Town of Bracebridge | Asset Management Plan

2024

Contents

Executive Summary

This asset management plan (AMP) for the Town of Bracebridge was developed in accordance with Ontario Regulation 588/17 (O. Reg 588/17). It offers a comprehensive overview of both core and non-core infrastructure assets.

The seven asset categories analyzed in this plan have a total replacement cost of $360 million, and include local and collector roads, bridges, structural culverts, stormwater infrastructure, various buildings, facilities, machinery, equipment, and vehicles that support effective operations and service delivery. The Town's road network comprises the largest share of the asset base, making up 48% of the total replacement cost.

Based on condition and age analysis, 81% of infrastructure and capital assets are in fair or better condition, with 19% in poor or worse condition, potentially requiring immediate rehabilitation or replacement. Maintaining assets in fair or better condition is more cost-effective than addressing them in poorer states. Field condition assessments, preferred over age-based estimates, were available for 60% of assets by replacement cost.

Annually, $10.9 million is needed to remain current with capital replacements across the Town's asset base. However, average annual funding available stands at $5.4 million, resulting in a $5.5 million funding deficit. Eliminating this deficit would require a 30% increase in current property tax revenues, which totaled $18.2 million in 2023. This increase may be introduced gradually, typically over a 5-, 10-, 15-, or 20-year phase-in period.

The recommended 15-year phase-in period would require a 1.8% annual increase in taxation revenues, excluding inflation, to phase in full funding for asset categories analyzed in the AMP. This strategy avoids the use of additional debt. The Town's current principal and interest (P&I) payments for existing debt total $4.1 million. Over the 15-year phase-in periods, these payments will decrease by $1.1 million annually. These reductions should be captured and reallocated for infrastructure needs to address annual deficits more quickly and avail funding for critical projects.

In addition to annual needs, there is an infrastructure backlog of $34.6 million, comprising assets that remain in operation beyond their estimated useful life. However, this estimate may be overstated; targeted and consistent condition assessments are essential to refining long-term replacement and backlog estimates. Risk frameworks and service level targets help prioritize projects, including those required to address the backlog, and select appropriate lifecycle interventions, including replacements or full reconstructions.

This AMP provides the Town's current performance levels. The 2025 iteration, as required by O. Reg 588/17, will pivot to identifying and delivering proposed or target levels of service. Although further data improvements are needed, staff have made important advancements in the Town's infrastructure database, including building a comprehensive stormwater inventory and improving replacement cost estimates for its road network. The Town is well-positioned to meet all reporting requirements, and to develop a practical and feasible asset management plan.

About this document

This asset management plan (AMP) for the Town of Bracebridge was developed in accordance with Ontario Regulation 588/17 (“O. Reg 588/17”). It contains a comprehensive analysis of Bracebridge’s infrastructure portfolio. The AMP is a living document that should be updated regularly as additional asset and financial data becomes available.

Ontario Regulation 588/17

As part of the *Infrastructure for Jobs and Prosperity Act, 2015*, the Ontario government introduced Regulation 588/17 - Asset Management Planning for Municipal Infrastructure. Along with creating better performing organizations, more livable and sustainable communities, the regulation is a key, mandated driver of asset management planning and reporting. It places substantial emphasis on current and proposed levels of service and the lifecycle costs incurred in delivering them.

Table 1 Ontario Regulation 588/17 Requirements and Reporting Deadlines

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

Scope

The scope of this AMP includes all requirements for the 2024 O. Reg 588/17 requirements as applied to core and non-core assets. It includes seven asset categories, namely:

1. Road Network
2. Bridges & Culverts
3. Stormwater Network
4. Buildings
5. Land Improvements
6. Machinery & Equipment
7. Vehicles

Overview of Asset Management

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

Lifecycle costs can span decades, requiring planning and foresight to ensure financial responsibility is spread equitably across generations. An asset management plan is critical to this planning, and an essential element of broader asset management program. The industry-standard approach and sequence to developing a practical asset management program begins with a Strategic Plan, followed by an Asset Management Policy and an Asset Management Strategy, concluding with an Asset Management Plan.

This industry standard, defined by the Institute of Asset Management (IAM), emphasizes the alignment between the corporate strategic plan and various asset management documents. The strategic plan has a direct, and cascading impact on asset management planning and reporting.

Key Technical Concepts in Asset Management

Effective asset management integrates several key components, including lifecycle management, risk management, and levels of service. These concepts are applied throughout this asset management plan and are described below in greater detail. We note that although these elements and concepts are integral to asset management, they also require additional resources for implementation and monitoring.

Lifecycle Management Strategies

The condition or performance of most assets will deteriorate over time. This process is affected by a range of factors including an asset's characteristics, location, utilization, maintenance history and environment. Asset deterioration has a negative effect on the ability of an asset to fulfill its intended function, and may be characterized by increased cost, risk and even service disruption.

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

There are several field intervention activities that are available to extend the life of an asset. These activities can be generally placed into one of three categories: maintenance, rehabilitation, and replacement. The following table provides a description of each type of activity and the general difference in cost.

Depending on initial lifecycle management strategies, asset performance can be sustained through a combination of maintenance and rehabilitation, but at some point, replacement is required. Understanding what effect these activities will have on the lifecycle of an asset, and their cost, will enable staff to make better recommendations. Table 2 provides a description of each type of activity, the general difference in cost, and typical risks associated with each.

The Town's approach to lifecycle management is described within each asset category outlined in this AMP. Staff will continue to evolve and innovate current practices for developing and implementing proactive lifecycle strategies to determine which activities to perform on an asset and when they should be performed to maximize useful life at the lowest total cost of ownership.

Table 2 Lifecycle Management: Typical Lifecycle Interventions

Lifecycle Activity	Description	Cost	Typical Associated Risks
Maintenance	Activities that prevent defects or deteriorations from occurring	$	• Balancing limited resources between planned maintenance and reactive, emergency repairs and interventions; • Diminishing returns associated with excessive maintenance activities, despite added costs; • Intervention selected may not be optimal and may not extend the useful life as expected, leading to lower payoff and potential premature asset failure;
Rehabilitation/ Renewal	Activities that rectify defects or deficiencies that are already present and may be affecting asset performance	$$$$	• Useful life may not be extended as expected; • May be costlier in the long run when assessed against full reconstruction or replacement; • Loss or disruption of service, particularly for underground assets;
Replacement/ Reconstruction	Asset end-of-life activities that often involve the complete replacement of assets	$$$$$$	• Incorrect or unsafe disposal of existing asset; • Costs associated with asset retirement obligations; • Substantial exposure to high inflation and cost overruns; • Replacements may not meet capacity needs for a larger population; • Loss or disruption of service, particularly for underground assets;

Levels of Service

A level of service (LOS) is a measure of the services that the Town is providing to the community and the nature and quality of those services. Within each asset category in this AMP, technical metrics and qualitative descriptions that measure both technical and community levels of service have been established and measured as data is available.

To comply with O. Reg 588/17, the Town must report on the community and technical levels of service for its core asset group.

Community Levels of Service

Community levels of service are a simple, plain language description or measure of the service that the community receives. For core asset categories as applicable (Roads, Bridges & Culverts, Stormwater) the Province, through O. Reg. 588/17, has provided qualitative descriptions that are required to be included in this AMP.

Technical Levels of Service

Technical levels of service are a measure of key technical attributes of the service being provided to the community. These include mostly quantitative measures and tend to reflect the impact of the Town's asset management strategies on the physical condition of assets or the quality/capacity of the services they provide.

For core asset categories as applicable (Roads, Bridges & Culverts, Stormwater) the province, through O. Reg. 588/17, has also provided technical metrics that are required to be included in this AMP.

Current and Proposed Levels of Service

This AMP focuses on measuring the current level of service provided to the community. Once current levels of service have been measured, the Town plans to establish proposed levels of service over a 10-year period, in accordance with O. Reg. 588/17.

Proposed levels of service should be realistic and achievable within the timeframe outlined by the Town. They should also be determined with consideration of a variety of community expectations, fiscal capacity, regulatory requirements, corporate goals and long-term sustainability. Once proposed levels of service have been established, and prior to July 2025, the Town must identify a lifecycle management and financial strategy which allows these targets to be achieved.

Reinvestment Rate

As assets age and deteriorate, they require additional investment to maintain a state of good repair. The reinvestment of capital funds, through asset renewal or replacement, is necessary to sustain an adequate level of service. The reinvestment rate is a measurement of available or required funding relative to the total replacement cost. By comparing the actual vs. target reinvestment rate the Town can determine the extent of any existing funding gap.

Asset Condition

An incomplete or limited understanding of asset condition can mislead long-term planning and decision-making. Accurate and reliable condition data helps to prevent premature and costly rehabilitation or replacement and ensures that lifecycle activities occur at the right time to maximize asset value and useful life.

A condition assessment rating system provides a standardized descriptive framework that allows comparative benchmarking across the Town's asset portfolio. The table below outlines the condition rating system used in this AMP to determine asset condition. This rating system is aligned with the Canadian Core Public Infrastructure Survey which is used to develop the Canadian Infrastructure Report Card. When assessed condition data is not available, service life remaining is used to approximate asset condition.

Table 3 Standard Condition Rating Scale

Condition	Pavement Condition Index (PCI)	Pipe Rating	Bridge Condition Index (BCI)	Age-based (Service Life Remaining%)	Broad Description
Very Good	91-100	0-1	>70	80-100	**Fit for the future** Well maintained, good condition, new or recently rehabilitated; no defects or minor defects
Good	76-90	2		60-80	**Adequate for now** Acceptable, signs of minor to defects and deterioration
Fair	66-75	3	50-70	40-60	**Requires attention** Signs of moderate deterioration and defects, some elements exhibit significant deficiencies
Poor	40-65	4	<50	20-40	**Increasing potential of affecting service** Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration; significant defects overall
Very Poor	0-39	5		0-20	**Unfit for sustained service** Near or beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable

Foundational Documents in Asset Management

In the municipal sector, ‘asset management strategy’ and ‘asset management plan’ are often used interchangeably. Other concepts such as ‘asset management framework’, ‘asset management system’, and ‘strategic asset management plan’ further add to the confusion; lack of consistency in the industry on the purpose and definition of these elements offers little clarity. We make a clear distinction between the policy, strategy, and the plan.

Asset Management Policy

An asset management policy represents a statement of the principles guiding the Town’s approach to asset management activities. It aligns with the organizational strategic plan and provides clear direction to municipal staff on their roles and responsibilities as part of the asset management program. All municipalities were required to develop and adopt an asset management policy in 2019 in compliance with O. Reg 588/17.

Asset Management Strategy

An asset management strategy is typically a higher-level document, focusing on business processes and organizational practices. It is a roadmap that includes key initiatives with recommended timelines that lead to higher state of asset management maturity. It is intended to convert the asset management policy from a set of formal, institutionalized, but philosophical commitments into specific actions.

While not a static document, the strategy should not evolve and change frequently—unlike the asset management plan. The strategy provides a long-term outlook on the overall asset management program development and strengthening key elements of its framework.

Asset Management Plan

The asset management plan is often identified as a key output within the strategy. The AMP has a sharp focus on the current state of the Town’s asset portfolio, and its approach to managing and funding individual service areas or asset groups. It is tactical in nature and provides a snapshot in time.

The strategic plan has a direct, and cascading impact on asset management planning and reporting, making it a foundational element. Many municipalities begin with an asset management plan. However, without the preceding documents, the AMP operates in a vacuum.

Limitations and Constraints

This AMP required substantial effort by staff. It was developed based on best-available data, and was subject to the following broad limitations, constrains, and assumptions:

- Although the Town's asset datasets have improved over the last year, some gaps persist, including incomplete condition data.

- In the absence of condition assessment data, age was used to estimate asset condition ratings. This approach can result in an over- or understatement of asset needs. As a result, financial requirements generated through this approach can differ from those identified by staff.

- The validity and reliability of all analysis in this AMP hinges critically on accurate and current replacement costs. User-defined and unit cost estimates, based typically on staff judgment, recent projects, or established through completion of technical studies, offer the most precise approximations of current replacement costs. When this isn't possible due to data gaps, historical costs incurred at the time of asset acquisition or construction can be inflated to present day. This approach, while sometimes necessary, and deployed in this AMP for some asset groups, can produce highly inaccurate estimates. The primary replacement cost used is indicated for each asset segment.

- Buildings and facilities are not adequately componentized into their individual elements, major components, and minor components. Buildings contain thousands of individual assets, including the building's substructure, shell, interior assets, various electrical, plumbing, HVAC systems, as well as equipment and furnishings. Each of these assets has its own useful life and replacement cost, and individual condition rating, as well as installation history. Many buildings assets are listed as singular sites, e.g., "Municipal Office' or 'Fire Station #1' rather than disaggregated into individual assets. Without componentization, the value of condition ratings, age profiles, and long- and short-term forecasts remains limited.

- The risk models are designed to support objective project prioritization and selection. However, in addition to the inherent limitations that all models face, they also require availability of important asset attribute data to ensure that asset risk ratings are valid, and assets are properly stratified within the risk matrix. Missing attribute data can misclassify assets.

These limitations have a direct impact on the analysis presented in this AMP, including condition summaries, age profiles, long-term replacement and rehabilitation forecasts, and shorter term, 10-year forecasts that are generated from Citywide, the Town's primary asset management system. These challenges are also common among municipalities. Overcoming them requires time, long-term commitment, dedicated resources, and sustained effort by staff.

State of the Infrastructure

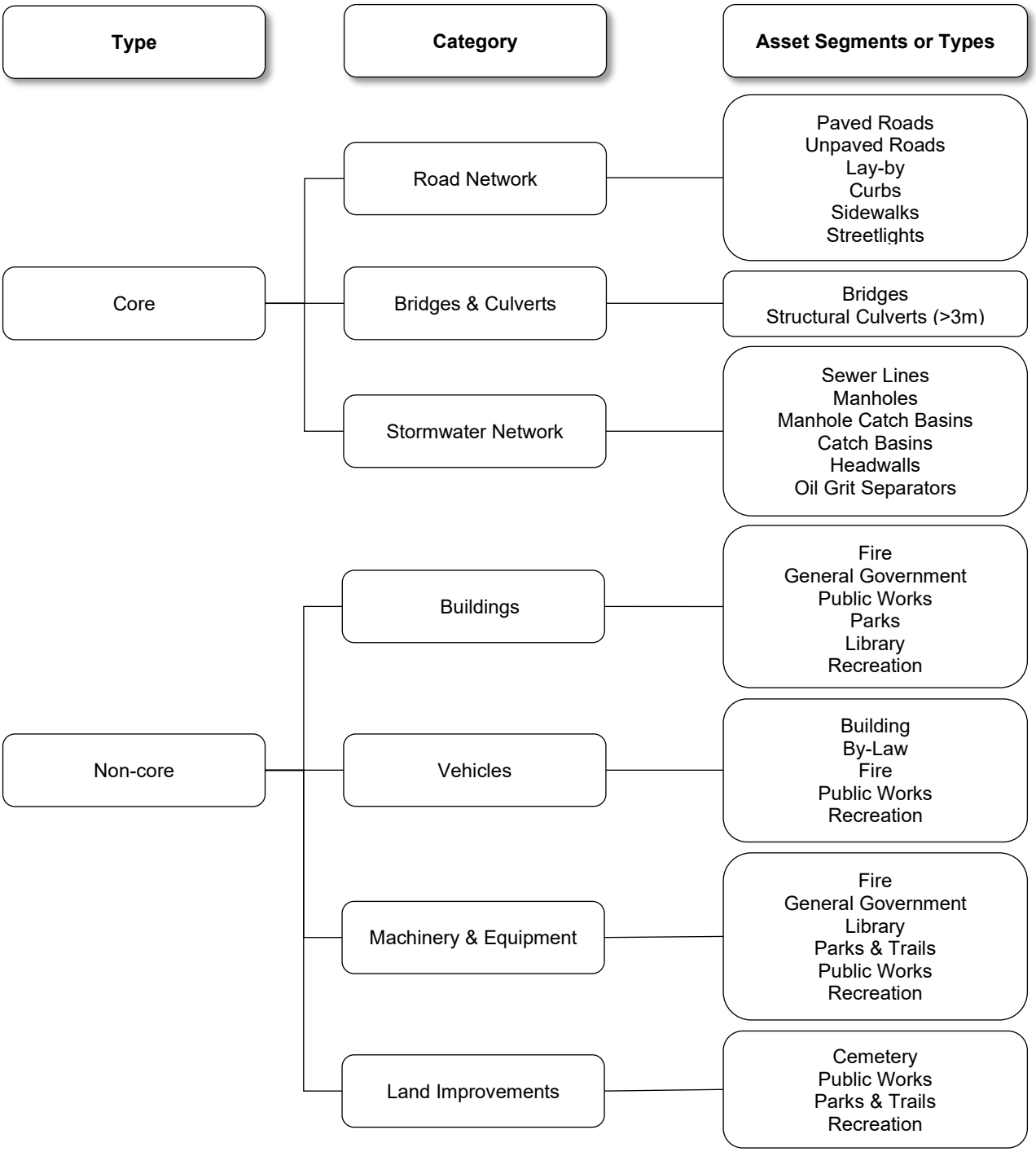
The state of the infrastructure (SOTI) summarizes the inventory, condition, age profiles, and other key performance indicators for the Town's infrastructure portfolio across its seven asset categories, current as of 2023.

Figure 1 illustrates how assets were classified within the infrastructure data hierarchy. Most reporting and analysis is presented at the segment level.

Asset Hierarchy and Data Classification

Asset hierarchy explains the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Assets were structured to support meaningful, efficient reporting and analysis. Key category details are summarized at asset segment level

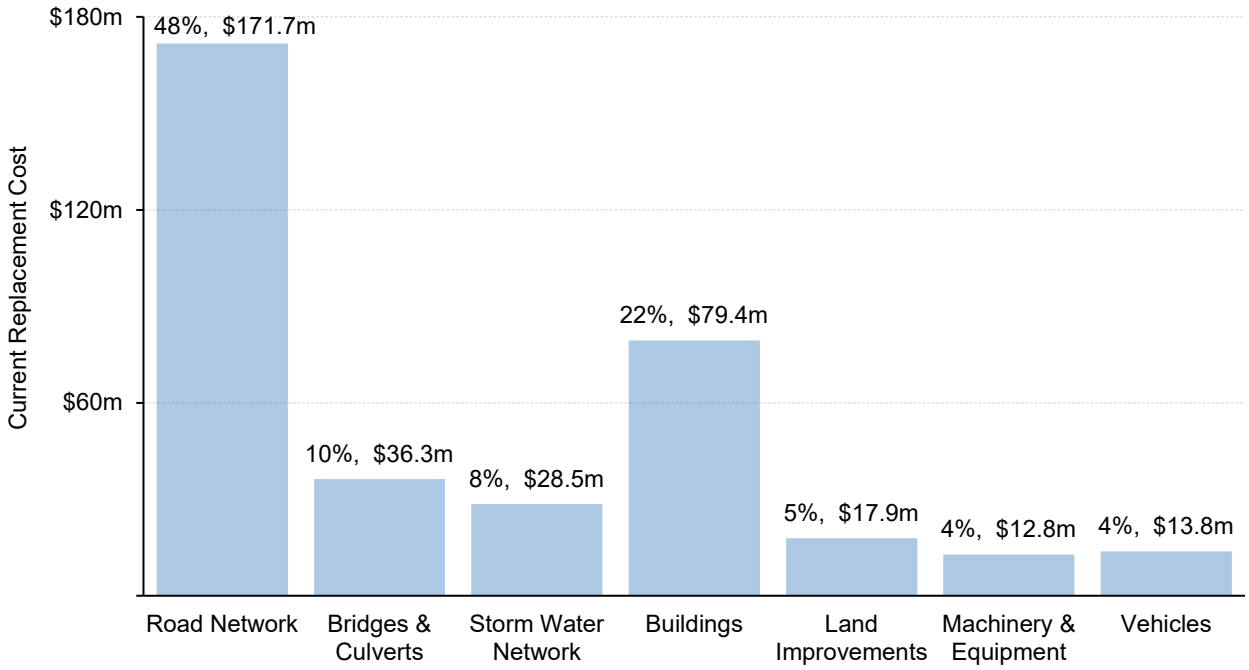
Figure 1 Asset Hierarchy and Data Classification



Portfolio Overview

The seven asset categories analyzed in this asset management plan have a total current replacement cost of $360 million. This estimate was calculated using user-defined costing, as well as inflation of historical or original costs to current date. Figure 2 illustrates the replacement cost of each asset category; at 48% of the total portfolio, the Town's road network forms the largest share of the asset portfolio, followed by buildings and facilities at 22%.

Figure 2 Current Replacement Cost by Asset Category



Condition Data

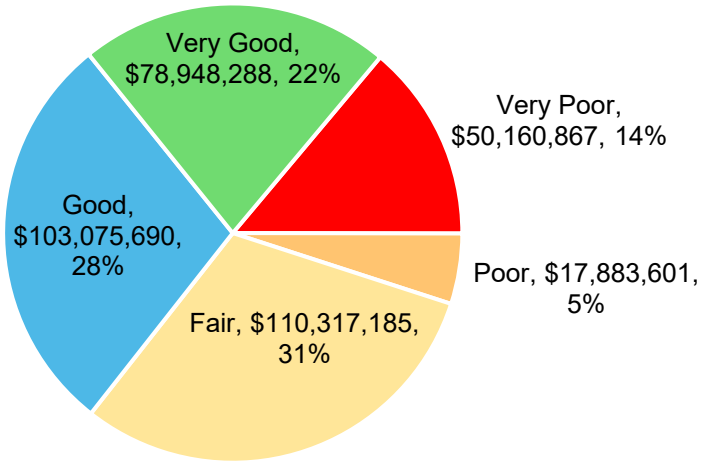
Figure 3 and Figure 4 summarize asset condition at the portfolio and category levels, respectively. Based on both assessed condition and age-based analysis, 81% of the Town's infrastructure portfolio is in fair or better condition, with the remaining 19% in poor or worse condition. Typically, assets in poor or worse condition may require replacement or major rehabilitation in the immediate or short-term. Targeted condition assessments may help further refine the list of assets that may be candidates for immediate intervention, including potential replacement or reconstruction.

Similarly, assets in fair condition should be monitored for disrepair over the medium term. Keeping assets in fair or better condition is typically more cost-effective than addressing assets needs when they enter the latter stages of their lifecycle or decline to a lower condition rating, e.g., poor or worse.

Condition data was available for majority of the road network, all bridges & culverts, stormwater assets, and most vehicles. For all remaining assets, including major infrastructure such as storm mains and buildings, age was used as an approximation of condition for these assets. Age-based condition estimations can skew data and lead to potential under- or overstatement of asset needs.

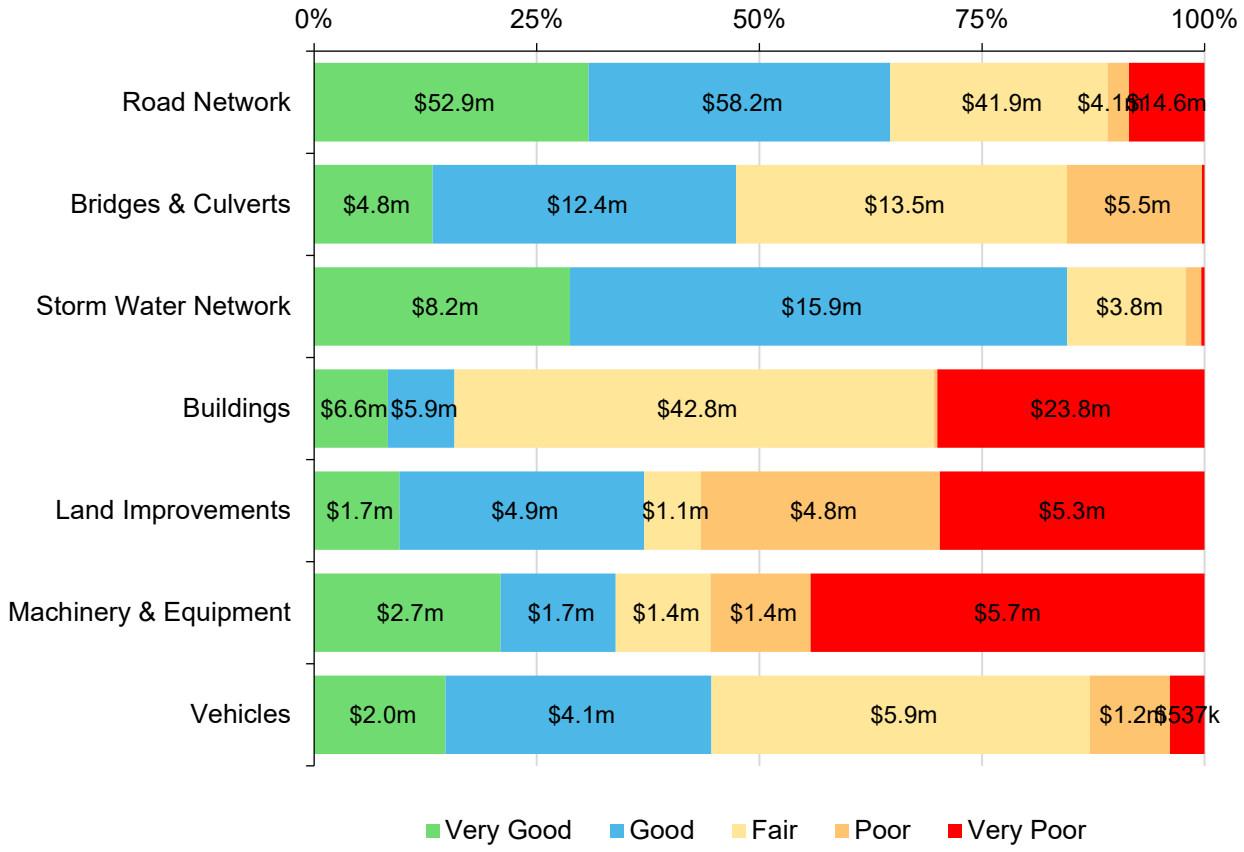
Further, when assessed condition data was available, it was projected to current year (2023). This 'projected condition' can generate lower condition ratings than those established at the time of the condition assessment. The rate of this deterioration will also depend on lifecycle curves used to project condition over time.

Figure 3 Asset Condition – Portfolio Overview



As further illustrated in Figure 4 at the category level, the majority of major, core infrastructure including roads, bridges, structural culverts, and stormwater assets are in fair or better condition, based on in-field condition assessment data. Most vehicles are also in fair or better condition, based on recent condition assessments, although these assessments were conducted in 2021. See Table 4 Source of Condition Data for details on how condition data was derived for each asset category.

Figure 4 Asset Condition – By Asset Category



As outlined previously, buildings and facilities are not componentized into their individual major elements and components. This limits the validity of current condition estimates as they are presented only at the ‘parent’ asset level, such as ‘Fire Station #1’, or ‘Municipal Office’.

Source of Condition Data

This asset management plan relies on assessed condition for 60% of assets, based on and weighted by replacement cost. For the remaining assets, aged is used as an approximation of condition. Assessed condition data is invaluable in asset management planning as it reflects the true condition of the asset and its ability to perform its functions. The table below identifies the source of condition data used throughout this AMP.

Table 4 Source of Condition Data

Asset Category	% of Assets With Assessed Condition Available
Road Network	84%
Bridges & Culverts	94%
Storm Water Network	96%
Buildings	0%
Land Improvements	0%
Machinery & Equipment	0%
Vehicles	80%
Total	**60%**

Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential long-term replacement spikes.

Road Network

The road network in the Town of Bracebridge constitutes the largest share of its infrastructure, with a replacement cost of over $171.7 million. This includes both paved and unpaved roads. Additionally, the Town owns and manages various other supporting infrastructure and capital assets, such as sidewalks, curbs, lay-bys, and streetlights.

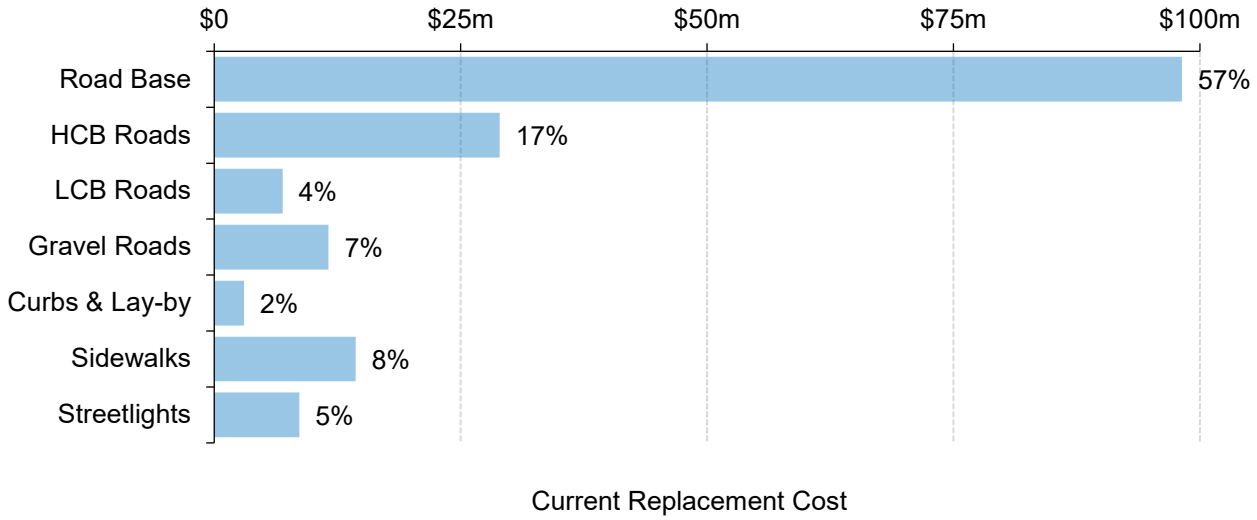
Inventory and Valuation

Table 5 summarizes the quantity and current replacement cost of the Town's various road network assets as managed in its primary asset management register, Citywide. More accurate replacement costs estimates were used for this iteration of the AMP update, retrieved from the 2023 roads needs study.

Table 5 Detailed Asset Inventory – Road Network

Segment	Quantity	Unit of Measure	Replacement Cost
Road Base	321	km	$98,178,795
High Class Bituminous (HCB)	91	km	$104,481,154
Low Class Bituminous (HCB)	99	km	$6,938,945
Gravel	135	Km	$11,603,247
Curbs & Lay-by	72	km	$3,029,964
Sidewalks	21	km	$14,359,916
Streetlights	41	Assets	$8,635,550
Total			**$171,699,157**

Figure 5 Portfolio Valuation – Road Network



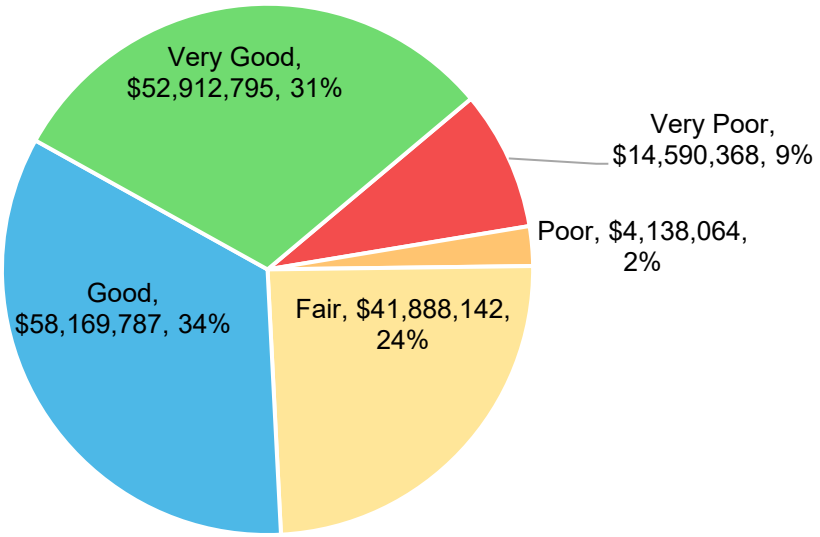
Asset Condition

Figure 6 summarizes the replacement cost-weighted condition of the Town's road network. Based on a combination of field inspection data and age, 89% of assets are in fair or better condition, contrasted with 79% in the 2022 AMP. This improvement can be partially attributed to longer design-life estimates used for road base assets, leading to higher age-based condition ratings.

The remaining 11% of assets, with a current replacement cost of $18.7 million, are in poor to very poor condition. Condition assessments were available for 100% of paved roads and unpaved roads, based on replacement cost. No condition data was available for the remaining asset types.

Assets in poor or worse condition may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition. As illustrated in Figure 6, the majority of the Town's road network assets are in fair or better condition.

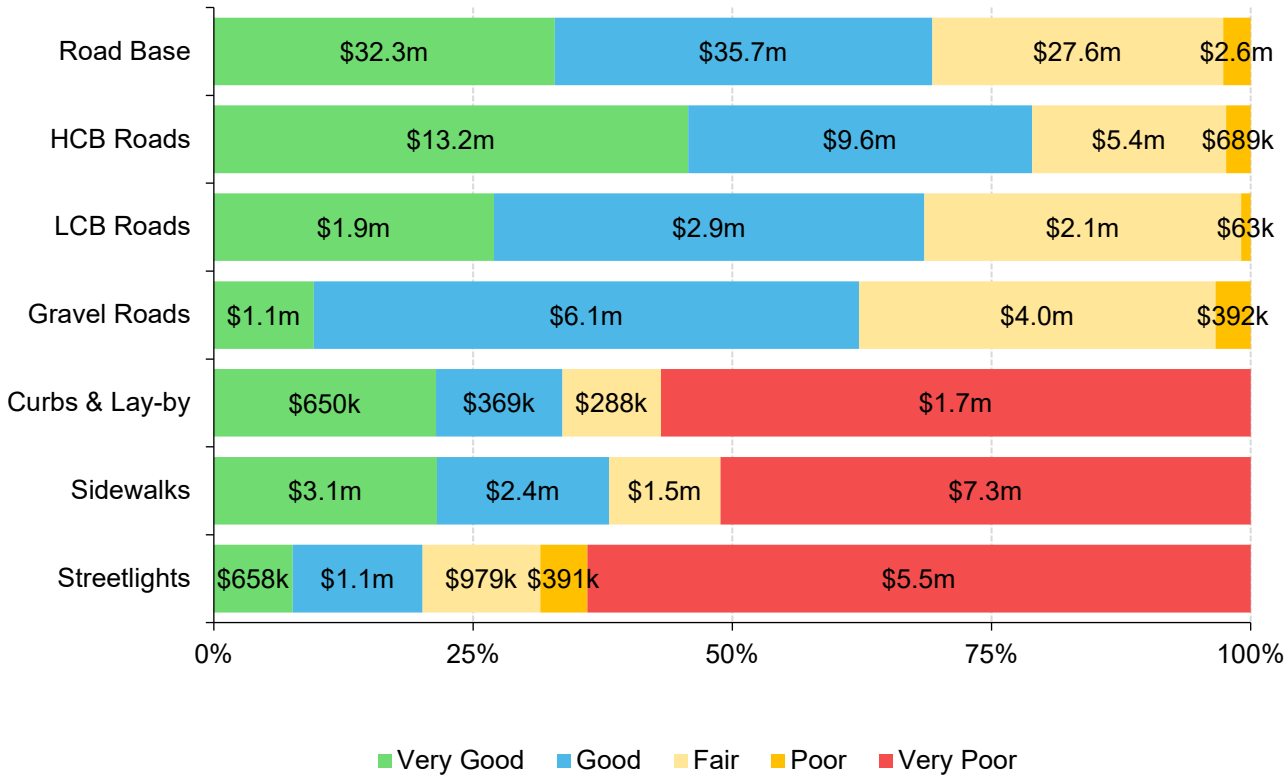
Figure 6 Asset Condition – Road Network: Overall



Condition assessments reveal that the overwhelming majority of the Town's paved and unpaved roads are in fair or better condition. We note that no condition or structural data was available for road base assets as pavement inspections were limited to surface conditions.

The Town also performs annual sidewalk condition assessments. However, as these are based on spot defects and do not include standard condition ratings for sidewalk segments, only age was used to approximate sidewalk panel conditions. This analysis indicates that approximately 50% of assets are in poor or worse condition.

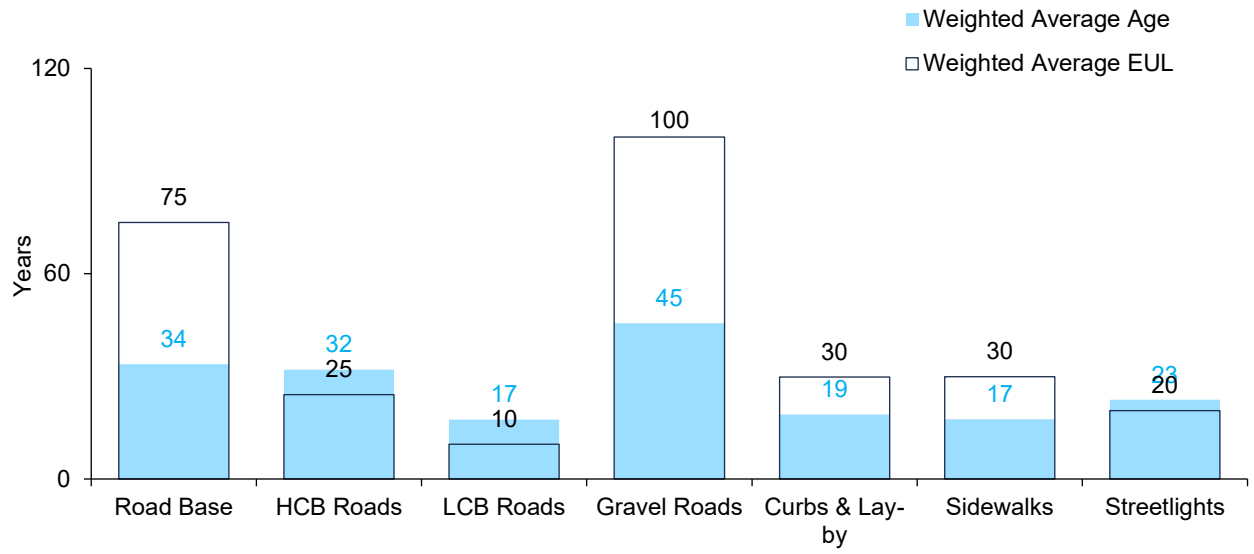
Figure 7 Asset Condition – Road Network: By Segment



Age Profile

Figure 8 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

Figure 8 Estimated Useful Life vs. Asset Age – Road Network



Asset age is an important measurement for long-term planning. However, condition assessments provide a more accurate indication of actual asset needs. Although age analysis indicates that pave and unpaved roads remain in service beyond their design-life, the 2023 condition assessment shows that most roads are in fair or better condition.

Streetlight assets, however, continue to remain in operation beyond their intended lifespan. However, without in-field inspection data, this estimate may not offer an accurate assessment of these assets performance. Despite their age, streetlights can still perform their function effectively.

Current Approach to Lifecycle Management

This section outlines Bracebridge's current approach to managing its road network. These can be used by staff for ongoing reference and planning within the Town's asset management program. These models should be continuously refined and updated with new data as it becomes available.

Roads

A roads needs study (RNS) is completed by an external consultant every five years for all paved and unpaved road sections. Curbs and lay-bys are also assessed as part of this study. The pavement condition index (PCI) scores generated from these road scans, staff judgment, traffic loads, and opportunity to bundle projects with utility work typically determine the optimal lifecycle intervention, ranging from pothole repairs to potential replacements.

The RNS provides a recommended 10-year capital program for road rehabilitation or replacements. Road sections are grouped in the "Now", "1-5 Year" and "6-10 Year" category. A separate breakdown for low volume roads is also presented to inform rehabilitation decisions. This information forms the basis for the Town's 10-Year roads capital plan.

Table 6 summarizes the Town's 1-10 year capital improvement needs for low and high volume roads. In total, $38.3 million is required over the next decade. This reflects the recommended work plan.

Table 6 1-10 Year Capital Improvement Needs: Road Network

Road Type	Now	1-5 Years	6-10 Years
Low Volume Roads (LVR)	$3,724,000	$983,000	$179,000
High Volume Roads (HVR)	$5,876,000	$12,928,000	$14,643,000
Total	**$9,600,000**	**$13,911,000**	**$14,822,000**

In discussion with staff, a proposed or recommended lifecycle strategy was developed for urban, semi-urban, and gravel roads. This strategy is outlined below. However, we note that this approach is not currently implemented due to financial constraints. Instead, most road sections are managed in a reactive manner to optimize the use of limited funds. Further, rural, semi-urban, and gravel roads are maintained on a perpetual cycle, and may not require a full excavation and reconstruction.

Table 7 Recommended Lifecycle Strategy

Road Type	Lifecycle Activity	Trigger (Condition 0-100 or repeating event)	Resulting Condition
Urban	Microsurfacing	75	95
Urban	Resurfacing - Single Lift Mill and Pave RMP1	50	95
Urban	Resurfacing - Double Lift Mill and Pave RMP2	50	95
Urban	Microsurfacing	75	95
Urban	Full Excavation and Reconstruction - 2 Lift		100
Rural-Semi Urban	Slurry Seal	90	Unchanged
Rural-Semi Urban	Surface Treatment - Double with Pulverization and Granular Base ST2PA	25	95
Rural-Semi Urban	Slurry Seal	1-year post surface treatment	Unchanged
Rural-Semi Urban	Surface Treatment - Double with Pulverization and Granular Base ST2PA	25	95
Rural-Semi Urban	Slurry Seal	1-year post surface treatment	Unchanged
Gravel	Grading	Monthly	100
Gravel	Dust Control	Annually	Unchanged
Gravel	Vegetation Control	5-year cycle	Unchanged
Gravel	Drainage Improvements	10-year cycle	Unchanged

Sidewalks

All sidewalk inventory is assessed annually by a specialist external contractor in accordance with the minimum maintenance standards. Trip hazards are addressed annually by cutting the concrete on an angle. Badly broken sections are replaced annually, typically (but not always) in conjunction with the roads program. The annual assessment should be expanded to capture standard condition ratings information on sidewalk segments.

Streetlights

The Town does not currently have a regular condition assessment program for streetlights. An external streetlight maintenance contractor provides maintenance and completes replacements on an as-needed basis. A planned condition assessment program should be implemented on existing assets to provide a baseline condition index. The program should be set to an interval of not greater than five years post base line analysis.

10-Year Replacement Needs

The table below summarizes the projected asset replacement needs that may be undertaken over the next 10 years to support current levels of service. As road base assets have long life-spans and are rarely replaced, they are not included in these projections.

Table 8 System-generated 10-Year Capital Replacement Forecast – Road Network

Segment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Paved	$0	$46k	$622k	$640k	$1.4m	$1.9m	$2.2m	$1.9m	$3.1m	$3.0m
Unpaved	$0	$0	$63k	$0	$1.2m	$817k	$602k	$645k	$2.1m	$1.5m
Curbs and Lay-bys	$0	$1.7m	$0	$0	$0	$0	$0	$0	$0	$0
Sidewalks	$0	$7.3m	$0	$0	$0	$0	$0	$0	$0	$0
Streetlights	$0	$0	$0	$0	$0	$243k	$149k	$0	$168k	$791k
Total	**$9.1m**	**$9.3m**	**$1.7m**	**$944k**	**$2.7m**	**$3.0m**	**$3.0m**	**$2.6m**	**$5.8m**	**$5.8m**

These projections are generated in Citywide and rely on the data available in the asset register. Assessed condition data and replacement costs were used to assist in forecasting replacement needs for roads. For all remaining assets, only age was used to determine forthcoming replacement needs.

The projections can be different from actual capital forecasts, which rely on short-term and specialized assessments. Consistent data updates, particularly condition, replacement costs, and regular upkeep of lifecycle models, will improve the alignment between the system generated expenditure requirements, and the Town's capital expenditure forecasts.

Bridges & Culverts

The Town of Bracebridge's transportation network also includes bridges and structural culverts, with a current replacement cost of $36.3 million.

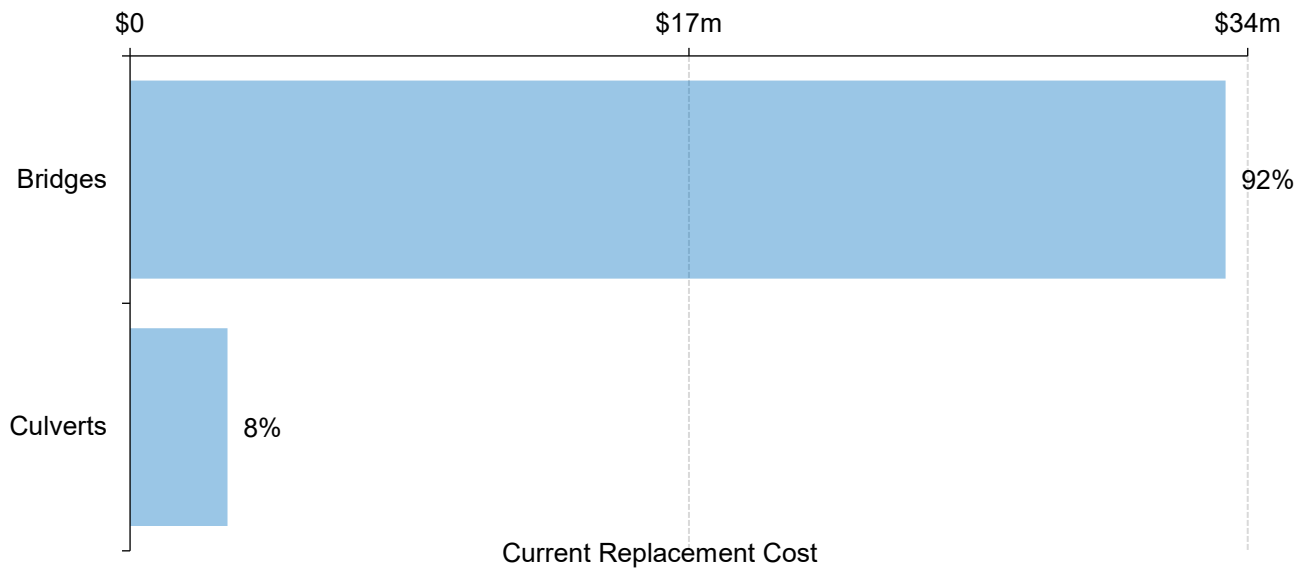
Inventory and Valuation

Table 9 summarizes the quantity and current replacement cost of bridges and culverts. The Town owns and manages 16 bridges and six structural culverts with a width of 3m or above. The Town's 16 bridges make up 92% of the structures portfolio.

Table 9 Detailed Asset Inventory – Bridges & Culverts

Segment	Quantity	Unit of Measure	Replacement Cost
Bridges	17	Assets	$33,323,200
Culverts	7	Assets	$2,962,200
Total	**24**		**$36,285,400**

Figure 9 Portfolio Valuation – Bridges & Culverts

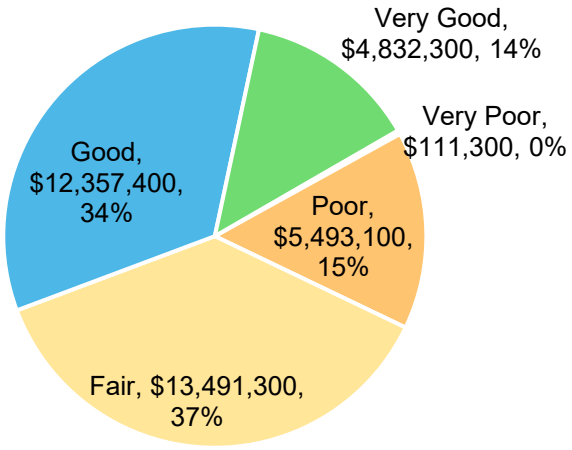


Asset Condition

Figure 10 replacement cost-weighted condition of the Town's bridges and culverts. According to recent Ontario Structures Inspection Manual (OSIM) assessments, 85% of bridges and culverts are in fair or better condition. Some elements or components of these structures may need replacement or rehabilitation in the medium term and should be monitored for further deterioration.

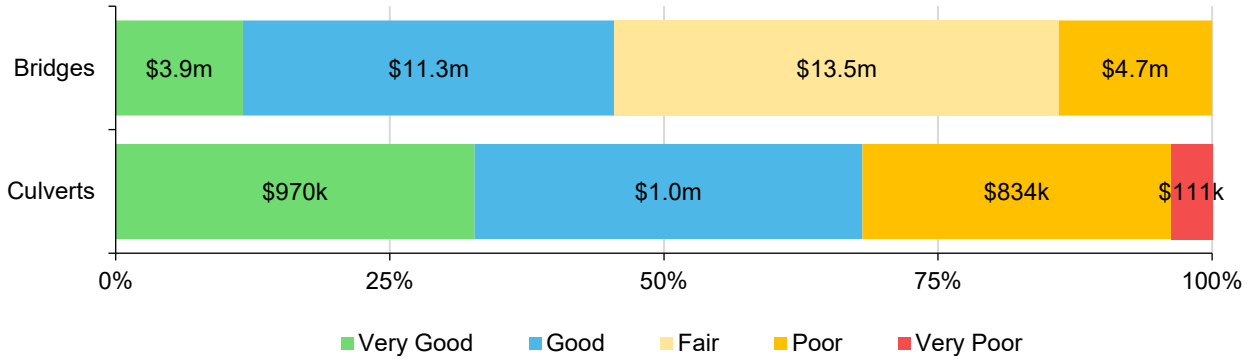
Assets in poor or worse condition, comprising 15% of the total portfolio, may require immediate or short-term replacement. However, bridges and structures with a poor or worse rating (i.e., a bridge condition index of less than 60) are not necessarily unsafe for regular use. The OSIM ratings are designed to identify repairs needed for individual bridge components, rather than an assessment of the overall condition of the structure.

Figure 10 Asset Condition – Bridges & Culverts: Overall



As further detailed in Figure 11, based on in-field condition assessments, $4.7 million of bridge assets were assessed as being in poor condition. Similarly, 32% of structural culverts were identified as poor or worse.

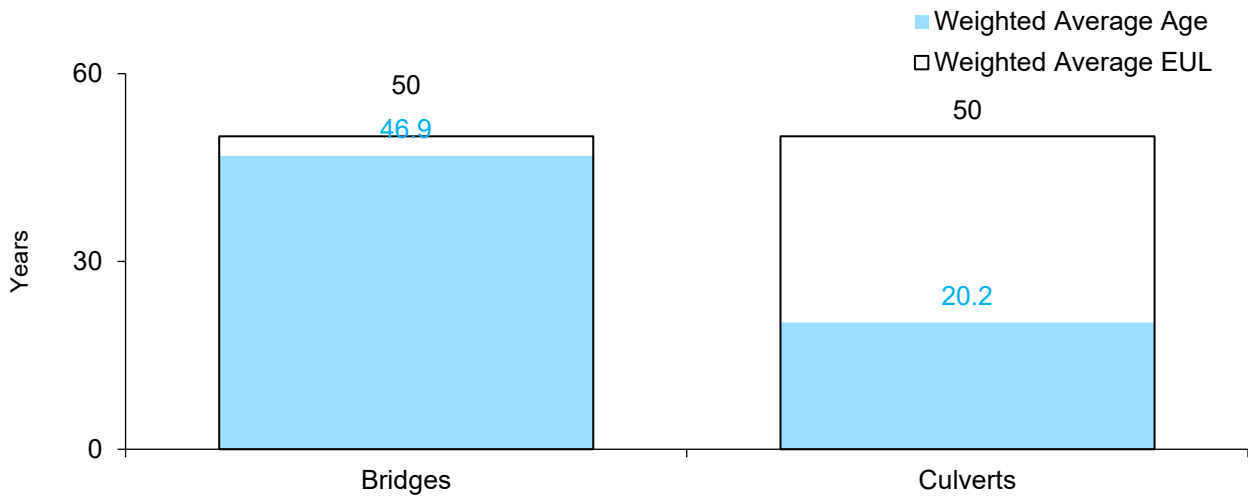
Figure 11 Asset Condition – Bridges & Culverts: By Segment



Age Profile

Figure 12 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

Figure 12 Estimated Useful Life vs. Asset Age – Bridges & Culverts



Age analysis reveals that on average, bridges have consumed virtually all of their estimated useful life, with an average age of 46.9 years against an average EUL of 50 years. On average, however, culverts are still in the first phase of their lifecycle, with an average age of 20.2 years, against an average EUL of 50 years. OSIM assessments should continue to be used in conjunction with age and asset criticality to prioritize capital and maintenance expenditures.

We do note that no in-service date was found for the Black River Road culvert, valued at $282,100. An in-service date of 2000 was used to allow for valid analysis.

Current Approach to Lifecycle Management

The condition of bridges and structural culverts is assessed biennially in compliance with Ontario Structure Inspection Manual (OSIM). The most recent inspection report was completed in 2022. The bridge condition index (BCI) is used to guide and prioritize capital investment, unless health and safety concerns warrant a different, more immediate intervention.

10-Year Replacement Needs

The table below summarizes the projected cost of lifecycle activities (capital replacement only) that will need to be undertaken over the next 10 years to support current levels of service.

Table 10 System-generated 10-Year Capital Replacement Forecast – Bridges & Culverts

Segment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Bridges	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Culverts	$0	$0	$0	$0	$0	$111k	$0	$0	$0	$0
Total	**$0**	**$0**	**$0**	**$0**	**$0**	**$111k**	**$0**	**$0**	**$0**	**$0**

These projections are generated in Citywide and rely on the data available in the asset register. Assessed condition data and replacement costs were used to assist in forecasting replacement needs for bridges and structural culverts. These projections may be different from actual capital forecasts as outlined in OSIM inspections and recommended workplans. Consistent data updates, especially condition, will improve the alignment between the system generated expenditure requirements, and the Town's capital expenditure forecasts, including long-term capital plans.

Stormwater Network

Bracebridge's Stormwater Network comprises sewer mains and other critical supporting capital assets with a total current replacement cost of $13.9 million. The Town is responsible for 28.6 kilometres of storm mains.

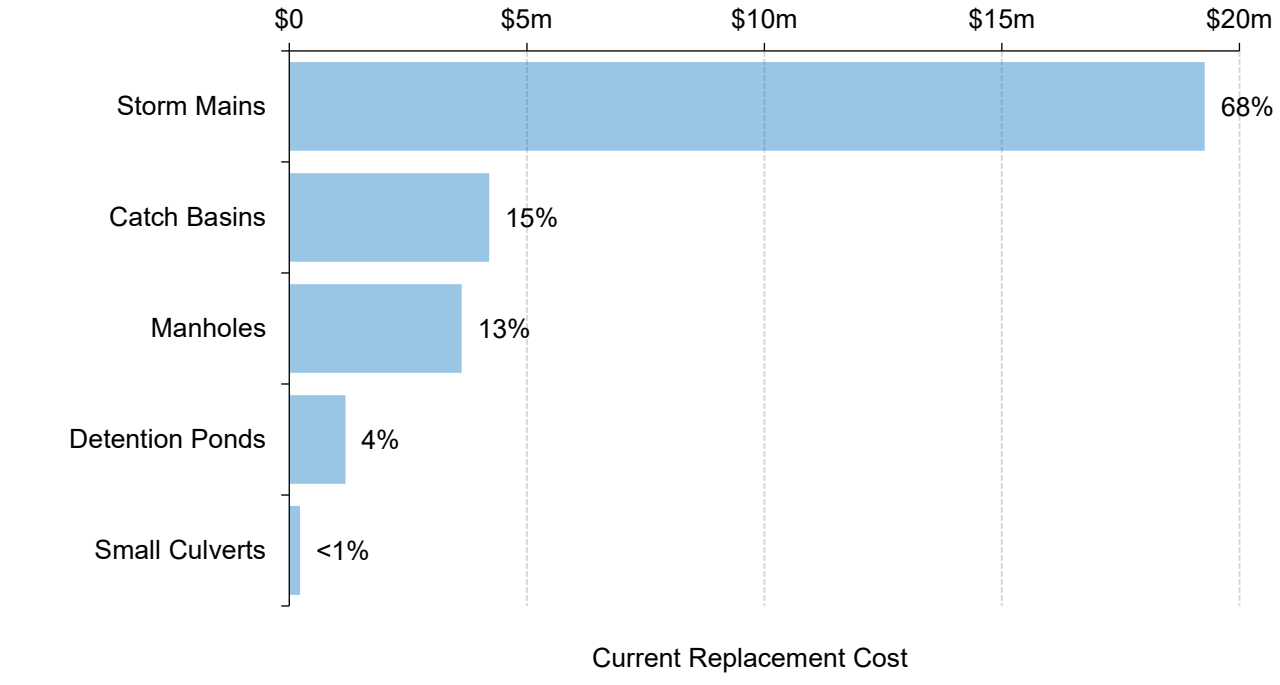
Inventory and Valuation

Table 11 summarizes the quantity and current replacement cost of all stormwater management assets available in the Town's asset register.

Table 11 Detailed Asset Inventory – Stormwater Network

Segment	Quantity	Unit of Measure	Replacement Cost
Storm Mains	28.6	km	$19,272,259
Catch Basins	26	Assets	$4,206,000
Manholes	363	Assets	$3,630,000
Detention Ponds	12	Assets	$1,183,335
Small Culverts	350	m	$225,814
Total			**$13,871,095**

Figure 13 Portfolio Valuation – Stormwater Network



Asset Condition

Figure 14 summarizes the replacement cost-weighted condition of the Town's stormwater management assets. Based on assessed condition data, nearly 98% of assets are in fair or better condition. The remaining 2% of assets, with a current replacement cost of, $607,000 were considered in poor or very poor condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

Figure 14 Asset Condition – Stormwater Network: Overall

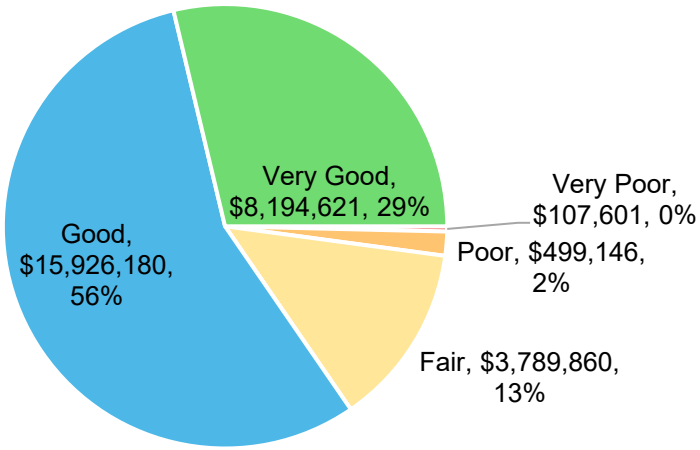
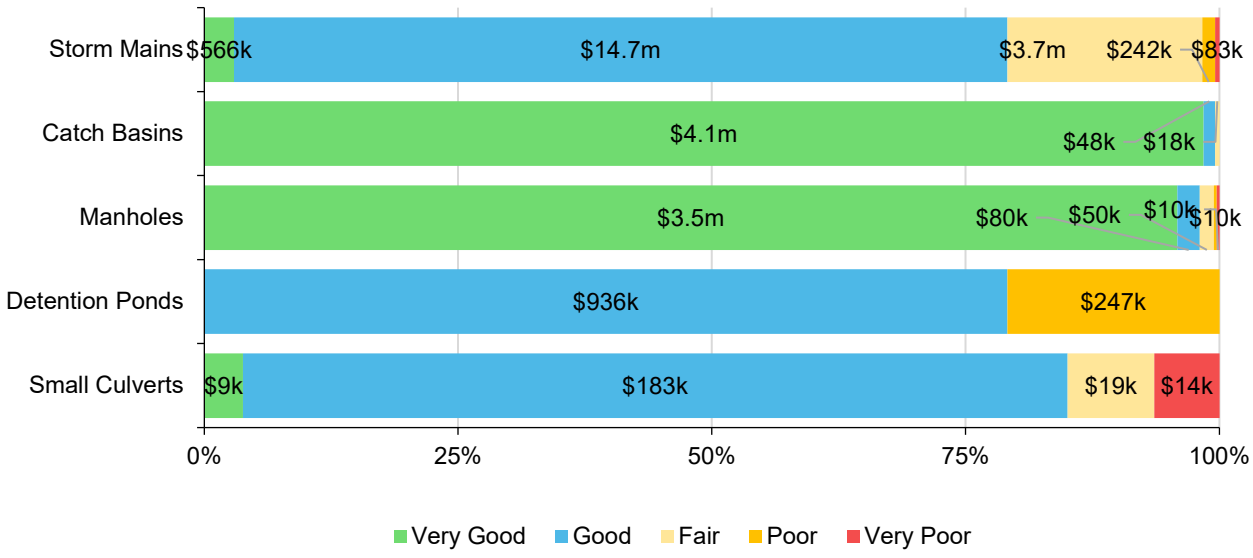


Figure 15 summarizes the condition of stormwater assets. Based on in-field condition data, nearly 100% of all stormwater linear and structures—including catch basins and manholes—are in fair or better condition. No updated condition data was available for detention ponds. Their condition ratings were projected from 2021 to end of 2023 to derive current condition scores.

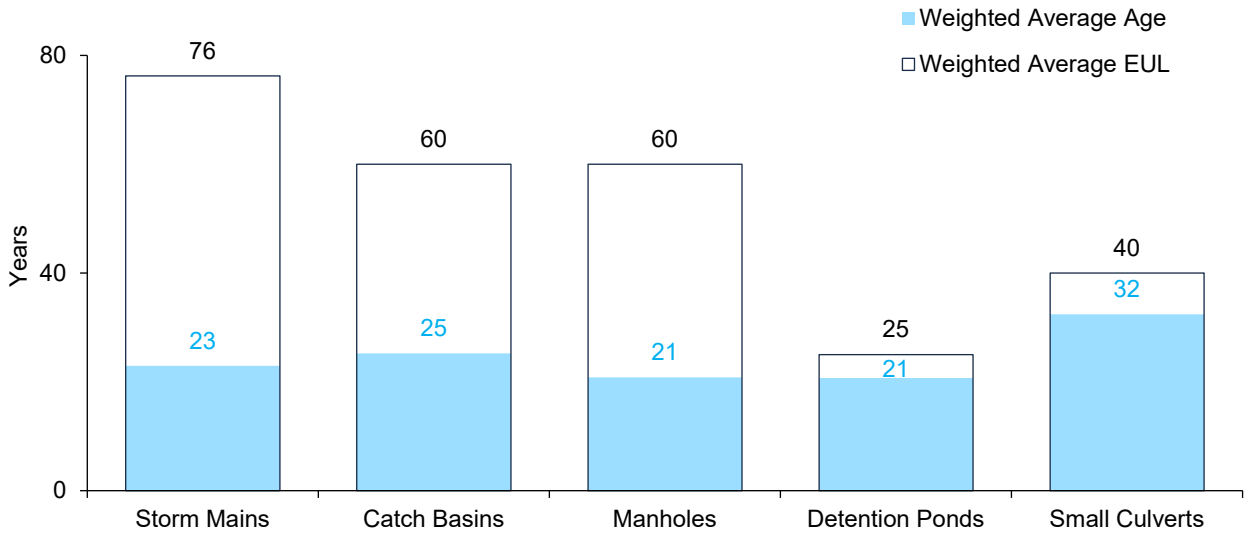
Figure 15 Asset Condition – Stormwater Network: By Segment



Age Profile

Figure 16 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

Figure 16 Estimated Useful Life vs. Asset Age – Stormwater Network



Age analysis reveals that on average, most stormwater assets are in the earlier stages of their estimated design life. Exceptions include detention ponds and small drainage culverts. Useful life estimates were adjusted and increased for most asset types, including mains, catch basins, manholes, and detention ponds.

Current Approach to Lifecycle Management

A condition inspection was conducted of the Town's stormwater infrastructure in 2023, including a zoom camera inspection of linear assets. Structural ratings were assigned.

Detention ponds are inspected annually, typically in the fall, and produce deficiency lists with cost estimates and a deadline for completion. They are typically rated as 'Acceptable' or 'Unacceptable'. As these assets age, the carrying costs of their ongoing maintenance and ownership will continue to escalate.

10-Year Replacement Forecast

The table below summarizes the projected cost of lifecycle activities (capital replacement only) that will need to be undertaken over the next 10 years to support current levels of service.

Table 12 System-generated 10-Year Replacement Forecast – Stormwater Network

Segment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Storm Mains	$0	$0	$0	$0	$0	$40k	$0	$0	$0	$0
Catch Basins	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Manholes	$0	$0	$0	$0	$0	$0	$10k	$0	$0	$0
Detention Ponds	$0	$0	$0	$0	$0	$0	$0	$247k	$0	$0
Small Culverts	$0	$0	$0	$0	$0	$9k	$6k	$0	$0	$0
Total	**$0**	**$0**	**$0**	**$0**	**$0**	**$49k**	**$16k**	**$247k**	**$0**	**$0**

These projections are generated in Citywide and rely on the data available in the asset register. They can be different from actual capital forecasts. Consistent data updates, especially condition, will improve the alignment between the system generated expenditure requirements, and the Town's capital expenditure forecasts.

Buildings

Bracebridge's building portfolio comprises fire stations, administrative and public works facilities, a public library, and recreational assets. The estimated total replacement cost for these buildings exceeds $79 million.

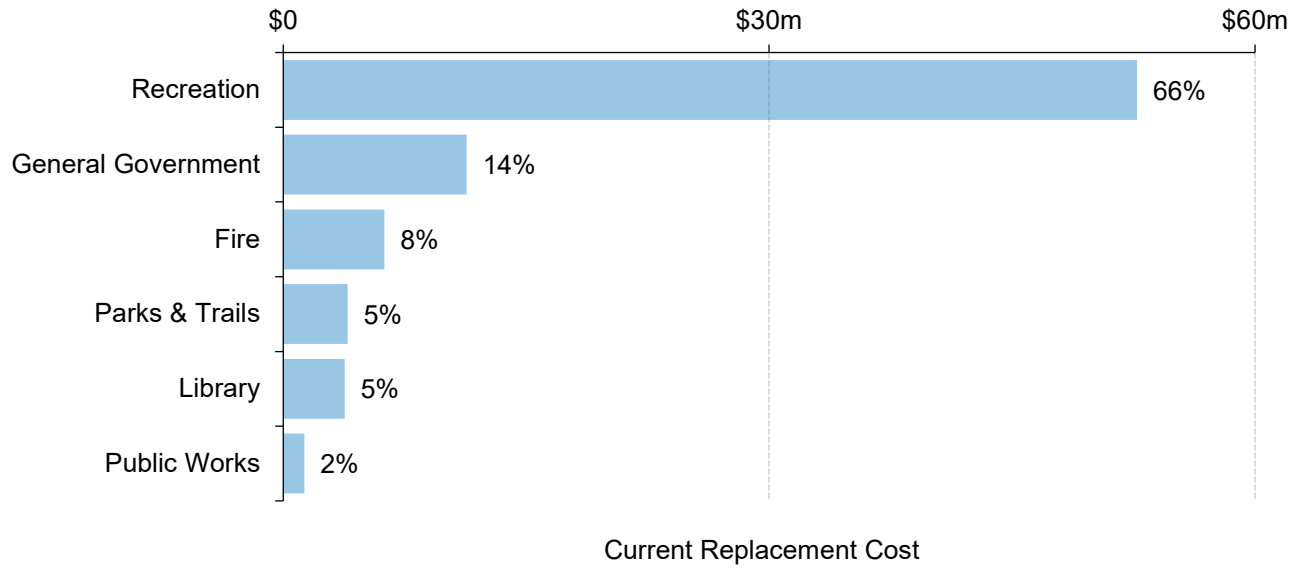
Inventory and Valuation

Table 13 summarizes the quantity and current replacement cost of all buildings assets available in the Town's asset register. The majority of buildings and facilities remain uncomponentized. Insured building values were used as a proxy for some assets; for others, historical costs were inflated to 2023.

Table 13 Detailed Asset Inventory – Buildings & Facilities

Segment	Quantity	Unit of Measure	Replacement Cost
Recreation	6	Buildings	$52,705,669
General Government	5	Buildings	$11,321,747
Fire	2	Buildings	$6,251,290
Parks & Trails	6	Buildings	$3,980,209
Library	1	Buildings	$3,803,054
Public Works	2	Buildings	$1,300,825
Total			**$79,362,794**

Figure 17 Portfolio Valuation – Buildings & Facilities



Asset Condition

Figure 19 illustrates the condition of the Town's building portfolio based on replacement cost. Using age data alone, 70% of the building assets are classified as fair or better, while 30%, with a replacement cost exceeding $24 million, are in poor or worse condition and may need short-term replacement. Assets in fair condition might require medium-term rehabilitation or replacement and should be closely monitored for further deterioration.

Due to the lack of component-level assessments, the condition data is provided at the overall site level instead of detailing individual elements or components within each building. This limitation is further exacerbated by the absence of actual condition assessments, necessitating reliance solely on age-based estimates.

Figure 18 Asset Condition – Buildings & Facilities: Overall

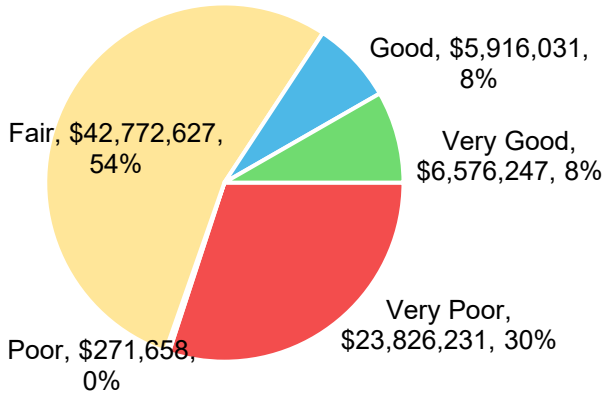
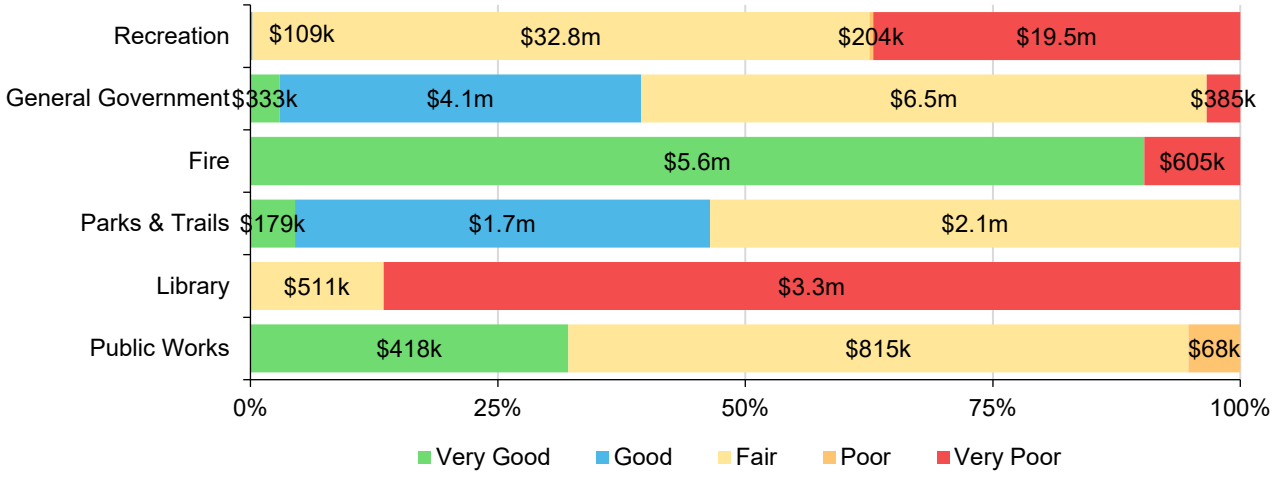


Figure 20 details the condition of buildings by department based on age. Many recreation assets and most library assets are in poor to worse condition. However, this data's usefulness is limited due to the lack of detailed component analysis and in-field condition assessments. Implementing asset componentization and incorporating condition assessments will yield a more precise and reliable evaluation of the state of these.

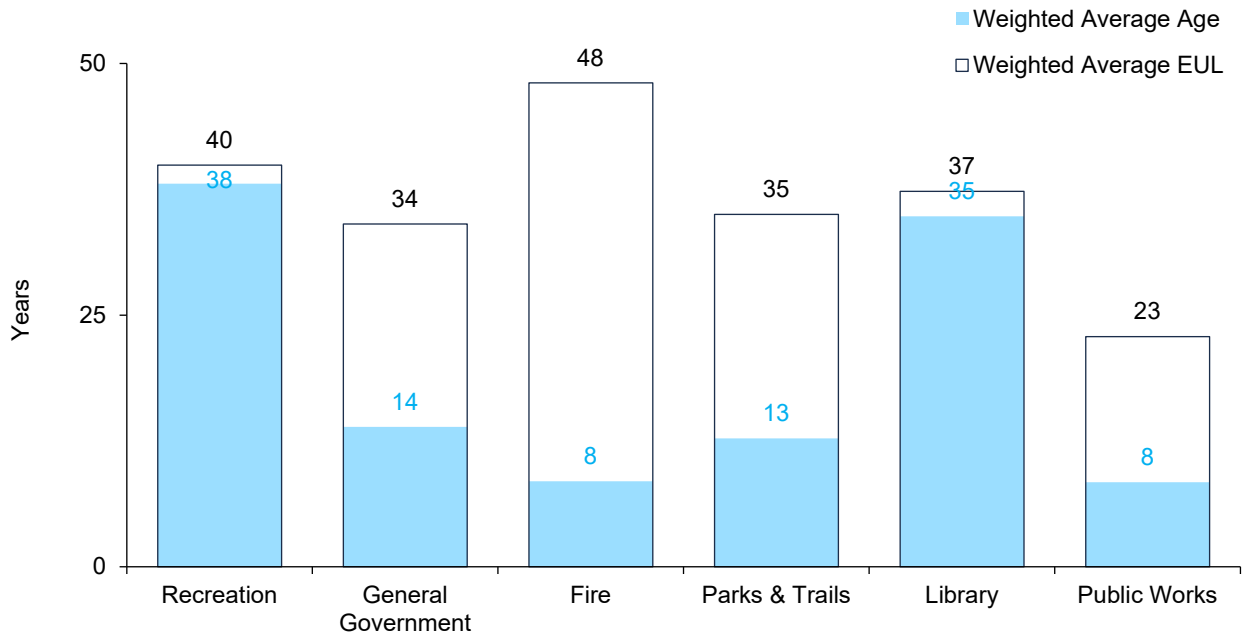
Figure 19 Asset Condition – Buildings & Facilities: By Department



Age Profile

Figure 21 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

Figure 20 Estimated Useful Life vs. Asset Age – Buildings & Facilities



Age analysis reveals that, on average, based on acquisition years, most library and recreation assets have consumed nearly 100% of their established useful life. Once again, this analysis is presented only at the site level, rather than at the individual element or component level. Useful and meaningful age analysis for buildings is entirely predicated on effective componentization.

Current Approach to Lifecycle Management

Buildings and facilities are assessed using standard building condition assessment (BCA) criteria. However, this data is not currently integrated with the Town's asset register. As buildings and facilities are componentized, BCA data can be more effectively integrated with the asset register.

10-Year Replacement Forecast

The table below summarizes the projected cost of lifecycle activities (capital replacement only) that will need to be undertaken over the next 10 years to support current levels of service.

Table 14 System-generated 10-Year Replacement Forecast – Buildings & Facilities

Segment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Recreation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
General Government	$385k	$0	$0	$0	$0	$0	$0	$0	$0	$0
Fire	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Parks & Trails	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Library	$3.3m	$0	$0	$0	$0	$0	$0	$0	$0	$0
Public Works	$0	$0	$0	$0	$0	$68k	$0	$0	$0	$0
Total	**$3.7m**	**$0**	**$0**	**$0**	**$0**	**$68k**	**$0**	**$0**	**$0**	**$0**

These projections are generated in Citywide and rely on the data available in the asset register. As assessed condition data was not available for any buildings assets, only age was used to determine forthcoming replacement needs. Buildings and facilities often contain thousands of assets, each with its own estimated useful life. Currently, however, as the Town's buildings are not fully componentized, there are only 34 assets in the register. This limits the extent to which accurate forecasts can be created.

Land Improvements

Bracebridge's Land Improvements portfolio includes parking lots, various sports fields and courts, and docks. The total current replacement of land improvements is estimated at approximately $17.9 million.

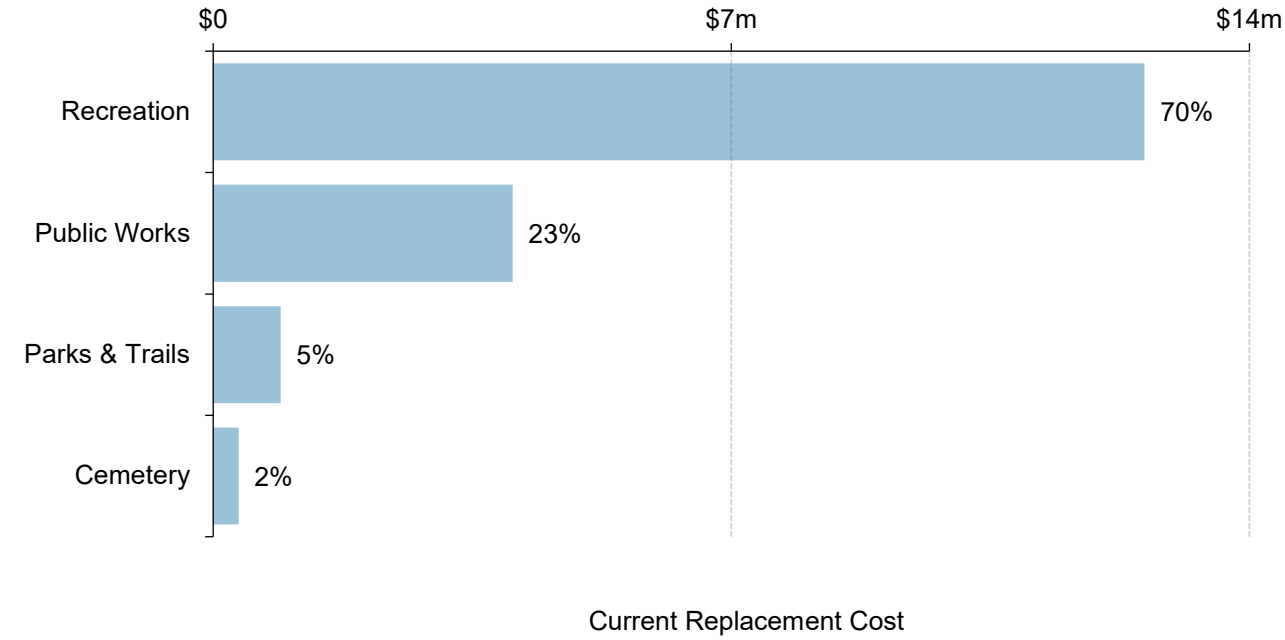
Inventory and Valuation

Table 15 summarizes the quantity and current replacement cost of all land improvements assets available in the Town's asset register. Recreation accounts for the largest share of this asset group.

Table 15 Detailed Asset Inventory – Land Improvements

Segment	Quantity	Unit of Measure	Replacement Cost
Recreation	64	Assets	$12,582,330
Public Works (Parking Lots)	23	Assets	$4,046,213
Parks & Trails	7	Assets	$912,774
Cemetery	8	Assets	$344,827
Total			**$17,886,144**

Figure 21 Portfolio Valuation – Land Improvements



Asset Condition

Figure 23 summarizes the replacement cost-weighted condition of the Town's vehicles portfolio. Based on age data only, 43% of assets are in fair or better condition, the remaining 57% are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

Figure 22 Asset Condition – Land Improvements: Overall

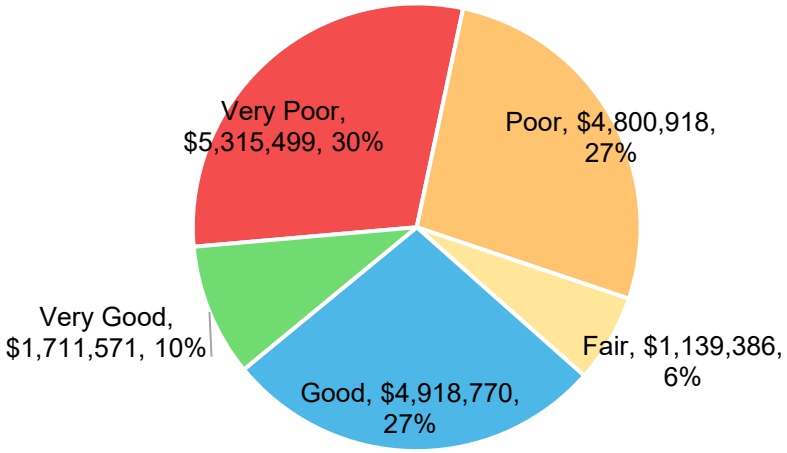
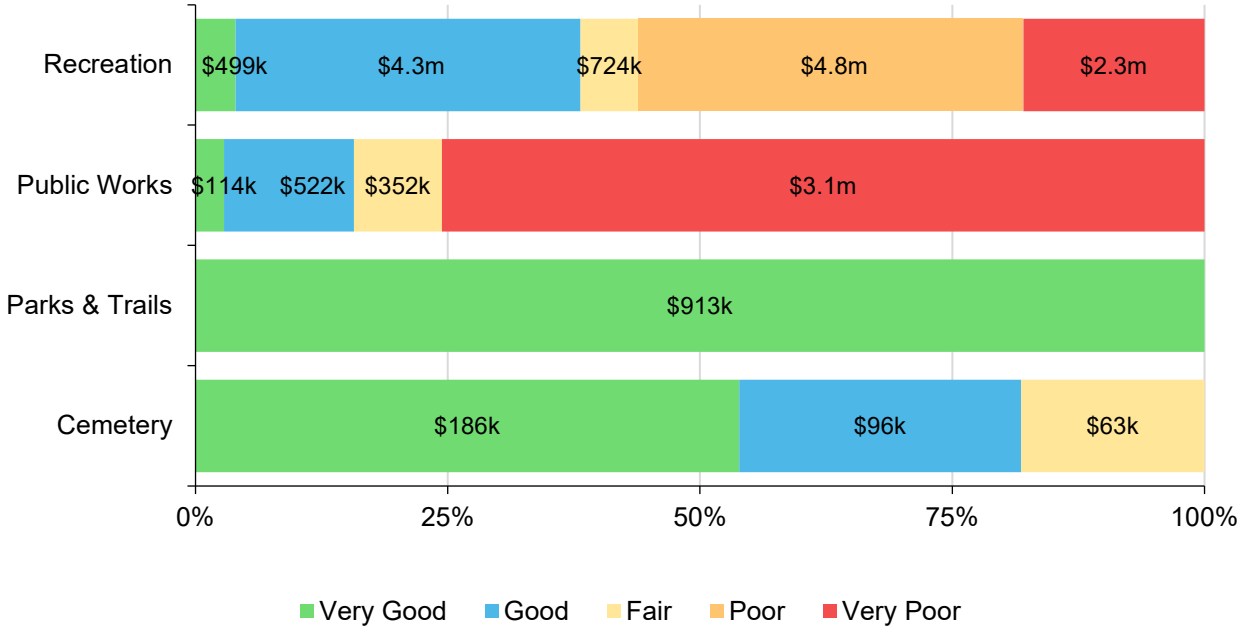


Figure 24 summarizes the age-based condition of land improvements by each department. Assets in poor or worse condition are concentrated primarily in public works, consisting mostly of parking lots and associated infrastructure.

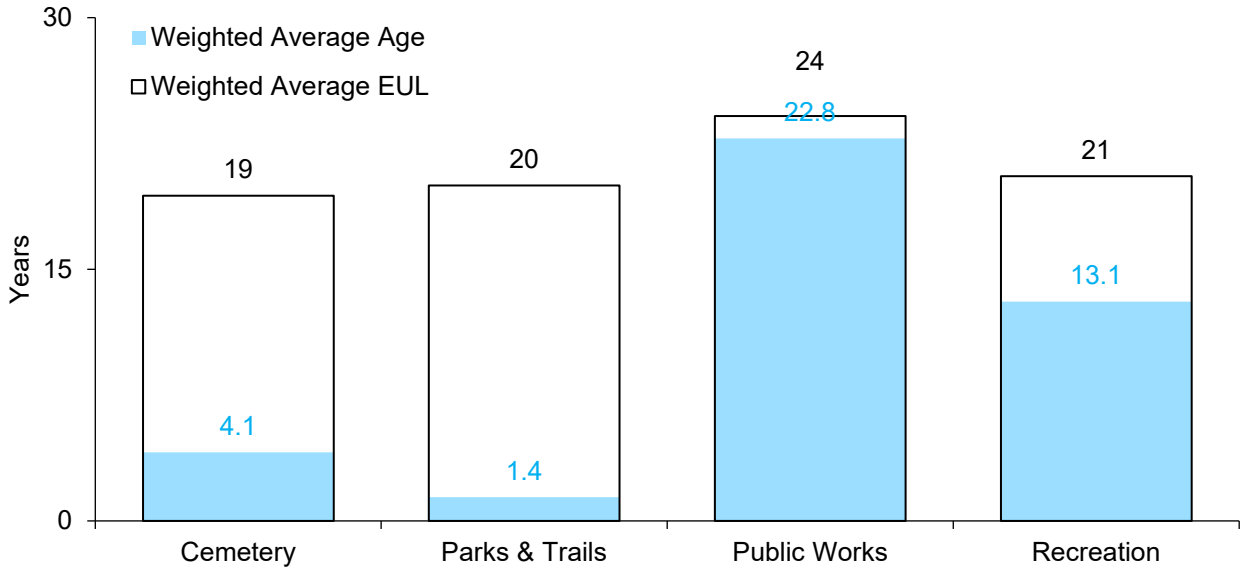
Figure 23 Asset Condition – Land Improvements: By Department



Age Profile

Figure 25 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

Figure 24 Estimated Useful Life vs. Asset Age – Land Improvements



Age analysis reveals that, on average, most public works assets are in the latter stages of their expected life, with an average weighted age of 22.8 years against an EUL of 24 years. Recreation assets are also in the latter stages of their expected design life.

Current Approach to Lifecycle Management

Some targeted condition assessment programs are in place. However, an expanded and more formal approach to the completion of assessments and the cataloguing of outcomes related to condition assessment should be integrated with the Town's asset management system for greater program effectiveness. Most land improvement assets are not critical infrastructure; their condition assessments can be conducted as part of other more involved inspections, e.g., building condition assessments.

10-Year Replacement Forecast

The table below summarizes the projected cost of lifecycle activities (capital replacement only) that will need to be undertaken over the next 10 years to support current levels of service.

Table 16 System-generated 10-Year Replacement Forecast – Land Improvements

Segment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Recreation	$0	$391k	$0	$0	$0	$770k	$4.0m	$48k	$146k	$44k
Public Works	$0	$0	$0	$0	$0	$0	$0	$0	$38k	$68k
Parks & Trails	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cemetery	$0	$0	$0	$0	$0	$0	$0	$0	$39k	$44k
Total	**$0**	**$391k**	**$0**	**$0**	**$0**	**$770k**	**$4.0m**	**$48k**	**$223k**	**$156k**

These projections are generated in Citywide and rely on the data available in the asset register. For land improvements, no condition information was available. As a result, this system-generated 10-year forecast relies only on asset age and replacement cost. These projections can be different from actual capital forecasts. Consistent data updates, especially condition, will improve the alignment between the system generated expenditure requirements, and the Town's capital expenditure forecasts.

Vehicles

Bracebridge's Vehicles portfolio consists of 68 vehicles that provide a range of general and essential services, such as public works, administration, by-law enforcement, and fire services. The estimated total current replacement value of these vehicles is $13.8 million.

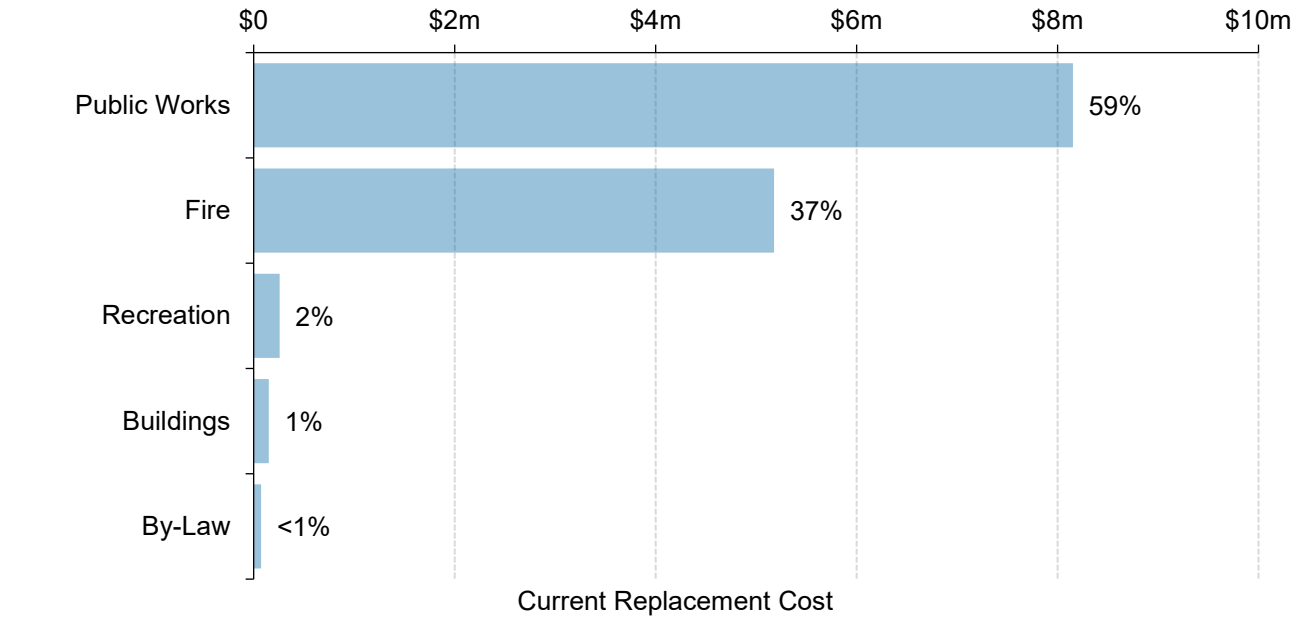
Inventory and Valuation

Table 17 summarizes the quantity and current replacement cost of all vehicle assets available in the Town's asset register. Public works and fire services account for the largest share of the vehicles portfolio.

Table 17 Detailed Asset Inventory – Vehicles

Segment	Quantity	Unit of Measure	Replacement Cost
Public Works	44	Assets	$8,152,317
Fire	14	Assets	$5,179,395
Recreation	4	Assets	$257,964
Buildings	4	Assets	$150,153
By-Law	2	Assets	$73,652
Total	**68**		**$13,813,481**

Figure 25 Portfolio Valuation – Vehicles



Asset Condition

Figure 27 summarizes the replacement cost-weighted condition of the Town's vehicles portfolio. Based primarily on assessed condition data (Fire and Public Works), 87% of vehicles are in fair or better condition, with the remaining 13% are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

Condition data was available for 80% of vehicles, based on replacement costs; age was used to estimate condition for the remaining 20% of assets.

Figure 26 Asset Condition – Vehicles: Overall

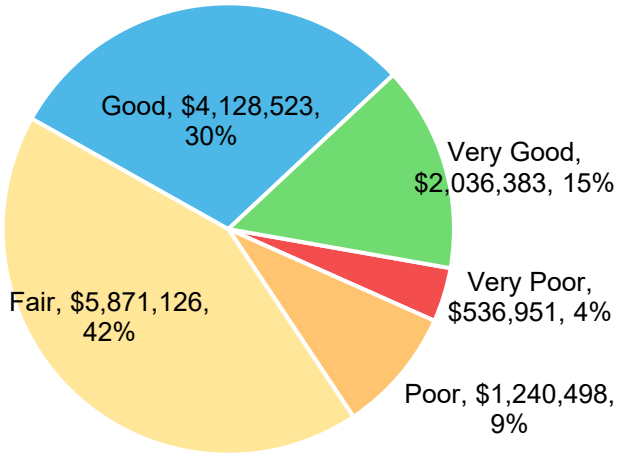
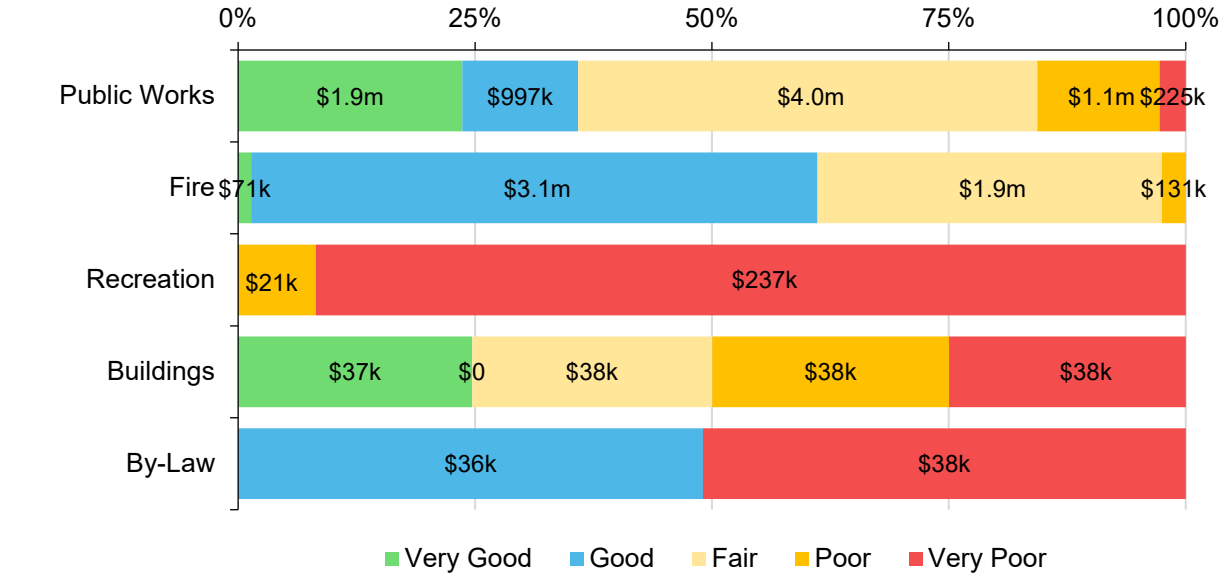


Figure 28 summarizes the condition of vehicles by each department. The vast majority of vehicles that support critical services such as fire are in fair or better condition. Vehicles in poor or worse condition are concentrated primarily in recreation and by-law services.

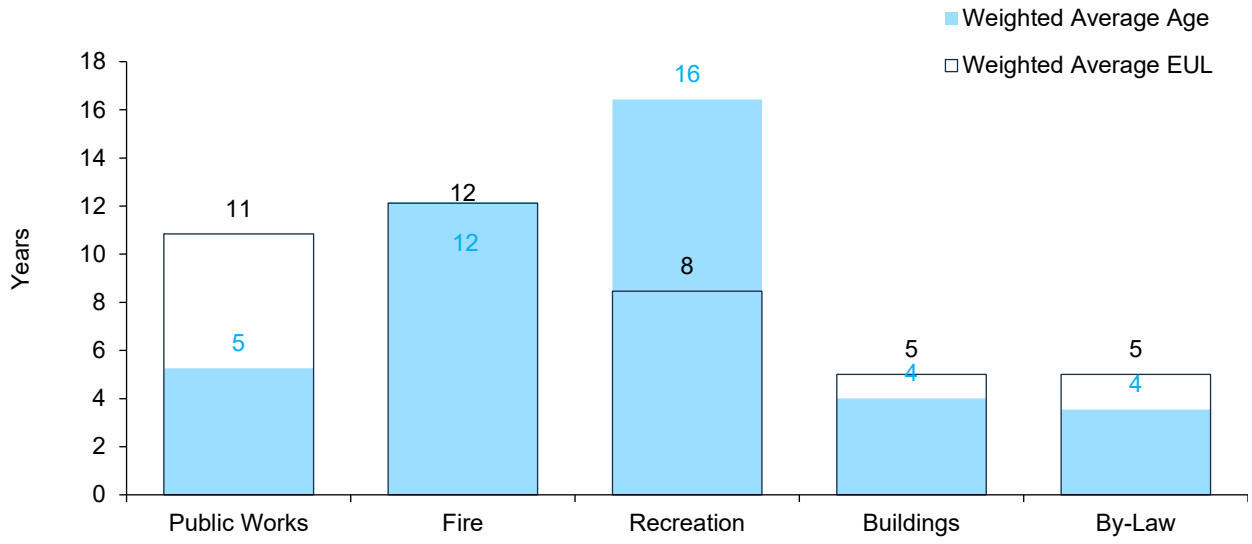
Figure 27 Asset Condition – Vehicles: By Department



Age Profile

Figure 29 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

Figure 28 Estimated Useful Life vs. Asset Age – Vehicles



Age analysis reveals that, on average, most vehicles are in the latter stages of their expected life. Vehicles in recreation remain in service well beyond their established useful life.

Current Approach to Lifecycle Management

Condition assessments reflect annual inspections completed by vendor serviced repair centres. The outcome of the repairs quantifies, with vehicle age and use, the vehicle's approximate overall condition rating. The Town also endeavours to meet all regulatory requirement for vehicles supporting critical services, e.g., fire. Age remains the driving factor for asset replacement.

10-Year Replacement Forecast

The table below summarizes the projected cost of lifecycle activities (capital replacement only) that will need to be undertaken over the next 10 years to support current levels of service.

Table 18 System-generated 10-Year Replacement Forecast – Vehicles

Segment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Public Works	$206k	$300k	$0	$0	$779k	$2.2m	$2.2m	$370k	$1.0m	$1.5m
Fire	$0	$131k	$131k	$0	$71k	$0	$1.9m	$131k	$0	$71k
Recreation	$0	$21k	$0	$0	$0	$59k	$21k	$0	$0	$0
Buildings	$0	$38k	$38k	$0	$37k	$38k	$38k	$38k	$0	$37k
By-Law	$0	$0	$0	$36k	$0	$38k	$0	$0	$36k	$0
Total	**$206k**	**$490k**	**$169k**	**$36k**	**$886k**	**$2.3m**	**$4.2m**	**$540k**	**$1.1m**	**$1.6m**

These projections are generated in Citywide and rely on the data available in the asset register. For some vehicles, no condition information was available. As a result, this system-generated 10-year forecast relies only on asset age and replacement cost for these assets. These projections can be different from actual capital forecasts. Consistent data updates, especially condition, and asset acquisitions and disposals will improve the alignment between the system generated expenditure requirements, and the Town's capital expenditure forecasts.

Machinery & Equipment

Bracebridge's Machinery & Equipment portfolio includes 216 pooled assets that support a variety of general and essential services, including recreation and fire. The total current replacement of machinery & equipment is estimated at approximately $12.8 million.

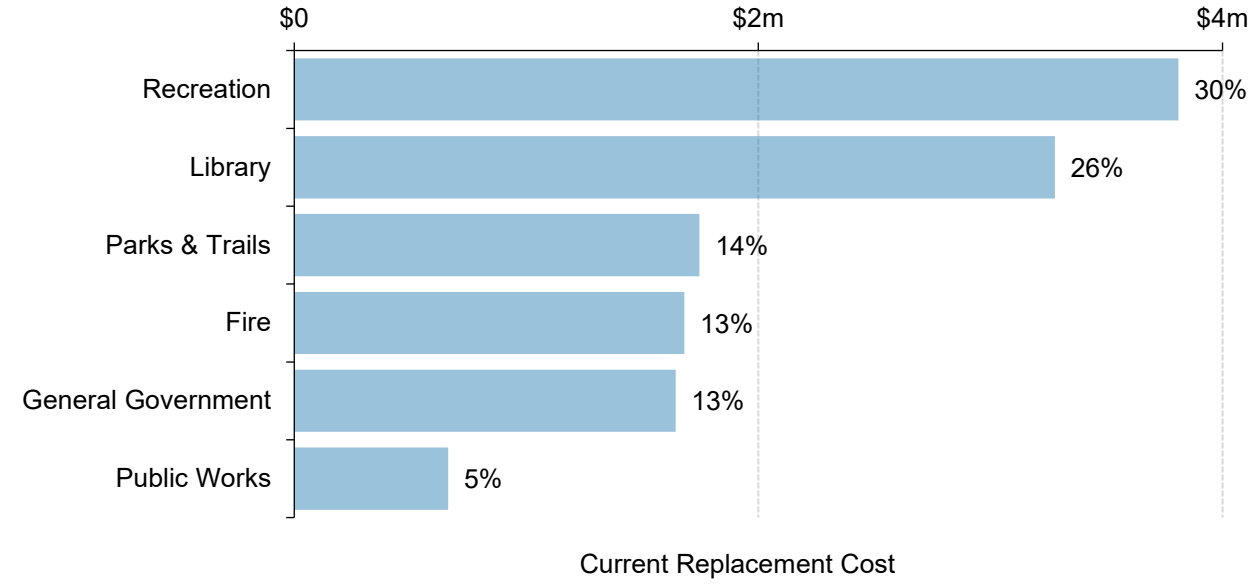
Inventory and Valuation

Table 19 summarizes the quantity and current replacement cost of all machinery & equipment assets available in the Town's asset register.

Table 19 Detailed Asset Inventory – Machinery & Equipment

Segment	Quantity	Unit of Measure	Replacement Cost
Recreation	67	Pooled Assets	$3,810,290
Library	29	Pooled Assets	$3,277,554
Parks & Trails	22	Pooled Assets	$1,746,105
Fire	74	Pooled Assets	$1,680,735
General Government	13	Pooled Assets	$1,643,168
Public Works	11	Pooled Assets	$663,396
Total	**216**		**$12,821,248**

Figure 29 Portfolio Valuation – Machinery & Equipment



Asset Condition

Figure 31 summarizes the replacement cost-weighted condition of the Town's machinery & equipment portfolio. Based only on age data, 45% of assets are in fair or better condition; the remaining 55% are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

Figure 30 Asset Condition – Machinery & Equipment: Overall

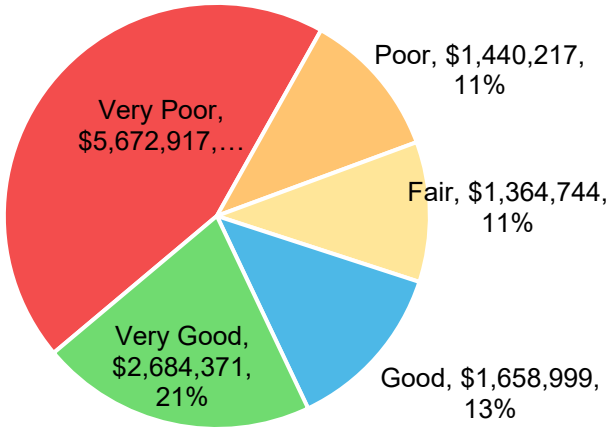
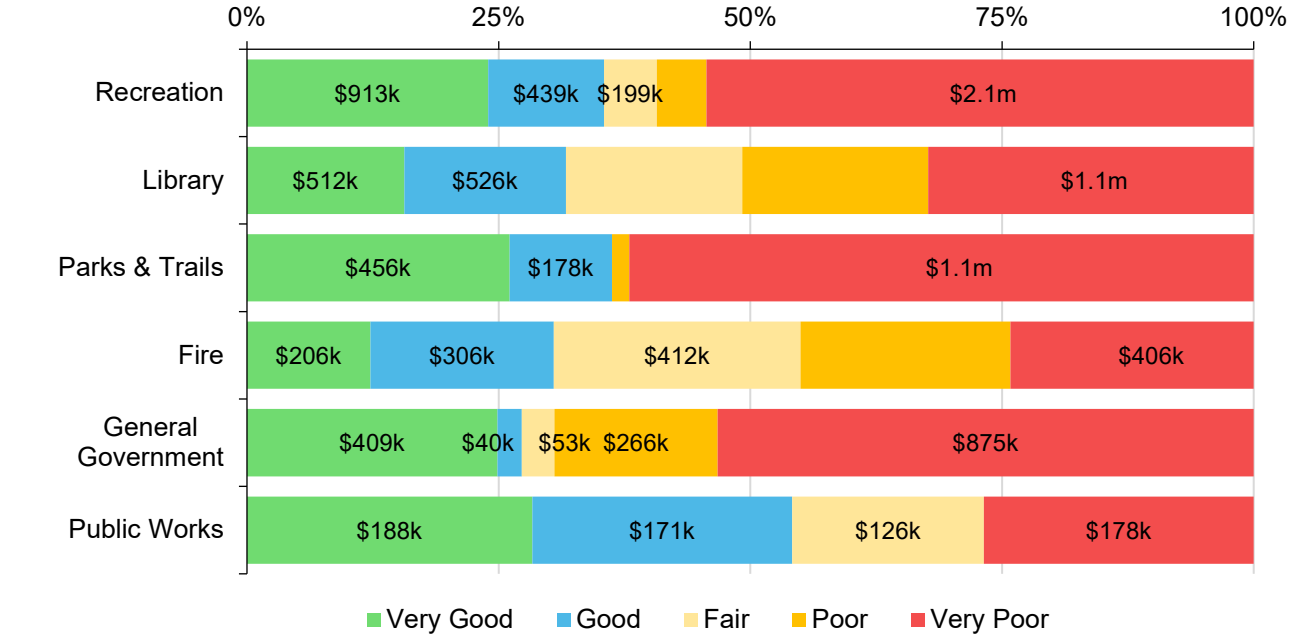


Figure 32 summarizes the age-based condition of machinery & equipment by each department. The majority of assets that support fire services are in fair or better condition. Substantial portions of all departmental machinery & equipment assets are in poor or worse condition.

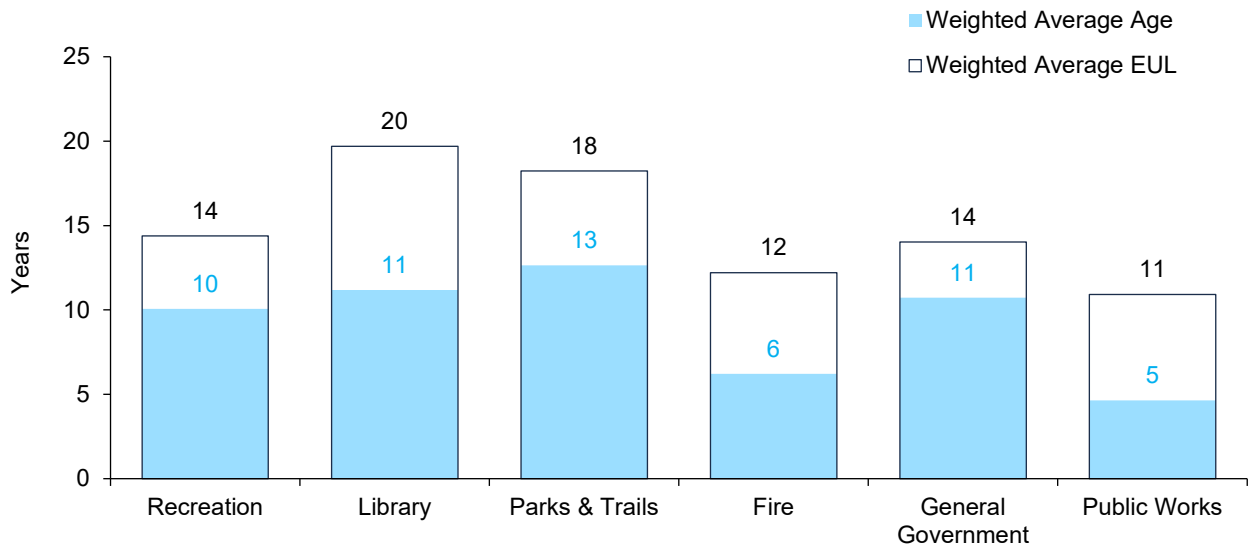
Figure 31 Asset Condition – Machinery & Equipment: By Department



Age Profile

Figure 33 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

Figure 32 Estimated Useful Life vs. Asset Age – Machinery & Equipment



Age analysis reveals that, on average, with the exception of fire services and public works, most machinery & equipment assets are in the latter stages of their expected life.

Current Approach to Lifecycle Management

Condition assessments are estimated as part of inspections completed at vendor serviced inspection centres. As with vehicles, the Town endeavours to meet all safety and regulatory requirements associated with critical services, such as fire. Inspections are used to determine appropriate repair or replacement priorities for fire equipment. However, age remains the driving factor behind asset replacements.

10-Year Replacement Forecast

The table below summarizes the projected cost of lifecycle activities (capital replacement only) that will need to be undertaken over the next 10 years to support current levels of service.

Table 20 System-generated 10-Year Replacement Forecast – Machinery & Equipment

Segment	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Recreation	$421k	$89k	$513k	$195k	$199k	$6k	$384k	$49k	$39k	$336k
Library	$144k	$133k	$125k	$137k	$184k	$149k	$158k	$147k	$158k	$162k
Parks & Trails	$0	$38k	$127k	$9k	$21k	$8k	$0	$23k	$0	$36k
Fire	$178k	$130k	$30k	$86k	$235k	$347k	$103k	$25k	$70k	$111k
General Government	$0	$0	$0	$0	$86k	$20k	$0	$266k	$480k	$8k
Public Works	$96k	$0	$0	$0	$125k	$19k	$84k	$0	$0	$188k
Total	**$839k**	**$391k**	**$794k**	**$427k**	**$850k**	**$549k**	**$729k**	**$511k**	**$747k**	**$841k**

These projections are generated in Citywide and rely on the data available in the asset register. For machinery & equipment, no condition information was available. As a result, this system-generated 10-year forecast relies only on asset age and replacement cost. These projections can be different from actual capital forecasts. Consistent data updates, especially condition, and asset acquisitions and disposals will improve the alignment between the system generated expenditure requirements, and the Town's capital expenditure forecasts.

Levels of Services

Levels of service (LOS) measure the quality and quantity of service provided, and offer direction for infrastructure investments. They are necessary for performance tracking and reporting. Many agencies attempt to deliver levels of service that cannot be sustainably funded by the existing tax base. This can lead to an eventual drop in quality of service, or increases to tax and utility rates to fund higher service levels.

LOS should be affordable and aligned with the community's long-term vision for itself and the service attributes it most values for different infrastructure programs.

This AMP focuses on providing the Town's current performance levels against metrics required by O. Reg 588/17 for core infrastructure. For non-core assets, recommended KPIs are included, along with the Town's current performance.

Road Network

Table 21 Ontario Regulation 588/17 Community Levels of Service – Road Network

Service Attribute	Qualitative Description	Current Level of Service
Scope	Description, which may include maps, of the road network in the Town and its level of connectivity	See maps for rural and urban roads. The Town's road network includes local and collector roads. These are connected to provincial highways and roads owned and managed by the District of Muskoka.
Quality	Description or images that illustrate the different levels of road class pavement condition.	The majority of the Town's paved and unpaved roads are in fair or better condition. Based on PCI values, deterioration and surface distress is evident for those in a fair rating or below. Assets in poor or worse condition offer lower ride quality.

Table 22 Ontario Regulation 588/17 Technical Levels of Service – Road Network

Service Attribute	Qualitative Description	Current Level of Service
Scope	Lane-km of arterial roads (MMS classes 1 and 2) per land area (km/km^2)	0
	Lane-km of collector roads (MMS classes 3 and 4) per land area (km/km^2)	0.4794 (294.93 lane-km and land area of 615.2 km^2)
	Lane-km of local roads (MMS classes 5 and 6) per land area (km/km^2)	0.4925 (303 lane-km and land area of 615.2 km^2)
Quality	Average pavement condition for paved roads in the Town	78.8
Performance	Average surface condition for unpaved roads in the Town (e.g. excellent, good, fair, poor)	64.5

Figure 33 Road Network Map – Rural Roads

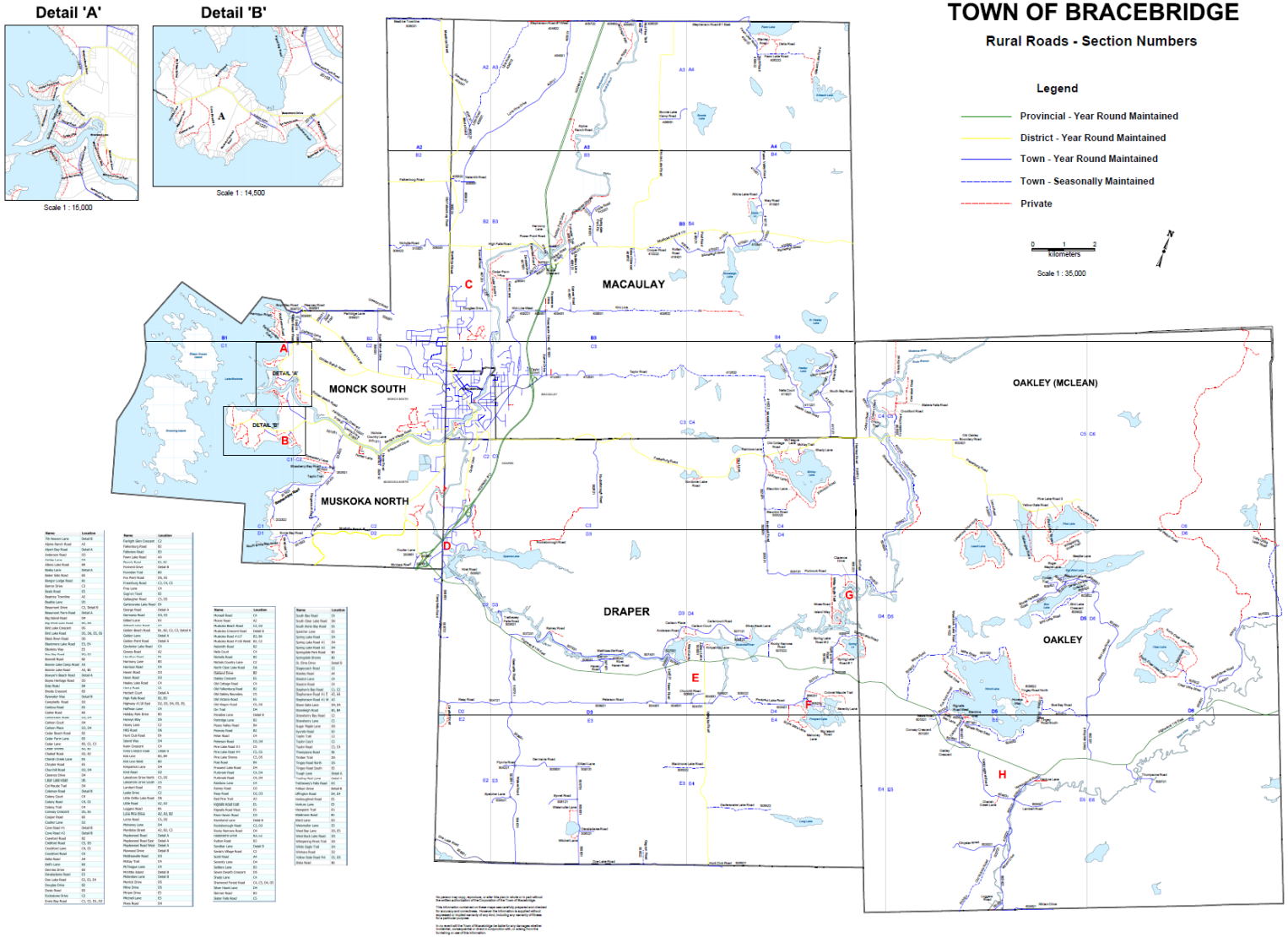
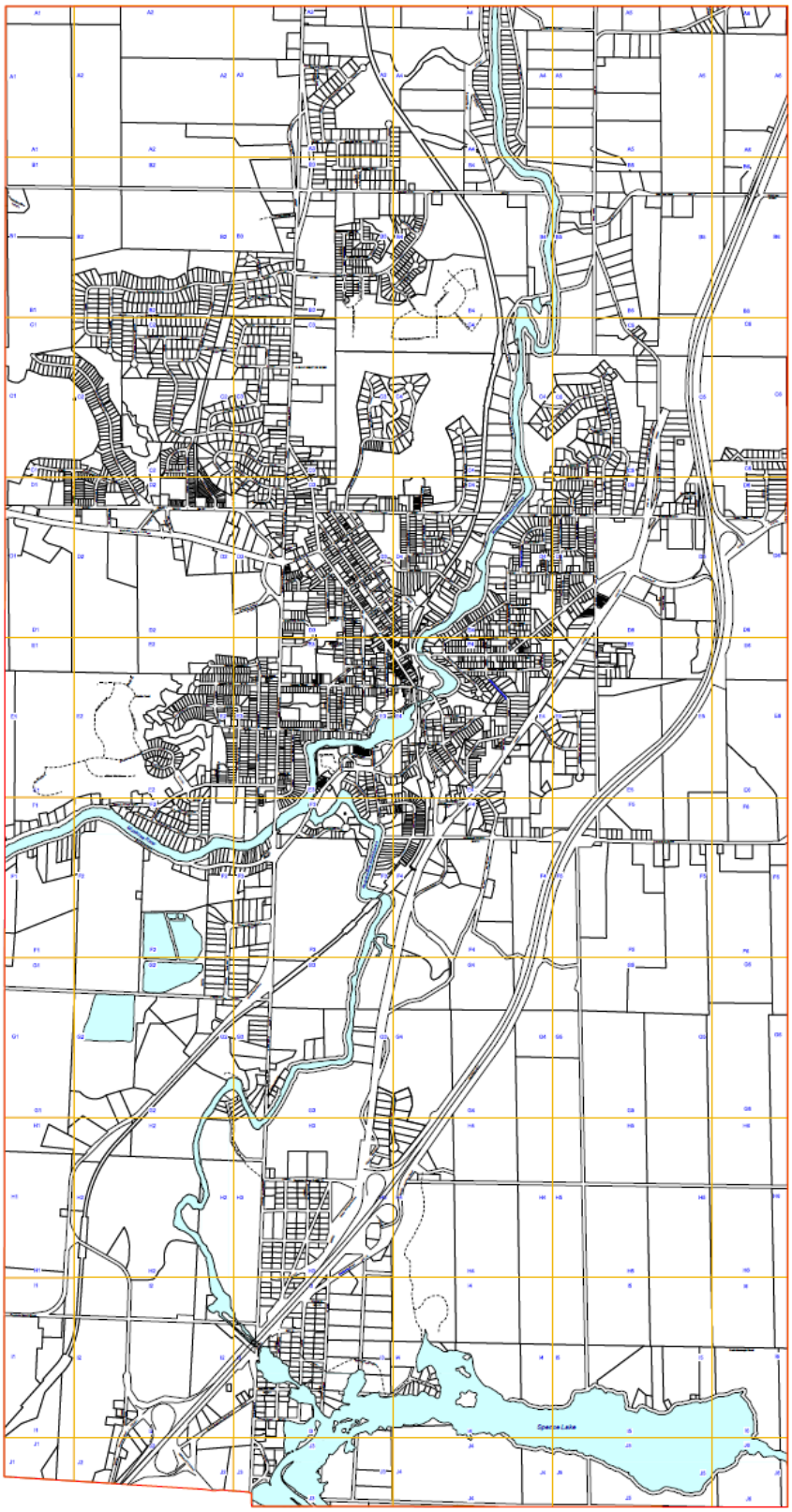


Figure 34 Road Network Map – Urban Roads



Bridges & Culverts

Table 23 Ontario Regulation 588/17 Community Levels of Service – Bridges & Culverts

Service Attribute	Qualitative Description	Current Level of Service
Scope	Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists).	The Town's bridges support all traffic types.
Quality	1. Description or images of the condition of bridges and how this would affect use of the bridges.	The majority of bridges in the Town were assessed as fair or better through recent OSIM inspections, making them safe for use. Bridges with load restrictions are identified. Most culverts were assessed as poor, suggesting need for maintenance work in the next year.
	2. Description or images of the condition of culverts and how this would affect use of the culverts.	

Table 24 Ontario Regulation 588/17 Technical Levels of Service – Bridges & Culverts

Service Attribute	Qualitative Description	Current Level of Service
Scope	Percentage of bridges in the Town with loading or dimensional restrictions.	6 of 17 (35%)
Quality	1. For bridges in the Town, the average bridge condition index value.	67
	2. For structural culverts in the Town, the average bridge condition index value.	61

Stormwater Network

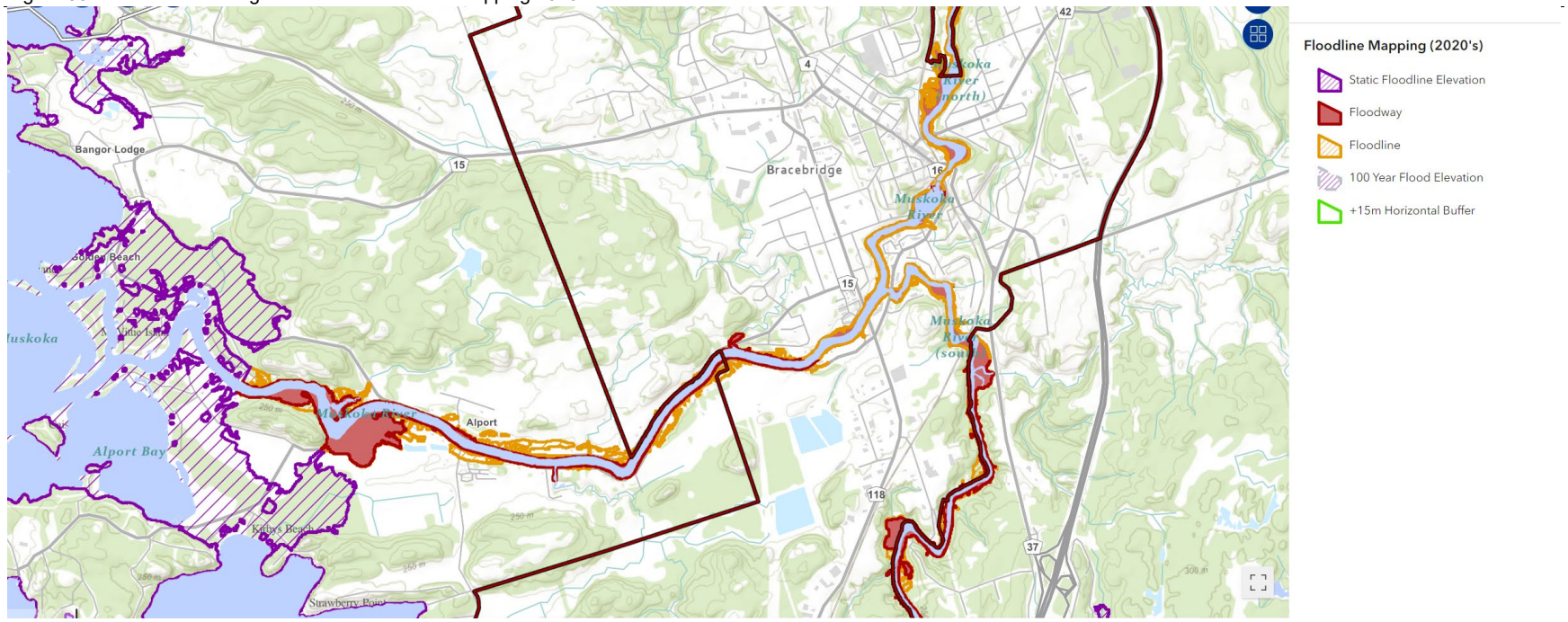
Table 25 Ontario Regulation 588/17 Community Levels of Service – Stormwater Network

Service Attribute	Qualitative Description	Current Level of Service
Scope	Description, which may include maps, of the user groups or areas of the Town that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system.	See Figure 36Figure 17, which shows areas of the Town adjacent to the Muskoka River and Black River that may experience flooding during a 100-year flood event.

Table 26 Ontario Regulation 588/17 Technical Levels of Service – Stormwater Network

Service Attribute	Qualitative Description	Current Level of Service
Scope	1. Percentage of properties in municipality resilient to a 100-year storm.	75% (staff estimate based on professional judgement)
	2. Percentage of the municipal stormwater management system resilient to a 5-year storm.	90% (staff estimate best on professional judgement)

Figure 35 Town of Bracebridge Floodline and LiDAR Mapping 2020s



Non-core Assets

The table below summarize Bracebridge's current levels of service with respect its non-core assets. O. Reg 588/17 does not include any prescribed metrics that must be reported on for non-core assets.

Table 27 Levels of Service KPIs for Non-core Assets

Asset Category	Service Attribute	KPI	Current Performance
Buildings	Quality	Percentage of buildings in fair or better condition	70%
Buildings	Financial Sustainability	Current capital reinvestment rate	0.6%
Land Improvements	Quality	Percentage of land improvement assets in fair or better condition	43%
Land Improvements	Financial Sustainability	Current capital reinvestment rate	1.1%
Machinery & Equipment	Quality	Percentage of machinery & equipment assets in fair or better condition	45%
Machinery & Equipment	Financial Sustainability	Current capital reinvestment rate	0.8%
Vehicles	Quality	Percentage of vehicles in fair or better condition	87%
Vehicles	Financial Sustainability	Current capital reinvestment rate	2.9%

Risk Analysis

The level of risk an asset carries determines how closely it is monitored and maintained, including the frequency of various lifecycle activities, and the investments it requires on an ongoing basis.

Some assets are also more important to the community than others, based on their financial and economic significance, their role in delivering essential services, the impact of their failure on public health and safety, and the extent to which they support a high quality of life for community stakeholders.

A risk-based approach to infrastructure spending can help prioritize capital projects to channel funds where they are needed most. Rather than taking the worst-first approach, a risk-based approach ranks assets based on their condition/performance as well as their criticality—providing a more complete rationale for project selection.

Asset-level Risk

Asset-level risk ratings attempt to rank assets based on their criticality and likelihood of failure. This risk rating is a product of two variables: the probability that an asset will fail, and the variety of consequences of that failure event. It can be a qualitative or a quantitative measurement that can be used to rank assets and projects, identify appropriate lifecycle strategies, optimize short- and long-term budgets, minimize service disruptions, and maintain public health and safety.

Approach to Risk

The approach used in this asset management plan produces a quantitative measurement of risk associated for each asset. The probability and consequence of failure are each scored from 1 to 5, producing a minimum risk rating of 1 for the lowest risk assets, and a maximum risk index of 25 for the highest risk assets.

These calculations incorporate available asset attribute data to produce a risk matrix. For assets lacking detailed attribute information, a more general risk model has been created and applied to all such assets, drawing on common practices employed by municipalities to estimate the probability and consequences of failure.

Table 28 Risk Ratings

Risk Rating	Description
Very Low (1-4)	Assets in excellent condition with minimal risk of failure; failure event may have negligible financial, economic, or social impact.
Low (5-7)	Assets in good condition with low risk of failure; failure event may result in minor financial, economic, or social impact.
Moderate (8-9)	Assets showing moderate wear with moderate risk of failure; asset failure may result in noticeable, adverse financial, economic, or social consequences.
High (10-14)	Assets needing significant repairs soon with high risk of failure; failure may result in substantial, critical financial, economic, or social consequences.
Very High (15-25)	Assets in poor condition with the highest risk of failure; failure consequences are severe or catastrophic, causing significant financial, economic, or social disruptions, requiring urgent action.

Probability of Failure

Several factors can help decision-makers estimate the probability or likelihood of an asset's failure. Typically, these can include the asset's condition, age, previous performance history, capacity challenges, and exposure to extreme weather events, such as flooding and ice jams—both a growing concern for municipalities in Canada.

Each of these factors and individual attributes must also be weighted, out of 100%, based on how well it can predict and explain the likelihood of asset failure. For example, recent condition assessments may be more dependable than age in helping predict asset failure, and would be ranked and weighted higher.

Once weightings are assigned, a scale is developed for each attribute so that a probability of failure rating from 1 to 5 can be assigned at each interval, reflecting how likely the asset is to fail at a particular level.

Consequence of Failure

The consequence of failure describes the overall, aggregate effect that an asset's failure will have on an organization's asset management goals. Consequences of failure can range from non-eventful to severe. An uneven sidewalk with some surface distress may pose a minor inconvenience to residents. However, a bridge failure poses critical health and safety risks, and may disconnect areas of the Town.

As with probability of failure, available asset attribute data is used to aid in the calculation of an asset's criticality, or consequence of failure, rating. Common types of adverse consequence of asset failure may include operational, direct financial, and socio-economic impacts.

Similar to measuring the probability of failure, these consequence types are ranked, and assigned a weighting out of 100%, reflecting their relative perceived severity. Available asset attributes are then used to help measure or quantify these consequences so that they can be incorporated into the risk models.

Once weightings are assigned to each consequence of failure type, a unique scale is developed so that a consequence of failure rating from 1 to 5 can be assigned at each interval, reflecting the relative severity of asset failure. Similar scales are developed for each attribute that is used to help approximate a particular consequence of failure.

Risk Models

The models used in this AMP have been developed in Citywide Assets, the Town's asset register application, and applied to the existing asset base. These models are provisional and intended as a foundational framework. They are expected to evolve over time as new information regarding asset attributes becomes available and is integrated into the analytical process.

For some assets, such as roads, contextual attributes such as AADT values were available. This data was used to further develop consequence of failure ratings and help distinguish one asset from another based on its criticality.

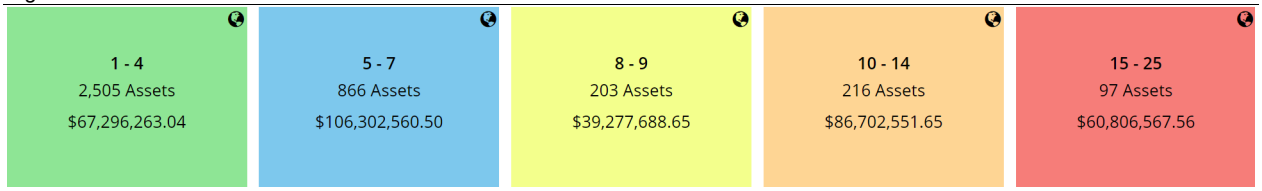
For assets without such additional, contextual information, a more general risk model was developed and applied. For these assets, replacement cost, service area, and asset type were used as the only data fields to approximate the consequence of their failure.

It is important to note that these models are not designed to guide annual capital expenditures at this time. Rather, they serve as an initial step in understanding and managing asset-level risk, providing a basis upon which further refinements and enhancements can be built.

Risk Matrix

The risk matrix below classifies the Town's assets based on their respective risk ratings, as determined by the risk models. The analysis shows that 97 assets, with a combined replacement cost of approximately $60.8 million, carried a very high risk rating, based on both their probability and consequence of failure. An additional 216 assets, with a total current replacement cost of $86.7 million, carried a high risk rating.

Figure 36 Risk Matrix



Assets in the left-most box, with the lowest risk rating ranging from 1-4, require minimal immediate attention, allowing for routine maintenance and monitoring. Conversely, assets in the right-most box, with the highest risk rating ranging from 15-25, should be prioritized for intervention, including preventive measures, repairs, or replacements to mitigate potential impacts.

By systematically addressing assets according to their risk ratings, infrastructure and asset management activities can be effectively prioritized, ensuring resources are allocated to maintain safety, reliability, and performance.

General and Corporate Risks

In addition to asset-level risk, the Town may also face risk associated with not executing key lifecycle activities, including repairs, rehabilitation, and replacement of critical assets. These are summarized in Table 29 below.

Table 29 General Corporate Risks

Asset Category	Risks of not completing lifecycle activities
Roads, Bridges, and Culverts	**Infrastructure Failure**: Increased risk of road surface degradation, bridge collapses, safety hazards, and traffic disruptions, leading to potential injuries and fatalities. **Cost Implications**: Higher repair costs due to delayed maintenance, reduced asset lifespan, and emergency repairs. **Legal and Regulatory**: Potential legal liabilities and fines for non-compliance with MMS, safety standards, and regulations.
Stormwater (Linear and Appurtenances)	**Flooding and Property Damage**: Increased risk of flooding, property damage, erosion, and loss of infrastructure functionality during storm events. **Environmental Impact**: Water quality degradation, habitat disruption, and public health risks from untreated stormwater runoff. **Costs**: Higher maintenance costs, emergency response expenses, and potential fines for non-compliance with environmental regulations.
Facilities	**Safety and Operational Risks**: Deterioration of building structures leading to safety hazards for occupants and visitors. **Operational Efficiency**: Decreased efficiency due to equipment failures, energy inefficiencies, and operational disruptions. **Compliance Issues**: Potential violations of building codes, accessibility standards, and workplace safety regulations, resulting in fines and legal liabilities.
Vehicles	**Vehicle Breakdowns**: Increased risk of breakdowns, downtime, and service disruptions affecting public safety and emergency response capabilities. **Costs**: Higher repair expenses, reduced vehicle lifespan, and increased operational costs due to inefficient fleet management. **Safety Concerns**: Potential safety risks for emergency responders and the public from poorly maintained vehicles and equipment. **Operational Disruptions**: Reduced readiness and response effectiveness during emergencies due to equipment failures.

Asset Category	Risks of not completing lifecycle activities
	Regulatory Compliance: Potential violations of safety standards and regulations, impacting the ability to provide timely and effective emergency services.
Equipment	**Operational Disruptions**: Equipment breakdowns causing service interruptions, and reduced operational capacity. **Costs**: Increased repair and replacement costs, inefficient use of resources, and decreased asset lifespan. **Safety and Compliance**: Safety hazards, regulatory non-compliance, and potential fines for failing to meet operational and safety standards.

Key Considerations

- Since risk ratings rely on many factors beyond an asset's physical condition or age, assets in a state of disrepair can sometimes be classified as low risk, despite their poor condition rating. In such cases, although the probability of failure for these assets may be high, their consequence of failure ratings was determined to be low based on the attributes used and the data available.

- Similarly, assets in very good condition can receive a moderate to high risk rating despite a low probability of failure. These assets may be deemed as highly critical to the Town based on their costs, economic importance, social significance, and other factors.

- Continued calibration of an asset's criticality and regular data updates are needed to ensure these models more accurately reflect an asset's actual risk profile. As these models are further calibrated with additional contextual data, their alignment with capital planning will improve, allowing for a risk-based approach to prioritizing maintenance and capital expenditures.

- Asset-level risk assessments and documented awareness of corporate and strategic risk provide essential information to help staff prioritize annual maintenance workplans and capital projects. Both approaches supplement the more detailed studies and processes undertaken by all program areas to ensure assets can continue to provide safe and effective service levels to Bracebridge residents and visitors.

Asset Management and Climate Change

Climate change and extreme weather pose substantial risks to communities across Canada. In its 2023 report, the Insurance Bureau of Canada estimated that severe weather, including flooding, storms, and wildfires, caused over $3.1 billion in insured damage.

These risks encompass a spectrum of challenges posed by natural and climatic factors, highlighting their potential impact on various asset categories. Changing weather patterns and extreme weather events such as intense rainfalls, snow and ice storms, windstorms, more frequent heat waves, and higher general temperatures can accelerate infrastructure disrepair, making ownership ultimately more expensive for taxpayers.

Due to climate variability and extreme events:

- the estimated baseline design life of assets may need to be reduced;
- the interval between treatments may have to change;
- the types of materials used in treatments may change;
- new technologies may need to be introduced;
- some assets will need premature replacement and upgrading;

Integrating Asset Management With Climate Change

Given its geographical location, Bracebridge is susceptible to flooding and other climate change impacts, such as the destruction of public and private property, shoreline erosion, irregular sedimentation in rivers and lakes, and disruptions to vital infrastructure.

In March 2023, Council approved a Bracebridge Action Plan and Implementation Schedule, the Town-specific portion of the District Municipality of Muskoka's Regional Climate Change Adaptation Plan (ReCAP), which outlines the actions that each Muskoka municipality plans to take to address the most urgent and threatening impacts of climate change.

The Town of Bracebridge Action Plan and Implementation Schedule consists of 30 action items organized into five themes:

1. Development and infrastructure
2. Communication and educational awareness
3. Adaptation programs
4. Emergency response measures
5. Policy change

Each theme includes several action items designed to review current infrastructure, programs, and planning; evaluate safeguards and mitigation programs to better support the community;

build partnerships and collaborate with area partners; and focus on continuous improvement, environmental stewardship, and more. This plan will guide the development of Municipal Budgets and Business Plans and support future climate change adaptation activities.

Growth

Based on Census 2021, the current population of the Town of Bracebridge is 17,305 permanent residents, a growth of 8% from the 2016 Census period. Population is expected to increase to 18,700 permanent residents by 2036, and to nearly 20,000 by 2046.

The 2019 Muskoka District Growth Strategy estimates employment in Bracebridge at approximately 9,000 residents. This is expected to increase to 9,550 by 2036 and 10,000 by 2046.

Key economic sectors include construction, tourism and hospitality, and manufacturing. The Town has also identified educational services, healthcare, geo-tech and green technology, and the arts as emerging sectors.

Key Considerations

- The Town completed its first Transportation Master Plan in 2023 to outline infrastructure investments needs through 2044. If implemented, the Town's road, cycling, and walking infrastructure base would grow by more than 10%, based on current replacement costs, with investments totaling $18.7 million by 2044.This estimate does not include investments by the District of Muskoka, totaling an additional $28.5 million over the same period.
- During summer months, Bracebridge's population increases substantially, by more than 7,000 residents, causing seasonal but substantial added strain on infrastructure. Seasonal population typically comprises approximately 30% of the total population.
- Seasonal growth can also require communities to own and maintain infrastructure that typically exceeds the capacity and functionality required for its permanent population. This also imposes additional burden on permanent residents.
- Both the magnitude and the demographic profile of growth will determine the level of investment that the Town will make in different infrastructure assets. The majority of the Town's population is working age, between 15-60 years old.

Financial Strategy

Each year, the Town of Bracebridge makes important investments in its infrastructure's maintenance, renewal, rehabilitation, and replacement to ensure assets remain in a state of good repair. However, needs typically exceed capacity. In fact, most municipalities continue to struggle with annual infrastructure deficits. Achieving full-funding for infrastructure programs will take many years, and should be phased-in gradually to reduce burden on taxpayers.

This financial strategy is designed for the Town's existing asset portfolio, and is premised on two key inputs: the average annual capital requirements and the average annual funding typically available for capital purposes. The annual requirements are based on the replacement cost of assets and their serviceable life. This figure is calculated for each individual asset, and aggregated to develop category-level values.

The annual funding typically available is determined by averaging historical capital expenditures on infrastructure, inclusive of any allocations to reserves for capital purposes. For Bracebridge, actuals from 2020-2023 were used to determine average annual funding levels. Only reliable and predictable sources of funding are used to benchmark funds that may be available on any given year. For the purpose of this AMP, these funding sources include:

- Revenue from taxation spent on capital works;
- Revenue from taxation allocated to reserves for capital purposes;
- The Canada Community Benefits Fund (CCBF), formerly the federal Gas Tax Fund;
- Ontario Community Benefits Fund (OCIF); and,
- Ontario Municipal Partnership Fund (OMPF);

Although provincial and federal infrastructure programs can change with evolving policy, CCBF, OCIF, and OMPF are considered as permanent and predictable.

Annual Capital Requirements

Table 30 outlines the total average annual capital requirements for existing assets in each asset category. Based on a replacement cost of $360.4 million, annual capital requirements total $10.9 million for the seven asset categories analyzed in this document. The table also illustrates the equivalent target reinvestment rate (ERR), calculated by dividing the annual capital requirements by the total replacement cost of each service area

Table 30 Average Annual Capital Requirements

Asset Category	Replacement Cost	Annual Capital Requirements	Equivalent Target Reinvestment Rate
Road Network	$171,699,157	$4,612,871	2.7%
Bridges & Culverts	$36,285,400	$736,677	2.0%
Stormwater Network	$28,517,407	$441,057	1.5%
Buildings & Facilities	$79,362,794	$2,106,249	2.7%
Land Improvements	$17,886,144	$859,241	4.8%
Machinery & Equipment	$12,821,248	$924,646	7.2%
Vehicles	$13,813,481	$1,236,124	8.9%
Total	**$360,385,631**	**$10,916,865**	**3.0%**

Although there is no industry standard guide on optimal annual investment in infrastructure, the ERRs above provide a useful benchmark for organizations. In 2016, the Canadian Infrastructure Report Card (CIRC) produced an assessment of the health of municipal infrastructure as reported by cities and communities across Canada. The report card also contained recommended reinvestment rates that can also serve as benchmarks for municipalities.

Table 31 provides the CIRC lower and upper reinvestment rate targets for relevant asset groups; no data was available for machinery and fleet assets. The table shows that, on average, municipalities are well below the recommended target reinvestment rates.

Table 31 Canadian Infrastructure Report Card (CIRC) Reinvestment Rate Targets

Asset Category	Lower Target	Upper Target	Municipal Average in 2016
Road Network	2%	3%	1.1%
Bridges & Culverts	1%	1.5%	0.8%
Stormwater Network – Linear	1.0%	1.3%	0.3%
Stormwater Network – Non-linear	1.7%	2.0%	1.3%
Buildings and Facilities	1.7%	2.5%	1.3%

Current Infrastructure Funding Framework

Figure 38 shows funding that has historically been available for infrastructure purposes for that last four years, beginning with 2020, as well as the composition of those funds. The figure shows that on average, $5.4 million is available for infrastructure spending on an annual basis for the Town's current asset portfolio comprising the seven categories in this AMP. On average, approximately 50% of this available funding comes CCBF, OCIF, and OMPF. This figure excludes development charges that may be used for growth-related infrastructure.

Figure 37 Historical Funding Available for Infrastructure Purposes

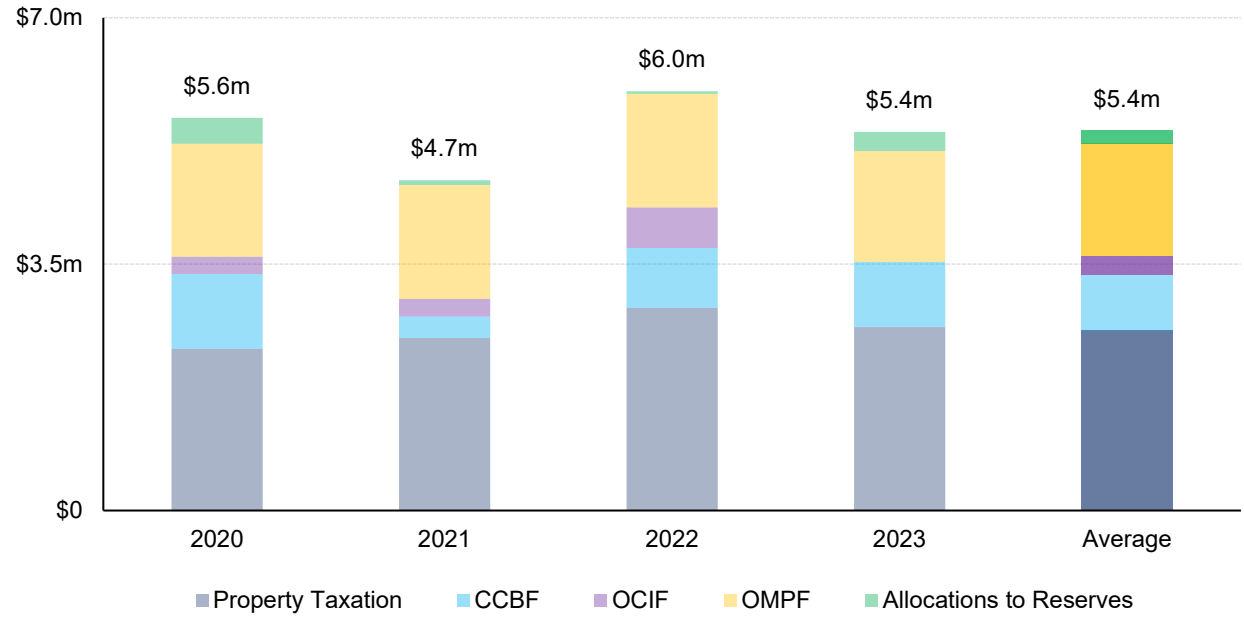


Table 32 summarizes how the above annual 4-year average funding of $5.4 million is allocated across the different asset categories. The OMPF funding is available for general capital purposes and is not allocated to any particular asset category. This average annual funding available figure is used to calculate annual infrastructure deficits and develop a strategy for full funding.

Table 32 Allocation of Average Annual Infrastructure Funding by Asset Category

Asset Category	Taxation	CCBF	OCIF	OMPF	Average Annual Funding Available
Road Network	$1,272,413	$786,706	$267,464		$2,326,583
Bridges & Culverts	$100,342				$100,342
Stormwater Network	$40,800				$40,800
Buildings & Facilities	$436,790				$436,790
Land Improvements	$204,862				$204,862
Machinery & Equipment	$104,810				$104,810
Vehicles	$397,437				$397,437
Non-Program Capital Revenue				$1,604,050	$1,604,050
Allocations to Reserves	$185,125				$185,125
Total	**$2,742,579**	**$786,706**	**$267,464**	**$1,604,050**	**$5,400,799**

Current Funding Levels and Infrastructure Deficits

The table below shows that based on current funding levels, including all own-source revenues and senior government programs, the Town is funding 49% of its annual capital needs, or an actual reinvestment rate of 1.5% against a required rate of 3.0%. This creates an annual infrastructure deficit of $5.5 million.

Table 33 Using OMPF to Reduce Annual Infrastructure Deficit

Asset Category	Total
Average Annual Funding Required	$10,916,865
Average Annual Funding Available	$5,400,799
Annual Deficit	$5,516,066
Current Funding Levels	49%
Current Reinvestment Rate	1.5%

Closing Funding Gaps

Eliminating annual infrastructure funding shortfalls is a difficult and long-term endeavour for municipalities. Considering the Town's current funding position, it will require many years to reach full funding for current assets. This section outlines how the Town of Bracebridge can close annual funding deficits using own-source revenue, i.e., property taxation, and without the use of debt for existing assets.

For 2023, the Town of Bracebridge's actual property tax revenue totaled $18,177,230. To close the annual infrastructure deficit, an additional $5.5 million in annual revenue will need to be raised purely for the asset categories analyzed in this AMP, representing an increase of 30%. This will allow the Town to meet its average annual requirements of $10.9 million.

Table 34 Increase Needed in Property Taxation Revenue to Meet Annual Infrastructure Needs

2023 Property Taxation Revenue	Additional Revenue Needed for Infrastructure	% Increase Needed
$18,177,230	$5,516,066	30%

To achieve this increase, several scenarios have been developed using phase-in periods ranging from five to 20 years. Shorter phase-in periods may place too high a burden on taxpayers, whereas a phase-in period beyond 20 years may see a continued deterioration of infrastructure, leading to larger backlogs.

Table 35 Increase Needed in Property Taxation Revenue to Meet 100% of Average Annual Capital Requirements

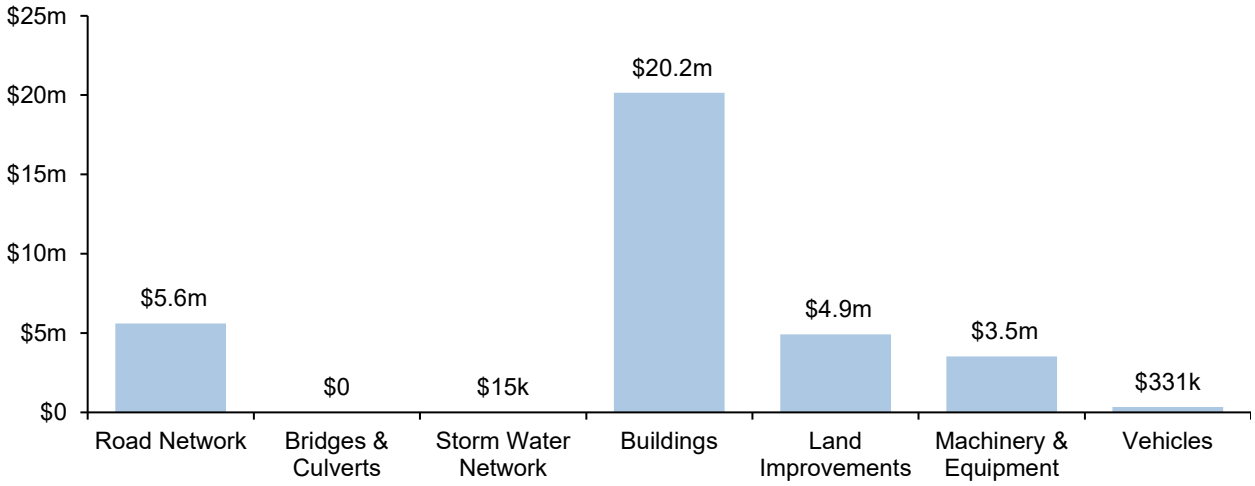
Total % Increase Needed in Annual Property Taxation Revenues	Equivalent Increase Over 5 Years	Equivalent Increase Over 10 Years	Equivalent Increase Over 15 Years	Equivalent Increase Over 20 Years
30%	5.4%	2.7%	1.8%	1.33%

Funding 100% of annual capital requirements ensures that all major capital events, including replacements, are completed as required. Under this scenario, no projects are deferred for future years. This delivers the highest asset performance and customer levels of service.

Infrastructure Backlogs

The annual tax increases proposed are designed to eliminate annual infrastructure deficits. However, they do not address existing backlogs. Figure 39 shows that the current infrastructure backlog totals $34.6 million across all asset categories analyzed in this AMP. However, as many assets did not have condition assessment data available, age was used to estimate backlog figures. As a result, the figure below may be an under- or overstatement of actual asset needs. Condition assessment data will be essential in developing more accurate and credible estimates.

Figure 38 Current Infrastructure Backlog by Asset Category



Eliminating backlogs will require prioritizing projects, ideally through continuous improvements and application of the Town's risk models. This risk-based approach will ensure that project selection is objective, supports delivery of the Town's service level targets, and is in line with long-term strategic objectives.

Reserve Levels and Use of Debt

Table 36 summarizes the size of current infrastructure reserves. Across all asset categories, infrastructure reserves total $20.2 million, or 6% of the total current replacement value of assets. These reserves are available for use for various infrastructure-related expenditures as needed.

Table 36 Infrastructure Reserve Levels vs. Asset Replacement Costs

Reserve	Closing Balance at December 31, 2023
Parking	$26,039
Canada Community Building Fund (CCBF)	$0
Parkland	$184,467
General Government	$809,614
Fire Department	$644,451
By-Law Enforcement	$29,487
Public Works	$1,831,854
Streetlighting	$131,121
Cemetery	$26,361
Parks & Trails	$570,457
Recreation	$574,535
Library	$139,437
Planning and Development	$149,034
Major Infrastructure	$2,785,241
From Land Disposition	$1,423,728
Tax Rate Stabilization	$7,963,089
Building Fees	$2,676,269
Woodchester Villa	$393
Oakley Village Square	$3,000
Annie Williams Memorial Park	$0
MLCC - Library	$54,313
MLCC - General	$5,763
MLCC - Arena	$150,000
MLCC - Fieldhouse	$0
Total	**$20,178,653**

Although there is no consensus in the municipal sector on the levels of reserves for infrastructure sustainability, this funding allows the Town to better prepare for unforeseen project expenditures and reduce fluctuations in tax rates. The reserves can also be used to address existing infrastructure backlogs.

Strategic Use of Development Charges

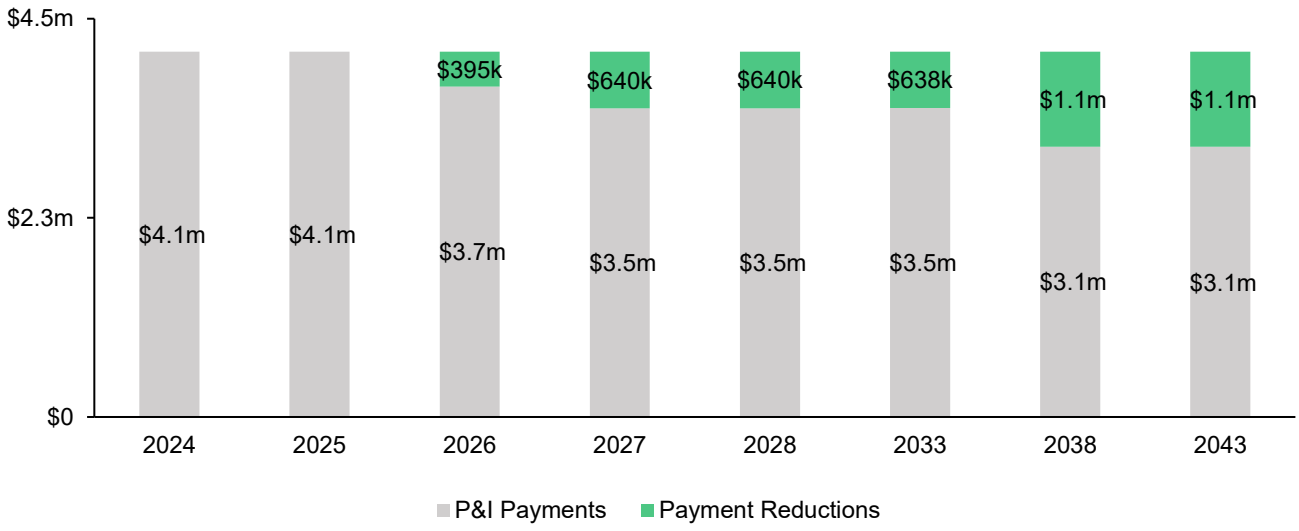
Although not listed above, the Town also has $2.5 million available in its Development Charges (DC) reserve. The use of these funds is more restricted, and dedicated to growth-related projects. However, it is possible that a portion of the projects identified in the Town's DC program contain the reconstruction or upgrade of assets that are currently in a backlog state. Further analysis is required to determine how strategically DC funds can be used to meet both growth-related needs and at least partially address the Town's existing infrastructure backlog.

Debt

Although this strategy avoids the use of further debt to meet annual average capital needs, the Town can leverage debt as a strategic tool to support infrastructure investments, particularly for large-scale projects, such as public facilities, without the immediately raising taxes or cutting other programs and services.

The Town currently has $25.21 million in outstanding debt. Figure 40 illustrates the current principal and interest (P&I) payment schedule for existing debt. The graph illustrates how these repayment will decline over the next 20 years, from $4.1 million in 2024 to $3.1 million in 2043, producing annual repayment reductions of approximately $1.1 million.

Figure 39 20-Year Debt Repayment Schedule



Although reduction in debt repayments can theoretically be used to reduce tax rates, it is typically more prudent to maintain existing rates, capture these savings, and reallocate them to fund infrastructure programs and reduce annual deficits at a faster pace.

Recommendations and Key Considerations

- Review feasibility of adopting a full-funding scenario that achieve 100% of average annual requirements for the asset categories analyzed in this AMP. This involves:
  - implementation of a 1.8% annual tax increase over a 15-year phase in period and allocating the full increase in revenue toward these asset categories;
  - continued allocation of OCIF and CCBF funding as previously outlined in Table 32;
  - continued use of OMPF to augment funding available for infrastructure needs;
  - using risk frameworks and staff judgement to prioritize projects, particularly to aid in elimination of existing infrastructure backlogs;
- Although difficult to capture, inflation costs, supply chain issues, and fluctuations in commodity prices will also influence funding needs and true cost of capital expenditures. The above recommendations do not include inflation, which may further escalate recommended tax increases to achieve full funding.
- In addition, the Town's annual debt repayments will decrease by $1.1 million annually within the proposed 15-year phase-in period. Although these reductions can be used to reduce tax rates, a more prudent strategy would see these reductions captured, and reallocated to address annual infrastructure deficits more rapidly.
- Componentizing buildings is an essential next step to ensure replacements and long-term forecasts are accurate and reliable.
- In 2025, the Town is expected to develop proposed levels of service for each asset category. This is likely to have impacts on the recommended tax rates, phase-in periods, and broader asset management programming.