Asset Management Plan

2025

The Township of Elizabethtown-Kitley

Key Statistics

Replacement cost of asset portfolio
$128.5 million

Replacement cost of infrastructure per household
$30,901

Percentage of assets in fair or better condition
86%

Percentage of annual infrastructure needs being met
57%

Annual cost savings through proactive lifecycle management
33%

Recommended timeframe for eliminating annual infrastructure deficit
10 Years

Target reinvestment rate
3.6%

Actual reinvestment rate
2.0%

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Executive Summary

The infrastructure owned by the Township of Elizabethtown-Kitley (the “Township”) supports a wide range of municipal services that enable residents, businesses, and pother stakeholders to love, work, and play. The overall performance of the municipal infrastructure plays a significant role in the Township’s economic development, competitiveness, prosperity, reputation, and quality of life for residents.

Municipalities in Ontario are required to complete an Asset Management Plan (AMP) that meets all the requirements contained in *Ontario Regulation 588/17*. A thorough Asset Management Plan details the investment required to ensure the sustainable delivery of services associated with desired infrastructure levels of service in the most cost-effective manner. This involves the development and implementation of asset management strategies and long-term financial planning.

Scope

This AMP includes all assets owned and capitalized by the Township, with additional prescriptive information on Core Assets. The plan further outlines the current state of asset management planning in the Township of Elizabethtown-Kitley. It identifies the current practices and strategies that are in place to manage public infrastructure and makes recommendations where they can be further refined. The plan provides the respective financial obligations of all asset categories required to maintain the Township’s current Levels of Service and further includes proposed Levels of Service as required by *Ontario Regulation 588/*17.

Through the implementation sound asset management strategies, the Township can ensure that public infrastructure is managed to support the sustainable delivery of municipal services.

All municipalities in Ontario are required to complete an asset management plan (AMP) in accordance with Ontario Regulation 588/17 (O. Reg. 588/17). This AMP outlines the current state of asset management planning in the Township of Elizabethtown-Kitley. It identifies the current practices and strategies that are in place to manage public infrastructure and makes recommendations where they can be further refined. Through the implementation of sound asset management strategies, the Township can ensure that public infrastructure is managed to support the sustainable delivery of municipal services.

With the development of this AMP, the Township has achieved compliance with *Ontario Regulation 588/17* to the extent of the requirements that must be completed by July 31, 2025. Annual updates to the AMP will required to ensure compliance with the regulation is maintained.

This AMP includes the following asset categories:

ASSET CATEGORY	SOURCE OF FUNDING
Road Network	Taxation
Bridges	
Facilities	
Fleet	
Machinery & Equipment	
Land Improvements	
Water Distribution	User Rates

Findings

The overall replacement cost of the asset categories included in this AMP totals **$128.5 million**.

Of all assets analysed in this AMP, 86% are in fair or better condition with assessed condition available for 70% of assets. For the remaining 30% of assets, the assessed condition data was unavailable, and therefore, the asset age was used to approximate the condition which is a data gap that persists in most municipalities.

Generally, the asset age misstates the true condition of assets, making assessments of assets essential for effective asset management planning, which is a recurring recommendation throughout this AMP.

The development of a long-term, sustainable financial plan requires an analysis of whole lifecycle costs. This AMP uses a combination of proactive lifecycle strategies and replacement only strategies to determine the lowest cost option to maintain the current Level of Service.

To meet capital replacement and rehabilitation needs for existing infrastructure, prevent infrastructure backlogs, and achieve long-term sustainability, the Township's average annual capital requirement totals **$4.6 million** which includes the annual requirement related to capital lifecycle strategies. If strategies to extend the useful life of assets was not undertaken, the overall replacement cost requirement would be **$6.8 million** annually. Based on a historical analysis of sustainable capital funding sources including

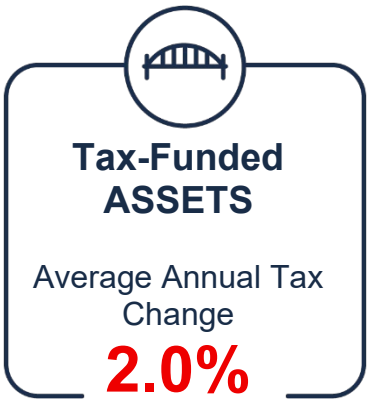
property taxation, CCBF, and OCIF funding, the Township is committing approximately **$2.6 million** annually towards capital projects or reserves. As a result, there is currently an annual funding gap of **$2.0 million**.

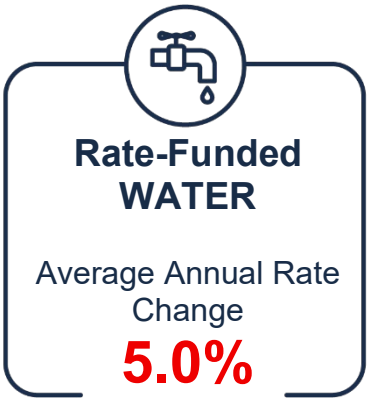
An updated financial strategy is being recommended to address the annual funding gap over the next 10 years, with continued increases to be maintained beyond the next 10 years to address the infrastructure backlog which will continue to grow until a sustainable level of funding is achieved; thereby eliminating the annual gap currently faced by the Township. Further, continued increases beyond the next 10 years will also help to address price changes and inflationary impacts which cannot be predicted at this time with any level of confidence.

It is important to note that this AMP represents a ***snapshot in time*** and is based on the best available processes, data, and information available to the Township. It needs to be stressed that Strategic Asset Management planning is an ongoing and dynamic process that requires continuous improvement and dedicated resources.

Recommendations

A financial strategy was developed to address the annual capital funding deficit. The following graphics shows the annual tax/rate changes that are required to eliminate the Township's tax funded infrastructure deficit based on a 10-year plan and rate funded infrastructure over 47 years with an initial annual capital rate of $50 per user.





Continuous Improvement

The Asset Management Plan represents a snapshot in time and is based on the vest available processes, data, and information. Strategic asset management planning is ongoing and requires continuous improvement and dedicated resources. Several recommendations have been developed to guide the refinement of the Township's Asset Management Plan as outlined in this document. These recommendations include:

9. Continuous validation of asset inventory data and information.

10. Formalization of condition assessment strategies for all asset categories.

11. Continued implementation and alignment of risk-based decision-making as part of regular budget deliberations.

12. Continuous review, development, and implementation of optimal lifecycle management strategies.

13. Refinement of Community and Technical Levels of Service.

14. Refinement of the financial strategy to continually reduce and/or manage the annual capital funding gap.

1.Introduction & Context

The goal of Asset Management is to minimize the lifecycle costs of delivering infrastructure services and manage the associated risks while maximizing the value that ratepayers in turn receive from the asset portfolio

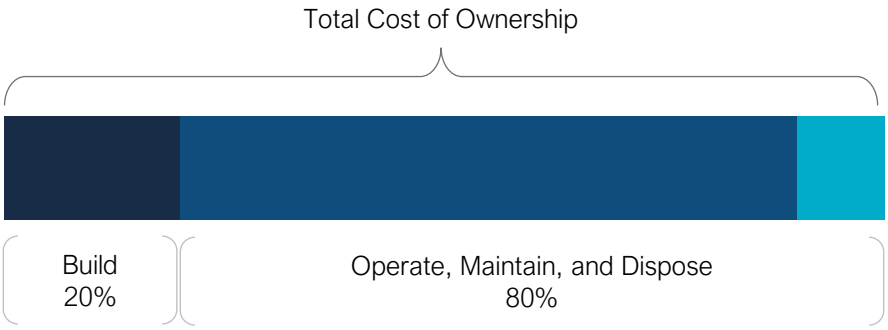
The Township's Strategic Asset Management policy provides clear direction to staff on their roles and responsibilities regarding asset management. It is critical to be understood that an Asset Management Plan is a living document that should be updated and reviewed regularly to ensure that all capital requirements are continuously captured to inform the Township's long-term planning.

Ontario Regulation 588/17 which is referenced throughout the document outlines several key milestones and specific requirements that must be contained within Asset Management plans between July 1, 2025 and July 1, 2025 for compliance with the Province.

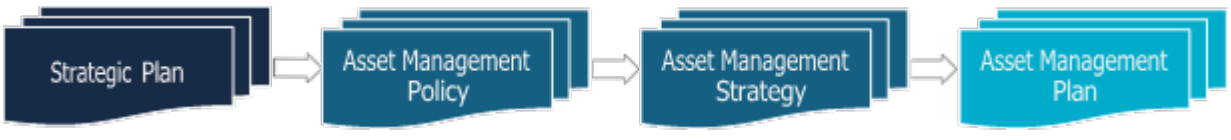
1.1 An Overview of Asset Management

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

The acquisition of capital assets only accounts for 10-20% of their total cost of ownership. The remaining 80-90% of their total cost derives from the operations and maintenance of the capital asset during its useful life. This Asset Management Plan focuses its analysis on the capital costs to **maintain**, **rehabilitate** and **replace** existing municipal infrastructure assets.



The total cost of ownership 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 a broader asset management program. The diagram below depicts an industry-standard approach and sequence to developing a practical asset management program.



This industry standard as 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.

Asset Management Policy

An Asset Management policy represents a statement of the principles guiding the Township'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.

In Accordance with the timelines set out by the Province of Ontario on December 13, 2017 (*Ontario Regulation. 588/17*), the Township finalized its Strategic Asset Management Policy in June 2019 and further updated it in 2025.

The objectives of the Strategic Asset Management Policy include:

15. Provide a framework for implementing Asset Management to enable a consistent and strategic approach at all levels of the organization.

16. Provide guidance to staff responsible for Asset Management.

17. Ensure the management of the Township's assets is implemented in the most efficient and effective way possible.

18. Provide guidance for logical and evidence-based decision making for the management of municipal infrastructure assets that is in line with the Township's strategic priorities and any federal and provincial regulatory requirements.

The Township's Asset Management Policy contains the key components required of an Asset Management Strategy.

Asset Management Strategy (AMS)

An Asset Management Strategy outlines the translation of organizational objectives into asset management objectives and provides a strategic overview of the activities required to meet these objectives. It provides greater detail than what is outlined in the policy on how the municipality plans to achieve asset management objectives through planned activities and decision-making criteria.

Asset Management Plan (AMP)

The Asset Management Plan (AMP) presents the outcomes of the municipality's Asset Management program and identifies the resources required to achieve a defined Level of Service. To meet the industry standards as set by IMA and for compliance with *Ontario Regulation 588/*17 an AMP includes the following specific content:

19. State of Infrastructure
20. Asset Management Strategies
21. Levels of Service
22. Financial Strategies

The AMP is a **"living"** document that should be updated on a continuous basis as additional asset and financial data becomes available. This will allow the Township to re-evaluate the state of infrastructure and identify how the organization's asset management and financial strategies are progressing. The Townships previous Asset Management Plan was adopted in 2022.

1.2 Key Concepts in Asset Management

Effective asset management integrates the following key components:

(a) Lifecycle management strategies

(b) Risk management strategies

(c) Levels of Service

These concepts are applied throughout this Asset Management Plan and are explained below in greater detail.

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 realize its expected useful life resulting in increased maintenance costs, unmitigated risk and in the extreme case, complete service disruption.

To ensure that municipal assets are performing as expected and meeting the needs of customers, residents and taxpayers, it is critical that a Lifecycle Management Strategy is established 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 five categories; namely,

(a) general maintenance, (b) preventative maintenance, (c) rehabilitation/renewal, (d) replacement/reconstruction and (e) replacement upgrade/reconstruction.

The following table provides a description of each type of activity and the general difference in cost from lowest to highest.

Lifecycle Activity	Description	Example (Roads)	Cost
General Maintenace	Activities that repair current defects or inhibits deterioration	Pothole Repairs	$
Preventative Maintenance	Activities that prevent defects or deteriorations from occurring	Crack Seal	$
Rehabilitation/ Renewal	Activities that rectify defects or deficiencies that are already present and may be affecting asset performance	Pulverize & resurface	$$
Replacement/ Reconstruction	Asset end-of-life activities that often involve the complete replacement of assets	Full Reconstruction	$$$
Replacement Upgrade/ Reconstruction	Asset end-of-life activities that often involve the complete replacement of assets with an upgraded asset	Full Reconstruction LCB to HCB Surface	$$$$

Depending on initial lifecycle management strategies, asset performance can be sustained through a combination of maintenance and rehabilitation, but at some point, replacement is going to be required. Understanding what effect these activities will have on the lifecycle of an asset, and their cost, will enable staff to make better recommendations.

The Township's approach to lifecycle management is described within each asset category outlined in this AMP. Developing and implementing a proactive lifecycle strategy will help staff to determine which activities to perform on an asset and within what timeframe they should be performed to maximize the useful life of the asset at the lowest total cost of ownership.

Risk Management Strategies

Municipalities generally take a 'worst-case first' approach to infrastructure spending. What this means specifically is that rather than prioritizing assets based on their

importance to service delivery, assets in the worst condition are fixed first, regardless of their criticality. However, not all assets are created equal. Some are more important than others, and their failure or disrepair poses more risk to the community than that of others. For example, a road with a high volume of traffic that provides access to critical services poses a higher risk than a low volume rural road. These high-value assets should be prioritized for funding before others to ensure that scarce financial resources are being allocated effectively.

By identifying the various impacts of asset failure and the likelihood that it will fail, risk management strategies can identify critical assets, and determine where maintenance efforts, and spending, should be focused.

This AMP includes a high-level evaluation of asset risk and criticality. Each asset has been assigned a probability and consequence of failure scores based on available asset data. These risk scores in turn are used to prioritize maintenance, rehabilitation and replacement strategies for critical assets.

Levels of Service (LOS)

A Level of Service (LOS) is a measure of what the Township is providing to the community and the nature and quality of that service. 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 made available.

These measures include a combination of those that have been outlined in O. Reg. 588/17 in addition to performance measures identified by the Township as worth measuring and evaluating. The Township measures the level of service provided at two levels: Community Levels of Service, and Technical Levels of Service.

Community Levels of Service

Community Levels of Service are a simple, plain language description or measure of the service that the community receives from the Township. For core asset categories (Roads, Bridges & Culverts, Water), the Province, through *Ontario Regulation 588/17*, has provided qualitative descriptions that are required to be included in this AMP. For non-core asset categories, the Township has determined the qualitative descriptions that will be used to determine the Community Level of Service provided. These descriptions can be found in Appendix B - Levels of Service.

Technical Levels of Service

Technical Levels of Service are a measure of key technical attributes of the service being provided by the Township to the community. These include mostly quantitative

measures and tend to reflect the impact of the municipality's asset management strategies on the physical condition of assets or the quality/capacity of the services they provide.

For core asset categories (Roads, Bridges & Culverts, Water, Wastewater, Stormwater), similar to the Community Levels of Service, the Province, through *Ontario Regulation 588/*17 has provided technical metrics that are required to be included in this AMP. For non-core asset categories, the Township has determined the technical metrics that will be used to determine the technical level of service provided. These metrics can be found in the Appendix B - Levels of Service.

Current and Proposed Levels of Service

Current Levels of Service

The previous AMP completed by the Township in 2022 focused on how to measure the current Level of Service provided to the community. Now that the Levels of Service have been measured, the Township is establishing proposed Levels of Service over a 10-year period which is a requirement of the Province through *Ontario Regulation 588/17.*

Proposed Levels of Service

Proposed Levels of Service should be realistic and achievable within the timeframe that is established by the Township. They should also be determined taking into consideration of a variety of community expectations, fiscal capacity, regulatory requirements, corporate goals, and long-term sustainability. With proposed Levels of Service having been established, the Township must identify a Lifecycle Management Strategy and Financial Strategy which allows the Levels of Service to be achieved.

There is no question that the cost to maintain levels of service will increase. Therefore, to provide an achievable target that takes into consideration the municipality's ability to continue to maintain the current level of services, staff are recommending that in general, the proposed Levels of Services is to maintain what is currently being provided.

These metrics can be found in the Appendix B Levels of Service.

1.3 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 (O. Reg 588/17). Along with creating better performing organizations, more liveable 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.

The diagram below outlines key reporting requirements under O. Reg 588/17 and the associated timelines.

2019

Strategic Asset Management Policy

2022

Asset Management Plan for Core Assets with the following components:

1. Current levels of service
2. Inventory analysis
3. Lifecycle activities to sustain LOS
4. Cost of lifecycle activities
5. Population and employment forecasts
6. Discussion of growth impacts

2024

Asset Management Plan for Core and Non-Core Assets

2025

Asset Management Policy Update and an
Asset Management Plan for All Assets with the following additional components:

1. Proposed levels of service for next 10 years
2. Updated inventory analysis
3. Lifecycle management strategy
4. Financial strategy and addressing shortfalls
5. Discussion of how growth assumptions impacted

O. Reg. 588/17 Compliance Review

The following table identifies the requirements outlined in Ontario Regulation 588/17 for municipalities to meet by July 1, 2025. Next to each requirement a page or section reference is included in addition to any necessary commentary.

Requirement	O. Reg. Section	AMP Section Reference	Status
Proposed Levels of Service in each category	S.6(1)	4.1.6 - 5.2.6	Complete
Explanation of why the proposed level of service is appropriate	S.6(2)		Complete
Lifecycle Management Straegy	S.6(4)	4.1.4 – 5.2.4	Complete
Financial Strategy	S.6(4)		Complete
Growth assumptions	S.5	6.1 – 6.2	Complete

2. Scope and Methodology

(A) This Asset Management Plan includes 7 asset categories and is divided between Tax-Funded and Rate-Funded categories.

(B) The source and recency of replacement costs impact the accuracy and reliability of asset portfolio valuation.

(C) 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.

2.1 Asset Categories included in this Asset Management Plan

This Asset Management Plan for the Township of Elizabethtown-Kitley is produced in compliance with Ontario Regulation 588/17. The July 2025 iteration of the Asset Management Plan requires proposed levels of service and financing strategy, lifecycle management strategy, and discussion on how these are impacted by growth for all Asset Categories.

Simply put, the AMP summarizes the state of the infrastructure for the Township's asset portfolio establishes (a) current and proposed levels of service and the associated technical and customer-oriented key performance indicators (KPIs), (b) outlines lifecycle strategies for optimal asset management and performance, and (c) provides financial strategies to reach sustainability for the asset categories listed below.

Asset Category	Source of Funding
Road Network	Tax Levy
Bridges & Culverts	
Buildings & Facilities	
Machinery & Equipment	
Land Improvements	
Vehicles	
Water Network	User Rates

2.2 Deriving Replacement Costs

There are a range of methods to determine the replacement cost of an asset, and some are more accurate and reliable than others. This AMP primarily relies on two methodologies:

(a) **User-Defined Cost and Cost/Unit**: Based on costs provided by municipal staff which could include average costs from recent contracts; data from engineering reports and assessments; staff estimates based on knowledge and experience; and

(b) **Cost Inflation/CPI Tables**: Historical cost of the asset is inflated based on Consumer Price Index or Non-Residential Building Construction Price Index

User-defined costs based on reliable sources are a reasonably accurate and reliable way to determine asset replacement costs.

Cost inflation is typically used in the absence of reliable replacement cost data. It is considered a reliable method for *recently purchased and/or constructed assets* where the total cost is reflective of the actual costs that the Township incurred. As assets age, and new products and technologies become available, cost inflation becomes a less reliable method.

2.3 Estimated Useful Life and Service Life Remaining

The Estimated Useful Life (EUL) of an asset is the period over which the Township expects the asset to be available for use and remain in service before requiring replacement or disposal. The EUL for each asset in this AMP was assigned according to the knowledge and expertise of municipal staff and supplemented by existing industry standards when necessary and where publicly available. Each asset's Estimated Useful Life should be reviewed continuously to determine whether adjustments need to be made to better align the expected replacement of disposal with the observed length of service life for each asset type.

The average age of each asset is based on the number of years each asset has been in service.

By using an asset's in-service data and its EUL, the Township can determine the Service Life Remaining (SLR) for each asset. Using condition data and the asset's SLR, the Township can more accurately forecast when it will require replacement. The SLR is calculated as follows:

1. In Service Date of Asset

Plus

2. Estimated Useful Life (EUL)

Less

3. The Current Year

The estimated useful life, average age, and average Service Life Remaining can be found in the ***Estimated Useful Life & Average Age*** subsection within each asset category.

2.4 Reinvestment Rate

As assets age and begin to deteriorate in their intended functionality, 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 Township can determine the funding gap that exists relative to the asset in question. The Reinvestment Rate is calculated as follows:

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

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

2.5 Deriving 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 as well as 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 Township's asset portfolio. The table below outlines the Condition Rating System that is being used in this AMP to determine the asset condition. This rating system is aligned with the Canadian Core Public Infrastructure Survey which is used as the primary benchmark to develop the Canadian Infrastructure Report Card. When the assessed condition data is not available, Service Life Remaining is then used to approximate the asset condition. See Appendix D for the condition rating criteria of each core infrastructure group (Roads, Bridges, Facilities).

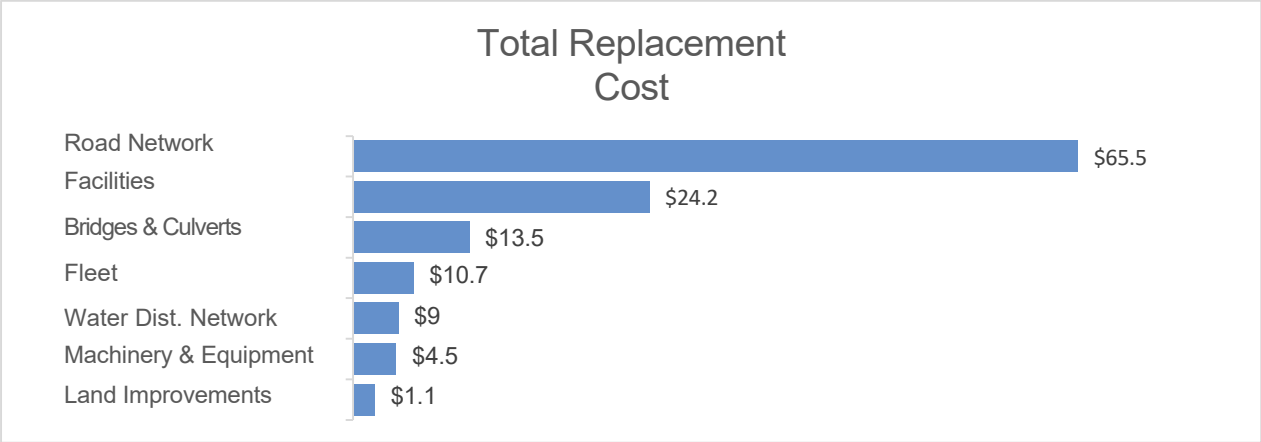
Condition	Description	Criteria	Service Life Remaining (%)
Very Good	Fit for the future	Well maintained, good condition, new or recently rehabilitated	80-100
Good	Adequate for now	Acceptable, generally approaching mid-stage of expected service life	60-79
Fair	Requires attention	Signs of deterioration, some elements exhibit significant deficiencies	40-59
Poor	Increasing potential of affecting service	Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration	20-39
Very Poor	Unfit for sustained service	Near or beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable	0-19

The analysis in this AMP is based only on the assessed condition data that is available. In the absence of the assessed condition data, asset age is used as a proxy to determine asset condition.

3. Portfolio Overview

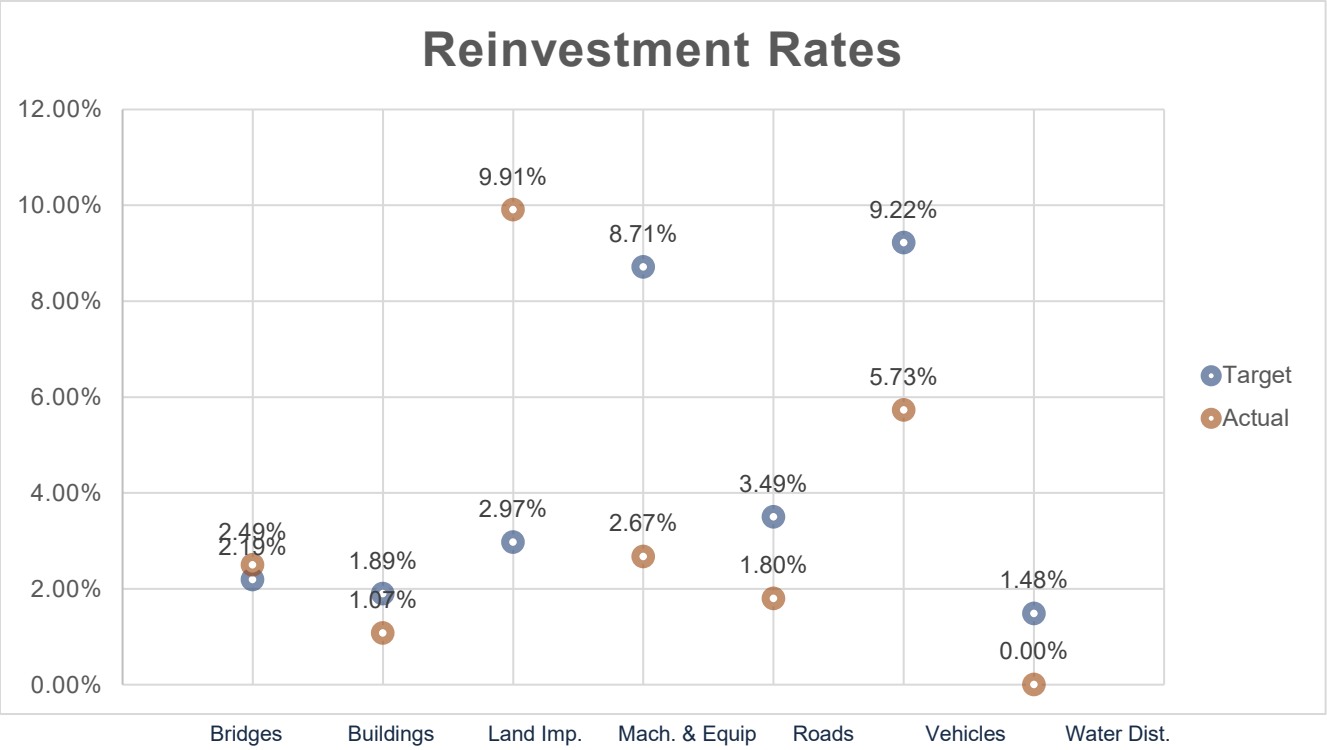
3.1 Total Replacement Cost of Asset Portfolio

The asset categories analysed in this AMP have a total replacement cost of **$128.5 million** based on the 2025 inventory data. The total replacement cost was determined using a combination of user-defined costs and historical cost inflation. The total replacement cost estimate reflects replacement of historical assets with similar, not necessarily identical, assets available for procurement today.



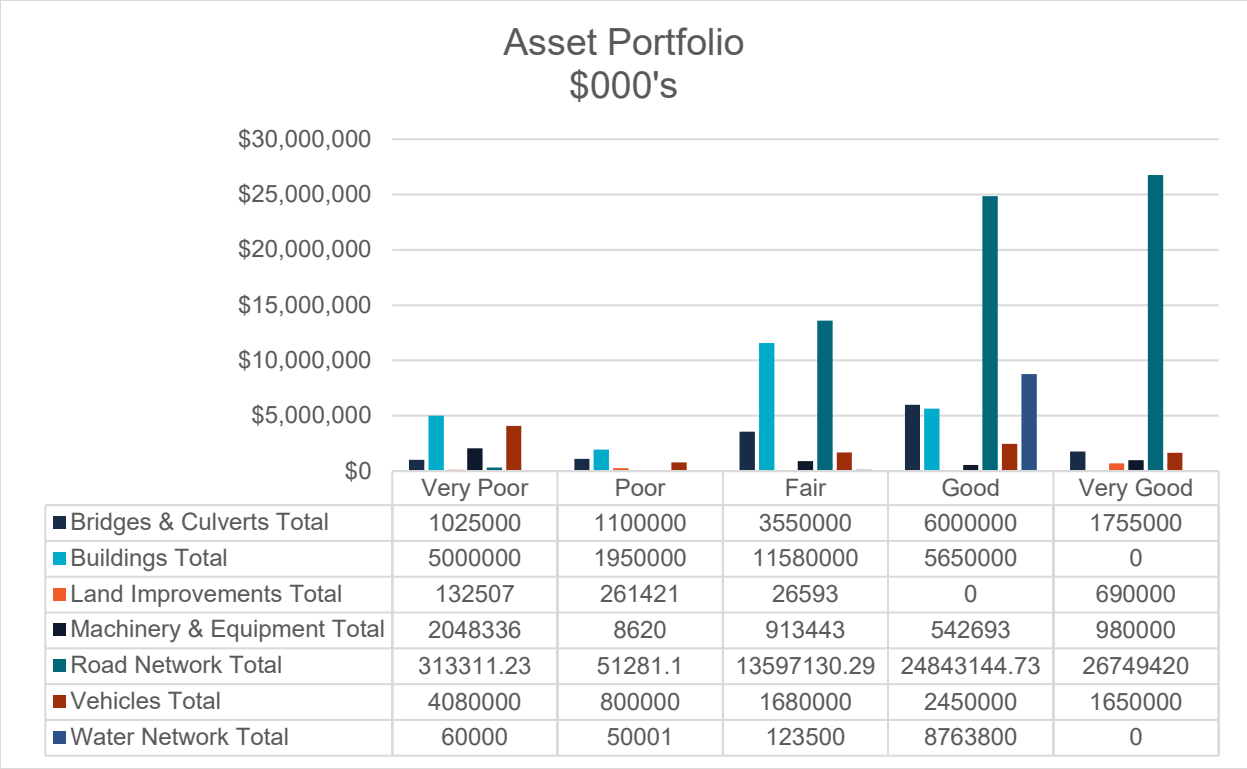
3.2 Target vs. Actual Reinvestment Rate

The graph below depicts funding gaps (deficits) or surpluses by comparing Target vs Actual Reinvestment Rate. To meet the long-term replacement needs that have been identified, the Township **should** be allocating approximately **$4.6 million** annually, for a target Reinvestment Rate of **3.6%.** Actual annual funding for capital infrastructure totals approximately **$2.6 million**, for an actual reinvestment rate of **2%.** This still leaves an annual funding gap of **$2.0 million** annually or **1.6%**.



3.3 Condition of Asset Portfolio

The current condition of the assets is central to all asset management planning. Collectively, 84% of assets in Elizabethtown-Kitley are in fair or better condition. This estimate relies on both age-based and field condition data.



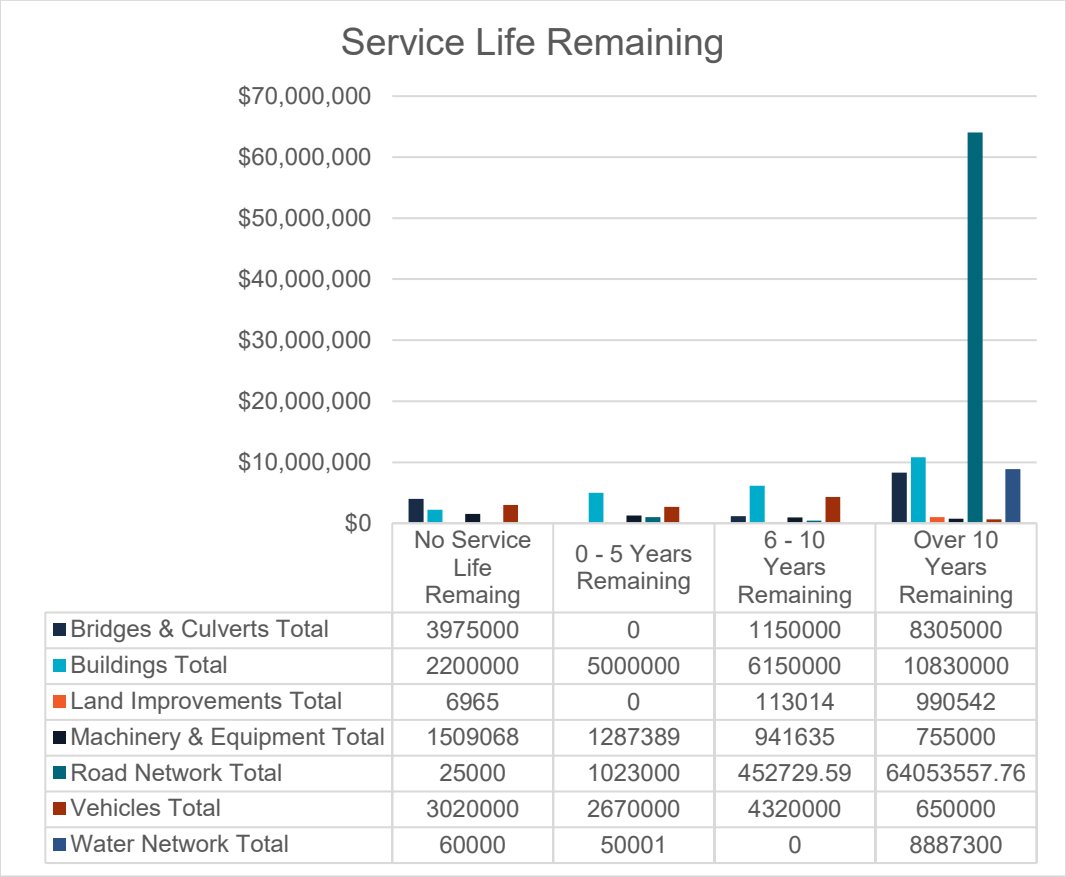
	Very Poor	Poor	Fair	Good	Very Good
Bridges & Culverts Total	1025000	1100000	3550000	6000000	1755000
Buildings Total	5000000	1950000	11580000	5650000	0
Land Improvements Total	132507	261421	26593	0	690000
Machinery & Equipment Total	2048336	8620	913443	542693	980000
Road Network Total	313311.23	51281.1	13597130.29	24843144.73	26749420
Vehicles Total	4080000	800000	1680000	2450000	1650000
Water Network Total	60000	50001	123500	8763800	0

This AMP relies on assessed condition data for 65% of assets. For the remaining portfolio, age is used as an approximation of condition. Assessed condition data is invaluable in Asset Management Planning as it 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.

Asset Category	Asset Segment	% Of Assets with Assessed Condition	Source of Condition Data
Road Network	Roads	100%	2022 RNS
	Sidewalks	100%	Greer Galloway Group
	Streetlights	0	Age-Based
Bridges & Culverts	Bridges	100%	2023 OSIM Report
	Structural Culverts	100%	2023 OSIM Report
Buildings & Facilities	All	100%	2020 Facility Assessment
Machinery & Equipment	All	0%	Age-Based
Land Improvements	All	0%	Age-Based
Vehicles	All	0%	Age-Based
Water Network	All	0%	Age-Based

3.4 Service Life Remaining

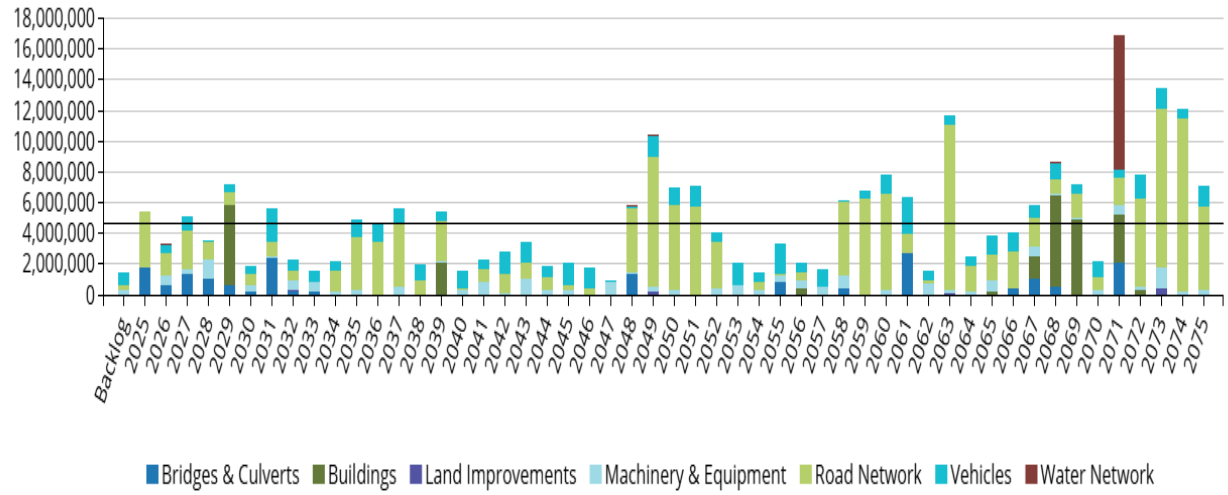
Based on asset age, available assessed condition data and estimated useful life, approximately 25% of the Township's assets will require replacement within the next **10 years**. Capital requirements over the next 10 years are identified in Appendix A.



	No Service Life Remaing	0 - 5 Years Remaining	6 - 10 Years Remaining	Over 10 Years Remaining
Bridges & Culverts Total	3975000	0	1150000	8305000
Buildings Total	2200000	5000000	6150000	10830000
Land Improvements Total	6965	0	113014	990542
Machinery & Equipment Total	1509068	1287389	941635	755000
Road Network Total	25000	1023000	452729.59	64053557.76
Vehicles Total	3020000	2670000	4320000	650000
Water Network Total	60000	50001	0	8887300

3.5 Forecasted Capital Requirements

The development of a long-term capital forecast should include both asset rehabilitation and replacement requirements. With the development of asset-specific lifecycle strategies that include the timing and cost of future capital events, the Township can produce an accurate long-term capital forecast. The following graph identifies capital requirements over the next 50 years.



4. Analysis of Tax-funded Assets

23. Tax-funded assets are valued at **$119.5 million**.

24. 82% of Tax-funded assets are assessed to be in “fair” or “better” condition.

25. The average annual capital requirement to sustain the current Level of Service for Tax-funded assets is approximately **$4.6 million**.

26. To reach sustainability, tax revenues need to be increased by at least **$2,015,910.15** annually for the next 10 years to eliminate the infrastructure funding gap. If the Township is successful in obtaining additional grant funding or conversely if the OCIF and CCBF decline, this would change annual deficits and the gap. Currently, if the total tax revenues are increased by 2% annually for the next ten years this would eliminate the annual capital deficit and begin to address the gap in capital replacement that has been identified based on lifecycle assessment and useful life data that is available.

27. New assets being added to the Township’s inventory **are not** included in these calculations and would require additional funding to be added annually to ensure adequate replacement.

28. Critical assets should be evaluated to determine appropriate risk mitigation activities and treatment options.

4.1 Road Network

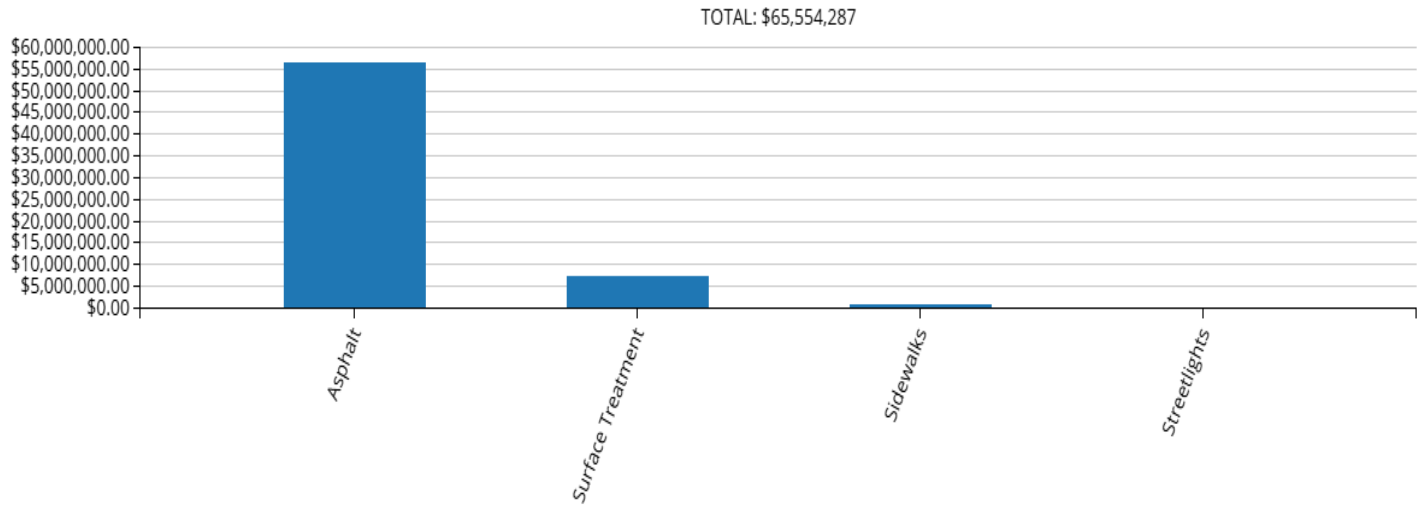
The Road Network is a critical component of the provision of safe and efficient transportation services and represents the highest value asset category in the Township's asset portfolio. It includes all municipally owned and maintained roadways in addition to supporting roadside infrastructure including sidewalks and streetlights.

4.1.1 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Road Network inventory.

Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Gravel Roads	203.5 kms	Not Planned for Replacement[1]	
Asphalt Roads	123.8 kms	100% Cost/Unit	$56,657,350
Surface Treated Roads	12.7 kms	100% Cost/Unit	$7,616,000
Sidewalks	4.85 kms	User-Defined	$1,150,392
Streetlights	233	CPI Tables	$130,045
			$65,554,287

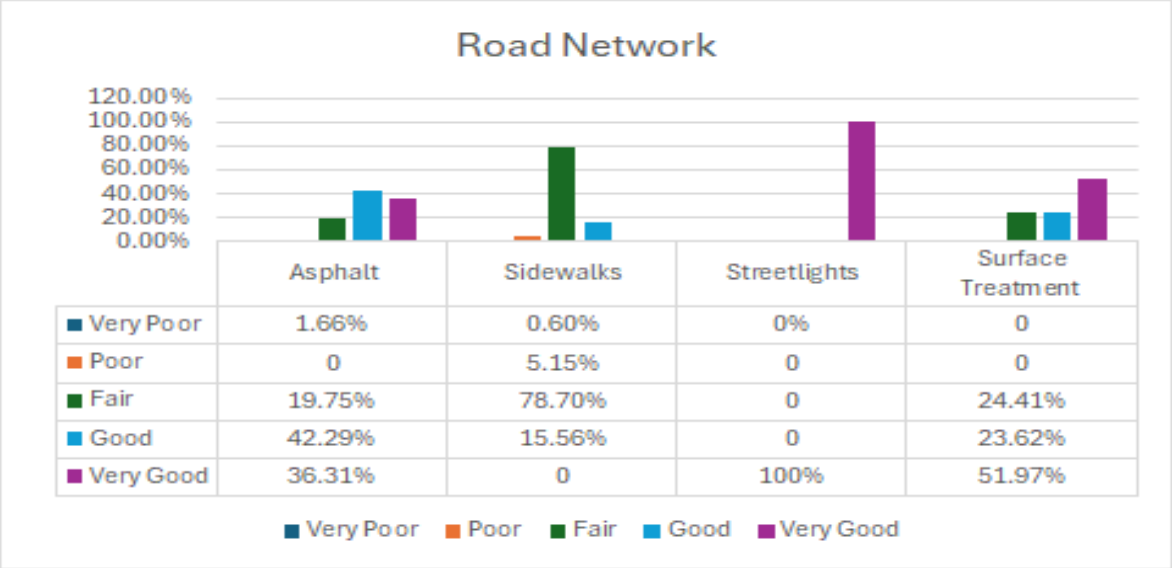
[1] Gravel roads have been included as they comprise a significant portion of the Township's Road Network. However, the lifecycle management strategies for these assets consist of perpetual maintenance activities and do not require capital costs for rehabilitation or replacement.



4.1.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Asphalt Roads	68%	Good	100% Assessed
Surface Treated Roads	66%	Good	100% Assessed
Sidewalks	48%	Good	100% Assessed
Streetlights	87%	Very Good	Age-based
	65%	**Good**	**99.8% Assessed**



	Asphalt	Sidewalks	Streetlights	Surface Treatment
Very Poor	1.66%	0.60%	0%	0
Poor	0	5.15%	0	0
Fair	19.75%	78.70%	0	24.41%
Good	42.29%	15.56%	0	23.62%
Very Good	36.31%	0	100%	51.97%

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the Remaining Service
Life of assets and identify the most cost-effective approach to managing assets more confidently. The following describes the municipality's current approach:

29. A Comprehensive Road Needs Study was completed in 2022 that included a detailed assessment of the condition of each road segment (PCI).

30. The Road Needs Study is reviewed and updated every 4 years.

31. An annual internal road review is completed by municipal staff, which includes visual inspection and is done in accordance with O.Reg. 239/02.

32. Sidewalks are inspected on an annual basis by a third-party contractor, with the purpose of documenting any defects found.

4.1.3 Estimated Useful Life & Average Age

The Estimated Useful Life for Road Network assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase

or decrease the average service life remaining. Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed Length of Service Life for each asset type.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Asphalt Roads	15	19.2	11.1
Surface Treated Roads	12	7.9	12.1
Sidewalks	40	27.9	19.2
Streetlights	30	10.1	8.8
		19.6	**44.6**

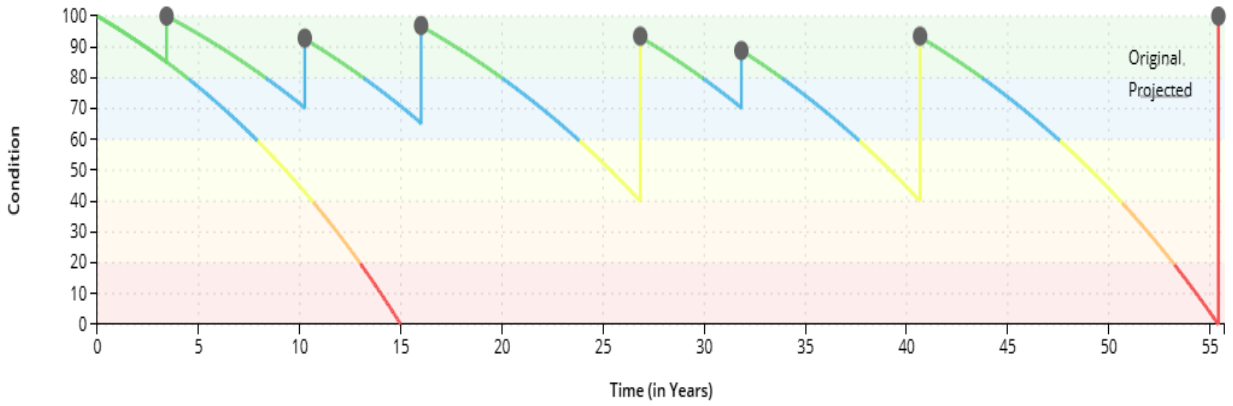
4.1.4 Lifecycle Management Strategy

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.

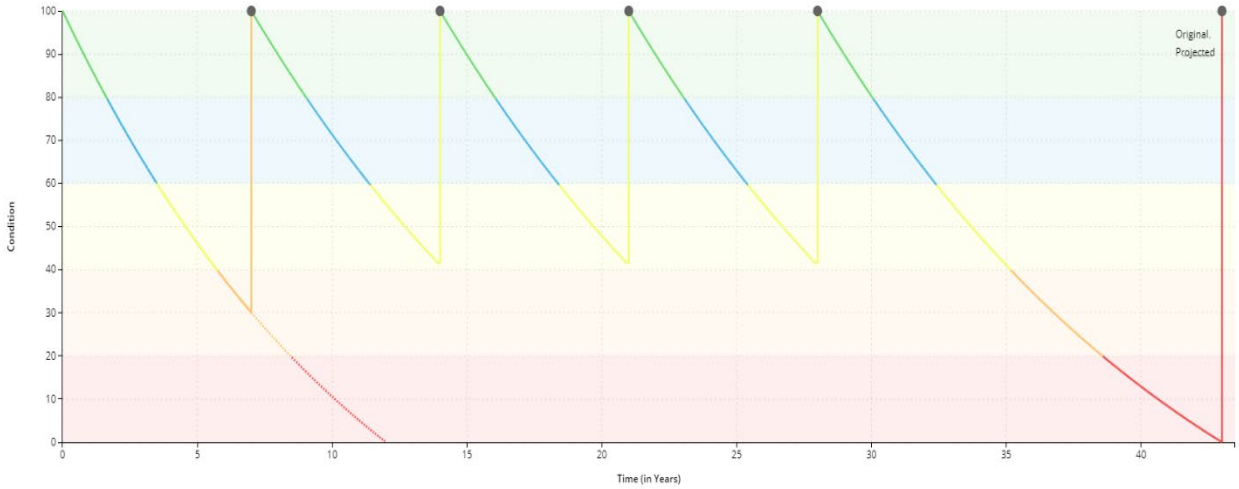
The following Lifecycle Strategies have been developed as a proactive approach to managing the lifecycle of asphalt and surface treated roads. Instead of allowing the roads to deteriorate until replacement is required, strategic rehabilitation would extend the service life of roads at a lower total cost.

Asphalt Roads		
Event Name	**Event Class**	**Event Trigger**
Asphalt Rejuvenator	Maintenance	Condition: 85
Crack Sealing	Preventative Maintenance	Condition: 70
Slurry Seal	Preventative Maintenance	Condition: 70
Micro Surfacing (Double)	Rehabilitation	Condition: 65
Asphalt Overlay	Rehabiliation	Condition: 40

Cold In-Place Recycle Overlay	Rehabilitation	Condition: 10
Full Reconstruction	Replacement	Condition: 0

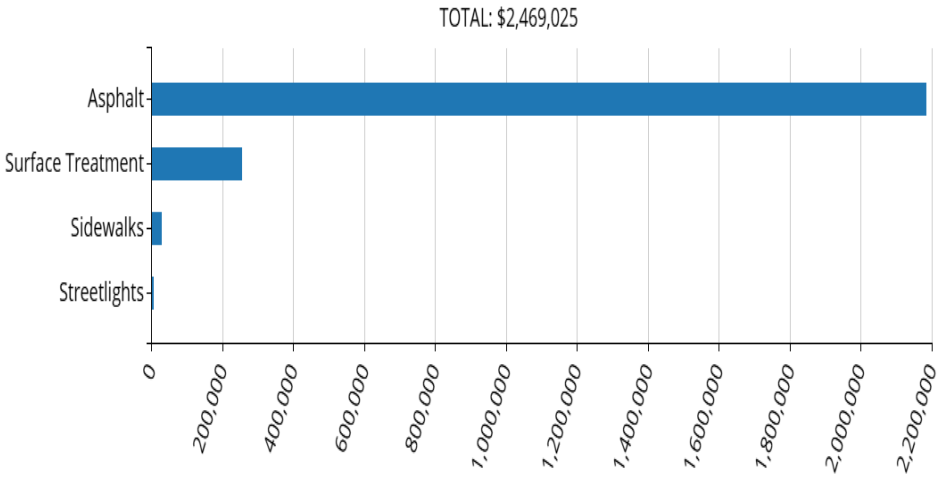


Surface Treated Roads		
Event Name	**Event Class**	**Event Trigger**
Double Surface Treatment	Rehabilitation	Condition: 30
Single Surface Treatment 1	Rehabilitation	14 Years
Single Surface Treatment 2	Rehabilitation	21 Years
Single Surface Treatment 3	Rehabilitation	28 Years
Full Reconstruction	Replacement	Condition: 0



Forecasted Capital Requirements

Based on the lifecycle strategies identified previously for asphalt and surface treated roads, and assuming the end-of-life replacement of all other assets in this category, the following graph forecasts capital requirements for the Road Network.



The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs to meet future capital needs.

4.1.5 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Staff Resources & Capacity

Municipal staff have indicated that there currently is not enough capacity to complete regularly scheduled maintenance of the road network. Consequently, there is not enough time for internal staff to dedicate towards asset management planning activities such as data refinement and lifecycle strategy development. With Elizabethtown-Kitley currently having a backlog regarding its road network, staffing resources and capacity needs to be addressed.

Climate Change & Extreme Weather Events

An increase in the frequency and intensity of precipitation events can result in flooding of sections of the road network. The drainage capacity of the road network is not sufficient to withstand heavy water flow. Further issues can arise as a result of flooding and poor drainage including accelerated deterioration caused by freeze/thaw cycles. To improve asset resiliency, Staff should identify problem areas and improve drainage through enhanced lifecycle strategies.

The asset-specific attributes that internal staff utilize to define and prioritize the criticality of the road network are documented below:

Probability of Failure (POF)	Consequence of Failure (COF)
Condition	Replacement Cost (Financial)

Recommendations

1. Asset Inventory

33. Continue to review and update road replacement costs to reflect current unit rates.

2. Condition Assessment Strategies

34. The last comprehensive assessment of the road network was conducted in 2023. It is in the best interest of the Township to conduct a regular, network-wide assessment every 3 – 5 years.

3. Lifecycle Management Strategies

35. Implement the identified lifecycle management strategies for Asphalt and Surface Treated roads to realize potential cost avoidance and maintain a high quality of road pavement condition.

36. Evaluate the efficacy of the Township's lifecycle management strategies at regular intervals to determine the impact cost, condition and risk.

4. Risk Management Strategies

37. Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.

38. Review risk models on a regular basis and making adjustments according to an evolving understanding of the probability and consequences of asset failure.

5. Levels of Service

- Continue to measure current levels of service in accordance with the metrics identified in O. Reg. 588/17 and those metrics that the Township believes to provide meaningful and reliable inputs into asset management planning.

- Update proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed Levels of Service.

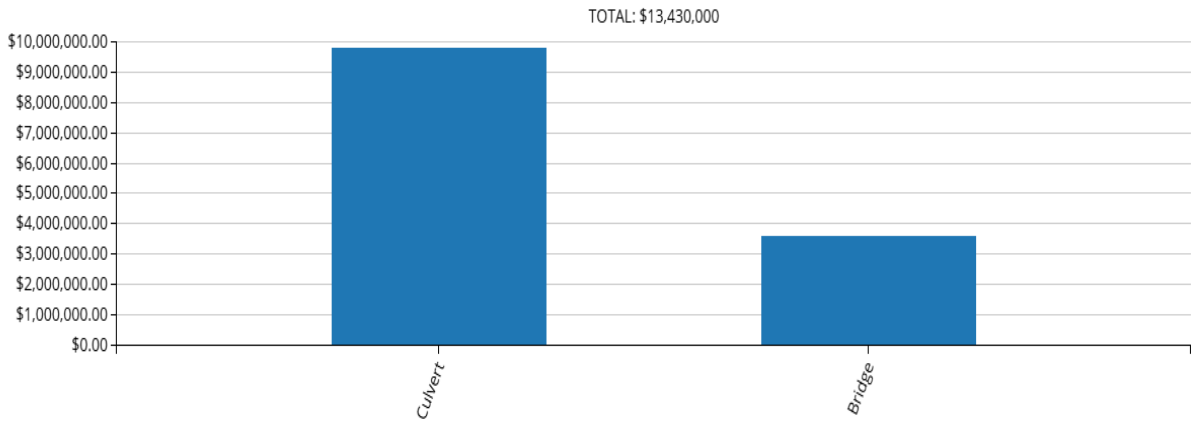
4.2 Bridges & Culverts

Bridges & Culverts represent a critical portion of the transportation services provided to the community. The Department of Public Works is responsible for the maintenance of all bridges and culverts located across municipal roads with the goal of keeping structures in an adequate state of repair and minimizing service disruptions.

4.2.1 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Bridges & Culverts inventory.

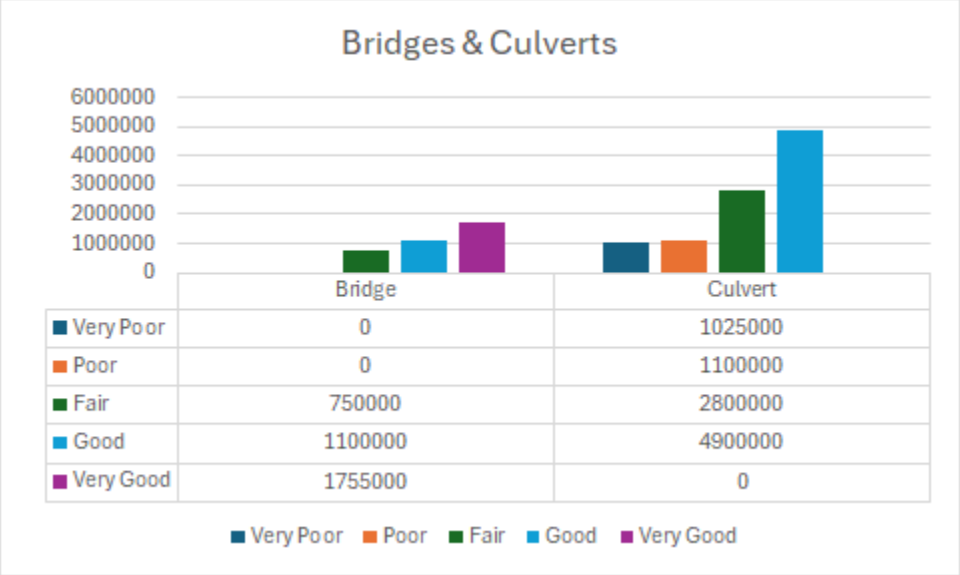
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Bridges	3	User-Defined	$3,605,000
Structural Culverts	7	User-Defined	$9,825,000
			$13,430,000



4.2.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Bridges	58%	Poor	100% Assessed
Structural Culverts	46%	Poor	100% Assessed
	49%	**Poor**	**100% Assessed**



To ensure that the Township's Bridges & Culverts continue to provide an acceptable level of service, Elizabethtown-Kitley should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation, and replacement activities are required to increase the overall condition of the Bridges & Culverts.

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently.

The following describes the municipality's current approach:

39. Condition assessments of all bridges and culverts with a span greater than or equal to 3 meters are completed every 2 years in accordance with the Ontario Structure Inspection Manual (OSIM) with the most recent being 2023.

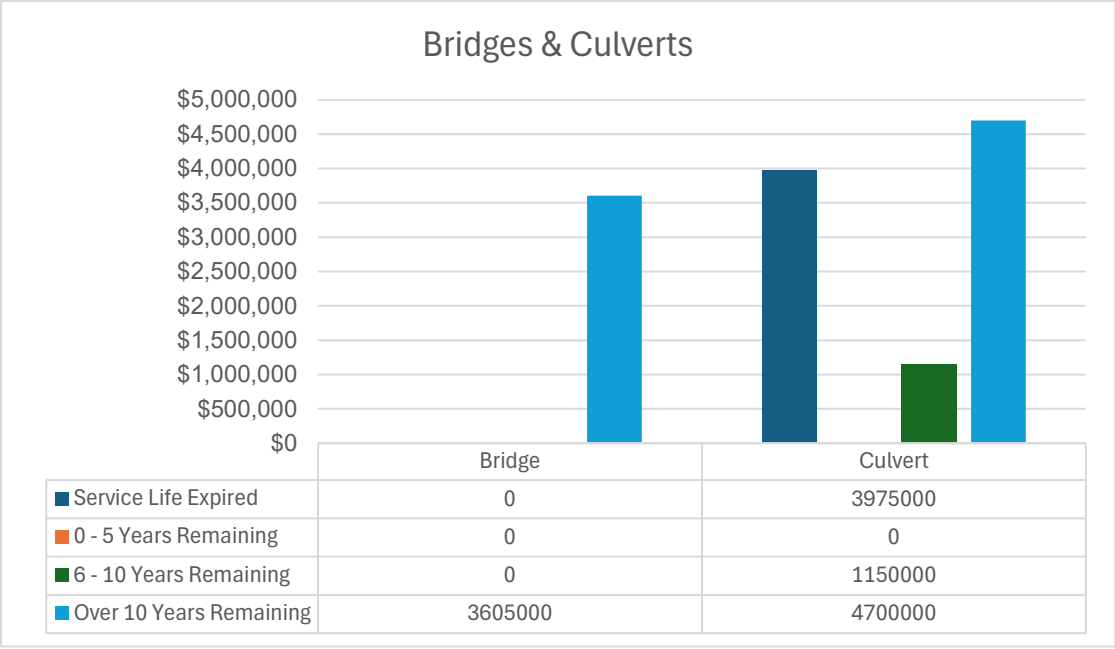
In this AMP, the following rating criteria is used to determine the current condition of bridges and culverts and forecast future capital requirements:

Condition	Rating
Very Good	80-100
Good	70-80
Fair	60-70
Poor	50-60
Very Poor	0-50

4.2.3 Estimated Useful Life & Average Age

The Estimated Useful Life for Bridges & Culverts assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Bridges	75	31.1	43.3
Structural Culverts	40	29.8	23.1
		30.3	**28.2**



Each asset’s Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

4.2.4 Lifecycle Management Strategy

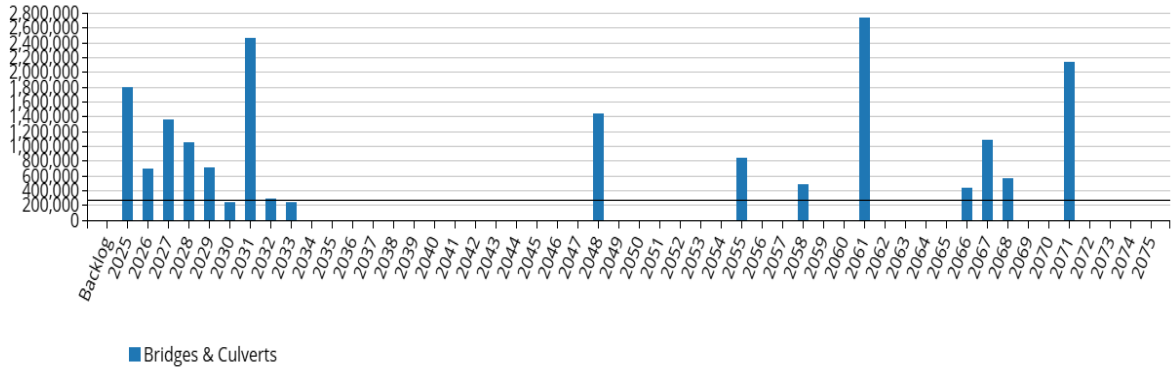
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance, Rehabilitation and Replacement	All lifecycle activities are driven by the results of mandated structural inspections competed according to the Ontario Structure Inspection Manual (OSIM)
Inspection	The most recent inspection report was completed in 2023 TSI Inc.

Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs.



The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix A.

4.2.5 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Aging Infrastructure

As municipal bridges continue to age, there are a handful of structures that have approached their original useful life. As the bridges were created around the same time, this can create the need for complete major rehabilitation projects at the same time.

Capital Funding Strategies

Major capital rehabilitation projects for bridges and culverts are dependant on the availability of grant funding opportunities. When grants are not available, bridge rehabilitation projects may be deferred. An annual Capital Funding Strategy can reduce dependency on grant funding and help prevent deferral of capital works. Staff have indicated that both internal/external lifecycle activities (maintenance, rehabilitation), are not being completed due to the lack of funding to complete work. In 2025 the Township has taken on debt as part of the strategy to fund the necessary replacement of some of these deferrals that cannot be postponed any further due to their assessed condition.

Climate Change & Extreme Weather Events

Flooding and extreme weather causes damage to multiple components of the Township's bridges including the deck, superstructure, substructure, and approaches. The rising levels of freshwater and the increased frequency and intensity of precipitation events are likely to increase the deterioration of bridge components. Staff should identify and monitor affected bridges and culverts. The township experienced a washout in 2001, resulting in a complete rebuild.

The Township also should continue to prioritize infrastructure maintenance, rehabilitation, and replacement based on safety and susceptibility to climate impacts.

The asset-specific attributes that internal staff utilize to define and prioritize the criticality of the bridge and culvert infrastructure are documented below:

Probability of Failure (POF)	Consequence of Failure (COF)
Condition	Replacement Cost (Financial)

Recommendations

1. Data Review/Validation

- Continue to review and validate inventory data, assessed condition data and replacement costs for all bridges and structural culverts upon the completion of OSIM inspections every 2 years.

2. Risk Management Strategies

40. Use risk ratings to prioritize critical bridges, ensuring that limited funding can be best apportioned to the bridges and culverts network.

41. Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

3. Lifecycle Management Strategies

42. This AMP only includes capital costs associated with the reconstruction of bridges and culverts. The Township should work towards identifying projected capital rehabilitation and renewal costs for bridges and culverts and integrating these costs into long-term planning.

4. Levels of Service

- Continue to measure levels of service in accordance with the metrics identified in O. Reg. 588/17 and those metrics that the Township believes to provide meaningful and reliable inputs into asset management planning.

4.3 Buildings & Facilities

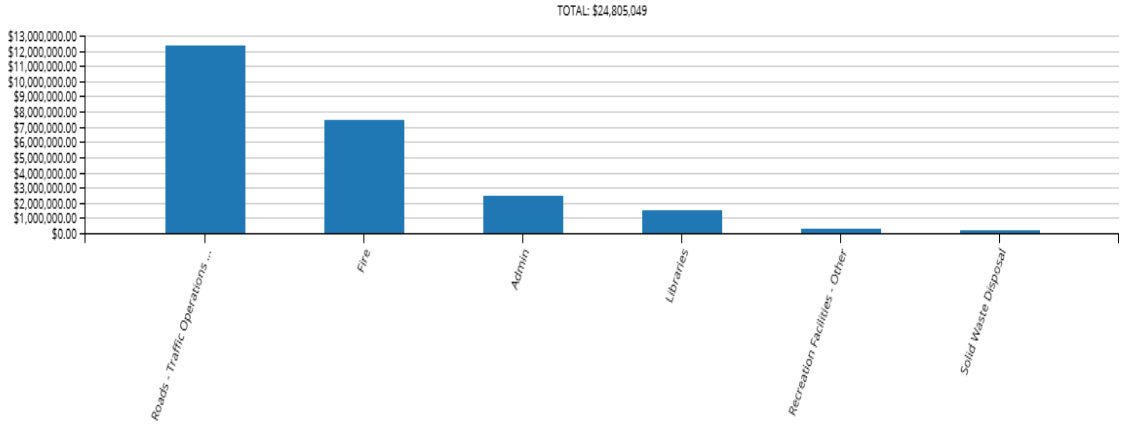
The Township of Elizabethtown-Kitley owns and maintains several facilities that provide key services to the community which include:

43. Administrative Offices
44. Public Works
45. Fire Stations
46. Public Libraries
47. Waste Site

4.3.1 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Buildings & Facilities inventory. All user-defined costs are insurance appraisals.

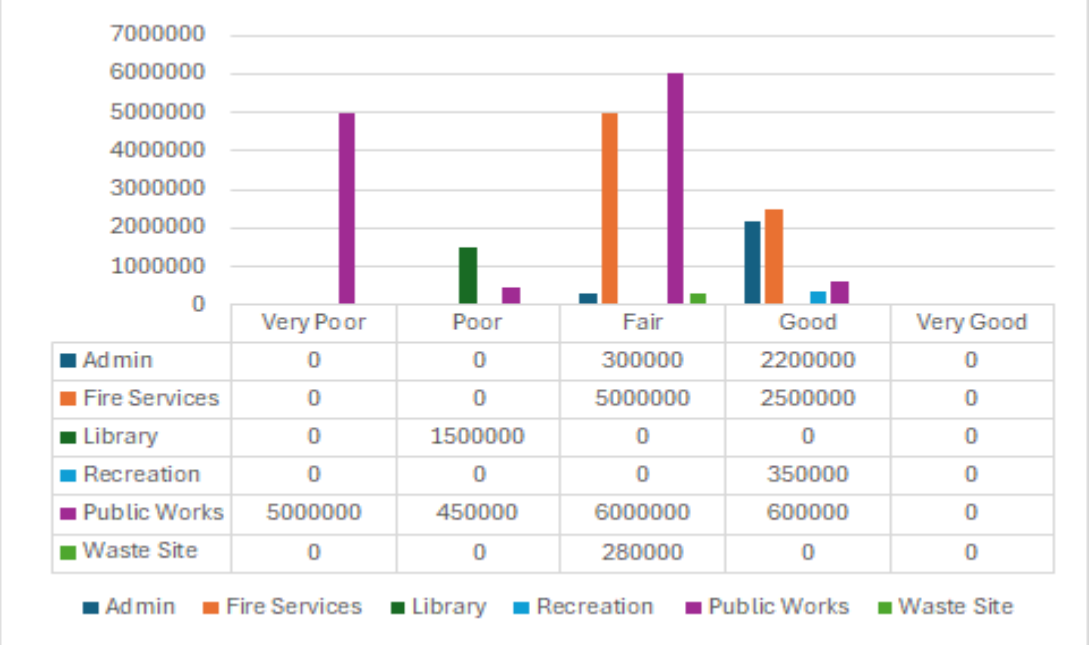
Asset Segment	Quantity (# of components)	Replacement Cost Method	Total Replacement Cost
Admin	2 (7)	User Defined	$2,240,035
Fire Services	3	User Defined	$7,532,483
Library	1 (4)	User Defined	$1,601,957
Public Works	2 (6)	User Defined	$12,429,199
Waste Site	1	User-Defined	$298,190
			$24,805,049



4.3.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Administration Offices	91%	Very Good	2020 Assessment
Fire Services	88%	Good	2020 Assessment
Library	84%	Good	2020 Assessment
Park/Recreation	84%	Good	2020 Assessment
Public Works	60%	Fair	2020 Assessment
Waste Site	79%	Good	2020 Assessment
	76%	**Good**	2020 Assessment



	Very Poor	Poor	Fair	Good	Very Good
Admin	0	0	300000	2200000	0
Fire Services	0	0	5000000	2500000	0
Library	0	1500000	0	0	0
Recreation	0	0	0	350000	0
Public Works	5000000	450000	6000000	600000	0
Waste Site	0	0	280000	0	0

To ensure that the Township's Buildings & Facilities continues to provide an acceptable level of service, the Township of Elizabethtown-Kitley should monitor the average

condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Buildings & Facilities.

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently. The Township's current approach to completing a condition assessment is summarized as follows:

48. A building condition assessment was conducted in 2020, recommending improvements to each building component. An updated condition assessment is recommended.

49. Health and safety walkthroughs are completed internally on a monthly basis.

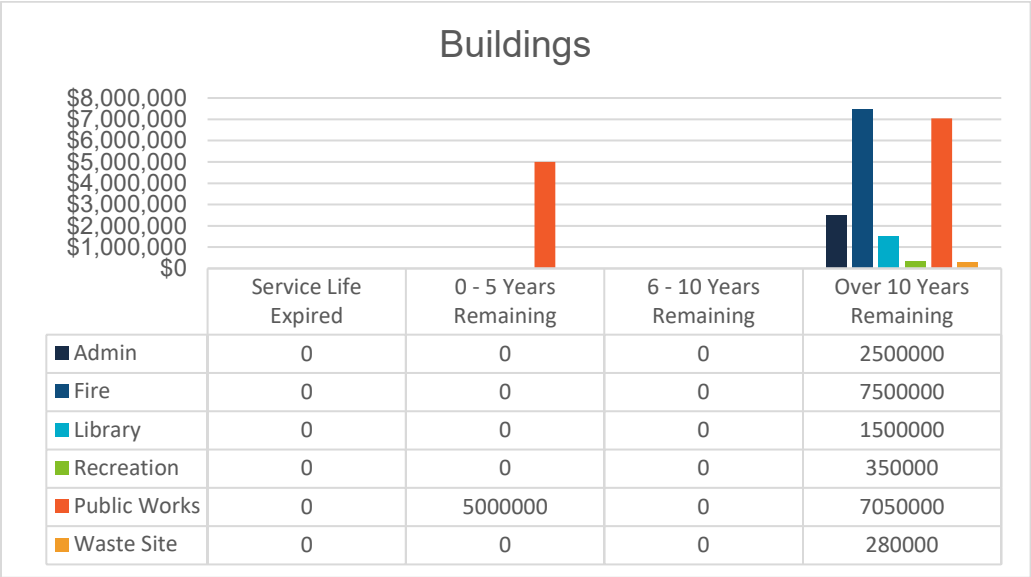
50. Building Assessments are completed on a regular basis by the designated facility manager.

Estimated Useful Life & Average Age

The Estimated Useful Life for Buildings & Facilities assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Admin	20-50	70.1	21.6
Fire Services	20-50	19	31
Library	20-50	14	36
Park/Recreation	10-50	15	35
Public Works	20-50	32.1	17.2

Waste Site	50	30	20
		32.4	**24.1**



	Service Life Expired	0 - 5 Years Remaining	6 - 10 Years Remaining	Over 10 Years Remaining
Admin	0	0	0	2500000
Fire	0	0	0	7500000
Library	0	0	0	1500000
Recreation	0	0	0	350000
Public Works	0	5000000	0	7050000
Waste Site	0	0	0	280000

Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

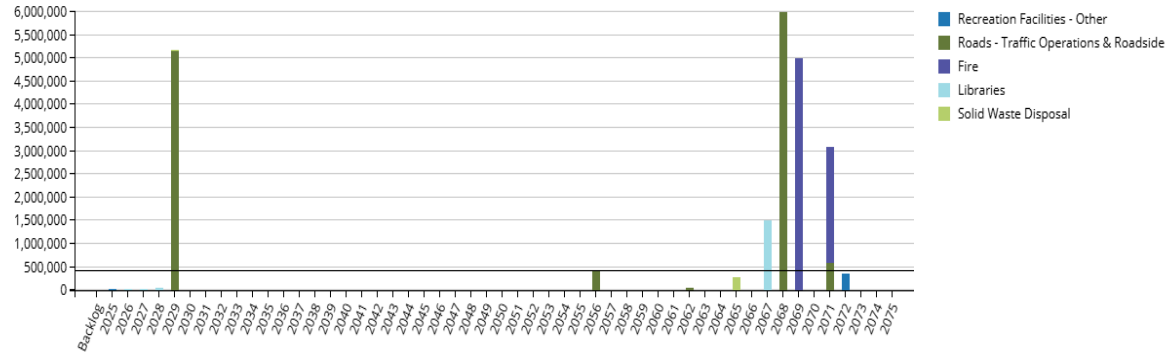
4.3.4 Lifecycle Management Strategy

The condition or performance of most assets will deteriorate over time. 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. The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance / Rehabilitation	Municipal buildings are subject to monthly, scheduled inspections to identify health & safety requirements
	Fire stations are subject to internal maintenance regarding heating systems (annually), compressors (semi-annually)
	Building maintenance is primarily reactive, apart from shceudled mainataince on HVAC systems, which is done through an external contractor
Replacement	Replacements occur when assets reach end of life/failure. Assessments are completed strategically as facilities approach their end of life to determine whether replacement or rehabilitation is appropriate

Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs. Annual operating requirements fluctuate significantly and are addressed on an as-needed basis. The projected cost of lifecycle activities that will need to be undertaken over the next 10 years are depicted in the following graph. Further, current and proposed Levels of Service can be found in Appendix B.



4.3.5 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Aging Infrastructure & Capital Funding

The Township's buildings and facilities have an average age of 22.2 years. With the Township's aging infrastructure, staff had indicated that the presence of asbestos in buildings could be an issue. In 2024, staff completed testing on Township buildings to determine the presence of asbestos for asset retirement obligations and/or potential remediation consideration. The Township **does not** currently have any obligations in their buildings as it relates to asbestos. Not having the necessary budget available to complete any required work, is further compounding the Township's problem with the management of its buildings and facilities.

The asset-specific attributes that internal staff utilize to define and prioritize the criticality of the water network are documented below:

Probability of Failure (POF)	Consequence of Failure (COF)
Condition	Replacement Cost (Financial)

Recommendations

1. Asset Inventory

51. The Township's building inventory is a combination of single building entries, and separate assets for upgrades. The Township should develop a consistent building component scheme, such as UNIFORMAT-II. This will allow the Township to document the needs of buildings at a component level.

2. Condition Assessment Strategies

52. The Township should implement regular condition assessments for all facilities to better inform short- and long-term capital requirements.

3. Risk Management Strategies

53. The Township should implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.

54. The Township should review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

4. Levels of Service

- Continue measuring levels of service in accordance with the metrics that the Township has established in this AMP. Additional metrics can be established as they are determined to provide further meaningful and reliable inputs into asset management planning.

4.4 Machinery & Equipment

To maintain the high quality of public infrastructure and support the delivery of core services, Elizabethtown-Kitley staff owns and employ various types of machinery and equipment to include:

55. Fire equipment
56. Office/IT equipment
57. Public works equipment
58. Waste site equipment

Keeping machinery & equipment in an good and functional state of repair is important to maintain a high level of service.

4.4.1 Asset Inventory & Replacement Cost

The following table includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Machinery & Equipment inventory.

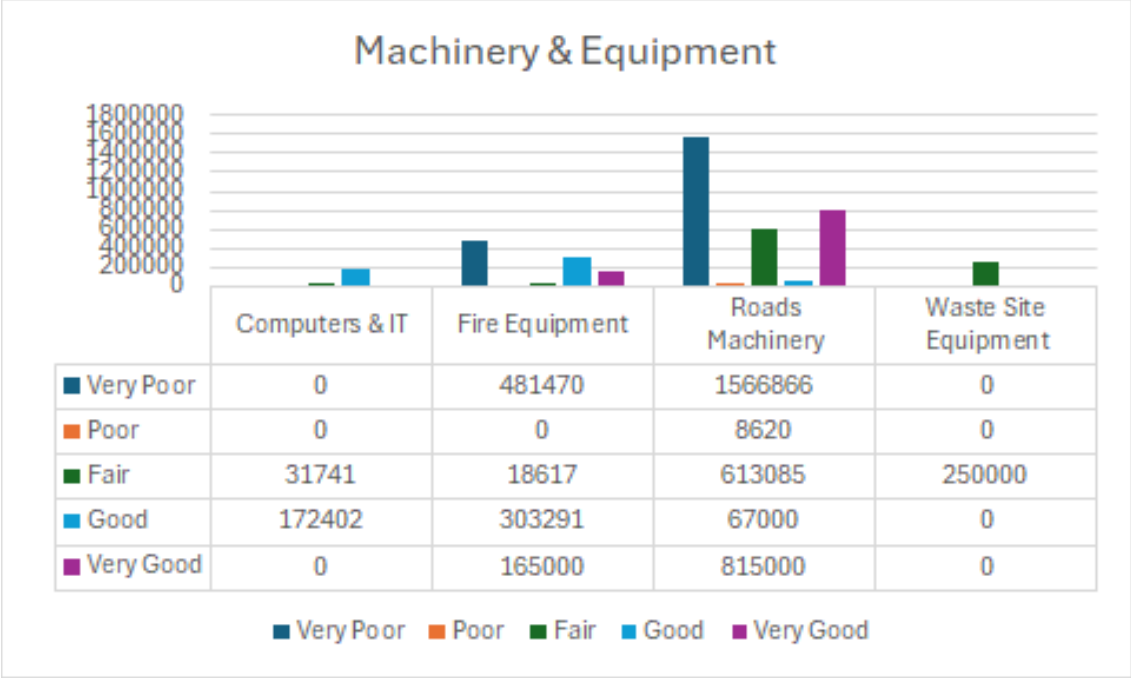
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Fire Equipment	7	CPI Tables	$968,378
Computers & IT	7	CPI Tables	$204,143
Public Works Machinery	15	CPI Tables	$3,070,571
Waste Site Equipment	3	CPI Tables	$250,000
			$4,493,092

4.4.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Fire Equipment	56%	Poor	Age-based

Computers & IT	67%	Good	Age-based
Public Works Machinery	40%	Poor	Age-based
Waste Site Equipment	49%	Poor	Age-Based
	50%	**Poor**	**Age-Based**



To ensure that the Machinery and Equipment of the Township continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Machinery & Equipment.

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the Remaining Service Life of assets and therefore in turn, identify the most cost-effective approach to managing assets more confidently. The following describes the municipality's current approach:

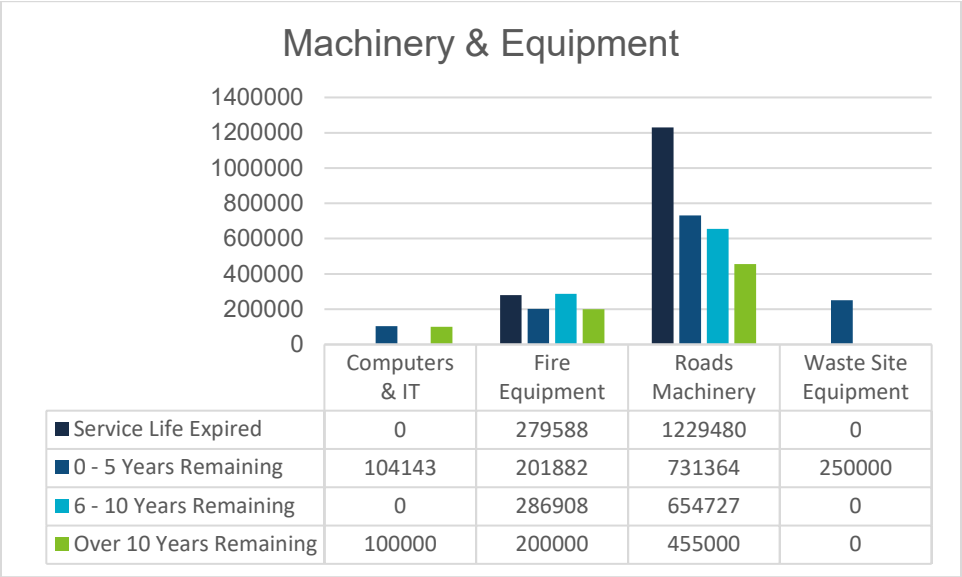
59. Staff complete regular visual inspections of machinery & equipment to ensure they are in state of adequate or good repair. The Township should look at hiring an onsite mechanic to better stay up to date on the state and condition of the equipment and ensure lifecycle maintenance is completed.

60. There is a structured reporting and tracking program in place for emergency services equipment. There are no formal condition assessment programs in place for any other equipment outside of emergency services equipment.

4.4.3 Estimated Useful Life & Average Age

The Estimated Useful Life for Machinery & Equipment assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining. The hours of service for heavy-duty machinery is used in determining the remaining useful life.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Fire Equipment	8-15	4.10	5.10
IT/Office Equipment	7-10	2.11	5.11
Public Works Equipment	10-25	12.3	1.8
Waste Site Equipment	10-15	5.1	4.11
		8.1	**3.10**



Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

4.4.4 Lifecycle Management Strategy

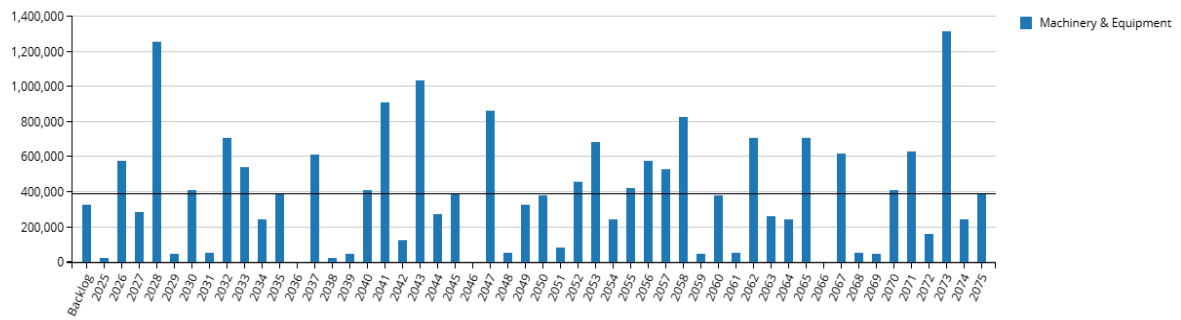
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance/ Rehabilitation	Maintenance program varies by department
	Fire Protection Services equipment is subject to a much more rigorous inspection and maintenance program compared to most other departments. Fire equipment requires annual testing, bunker gear is inspected after every use.
	IT equipment recieves annual recommendations by an external contractor
	Machinery & equipment is maintained according to manufacturer recommended actions and supplemented by the expertise of municipal staff
Replacement	The replacement of machinery & equipment depends on deficiencies identified by operators that may impact their ability to complete required tasks

Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs. Annual operating requirements fluctuate significantly and are addressed on an as-needed basis.



Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Staff Capacity

The Fire Department recruitment and retention for volunteer fire fighters continues to be an ongoing issue. Coupled with the legislative/regulatory requirements, staffing capacity issues need to be resolved to maintain the Township's level of service and the community's expectations. The Public Works department has also indicated the need to increase the number of staff to a previous level as well as having a dedicated mechanic to possibly extend the life of some of the equipment.

Aged Machinery

Public Works Department is stuggling with aged equipment with costly repairs and has to continually balance which is the most cost effective and or acheivable approach, replacement or repair(rehabilitation).

The asset-specific attributes that internal staff utilize to define and prioritize the criticality of the water network are documented below:

Probability of Failure (POF)	Consequence of Failure (COF)
Condition	Replacement Cost (Financial)

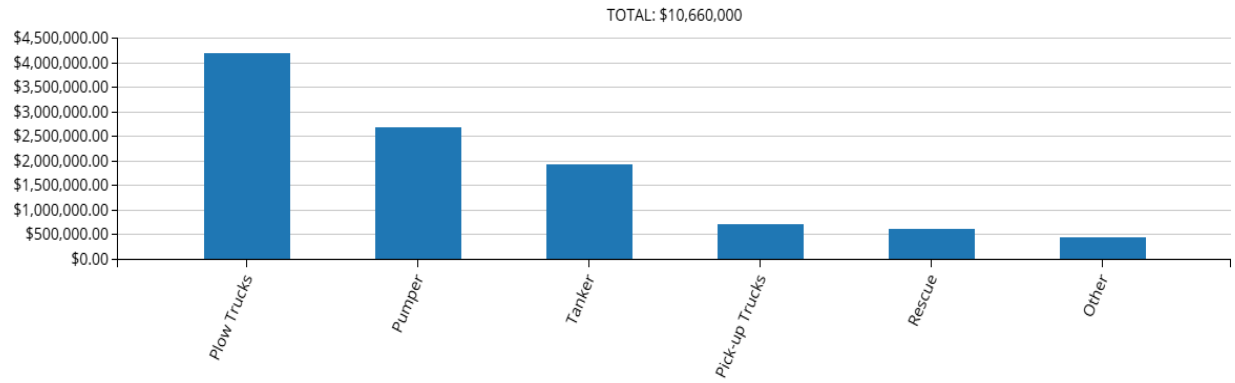
4.5 Vehicles

Vehicles allow staff to efficiently deliver municipal services and personnel. The Township's vehicle inventory is comprised of fire rescue vehicles and public works vehicles (plow trucks)

4.5.1 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Vehicles.

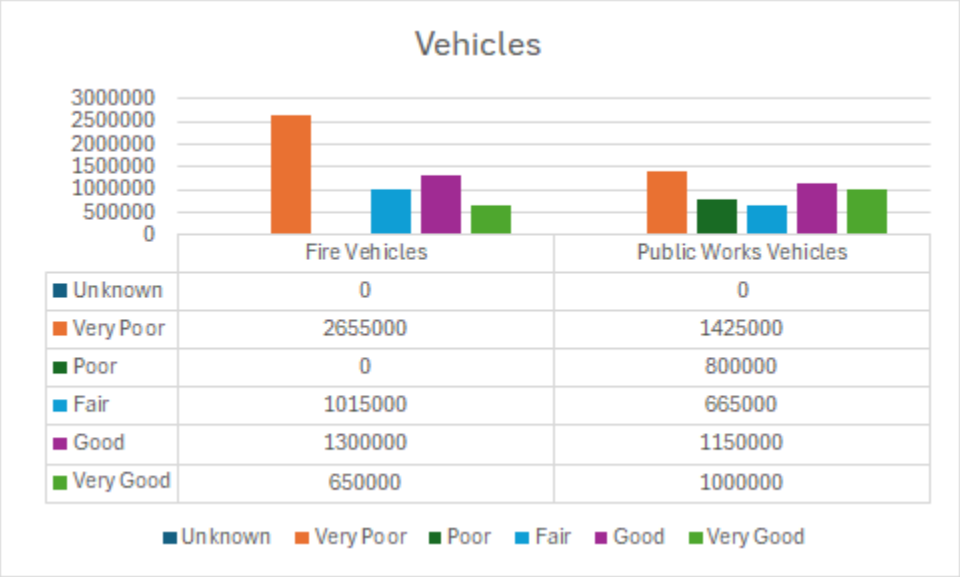
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Fire Vehicles	15	User-Defined	$5,620,000
Public Works Vehicles	16	User-Defined	$5,040,000
			$10,660,000



4.5.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Fire Vehicles	34%	Poor	Age-Based
Public Works Vehicles	38%	Poor	Age-Based
	36%	**Poor**	**Age-Based**



To ensure that the Township's vehicles continue to provide an acceptable Level of Service, the Township should closely monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Vehicles.

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently.

The following describes the municipality's current approach:

61. Fire vehicles are inspected monthly, internally.

62. The mileage of vehicles is used in determining remaining useful life.

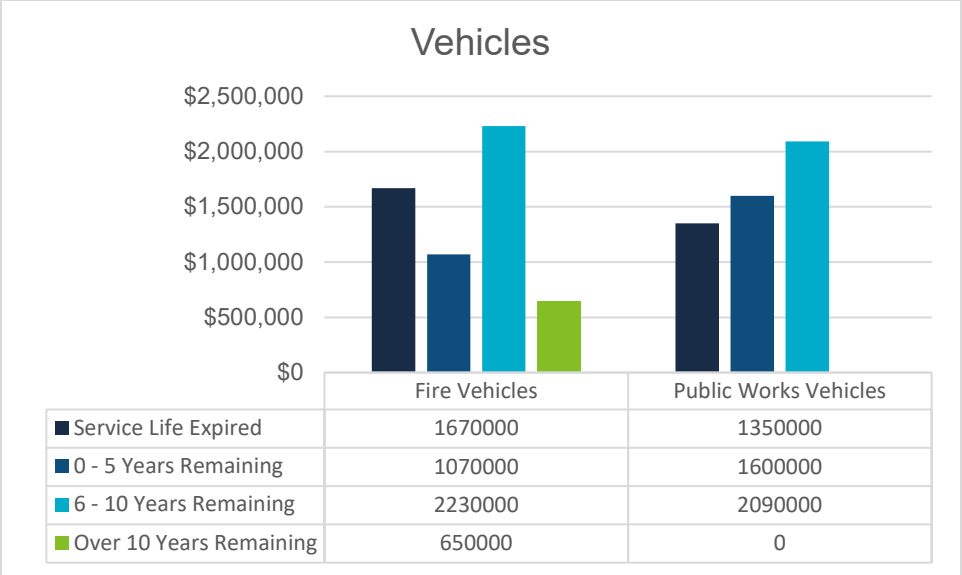
63. Staff complete regular visual inspections of public works vehicles to ensure they are in state of adequate repair prior to operation.

64. Vehicles are also inspected and recertified annually.

4.5.3 Estimated Useful Life & Average Age

The Estimated Useful Life for Vehicles assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Fire Vehicles	6-15	8.11	2.11
Public Works Vehicles	6-12	7	1.6
		7.10	**2.1**



	Fire Vehicles	Public Works Vehicles
Service Life Expired	1670000	1350000
0 - 5 Years Remaining	1070000	1600000
6 - 10 Years Remaining	2230000	2090000
Over 10 Years Remaining	650000	0

Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

4.5.4 Lifecycle Management Strategy

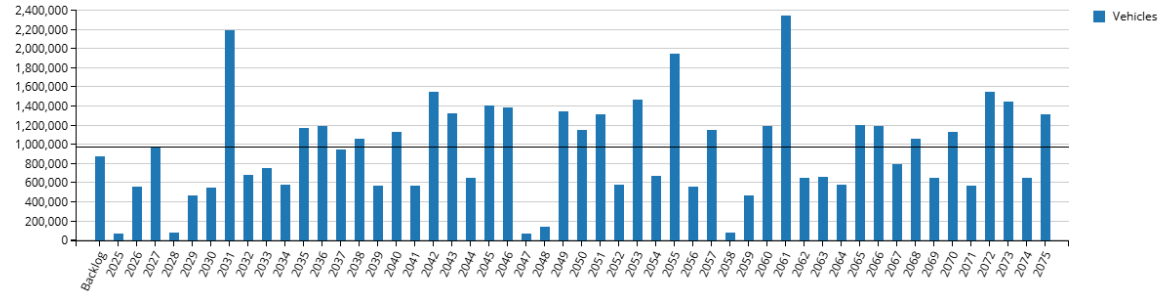
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance / Rehabilitation	As needed minor maintainance activities include: oil changes, greasing, filter changes, tire rotation
	Annual preventative maintenance activities are in accordance with manufacturer recommended actions and supplemented by the expertise of municipal staff
	Batteries are replaced every 3 years for fire department vehicles, while tires are changed every 10 years
Replacement	Vehicle age, kilometres and annual repair costs are taken into consideration when determining appropriate replacement schedules

Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs. Annual operating requirements fluctuate significantly and are addressed on an as-needed basis.



4.5.5 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing.

Staff Capacity

Staff have indicated that it is difficult to complete all required maintenance activities. This is due in part because the Township does not have an internal mechanic. With most vehicles projected to reach their estimated useful life within a year (0.9 years), regular maintenance becomes increasingly important if the Township wants to continue utilizing its vehicle assets.

Aging Infrastructure & Funding Strategies

As vehicles age, they will require exponentially increasing O&M costs to ensure compliance with MTO standards and to function adequately. As capital budgets become more constrained, more maintenance will be postponed, which will further amplify this risk.

The asset-specific attributes that internal staff utilize to define and prioritize the criticality of the water network are documented below:

Probability of Failure (POF)	Consequence of Failure (COF)
Condition	Replacement Cost (Financial)

4.6 Land Improvements

The Township of Elizabethtown-Kitley owns a variety of assets that are considered Land Improvements to include the following:

- Park assets that include docks, walkways
- Pavillions, Washrooms, Concessions
- Playgrounds, sports fields, and courts

4.6.1 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Land Improvements inventory.

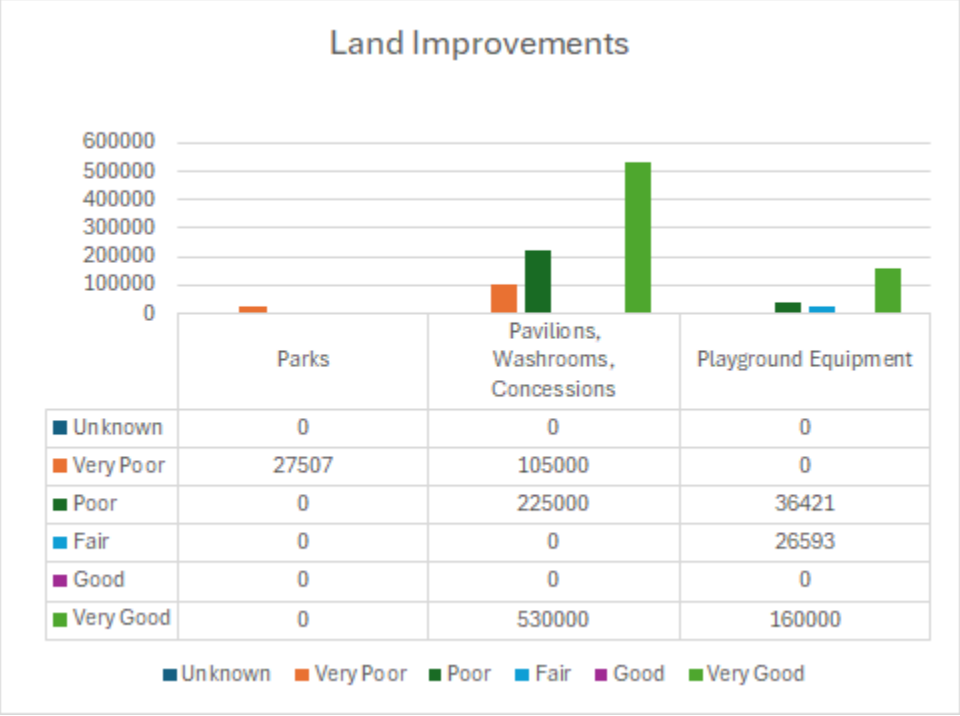
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Parks	2	User-Defined	$27,507

Pavillions, Washrooms, Concessions	7	User-Defined	$860,000
Playpround Equipment	5	User-Defined	223,014
			$1,110,521

4.6.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Parks	37%	Poor	Age-Based
Pavillions, Washrooms, Concessions	64%	Good	Age-Based
Playpround Equipment	**68%**	**Good**	**Age-Based**



To ensure that the Township's Land Improvements continue to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Land Improvements.

4.6.3 Current Approach to Condition Assessment

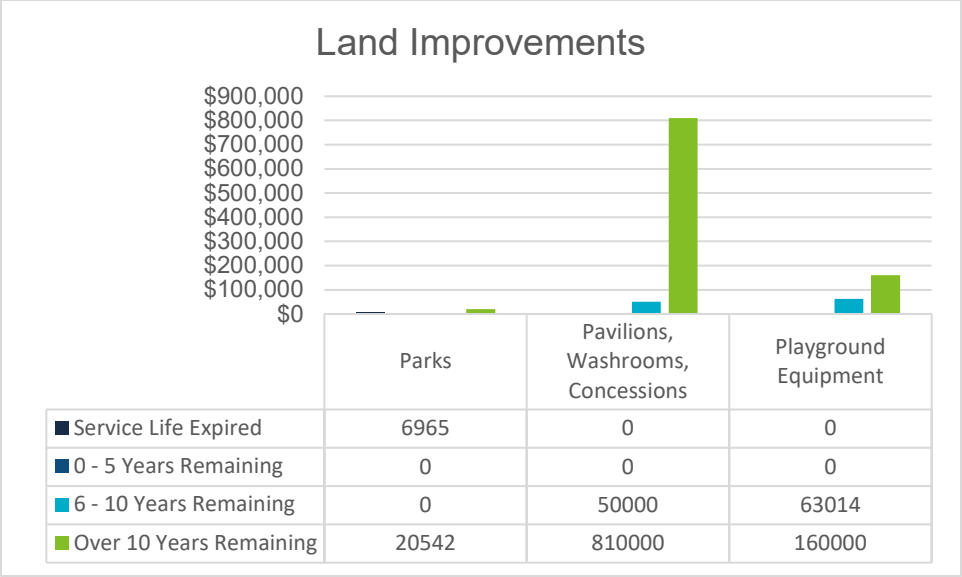
Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently. The following describes the municipality's current approach:

- Staff complete regular visual inspections of land improvement assets to ensure they are in a state of acceptable repair.
- Although assessed condition data is available, there are no formal condition assessment programs in place for land improvements.

4.6.4 Estimated Useful Life & Average Age

The table below identifies the estimated useful life, average age, and average service life remaining for each asset segment. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Parks	12-15	7.10	7.3
Pavillions, Washrooms, Concessions	20-30	16.6	32.9
Playpround Equipment	20	6.5	13.7
		11.8	**22.3**



4.6.5 Lifecycle Management Strategy

The condition or performance of most assets will deteriorate over time. 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.

The following table outlines the Town's current lifecycle management strategy.
Maintenanace/ Rehabilitation:

Various land improvement segments, including playground equipment, are subject to regular inspections to identify health & safety requirements as well as structural deficiencies that require additional attention.

Maintenance of land improvements is dealt with on a case-by-case basis.

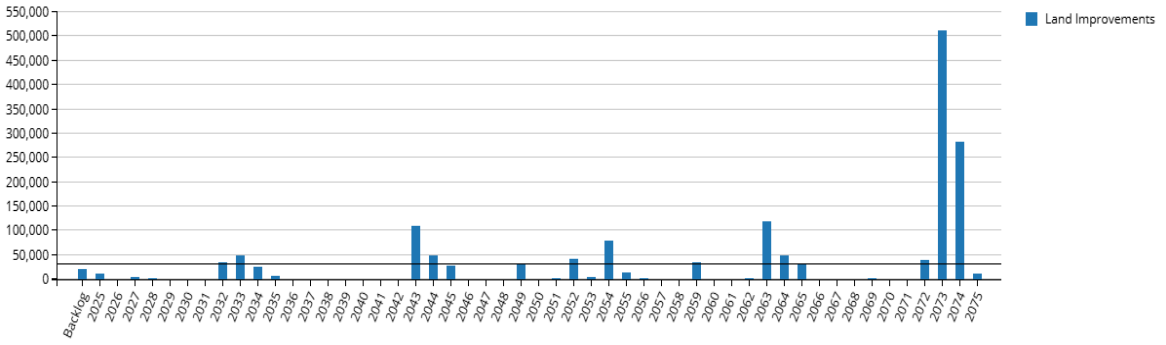
Replacement:

The Land Improvements asset category includes several unique asset types and lifecycle requiments are dealt with on a case-by-case basis.

Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate

towards funding rehabilitation and replacement needs. Annual operating requirements fluctuate significantly and are addressed on an as-needed basis.



4.6.6 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that is being faced by the Township:

Staff Capacity

Staff have indicated that it is difficult to complete all required maintenance activities. This is due in part because the Township does not have dedicated recreation staff to perform these tasks. The administrative support is shared with public works.

Funding Strategies

Playground equipment and Pavilions at Township parks have been replaced with the use of grant money over the past few years so a lot of the improvements are new. The Township should now be putting money away annually for the next replacement.

The asset-specific attributes that internal staff utilize to define and prioritize the criticality of the water network are documented below:

Probability of Failure (POF)	Consequence of Failure (COF)
Condition	Replacement Cost (Financial)

5. Analysis of Rate-Funded Assets

Key Insights

65. Rate-funded assets are valued at **$8.9 million**.

66. **93%** of rate-funded assets are in fair or better condition.

67. The average annual capital requirement to sustain the current level of service for rate-funded assets is approximately **$133,500**.

68. Critical assets should be evaluated to determine appropriate risk mitigation activities and treatment options.

5.1 Water Network

Water services for the Township are currently maintained by the City of Brockville, and the operating expenditures are funded through the City of Brockville billing system. The Township is expected to pay for capital costs associated with the water distribution main they own. The water services provided by the Township includes the following:

69. Hydrants
70. Valves
71. Water Mains
72. Booster Station
73. Meter Chamber
74. Meters
75. Flush Sample Station

5.1.2 Asset Inventory & Replacement Cost

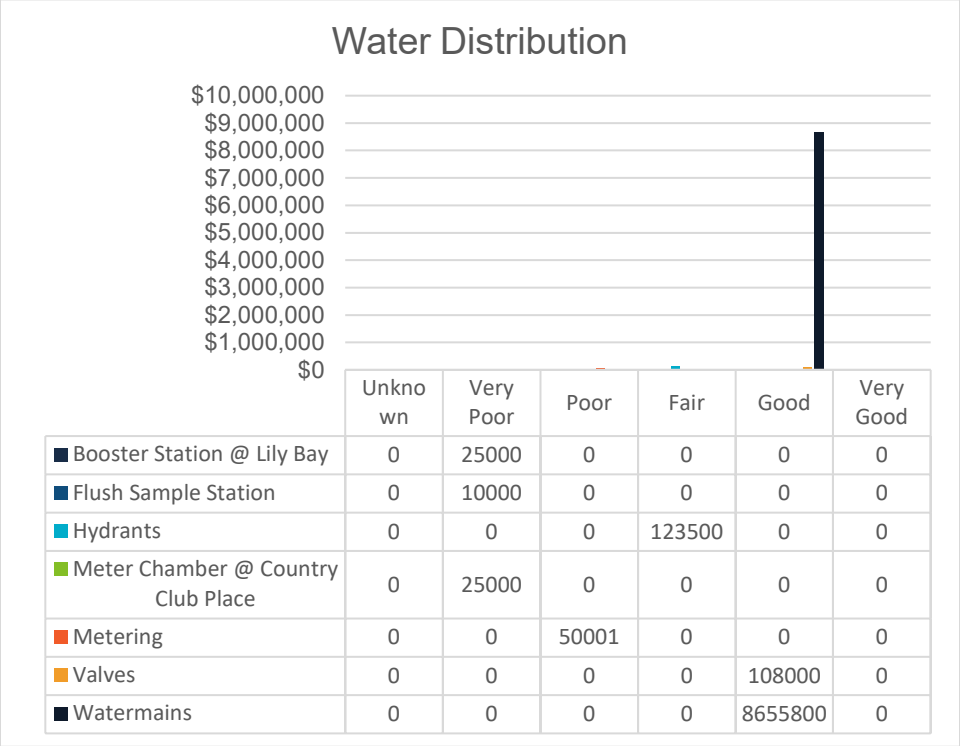
The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Water Network inventory.

Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Hydrants	19	User-Defined	$123,500
Valves	60	User-Defined	$108,000
Water Mains	16.23 kms	Cost/Unit	$8,655,800
Booster Station		User-Defined	$25,000
Meter Chamber		User Defined	$25,000
Meters		Cost/unit	$50,000
Flush Sample Station		User-Defined	$10,000
			$8,997,300

5.1.3 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Hydrants	46%	Fair	Age-Based
Valves	63%	Good	Age-based
Water Mains	63%	Good	Age-Based
Booster Station	0	Poor	Age-Based
Flush Sample Station	0	Poor	Age-based
Meter Chamber	0	Poor	Age-Based
Metering	27%	Poor	Age-Based
	57%	**Good**	**Age-Based**



	Unknown	Very Poor	Poor	Fair	Good	Very Good
Booster Station @ Lily Bay	0	25000	0	0	0	0
Flush Sample Station	0	10000	0	0	0	0
Hydrants	0	0	0	123500	0	0
Meter Chamber @ Country Club Place	0	25000	0	0	0	0
Metering	0	0	50001	0	0	0
Valves	0	0	0	0	108000	0
Watermains	0	0	0	0	8655800	0

To ensure that the Township's water network continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Water Network.

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently.

The following describes the municipality's current approach to the condition assessment of the Water Network:

76. Staff primarily rely on the age and material of watermains to determine the projected overall condition of watermains.

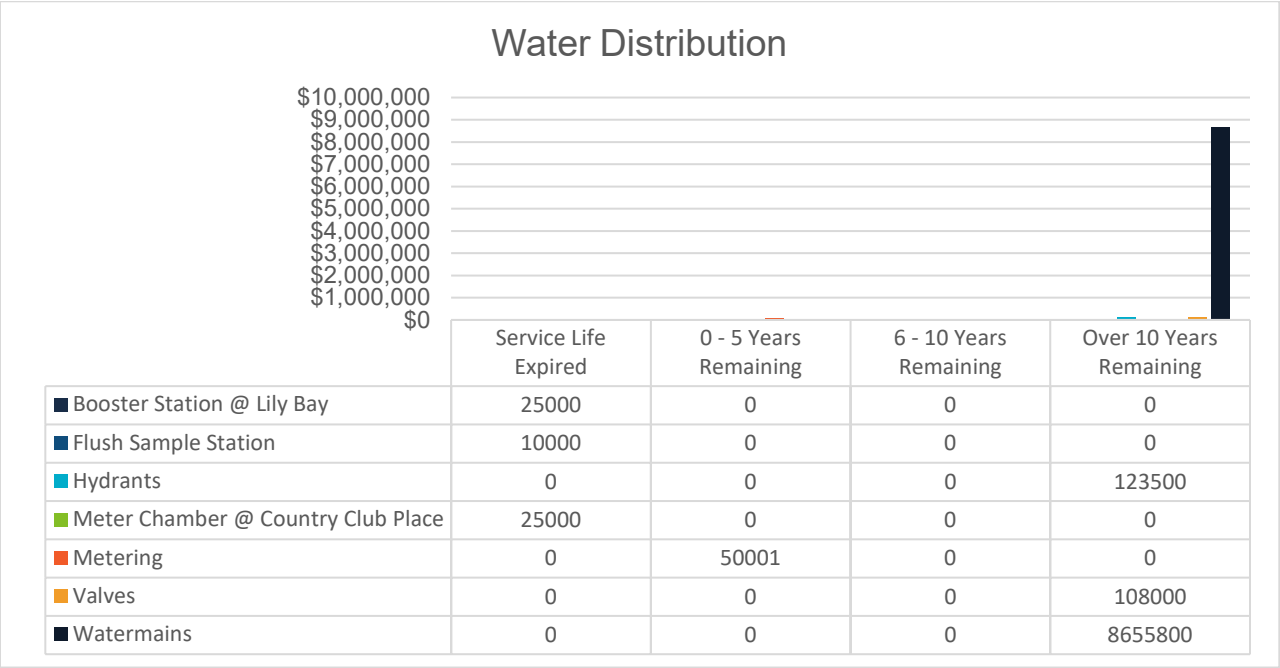
77. There are no formal internal condition assessment programs in place for the Water Network.

78. Regular inspections are completed by the City of Brockville.

5.1.4 Estimated Useful Life & Average Age

The Estimated Useful Life for Water Network assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Hydrants	50	27.0	23.0
Valves	72	27.0	45.0
Water Mains	72	27.0	45.0
Booster Station	10	21	0
Flush Sample Station	10	11	0
Meter Chamber	10	21	0
Metering	15	11	4
		26.1	**38.9**



	Service Life Expired	0 - 5 Years Remaining	6 - 10 Years Remaining	Over 10 Years Remaining
Booster Station @ Lily Bay	25000	0	0	0
Flush Sample Station	10000	0	0	0
Hydrants	0	0	0	123500
Meter Chamber @ Country Club Place	25000	0	0	0
Metering	0	50001	0	0
Valves	0	0	0	108000
Watermains	0	0	0	8655800

5.1.5 Lifecycle Management Strategy

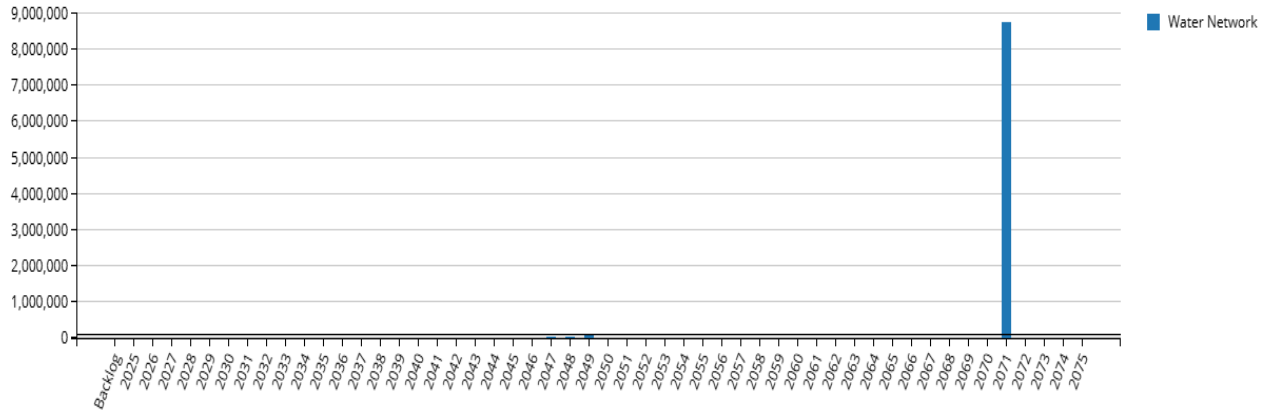
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Main flushing is completed annually
	Hydrant inspection and valve turning occurs annually
Replacement	In the absence of mid-lifecycle rehabilitative events, most mains are simply maintained with the goal of full replacement once it reaches its end-of-life
	Replacement activities are identified based on an analysis of the main break rate as well as any issues identified during regular maintenance activities

Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs.



5.1.6 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that is currently being faced by the Township:

Asset Data & Information

All asset data pertaining to the water network is with The City of Brockville. Consequently, the Township does not have immediate access.

With the completion of this AMP, the Township has been able to have a centralized database of the hydrants, valves, and mains. Staff plan to prioritize data refinement efforts to increase confidence in the accuracy and reliability of asset data and information. Once completed there will be greater confidence in the development of data-driven strategies to address infrastructure needs.

5.1.7 Levels of Service

The following tables identify the Township's current level of service for Water Network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by Water Network.

Service Attribute	Qualitative Description	Proposed LOS (2025)	Current LOS (2021)
Scope	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system	See Appendix B	See Appendix B
	Description, which may include maps, of the user groups or areas of the municipality that have fire flow	See Appendix B	See Appendix B
Reliability	Description of boil water advisories and service interruptions	N/A	

Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Water Network.

Service Attribute	Technical Metric	Proposed LOS (2025)	Current LOS	LOS (2021)
Scope	% Of properties connected to the municipal water system	7%	7%	7%
	% Of properties where fire flow is available	0%	0%	0%
Reliability	# Of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system	0	0	0
	# Of connection-days per year where water is not available due to water main breaks compared to the total number of properties connected to the municipal water system	0.017	0.017	0.017
Outcome	Capital re-investment rate	1.48%	0.0%	0.0%

Recommendations

1. Asset Inventory

- Review unit replacement costs of watermains and hydrants, ensuring they reflect current market value.

2. Condition Assessment Strategies

- Continue to identify condition assessment strategies for high value and high-risk water network assets.

3. Lifecycle Strategies

- Work with Brockville to determine an appropriate level of flushing, valve turning, and hydrant maintenance to ensure the water system is functioning.

4. Risk Management Strategies

79. Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
80. Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

5. Levels of Service

- Continue to measure levels of service in accordance with the metrics that the Township has established in this AMP. Additional metrics can be established as they are determined to provide meaningful and reliable inputs into asset management planning.

6. Impacts of Growth

Key Insights

81. Understanding the key drivers of growth and demand will allow the Township to more effectively plan for new infrastructure, and the upgrade or disposal of existing infrastructure.

82. Moderate population growth, and moderate employment decline is expected.

83. The costs of growth should be considered in long-term funding strategies that are designed to maintain the current Level of Service.

6.1 Description of Growth Assumptions

The demand for infrastructure and services will change over time based on a combination of internal and external factors. Understanding the key drivers of growth and demand will allow the Township to plan for new infrastructure more effectively, and the upgrade or disposal of existing infrastructure. Increases or decreases in demand can affect what assets are needed and what level of service meets the needs of the community

6.1.1 Official Plan of the Township of Elizabethtown-Kitley (2018)

The Township recently adopted a new Official Plan to ensure conformity with the United Counties of Leeds and Grenville Official Plan, and address matters of local planning interest. The Official Plan is a planning document for the purpose of guiding the future development of the Township of Elizabethtown-Kitley to the year 2031.

The Official Plan has been approved by the United Counties of Leeds & Greenville as of October 25, 2018.

The General Development Policies apply to development regardless of the land use designation in which it is situated. The policies in the Official Plan are intended to support the initiative that most of the future growth will be focused on existing settlement areas in the Township's villages and hamlets.

The majority of commercial and industrial development will be directed to existing industrial-business parks, with designated portions of County Road No. 29 Corridor area as a healthy and prosperous commercial and industrial area.

6.1.2 United Counties of Leeds and Grenville (2021)

The United Counties of Leeds and Grenville is responsible for the allocation of growth to the local municipalities, which is based on a combination of local factors including: local planning policy; historic and recent growth trends; market demand; and the capacity to accommodate growth from land supply and servicing perspectives.

The following table outlines the population and employment forecasts allocated to the Township of Elizabethtown-Kitley:

	2011	2021	2031
Total Place of Work Employment Forecasts	2,580	2,680	2,500
Historical & Forecast Total Population	9,965	9,960	10,010

6.2 Impact of Growth on Lifecycle Activities

Effective July 1, 2025 as mandated by the Province, the Township's Asset Management Plan must include a discussion of how the assumptions regarding future changes in population and economic activity informed the preparation of the lifecycle management and financial strategy.

Planning for forecasted population growth may require the expansion of existing infrastructure and services. As growth-related assets are constructed or acquired, they should be integrated into the Township's AMP. While the addition of residential units will add to the existing assessment base and offset some of the costs associated with growth, the Township will need to review the lifecycle costs of growth-related infrastructure. These costs should be considered in long-term funding strategies that are designed to, at a minimum, maintain the current level of service.

7. Financial Strategy

Key Insights

84. The Township is committing approximately **$2,611,822** towards capital projects per year from sustainable revenue sources

85. Given the annual capital requirement of **$4,761,255** there is currently a funding gap of **$2,149,433** annually

86. For Tax-Funded assets, the recommend annual tax increase is **2%** each year for the next **10** years to achieve a sustainable level of funding

87. For the Water Network, the suggested starting annual rate per user is **$50**, with an annual **5%** increase to achieve the sustainable level of annual funding requirement of **$133,523**. It will take approximately **47** years to achieve the cost parity required but it will be in time for the watermain replacement and will cover any debt requirements at that time.

7.1 Financial Strategy Overview

For an Asset Management Plan to be effective and meaningful, it must be integrated with financial planning and long-term budgeting. The development of a comprehensive financial plan will allow the Township of Elizabethtown-Kitley to identify the financial resources required for sustainable asset management based on existing asset inventories, desired levels of service, and projected growth requirements.

This report develops such a financial plan by presenting several scenarios for consideration and culminating with final recommendations. As outlined below, the scenarios presented model different combinations of the following components:

1. The financial requirements for:

    a. Existing assets
    b. Existing service levels
    c. Requirements of contemplated changes in service levels (none identified for this plan)
    d. Requirements of anticipated growth (none identified for this plan)

2. Use of traditional sources of municipal funds:

    a. Tax levies
    b. User fees
    c. Reserves
    d. Debt

3. Use of non-traditional sources of municipal funds:

    a. Reallocated budgets
    b. Partnerships
    c. Procurement methods

4. Use of Senior Government Funds:

    a. Canada Community Building Fund (CCBF)
    b. Annual grants

Note: Periodic grants are normally not included due to Provincial requirements for firm commitments. However, if moving a specific project forward is wholly dependent on receiving a one-time grant, the replacement cost included in the financial strategy is the net of such grant being received.

If the financial plan component results in a funding shortfall, the Province requires the inclusion of a specific plan as to how the impact of the shortfall will be managed. In determining the legitimacy of a funding shortfall, the Province may evaluate the Township's approach to the following:

1. In order to reduce financial requirements, consideration has been given to revising service levels downward.

2. All asset management and financial strategies have been considered. For example:

    a. If a zero-debt policy is in place, is it warranted? If not the use of debt should be considered.

    b. Do user fees reflect the cost of the applicable service? If not, increased user fees should be considered.

Annual Requirements & Capital Funding

7.1.1 Annual Requirements

The annual requirements represent the amount the Township should allocate annually to each asset category to meet replacement needs as they arise, prevent infrastructure backlogs and achieve long-term sustainability. In total, the Township must allocate approximately **$4.76 million** annually to address capital requirements for the assets included in this AMP.

For most asset categories the annual requirement has been calculated based on a “replacement only” scenario, in which capital costs are only incurred at the construction and replacement of each asset.

However, for the Road Network, Lifecycle Management strategies have been developed to identify capital costs that are realized through strategic rehabilitation and renewal of the Township’s roads and sanitary sewer mains respectively. The development of these strategies allows for a comparison of potential cost avoidance if the strategies were to be implemented.

Annual Funding Available

Based on a historical analysis of sustainable capital funding sources, the Township is committing approximately $2,611,822 towards capital projects per year. Given the annual capital requirement of $4,761,256, there is currently a funding gap of $2,149,433 annually.

7.2. Funding Objective

We have developed a scenario that would enable Elizabethtown-Kitley to achieve full funding within 1 to 10 years for the **Tax Funded Assets** and 1-47 years for the **Rate Funded Assets.**

Note: For the purposes of this AMP, we have excluded gravel roads since they are a perpetual maintenance asset and end of life replacement calculations do not normally apply. If gravel roads are maintained properly, they can theoretically have a limitless service life.

For each scenario developed we have included strategies, where applicable, regarding the use of cost containment and funding opportunities.

7.3 Financial Profile: Tax Funded Assets

7.3.1 Current Funding Position

The following tables show, by asset category, the Township of Elizabethtown-Kitley's average annual asset investment requirements, current funding positions, and funding increases required to achieve full funding on assets funded by taxes.

Asset Category	Avg. Annual Requirement	Annual Funding Available				Annual Deficit
		Taxes	Gas Tax	OCIF	Total Available	
Bridges & Culverts	294,000	335,000	0	0	335,000	-41,000
Buildings & Facilities	458,000	299,000	0	0	299,000	159,000
Land Improvements	33,000	70,000			70,000	-37,000
Machinery & Equipment	392,000	120,000	0	0	120,000	272,000
Road Network	2,469,000	656,000	313,000	198,000	1,167,800	1,301,200
Vehicles	983,000	610,000	0	0	610,000	373,000
	4,761,000	**2,100,000**	**313,000**	**198,000**	**2,612,000**	**2,149,000**

The average annual investment requirement for the above categories is $4,761,000. Annual revenue currently allocated to these assets for capital purposes is $2,612,000 leaving an annual deficit of $2,149,000. Put differently, these infrastructure categories are currently funded at 45% of their long-term requirements.

7.3.2 Full Funding Requirements

In 2025, Township of Elizabethtown-Kitley has annual tax revenues of $8,518,995. As illustrated in the following table, without consideration of any other sources of revenue or cost containment strategies, full funding would require the following tax change over time:

Asset Category	Tax Change Required for Full Funding
Bridges & Culverts	0%
Buildings & Facilities	1.9%
Machinery & Equipment	3.2%
Land Improvements	0
Road Network	15.3%

Vehicles	4.4%
	25.0%

The following changes in costs and/or revenues over the next number of years should also be considered in the financial strategy:

a) The Township's formula based OCIF grant is decreasing annually by approximately $30,000 from $247,000 in 2023 to $178,000 in 2026.

b) The Township's debt payments for the building asset categories will be decreasing by $35,000 over the next 5 years and by $151,000 over the next 10 years. Although in 2026 the Township has committed to taking on new debt for bridges for the next 15 years to address some of the gap in that category.

7.3.3 Financial Strategy Recommendations

Considering all the above information that has been presented, it is recommended that the Township follow the 10-year option meaning the Township achieve full funding over the proceeding 10-year period by:

a) Increasing tax revenues by 2% each year for the next 10 years solely for the purpose of phasing in full funding to the asset categories covered in this section of the AMP.

b) Allocating the current gas tax and OCIF revenue as outlined previously.

c) If the scheduled OCIF grant increase, the Township should reduce the annual tax increase by an amount equal to the grant increase as it occurs.

d) Reallocating appropriate revenue from categories in a surplus position to those in deficit position.

e) Increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.

Notes:

1. As in the past, periodic senior government infrastructure funding will most likely be available during the phase-in period. By Provincial AMP rules, this periodic funding cannot be incorporated into an AMP unless there are firm commitments in place. We have included OCIF formula-based funding, if applicable, since this funding is a multi-year commitment.

2. We realize that raising tax revenues by the amounts recommended above for infrastructure purposes will be very difficult to do. However, considering a longer “phase-in” period beyond the 10-year timeframe recommended may have even greater consequences in terms of infrastructure failure.

Although this option achieves full funding on an annual basis in 10 years and provides financial sustainability over the period modeled, the recommendations do require prioritizing capital projects to fit the resulting annual funding available.

Prioritizing future projects will require the current data to be replaced by condition-based data. Although our recommendations include no further use of debt, the results of the condition-based analysis may require otherwise.

7.4 Financial Profile: Rate Funded Assets

7.4.1 Current Funding Position

The following tables show, by asset category, Elizabethtown-Kitley's average annual asset investment requirements, current funding positions, and funding increases required to achieve full funding on assets funded by taxes.

Asset Category	Avg. Annual Requirement	Annual Funding Available				Annual Deficit
		Taxes	Gas Tax	OCIF	Total Available	
Water Network	133,500	0	0	0	0	133,500
	133,500	**0**	**0**	**0**	**0**	**133,500**

The average annual investment requirement for the above categories is $133,500. Annual revenue currently allocated to these assets for capital purposes is $0 leaving an annual deficit of $133,500. Put differently, these infrastructure categories are currently **funded at 0%** of their long-term requirements.

7.4.2 Full Funding Requirements

In 2025, the Township had no annual water revenues. As illustrated in the table below, without consideration of any other sources of revenue, full funding would require the following changes over time:

Asset Category	Tax Change Required for Full Funding
Water Network	N/A

In the following tables, we have expanded the above scenario to present multiple options. Due to the significant increases required and the EUL of the assets, phase-in options of up to 47 years can be considered.

7.4.3 Financial Strategy Recommendations

Considering all of the above information, phasing in a Water Network rate over the next 47 years is recommended:

a) Over the phase in period, achieve annual funding available for asset investment of $133,000 from the Water Network rates.

b) Increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.

Notes:

1. As in the past, periodic senior government infrastructure funding will most likely be available during the phase-in period. This periodic funding should not be incorporated into an AMP unless there are firm commitments in place.

2. We realize that increasing rate revenues for infrastructure purposes will be very difficult to do. However, considering a longer “phase-in” window may have even greater consequences in terms of infrastructure failure.

3. Any increase in rates required for operations would be in addition to the above recommendations.

Prioritizing future projects will require the current data to be replaced by condition-based data. Although our recommendations include no further use of debt, the results of the condition-based analysis may require otherwise.

The following tables outline how Elizabethtown-Kitley is using debt for investing in the asset categories as listed. There is currently $2,208,000 of debt outstanding for the assets covered by this AMP with corresponding principal and interest payments of $151,000, well within its provincially prescribed maximum of $1,873,000.

Asset Category	Current Debt Outstanding	Use of Debt in the Last Five Years				
		2021	2022	2023	2024	2025
Bridges & Culverts	2,830,467	0	0	0	0	2,830,467
Buildings & Facilities	2,208,000	2,208,000	0	0	0	0
Total Tax Funded:	**0**	**0**	**0**	**0**	**0**	**5,038,467**
Water Network	0	0	0	0	0	0
Total Rate Funded:	**0**	**0**	**0**	**0**	**0**	**0**

Asset Category	Principal & Interest Payments in the Next Ten Years						
	2021	2025	2026	2027	2028	2029	2040
Bridges & Culverts	0	0	255,000	255,000	255,000	255,000	255,000
Buildings & Facilities	0	151,000	151,000	151,000	151,000	151,000	151,000
Machinery & Equipment	0	0	0	0	0	0	0
Road Network	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Total Tax Funded:	**0**	**151,000**	**151,000**	**151,000**	**151,000**	**151,000**	**151,000**
Water Network	0	0	0	0	0	0	0
Total Rate Funded:	**0**	**0**	**0**	**0**	**0**	**0**	**0**

The revenue options outlined in this plan allow the Township to fully fund its long-term infrastructure requirements without further use of debt.

7.5 Use of Reserves

7.5.1 Available Reserves

Reserves play a critical role in long-term financial planning. The benefits of having reserves available for infrastructure planning include:

a) the ability to stabilize tax rates when dealing with variable and sometimes uncontrollable factors

b) financing one-time or short-term investments

c) accumulating the funding for significant future infrastructure investments

d) managing the use of debt

e) normalizing infrastructure funding requirement

By asset category, the table below outlines the details of the reserves currently available to the Township of Elizabethtown-Kitley.

Asset Category	Balance at December 31, 2024
Bridges & Culverts	100,000
Buildings & Facilities	180,700
Machinery & Equipment	100,000
Land Improvements	20,000
Road Network	122,000
Vehicles	0
Total Tax Funded:	**522,700**
Water Network	0
Total Rate Funded:	**0**

There is considerable debate in the municipal sector as to the appropriate level of reserves that a Township should have on hand. There is no clear guideline that has gained wide acceptance.

Factors that municipalities should consider when determining their capital reserve requirements include:

a) breadth of services provided
b) age and condition of infrastructure
c) use and level of debt
d) economic conditions and outlook
e) internal reserve and debt policies

These reserves are available for use by applicable asset categories during the “phase-in” period to full funding. This coupled with the Township’s judicious use of debt in the past, allows the scenarios to assume that, if required, available reserves and debt capacity can be used for high priority and emergency infrastructure investments in the short- to medium-term.

7.5.2 Recommendation

In 2024, Ontario Regulation 588/17 will require the Township of Elizabethtown-Kitley to integrate proposed levels of service for all asset categories in its Asset Management Plan update. We recommend that future planning should reflect adjustments to service levels and their impacts on reserve balances.

Appendices

Appendix A – **10-Year Capital Requirements** identifies projected 10-year capital requirements for each asset category.

Appendix B - **Current and Proposed Levels of Service are** identified in this appendix for each asset category.

Appendix C - **Levels of Service Maps** includes several maps that have been used to visualize the current Level of Service.

Appendix D **– Condition Assessment Guidelines**

Appendix A: 10-Year Capital Requirements

The following tables identify the capital cost requirements for each of the next 10 years to meet projected capital requirements and maintain the current level of service.

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Bridge	$ -	$ 1,755,467	$ -	$ -	$ 152,500	$ 707,500	$ -	$ -	$ -	$ -	$ -	$ -
Culvert	$ -	$ 55,000	$ 712,500	$ 1,376,250	$ 334,375	$ 16,000	$ 254,000	$ 2,471,000	$ 306,750	$ 831,625	$ -	$ -
Bridges & Culverts Total	**$ -**	**$ 1,810,467**	**$ 712,500**	**$ 1,376,250**	**$ 486,875**	**$ 723,500**	**$ 254,000**	**$ 2,471,000**	**$ 306,750**	**$ 831,625**	**$ -**	**$ -**

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Bellamy Park	$ -	$ 20,205	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fire Station # 1 - Lyn	$ -	$ 1,656	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fire Station # 2 - New Dublin	$ -	$ 110	$ 113	$ 115	$ 117	$ 120	$ -	$ -	$ -	$ -	$ -	$ -
Library - Springbrook	$ -	$ -	$ 13,739	$ 6,450	$ 46,925	$ 16,676	$ -	$ -	$ -	$ -	$ -	$ -
PW Garage New Dublin	$ -	$ 360	$ 851	$ 374	$ 886	$ 5,000,509	$ -	$ -	$ -	$ -	$ -	$ -
PW Garage/Office/Library Toledo	$ -	$ 6,658	$ 2,815	$ 574	$ 586	$ 10,158	$ -	$ -	$ -	$ -	$ -	$ -
PW Salt Dome New Dublin	$ -	$ 1,104	$ 563	$ -	$ -	$ 139,826	$ -	$ -	$ -	$ -	$ -	$ -
PW Storage Shed New Dublin	$ -	$ -	$ -	$ 13,552	$ 11,796	$ 3,459	$ 360	$ 851	$ 374	$ 886	$ 509	$ -
Waste Site Main Building	$ -	$ 1,932	$ 1,520	$ 747	$ 176	$ 6,155	$ -	$ -	$ -	$ -	$ -	$ -
Buildings Total	**$ -**	**$ 32,025**	**$ 19,602**	**$ 21,812**	**$ 60,486**	**$ 5,176,903**	**$ 360**	**$ 851**	**$ 374**	**$ 886**	**$ 509**	**$ -**

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Parks	$ 20,542	$ 6,965	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,965
Pavilions, Washrooms, Concessions	$ -	$ 4,858	$ -	$ 4,962	$ 2,882	$ -	$ -	$ -	$ -	$ 50,000	$ -	$ -
Playground Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 36,421	$ -	$ 26,593	$ -
Land Improvements Total	**$ 20,542**	**$ 11,823**	**$ -**	**$ 4,962**	**$ 2,882**	**$ -**	**$ -**	**$ -**	**$ 36,421**	**$ 50,000**	**$ 26,593**	**$ 6,965**

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Computers & IT	$ -	$ -	$ -	$ -	$ -	$ 40,000	$ 64,143	$ -	$ -	$ -	$ 40,000	$ -
Fire Equipment	$ 256,882	$ 22,706	$ -	$ -	$ 201,882	$ -	$ -	$ 18,617	$ 92,000	$ 290,879	$ 165,000	$ -
Roads Machinery	$ 74,026	$ -	$ 577,727	$ 287,797	$ 1,052,316	$ 8,620	$ 350,000	$ 35,358	$ 614,727	$ -	$ 40,000	$ 395,927
Waste Site Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 250,000	$ -	$ -
Machinery & Equipment Total	**$ 330,908**	**$ 22,706**	**$ 577,727**	**$ 287,797**	**$ 1,254,198**	**$ 48,620**	**$ 414,143**	**$ 53,975**	**$ 706,727**	**$ 540,879**	**$ 245,000**	**$ 395,927**

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Asphalt	$ 225,000	$ 2,030,536	$ 862,333	$ 1,437,270	$ 1,122,329	$ 1,839,019	$ 491,170	$ 263,844	$ 534,473	$ 100,755	$ 193,613	$ 3,008,602
Sidewalks	$ 68,399	$ -	$ 6,787	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Streetlights	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 130,045	$ -
Surface Treatment	$ -	$ -	$ -	$ -	$ -	$ 435,866	$ 364,087	$ 242,802	$ -	$ 598,003	$ 85,635	$ 265,357
Road Network Total	**$ 293,399**	**$ 2,030,536**	**$ 869,120**	**$ 1,437,270**	**$ 1,122,329**	**$ 2,274,885**	**$ 855,257**	**$ 506,646**	**$ 534,473**	**$ 698,757**	**$ 409,293**	**$ 3,273,959**

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Other	$ 300,000	$ -	$ -	$ -	$ -	$ -	$ 150,000	$ 150,000	$ -	$ -	$ -	$ -
Pick-up Trucks	$ 75,000	$ 75,000	$ 160,000	$ 85,000	$ 85,000	$ 75,000	$ -	$ 150,000	$ 160,000	$ 260,000	$ 85,000	$ 75,000
Plow Trucks	$ 500,000	$ -	$ 400,000	$ -	$ -	$ 400,000	$ 400,000	$ 1,000,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000
Pumper	$ -	$ -	$ -	$ 900,000	$ -	$ -	$ -	$ 900,000	$ -	$ -	$ -	$ -
Rescue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ 600,000
Vehicles Total	**$ 875,000**	**$ 75,000**	**$ 560,000**	**$ 985,000**	**$ 85,000**	**$ 475,000**	**$ 550,000**	**$ 2,200,000**	**$ 690,000**	**$ 760,000**	**$ 585,000**	**$ 1,175,000**

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Booster Station @ Lily Bay	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Flush Sample Station	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Meter Chamber @ Country Club Place	$ -	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Metering	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,000	$ 5,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000
Water Network Total	**$ -**	**$ -**	**$ 10,000**	**$ 25,000**	**$ 25,000**	**$ -**	**$ 5,000**	**$ 5,000**	**$ 10,000**	**$ 10,000**	**$ 10,000**	**$ 10,000**

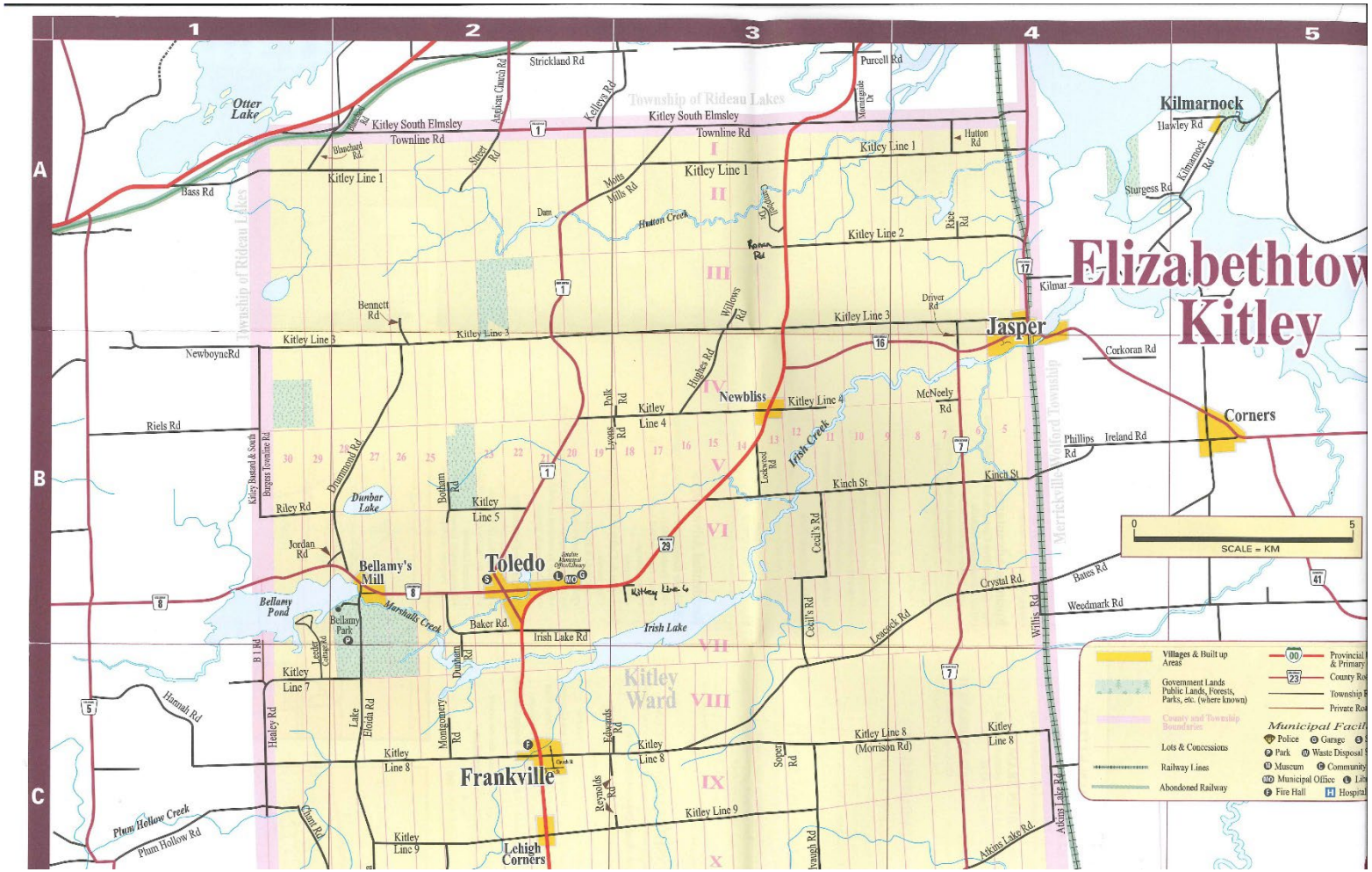
APPENDIX B - CURRENT & PROPOSED LEVELS OF SERVICE

Service Attribute	Community Level of Service	LOS	Technical LOS (Description)	2021 LOS	2025 LOS	Target LOS	Cost Target LOS
			ROADS NETWORK				
Scope	Description, which may include maps, of the road network in the municipality and its level of connectivity.	A map of the road network is included in an appendix to the AMP. See Appendix C	Number of lane-kilometres of each of arterial roads, collector roads and local roads as a proportion of square kilometres of land area of the municipality (O. Reg. 588/17).				
			Arterial	0.00%	0.00%	0.00%	
			Collector	1.02%	0.95%	0.95%	
			Local	0.30%	0.37%	0.37%	
Quality	Description or images that illustrate the different levels of road class pavement condition.	The Township completed an update in 2021. Every road surface received an updated pavement condition index (PCI) from 0-100, with 0 indicating very poor, and 100 indicating a road which is in very good condition	1. For paved roads in the municipality, the average pavement condition index value (O. Reg. 588/17).	Good	Good	Good	
			2. For Surface treated roads in the municipality, the average pavement condition index value (O. Reg. 588/17).	Good	Good	Good	
			3. For unpaved roads in the municipality, the average surface condition (O. Reg. 588/17).	Good	Good	Good	
Performance			Capital Reinvestment Rate	2.27%	1.80%	3.49%	$2,469,025
			BRIDGES & CULVERTS				
Scope	Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists).	Bridges and structural culverts are a key component of the municipal transportation network. One structure owned and maintained by the Township, has a loading or dimensional restrictions. All other structures support most types of vehicles, including heavy transport, emergency vehicles, and cyclists.	Percentage of bridges in the municipality with loading or dimensional restrictions (O. Reg. 588/17).	10%	10%	10%	
Quality	1. Description or images of the condition of bridges and how this would affect use of the bridges.	Images of bridges/culverts is included in the Bridges and Culverts report completed every two years.Appendix C	1. For bridges in the municipality, the average bridge condition index value (O. Reg. 588/17).	Poor	Poor	Good	
	2. Description or images of the condition of culverts and how this would affect use of the culverts.	Images of bridges/culverts is included in the Bridges and Culverts report completed every two years. Appendix C	2. For structural culverts in the municipality, the average bridge condition index value (O. Reg. 588/17).	Poor	Poor	Good	
Performance			Capital Reinvestment rate	0%	2.49%	2.19%	$293,692
			BUILDINGS				
Scope	Description, which may include maps, of the types of facilities that the Township operates and maintains	Admin (2), Fire(3), Library (3), Parks/Rec (14), Public Works (2), Waste Site (1)					
Quality			% of assets at or above "Good" or "Very Good" condition	48%	48%	48%	
			% of assets at or above "Poor" or "Very Poor" condition	42%	42%	42%	
Performance			Capital Reinvestment Rate	0.42%	1.07%	1.89%	$457,830

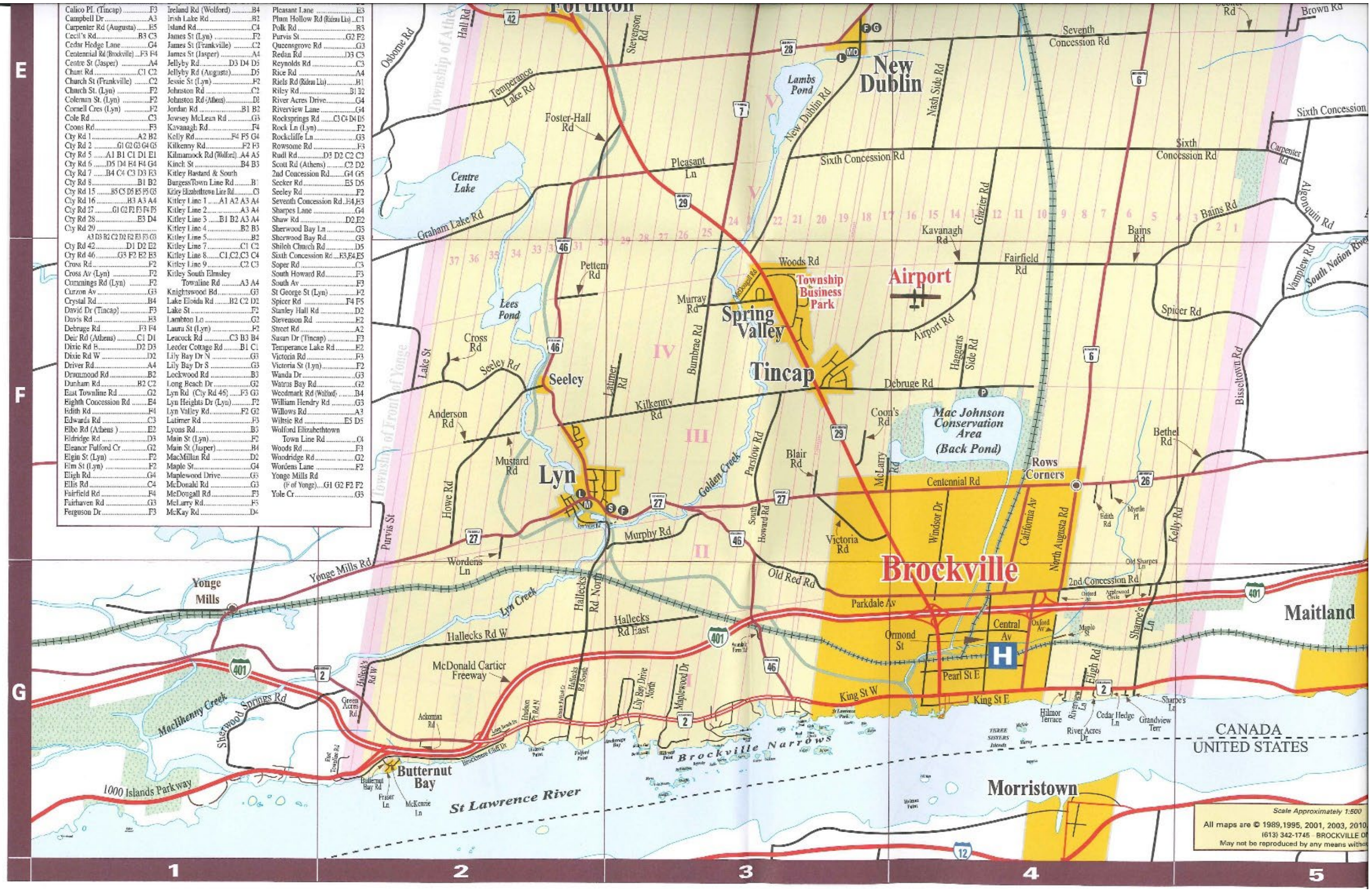
MACHINERY & EQUIPMENT							
Scope	Description or images of the types of machinery and equipment that the Township operates and maintains	IT/Office (7), Fire Equipment (7), Public Works Machinery (15), Waste Site (3)					
Quality			% of assets at or above "Good" or "Very Good" condition	36%	36%	36%	
			% of assets at or above "Poor" or "Very Poor" condition	51%	51%	51%	
Performance			Capital Reinvestment Rate	1.55%	2.67%	8.71%	$391,495
VEHICLES							
Scope	Description or images which of the types of vehicles that the Township operates and maintains	Fire Vehicles (15), Public Works Vehicles (16)					
Quality			% of assets at or above "Good" or "Very Good" condition	33%	33%	33%	
			% of assets at or above "Poor" or "Very Poor" condition	66%	66%	66%	
Performance			Capital Reinvestment Rate	4.87%	5.73%	9.22%	$982,727
LAND IMPROVMENTS							
Scope	Description, which may include maps, of the Municipal Parks & Fields in the municipality and proximimity to the surrounding communities.	See Parks and Fields List Appendix C					
Accessibility			# of Recreation areas in the municipality per 1000 residents	1.04	1.04	1.04	
Quality			# of customer complaints about unsafe conditions of outdoor recreational assets	TBD	TBD	TBD	
			assessment ("Very Poor" to "Very	Good	Good	Good	
			% of assets at or above "Good" or "Very Good" condition	42%	42%	100%	
			% of assets beyond their useful life	7%	7%	0%	
Performance			Capital Reinvestment rate	0.00%	2.97%	9.91%	$32,965
WATER DISTRIBUTION NETWORK							
Scope	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system	See Appendix C	1. Percentage of properties in municipalityconnected to the municipal water system (O. Reg. 588/17).	7%	7%	7%	
	Description, which may include maps, of the user groups or areas of the municipality that have fire flow	See Appendix C	2. Percentage of properties where fire flow is available (O. Reg. 588/17).	0%	0%	0%	
Reliability	Description of boil water advisories and service interruptions		# Of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system	0	0	0	
			# Of connection-days per year where water is not available due to water main breaks compared to the total number of properties connected to the municipal water system	0.017	0.017	0.017	
Performance			Capital Reinvestment Rate	0%	0%	1.48%	$133,523

Appendix C: Level of Service Maps & Lists

Road Network Maps




Frankville
Lehigh Corners
Addison
Greenbush
Forthton
Rocksprings
Elizabethtown Ward
Eloida Lake
Atkins Lake
Mud Lake
Mud Creek
Kitley Line 8
Kitley Line 9
Mother Barnes Rd
Kitley-Elizabethtown Townline Rd
Wolford-Elizabethtown Townline Rd
Rocksprings Rd
Jellyby Rd
Addison-Greenbush Rd
Dixie Rd W
Dixie Rd E
Elbe Rd
Gosford Rd
Seventh Concession Rd
Eighth Concession Rd
Brown Rd
Seeker Rd
Wiltsie Rd
Paul Foster Rd
Davis Rd
Miller Rd
Rudl Rd
Redan Rd
Cole Rd
Bellamy Rd
Mulvaugh Rd
Reynolds Rd
Soper Rd
Atkins Lake Rd.
Island Rd
Ellis Rd
McManus Rd
Mills Rd
Shiloh Church Rd
Flycreek Rd
McKay Rd
Mudcreek Rd
Eldridge Rd
Brayton-Miller Rd
Greenbush Line
Stanley Hall Rd
Peterson Rd
Haggett Ln
Johnston Rd
MacMillan Rd
Scott Rd
Deir Rd
Chant Rd
Lake Eloida Rd
Frank Rd
Shaw Rd
Hall Rd
Glen Elbe
Lots & Concessions
Railway Lines
Abondoned Railway
Police
Garage
Park
Waste Dispo
Museum
Commu
Municipal Office
Fire Hall
Hos
Index
McKenzie Ln G2
McManus Rd D4 C4
McNeely Rd B4
Meg Av (Tincap) F3
Mill St (Lyn) F2
Miller Rd D3
Mills Rd C4 D4
Montgomery Rd C2
Morrison Rd (Line 8) C3 C4
Mother Barnes Rd C1 C2
Motts Mills Rd A2 A3
Mud Creek Rd E4 D4
Mulvaugh Rd C3
Murphy Rd F3
Murray Rd F3
Mustards Rd F2
Myrtle Place F4
Nash Side Rd E4
New Dublin Rd E3 F3
Newboyne Rd (Rideau Lks) A1
North Augusta Rd (Cty Rd 6) G4 E4 E5 D5 F4
Old Lily Bay Rd G3
Old Red Rd F3 G3
Old Sharpe's Ln G4
Orchard St F3
Oxford Av G4
Parslow Rd F3
Paul Foster Rd E3
Paul Rd G3
Pearl St (Lyn) F2
Perth St (Cty Rd. 46) F2
Perth St. (Lyn) F2
Peterson Rd D2
Pettem Rd F2
Pleasant Lane E3
Plum Hollow Rd (Rideau Lks) C1
Polk Rd B3
Purvis St G2 F2
Queensgrove Rd G3


Calico Pl. (Tincap) F3
Campbell Dr A3
Carpenter Rd (Augusta) E5
Cecil's Rd B3 C3
Cedar Hedge Lane G4
Centennial Rd (Brockville) ...F3 F4
Centre St (Jasper) A4
Chant Rd C1 C2
Church St (Frankville) C2
Church St. (Lyn) F2
Coleman St. (Lyn) F2
Cornell Cres (Lyn) F2
Cole Rd C3
Coons Rd F3
Cty Rd 1 ....A2 B2
Cty Rd 2 ....G1 G2 G3 G4 G5
Cty Rd 5 ....A1 B1 C1 D1 E1
Cty Rd 6 ....D5 D4 E4 F4 G4
Cty Rd 7 ....B4 C4 C3 D3 E3
Cty Rd 8 ....B1 B2
Cty Rd 15 ....B5 C5 D5 E5 F5 G5
Cty Rd 16 ....B3 A3 A4
Cty Rd 27 ....G1 G2 F2 F3 F4 F5
Cty Rd 28 ....E3 D4
Cty Rd 29 ....A3 D3 B2 C2 D2 E2 E3 F3 G3
Cty Rd 42 ....D1 D2 E2
Cty Rd 46 ....G3 F2 E2 E3
Cross Rd F2
Cross Av (Lyn) F2
Cummings Rd (Lyn) F2
Curzon Av G3
Crystal Rd B4
David Dr (Tincap) F3
Davis Rd E3
Debruge Rd F3 F4
Deir Rd (Athens) C1 D1
Dixie Rd E D2 D3
Dixie Rd W D2
Driver Rd A4
Drummond Rd B2
Dunham Rd B2 C2
East Townline Rd G2
Eighth Concession Rd E4
Edith Rd F4
Edwards Rd C3
Elbe Rd (Athens) E2
Eldridge Rd D3
Eleanor Fulford Cr G2
Elgin St (Lyn) F2
Elm St (Lyn) F2
Eligh Rd G4
Ellis Rd C4
Fairfield Rd F4
Fairhaven Rd G3
Ferguson Dr F3
Ireland Rd (Wolford) B4
Irish Lake Rd B2
Island Rd C4
James St (Lyn) F2
James St (Frankville) C2
James St (Jasper) A4
Jellyby Rd D3 D4 D5
Jellyby Rd (Augusta) D5
Jessie St (Lyn) F2
Johnston Rd C2
Johnston Rd (Athens) D2
Jordan Rd B1 B2
Jowsey McLean Rd G3
Kavanagh Rd F4
Kelly Rd F4 F5 G4
Kilkenny Rd F2 F3
Kilmarnock Rd (Wolford) ..A4 A5
Kinch St B4 B3
Kitley Bastard & South
BurgessTown Line Rd B1
Kitley Elizabethtown Line Rd C3
Kitley Line 1 ....A1 A2 A3 A4
Kitley Line 2 ....A3 A4
Kitley Line 3 ....B1 B2 A3 A4
Kitley Line 4 ....B2 B3
Kitley Line 5 ....B2
Kitley Line 7 ....C1 C2
Kitley Line 8 ....C1,C2,C3 C4
Kitley Line 9 ....C2 C3
Kitley South Elmsley
Townline Rd A3 A4
Knightswood Bd G3
Lake Eloida Rd B2 C2 D2
Lake St F2
Lambton Ln G2
Laura St (Lyn) F2
Leacock Rd C3 B3 B4
Leeder Cottage Rd B1 C1
Lily Bay Dr N G3
Lily Bay Dr S G3
Lockwood Rd B3
Long Beach Dr G2
Lyn Rd (Cty Rd 46) F3 G3
Lyn Heights Dr (Lyn) F2
Lyn Valley Rd F2 G2
Latimer Rd F3
Lyons Rd B3
Main St (Lyn) F2
Main St (Jasper) B4
MacMillan Rd D2
Maple St G4
Maplewood Drive G3
McDonald Rd G3
McDougall Rd F3
McLarry Rd F3
McKay Rd D4
Pleasant Lane E3
Plum Hollow Rd (Rideau Lks) ..C1
Polk Rd B3
Purvis St G2 F2
Queensgrove Rd G3
Redan Rd D3 C3
Reynolds Rd C3
Rice Rd A4
Riels Rd (Rideau Lks) B1
Riley Rd B1 B2
River Acres Drive G4
Riverview Lane G4
Rocksprings Rd C3 C4 D4 D5
Rock Ln (Lyn) F2
Rockcliffe Ln G3
Rowsome Rd F3
Rudl Rd D3 D2 C2 C3
Scott Rd (Athens) C2 D2
2nd Concession Rd G4 G5
Secker Rd E5 D5
Seeley Rd F2
Seventh Concession Rd ..E4,E3
Sharpes Lane G4
Shaw Rd D2,E2
Sherwood Bay Ln G3
Sherwood Bay Rd G3
Shiloh Church Rd D5
Sixth Concession Rd E3,E4,E5
Soper Rd C3
South Howard Rd F3
South Av F3
St George St (Lyn) F2
Spicer Rd F4 F5
Stanley Hall Rd D2
Stevenson Rd E2
Street Rd A2
Susan Dr (Tincap) F3
Temperance Lake Rd E2
Victoria Rd F3
Victoria St (Lyn) F2
Wanda Dr G3
Watrus Bay Rd G2
Woodmark Rd (Wolford) B4
William Hendry Rd G3
Willows Rd A3
Wiltsie Rd E5 D5
Wolford Elizabethtown
Town Line Rd C4
Woods Rd F3
Woodridge Rd G2
Wordens Lane F2
Yonge Mills Rd
(F of Yonge) ...G1 G2 F2 F2
Yole Cr G3
E
F
G
1
2
3
4
5
New Dublin
Lambs Pond
Seventh Concession Rd
Sixth Concession Rd
Sixth Concession
Temperance Lake Rd
Foster-Hall Rd
Pleasant Ln
Centre Lake
Graham Lake Rd
Township of Front of Yonge
Lees Pond
Pettem Rd
Woods Rd
Township Business Park
Airport
Murray Rd
Spring Valley
Tincap
Kavanagh Rd
Fairfield Rd
Bains Rd
Spicer Rd
Cross Rd
Seeley Rd
Seeley
Kilkenny Rd
Debruge Rd
Coon's Rd
Mac Johnson Conservation Area
(Back Pond)
Anderson Rd
Mustard Rd
Lyn
Blair Rd
Rows Corners
Centennial Rd
Bethel Rd
Murphy Rd
Golden Creek
Victoria Rd
Brockville
Wordens Ln
Yonge Mills Rd
Yonge Mills
Old Red Rd
2nd Concession Rd
Parkdale Av
Maitland
Lyn Creek
Hallecks Rd W
Hallecks Rd East
Ormond St
Central Av
Pearl St E
King St W
King St E
McDonald Cartier Freeway
Springs Rd
MacIlhenny Creek
Butternut Bay
1000 Islands Parkway
St Lawrence River
Brockville Narrows
CANADA
UNITED STATES
Morristown
Scale Approximately 1:600
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Images of Bridge in Good Condition
Lyn Valley Road Culvert
BCI: 70
Inspected: June 8th, 2021

Images of Culvert in Fair Condition
Kitley Line 1 Bridge
BCI: 57.2
Inspected: June 10th, 2021

Parks & Fields List

Segment	Name	Description
Parks	Bellamy Park	CampGround
Pavilions, Washrooms, Concessions	Lyn Ball Park	Athletic Field
Pavilions, Washrooms, Concessions	Douglas Scott	Athletic Field
Pavilions, Washrooms, Concessions	Blaine Healey	Athletic Field
Pavilions, Washrooms, Concessions	Clifford E. Hall/Greenbush	Athletic Field
Playground Equipment	Douglas Scott Playground Structure	Play Structure
Playground Equipment	Lyn Heights Play Structure	Play Structure
Playground Equipment	Heather Heights Playground Structure	Play Structure
Playground Equipment	Kitley Soccer Playground Structure	Play Structure
Playground Equipment	Eleanor Fulford Playground Structure	Play Structure

Water Network Map – map of water feeder main

88.

Appendix D: Condition Assessment, Guidelines

The foundation of good Asset Management practice is accurate and reliable data on the current condition of infrastructure. Assessing the condition of an asset at a single point in time allows staff to have a better understanding of the probability of asset failure due to deteriorating condition.

Condition data is vital to the development of data-driven asset management strategies. Without accurate and reliable asset data, there may be little confidence in asset management decision-making which can lead to premature asset failure, service disruption and suboptimal investment strategies. To prevent these outcomes, the Township's condition assessment strategy should outline several key considerations, including:

89. The role of asset condition data in decision-making

90. Guidelines for the collection of asset condition data

91. A schedule for how regularly asset condition data should be collected

Role of Asset Condition Data

The goal of collecting asset condition data is to ensure that data is available to inform maintenance and renewal programs required to meet the desired level of service. Accurate and reliable condition data allows municipal staff to determine the remaining service life of assets, and identify the most cost-effective approach to deterioration, whether it involves extending the life of the asset through remedial efforts or determining that replacement is required to avoid asset failure.

In addition to the optimization of lifecycle management strategies, asset condition data also impacts the Township's risk management and financial strategies. Assessed condition is a key variable in the determination of an asset's probability of failure. With a strong understanding of the probability of failure across the entire asset portfolio, the Township can develop strategies to mitigate both the probability and consequences of asset failure and service disruption. Furthermore, with condition-based determinations of future capital expenditures, the Township can develop long-term financial strategies with higher accuracy and reliability.

Guidelines for Condition Assessment

Whether completed by external consultants or internal staff, condition assessments should be completed in a structured and repeatable fashion, according to consistent and objective assessment criteria. Without proper guidelines for the completion of condition assessments there can be little confidence in the validity of condition data and asset management strategies based on this data.

Condition assessments must include a quantitative or qualitative assessment of the current condition of the asset, collected according to specified condition rating criteria, in a format that can be used for asset management decision-making. As a result, it is important that staff adequately define the condition rating criteria that should be used and the assets that require a discrete condition rating. When engaging with external consultants to complete condition assessments, it is critical that these details are communicated as part of the contractual terms of the project.

There are many options available to the Township to complete condition assessments. In some cases, external consultants may need to be engaged to complete detailed technical assessments of infrastructure. In other cases, internal staff may have sufficient expertise or training to complete condition assessments.

Developing a Condition Assessment Schedule

Condition assessments and general data collection can be both time-consuming and resource-intensive. It is not necessarily an effective strategy to collect assessed condition data across the entire asset inventory. Instead, the Township should prioritize the collection of assessed condition data based on the anticipated value of this data in decision-making. The International Infrastructure Management Manual (IIMM) identifies four key criteria to consider when making this determination:

1. **Relevance**: every data item must have a direct influence on the output that is required

2. **Appropriateness**: the volume of data and the frequency of updating should align with the stage in the assets life and the service being provided

3. **Reliability**: the data should be sufficiently accurate, have sufficient spatial coverage and be appropriately complete and current

4. **Affordability**: the data should be affordable to collect and maintain