



Loyalist Township

2025 Asset Management Plan

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EXECUTIVE SUMMARY

The infrastructure owned by Loyalist Township (the “Township”) supports a wide range of municipal services that enable residents, businesses, and other stakeholders to live, work, and play. Its overall performance 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 that meets all requirements outlined within Ontario Regulation 588/17. A thorough Asset Management Plan will communicate the investment required to ensure the sustainable delivery of services associated with desired infrastructure levels of service.

Scope

This Asset Management Plan includes all assets owned and capitalized by the Township, with additional prescriptive information on Core Assets. Furthermore, the plan provides the respective financial obligations of all asset categories required to maintain the Township’s current Levels of Service. This iteration of the plan includes proposed Levels of Service as required by O.Reg 588/17, updated replacement costs along with updated sign, road, and building condition assessments.



State of the Local Infrastructure

The State of the Local Infrastructure assesses and quantifies the asset categories in terms of overall condition, replacement cost, and estimated service life remaining. As depicted in Figure 1 and Figure 2, the Township's current infrastructure has an estimated replacement cost of all assets is \$824 million based on the end of life replacement cost and is in good to very good condition overall. This represents a \$50 million increase since 2024, \$13 million of which is related to new or developer donated assets.

Figure 1: Township Assets - Replacement Cost by Asset Category

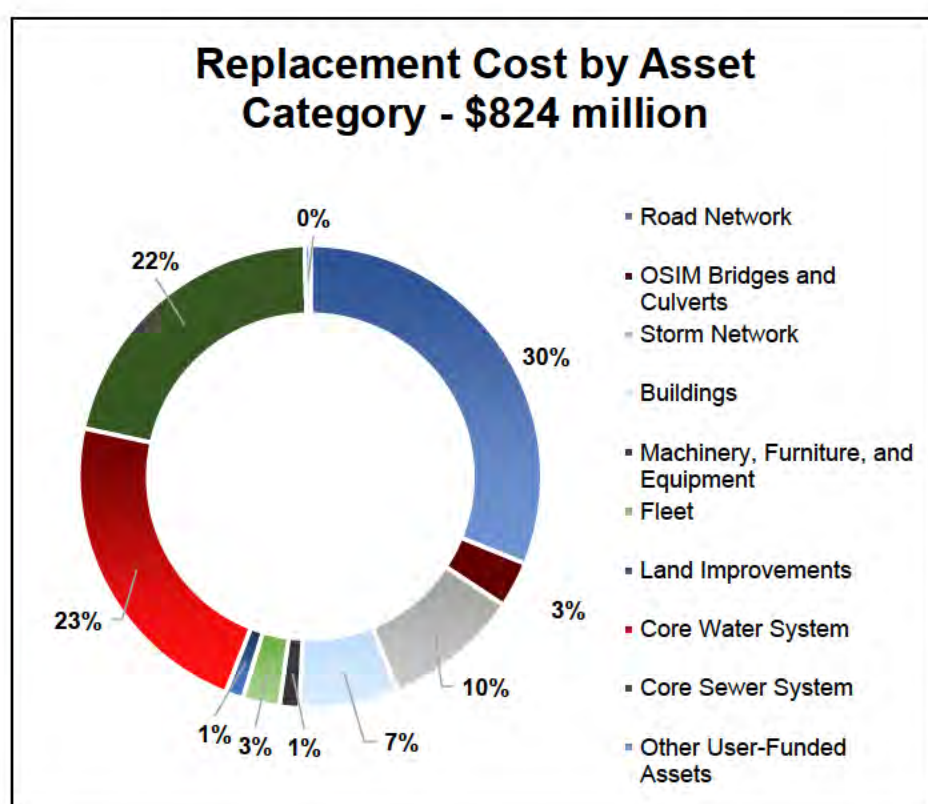


Figure 2: Township Assets - Condition by Replacement Cost

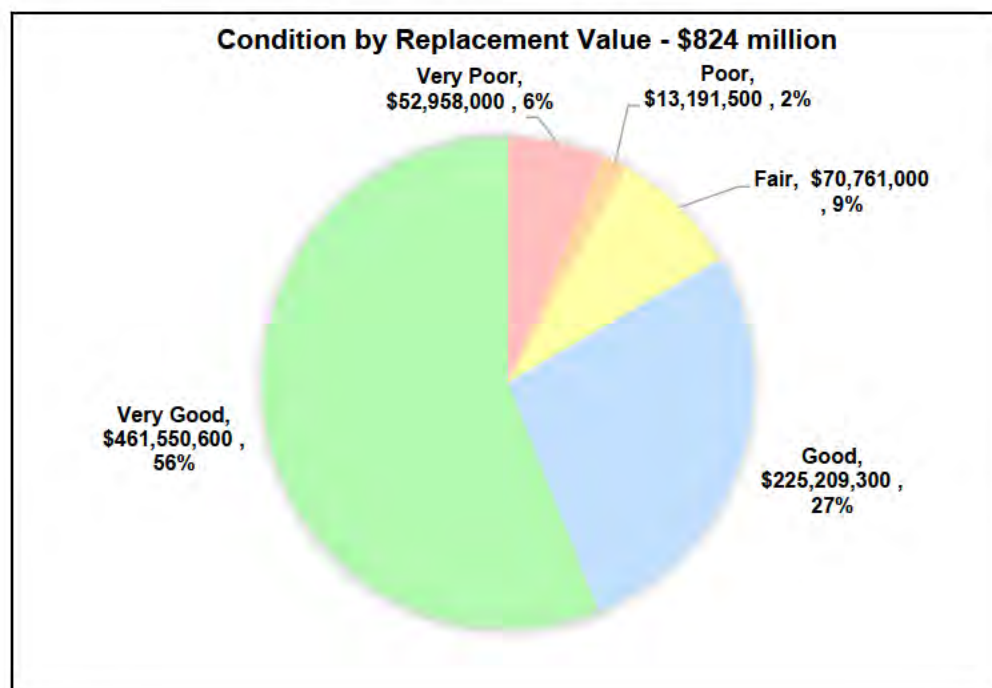
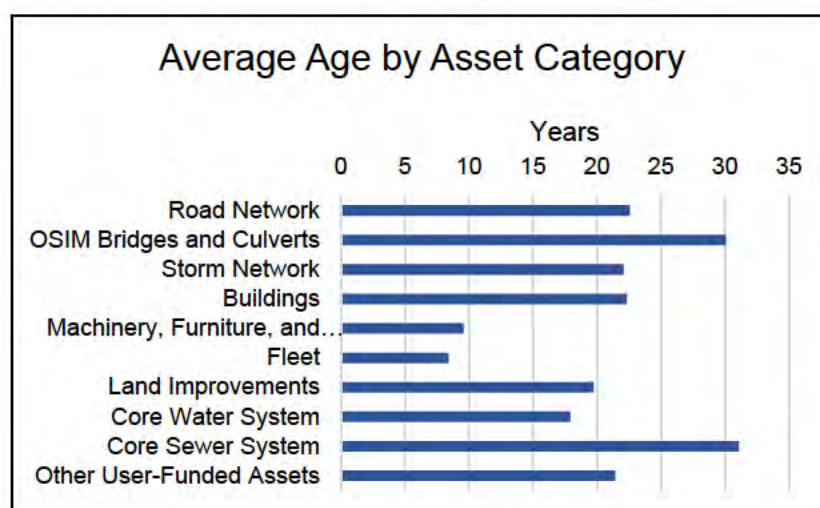


Figure 3: Township Assets – Average Age by Asset Category



Township staff are continuing to prioritize data management and more specifically, to refine its condition assessment approaches across all asset categories.

As the Township continues to grow, the average age by asset category ranges between 8 and 31 years as shown in Figure 3.

Financial Strategy Recommendations

To meet capital replacement and rehabilitation needs for existing infrastructure, prevent infrastructure backlogs, and achieve long-term sustainability, the Township's average Annual Requirement totals \$17.5 million, which represents a \$1.0 million increase from 2024. Based on a historical analysis of sustainable capital funding sources, the Township has committed approximately \$8.6 million toward capital projects per year. As a result, there is currently an annual funding gap of \$9.0 million, an increase of \$1.0 million from 2024.

A simplified financial strategy was developed as part of the 2022 AMP to address the annual asset management capital Funding Gap which is summarized in Table 1. Given the Township's anticipated assumption of new debt in the upcoming years, the 2025 Asset Management Plan recommends discontinuing the use of debt reduction savings going forward. The table has been updated to reflect the 2025 requirements with changes from 2024 noted in brackets.

Table 1: Summary of Recommended Revenue Changes

	Total Tax Levy Change/User Revenue Change	Average Annual Tax/Rate Change for 20 years Without Debt Reduction Savings	Average Annual Tax/Rate Change for 20 years with Debt Savings
Tax-Funded Assets	28.6% (+3.3%)	1.4% (+0.1%)	1.3% (+0.1%)
Water - User-Funded Assets	10.1% (+1.7%)	0.5% (+0.1%)	0.2% (+0.1%)
Sewer - User-Funded Assets	39.6% (+3.3%)	2.0% (+0.2%)	0.7% (+0.1%)

This report is recommending that the general tax levy be increased annually by 1.4%, the water rates increased annually by 0.5% and the sewer user rates be increased annually by 2.0%, for the next 20 years for the purposes of funding capital works to maintain our existing infrastructure assets, and that the annual capital contribution be increased annually in line with CPI.

It is further recommended that following the completion and capitalization of the \$49.5M renovation project at the W.J. Henderson Recreation Centre that the Township update the Asset Management Plan and financial recommendations.

In 2024, the Township started the work on completing a Long-Range Financial Plan (LRFP). It should be noted that the Asset Management Plan (AMP) will not match the LRFP. The AMP forecasts capital expenditures needed to maintain our existing assets with the timing based on age and condition-based ratings. The LRFP includes the AMP funding requirements and new assets due to growth and other needs which are not related specifically to assets, and in some cases, the LRFP will identify the replacement or rehabilitation of an existing asset with different timing from the AMP due to coordinating the work with other activities. Finally, due to the existing

funding gap identified within the AMP, staff are continuously evaluating which capital projects are the highest priority and which capital projects can be delayed based on their risk profile.

The Water and Sewer (User-Funded) Assets are included in the calculations of needs for the Asset Management Plan, however the revenues that are raised from these systems are separate from the tax rate and are funded from specific Water and Sewer user fees. The analysis of these fees was just updated in the 2024 Water/ Sewer rate study, which includes a multi year financial plan. The financial plan considers funding of the system, operations and capital.

Continuous Improvement

This Asset Management Plan represents a snapshot in time and is based on the best 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 Appendix D. These include:

- Continuous validation of asset inventory data and information.
- Formalization of condition assessment strategies for all asset categories.
- Continued implementation and alignment of risk-based decision-making as part of regular budget deliberations.
- Continuous review, development, and implementation of optimal lifecycle management strategies.
- Refinement of Community and Technical Levels of Service.
- Identification of proposed Levels of Service.
- Refinement of the financial strategy to continually reduce/manage the annual capital funding gap.

The 2025 AMP includes proposed levels of service as required by O. Reg. 588/17, updated replacement costs along with updated sign, road, and building condition assessments. Implementing condition-based assessments vs age-based condition ratings could result in changes to the annual requirements.

1. INTRODUCTION

Loyalist Township is one of four lower-tier municipalities in the County of Lennox & Addington in southeastern Ontario. Spanning 340 square kilometres, the Township includes the residential communities of Amherstview, Bath, Odessa, and Amherst Island, as well as a number of small hamlets and rural areas.

The Township is currently experiencing significant growth in residential, commercial, and industrial assessment classes. As this continues for the foreseeable future, planned investments will need to be made to address existing infrastructure in addition to preparing for future infrastructure to service this growth.

Figure 4: Map of Loyalist Township



Asset management (“AM”) is a comprehensive process to ensure the delivery of services associated with infrastructure is provided in a financially sustainable manner.

The implementing of the Township's Asset Management Plan ("AMP") is a key objective in the Strategic Plan endorsed by Council in 2024. Figure 5 is the asset management initiatives from the 2024-2027 Strategic Plan.

Figure 5: Loyalist Township Strategic Plan 2024-2027: Asset Management Initiatives

Implement the Asset Management Plan (AMP)

- Update AMP to include non-core assets
- Implement 50% of planned maintenance strategies for core assets in the AMP
- Implement cross-department working group to refine configuration of asset management software and improve functionality for AMP
- Develop an Urban Forest Management Plan
- Develop an asset retirement obligation (ARO) inventory and adopt an ARO policy

The AM program is designed to connect strategic Council and community objectives with day-to-day infrastructure investment and operating decisions.

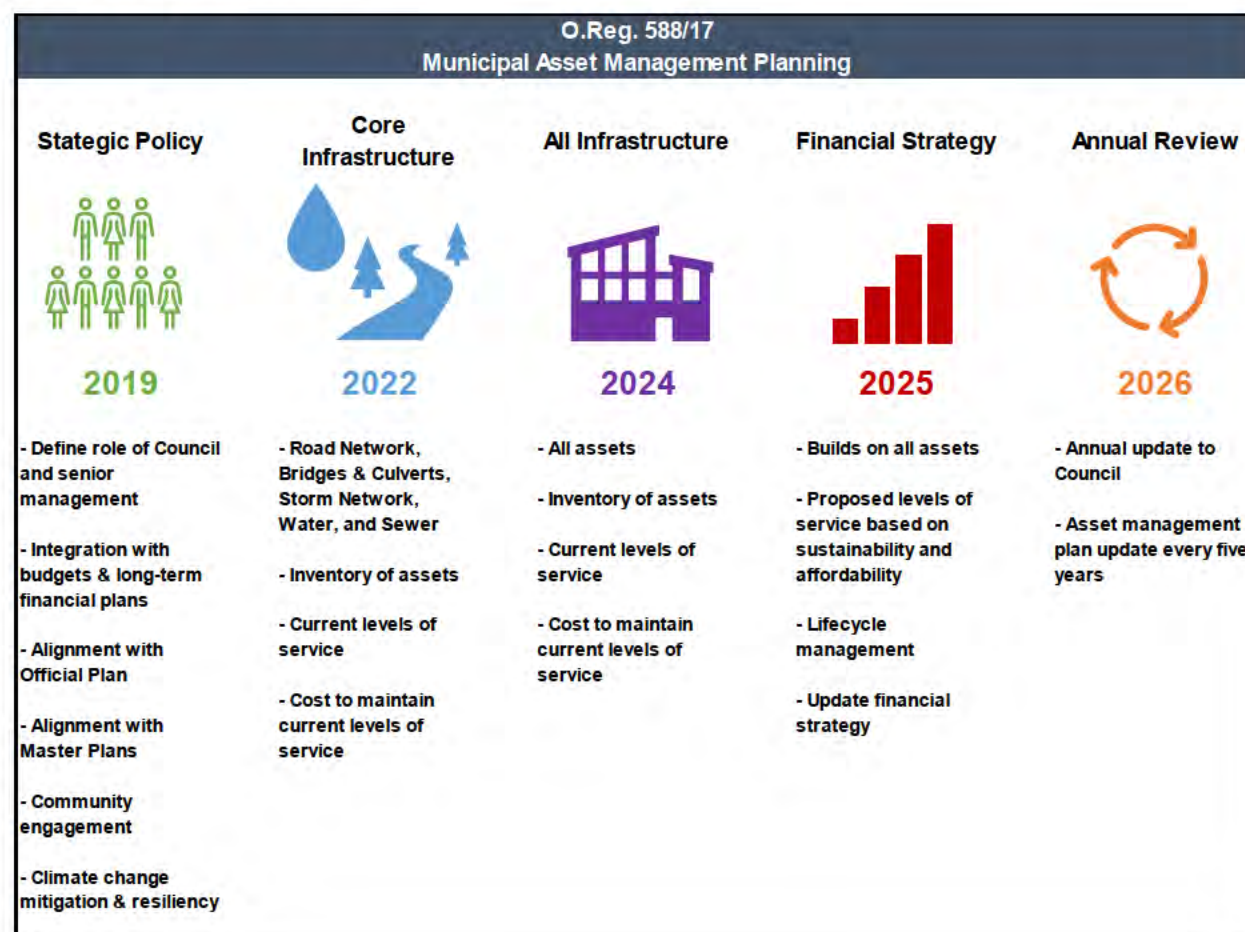
The key objectives of AM are to:

- Align with the Provincial regulatory landscape, meet the requirements of O. Reg. 588/17, and position the Township for grant funding programs.
- Understand the Township's current State of the Local Infrastructure ("SOLI").
- Measure and monitor Level of Service ("LOS") metrics to determine how well infrastructure meets expectations.
- Establish asset lifecycle management activities (i.e., the operation, maintenance, rehabilitation, and replacement of assets).
- Determine the optimal costs of and appropriate timing for the asset lifecycle activities required to ensure the infrastructure systems provide service levels that meet community expectations.
- Establish a financial strategy that will fund the expenditures required to complete the optimal lifecycle activities.

1.1. REGULATORY FRAMEWORK

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"). This regulation mandates specific requirements to assist municipalities with managing assets. Furthermore, it emphasizes current and proposed LOS and the Lifecycle Costs incurred to deliver them. Figure 6 outlines the various milestones that all Ontario municipalities must meet to fulfill the requirements of the regulation.

Figure 6: O.Reg.588/17 Timelines



This AMP will replace the Township's 2024 AMP to ensure adherence to O.Reg.588/17. Table 2 lists the regulatory milestones that are currently due and whether the Township complies with this AMP.

Table 2: O.Reg.588/17 Compliance

O.Reg. 588/17	Requirement	Section(s) in this AMP	Status
S.5(2), 1(i - ii)	Community and Technical LOS based on data from at most the two calendar years before the year in which all information required under the section is included in the AMP. For Core Assets, the Community and Technical LOS as set out in the regulation. For Non-Core Assets, the LOS established by the municipality.	3 & 4	In compliance
S.5(2), 2	Current performance of each asset category per the performance measures established by the municipality based on data from at most two calendar years in which all information required under the section is included in the AMP.	3 & 4	In compliance. Township is working to improve key performance indicators ("KPIs") in future AMPs.
S.5(2), 3(i - v)	Summary of assets in each category. The replacement cost of the assets in the category. The average age of the assets in the category determined by assessing the average age of the components of the assets. The information available on the condition of the assets in the category. A description of the municipality's approach to assessing the condition of the assets in the category, based on the recognized and generally accepted good engineering practices where appropriate.	3 & 4	In compliance
S.5(2), 4(i - iv)	For each asset category, the lifecycle activities that would need to be undertaken to maintain the current LOS for 10 years and the costs of providing those activities.	3, 4, 5, Appendix C	In compliance
S.5(2), 5(i - ii)	For municipalities with a population of less than 25,000, a description of assumptions regarding future changes in population or economic activity and how the assumptions relate to information on the municipality's lifecycle activities.	6	In compliance

1.2. ASSET MANAGEMENT POLICY

Under Section 3(1) of the O.Reg. 588/17, the Strategic Asset Management Policy was developed and endorsed by Council in June 2019 and subsequently updated in 2021 for changes in governance determined to be necessary through policy implementation. The objectives of the policy are to:

- Provide a framework for implementing AM to enable a consistent and strategic approach at all levels of the organization.
- Provide transparency and demonstrate to stakeholders the legitimacy of decision-making processes that combine strategic plans, budgets, service levels, and risks.
- Ensure the commitment to AM practices and their alignment with the Township's strategic objectives.

The Township is required to review and update this policy, if necessary, at least every five years.

AM is not a time-limited initiative, but rather a way of doing business that requires the alteration of processes and active and ongoing collaboration from the most important resource in an AM program – people. The development, implementation, and improvement of the Township's AM program requires stakeholder knowledge in specific areas of interest, as listed in Table 3.

Table 3: Stakeholders and Areas of Interest

Stakeholders	Areas of Interest
Council and Standing Committees	• Community sustainability • Public concerns • Corporate strategy and plan approvals • Sustainability of the Township's infrastructure and service levels • Capital and operating budget approval • User Rate approval • Appropriate fiscal decision making • Significant project approvals
Senior Management Team/AM Steering Committee	• Provide strategic direction • Sustainability of the Township's infrastructure and service levels • Capital and operating budget reviews, recommendations to Council • Rate reviews and recommendations to Council • Appropriate fiscal decision-making including preparation of the annual capital and operational budgets with AM needs assessed and recommendations for funding. • Support and assign priority to the AM program • Significant project review and recommendations • Responsible for oversight and guidance of the AM program • Need to be aware of program developments, milestones, etc. • Need to be aware of and approve program results
AM Team	• Program design and implementation • Facilitation and coordination of activities across the Township-wide AM network • Communication
Staff	• Asset stewardship • Data collection and reporting • Data analysis and modeling support • Processes and procedures including decision making • New approaches, tools, and technologies • Education and information
Agencies/Government	• Compliance with legal and regulatory requirements • Compliance with service agreements • Compliance with grant/funding program requirements
Customers/Community (Residential, Commercial, Industrial, Institutional, visitors)	• Municipal services available for their use • Municipality plans for future investment, growth, etc. • Rationales behind decisions • Where and how their tax dollars and user rates are being spent • Sustainability of the Township's infrastructure and service levels • Public health and safety • Willingness to pay for service • Equitable rate structure • Business support

1.3. SCOPE

This AMP includes all assets that the Township has capitalized per the Public Sector Accounting Standard ("PSAS") 3150 - Tangible Capital Assets. Furthermore, this AMP excludes certain assets that fall outside the scope of the Township's Tangible Capital Asset Policy. O. Reg 588/17 specifies Community and Technical LOS for Core Assets and in accordance with the regulation, the Township has developed its own LOS for Non-Core assets.

Table 4 lists the assets included in this AMP and how they are categorized.

Table 4: Asset Categories in this AMP

Asset Category	Subcategories	Core/Non-Core Infrastructure
3. Tax-Funded Assets		
3.1. Road network	Gravel Roads, High-Class Bitumen ("HCB") Roads, Low-Class Bitumen ("LCB") Roads, Road Guiderails	Core
	Sidewalks/Curbs, Signs, Streetlights, Shoreline Protection	Non-Core
3.2. Bridges & Culverts	Bridges and Culverts subject to the Ontario Structure Inspection Manual ("OSIM")	Core
3.3. Storm Network	Cross Culverts, Driveway Culverts, Catch Basins, Storm Manholes, Storm Mains, Storm Water Management Facilities, Storm Water Treatment Units	
3.4. Buildings	Corporate Services, Emergency Services, Recreation & Facilities Services, Transit Services, Transportation Services, Waste Management Services	Non-Core
3.5. Machinery, Furniture, and Equipment		
3.6 Fleet		
3.7 Land Improvements	Siteworks – Parks, Play Structures Outdoor Recreation, Boat Ramps & Docks, Siteworks - Other	

Asset Category	Subcategories	Core/Non-Core Infrastructure
3.8 Natural Assets	Woodlands, Significant Woodlands, Wetlands, Significant Wetlands, Alvars	
4. User-Funded Assets		
4.1. Core Water System	Hydrants, Valves Water Meters, Water Mains Treatment Facilities, Distribution Facilities	Core
4.2. Core Sewer System	Sewer Manholes, Sewer Mains Treatment Facilities, Collection Facilities	
4.3. Other User-Funded Assets	Utilities Buildings, Utilities Machinery & Equipment, Utilities Fleet	Non-Core

2. METHODOLOGY

2.1. ASSET MANAGEMENT PLAN

This iteration of the Township's AMP is structured as follows:

- Introductory sections that outline the approach, purpose, and structure of the AMP.
- A series of separate sections for each asset category, which includes:
 - The State of the Local Infrastructure
 - The Level of Service Strategy
 - The Lifecycle Management Strategy
 - The Risk Management Strategy
- A section outlining the financial strategy between tax-funded and user-funded asset categories.
- A section addressing future growth in the municipality.
- Various appendices that compliment the data presented in this AMP.

Data Management

The effective management of assets relies on the processing of large volumes of asset data and related information, such as their condition, costs, and risk evaluation, as well as rehabilitation, replacement, and maintenance activities. This information supports decision-making that should relate to the Township's community objectives. AM at the Township, therefore, relies on the processes and systems that collect, manage, and report this information.

The Township's asset data is housed in Public Sector Digest's Citywide Asset Manager software ("Citywide"). The Township also uses a Geospatial Information System ("GIS") system by ESRI to house geographically located assets. There is currently an integration to link assets in Citywide to the GIS display only; one system cannot update the other. The Township has provisions set for these systems that provide controls for different users, roles, and groups. Any access to asset data is restricted to the permissions included within the users' role profiles.

Township staff understand that maintaining its data and continuously improving its accuracy is imperative to the success of its AM program. As stated in the Township's Strategic Asset Management Policy, the divisional management team or the "AM Network Team" with support from operations staff, are responsible for the management and updating of asset data.

Citywide's Asset Hierarchy as illustrated in **Appendix A The Hierarchy**, outlines the Township's Asset Classifications and was developed to provide corporate-wide consistency to reporting assets. Additionally, this hierarchy satisfies the financial reporting requirements of the Township, such as financial statement presentation under PSAS, the amortization of assets, and the submission of the provincially mandated Financial Information Return. Citywide also groups assets by asset profile using the Asset Sub-Type and Component of the Asset Hierarchy. Asset profiles set the lifecycle strategy and risk models for each asset category.

Annual Requirement

Annual Requirement is used throughout this AMP to estimate the present value of funds that should be allocated annually over the Estimated Useful Life ("EUL") of an asset to fully fund its replacement. The formula to calculate Annual Requirement is as follows:

$$\text{Replacement Cost} \div \text{Estimated Useful Life} = \text{Annual Requirement}$$

Assumptions and Limitations

Assumptions and limitations are documented throughout this AMP directly or via footnotes. **Appendix D** lists recommendations for AM practices that may be incorporated into future AMPs.

Future Demand

Anticipating the impact of future demands on the Township's assets and infrastructure networks is an integral part of infrastructure design. There are three main future demands the Township has identified that will impact new and existing assets:

- Growth
- Climate change
- Increased service level expectations

The rate of housing growth in the Township has been outpacing population growth since 2001, owing to declining average household size, which is a result of the demographic change underway in the Township. The growth rate differences between population and households are partially due to an aging population, a demographic feature of the Township that mirrors most of Ontario, particularly in communities outside major urban centers. The effect of declining household size is that a greater number of housing units and infrastructure are required to house a comparable population.

Aligning the AMP with the needs outlined in the Township's Development Charges study, Impost study, Official Plan, Climate Action Plan, Infrastructure Master Plan and other division specific master plans such as the Recreation Master Plan and Fire Master Plan, is imperative to ensure new and existing assets will sustainably provide service levels into the future.

A guiding principle of the Strategic Plan is environmental sustainability and specifically that “Loyalist Township will make decisions in a sustainable manner while maintaining a focus on protecting our natural environment”. This will be achieved by reviewing maintenance plans to incorporate more environmentally sound practices; by including environmental responsibility in key decision-making; and by integrating carbon reduction into AM activities. The ResiLienT Loyalist Township Climate Action Plan is the Township’s commitment to undertaking local action on climate change by setting goals for greenhouse gas (“GHG”) emissions across various sectors while outlining steps needed to achieve them. The goals of the action plan are listed in Table 5.

Table 5: ResiLienT Climate Action Goals

Priority Sector	Goals
Sustainable Land Use	Meet the current and future needs of the Loyalist Community while incorporating practices that will protect the environment and support local agriculture.
Waste Reduction	Divert waste away from landfill and promote a circular economy
Transportation	Provide residents with enhanced transit services and promote the uptake of low-carbon fuels in vehicles, all while maintaining expected levels of service.
Buildings	Increase the energy efficiency of existing residential, commercial, and municipal buildings, and promote the construction of new buildings designed to exceed existing energy standards.
Water and Wastewater	Reduce residential water usage and the amount of energy required to treat, distribute, or collect water and wastewater.
Other	Undertake initiatives which may not have a direct and quantifiable impact on GHG emissions in Loyalist, but that will contribute to a culture of climate action while promoting community resiliency and financial sustainability.

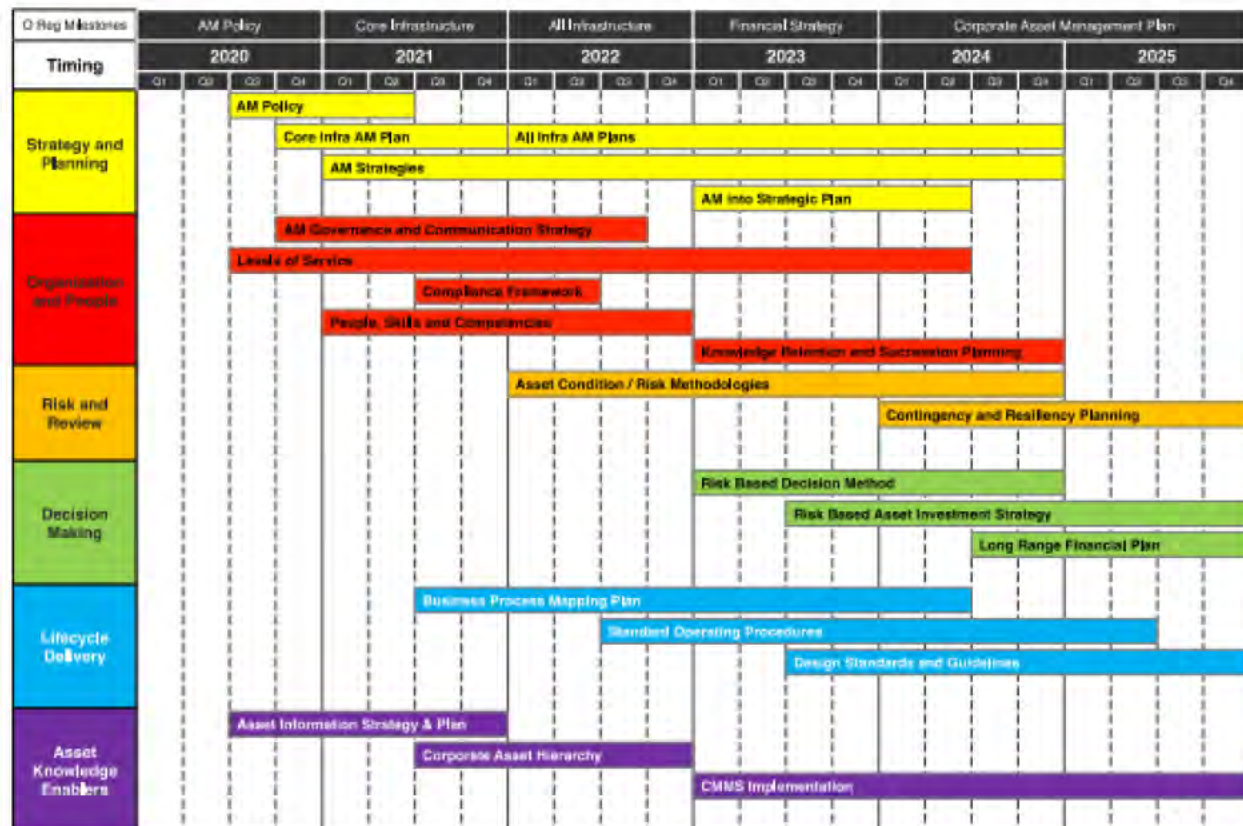
Building climate change resilience within the Township’s assets and implementing adaptation solutions will sustain services and ensure that assets endure climate impacts. Furthermore, it will reduce the Township’s carbon footprint with the potential of reducing associated Lifecycle Costs.

It is the requirement of O.Reg. 588/17 that the Township review its service levels and provide recommended targets for the next 10 years. Through that exercise, all LOS will be evaluated for sustainability and a plan to implement any changes will be developed. The Township addresses the growing needs of the community through public engagement throughout the year, most notably during budget development and deliberations as well as semi-annual Townhalls.

Plan Improvement and Monitoring

Developed in 2020 with the assistance of a third-party consultant, the roadmap planned for the corporate development of AM is illustrated in Figure 7.

Figure 7: Asset Management Roadmap



Each asset category may be at various stages of development; however, this program is for consistent development across all areas. Per Section 7 of the O.Reg. 588/17, the Township shall review and update its AMP every five years once the final milestone has been completed, and at least every five years thereafter.

As per Section 9 of the O.Reg.588/17, the Township's Council shall conduct an annual review of its AM progress on or before July 1 each year, starting the year after the final milestone has been completed. The review must address its progress on implementing the plan, any factors impeding its ability to implement the plan, and a strategy to address any above-noted impeding factors.

As noted, recommendations to improve the Township's AM practices have been listed in Appendix D.

2.2. STATE OF THE LOCAL INFRASTRUCTURE

The State of the Local Infrastructure (SOLI) as presented in each asset category provides the following:

- Summary of asset inventories that include descriptions and quantities and that support the various services provided by the Township.
- Estimated replacement cost of the assets. It is important to note that not all assets are scheduled to be replaced, but rather continually rehabilitated. As such, a replacement cost estimate serves as a foundational benchmark to highlight the significance of the infrastructure that supports various services.
- Description of the proportion of estimated service life remaining relative to an asset category's EUL.
- Average condition of the assets weighted by replacement cost.
- Description of the data sources used to inform this section, including any relevant condition assessment policies/practices.

Replacement Costs

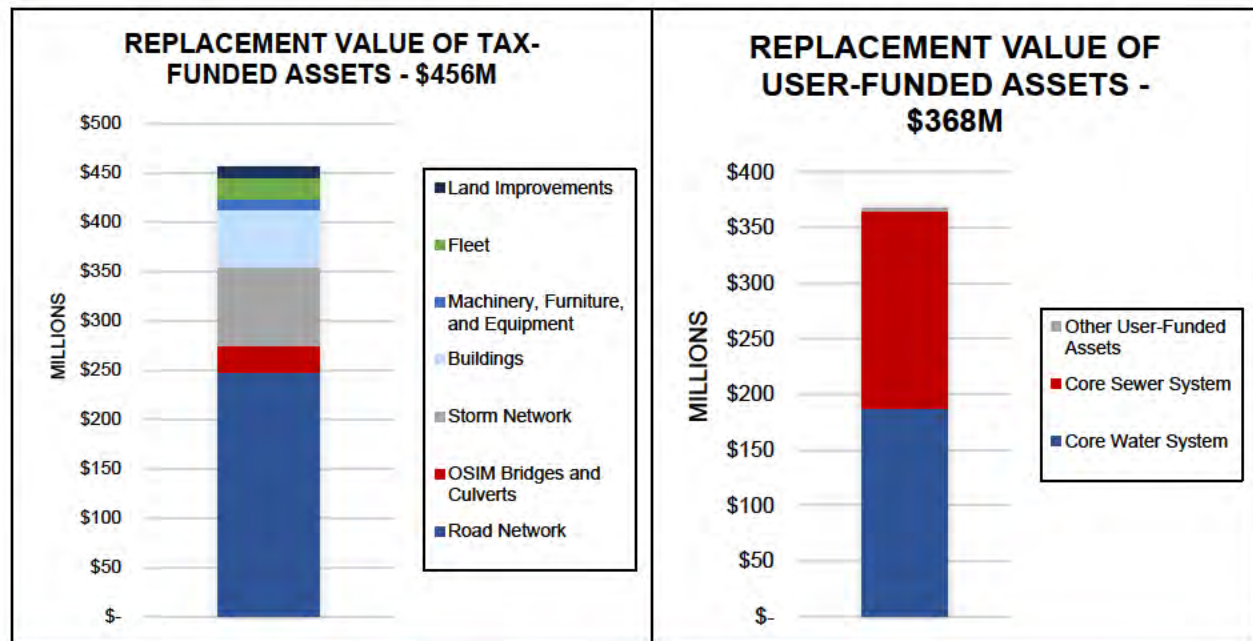
Replacement Costs for each asset or asset category were derived based on several sources, which include:

- Historic Township construction contracts and tenders to develop per-unit costs.
- User-defined costs based on industry sources.
- Consumer Price Index ("CPI")/inflationary estimates.

CPI is typically used in the absence of reliable data to determine the replacement cost of an asset. Citywide calculates the most recent CPI against the historical cost of each asset and its in-service date to estimate the replacement at its present value. As assets age and new technology become available, inflation becomes a less reliable method. As such, as 10-year capital plans are adjusted from year-to-year, costing is more accurately updated.

As of 2024, the estimated total Replacement Cost of the Township's assets is \$836 million. This is illustrated between tax and user-funded assets in Figure 8.

Figure 8: Replacement Cost of Township Assets



Estimated Useful Life and Service Life Remaining

The Estimated Useful Life (EUL) of an asset is the period in which the Township expects the asset to be in service before requiring replacement or disposal. The EUL is initially estimated based on the Tangible Capital Asset Policy but can be adjusted via rehabilitations/improvements and/or condition assessments, resulting in a shortened or prolonged EUL. An asset's service life remaining is the projected in-service years remaining of an asset after any adjustment to its EUL. Two scenarios are presented below to illustrate service life remaining.

Item	In-service Year	Asset Age as of Year 2021	Initial Lifecycle EUL	Condition Assessment and/or Event	Service Life Remaining
HCB Roads	2000	21 Years	40 Years	None	19 Years
HCB Roads	2000	21 Years	40 Years	Micro-surfacing, holds condition 5 years	24 Years

Condition Assessment Approach

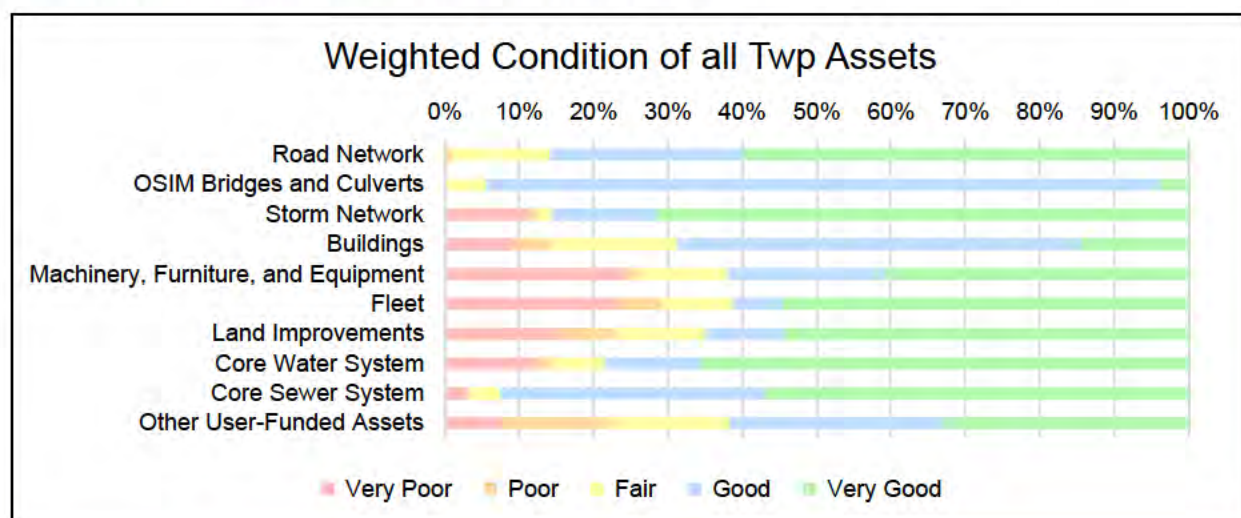
Condition ratings were assigned to every asset using a five-point rating scale as shown in Table 6. In addition to providing a sound basis for assessment, this will allow Township staff to benchmark the results against the values presented in this document.

Table 6: Condition Ratings

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

A weighted condition summary of each asset category is illustrated in Figure 9. Collectively, 85% of assets owned by the Township relative to Replacement Cost are in good or very good condition. This estimate relies on either the asset's age or any condition assessments undertaken.

Figure 9: Township Assets - Condition Summary by Asset Category



2.3. LEVELS OF SERVICE STRATEGY

In balancing Council-endorsed LOS and financially sustainable lifecycle costs, municipalities face a choice: overpromise and underdeliver; under-promise and over-deliver; or promise only what can be delivered sustainably.

Developing realistic LOS using meaningful key performance indicators (“KPIs”) can be instrumental in managing stakeholder expectations, identifying areas requiring higher investments, driving organizational performance, and securing the highest value for money from public assets.

Community & Technical Levels of Service

The purpose of Community and Technical LOS is to define what needs to be achieved and how it relates to the Township’s assets and the people and processes which influence their performance. O.Reg. 588/17 mandates the inclusion of specific Community and Technical LOS for Core Assets in this AMP; however, the Township has defined Corporate LOS and expanded Community LOS, which are planned to be integrated into future iterations of the Township’s AMP. These value-added LOS are further discussed below.

Additionally included within the applicable LOS in Sections 3 and 4 is a performance metric calculating the Capital Reinvestment Rate. This reinvestment rate is a factor of annual capital allocation relative to total Replacement Cost.

Proposed LOS are included as part of the 2025 AMP in accordance with O.Reg. 855/17. Current LOS represents where the Township is currently at, while proposed LOS represent where the Township would like to go.

Strategic and Corporate Goals

This AMP was developed to ensure alignment with the 2024-2027 Strategic Plan, specifically the vision of the Township and the corporate mission. The Township’s strategic vision is a thriving, innovative and sustainable community where all people are valued. Our mission is to promote a balanced quality of life for residents and businesses, through the effective delivery of services and good governance, while ensuring fiscal responsibility and environmental sustainability.

The Township developed the three pillars of customer service in the Corporate LOS and has expanded its Community LOS as outlined in Figure 10.

Figure 10: Corporate & Community LOS



Future Improvements

Future iterations of the AMP will work to incorporate the Corporate and Community LOS. Establishing the connection between Community LOS and the activities performed to determine the Technical LOS will ensure a clear relationship is identified between corporate objectives and asset-focused objectives. Similarly, understanding the interplay between asset LOS and KPIs will ensure that integrated and holistic AM decisions can be made to provide the optimal blend of capital and operating expenditures.

This process will enable the organization to move towards a budgeting practice that quantifies the cost of achieving LOS, and/or communicates a reduction or improvement in LOS. This model is in its inception stage, and therefore, will be updated accordingly as part of future AMP updates.

2.4. LIFECYCLE STRATEGY

The goal of this strategy is to establish an integrated corporate-wide approach to managing assets from a capital and operating perspective. This is a process of updating the asset inventory to reflect what method of lifecycle management will be used.

Lifecycle assets are those that are monitored and kept in good repair via periodic lifecycle activities to ensure the provision of services. This strategy for an asset category can be applied at the asset profile level in Citywide.

Non-Lifecycle Assets are those assets that are monitored for condition but are run to failure under an asset end-of-life approach. Non-lifecycle management is a function of the level of risk the asset possesses to the Township. Both the asset risk as well as the risk to LOS must be considered when choosing this strategy. Assets that reach a condition of 20 or below will have a planning budget generated to assess the condition or plan for the asset replacement.

The types of lifecycle activities discussed in Sections 3 and 4 are listed in Table 7.

Table 7: Lifecycle Activities - Examples

Lifecycle Activity	Description	Examples for Roads
Maintenance	Regularly scheduled inspection of maintenance, or more significant repair activities associated with unexpected events.	Grading/ditching on gravel roads
Preventative Maintenance	Regularly scheduled maintenance or more significant repairs that may extend the useful life of the asset.	Soft spot repairs on gravel roads, rejuvenating agents on HCB roads
Rehabilitation	Significant treatments designed to extend the life of the asset.	HCB road resurfacing, LCB road re-profile
Replacement	Activities that are expected to occur once an asset has reached the end of its EUL and renewal/rehabilitation is no longer an option (if applicable).	Reconstruction of base and surface of HCB & LCB roads

2.5. RISK STRATEGY

Generally, infrastructure needs exceed municipal resource capacity. As such, municipalities must carefully select projects based on the state of infrastructure, economic development goals, and the needs of an evolving and growing community. These factors, along with social and environmental considerations, will form the basis of the Township's risk management framework incorporated in Citywide at the asset profile level. Risk is calculated as follows in the following graphic.

Probability of Failure • out of 5	Range		Risk Rating
✖	1 to 4		Very Low
	5 to 9		Low
	10 to 14		Moderate
	15 to 19		High
	20 to 25		Very High
Consequence of Failure • out of 5			
=			
Risk Rating • out of 25			

The probability of failure is generally a function of an asset's physical condition (service life remaining), which is heavily influenced by the asset's age and the amount of investment that has been made in the maintenance and renewal of the asset throughout its life. Table 8 illustrates the probability of failure of risk model that was developed for all asset categories within this AMP.

Table 8: All Assets - Probability of Risk Model

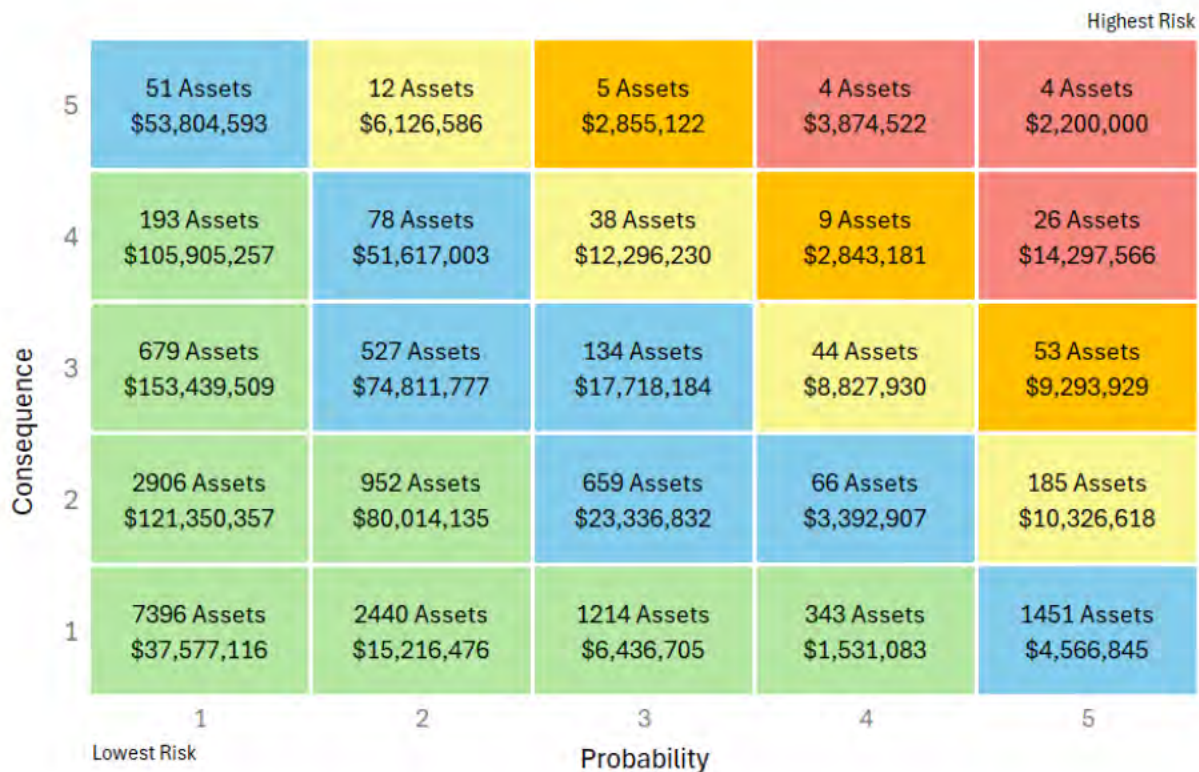
Range	Probability of Failure	Economic (100%) Condition (Service Life Remaining) (100%)	Condition
1	Rare	>80%	Very Good
2	Unlikely	>=60% and <80%	Good
3	Possible	>=40% and <60%	Fair
4	Likely	>=20% and <40%	Poor
5	Almost Certain	<20%	Very Poor

The consequence of failure risk models are disclosed throughout Sections 3 and 4 as they will differ by asset category. These will typically have multiple factors, such as:

- Economic implications of asset failure (Replacement Cost).
- Regulatory and health and safety implications of asset failure.
- Service level implications of asset failure.

Figure 11 illustrates the Township's aggregated risk matrix of its assets as of 2025. Any high-risk assets are reviewed by the department, whereby mitigation activities are developed, or the risk is tolerated. Out of the total Replacement Cost of \$836 million, approximately \$36.8 million or 4.4% of assets are considered high or very high risk.

Figure 11: Township Risk Matrix



Historically, the Township has used a project prioritization process to evaluate proposed capital projects. The first set of criteria or the identified project driver is broken down as follows:



The second level criteria identified are as follows:



A project's score is calculated by multiplying the project driver by the sum of all the second level criteria that apply. This process puts all projects on a level playing field to assist decision-makers

in allocating the limited resources in a more strategic, beneficial, and consistent way. It is the goal to integrate these practices with risk models as outlined above.

3. TAX-FUNDED ASSET CATEGORIES



3.1. ROAD NETWORK

The Township's Road Network is the most identifiable and widely used category of assets by residents and businesses in all rural and urban areas. The community's fundamental expectation is for this network to be efficient, dependable, and safe. Furthermore, it makes up the largest group of assets in terms of both quantity and Replacement Cost. This section summarizes the Road Network asset category that is managed by the Public Works Division within the Community & Customer Services Department.

State of the Local Infrastructure

An inventory valuation summary for the Township's Road Network is outlined in Table 9. Per O.Reg. 588/17, this asset category is comprised of Core Assets (roads and road guiderails) and Non-Core Assets (sidewalks/curbs, signs, and streetlights). Roads are further subcategorized between three materials, which are gravel, asphalt/high-class bituminous ("HCB"), and surface treated/low-class bituminous ("LCB").

The total Replacement Cost of the Road Network totaling \$248 million (+\$4 million from 2024) has been developed using historic construction costs per unit and a standardized consumer price index. The average age of the Road Network is approximately 23 years and the overall condition is very good.

Public Works has implemented several preventative maintenance programs and undertaken updated road condition assessments which show an improved overall condition for the road network. The projected savings for using a lifecycle road maintenance program with timely preservation activities vs end-of-life system is identified in the capital forecast section.

Asset Inventory

Table 9: Road Network - Inventory Valuation Summary

Subcategory	Quantity		Replacement Costs (\$)	Replacement Cost Method	Average Age in Years	Weighted Average Condition
Gravel Roads	108,217	Length (m)	32,570,530	User-Defined Cost/Unit	49.8	Good
HCB Roads	67,871	Length (m)	152,709,523		35.8	Very Good
LCB Roads	83,546	Length (m)	33,418,469		48.1	Very Good
Road Guiderails	585	Quantity, Length (m)	617,759	Consumer Price Index	8.4	Very Good
Sidewalks/Curbs	41,890	Length (m)	15,819,130	User-Defined Cost/Unit	22.3	Good
Signs	1,598	Quantity	734,649	Consumer Price Index	11.0	Very Good
Streetlights	1,194	Quantity	7,567,893		30.1	Very Good
Shoreline Protection	1,431	Length (m)	4,666,667		3.8	Very Good
Road Network Total			246,104,619		22.6	Very Good

Asset Age

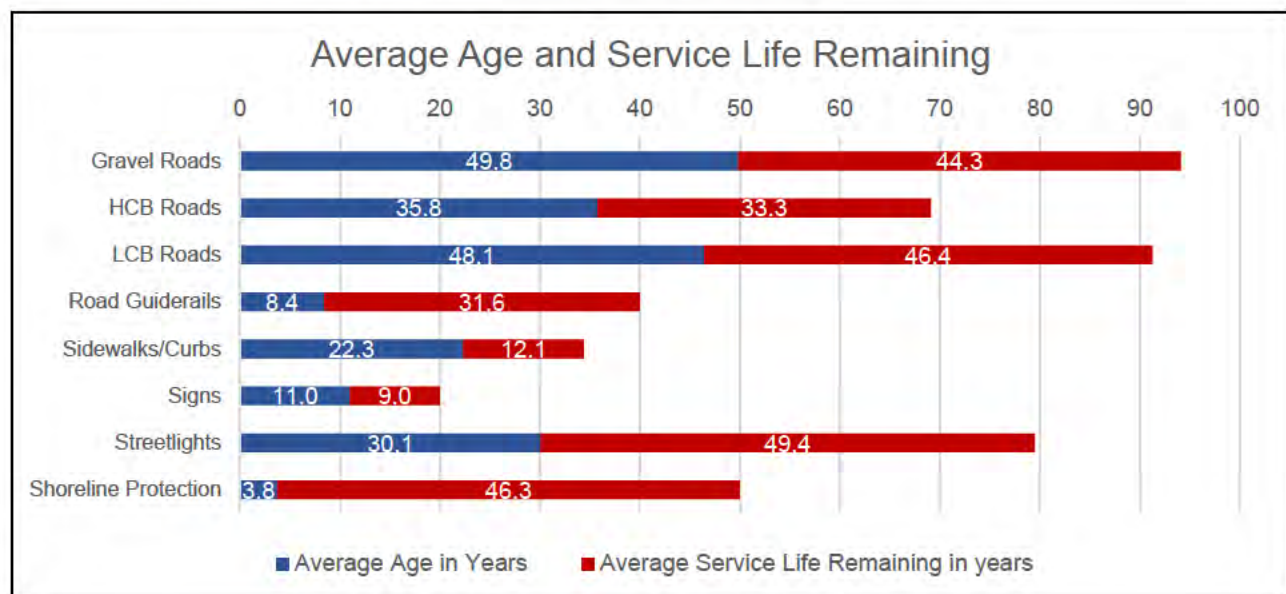
Figure 12 illustrates the average age relative to service life remaining for each subcategory of the Road Network. Service life remaining is primarily based on the initial EUL of the assets, which are listed in Table 10, but may deviate if condition assessments and/or lifecycle activities have been undertaken as discussed later in this section. Most roads have at least one condition assessment documented in Citywide from the Roads Needs Study that was completed in 2015. Updated road condition assessments were completed in-house in 2022, 2023 & 2025. Sign condition assessments are completed by a third party and have been updated as per the 2024 sign inspection program; the average age of the signs is estimated at 11 years.

EULs are developed based on industry standards and fall under the Township's Tangible Capital Asset Policy. HCB and LCB roads are further broken down between base and surface and are depreciated at different rates. To manage the replacement of roads, lifecycle EULs have been used to schedule events as discussed later in this section.

Table 10: Road Network - Estimated Useful Life

Subcategory	Estimated Useful Life (EUL)
Gravel Roads	50 Years
HCB Roads	40 Years ¹
LCB Roads	20 Years ²
Road Guiderails	40 Years
Sidewalks/Curbs	30 Years
Signs	20 Years
Streetlights	30 to 60 Years
Shoreline Protection	50 Years

Figure 12: Road Network - Average Service Life and Service Life Remaining



¹ EUL for HCB roads is the lifecycle EUL if no lifecycle maintenance events occur.

² EUL for LCB roads is the lifecycle EUL if no lifecycle maintenance events occur.

Asset Condition and Assessment

The Township's current approach to assessing the condition of core Road Network assets relies on the projected conditions established from in-house condition assessments completed in 2024 & 2025. Asset profiles are set up in Citywide to allocate a tailored deterioration curve to each subcategory of road. Therefore, a condition assessment from 2022 will project to 2024 using the applicable deterioration curve within the profile. A Roads Needs Study, periodically completed by an external consultant, also recommends various lifecycle activities to optimize the useful life of roads. Condition ratings are measured using the Ministry of Transportation's Pavement Condition Index ("PCI") metric to produce an approximate structural adequacy score and physical condition. This will establish the time and need to address certain roads. Aside from this, observations from staff and the public also result in ad-hoc condition assessments to trigger events such as spot repairs.

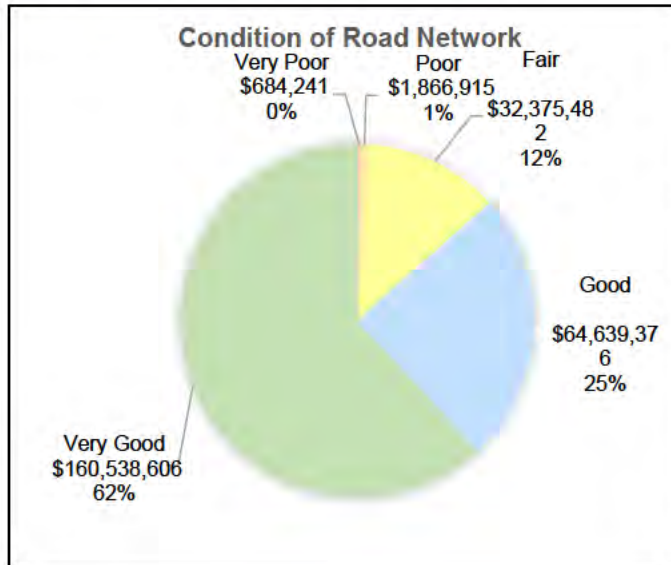
Sign assets assessments were completed in 2024 by an external consultant and uses an overall condition rating of good, fair or poor based on retroreflectivity, contrast ratio, sign condition, sign deficiencies and support. Signs with a good overall condition and passing all testing were adjusted to a very good rating, while signs in poor condition with multiple failures were lowered too very poor.

The Township does not have a formal approach to assessing the condition of the Road Network's Non-Core Assets, and therefore heavily relies on an asset's age and EUL to determine condition. Staff assessments that may shift the replacement of an asset are currently ad-hoc and are triggered by visual inspections and/or complaints. Sidewalks/Curbs have a staff-assessed projected condition from a 2019 rating. Table 11 outlines the Township's average condition of the road network to be 81 (+6) or very good condition overall, with the lowest being sidewalks/curbs. A weighted average condition incorporates an asset's Replacement Cost to calculate an average condition for the subcategory.

Table 11: Road Network - Weighted Average Condition and Source

Subcategory	Weighted Average Condition out of 100	Condition Source
Gravel Roads	74%	Assessed
HCB Roads	81%	
LCB Roads	89%	
Road Guiderails	97%	
Sidewalks/Curbs	60%	
Signs	96%	
Streetlights	91%	Age-based
Shoreline Protection	100%	
Road Network Total	81%	

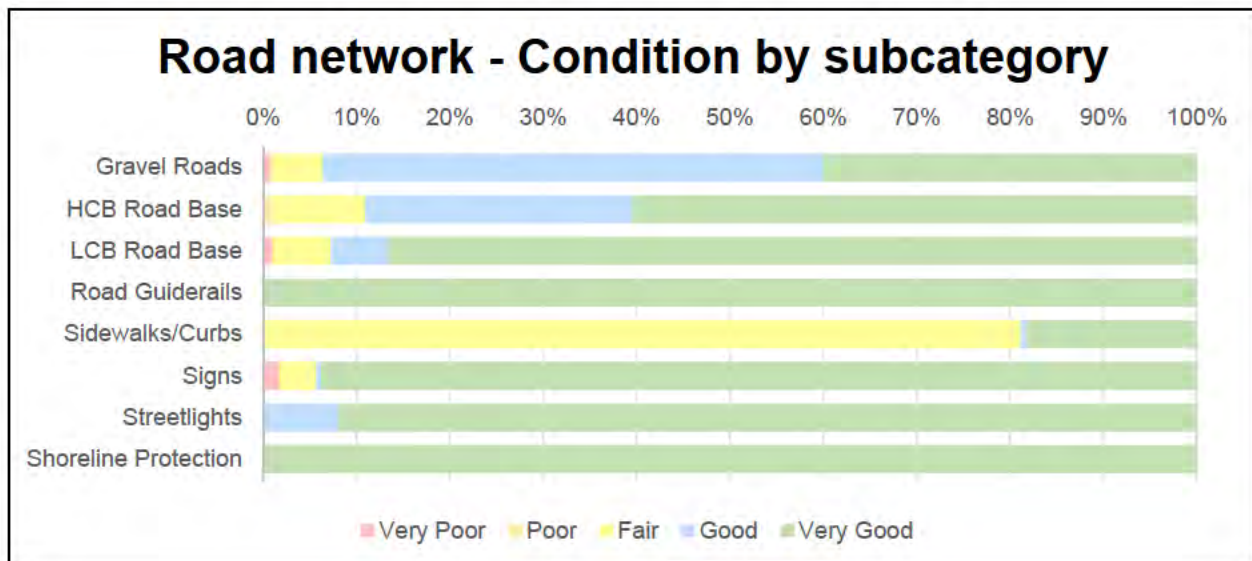
Figure 13: Road Network - Condition Summary



As shown in Figure 13, the Township's Road Network has approximately 87% of assets in good or very good condition. The remaining are approaching the end of their expected useful lives, indicating a need for investment in the short to medium term. Overall road conditions have improved 6% since the 2024 AMP due to ongoing lifecycle activities and updated road condition assessments.

Figure 14 provides further detail on the condition of the assets by subcategory.

Figure 14: Road Network - Condition by Subcategory



Levels of Service

To adhere to the first AM milestone, O.Reg. 588/17 mandates the disclosure of certain Community and Technical LOS for Core Assets. Community LOS use qualitative descriptions to describe the scope or quality of service delivered by an asset category. Technical LOS use metrics to measure the scope or quality of service being delivered by an asset category. Table 12 outlines the required Community and Technical LOS as set out in O.Reg. 588/17 and one selected performance measure for this iteration of the AMP. Changes from 2024 are highlighted in brackets.

It is the Township's objective to finalize the development of advanced LOS within the Road Network in future iterations of the AMP. These will incorporate the six added-value Community LOS endorsed by Council, as outlined in Section 2.3.

Table 12: Road Network: Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Scope	Description, which may include maps, of the road network in the municipality and its level of connectivity	See map in Appendix B.1	Lane-kilometers of Township Arterial Roads (MMS Road Classes 1 and 2) per land area (k/km ²)	0.00 km/km ²	Maintain
			Lane-kilometers of Township Collector Roads (MMS Road Classes 3 and 4) per land area (k/km ²)	0.50 km/km ²	Maintain
			Lane-kilometers of Township local roads (MMS Road Classes 5 and 6) per land area (k/km ²)	1.00 km/km ² (+0.02)	Maintain

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Quality	Description or images that illustrate the different levels of road class pavement condition	The Township completed a Road Needs Study in 2015 in coordination with a third-party consultant. Every road section received a surface condition rating and a physical condition rating Surface Condition rating criteria segregates roads into four categories: 1-35 physical condition (poor to very poor to failed) - reconstruction of major rehabilitation is required immediately 36-55 physical condition (fair) - 1 to 5 year needs 56-70 physical condition (good) - 6 to 10 year needs 71-100 physical condition (excellent) - adequate, only maintenance & preservation scheduled. The Township has translated the above criteria to input condition assessments with Citywide's deterioration curve model. Condition ratings are as follows: 80-100 Very Good physical condition 60-79 Good physical condition 40-59 Fair physical condition 20-39 Poor physical condition 0-19 Very Poor physical condition	For paved roads in the municipality, the average pavement condition index value.	HCB Roads 82% (+6%) (Very Good) LCB Roads 87% (+5%) (Very Good)	HCB Roads Good LCB Roads Good
			For unpaved roads in the municipality, the average surface condition (e.g., excellent, good, fair, or poor)	Good (Good)	Good
		Percentage of road network assets in fair or better condition		99%	80%
		Average condition of road network assets		80% (Good)	Good
Performance			Capital re-investment rate	1.35% (-0.12%)	Increase

Lifecycle Management

Lifecycle strategies of the Road Network are segregated between the Core Assets and Non-Core Assets. To meet the requirements of O.Reg. 588/17, the focus has been to document and define the optimized lifecycle strategies within the core network, being gravel roads, HCB roads, and LCB roads.

Core Road network

The general approach to forecasting the cost of the lifecycle activities that are required to maintain the current LOS is to ensure that the proportion of assets in poor or very poor condition remains relatively stable. Staff have worked with the Township's upper-tier partner, the County of Lennox & Addington, to consider the optimal blend of each lifecycle activities to achieve the lowest Lifecycle Cost to manage the Township's roads.

Table 13 outlines the current lifecycle strategy that has been applied to the Township's gravel roads. This strategy is perpetual in nature and avoids replacement so long as lifecycle events are completed to retain the assets at a certain condition and risk range.

Table 13: Lifecycle Strategy - Gravel Roads

Gravel Roads		
Lifecycle Activity	Type	Trigger/Timeline
Grading	Operating - maintenance	Annually or as needed
Ditching		Every 20 years
Resurfacing	Operating - preventative maintenance ³	40 mm every three years 75 mm as needed or 40 to 65 condition rating 150 mm as needed or 25 to 40 condition rating
Alleviate soft spots		As needed, as identified through road patrols
Reconstruction	Capital - replacement	As needed otherwise perpetual lifecycle via resurfacing activities

³ Per the Township's current Tangible Capital Assets policy, the resurfacing of gravel roads is considered an operating cost.

Table 14 outlines the current lifecycle strategy that has been applied to the Township's HCB Roads. While this strategy requires attention before replacement, it extends the useful life from 40 years to approximately 94 years. Extending the useful life and replacement date of HCB roads is beneficial in aligning with the replacement and rehabilitation of underground works and other linear lifecycle strategies.

Table 14: Lifecycle Strategy - HCB Roads

HCB Roads		
Lifecycle Activity	Type	Trigger/Timeline - chronologically triggered by condition
Rejuvenator	Capital - preventative maintenance	4 years following initial construction or resurfacing - repeated up to 4 times
Micro Surfacing	Capital - rehabilitation	8 years following rejuvenator - repeated up to 4 times
Resurfacing		12 to 15 years following micro surfacing - repeated up to 3 times
Reconstruction	Capital - replacement	Projected at 94 years with lifecycle events

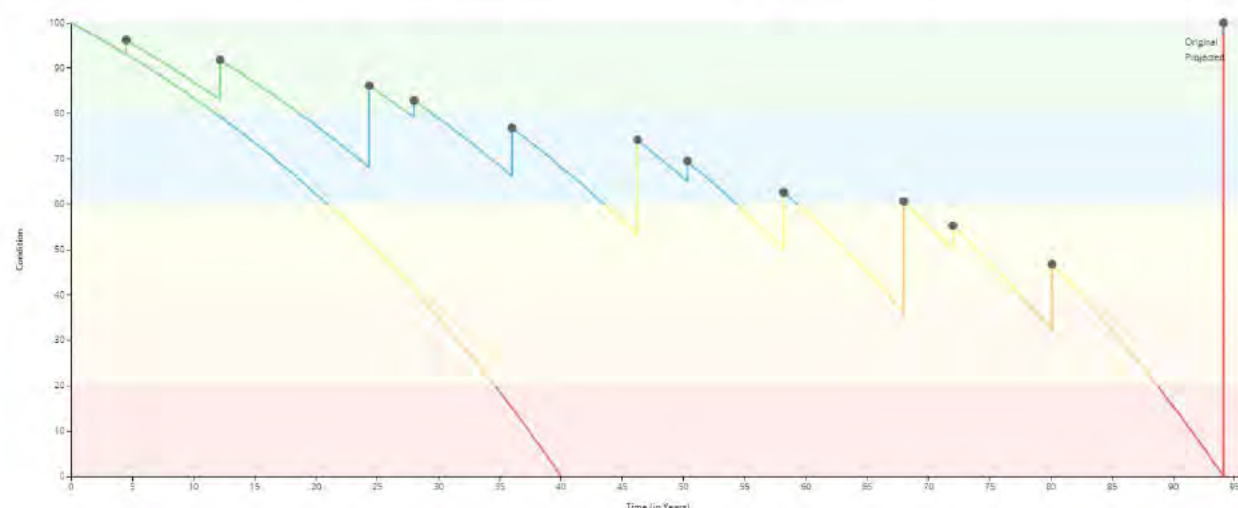
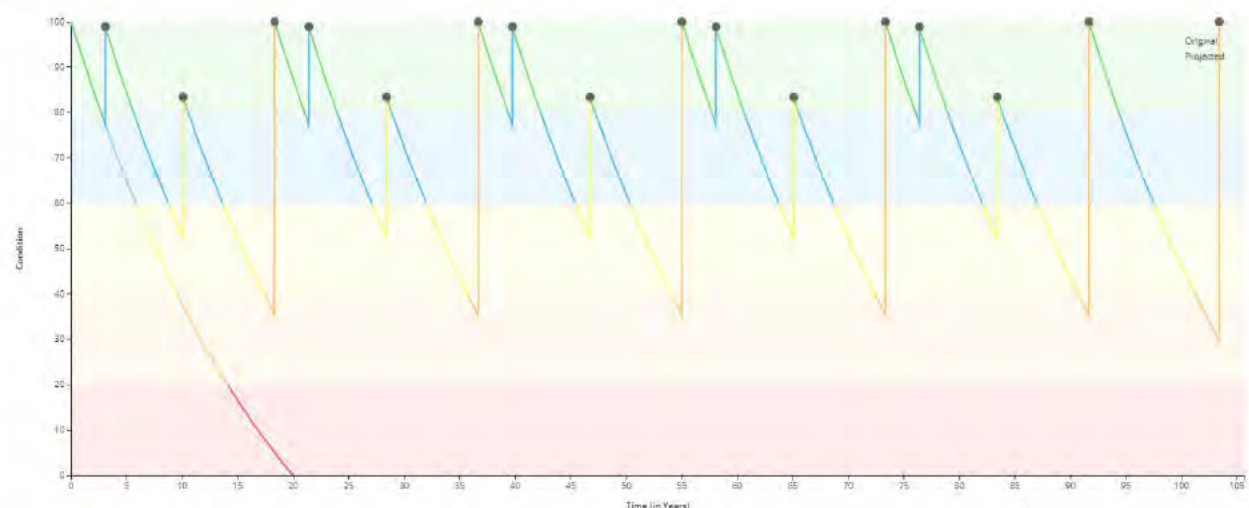


Table 15 outlines the current lifecycle strategy that has been applied to the Township's LCB Roads. This strategy is perpetual in nature and avoids replacement so long as lifecycle events are completed to retain the assets at a certain condition and risk range.

Table 15: Lifecycle Strategy - LCB Roads

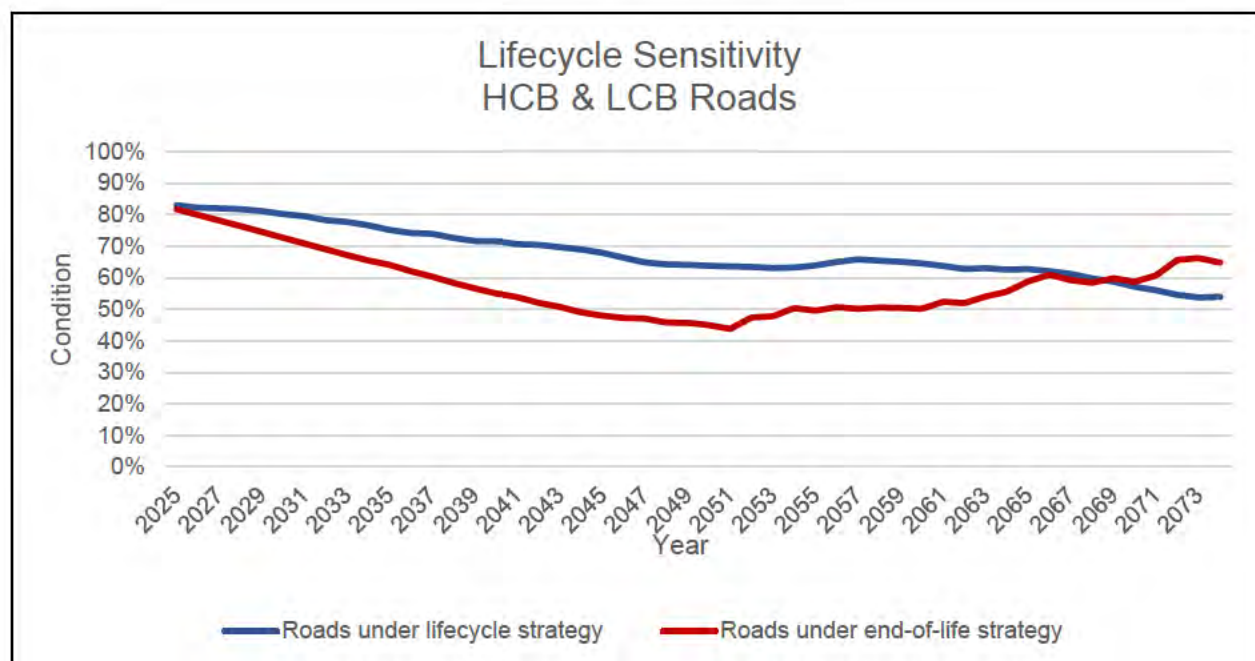
LCB Roads		
Lifecycle Activity	Type	Trigger/Timeline - chronologically triggered by condition
Single Preservation	Capital - preventative maintenance	3 years following initial construction or re-profile
Double Preservation		7 years following single preservation
Re-profile	Capital - rehabilitation	8 years following double preservation
Reconstruction	Capital - replacement	As needed otherwise perpetual lifecycle via preservation and re-profile activities



Lifecycle Sensitivity

Based on the above, Figure 15 illustrates the qualitative benefit of undertaking a lifecycle strategy to manage assets, whereby the average condition of HCB and LCB roads remains relatively stable under a lifecycle approach rather than an asset end-of-life approach. This mitigates overall risk at a lower cost.

Figure 15: Road Network - Lifecycle Sensitivity of HCB & LCB Roads



Non-core Road Network

The current lifecycle strategy of sidewalks, signs, and streetlights is to replace or rehabilitate them on an as-needed basis. Before the end of an asset's useful life, activities may be triggered prematurely via a visual inspection, reports/complaints, or accident reports. Like other infrastructure within the right-of-way, staff attempt to coordinate replacements with any underground and road works.

Asset Management Capital Forecasts

Figure 16 illustrates the road network's 10-year capital forecast, which includes lifecycle activities of roads as noted above.

As noted in Table 16, the Annual Requirement to fund the replacement and lifecycle activities of the Road Network totals \$5.7 (-0.2M) million. This incorporates annual savings in the present value of approximately \$1.3M (+\$272,280) if all the above-noted lifecycle strategies are undertaken at the appropriate condition rating. A more detailed 10-Year capital forecast is found in Appendix C.

Figure 16: Road Network - 10-Year Capital Forecast

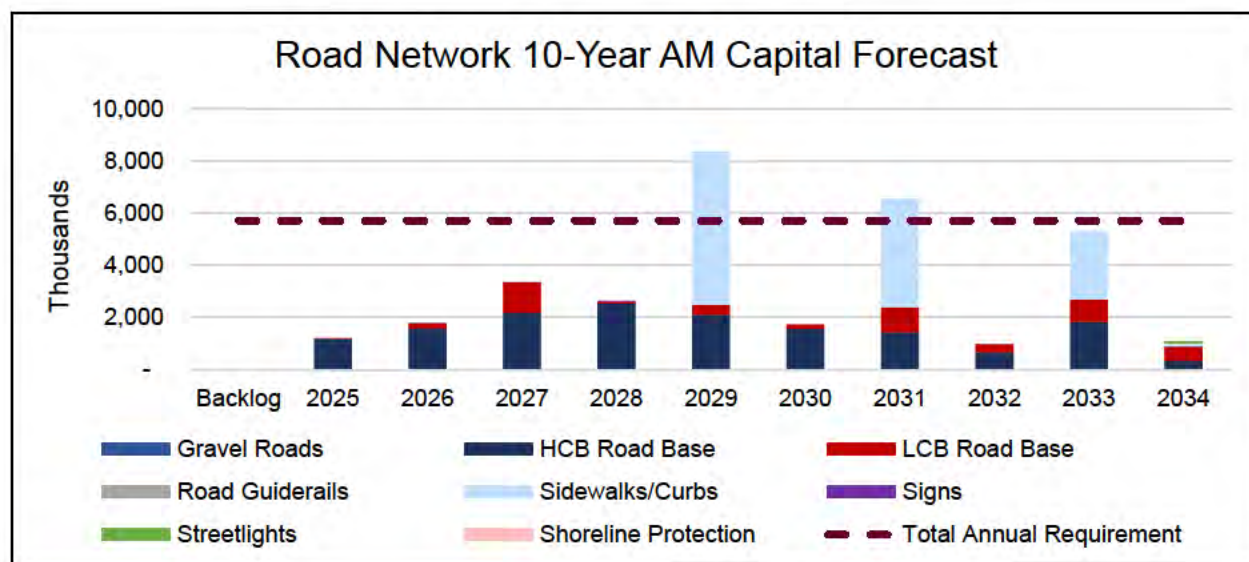


Table 16: Road Network - Annual Requirement

Subcategory	Annual Requirement - Lifecycle (\$)	Annual Requirement - End of Life (\$)	Savings (costs)
Core Assets	4,902,236	6,155,516	1,253,280
Non-Core Assets	802,796	802,796	-
Road Network Total	5,705,033	6,958,312	1,253,280

Risk Management

Risk models were developed at the asset profile level to prioritize rehabilitation and replacement of assets, with a higher focus on Core Assets. The basis for calculating risk is to determine the probability and consequence of failure of a specific asset. This is further explained in Section 2.5. The risk model to calculate the probability of failure is condition-based and is uniform across all asset categories. The consequence of failure risk model for the core Road Network is outlined in Table 17.

Table 17: Road Network - Consequence of Risk Model

Range	Economic (34%) Replacement Cost (100%)	Operational (33%) Fixed Risk (100%)	Health & Safety (33%) Road Class Attribute (100%)	Consequence of Failure
1	<\$100,000	N/A	6 (Local)	Insignificant
2	>=\$100,000 and <\$250,000	N/A	5 (Local)	Minor
3	>=\$250,000 and <\$500,000	Gravel Roads	4 (Collector)	Moderate
4	>=\$500,000 and <\$1,000,000	LCB Roads Road Guiderails	3 (Collector)	Major
5	>\$1,000,000	HCB Roads	1 & 2 (Arterial)	Severe

Figure 17 is the risk matrix generated from Citywide that incorporates the above-noted risk model and all asset subcategories in the Road Network. This matrix does not include any assets not planned for replacement. Under this model, there are no assets considered high or very high risk due to their condition or consequence of failure. These are also subsequently listed in

		Highest Risk				
Consequence	5	0 Assets \$0	0 Assets \$0	0 Assets \$0	0 Assets \$0	0 Assets \$0
	4	28 Assets \$24,623,433	22 Assets \$23,170,475	2 Assets \$2,221,295	0 Assets \$0	0 Assets \$0
	3	196 Assets \$88,104,898	67 Assets \$31,790,393	28 Assets \$12,199,332	2 Assets \$1,090,582	0 Assets \$0
	2	501 Assets \$30,738,019	59 Assets \$11,133,731	249 Assets \$15,432,952	1 Assets \$56,548	2 Assets \$212,614
	1	2160 Assets \$6,495,055	105 Assets \$603,457	56 Assets \$53,836	18 Assets \$67,933	14 Assets \$36,051
		1	2	3	4	5
		Probability				
		Lowest Risk				

Table 18. This represents a reduction of 4 road sections in very high and high risk categories as compared to 2024 AMP due to updated road condition assessments.

Figure 17: Road Network - Risk Matrix

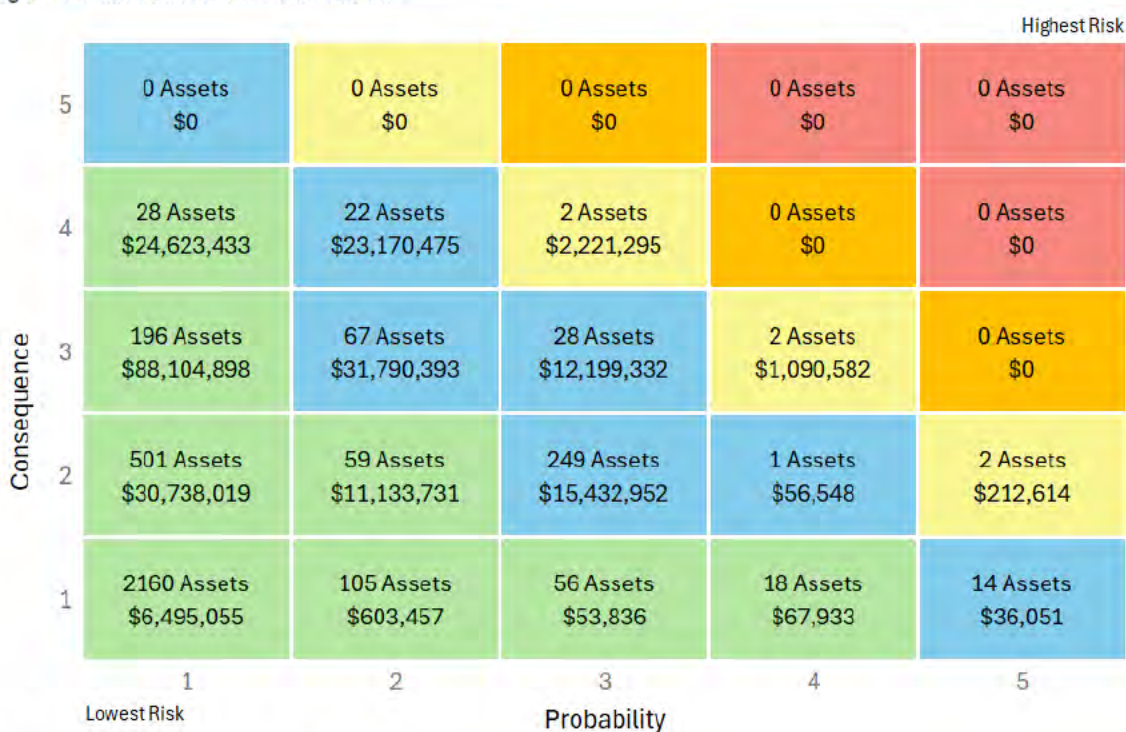


Table 18: Road Network – High-Risk Assets

Asset Name	Subcategory	GIS #	Risk Rating
None			

3.2. BRIDGES & CULVERTS

As outlined in the O.Reg. 588/17, Bridges and Culverts form part of the Core Assets owned and managed by the Township. Within this asset category are structures that are subject to inspections under the Ontario Structure Inspection Manual ("OSIM"), as they meet the minimum span requirement of greater than or equal to three meters. The Public Works Division is responsible for the maintenance of all Bridges and Culverts owned by the Township to ensure these structures remain in adequate condition.

State of the Local Infrastructure

An inventory valuation summary for the Township's Bridges and Culverts is outlined in Table 19. This asset category is valued using a standardized CPI, and in some cases, a user-defined amount for a total value of approximately \$27 million. The average age of Bridges and Culverts is approximately 30 years and the overall condition is good.

Asset Inventory

Table 19: Bridges & Culverts - Inventory Valuation Summary

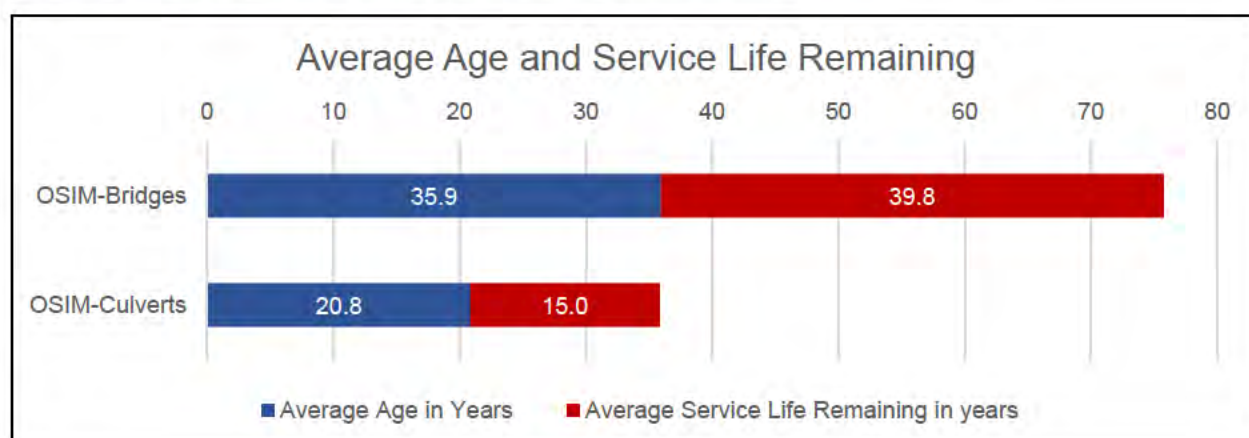
Subcategory	Description	Quantity	Replacement Costs (\$)	Replacement Cost Method	Average Age in Years	Weighted Average Condition
Bridges	Bridges subject to OSIM inspection	15 ea.	20,321,266	User-Defined Cost/Consumer Price Index	35.9	Good
	Culverts subject to OSIM inspection	13 ea.	6,558,346		20.8	Good
Total Bridges & Culverts		28	26,879,612		30.1	Good

Asset Age

Figure 18 illustrates the average age relative to service life remaining for each subcategory of Bridges & Culverts. Service life remaining is based on the initial EUL of the assets, which range between 20 to 60 years. This may deviate if a condition assessment and/or lifecycle activities have been undertaken. As shown, Bridges and Culverts are through approximately 46% & 55% of their EULs on average, respectively.

EULs are developed based on industry standards and fall under the Township's Tangible Capital Asset Policy.

Figure 18: Bridges & Culverts - Average Age and Service Life Remaining

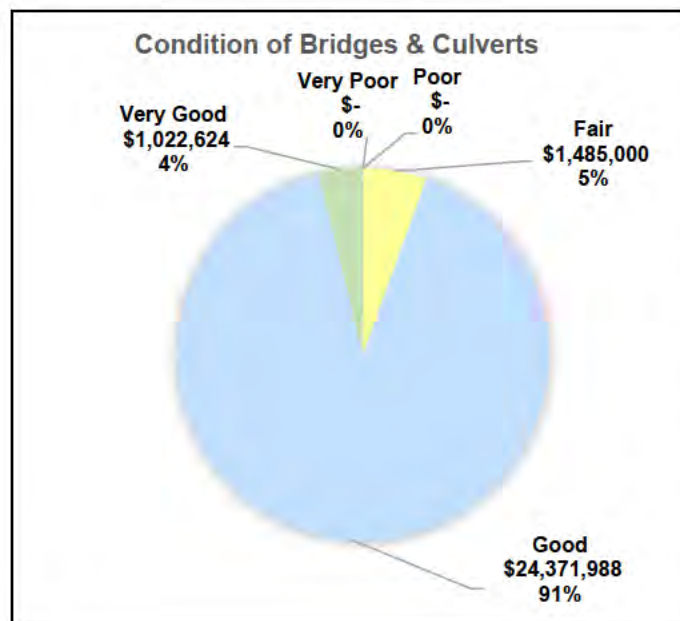


Asset Condition and Assessment

The Township's current approach to assessing the condition of Bridges & Culverts within this asset category is using the structural condition ratings generated from the provincially regulated OSIM inspection. This manual provides municipalities with a guide that outlines inspection procedures, material defects, condition states, maintenance needs, and performance deficiencies.

The last OSIM inspection was completed in 2024, therefore condition will project in accordance with the asset's respective deterioration curve and estimated useful life in Citywide. The next OSIM inspection is scheduled for 2026 as they are to be completed biennially.

Figure 19: Bridges & Culverts - Condition Summary

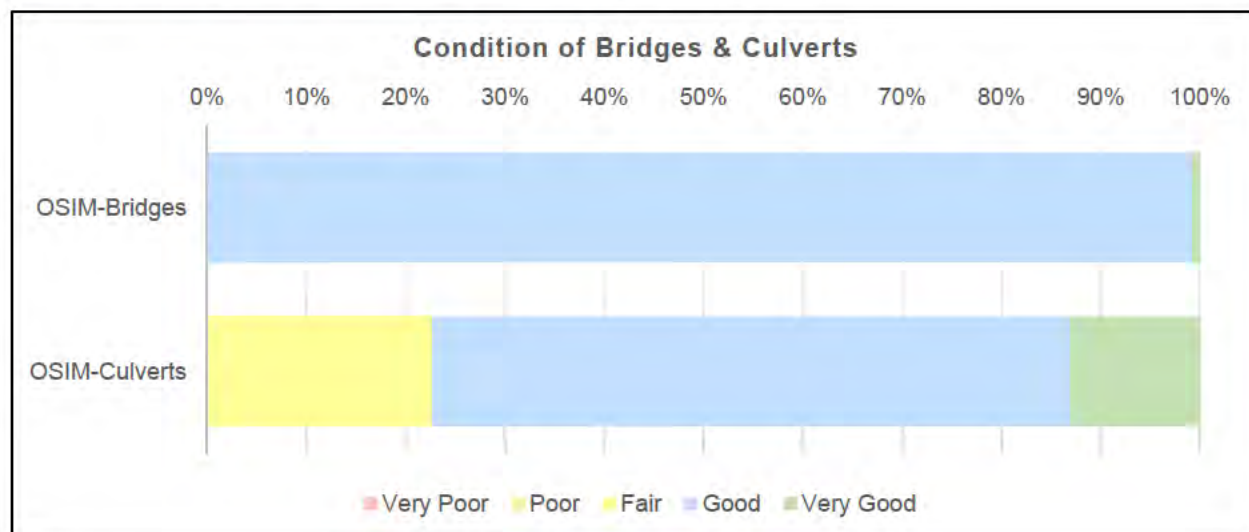


Projected conditions illustrated in Figure 19 are based on a weighted average relative to the Replacement Cost.

The Township's Bridges and Culverts asset category has approximately 95% of assets in good or very good condition due to the results of the last OSIM inspection and the spread between useful lives within the asset category. The remaining assets are approaching the end of their expected useful lives, indicating a need for investment in the short to medium term.

Figure 20 provides further detail into the assets by subcategory.

Figure 20: Bridges & Culverts - Condition by Subcategory



Levels of Service

To adhere to the first AM milestone, O.Reg. 588/17 legislates the disclosure of certain Community and Technical LOS for Core Assets. Community LOS use qualitative descriptions to describe the scope or quality of service delivered by an asset category. Technical LOS use metrics to measure the scope or quality of service being delivered by an asset category. Table 20 outlines the required Community and Technical LOS as set out in O.Reg. 588/17 and one selected performance measure for this iteration of the AMP.

It is the Township's objective to finalize the development of advanced LOS for Bridges & Culverts in future iterations of the AMP. These will incorporate the six added-value Community LOS endorsed by Council, as outlined in Section 2.3.

Table 20: Bridges & Culverts - Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Scope	Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists)	Bridges provide reliable access to the road network for vehicles and/or pedestrians	Percentage of bridges in the Township with loading restrictions	6.7%	Maintain
Quality	Description or images of the condition of bridges & OSIM culverts and how this would affect the use of the bridges & culverts	See map in Appendix B.2	The average condition index value for OSIM structures in the Township	70% (Good)	Good
			Percentage of OSIM assets in fair or better condition	100%	80%
Performance			Capital re-investment rate	0.66% (-0.08%)	Increase

Lifecycle Management

Table 21 outlines the current lifecycle strategy that has been applied to the Township's Bridges & Culverts.

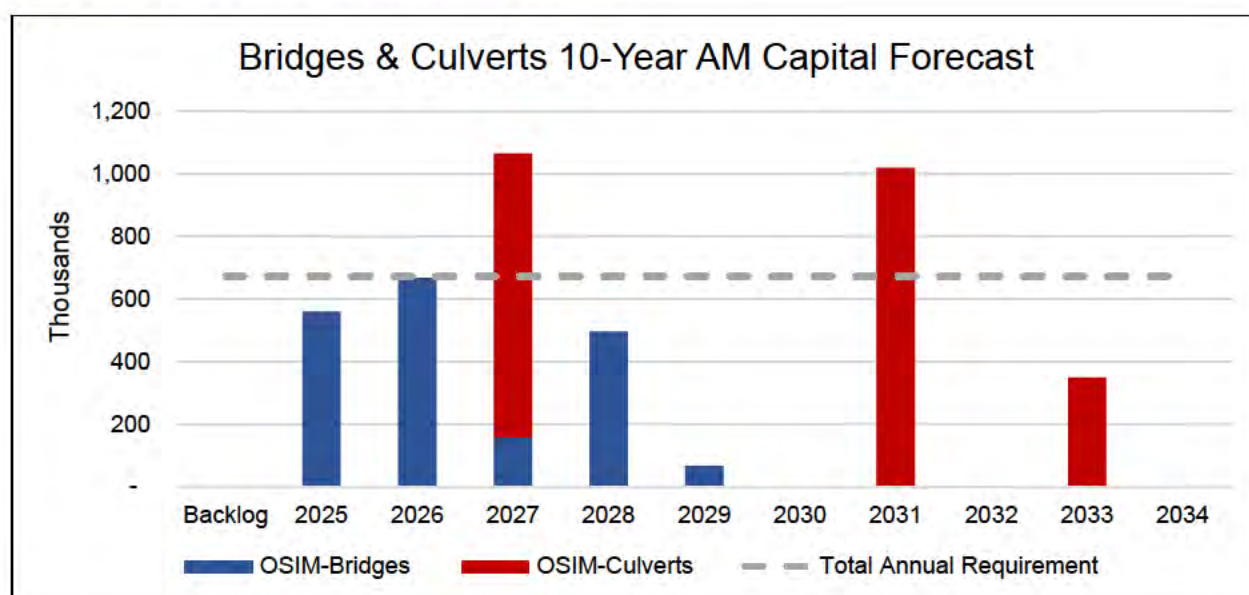
Table 21: Bridges & Culverts - Lifecycle Strategy

Lifecycle Activity	Type	Trigger/Timeline	Description
OSIM inspection	Operating – maintenance/regulatory inspection	Mandated every two years	Biennial inspections by qualified professionals using the OSIM manual provide a snapshot of the current condition of each bridge element. Maintenance, repair, and rehabilitation are planned following inspections.
Routine maintenance	Operating - preventative maintenance	Annual details are structure dependent	Routine maintenance includes excess vegetation removal, pressure washing of bearing seats and expansion joint seals, routing and sealing of cracks, and removal of ice buildup.
Concrete protectant application		Applied every three years	Concrete protective coatings are applied to the surface of the concrete to provide a waterproof sealant that protects the concrete from water absorption.
Replacement	Capital - replacement	Mandated by results of structural inspections	Replacement at end of its useful life.

Asset Management Capital Forecasts

The Annual Requirement to fund the replacement of Bridges and Culverts is currently \$687,017 (+\$73,017). Figure 21 illustrates the 10-year capital forecast for this asset category, however, minimal capital spending is anticipated in the short-term based on the results of the 2024 OSIM inspection with higher costs expected beyond the 10-year forecast period. The total annual requirement shown is based on the full lifecycle of the assets.

Figure 21: Bridges & Culverts - 10-Year Capital Forecast



Risk Management

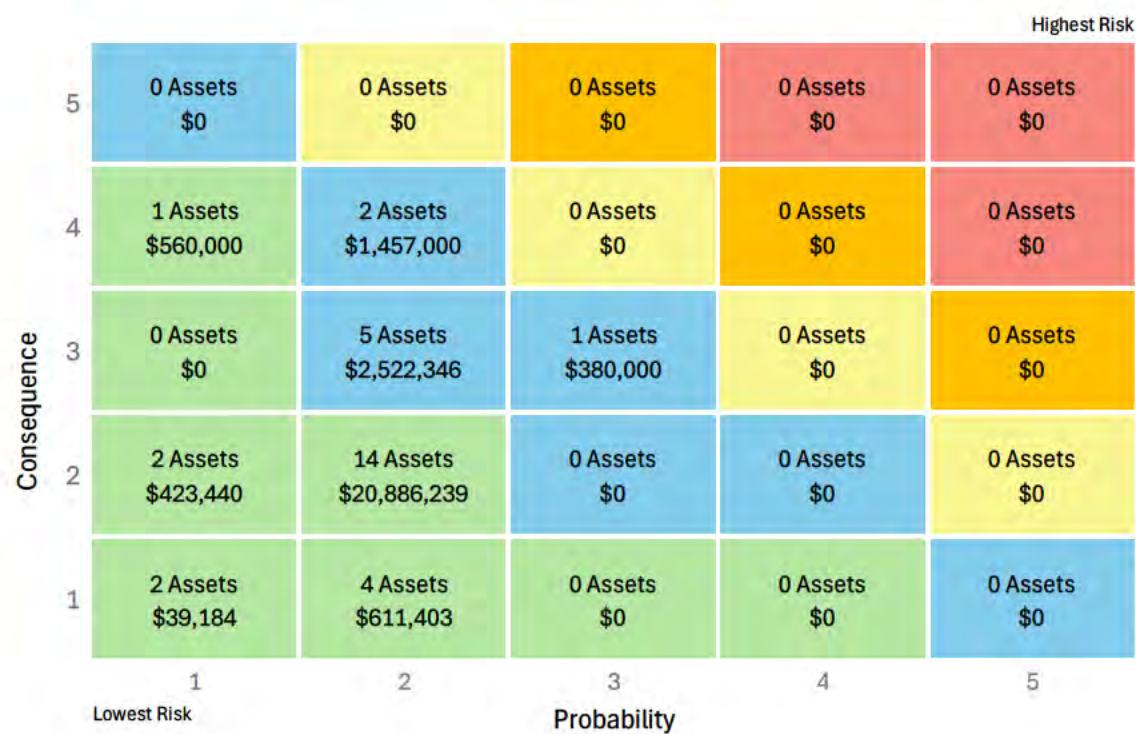
Risk models were developed at the asset profile level to prioritize the rehabilitation and replacement of assets, with a higher focus on Core Assets. The basis for calculating risk is to determine the probability and consequence of failure for each asset. This is further explained in Section 2.5. The risk model to calculate the probability of failure is condition-based and is uniform across all asset categories. The consequence of failure risk model for Bridges & Culverts is outlined in Table 22.

Table 22: Bridges & Culverts - Consequence of Failure Risk Model

Range	Economic (34%)	Health & Safety (66%)	Consequence of Failure
	Replacement Cost (100%)	Road Class (100%)	
1	<\$100,000	6 (Local)	Insignificant
2	>=\$100,000 and <\$250,000	5 (Local)	Minor
3	>=\$250,000 and <\$500,000	4 (Collector)	Moderate
4	>=\$500,000 and <\$1,000,000	3 (Collector)	Major
5	>\$1,000,000	1 & 2 (Arterial)	Severe

Figure 22 is the risk matrix generated from Citywide that incorporates the above-noted risk model. This matrix does not include any assets not planned for replacement or with a nominal Replacement Cost. Under this model, there are no assets considered high or very high risk due to their condition or consequence of failure.

Figure 22: Bridges & Culverts - Risk Matrix



3.3. STORM NETWORK

The Township's Storm Network manages and treats stormwater to protect residents, businesses, and its natural built environments. Stormwater, derived from rain and snowmelt, enters the storm system through catch basins, creeks, ditches, and other stormwater channels. The system drains stormwater away from buildings, roads, and other surfaces.

Due to the increased intensity and frequency of storm events from climate change, stormwater management is becoming increasingly crucial, hence the requirement to address the issue within the Township's Strategic Asset Management Policy. If the Storm Network is not well maintained, appropriately sized, or in a good state of repair to accommodate added flows, this can increase the risk of overland flooding.

State of the Local Infrastructure

Asset Inventory

The Public Works division operates and maintains the Township's Storm Network, which is subcategorized in Table 23 with an overall Replacement Cost of \$79 million (+\$7 million from 2024). These values were developed based on historic construction costs and consumer price index. This asset category's overall condition is very good at an average age of 22 years and forms part of the core infrastructure as outlined in O.Reg. 588/17.

Table 23: Storm Network - Inventory Valuation Summary

Subcategory	Quantity	Replacement Costs (\$)	Replacement Cost Method	Average Age in Years	Weighted Average Condition
Cross Culverts	1,723	Quantity, Length (m) 10,295,730	Consumer Price Index	25.2	Fair
Driveway Culverts	4,031	Quantity, Length (m) 8,327,773		4.6	Very Good
Catchbasins	1,312	Quantity 5,308,352	User-Defined Cost/Unit	22.7	Very Good
Storm Manholes	612	Quantity, Length (m) 5,827,464		20.9	Very Good
Storm Mains	43,792	Length (m), Quantity 43,736,076		23.9	Very Good
Storm Water Management Facilities	8	Quantity 5,427,461	Consumer Price Index	12.0	Very Good
Storm Water Treatment Units	1	Quantity 243,619		8.3	Very Good
Storm Network Total		79,166,475		22.1	Very Good

Asset Age

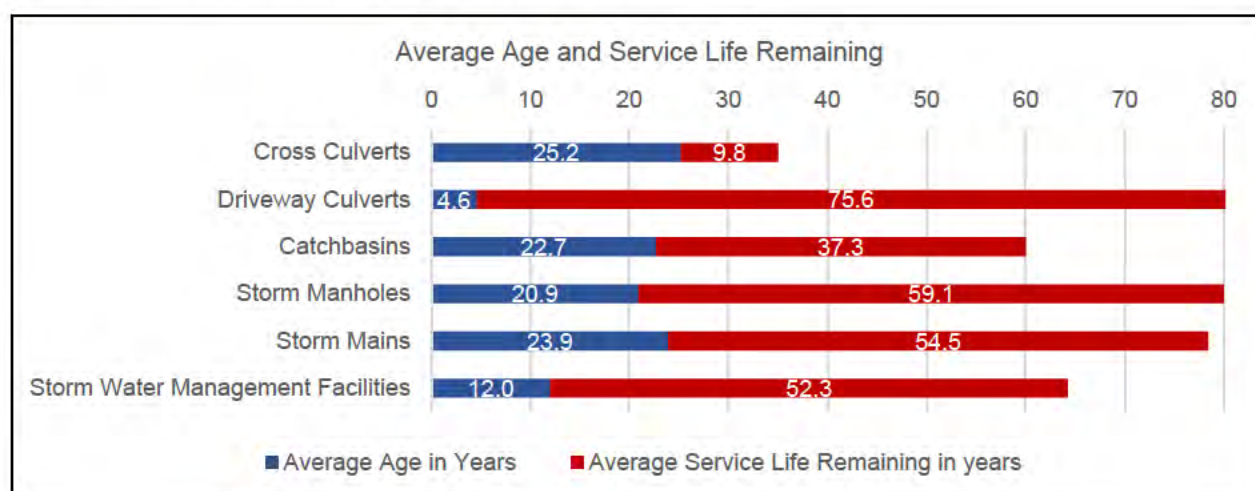
Figure 23 illustrates the average age relative to service life remaining for each subcategory of the Storm Network. Service life remaining is based on the initial EUL of the assets, which are listed in Table 24, but may deviate if a condition assessment and/or lifecycle activities have been undertaken.

EULs are developed based on industry standards and are in accordance with the Township's Tangible Capital Asset Policy. A range in EUL is important to ensure certain components of an asset (where applicable) are depreciated and forecasted for replacement appropriately.

Table 24: Storm Network - Estimated Useful Lives

Division	Estimated Useful Life (EUL)
Cross Culverts	30 to 60 Years
Driveway Culverts	80 Years
Catch Basins	60 Years
Storm Manholes	80 Years
Storm Mains	30 to 80 Years
Storm Water Management Facilities	60 to 80 Years
Storm Water Treatment Units	80 Years

Figure 23: Storm Network - Average Age and Service Life Remaining

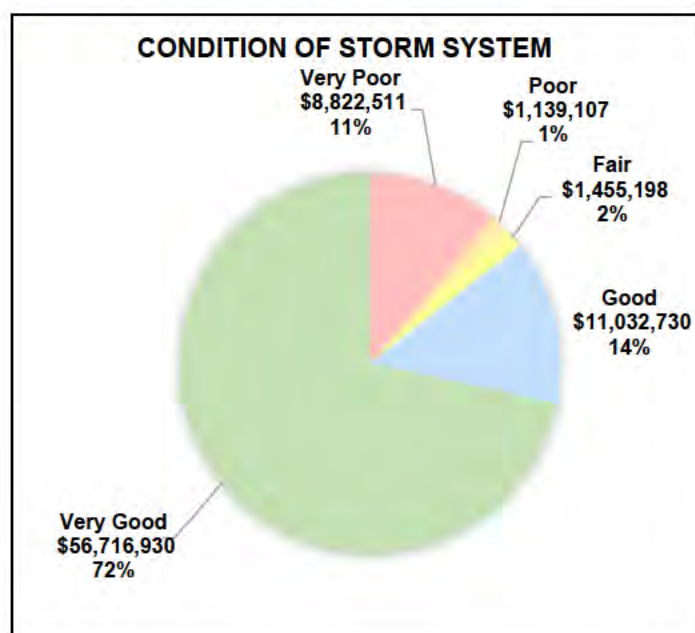




Asset Condition and Assessment

The Township does not have a formal approach to assessing the condition of assets within the Storm Network, and therefore heavily relies on an asset's age and EUL to determine condition. Staff assessments that may shift the replacement of an asset are currently ad-hoc and are triggered by visual inspections and/or complaints

Figure 24: Storm Network - Condition Summary



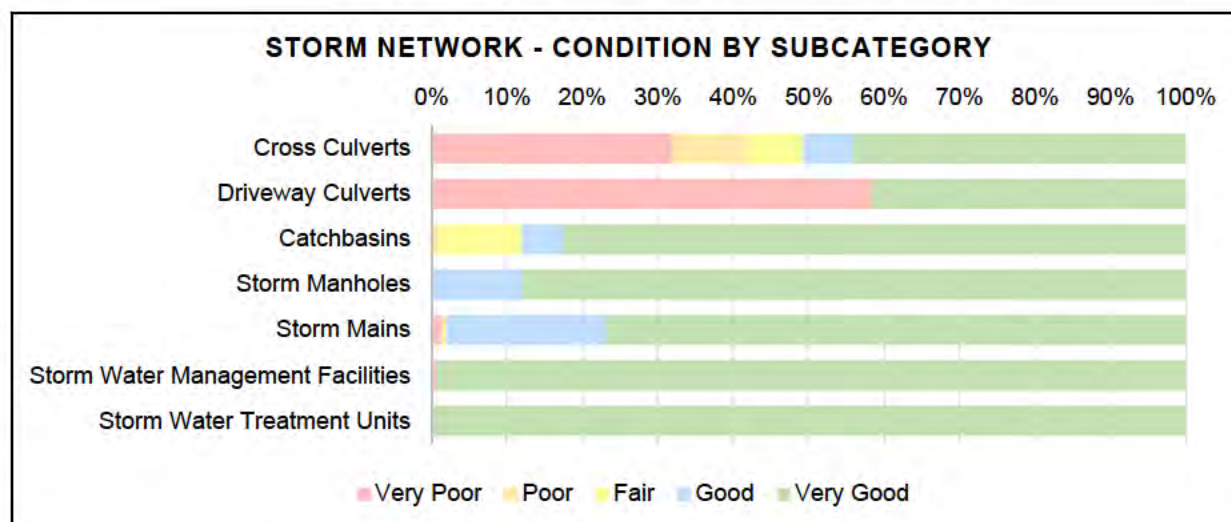
Projected conditions illustrated in Figure 24 are based on a weighted average relative to the Replacement Cost.

The Township's Storm Network has approximately 86% of assets in good or very good condition. The remaining are approaching the end of their expected useful lives, indicating a need for investment in the short to medium term. Approximately 92% of the Replacement Costs associated with poor and very poor condition relates to culverts.

Figure 25 provides further detail on assets by subcategory, highlighting a generally poor condition of cross culverts compared to other subcategories. As

noted, driveway culverts are primarily pooled and are not an accurate representation of the asset subcategory.

Figure 25: Storm Network - Condition by Subcategory



Levels of Service

O.Reg. 588/17 requires legislated Community LOS for Core Assets, using qualitative descriptions to define the scope or quality of service delivered by an asset category. O.Reg. 588/17 also requires Technical LOS for Core Assets which use metrics to measure the scope or quality of service being delivered by an asset category. Table 25 lists the Community and Technical LOS as set out in O.Reg. 588/17 and one selected performance measure for this iteration of the AMP.

It is the Township's objective to finalize the development of advanced LOS within the Storm Network in future iterations of the AMP. These will incorporate the six added-value Community LOS endorsed by Council, as outlined in Section 2.3.

Table 25: Storm Network - Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Scope	Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of protection	Rural properties outside of floodplains are protected from flooding. See maps in Appendix B.3.	Percentage of properties in municipality resilient to a 100-year storm	The percentage of properties resilient to a 100-year storm is not available at the time of this report. All stormwater systems that are within subdivisions that were constructed after 1970 are protected	Increase

Performance	provided by the municipal stormwater system			from the 100-year storm. Some areas of old Odessa are 'drainage supported only' as opposed to formal minor storm sewer serviced.	
			Percentage of storm network assets in fair or better condition	87%	80%
			Average condition of storm network assets	81% (Good)	Good
			Capital re-investment rate	0.41% (-0.03%)	Increase

Lifecycle Management

Table 26 lists the current lifecycle strategy adopted by the Township to maintain the current LOS associated with Storm Network.

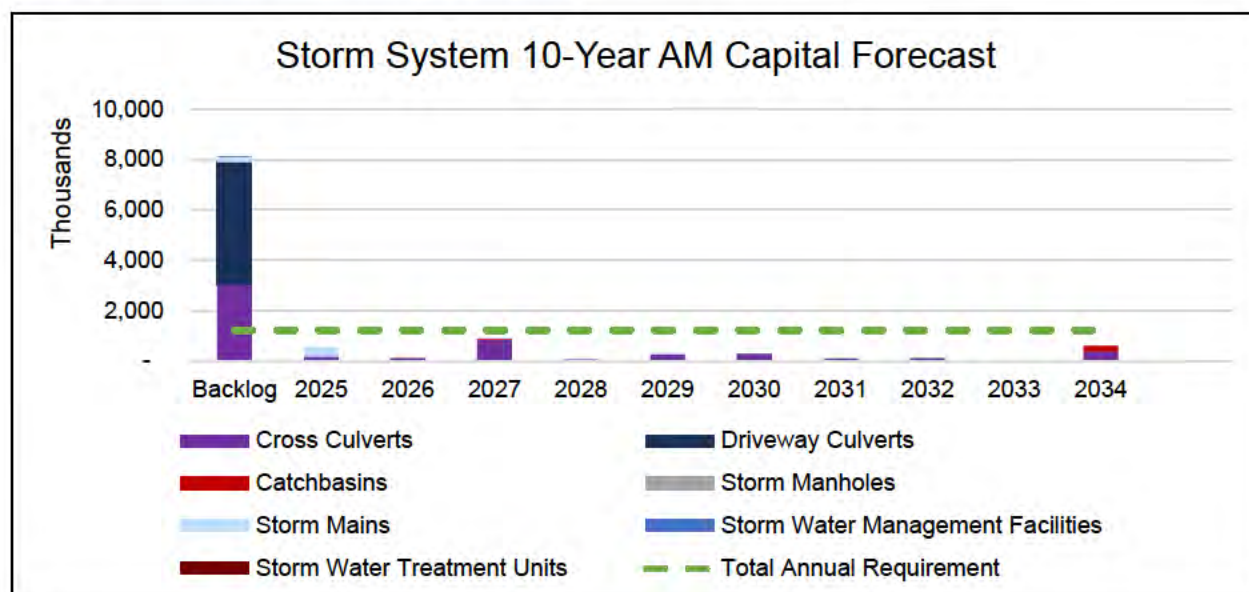
Table 26: Storm Network - Lifecycle Strategy

Lifecycle Activity	Type	Trigger/Timeline	Description
Sediment removal - catch basins & storm manholes	Operating - maintenance	Annually	Sediment removal reduces abrasion within the storm system and discharges at each outlet.
Storm main flushing and sediment removal in ditches		As required	Sediment removal within mains reduces abrasion and corrosion and maintains design flow.
Facility inspections		In accordance with Environmental Compliance Approvals	
Culvert inspections		Completed during road rehabilitation projects as identified by condition ratings. Ad hoc inspections are as required.	
Replacement	Capital - replacement	Mandated by results of inspections or confirmed condition rating	Replacement at end of its useful life.

Asset Management Capital Forecasts

Figure 26 illustrates the Storm Network's 10-year capital forecast. Almost all the backlog relates to pooled cross and driveway culverts that require attention in Citywide. The Annual Requirement to fund the replacement of the Storm Network totals \$1,213,873 (+\$141,909). A more detailed 10-year capital forecast is found in Appendix C.

Figure 26: Storm Network - 10-Year Capital Forecast



Risk Management

As explained in Section 2.5, risk models have been developed for each asset category to prioritize the rehabilitation and replacement of assets, with a higher focus on the Core Assets. The consequence of failure risk model for storm mains, storm manholes, and catch basins is outlined in Table 27. The risk models for Stormwater Management Facilities and Driveway culverts are primarily based on Replacement Cost.

Table 27: Storm Network - Consequence of Risk Model

Range	Economic (34%) Replacement Cost (100%)	Operational (33%) Fixed Risk/Asset Sub-Type (100%)	Health & Safety (33%) Road Class Attribute (100%)	Consequence of Failure
1	<\$25,000	N/A	6 (Local)	Insignificant
2	>=\$25,000 and <\$75,000	Catch basins, Storm Manholes Storm Mains <450 mm	5 (Local)	Minor
3	>=\$75,000 and <\$125,000	Cross Culverts Storm Mains 450 - 750 mm	4 (Collector)	Moderate
4	>=\$125,000 and <\$200,000	Storm Mains 800 - 1,200 mm	3 (Collector)	Major
5	>\$200,000	Storm Mains >1,200 mm	1 & 2 (Arterial)	Severe

Figure 27 is the risk matrix generated from Citywide that incorporates the above-noted risk model. This matrix does not include any assets not planned for replacement. Under this model, there is one asset considered high or very high risk due to their condition or consequence of failure. This asset is also subsequently listed in Table 28: Storm Network - High-Risk Assets.

Table 28: Storm Network - High-Risk Assets

Name	AMP Subcategory	Risk Rating
Storm Sewer on Main Street - Bath	Storm Mains	High ⁴

⁴ This asset is scheduled for replacement as part of the Main Street – Bath (East) project.

Figure 27: Storm Network - Risk Matrix

		Highest Risk				
Consequence	5	6 Assets \$5,632,217	0 Assets \$0	0 Assets \$0	0 Assets \$0	0 Assets \$0
	4	11 Assets \$2,425,415	6 Assets \$2,969,320	0 Assets \$0	0 Assets \$0	0 Assets \$0
	3	82 Assets \$10,161,816	16 Assets \$1,885,054	0 Assets \$0	3 Assets \$445,423	1 Assets \$75,880
	2	691 Assets \$25,053,153	111 Assets \$3,461,117	53 Assets \$431,059	15 Assets \$560,147	112 Assets \$6,868,668
	1	2236 Assets \$15,561,299	136 Assets \$996,678	128 Assets \$690,281	27 Assets \$215,186	167 Assets \$1,733,765
		1	2	3	4	5
		Lowest Risk				
		Probability				

3.4. BUILDINGS

The Township owns and maintains several Buildings that provide services to residents and businesses. This section compiles the Buildings that are considered non-core as per O.Reg. 588/17, which includes municipal offices, fire stations, recreation centres, and garages.

State of the Local Infrastructure

Table 29 lists and describes the Township's Buildings by division/department. With an overall Replacement Cost of \$62 million (+\$20M from 2024), the average age is 22 years with an overall condition of good. The Township has undertaken Building Condition Assessments in 2025, assessed conditions and replacement costs have been included with this AMP rather than using only an age-based condition.

Asset Inventory

Table 29: Buildings - Asset Valuation Summary

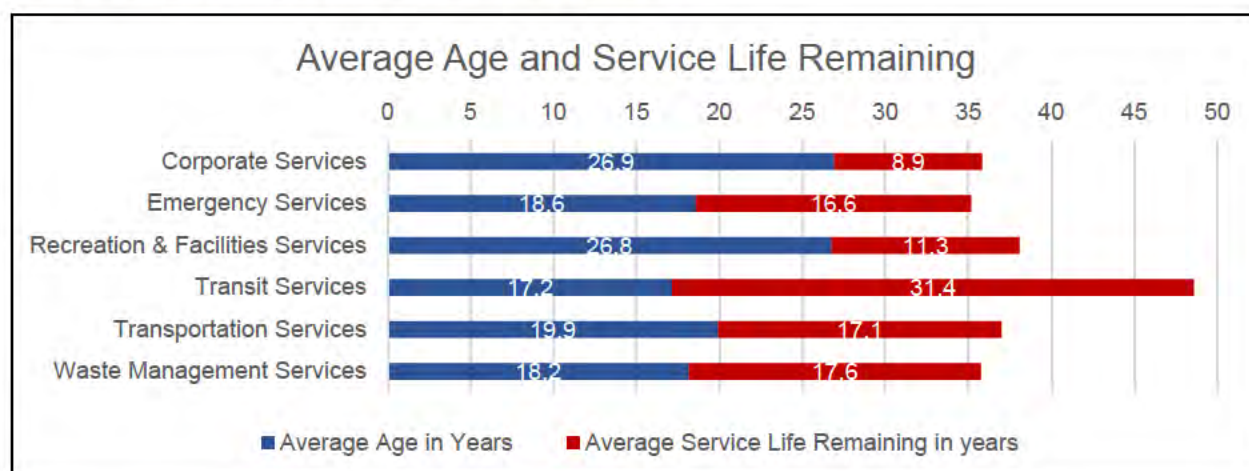
Subcategory	Description	Quantity	Replacement Costs (\$)	Replacement Cost Method	Average Age in Years	Weighted Average Condition
Corporate Services	Municipal office, cemetery storage shed	2 ea	3,790,597	Consumer Price Index	26.9	Good
Emergency Services	Training facility, training towers (2), burn room, storage shed, fire stations (4)	9 ea	13,213,045		18.6	Good
Recreation & Facilities Services	Recreation centre, canteen, Leisure Centre & Hall, storage/maintenance sheds (3), shelters (4), outdoor rink, community hall, libraries (2), other (4)	22 ea	26,721,039		26.8	Fair
Transit Services	Bus Shelters	18	262,025		17.2	Fair
Transportation Services	Public Works garages (2), sand and salt storage facilities (6)	8 ea	13,365,836		19.9	Good
Waste Management Services	Landfill facility	3 ea	723,516		18.2	Good
Buildings Total		62	58,076,058		22.1	Good

Asset Age

The EUL of Buildings range between five to 80 years depending on the component of the building, which includes fixtures, site services, HVAC, structural, mechanical, and electrical. These useful lives are in accordance with the Township's Tangible Capital Asset Policy.

Figure 28 illustrates the average age and service life remaining by division. The sum of these two factors may not necessarily total the asset's EUL, as an internal condition assessment may adjust the remaining useful life.

Figure 28: Buildings - Average Age and Service Life Remaining



Asset Condition and Assessment

The Township's historic approach to assessing the condition of non-core Buildings relies on the asset's age and EUL. Internal inspections and failures have played a role in identifying and prioritizing the rehabilitation and replacement of non-core Buildings.

In 2025, the Township undertook Building Condition Assessments (BCAs) of most non-historical facilities, condition ratings and updated replacement costs were included with the BCAs and updated in the AMP. One major exception was the W.J. Henderson Recreation Centre which is currently undergoing a major rehabilitation. Updated assessment information will be provided at the completion of that project.

The 2025 BCA reports are currently in draft format and under review. As the reports are reviewed addition changes are likely to this section.

Projected conditions illustrated in Figure 29 are based on a weighted average relative to the Replacement Cost.

The Township's non-core Buildings have approximately 66% (-12%) of assets in good or very good condition. The remaining are approaching the end of their expected useful lives, indicating a need for investment in the short to medium term. Approximately 70% of the Replacement Values associated with poor and very poor condition relates to Recreation Services Buildings, and more specifically, the W.J. Henderson Recreation Centre which has a major infrastructure project in progress. It is expected when refined in future AMP updates, replacement costs will increase.

Figure 29: Buildings - Condition Summary

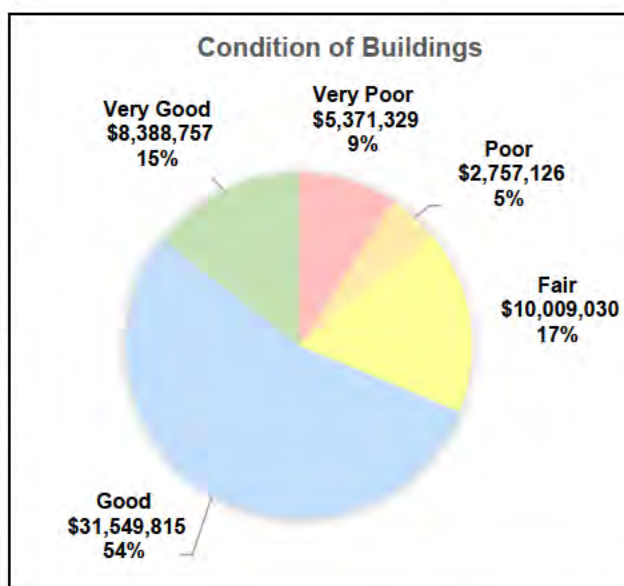
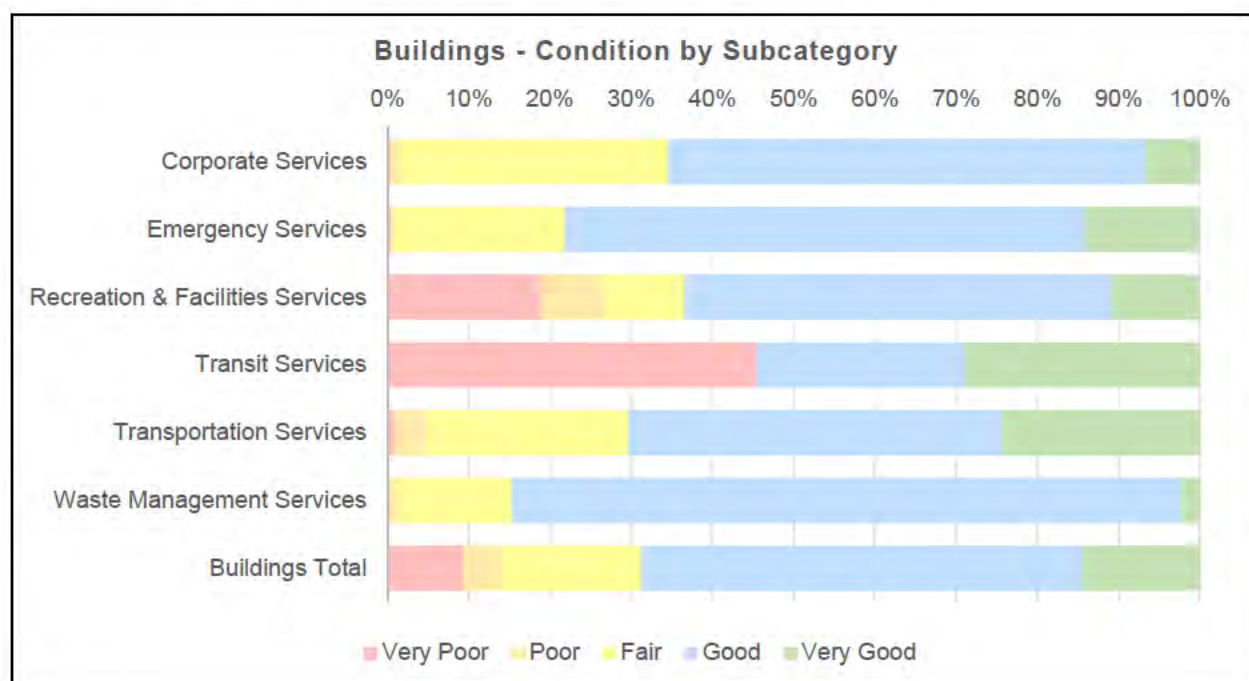


Figure 30 provides further detail on the assets by subcategory.

Figure 30: Buildings - Condition by Subcategory



Levels of Service

Buildings are considered a Non-Core Asset category and as such Technical and Community LOS are not defined in O.Reg. 588/17; municipalities are to develop their own.

Table 30 lists the Community and Technical LOS developed by the Township. It is the Township's objective to finalize the development of advanced LOS in future AMP updates. These will incorporate the six added-value Community LOS endorsed by Council, as outlined in Section 2.3.

Table 30: Buildings: Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Scope	Description, which may include maps of municipally owned buildings.	See maps in Appendix B.4			
Safety			Percentage of facilities where annual internal inspections have been completed	100%	
Quality			Percentage of facility assets that are in fair or better condition	86%	80%
			Average condition of facility assets	65% (Good)	Good
Usage			Number of bookings at Recreational Facilities	12238	
Performance			Capital re-investment rate	0.57% (-0.06%)	Increase

Lifecycle Management

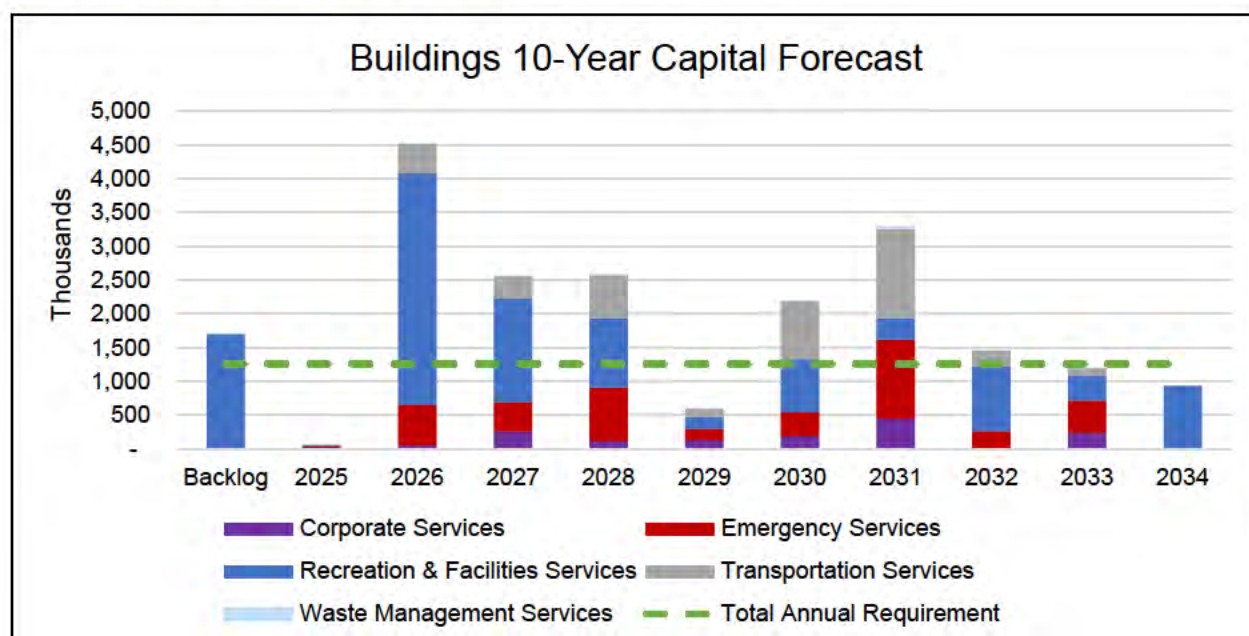
Township Buildings are subject to inspections to adhere to health and safety requirements and structural deficiencies. Certain Buildings, such as within the subcategory of Emergency Services are required to provide certain LOS as laid out in their master plan. The maintenance of other buildings is dealt with on a case-by-case basis.

The replacement of Building components is scheduled for Council's consideration based on condition, age, and historical maintenance costs. Currently, the Township does not have a formal approach to managing the lifecycle of non-core Buildings.

Asset Management Capital Forecasts

Based on current data, the Annual Requirement to fund the capital replacement of Buildings is \$1.26M (+\$360,441). The 10-year capital forecast totaling \$21.3 (+\$11.7M) million is illustrated in Figure 31. A more detailed 10-year capital forecast is found in Appendix C.

Figure 31: Buildings - 10-Year Capital Forecast



Risk Management

As further explained in Section 2.5, the risk model to calculate the probability of failure is condition-based and is consistent across all asset categories. The consequence of failure risk model for Buildings is outlined in Table 31.

Table 31: Buildings - Consequence of Failure Risk Model

Range	Economic (34%) Replacement Cost (100%)	Social (33%) Fixed Risk by Service Area (100%)	Health & Safety (33%) Fixed Risk by Asset Sub-Type (100%)	Consequence of Failure
1	<\$75,000	Corporate Services	Building Fixtures	Insignificant
2	=>\$75,000 and <\$125,000	Utilities Services (non- core) ⁵	Building Site Services	Minor
3	=>\$125,000 and <\$250,000	Transportation Services	Building HVAC	Moderate
4	=>\$250,000 and <\$500,000	Recreation Services	Building Electrical Building Mechanical	Major
5	> \$500,000	Emergency Services	Building Structural	Severe

Figure 32 is the risk matrix generated from Citywide that incorporates the above-noted risk model. This matrix does not include any assets not planned for replacement or with a nominal Replacement Cost. Under this model, there are eight assets considered high or very high risk due to their condition or consequence of failure, which are also listed in Table 32.

⁵ Non-core buildings operated by the Utilities division are included in Section 4.3.

Figure 32: Buildings - Risk Matrix

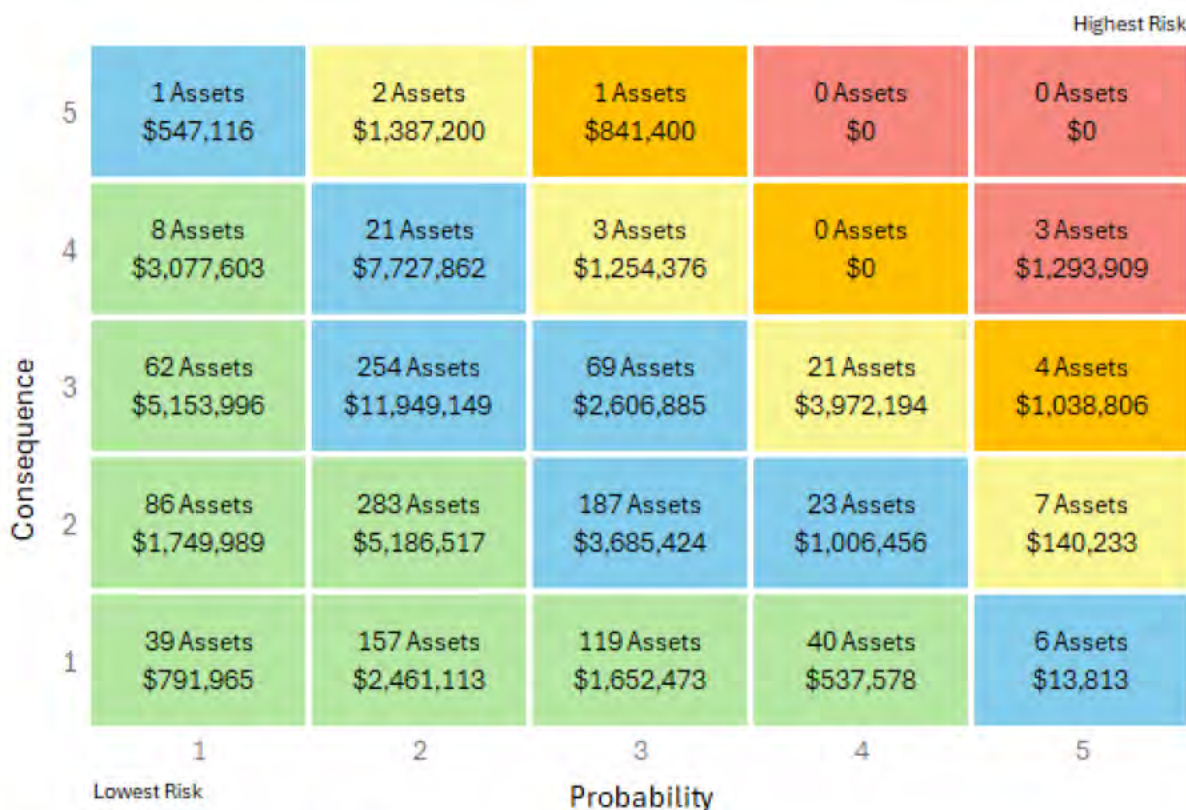


Table 32: Buildings - High-Risk Assets

Asset ID	Asset Name	Subcategory	Risk Rating
13925	W.J. Henderson Lobby & Arena Electrical	Recreation & Facilities Services	Very High ⁶
13927	W.J. Henderson Amherstview Library Electrical	Recreation & Facilities Services	Very High ⁶
13934	W.J. Henderson Pool Flat Roof	Recreation & Facilities Services	High ⁶
13941	W.J. Henderson Arena Rink Boards and Glass	Recreation & Facilities Services	High ⁶
13951	W.J. Henderson Arena plumbing	Recreation & Facilities Services	Very High ⁶
13967	Millcreek Park Gazebo Structure	Recreation & Facilities Services	High
13986	Heritage Fairfield House Weather Proofing	Recreation & Facilities Services	High

⁶ W.J. Henderson high risk assets are being addressed as part of the current reconstruction project.

37430	County Road 6 Works Garage - Roadways - Paving & Surfacing	Transportation Services	High
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W.J. Henderson Recreation Centre

The W.J. Henderson Recreation Centre was originally constructed in 1974 and is the Township's primary recreation facility that houses a pool, indoor skating rink, and library. The facility had undergone extensive repairs, maintenance, and rehabilitation up to the closure of the pool in 2022. In November 2023, following the presentation of a Validation Report, Council approved the renewal of the facility valued at approximately \$50 million which includes the replacement of the majority of assets included in the arena area, an addition to the facility to house a new aquatics facility, and updates to the community spaces. Construction includes a new eight lane swimming pool and a leisure pool and conversion of the existing pool basin and change rooms into new aquatics change rooms and general community gathering space. The project includes net-zero ready mechanical systems resulting in a fully electrified facility with the exception of the library gas boiler. The project includes accessibility upgrades such as the installation of an elevator, universal washrooms, universal changerooms, barrier free washrooms, and an in-arena accessible viewing platform. Once fully opened, this project will be transformational for the community and includes numerous asset management lifecycle improvements throughout the facility.

The SOLI illustrated in this AMP is as of December 31, 2024 and does not include any work done since construction on the W.J. Henderson Recreation Centre started in 2024 which remain works in progress. The increased costing associated with the upgrades are expected to be capitalized in 2026, at which time updated condition ratings and risk profiles will be consolidated for inclusion in a future AMP update. The work will result in significant increases to the renewal costs in the Buildings asset classification but will replace all of the very poor and poor condition assets associated with the facility. These updates are likely to have sizable impacts on the annual requirement of the AMP with the increased value of the facility and positive impacts to condition and risk ratings.

To avoid these types of significant impacts to the AMP model in the future, the Township continues to develop its program to undertake condition assessments and update costing information for core and non-core assets. This will improve the quality of AMP input data by reducing the reliance on age-based condition ratings and renewal costs generated from inflated historical costs.

3.5. MACHINERY, FURNITURE, AND EQUIPMENT

The Township owns and utilizes a variety of Machinery, Furniture, and Equipment to assist in providing services to residents and businesses. This section compiles the Machinery, Furniture, and Equipment that is considered non-core as per O.Reg. 588/17, which includes items relating to information technology, firefighting, parks, the recreation centre, road maintenance, and waste management.

State of the Local Infrastructure

Asset Inventory

Table 33 lists and describes the Township's Machinery, Furniture, and Equipment by division/department. With an overall Replacement Cost of \$11.5 million (+2.7M from 2024), the overall condition of this asset category is fair at an average age of 9.6 years.

Table 33: Machinery & Equipment - Asset Valuation Summary

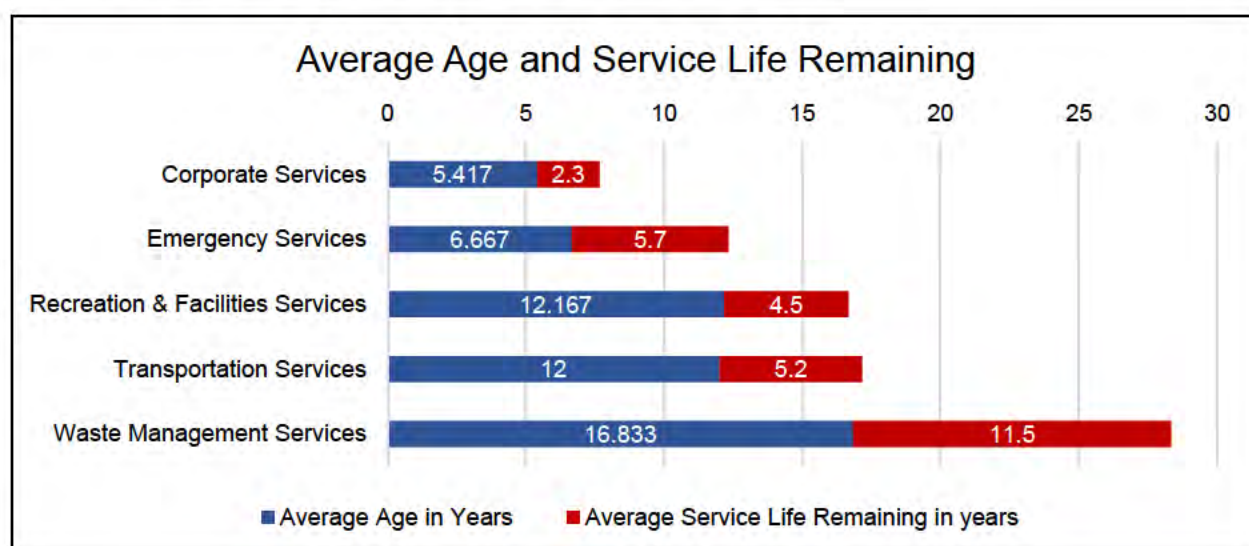
Subcategory	Description	Quantity	Replacement Costs (\$)	Replacement Cost Method	Average Age in Years	Weighted Average Condition
Corporate Services	IT equipment, furniture & fixtures	171	Quantity 1,241,476	Consumer Price Index/User-Defined Cost	5.4	Fair
Emergency Services	Pooled equipment such as bunker & rescue gear, hoses, extrication kits, breathing apparatuses, etc.	56	Quantity 1,897,446		6.7	Good
Recreation & Facilities Services	Various machinery & equipment at the WJH Henderson Centre, mowers, fitness equipment, etc.	50	Quantity 2,097,435		12.2	Fair
Transportation Services	Loaders, street sweepers, tractors, excavator, survey equipment, radio repeaters, various public works garage equipment, etc.	58	Quantity 4,885,189		12.0	Fair
Waste Management Services	Scale, compactor, weigh scale, loader, etc.	6	Quantity 1,356,168		16.8	Good
Machinery, Furniture, and Equipment Total			11,477,714		9.6	Fair

Asset Age

The EUL of Machinery, Furniture, and Equipment ranges between five to 25 years and is in accordance with the Township's Tangible Capital Asset Policy.

Figure 33 illustrates the average age and service life remaining by department. The sum of these two factors may not necessarily total the asset's EUL, as an internal condition assessment may adjust the remaining useful life.

Figure 33: Machinery & Equipment - Average Age and Service Life Remaining

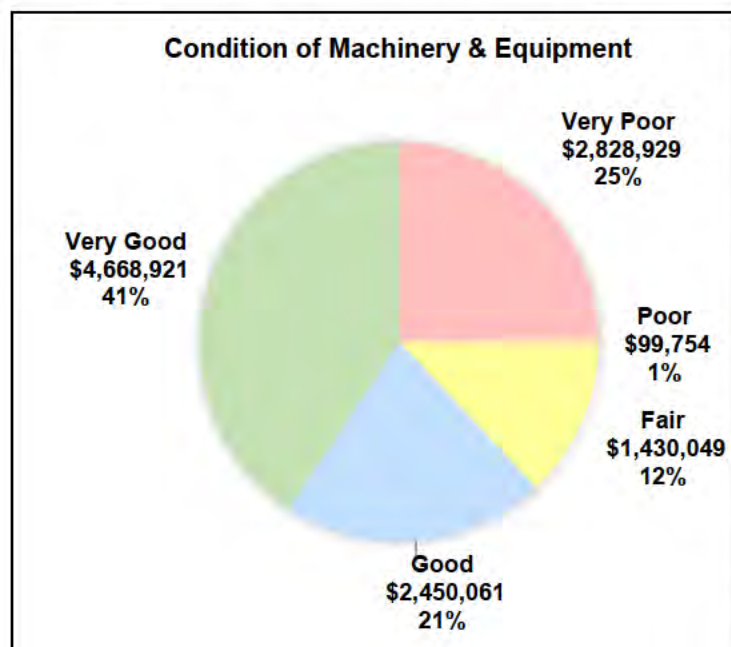


Asset Condition and Assessment

The Township's historic and current approach to assessing the condition of non-core Machinery, Furniture, and Equipment relies on the asset's age and estimated useful life. Internal inspections and failures have played a role in identifying and prioritizing the rehabilitation and replacement of this asset category.

Currently, the Township does not have a formal condition assessment approach for non-core Machinery, Furniture, and Equipment. It is important for the Township to develop and implement a formal and comprehensive condition assessment approach that proactively assesses this asset category.

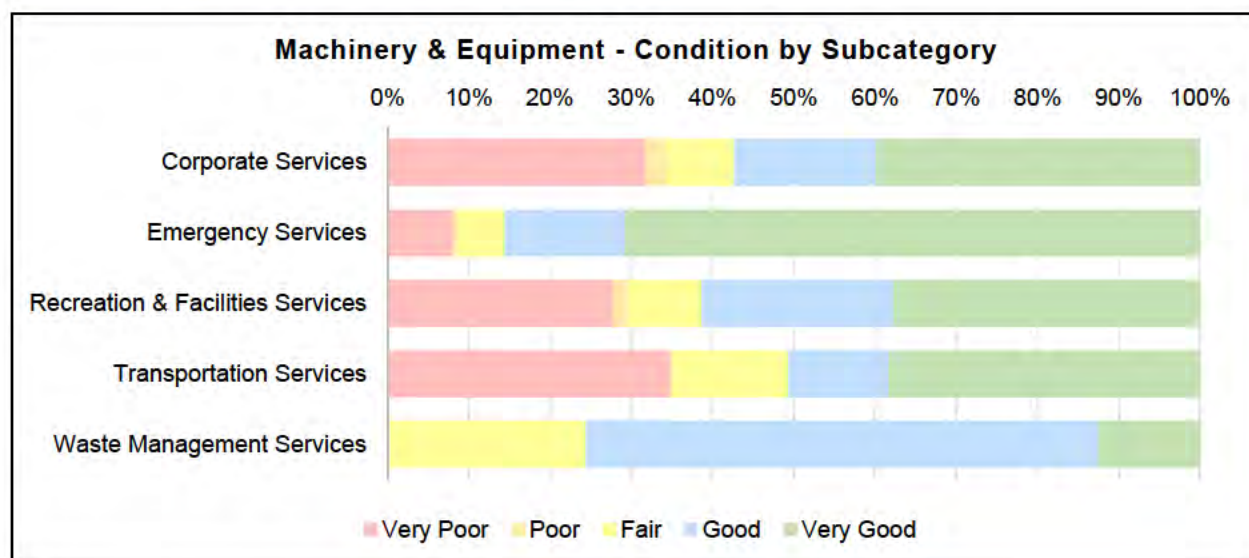
Figure 34: Machinery & Equipment - Condition Summary



Projected conditions illustrated in Figure 34 are based on a weighted average relative to the Replacement Cost.

The Township's non-core Machinery, Furniture, and Equipment has approximately 62% (-3%) of assets in good or very good condition. The remaining are approaching the end of their expected useful lives, indicating a need for investment in the short to medium term. The Replacement Costs associated with poor and very poor condition relates to machinery and equipment that provide transportation and emergency services. Figure 35 provides further detail by subcategory.

Figure 35: Machinery & Equipment - Condition by Subcategory



Levels of Service

Machinery, Furniture, and Equipment are considered a Non-Core Asset category and as such Technical and Community LOS are not defined in O.Reg. 588/17; municipalities are to develop their own.

Table 34 lists the Community and Technical LOS developed by the Township. It is the Township's objective to finalize the development of advanced LOS in future AMP updates. These will incorporate the six added-value Community LOS endorsed by Council, as outlined in Section 2.3.

Table 34: Machinery, Furniture, and Equipment: Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Quality			Percentage of assets in fair or better condition	74%	80%
			Percentage of essential equipment where regulatory inspections have been completed	100%	
			Average condition of machinery, furniture and equipment assets	58% (Fair)	Good
Environmental Stewardship	Vehicles and Equipment have minimal impact on the environment	The Township's Climate Action Plan includes the following goals: CAP goal #17 ⁷			
Performance			% of facilities where annual internal inspections of IT networking equipment have been completed	100%	
			Capital re-investment rate	1.52% (-0.07%)	Increase

⁷ CAP goal #17 - Electrify the municipal fleet- replace fossil fuel powered vehicles with electric alternatives as part of lifecycle activities.

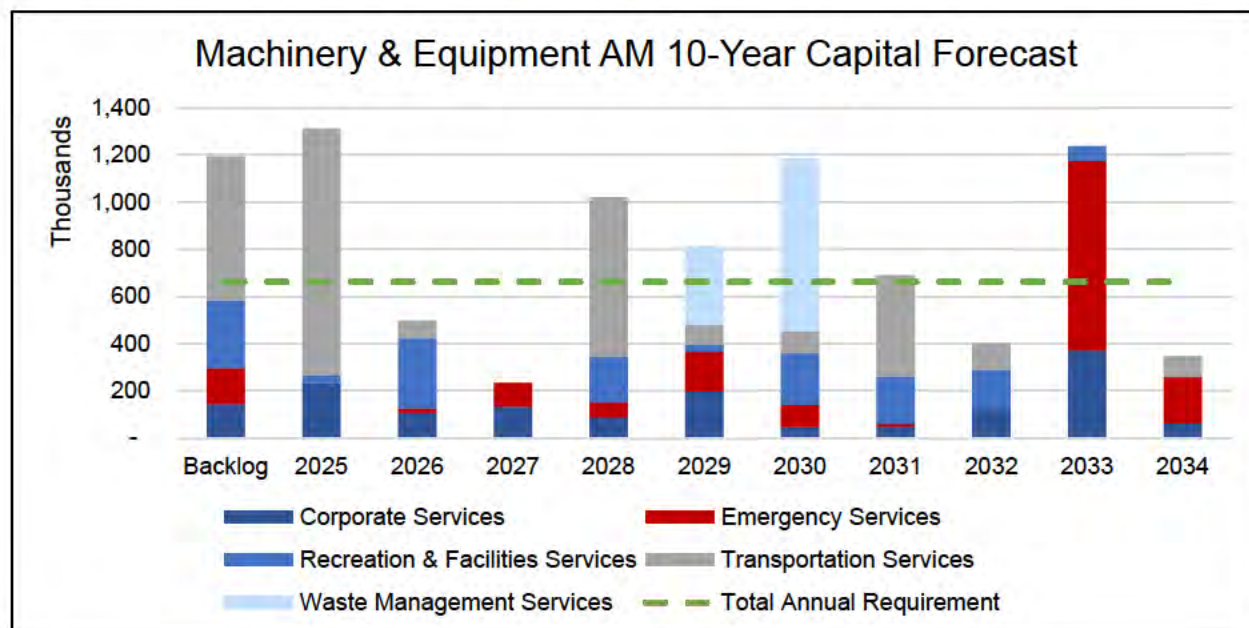
Lifecycle Management

The replacement of Machinery, Furniture, and Equipment is scheduled for Council's consideration based on condition, age, and historical maintenance costs. Currently, the Township does not have a formal approach to managing the lifecycle of Machinery, Furniture, and Equipment.

Asset Management Capital Forecasts

Based on current data, the Annual Requirement to fund the capital replacement of Machinery, Furniture, and Equipment is \$661,194 (+\$172,463). The 10-year capital forecast totaling \$8.9 (+\$2.2M) million is illustrated in Figure 36.

Figure 36: Machinery & Equipment - 10-Year Capital Forecast



Risk Management

As explained in Section 2.5, risk models were developed for each asset category to prioritize the rehabilitation and replacement of assets. The consequence of failure risk model for machinery, furniture, and equipment is outlined in Table 35.

Table 35: Machinery & Equipment - Consequence of Risk Model

Range	Economic (50%) Replacement Cost (100%)	Social (50%) Fixed Risk by Service Area (100%)	Consequence of Failure
1	<\$25,000	Corporate Services	Insignificant
2	>=\$25,000 and <\$75,000	Utility Services (non-core) ⁸	Minor
3	>=\$75,000 and <\$125,000	Transportation Services	Moderate
4	>=\$125,000 and <\$200,000	Recreation Services	Major
5	>\$200,000	Emergency Services	Severe

Figure 37 is the risk matrix generated from Citywide that incorporates the above-noted risk model. This matrix does not include any assets not planned for replacement or with a nominal Replacement Cost. Under this model, there are 12 assets considered high or very high risk due to their condition or consequence of failure, which are also listed in Table 36.

⁸ User-funded machinery & equipment operated by the Utilities division is included in Section 4.3.

Figure 37: Machinery & Equipment - Risk Matrix

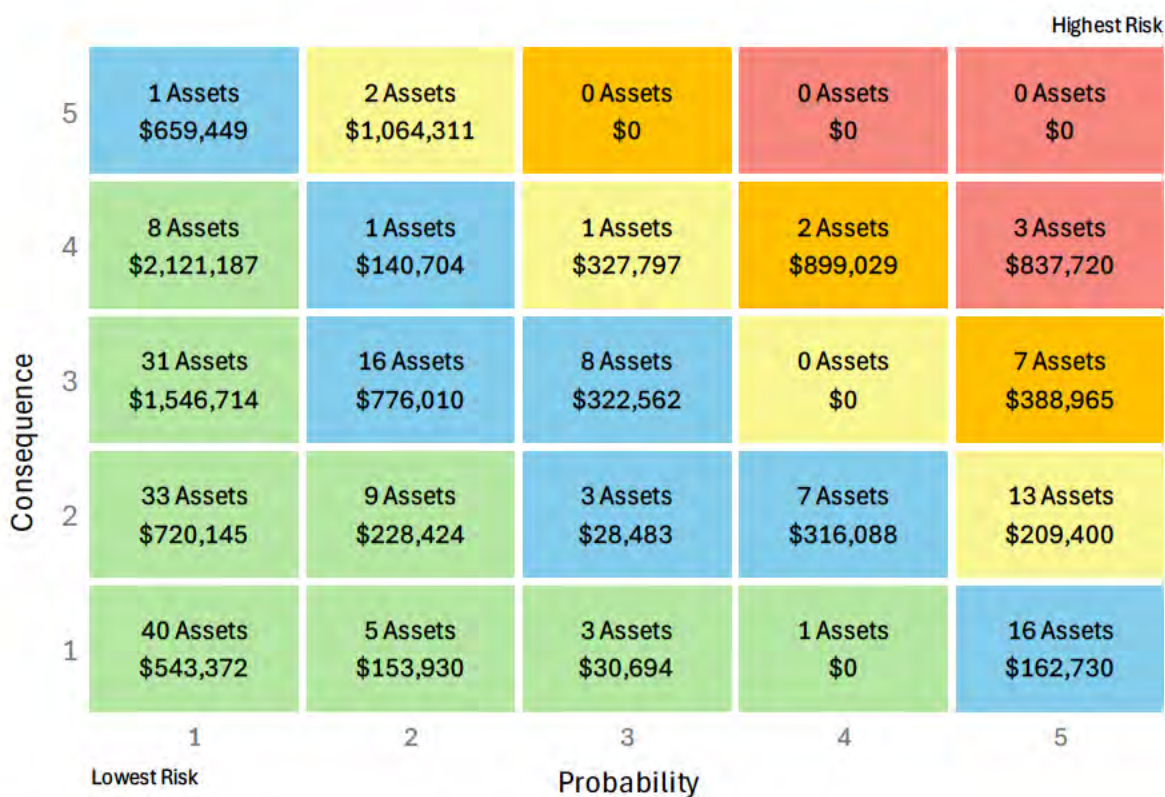


Table 36: Machinery & Equipment – High-Risk Assets

Asset Name	Subcategory	Risk Rating
Arena Ice System	Recreation & Facilities Services	High ⁹
Leisure Centre Fitness Equipment	Recreation & Facilities Services	High
Compressor for breathing air	Emergency Services	High
Heavy Hydraulic Extraction Equipment kit # 2	Emergency Services	High
Heavy Hydraulic Extraction Equipment kit # 2	Emergency Services	High
Heavy Hydraulic Extraction Equipment kit # 2	Emergency Services	High
1992 Caterpillar Loader, M/936F	Transportation Services	Very High
2004 Champion/Volvo grader	Transportation Services	High ¹⁰
2005 John Deere tractor	Transportation Services	High
2009 John Deere tractor	Transportation Services	High
2004 John Deere riding mower 1435	Recreation & Facilities Services	High
2005 John Deere tractor	Recreation & Facilities Services	High

⁹ This asset is included in the 2024 WJH project.

¹⁰ This asset is included in the 2025 Capital Budget.

3.6. FLEET

Tax-funded Fleet is considered non-core infrastructure in accordance with O.Reg. 588/17 and is primarily operated by Emergency Services, Public Works (Transportation Services), Building, and Recreation & Facilities Divisions. All but Emergency Services' fleet is managed by the Public Works Division. This asset category includes the light to heavy-duty fleet and fire rescue vehicles to provide services including but not limited to:

- Firefighting, training, and prevention
- Road maintenance
- Building inspections
- Parks and facilities maintenance

State of the Local Infrastructure

An inventory valuation summary for the Township's tax-funded Fleet is outlined in Table 37. The total Replacement Cost of this asset category totals \$21.6 million (+\$4.6 million from 2024) based on historic costs per unit and a standardized consumer price index. The average age of this fleet is approximately 8.4 years and has an overall condition of good.

The Township is undertaking a fleet review in 2025 which will be incorporated into the next AMP.

Asset Inventory

Table 37: Fleet - Asset Valuation Summary

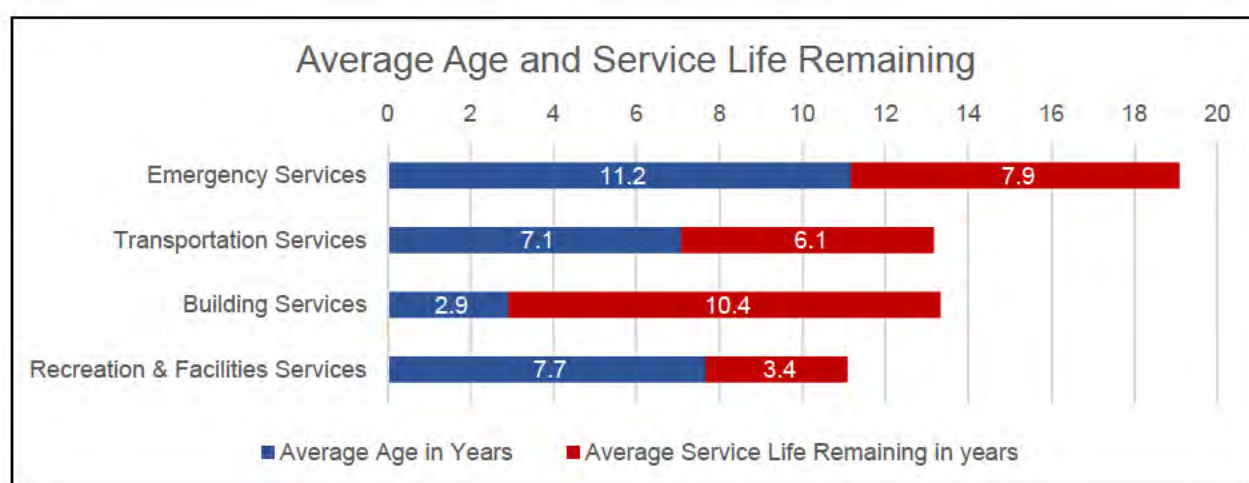
Subcategory	Description	Quantity	Replacement Costs (\$)	Replacement Cost Method	Average Age in Years	Weighted Average Condition
Emergency Services	Heavy & light rescue units, pick-up trucks, cars, pumpers, tankers, aerial trucks, utility vehicles	26 ea.	14,252,980	User-Defined Cost/Consumer Price Index	11.2	Good
Transportation Services	Plows, pick-up trucks, vans, dump trucks	37 ea.	6,779,026		7.1	Fair
Building Services	Pick-up trucks	3 ea.	83,443		2.9	Very Good
Recreation & Facilities Services	Pick-up trucks, dump trucks, vans	9 ea.	459,101		7.7	Good
Fleet Total		75	21,574,550		8.4	Good

Asset Age

The EUL of the Fleet ranges between 10 to 20 years and is in accordance with the Township's Tangible Capital Asset Policy.

Figure 38 illustrates the average age and service life remaining by division. The sum of these two factors may not necessarily total the asset's EUL, as an internal condition assessment may adjust the remaining useful life.

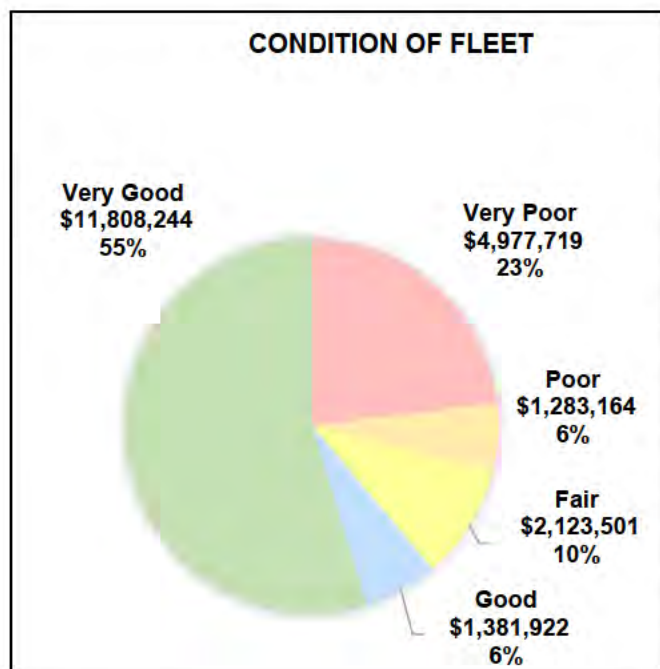
Figure 38: Fleet - Average Age and Service Life Remaining



Asset Condition and Assessment

The Township's historic and current approach to assessing the condition of tax-funded Fleet initially relies on the asset's age and EUL. The useful life of the Fleet to provide Emergency Services is based on the results of regulated inspections. For all other fleet, internal inspections, and review of historic maintenance scheduled for each vehicle play a role in identifying and prioritizing the replacement of these assets.

Figure 39: Fleet - Condition Summary

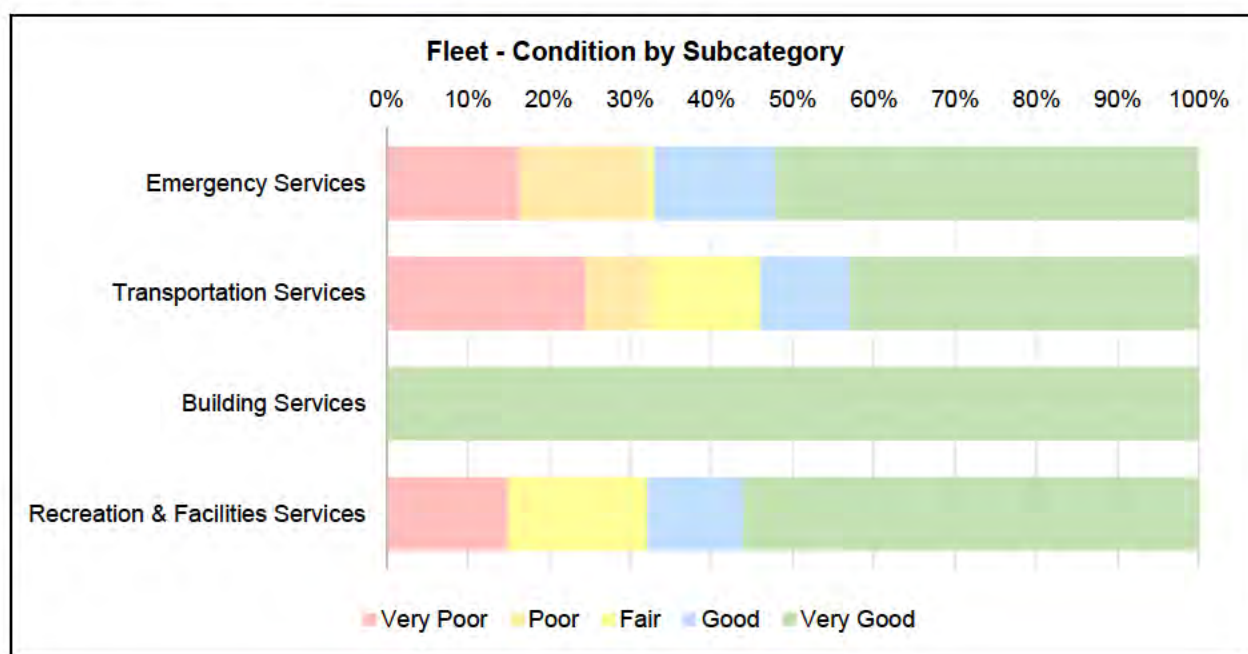


Projected conditions illustrated in Figure 39. are based on a weighted average relative to the Replacement Cost.

The Township's Fleet has approximately 61% of assets in good or very good condition. The remaining are approaching the end of their expected useful lives, indicating a need for investment in the short to medium term. Approximately 59% (+6%) of the Replacement Costs associated with poor and very poor condition relates to Emergency Services due to its high Replacement Cost relative to the other fleet.

Figure 40 provides further detail by subcategory, illustrating that Building Services has the largest portion of fleet in very poor to poor condition.

Figure 40: Fleet - Condition by Subcategory



Levels of Service

Fleet is considered a Non-Core Asset category and as such, Technical and Community LOS are not defined in O.Reg. 588/17; municipalities are to develop their own.

Table 38 lists the Community and Technical LOS developed by the Township. It is the Township's objective to finalize the development of advanced LOS for inclusion in future AMP updates. These will incorporate the six added-value Community LOS endorsed by Council, as outlined in Section 2.3.

Table 38: Fleet: Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Quality			Percentage of fleet assets in fair or better condition	71%	80%
			Average condition of fleet assets	63% (Good)	Good
			Percentage of vehicles where regulatory inspections have been completed	100%	
Environmental Stewardship	Vehicles and Equipment have minimal impact on the environment	The Township's Climate Action Plan includes the following goals: CAP goal #16 ¹¹ CAP goal #17 ¹² CAP goal #18 ¹³	Percentage of vehicles that are zero-emission vehicles	1%	Increase
Performance			Capital re-investment rate	2.55% (-0.62%)	Increase

¹¹ CAP goal #16 - Optimize use of municipal vehicles by promoting eco driving techniques and inter-departmental vehicle sharing, installing auxiliary power units in vehicles to reduce idling.

¹² CAP goal #17 - Electrify the municipal fleet- replace fossil fuel powered vehicles with electric alternatives as part of lifecycle activities.

¹³ CAP goal #18 - Replace heavy duty vehicles with zero emissions alternatives as the technology becomes available.

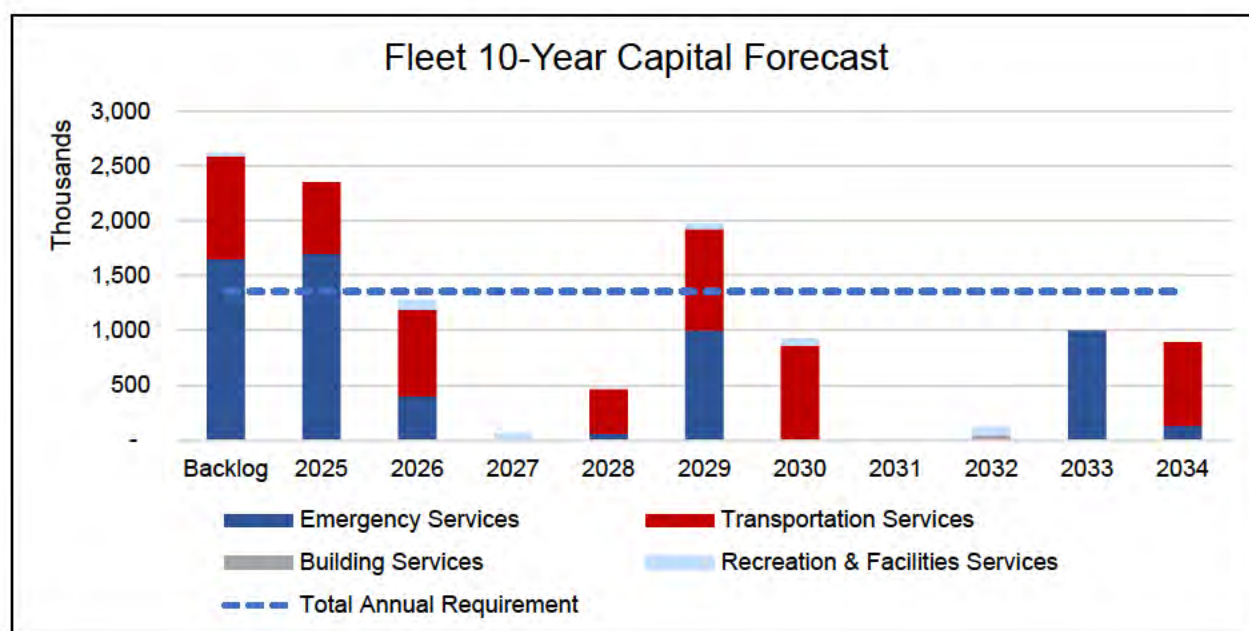
Lifecycle Management

Township Fleet undergoes visual and detailed inspections on an ad-hoc basis. Although certain divisions, such as Emergency Services, are required to replace firefighting Fleet at specific useful lives, Fleet replacements are generally scheduled for Council's consideration based on condition, age, and historical maintenance costs.

Asset Management Capital Forecasts

Based on current data, the Annual Requirement that should be allocated to fund the capital replacement of tax-funded Fleet is \$1,355,099 (+\$156,586). The 10-year capital forecast totaling \$11.7 million (+\$1.5M) is illustrated in Figure 41. The Township has a Fleet & Equipment Replacement reserve fund available for use in accordance with its Reserve & Reserve Fund Policy. This reserve fund has an internal target of \$1.5 to \$2 million. As noted above, the Township is undertaking a fleet review in 2025, some vehicle purchases were deferred pending the completion of the review, in addition lead times for ordering vehicles have increased resulting in an increasing backlog.

Figure 41: Fleet - 10-Year Capital Forecast



Risk Management

As further explained in Section 2.5, the risk model to calculate the probability of failure is condition-based and is consistent across all asset categories. The consequence of failure risk model for tax-funded Fleet is outlined in Table 39.

Table 39: Fleet - Consequence of Failure Risk Model

Score	Economic (34%) Replacement Cost (100%)	Operational (33%) Fixed Risk by Asset Profile (100%)	Social (33%) Fixed Risk by Asset-Type (100%)	Consequence of Failure
1	<\$25,000	N/A	Building Services	Insignificant
2	>=\$25,000 and <\$75,000	General Fleet	Recreation & Facilities	Minor
3	>=\$75,000 and <\$125,000	N/A	Utilities ¹⁴	Moderate
4	>=\$125,000 and <\$200,000	Plows	Public Works	Major
5	>\$200,000	Emergency Fleet - All	Emergency Services	Severe

Figure 42 illustrates the risk matrix for Fleet that is generated in Citywide that incorporates the above-noted risk models. There are nine assets considered high or very high risk due to their condition or consequence of failure, which are also listed in Table 40.

¹⁴ User-funded fleet operated by the Utilities division is included in Section 4.3.

Figure 42: Fleet - Risk Matrix

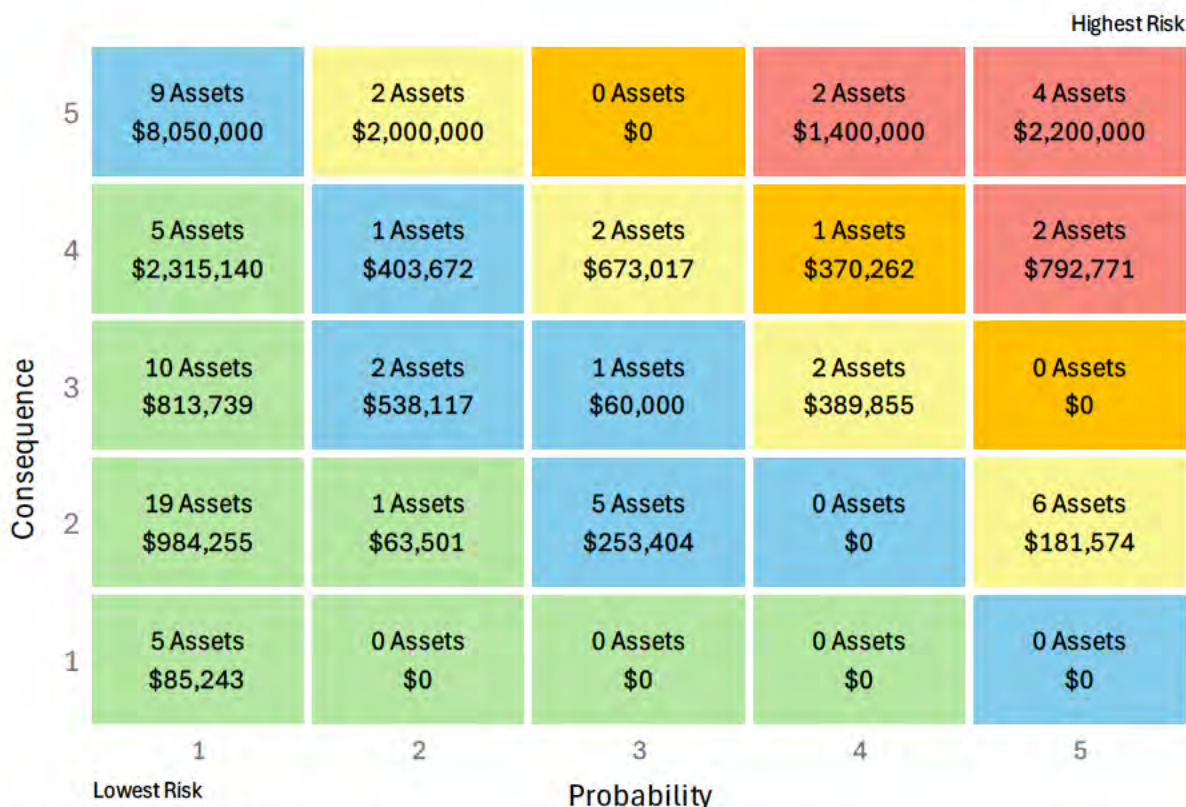


Table 40: Fleet – High-Risk Assets

Asset Name	Description	Division	Risk Rating
T921 – 1996 GMC - Tanker	E4496	Emergency Services	Very High
S921 - 2001 Ford - Squad	E4501	Emergency Services	Very High
T941 – 1999 GMC - Tanker	E8399	Emergency Services	Very High
T932 – 2003 GMC - Tanker	E8503	Emergency Services	Very High
R911 - 1998 Freightliner - Heavy Rescue	E8697	Emergency Services	Very High
T912 – 2008 International - Tanker	E8808	Emergency Services	Very High
2015 International Tandem Truck	T0215	Transportation Services	High
2010 International - single axle	T0410	Transportation Services	Very High
2008 International tandem plow ¹⁵	T3208	Transportation Services	Very High

¹⁵ T3208 Snow Plow - Replacement ordered with delivery scheduled for 2025.

3.7. LAND IMPROVEMENTS

The Township owns and maintains land across the community in which improvements have been undertaken. These improvements include but are not limited to landscaping, walkways, play structures, sports fields, boat ramps, and other siteworks. This asset category is considered non-core in accordance with O.Reg. 588/17.

State of the Local Infrastructure

Asset Inventory

Table 41 lists and describes the Township's Land Improvements by component. With an overall Replacement Cost of \$11.4 million (+\$2.6 million from 2024), the overall condition of this asset category is good at an average age of 19.8 years.

Table 41: Land Improvements - Asset Valuation Summary

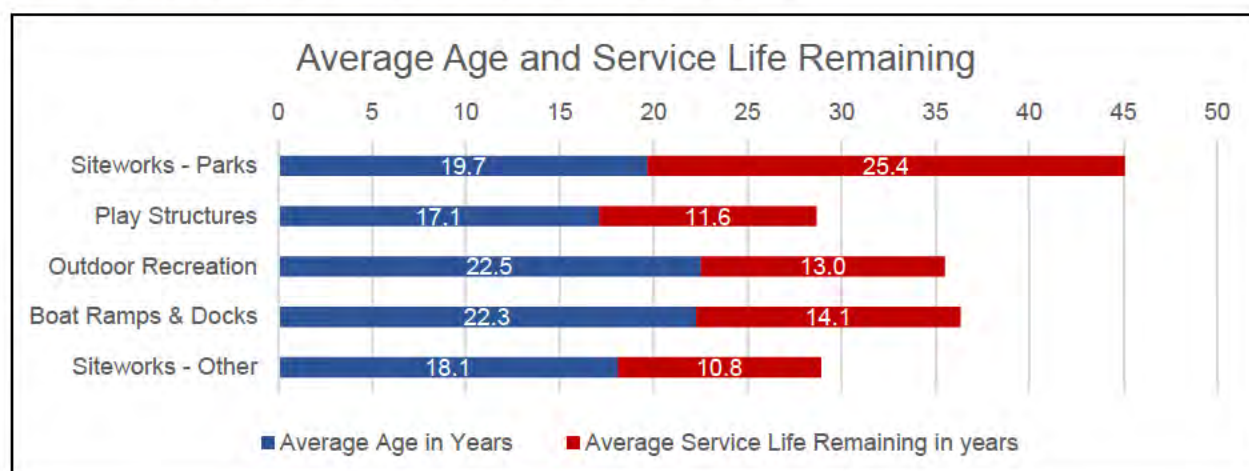
Subcategory	Description	Quantity	Replacement Costs (\$)	Replacement Cost Method	Average Age in Years	Weighted Average Condition
Siteworks - Parks	Landscaping, paving, irrigation, walkways, lights, signs, benches in Township-owned parks	1452	Quantity, Length (m) 3,438,279	Consumer Price Index	19.7	Very Good
Play Structures	Play Structures	27	Quantity 1,563,912		17.1	Good
Outdoor Recreation	Sports fields, courts, and rinks	14	Quantity 3,158,492		22.5	Good
Boat Ramps & Docks	Boat Ramps & Docks	2	Quantity 96,966		22.3	Very Good
Siteworks - Other	Landscaping & paving in other municipal properties	1570	Quantity, Length (feet), Length (m) 2,164,135		18.1	Good
Total Land Improvements		3081	11,369,918		19.8	Good

Asset Age

The EUL of Land Improvements range between 15 to 80 years and is in accordance with the Township's Tangible Capital Asset Policy. The useful life of an asset will depend on the type of improvement undertaken to lands.

Figure 43 illustrates the average age and service life remaining by department. The sum of these two factors may not necessarily total the asset's EUL, as an internal condition assessment may adjust the remaining useful life.

Figure 43: Land Improvements - Average Life and Service Life Remaining

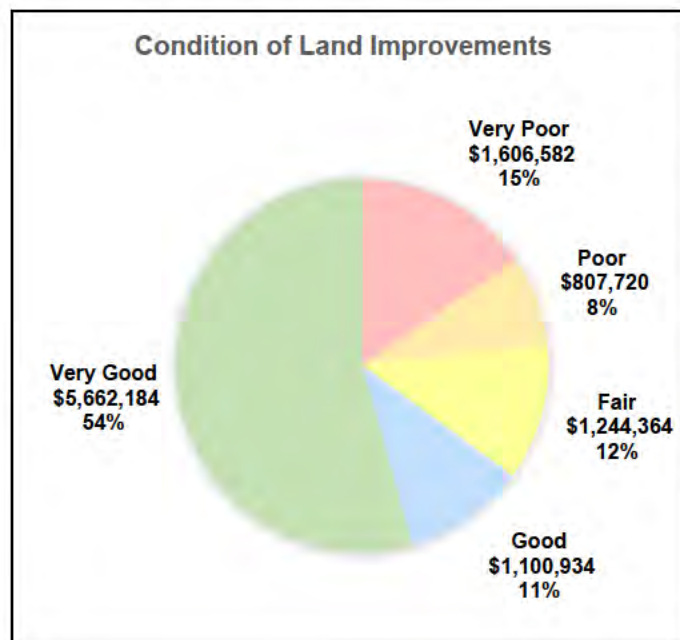


Asset Condition and Assessment

The Township's historic and current approach to assessing the condition of Land Improvements relies on the asset's age and EUL. Internal inspections and failures have played a role in identifying and prioritizing the rehabilitation and replacement of this asset category.

Currently, the Township does not have a formal condition assessment approach for Land Improvements. It is important for the Township to develop and implement a formal and comprehensive condition assessment approach that proactively assesses this asset category.

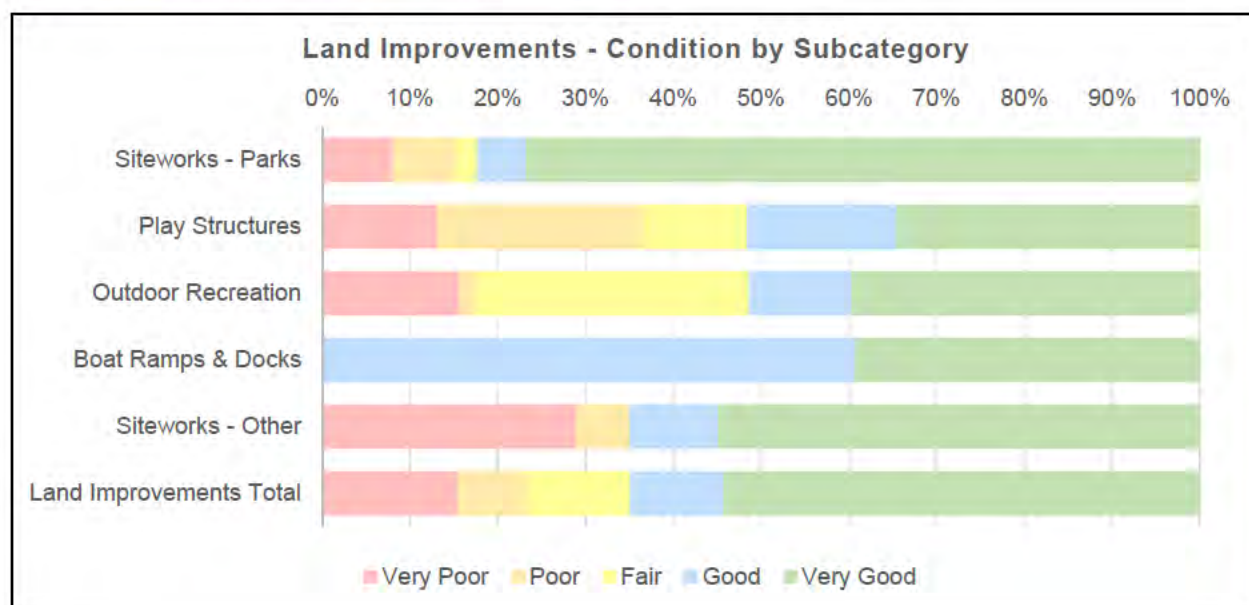
Figure 44: Land Improvements - Condition Summary



Projected conditions illustrated in Figure 44 are based on a weighted average relative to the Replacement Cost.

The Township's non-core Land Improvements have approximately 62% (-6%) of assets in good or very good condition. The remaining are approaching the end of their expected useful lives, indicating a need for investment in the short to medium term. Figure 45 provides further detail by subcategory.

Figure 45: Land Improvements - Condition by Subcategory



Levels of Service

Land Improvements are considered a Non-Core Asset category and as such Technical and Community LOS are not defined in O.Reg. 588/17; municipalities are to develop their own.

Table 42 lists the Community and Technical LOS developed by the Township. It is the Township's objective to finalize the development of advanced LOS in future AMP updates. These will incorporate the six added-value Community LOS endorsed by Council, as outlined in Section 2.3.

Table 42: Land Improvements: Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Safety			Percentage of play structures where regulatory inspections have been completed	100%	
			Percentage of play structures in compliance with CSA Standards	65%	
			Percentage of sport fields where inspections have been completed	50%	
			Percentage of walkway & trail assets inspected annually	100%	
Quality			Percentage of play structures in fair or better condition	63% (-10%)	80%
			Percentage of sport fields in fair or better condition	N/A ¹⁶	80%
			Percentage of land improvement assets in fair or better condition	77%	80%
			Average condition of land improvement assets	68% (Good)	Good
Quantity			Asphalt Walkways	6.4 km	
			Gravel Walkway	4.1 km	
			Earth/Grass Walkways	0.6 km	
Usage			Number of Sport fields bookings	839	
Performance			Capital re-investment rate	1.13% (-0.15%)	Increase

¹⁶ LOS to be included in 2025 AMP

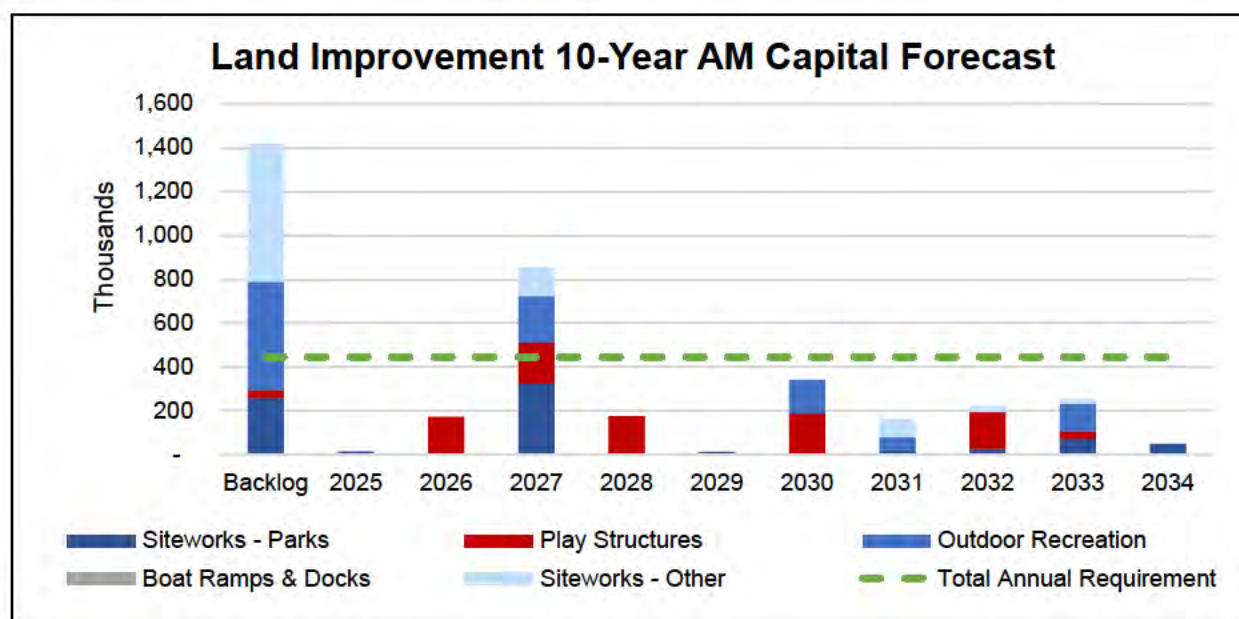
Lifecycle Management

The replacement of Land Improvements is scheduled for Council's consideration based on condition, age, and historical maintenance costs. Currently, the Township does not have a formal approach to managing the lifecycle of Land Improvements.

Asset Management Capital Forecasts

Based on current data, the Annual Requirement that should be allocated to fund the capital replacement of Land Improvements is \$445,726 (+\$63,026). The 10-year capital forecast totaling \$3.7 million is illustrated in Figure 46.

Figure 46: Land Improvements - 10-Year Capital Forecast



Risk Management

As explained in Section 2.5, risk models were developed for each asset category to prioritize the rehabilitation and replacement of assets. The consequence of failure risk model for Land Improvements is outlined in Table 43.

Table 43: Land Improvements - Consequence of Risk Model

Range	Economic (50%) Replacement Cost (100%)	Health & Safety (50%) Fixed Risk by Component (100%)	Consequence of Failure
1	<\$75,000	Siteworks - Other	Insignificant
2	>=\$75,000 and <\$125,000	Siteworks - Parks	Minor
3	>=\$125,000 and <\$250,000	Boat Ramps & Docks	Moderate
4	>=\$250,000 and <\$500,000	Outdoor Recreation	Major
5	>\$500,000	Play Structures	Severe

Figure 47 is the risk matrix generated from Citywide that incorporates the above-noted risk model. This matrix does not include any assets not planned for replacement or with a nominal Replacement Cost. Under this model, there are four assets considered high or very high risk due to their condition or consequence of failure, which are also listed in Table 44.

Figure 47: Land Improvements - Risk Matrix



Table 44: Land Improvements – High-Risk Assets

Asset Name	Risk Rating
J. Earl Burt Memorial Park Playground Equipment	High
Willie Pratt Sports Field Small Soccer Pitch	High
Willie Pratt Sports Field Regulation Soccer Pitch	Very High
Fairfield House & Park Playstructure	High

3.8. NATURAL ASSETS

The Township owns land across the community in which a variety of natural assets are located. Natural assets include wetlands, forests and alvars. Other natural assets such as parklands and stormwater management facilities are included in other sections. This asset category is considered non-core in accordance with O.Reg. 588/17.

The Township is currently working on a Natural Asset strategy to assess the condition of its assets and the value they provide to the community.

State of the Local Infrastructure

Asset Inventory

Natural assets do not depreciate in the same way as other assets, and their services can be provided in perpetuity if they are well managed and protected. Future iterations of the AMP should include all natural assets along with relevant watershed, sub-watershed and catchment area boundaries for the natural assets within the boundaries of Loyalist Township.

Table 45 lists and describes the Township's Natural Assets by component.

Table 45: Natural Assets – Asset Valuation Summary

Subcategory	Description	Quantity		Replacement Cost (\$)	Replacement Cost Method	Average Age in Years	Weighted Average Condition
Wetlands	-	76.3	ha	-	-	-	-
Significant Wetlands	-	438.2	ha	-	-	-	-
Wooded Areas	-	79.2	ha	-	-	-	-
Significant Woodlands	-	438.2	ha	-	-	-	-
Alvars	-	16.45	ha	-	-	-	-
Total Natural Assets				-	-	-	-

Levels of Service

Natural Assets are considered a Non-Core Asset category and as such Technical and Community LOS are not defined in O.Reg. 588/17; municipalities are to develop their own.

Table 46 lists the Community and Technical LOS developed by the Township. It is the Township's objective to finalize the development of advanced LOS in future AMP updates. These will incorporate the six added-value Community LOS endorsed by Council, as outlined in Section 2.3.

Table 46: Natural Assets: Levels of Service

Community Levels of Service			Technical Levels of Service	
Environmental Stewardship	Promoting access to nature, rewilding of some Township owned lands and the incorporating the use of Low Impact Development (LID) into developments.	The Township's Climate Action Plan includes the following goals: CAP goal #1 ¹⁷ CAP goal #2 ¹⁸ CAP goal #3 ¹⁹ CAP goal #5 ²⁰ CAP goal #8 ²¹		
	Pollinator Protection	CAP goal #4 ²²		
Quantity			Number of hectares of Township owned Alvars	33.5 ha
			Number of hectares of Township owned Wetlands	645.0 ha
			Number of hectares of Township owned Forests & Woodlands	517.4 ha

¹⁷ CAP goal # 1 to plant 20,000 trees over the next 10 years, the Township has planted 7700 trees on Township lands and 10s of thousands of trees have been planted on private lands.

¹⁸ CAP Goal #2 - rewild Township owned lands. Undertake pilot projects to naturalize municipal parks, and to investigate potential use of alternate seed mixes in municipal ROW.

¹⁹ CAP goal #3 - incorporate LID into stormwater management practices - LID concepts into stormwater activities where appropriate.

²⁰ CAP goal # 5 - promote access to nature. Expand the natural trail network, acquire and repurpose land to create publicly accessible natural spaces, where appropriate.

²¹ CAP goal #8 - create resilient, low carbon communities - encourage development through complete communities using mixed land use and diversity of residential types, promote sustainable land use development practices and resilient infrastructure.

²² CAP goal #4 = Develop a Pollinator Protection Strategy. Two pollinator gardens/canoes installed in Centennial Park, Bath (June 2022) as part of the Butterflyway Project. There is also a insect/pollinator hotel behind the school in Bath. Additional pollinator gardens have been established throughout the Township in collaboration with the Bath Gardening Club (per CAP 2023 report card) - not sure if these are Township owned lands or not.

4. USER-FUNDED ASSET CATEGORIES



4.1. CORE WATER SYSTEM

The Township supplies safe, clean, high-quality water to the serviced residents and businesses within the serviced areas of Amherstview, Odessa, Bath, Harewood, and Brooklands. This involves managing reliable water systems capable of providing sufficient quality, flow, and pressure to meet drinking, recreational, irrigation, sanitary, fire protection, and business needs. Drinking water is treated by two separate plants, which is then distributed throughout the serviced areas via five distribution facilities and over 86 (+1 km from 2024) kilometers of linear water infrastructure valued at approximately \$187 million (+\$4M). The Township's water system is primarily funded by user rates set by Council and therefore is excluded from expenditures funded by the tax levy.

State of the Local Infrastructure

Asset Inventory

Core Assets included within this section are listed in Table 47. Most of the Water System is linear in nature, such as hydrants, valves, water meters, and water mains. Treatment and distribution facilities are considered non-linear but contribute to the overall production and distribution of clean drinking water. Approximately two-thirds of the Core Water System's Replacement Costs are valued based on user-defined unit costs using historical development reports. The average age of the Core Water System is 18 years and has an overall condition of good.

Table 47: Core Water System - Asset Valuation Summary

Subcategory	Quantity		Replacement Costs (\$)	Replacement Cost Method	Average Age in Years	Weighted Average Condition
Hydrants	507	Quantity	7,028,394	User-Defined Unit Cost	22.5	Very Good
Water Valves	703	Quantity	3,388,985		21.5	Very Good
Water Meters	5,469	Quantity	3,828,300		15.6	Fair
Water Mains	86,310	Length (m)	129,993,981		30.0	Good
Water Treatment Facilities	2	Each	26,505,333	Consumer Price Index	21.2	Good
Water Distribution Facilities	5	Each	16,510,140		32.5	Good
Core Water System Total			187,255,132		17.9	Good



Asset Age

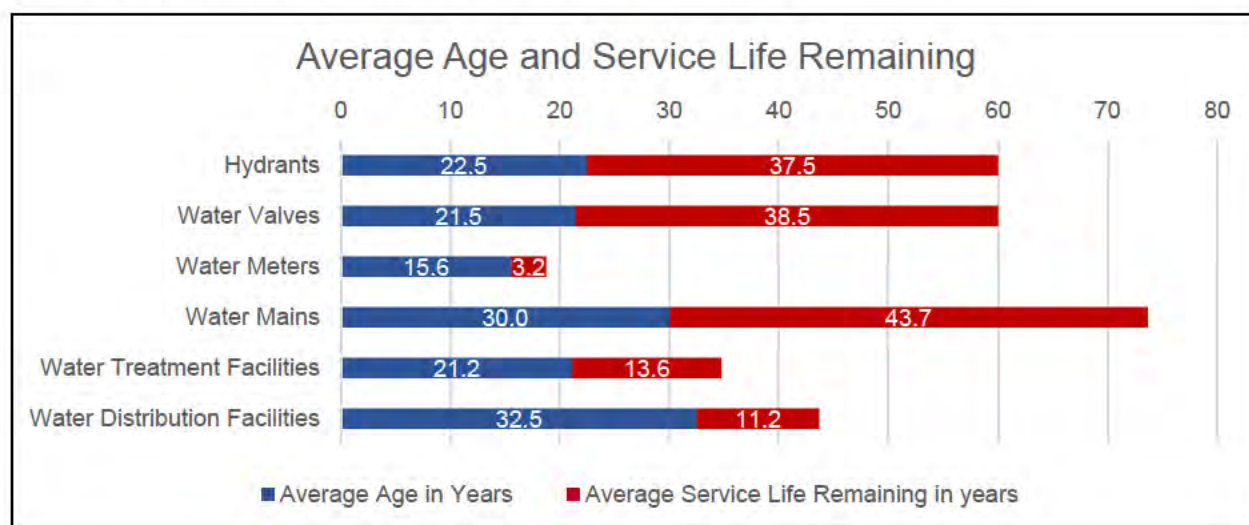
Figure 48 illustrates the average age relative to service life remaining for each subcategory of the Core Water System. Service life remaining is based on the initial EUL of the assets, which are listed in Table 48, but may deviate if a condition assessment has been undertaken. On average, water mains are through approximately one-third of their useful lives, which means over 60% of water mains are less than 40 years of age. Water meters have a shorter useful life and therefore, are through approximately three-quarters of their useful life.

EULs are developed based on industry standards and are in accordance with the Township's Tangible Capital Asset Policy. A range in EUL is important to ensure certain components of an asset (where applicable) are depreciated and forecasted for replacement appropriately.

Table 48: Core Water System - Estimated Useful Lives

Subcategory	Estimated Useful Life (EUL)
Hydrants	60 Years
Valves	60 Years
Water Meters	15 to 25 Years
Water Mains	50 to 80 Years
Treatment Facilities	5 to 80 Years
Distribution Facilities	5 to 80 Years

Figure 48: Core Water System - Average Age and Service Life Remaining

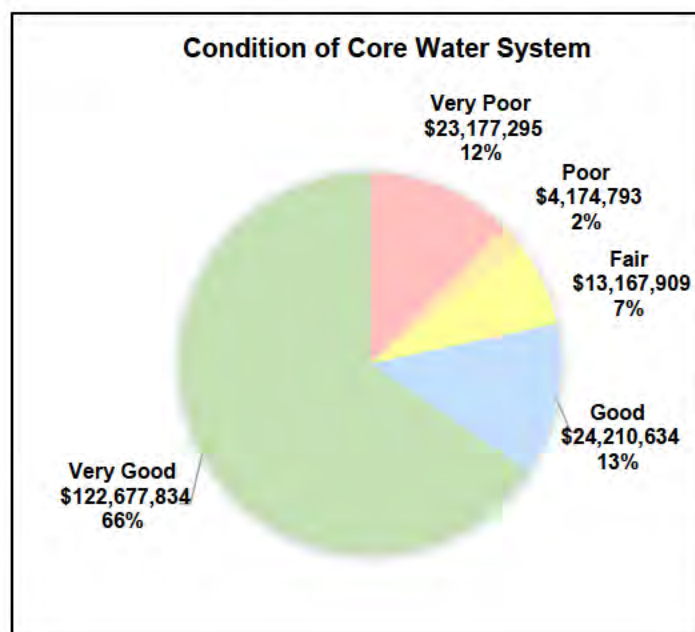


Asset Condition and Assessment

The Township's historic and current approach to assessing the condition of Core Water System assets heavily relies on the asset's age and EUL. Internal responses to the Technical LOS, such as historic main breaks, as disclosed in the next section, and externally legislated reporting requirements to retain a drinking water license have played a role in identifying and prioritizing the rehabilitation and replacement of linear assets. Although it is the Township's goal to proactively update and replace water meters, the current approach is to replace them as needed, which has been funded annually and consistently to some extent.

Currently, the Township does not have a formal condition assessment approach for Core Water System assets. It is important for the Township to develop and implement a formal and comprehensive condition assessment approach that proactively assesses core water infrastructure.

Figure 49: Core Water System - Condition Summary

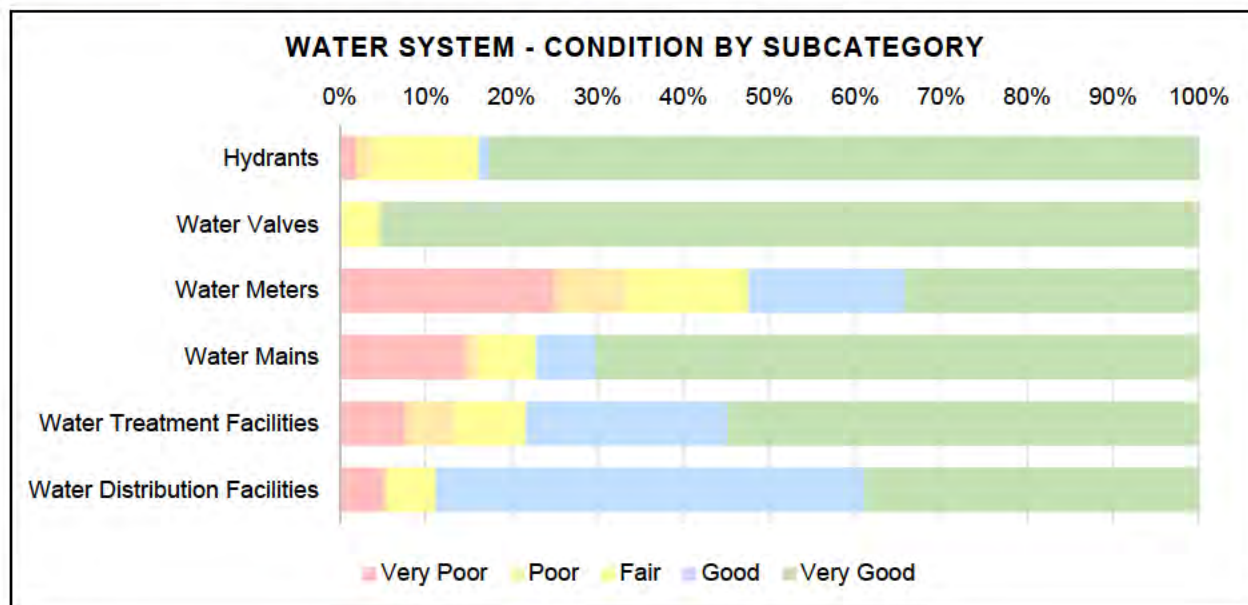


Projected conditions illustrated in Figure 49 are based on a weighted average relative to the Replacement Cost.

The Township's Core Water System has approximately 86% (+2%) of assets in good or very good condition. The remaining are approaching the end of their expected useful lives, indicating a need for investment in the short to medium term. While assets are generally in very good condition, approximately 78% of the Replacement Costs associated with poor and very poor conditions relate to water mains, due to their overall value relative to other infrastructure.

Figure 50 provides further detail into the Core Assets by subcategory. Water meters bear the highest proportion of assets in very poor condition at a relatively low Replacement Cost per unit.

Figure 50: Core Water System - Condition by Subcategory



Levels of Service

To adhere to the first asset management milestone, O.Reg. 588/17 legislates the disclosure of certain Community and Technical LOS for Core Assets. Community LOS use qualitative descriptions to describe the scope or quality of service delivered by an asset category. Technical LOS use metrics to measure the scope or quality of service being delivered by an asset category. Table 49 outlines the required Community and Technical LOS as set out in O.Reg. 588/17.

It is the Township's objective to finalize the development of advanced LOS within the Core Water System in future iterations of the AMP. These will incorporate the six added-value Community LOS endorsed by Council, as outlined in Section 2.3.

Table 49: Core Water System - Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Scope	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system	The Township operates two separated drinking water systems. the Bath Drinking Water System consists of one drinking water plant, one elevated storage tank and approximately 19.7 km of distribution watermains and services the village of Bath and Correctional Services Canada. The Fairfield Drinking Water System consists of one drinking water plant in Amherstview, one booster station, one distribution reservoir, two elevated storage tanks and approximately 66.6 km of watermains and services Amherstview, Odessa and the Loyalist East Business Park; See maps in Appendix B.5.	Percentage of properties connected to the municipal water system	73%	Maintain
	Description, which may include maps, of the user groups or areas of the municipality that have fire flow.		Percentage of properties where fire flow is available	99.7%	Maintain
Reliability	Description of boil water advisories and service interruptions	There were no boil water advisories in 2024. One watermain break was reported for 2024, and repairs were done on the same day. Extended service disruptions were avoided. However, water service interruptions may also occur due to maintenance activities or reconstruction projects. Staff attended to these interruptions in a timely manner, when possible.	Number 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	0.000	Maintain
			Number 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	0.000	Maintain
Quality			Percentage of water assets in fair or better condition	86%	80%
			Average condition of water assets	75% (Good)	Good
Performance			Capital Reinvestment Rate	1.31% (+0.41%)	Increase

Lifecycle Management

Linear Infrastructure

The AMP for the Core Water System's linear infrastructure has been developed using projected age-based conditions and risk. Water mains within Citywide are primarily defined by material and diameter, which allows the Township to use risk metrics to prioritize main relining and replacements. Furthermore, the Township performs periodic operational preventative maintenance activities on other linear assets such as valve exercising, hydrant flushing, and inspections. Like other linear infrastructure, staff attempt to coordinate water rehabilitation and replacements with road reconstruction projects to optimize Lifecycle Costs, unless there is a structural failure.

Core Facilities

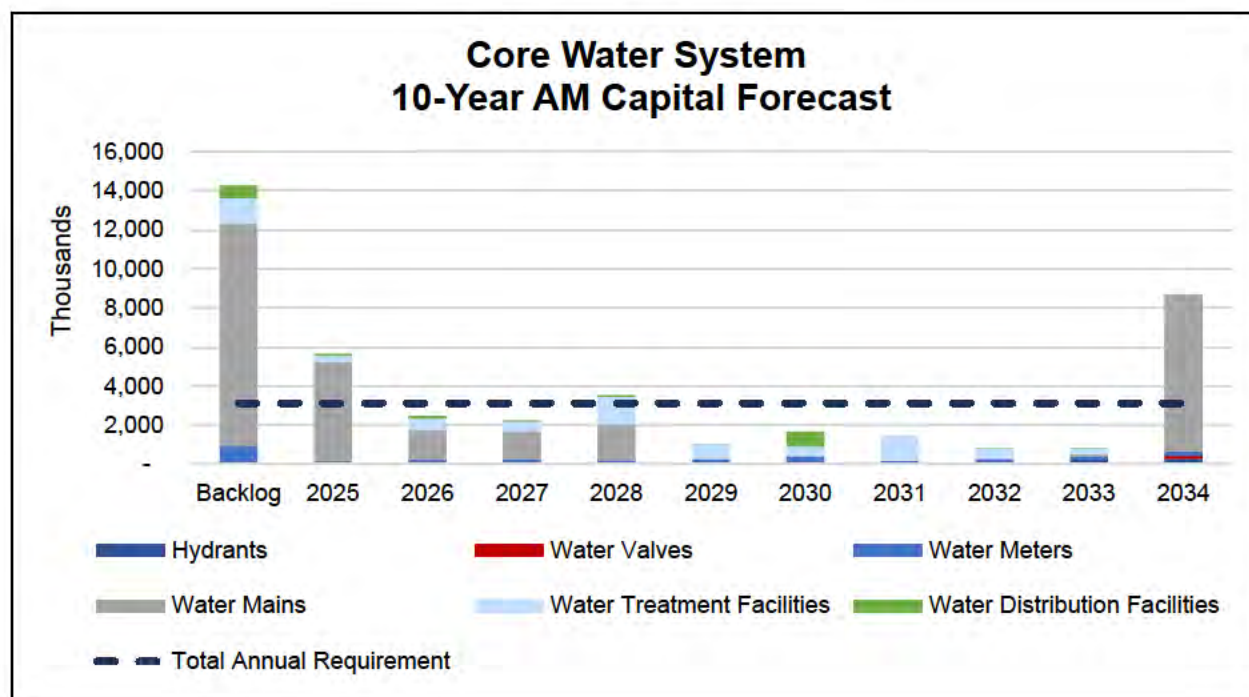
Core facilities within Citywide can be further broken down into process equipment and building components.

Process equipment lifecycle events are performed by the maintenance/operations staff. At a minimum, all facilities receive weekly visual inspections. Critical process equipment has alarms and the Supervisory Control and Data Acquisition ("SCADA") system monitoring the operation. Major process equipment receives annual detailed inspections.

Asset Management Capital Forecasts

Figure 51 illustrates the Core Water System's 10-year capital replacement forecast. The backlog represents scheduled asset replacements that are over their projected service life remaining. While they are not considered high-risk, it is important for the Township to document within Citywide a justification for any capital project deferrals. The Annual Requirement to fund the Core Water System is currently \$3.1 (+\$0.1M) million.

Figure 51: Core Water System - 10-Year Capital Forecast



Risk Management

As explained in Section 2.5, risk models were developed for each asset category to prioritize the rehabilitation and replacement of assets, with a higher focus on the Core Assets. The consequence of failure risk model for the Core Water System is outlined in Table 50.

Table 50: Core Water System - Consequence of Failure Risk Model

Score	Economic (34% All)	Operational (33% Valves, Meters, Mains)	Health & Safety (33% Valves, Meters, Mains) (66% Hydrants, Facilities)	Consequence of Failure
	Replacement Cost (100%)	Asset Classifications & Fixed Risk (100%)	QMS Risk Number (100%)	
1	<\$25,000	Valve Diameter - 25 mm Water Meters - All Water Main Diameter - 25 to 50 mm	6	Insignificant
2	>=\$25,000 and <\$75,000	Valve Diameter - 100 to 150 mm Water Main Diameter - 100 to 150 mm	8	Minor
3	>=\$75,000 and <\$125,000	Valve Diameter - 200 to 250 mm Water Main Diameter - 200 to 250 mm	12	Moderate
4	>= \$125,000 and <\$200,000	Valve Diameter - 300 mm Water Main Diameter - 300 mm	16	Major
5	>\$200,000	Valve Diameter - 400 mm Water Main Diameter - 400 mm	25	Severe

Figure 52 is the risk matrix generated from Citywide that incorporates the above-noted risk models. This matrix does not include any assets considered surplus and not planned for replacement. Under this model, there are 60 assets considered high or very high risk due to their condition or consequence of failure. These are also subsequently listed in Table 51.

Figure 52: Core Water System - Risk Matrix

		Highest Risk				
Consequence	5	12 Assets \$6,042,666	4 Assets \$1,117,175	2 Assets \$1,416,522	1 Assets \$297,327	0 Assets \$0
	4	117 Assets \$66,052,114	17 Assets \$14,320,281	28 Assets \$7,296,041	4 Assets \$1,055,880	16 Assets \$10,747,368
	3	216 Assets \$26,521,271	16 Assets \$2,308,988	23 Assets \$1,703,454	11 Assets \$2,244,184	37 Assets \$6,801,458
	2	1067 Assets \$21,318,308	36 Assets \$5,790,878	126 Assets \$1,680,691	13 Assets \$755,693	31 Assets \$1,823,774
	1	2009 Assets \$2,869,296	1554 Assets \$2,255,697	776 Assets \$964,444	222 Assets \$192,095	1184 Assets \$1,832,859
		1	2	3	4	5
		Lowest Risk				
		Probability				

Table 51: Core Water System – High-Risk Assets

Asset Name	Location	GIS #	Risk Rating
Water Pipe on Asbury	Asbury from Havergal to Westran	WM41	High
Water Pipe on Havergal	Havergal from Asbury to Rothwell	WM42	High
Water Pipe on Rothwell	Rothwell from Havergal to Westran	WM43	High
Water Pipe on Westran	Westran from Rothwell to Asbury	WM44	High
Water Pipe on Huff	Huff from Havergal to Westran	WM52	High
Water Pipe on Westfield	Westfield from Highway 33 to Manitou	WM143	High
Water Pipe on Highway 33	Bath Rd Hwy 33 – Behind Civic Addresses 4785,4777,4773,4771 Bath Rd	WM214	High
Water Pipe on Asbury	Asbury from Manitou to Havergal	WM40	High
Water Pipe on Havergal	Havergal from Rothwell to Cornell	WM45	High
Water Pipe on Westran	Westran from Rothwell to Cornell	WM46	High
Water Pipe on Cornell	Cornell from Havergal to Westran	WM47	High
Water Pipe on Westran	Westran from Cornell to Huff	WM48	High
Water Pipe on Westran	Westran from Huff to Littlefield	WM49	High
Water Pipe on Easement	Easement from Littlefield to WJ Henderson Recreation Ctr.	WM50	High
Water Pipe on Havergal	Havergal from Cornell to Huff	WM51	High
Water Pipe on Littlefield	Littlefield from Westran to Havergal	WM53	High
Water Pipe on Havergal	Havergal from Huff to Littlefield	WM54	High
Water Pipe on Littlefield	Littlefield from Havergal to Manitou	WM55	High
Water Pipe on Chesterfield	Chesterfield from Sherwood to Pittsfield	WM1085	High
Water Pipe on Kidd	Kidd from Kildare to Kidd	WM136	High
Water Pipe on Bayview Drive	Bayview Dr from Brooklands Park Ave N to 14 Bayview Dr	WM204	High
Water Pipe on Main	Main from Mott to Heritage	WM525	High
Water Pipe on Main	Main from Heritage to East end	WM535	High
Water Pipe on Easement	Easement from Purdy to Bath STP	WM550	High
Water Pipe on Sir John	Sir John from Pruyn to Pruyn	WM553	High
Water Pipe on Academy	Academy from Fairfield St to 30m past Bulch Ave Intersection on ending on Mott St	WM603	High
Water Pipe on Manitou	Manitou from Cambridge to Princeton	WM36	Very High
Water Pipe on Manitou	Manitou from Princeton to Briscoe	WM37	High
Water Pipe on Manitou	Manitou from Briscoe to Kildare	WM38	Very High
Water Pipe on Sherwood	Sherwood from Tareyton to Briscoe	WM73	High

Asset Name	Location	GIS #	Risk Rating
Water Pipe on Sherwood	Sherwood from Manitou to Briscoe	WM90	Very High
Water Pipe on Manitou	Manitou from Cambridge to Frink	WM87	Very High
Water Pipe on Sherwood	Sherwood from - to Manitou	WM141	High
Water Pipe on Main	Main from Church St to Davy St	WM512	High
Water Pipe on Main	Main from Lodge St to Davy St	WM519	High
Water Pipe on Manitou	Manitou from Sherwood to Future Westfield Dr N Side for 91, and Future Westfield Dr N Side to Westfield Dr S Side for 1008	WM91, WM1008	High
Water Pipe on Addington St	Addington St from Addington Crt to Hydrant 367 located 40 W of Amy Lynn Dr	WM116	Very High
Water Pipe on Purdy	Purdy from Tower to Sir John	WM549	Very High
Water Pipe on Sir John	Sir John from Purdy to Pruyn	WM552	High
Water Pipe on Pruyn	Pruyn from Sir John to Sir John	WM554	Very High
Water Pipe on Easement	Easement from WTP to Main	WM545	High
Water Pipe on Main	Main from Easement to Mott	WM546	Very High
Water Pipe on Mott	Mott from Main to Westbury	WM547	Very High
Water Pipe on Tower Rd.	Tower Rd. from Mott to Purdy	WM548	Very High
Water Pipe on Tower Rd.	Tower Rd. from Purdy to EWT	WM556	Very High
Water Pipe on Amherst	Amherst from Amherst to Amherst	WM123	High
Water Pipe on Upper Park	Upper Park from Park Cr to Amherst Dr	WM124	Very High
Water Pipe on Kildare	Kildare from Green to Kidd	WM25	High
Water Pipe on Kildare	Kildare from Kidd to Cambridge	WM26	Very High
Water Pipe on Amherst	Amherst from 343 Amherst Dr to Manitou Cr W	WM117	Very High
Water Pipe on Amherst	Amherst from Manitou to Pittsfield	WM119	Very High
Water Pipe on Amherst	Amherst from Pittsfield to	WM121	Very High
Water Pipe on Upper Park	Upper Park from Amherst to Water Tower	WM122	High
Water Pipe on Kidd	Kidd from Green to Kidd	WM137	High
Chlorine Scada / Electrical	Fairfield WTP - 4464 Bath Road		High
Chlorine Contact Equipment	Fairfield WTP - 4464 Bath Road		High
Package Plant Equipment	Bath WTP - 329 Main St		High
Chlorine Contact Equipment	Bath WTP - 329 Main St		High
Bath Water Treatment Plant - Parking Lots - Paving & Surfacing	Bath WTP - 329 Main St		High

All water pipes are in progress either through dedicated capital projects or new watermain relining program. The list is based on age-based conditions and watermain relining program will complete physical condition assessments to better prioritize based on actual conditions.

Series A PVC Water Pipe

The above list of high-risk assets includes a long list of water pipes. Most of these water pipes are included in the 10-year capital project list either through planned reconstructions or the new watermain relining program. One item that is important to note when considering this list is the specific circumstances of the water pipe material for mains located in Odessa.

Historic water pipe in Odessa was constructed using Series A PVC, an early version of the Polyvinyl Chloride (PVC) material. While this pipe does have a reasonably long-life span, it poses a unique risk for field conditions. When there is roadwork occurring in proximity to this pipe it has the tendency to catastrophically fail, causing a fast leak which can risk draining the water tower and would pose significant problems to the system. Township staff have identified this unique risk and mitigate it by reconstructing the watermain any time roadwork is occurring in close proximity to the pipe. Series A PVC Pipe has had its estimated useful life reduced from 80 to 60 years in this AMP.

While these pipes are otherwise typically stable and do not require work, this is challenging to accurately depict in the above data. In practice however, it has resulted in certain capital reconstruction projects such as the water pipes on Havergal, Asbury, Rothwell, Westran, Huff, Cornell, Littlefield being delayed in favour of aligning with the County of Lennox and Addington planned reconstruction of Main St – Odessa.

Staff are continuously evaluating the risks associated with these delays by monitoring watermain break rates as a proxy for overall condition. Staff also intend, through the new watermain relining program, to complete field sample of the watermains to get a more accurate picture of real conditions to contrast that with the above listed Estimated Useful Life of the water pipe, to aid in the overall evaluation of the risks in the system.

4.2. CORE SEWER SYSTEM

The Township's Core Sewer System is a combination of approximately 76 kilometers of linear sewers and eight pumping stations that convey wastewater flows from the serviced areas to two treatment plants where it is treated and discharged into the environment. This infrastructure is valued at approximately \$177 million (+\$9M) and is primarily funded by user rates set by Council. As a result, expenditures relating to the sewer system are excluded from the Township's tax levy.

State of the Local Infrastructure

Asset Inventory

Core Assets included within this section are listed in Table 52. Approximately half of the sewer system is linear in nature, which includes manholes and mains. Treatment and collection facilities are considered non-linear but contribute to the overall collection and treatment of wastewater. Approximately half of the Core Sewer System's Replacement Costs are valued based on user-defined unit costs using historical development reports. The average age of the Core Sewer System is 31 years and has an overall condition of very good.

Table 52: Core Sewer System - Asset Valuation Summary

Subcategory	Quantity		Replacement Costs (\$)	Replacement Cost Method	Average Age in Years	Weighted Average Condition
Sewer Manholes	887	ea.	8,996,841	User-Defined Unit Cost	34.1	Very Good
Sewer Mains	76,254	m.	103,527,620	User-Defined Unit Cost/Consumer Price Index	34.0	Very Good
Treatment Facilities	2	ea.	52,365,293	Consumer Price Index	20.1	Very Good
Collection Facilities	8	ea.	12,598,119		23.2	Good
Total Core Sewer System			177,487,873		31.1	Very Good

Asset Age

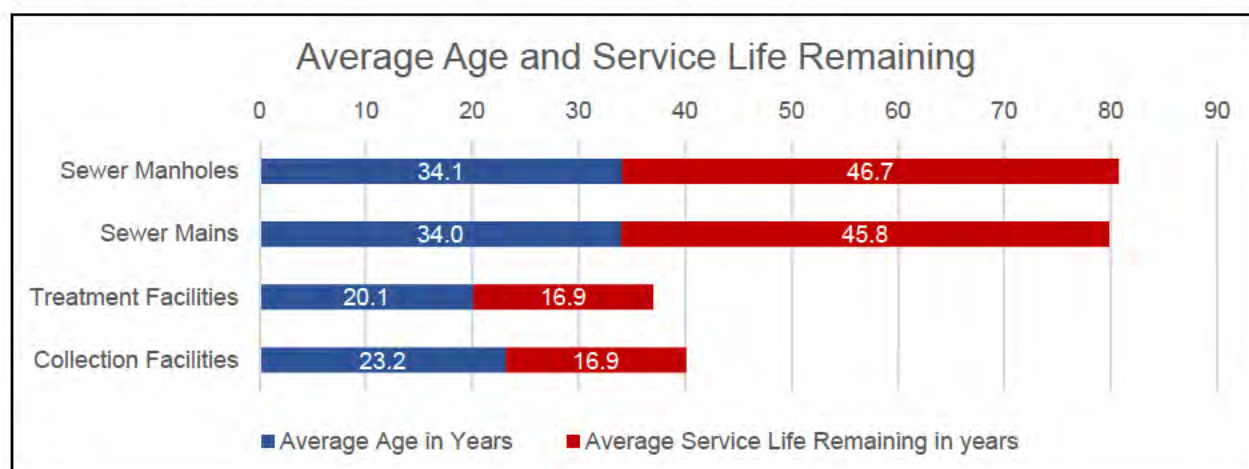
Figure 53 illustrates the average age relative to service life remaining for each subcategory of the Core Sewer System. Service life remaining is based on the initial EUL of the assets, which are listed in Table 53, but may deviate if a condition assessment has been undertaken. On average, linear sewer assets are approximately 40% through their useful lives, which means over 50% of assets are less than 40 years of age.

EULs are developed based on industry standards and are in accordance with the Township's Tangible Capital Asset Policy. A range in EUL is important to ensure certain components of an asset (where applicable) are depreciated and forecasted for replacement appropriately.

Table 53: Core Sewer System - Estimated Useful Life

Subcategory	Estimated Useful Life (EUL)
Sewer Manholes	80 Years
Sewer Mains	80 Years
Treatment Facilities	5 to 80 Years
Collection Facilities	5 to 80 Years

Figure 53: Core Sewer System - Average Age and Service Life Remaining

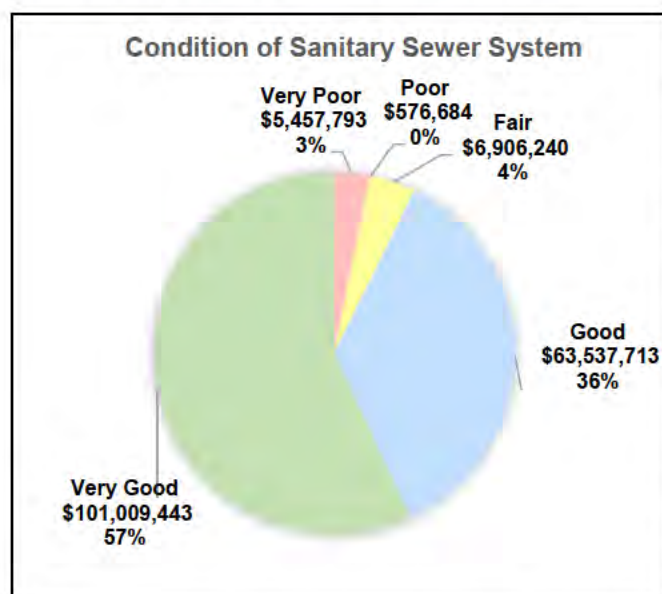


Asset Condition and Assessment

The Township's historic and current approach to assessing the condition of Core Sewer System assets heavily relies on the asset's age and EUL. Internal responses to the Technical LOS, as disclosed in the next section, and externally legislated reporting requirements have played a role in identifying and prioritizing the rehabilitation and replacement of linear assets.

Currently, the Township does not have a formal condition assessment approach for Core Sewer System assets. It is important for the Township to develop and implement a formal and comprehensive condition assessment approach that proactively assesses core sewer infrastructure.

Figure 54: Core Sewer System - Condition Summary

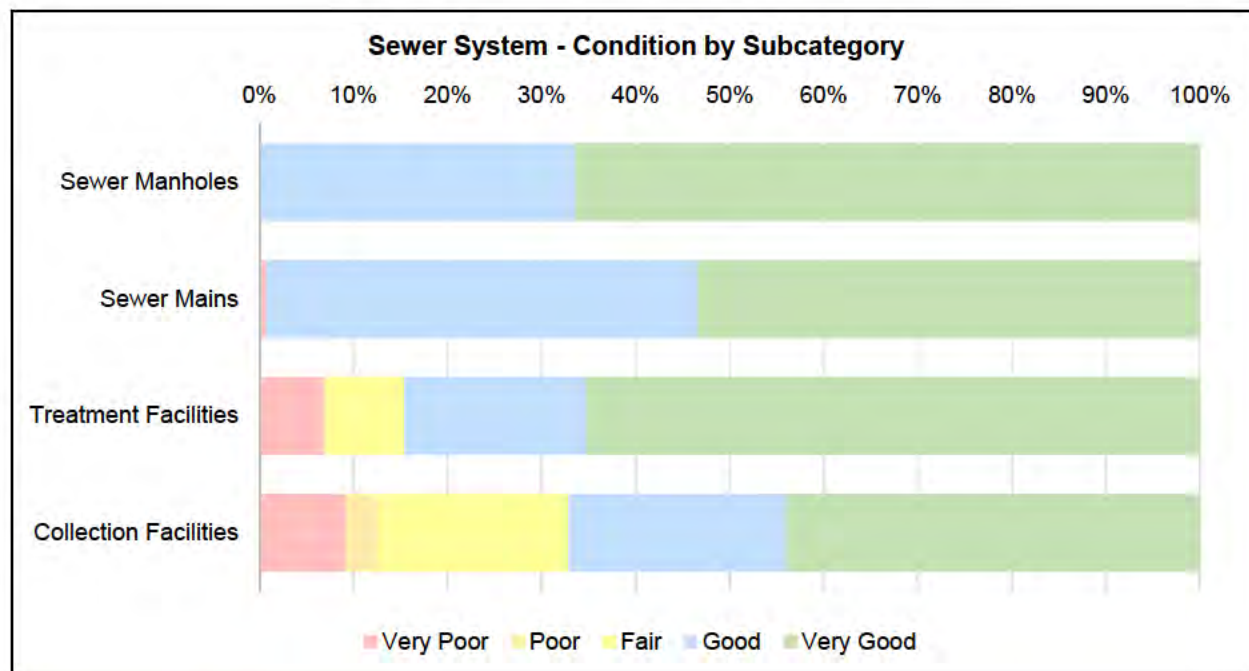


Projected conditions illustrated in Figure 54 are based on a weighted average relative to the Replacement Cost.

The Township's Core Sewer System has approximately 93% of assets in good or very good condition. The remaining are approaching the end of their expected useful lives, indicating a need for investment in the short to medium term. While assets are generally in very good condition, approximately 62% of the Replacement Costs associated with poor and very poor conditions relate to the treatment plants, due to their overall value relative to other infrastructure.

Figure 55 provides further detail into the Core Sewer System assets by subcategory. Collection facilities bear the highest proportion of assets in very poor condition at a relatively lower Replacement Cost as compared to other subcategories within the system.

Figure 55: Core Sewer System - Condition by Subcategory



Levels of Service

To adhere to the first asset management milestone, O.Reg. 588/17 legislates the disclosure of certain Community and Technical LOS for Core Assets. Community LOS use qualitative descriptions to describe the scope or quality of service delivered by an asset category. Technical LOS use metrics to measure the scope or quality of service being delivered by an asset category. Table 54 outlines the required Community and Technical LOS as set out in O.Reg. 588/17.

It is the Township's objective to finalize the development of advanced LOS within the Core Sewer System in future iterations of the AMP. These will incorporate the six added-value Community LOS endorsed by Council, as outlined in Section 2.3.

Table 54: Core Sewer System - Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Scope	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal wastewater system	The Township's system consists of two distinct separated sewage treatment plants and their associated collection system (see maps): The Bath Sewage collection system consists of works for the collection and transmission of sewage, consisting of approximately 19.8 km of sewers and 4 pumping stations. These eventually discharge into the Bath Sewage Treatment plant. The Loyalist East Sewage Collection system consists of works for the collection and transmission of sewage, consisting of approximately 56.8 km sewers and 4 sewage pumping stations. These works eventually discharge into the Amherstview Water Pollution Control Plant. See maps in Appendix B.6.	Percentage of properties connected to the municipal wastewater system	71.0%	Maintain
Quality			Percentage of sewer network assets in fair or better condition	97%	80%
			Average condition of sewer network assets	83% (Very Good)	Good
Reliability	Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occurs in habitable areas or beaches	The Township does not own any combined sewers.	Number of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system	0.0	Not Applicable

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Reliability	Description of how combined sewers in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes	The Township does not own any combined sewers.	Number of connection days per year having wastewater backups compared to the total number of properties connected to the municipal wastewater system	0.0000	Maintain
	Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes	The Township has separated sewers. Stormwater can enter sanitary sewers due to cracks in sanitary mains or through indirect connections (e.g., weeping tiles). Sewer mains are inspected regularly and repaired if leakages are observed. There was no sanitary sewer main backup reported in 2024.	Number of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system	0.0000 (- 0.0004)	Maintain
	Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to stormwater infiltration	The Township follows a series of design standards that integrate servicing requirements and land use considerations when constructing or replacing sanitary sewers. These standards have been determined with consideration of the minimization of sewage overflows and backups.			
	Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system	Effluent refers to water pollution that is discharged from a wastewater treatment plant and may include suspended solids, total phosphorous, biological oxygen demand, total ammonia nitrogen, and E. coli. The Environmental Compliance Approval (ECA) identifies the effluent criteria for municipal wastewater treatment plants. In 2023 two exceedances of the limit for E. coli occurred at the AWPCP due to low flows and wildlife activity in the wetland. All final effluent limits were met for BSTD.			

Performance		Capital Reinvestment Rate	0.51% (-0.49%)	
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Lifecycle Management

Linear Infrastructure

The AMP for the Core Sewer System's linear infrastructure has been developed using projected age-based conditions and risk. Sewer mains within Citywide are primarily defined by material and diameter, which allows the Township to use risk metrics to prioritize main relining and replacements. The Township has a CCTV inspection program that is currently based on observations from the annual flushing program, inspections, and reports of backups and blockages. Furthermore, the Township performs periodic operational activities on other linear assets such as manhole inspections. Like other linear infrastructure, staff attempt to coordinate storm rehabilitation and replacements with road reconstruction projects to optimize Lifecycle Costs, unless there is a structural failure.

Core Facilities

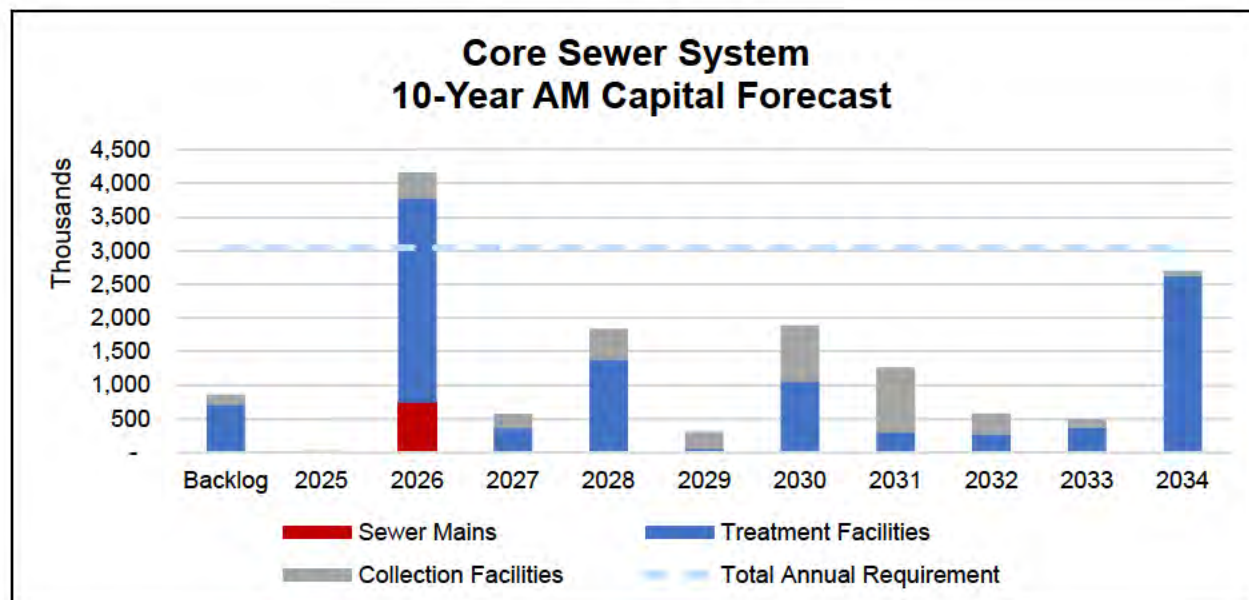
Core facilities within Citywide can be further broken down into process equipment and building components.

Process equipment lifecycle events are performed by the maintenance/operations staff and the computerized maintenance management system is under development. At a minimum, all facilities receive weekly visual inspections. Critical process equipment has alarms and the Supervisory Control and Data Acquisition ("SCADA") system monitoring the operation. Major process equipment receives annual detailed inspections.

Asset Management Capital Forecasts

Figure 56 illustrates the Core Sewer System's 10-year capital replacement forecast. The backlog represents scheduled asset replacements that are over their projected service life remaining. While the assets are not considered high-risk, it is important for the Township to document within Citywide justification for any capital project deferrals. The Annual Requirement to fund the Core Sewer System is currently \$3.0 (+0.2M) million.

Figure 56: Core Sewer System - 10-Year Capital Forecast



Risk Management

As explained in Section 2.5, risk models were developed for each asset category to prioritize the rehabilitation and replacement of assets, with a higher focus on the Core Assets. The consequence of failure risk model for the Core Sewer System is outlined in Table 55.

Table 55: Core Sewer System - Consequence of Risk Model

Score	Economic (34% Manholes, Mains) (100% Facilities) Replacement Cost (100%)	Operational (33% Manholes, 66% Mains)		Strategic (33% Manholes) Fixed Risk (100%)	Consequence of Failure
		Attribute - Road Class (100% Manholes) (50% Mains)	Asset Sub- Type - Main Diameter (50% Mains)		
1	<\$25,000	6 (Local)	50 to 150 mm	N/A	Insignificant
2	>=25,000 and <\$75,000	5 (Local)	200 to 250 mm	Manholes - All	Minor
3	>=\$75,000 and <\$125,000	4 (Collector)	300 to 375 mm	N/A	Moderate
4	>=\$125,000 and <\$200,000	3 (Collector)	400 to 450 mm	N/A	Major
5	>\$200,000	1 & 2 (Arterial)	525 to 750 mm	N/A	Severe

Figure 57 is the risk matrix generated from Citywide that incorporates the above-noted risk models. This matrix does not include any assets considered surplus and not planned for replacement. Under this model, there are six assets considered high or very high risk due to their condition or consequence of failure. These are also subsequently listed in Table 56.

Figure 57: Core Sewer System - Risk Matrix

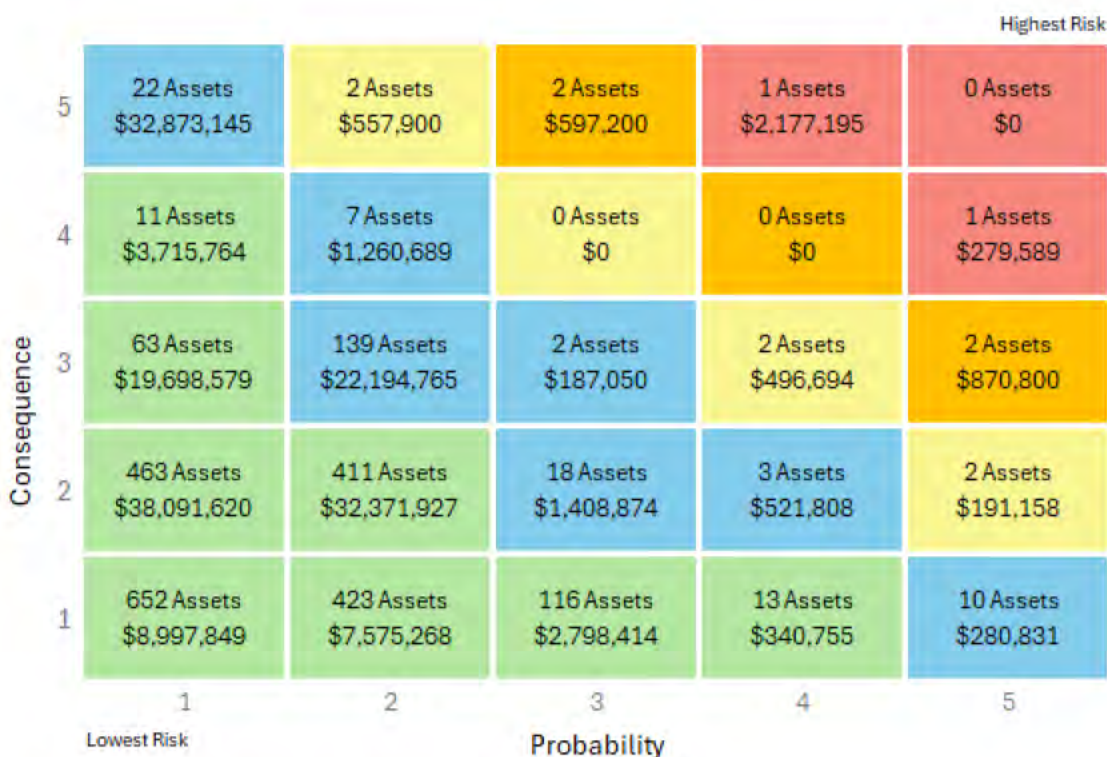


Table 56: Core Sewer System – High-Risk Assets

Asset Name	Location	GIS #	Risk Rating
Sanitary Main on Bath PS#2 FM ²³	Bath PS#2 FM from MH 0 to MH 5442	SAM5020	High
Sanitary Main on Bath PS#1 FM ²⁴	Bath PS#1 FM from MH 5398 to MH 5368	SAM5101	Very High
Outlet ²⁵	Amherstview WPCP - 4326 Taylor Kidd Blvd		Very High
Aeration	Bath WPCP - 50 Sir John Johnson Dr		High
Bath Water Pollution Control Plant - Lab Building - Roadways - Paving & Surfacing	50 Sir John Johnson Drive , Bath		High
Amherstview Water Pollution Control Plant - 2009 Addition - Roadways - Paving & Surfacing	4326 Taylor-Kidd Boulevard, Amherstview		High

²³ Replacement of sanitary main scheduled in the 10-year capital budget.

²⁴ Design is underway for Bath Main St. project with construction forecasted for 2028.

²⁵ Asset replacement scheduled in 10-year capital budget.

4.3. OTHER USER-FUNDED ASSETS

Other User-Funded assets include Buildings, Machinery & Equipment, and Fleet owned and maintained by the Utilities Division. This asset category is funded equally to provide both water and sewer services within the Township.

State of the Local Infrastructure

Asset Inventory

Assets included within this section are listed in Table 57. This asset category includes user-rate funded light-duty fleet, the Millhaven garage, and its equipment contents. With a Replacement Cost of \$3.2 million (-\$0.3M from 2024), the average age of other user-funded assets is 21 years, and has an overall condition of fair.

Table 57: Other User-Funded Assets - Asset Valuation Summary

Subcategory	Quantity	Replacement Costs (\$)	Replacement Cost Method	Average Age in Years	Weighted Average Condition
Utilities Building	2 Quantity	2,020,530	Consumer Price Index	27	Good
Utilities Machinery & Equipment	14 Quantity	428,755		13.167	Fair
Utilities Fleet	15 Quantity	777,312	User-Defined Unit Cost	7.167	Fair
Total Other User-Funded Assets		3,226,597		21.417	Fair

Asset Age

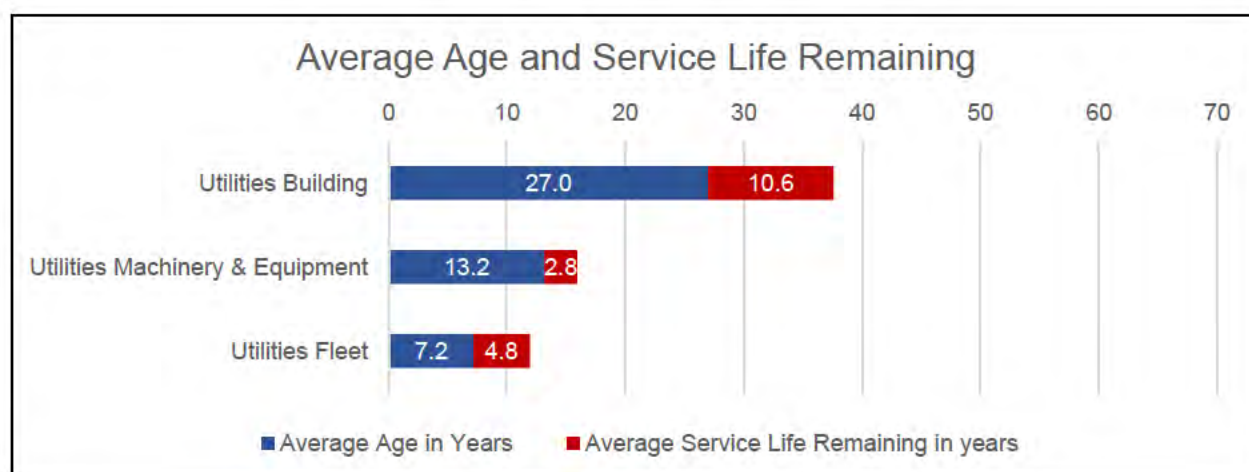
Figure 58 illustrates the average age relative to service life remaining for each subcategory of the Other User-Funded Assets. Service life remaining is based on the initial EUL of the assets, which are listed in Table 58, but may deviate if a condition assessment and/or lifecycle activities have been undertaken.

EULs are developed based on industry standards and are in accordance with the Township's Tangible Capital Asset Policy. A range in EUL is important to ensure certain components of an asset (where applicable) are depreciated and forecasted for replacement appropriately.

Table 58: Other User-Funded Assets - Estimated Useful Life

Subcategory	Estimated Useful Life (EUL)
Utilities Building	5 to 80 Years
Utilities Machinery & Equipment	5 to 25 Years
Utilities Fleet	5 to 20 Years

Figure 58: Other User-Funded Assets - Average Age and Service Life Remaining

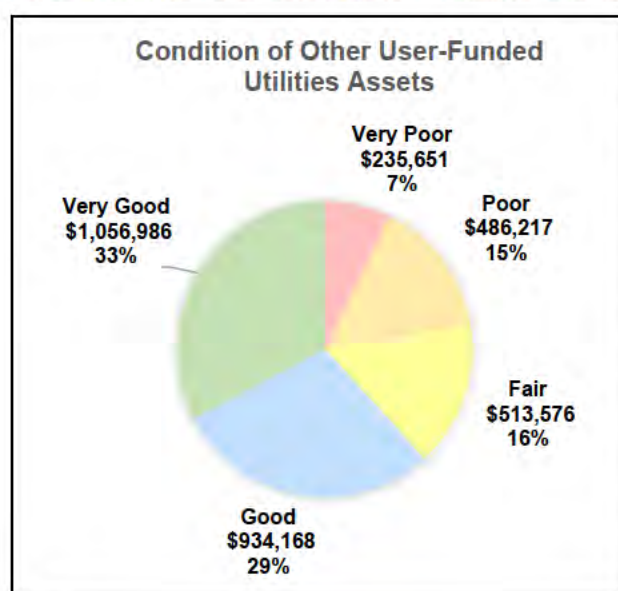


Asset Condition and Assessment

The Township's historic and current approach to assessing the condition of Other User-Funded Assets heavily relies on the asset's age and EUL.

Currently, the Township does not have a formal condition assessment approach for Other User-Funded Assets. It is important for the Township to develop and implement a formal and comprehensive condition assessment approach that proactively assesses these assets.

Figure 59: Other User-Funded Assets - Condition Summary



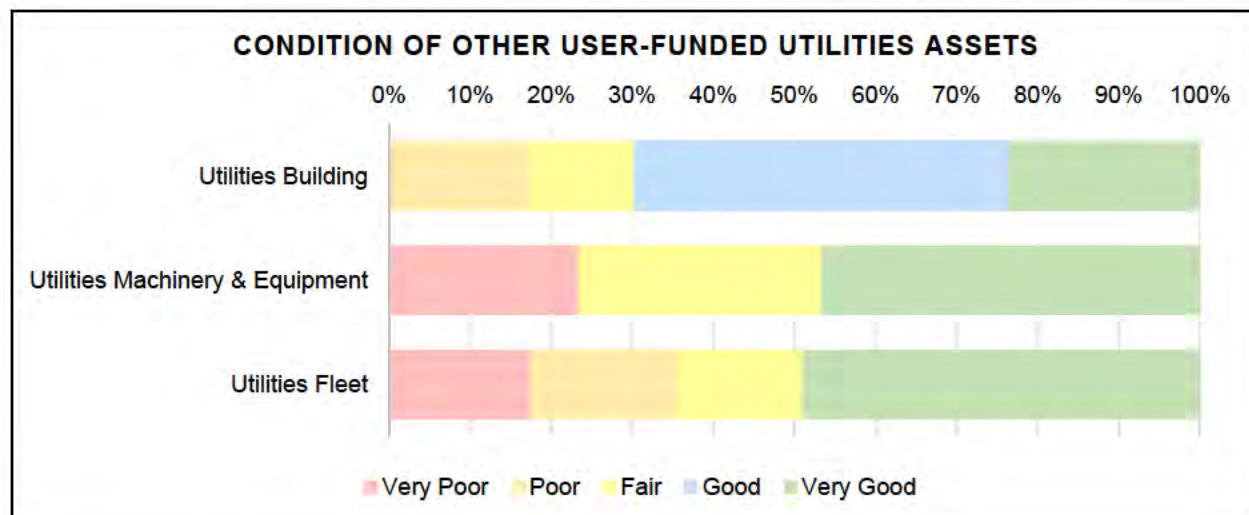
Projected conditions illustrated in Figure 59 are based on a weighted average relative to the Replacement Cost.

The Township's Other User-Funded Assets have approximately 62% (-24%) of assets in good or very good condition. The remaining are approaching the end of their expected useful lives, indicating a need for investment in the short to medium term. Figure 60 provides further detail by subcategory.

The 2024 and earlier utilized age-based conditions for buildings. The Township completed Building Condition Assessments (BCAs) with updated replacement costs in

2025.

Figure 60: Other User-Funded Assets - Condition by Subcategory



Levels of Service

Other User-Funded Assets are owned by the Utilities Division and are considered a Non-Core Asset category and as such, Technical and Community LOS are not defined in O.Reg. 588/17; municipalities are to develop their own.

Levels of Service for Other User-Funded Assets mirror corresponding asset categories under tax-funded assets.

Table 59, Table 60, and Table 61 list the Community and Technical LOS developed by the Township. It is the Township's objective to finalize the development of advanced LOS in future AMP updates. These will incorporate the six added-value Community LOS endorsed by Council, as outlined in Section 2.3.

Table 59: Other User-Funded Assets [Non-Core Buildings]: Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Scope	Description, which may include maps, of municipally owned buildings.	See maps in Appendix B.4. Buildings Map			
Safety			Percentage of non-core facilities where annual internal inspections have been completed	100%	
Quality			Percentage of non-core facility assets that are in fair or better condition (Age or Condition Based)	83% (-11%)	80%
			Average condition of non-core facility assets	68% (Good)	Good

Table 60: Other User-Funded Assets [Non-Core Fleet]: Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Quality			Percentage of fleet assets in fair or better condition	83%	80%
			Average condition of non-core fleet assets	60% (Good)	Good
			Percentage of non-core vehicles where regulatory inspections have been completed	100%	
Environmental Stewardship	Vehicles and Equipment have minimal impact on the environment	The Township's Climate Action Plan includes the following goals: CAP goal #16 ²⁶ CAP goal #17 ²⁷ CAP goal #18 ²⁸	% of vehicles that are zero-emission vehicles	0%	Increase

²⁶ CAP goal #16 - Optimize use of municipal vehicles by promoting eco driving techniques and inter-departmental vehicle sharing, installing auxiliary power units in vehicles to reduce idling.

²⁷ CAP goal #17 - Electrify the municipal fleet- replace fossil fuel powered vehicles with electric alternatives as part of lifecycle activities.

²⁸ CAP goal #18 - Replace heavy duty vehicles with zero emissions alternatives as the technology becomes available.

Table 61: Other User-Funded Assets [Non-Core Machinery & Equipment]: Levels of Service

Community Levels of Service			Technical Levels of Service		
				Current	Proposed
Quality			Percentage of non-core equipment in fair or better condition	83% (+2%)	80%
			Average condition of non-core equipment	59% (Fair)	Good
			Percentage of non-core essential equipment where regulatory inspections have been completed	100%	
Environmental Stewardship	Vehicles and Equipment have minimal impact on the environment	The Township's Climate Action Plan includes the following goals: CAP goal #17 ²⁹			
Performance			Percentage of facilities where annual internal inspections of IT networking equipment have been completed	100%	

Lifecycle Management

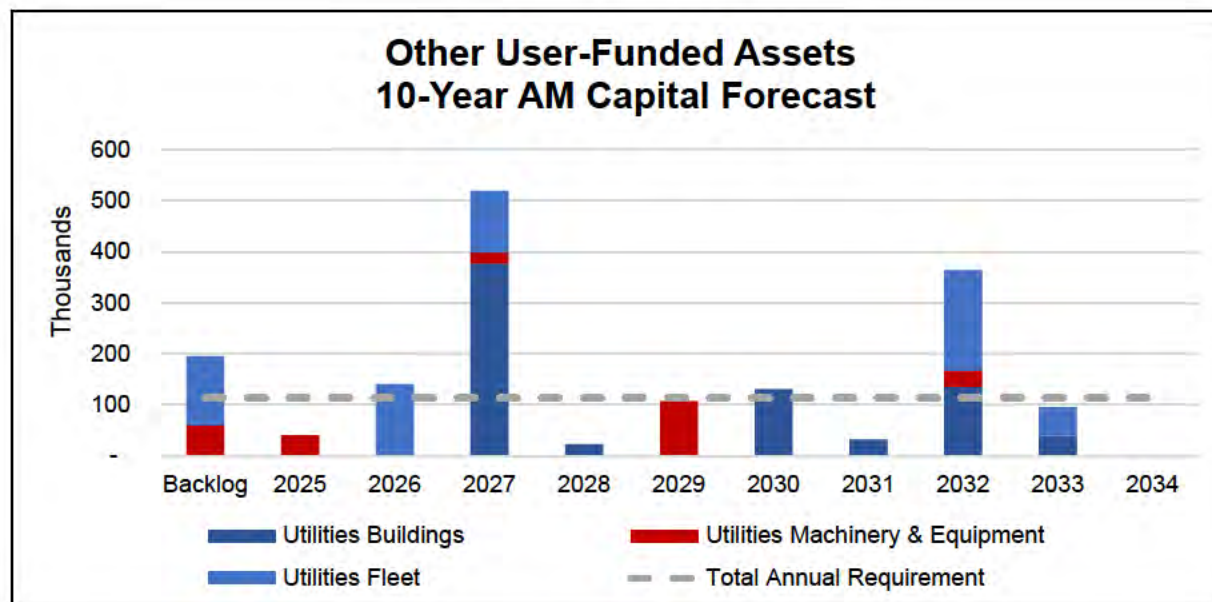
Lifecycle management strategies mirror corresponding asset categories under tax-funded assets.

Asset Management Capital Forecasts

Based on current data, the Annual Requirement that should be allocated to fund the capital replacement of Other User-Funded Assets is \$113,728 -(\$10,106). The 10-year capital forecast totaling \$1,647,940 (+\$792,515) is illustrated in Figure 61.

²⁹ CAP goal #17 - Electrify the municipal fleet- replace fossil fuel powered vehicles with electric alternatives as part of lifecycle activities.

Figure 61: Other User-Funded Assets - 10-Year Capital Forecast



Risk Management

Risk models mirror corresponding asset categories under tax-funded assets.

Figure 62 illustrates the risk matrix for fleet that is generated in Citywide that incorporates the risk models outlined in correlating tax-funded asset categories. Under this model, there is one asset considered high or very high risk due to their condition or consequence of failure. These are also subsequently listed in Table 56.

Figure 62: Other User-Funded Assets - Risk Matrix

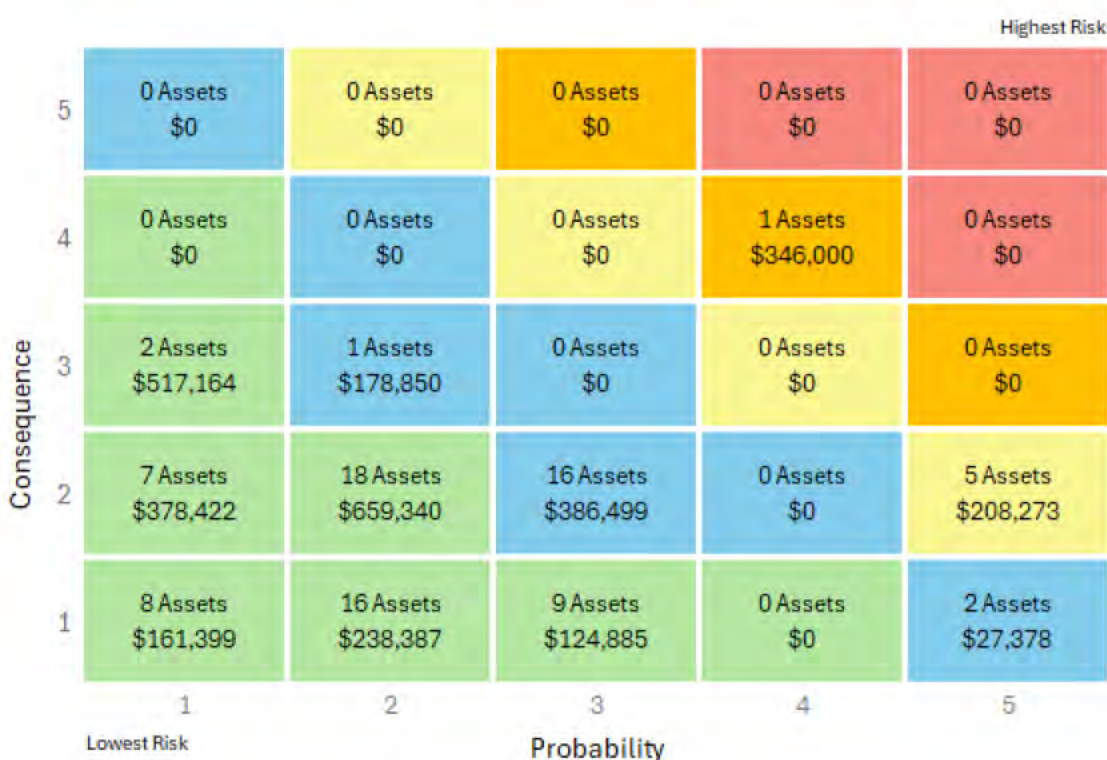


Table 62: Core Sewer System – High-Risk Assets

Asset Name	Location	GIS #	Risk Rating
Millhaven Garage - Parking Lots - Paving & Surfacing	240 County Road #4, RR#3, Bath		High

5. FINANCIAL STRATEGY

5.1. OVERVIEW

For an AMP to be effective and relevant, it is important that it be integrated into financial planning and long-term budgeting strategies. The development of a comprehensive financial plan is necessary for the Township to identify the financial resources needed for a successful, sustainable AM program. The Financial Strategy section develops such a financial plan by providing several options for consideration and concludes with staff recommendations. The plan presented took into consideration the following elements:

- Financial requirements
 - Existing assets
 - Existing service levels
 - Requirements of changes in LOS (will be included in future AMPs)
 - Requirements of growth
- Traditional sources of municipal funding
 - Tax levy
 - Debt
 - Reserves
 - User Rates
- Non-traditional sources of municipal funds
 - Reallocated budgets
 - Partnerships
 - Procurement methods
- Senior Government funds:
 - Canada Community Building Fund ("CCBF") (formerly Federal Gas Tax)
 - Ontario Community Infrastructure Fund ("OCIF")

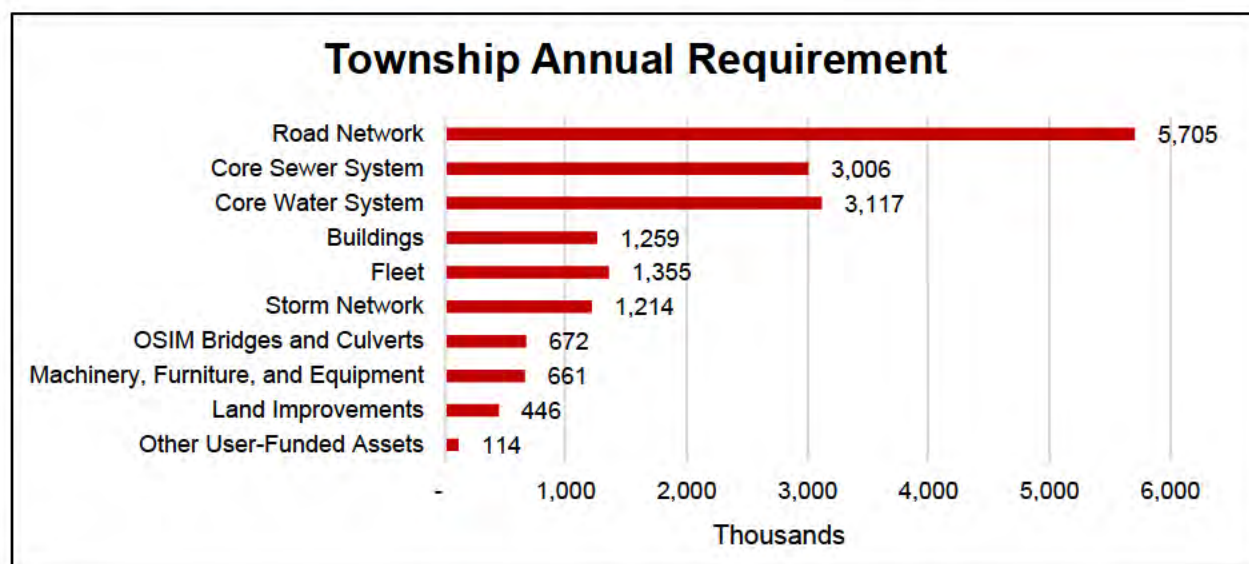
Per Provincial requirements, periodic grants that are not firm in nature are not included. If the financial plan demonstrates a funding shortfall, it is a requirement that a specific plan is included that illustrates how the impact of the shortfall will be managed. In evaluating the funding shortfall, the province may consider the Township's approach to the following:

- Has the reduction of existing LOS been considered to reduce financial requirements?
- What asset management and financial strategies have been considered? For example:
 - Has the use of debt been considered?
 - Do user fees reflect the cost of applicable services? If not, increased user fees should be considered.

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. This is a factor of total Replacement Cost and EUL. In total, the Township should allocate approximately \$17.6 million (+\$1.1M from 2024) annually to address capital requirements for the assets included in this AMP. This consists of \$11.3 million (+\$0.7M) for tax-funded assets and \$6.3 million (+\$0.4M) for user-funded assets. The breakdown by asset category is outlined in Figure 63.

Figure 63: Township Annual Requirement



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.

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. The reiterated table below provides a comparison of potential cost savings available if lifecycle management strategies are implemented across the Road Network, which compares the two scenarios:

1. Lifecycle strategy Scenario – based on the assumptions that lifecycle activities are performed at strategic intervals to extend the service life of assets until replacement is required.
2. End-of-Life Scenario – based on the assumption that assets deteriorate and – without regularly scheduled maintenance and rehabilitation – are replaced at the end of their service life.

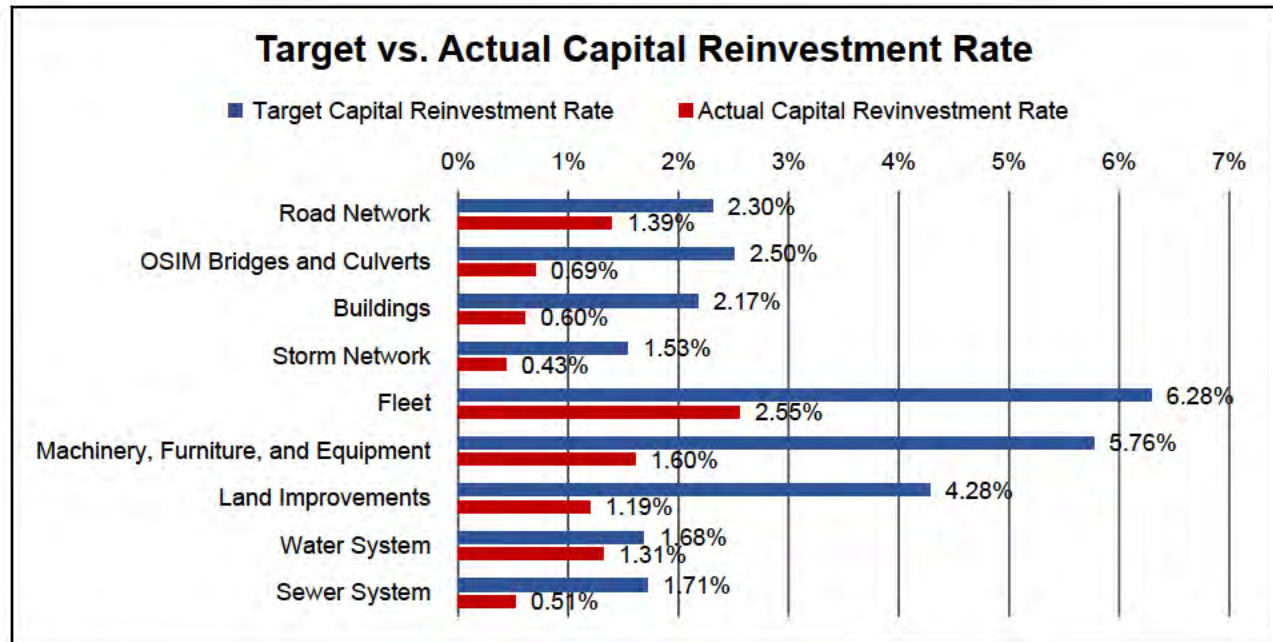
Subcategory	Annual Requirement - Lifecycle (\$)	Annual Requirement - End of Life (\$)	Savings (costs)
Core Assets	4,902,236	6,155,516	1,253,280
Non-Core Assets	802,796	802,796	-
Road Network Total	5,705,033	6,958,312	1,253,280

By using a proactive lifecycle strategy for the Road Network, the Township has the potential of realizing \$1.25 million (+\$272,115) in cost avoidance. This reduces the Annual Requirement of the Core Assets by 20%. As this is the lowest cost option available to the Township, this is the value used in the development of the financial strategy. This approach will be reviewed to see how it may be applied to other asset categories.

Annual Funding

Based on historical sustainable capital funding sources, the Township has committed approximately \$8.6 million towards capital projects annually. This consists of \$5.2 million towards tax-funded assets and \$3.4 million towards user-funded assets. Given the Annual Requirement of \$17.5 million (+\$1.0M), there is currently a Funding Gap of \$9.0 million (+\$1.0M), this translates to an overall actual Capital Reinvestment Rate of 1.04% (-0.05%) as compared to the targeted Capital Reinvestment Rate of 2.13% (+0.03%). Figure 64 breaks this down by asset category.

Figure 64: Target vs. Actual Capital Reinvestment Rate



5.2. TAX-FUNDED ASSETS

Debt Issuances

Table 63 and Table 64 demonstrate how the Township has historically utilized debt for investing in tax-funded assets. There is currently \$3.1 million (-\$0.3M from 2024) of debt outstanding for the tax-funded assets covered by this AMP, with corresponding principal and interest payments of \$446,500 (-\$3,300). These are well within provincially prescribed limits.

Table 63: Historical Tax-Funded Debt Issuances

Asset Category	Current Outstanding Debt	Use of Debt in the Last Five Years				
		2020	2021	2022	2023	2024
Road Network	824,600	-	-	-	-	-
OSIM Bridges and Culverts	-	-	-	-	-	-
Fleet	531,600	-	-	-	-	-
Storm Network	934,500	-	-	-	-	-
Buildings	426,800	-	-	-	-	-
Machinery, Furniture, and Equipment	-	-	-	-	-	-
Land Improvements	348,300	-	-	-	-	-
Natural Assets	-	-	-	-	-	-
Total Tax Funded	3,065,800	-	-	-	-	-

The Township anticipates the assumption of new debt in the upcoming years related to various capital projects.

Table 64: Future Tax-Funded Interest Payments

Asset Category	Principal & Interest Payments in the Next Twenty Years (\$)								
	2025	2026	2027	2028	2029	2030	2035	2040	2045
Total Tax Funded	446,500	374,000	373,600	286,800	246,700	246,300	206,500	87,600	-

Reserve Funds

Reserve Funds are a crucial tool in long-term financial planning. The benefits of reserve funds being available for infrastructure planning include:

- Ability to stabilize tax rates when addressing variable and at times unforeseen factors
- Financing one-time or short-term investments
- Accumulating the funding for significant future infrastructure investments
- Managing the use of debt
- Normalizing infrastructure funding requirement

Table 65 outlines the reserve funds available for tax-funded assets and the asset categories they are applicable.

Table 65: Tax-Funded Asset Replacement Reserve Funds

Reserve/Reserve Fund	Balance (December 31, 2024) (\$) ³⁰	Asset Category
General Capital Reserve Fund	1,071,036	All
Fleet & Equipment Replacement Reserve Fund	1,712,565	Fleet, Machinery, Furniture and Equipment
Amherst Island Assets Reserve Fund	92,929	All (restricted by geography)
Ice Resurfacer Reserve Fund	26,495	Fleet
Road Use Agreement Reserve Fund	479,731	Road Network
Fire Training Centre Reserve	67,241	Buildings
Total:	3,449,997	

³⁰ Balances subject to revision during finalization of 2024 Financial Statements. There is a significant unfinanced capital outlay at the end of 2024, a portion of which will be considered user-funded upon capitalization.

Current Funding

Table 66 shows, by asset category, the Township's average Annual Requirements and current funding positions.

Table 66: Tax-Funded Assets - Current Funding

Asset Category	Avg. Annual Requirement (\$)	Annual Funding Available (\$)				Annual Deficit (\$)
		Taxes	CCBF (formerly Gas Tax)	OCIF	Total Available	
Road Network	5,705,033	1,583,200	564,130	1,299,608	3,446,938	2,258,095
OSIM Bridges and Culverts	671,990	186,500	-	-	186,500	485,490
Buildings	1,259,118	349,400	-	-	349,400	909,718
Storm Network	1,213,873	336,800	-	-	336,800	877,073
Fleet	1,355,099	550,000	-	-	550,000	805,099
Machinery, Furniture, and Equipment	661,194	183,500	-	-	183,500	477,694
Land Improvements	445,726	123,700	-	-	123,700	322,026
Natural Assets	-	-	-	-	-	-
Total:	11,312,032	3,313,100	564,130	1,299,608	5,176,838	6,135,194

The average Annual Requirement for the above asset categories is \$11.3 million (+\$0.7M). Annual revenue currently allocated to these assets for capital purposes is \$5.2 million. This results in an annual funding gap of \$6.1 million (+\$0.7M). This means that the above infrastructure categories are currently funded at 46% of their long-term requirements.

Funding Requirement

In 2024, The Township had annual tax revenues of \$21,437,783. Table 67 illustrates, without consideration of any other revenue sources or cost containment strategies, the tax levy change necessary over time to achieve full funding.

Table 67: Tax-Funded Assets - Tax Change Required

Asset Category	Tax Change Required for Full Funding
Road Network	12.6%
OSIM Bridges and Culverts	2.3%
Buildings	4.3%
Storm Network	4.2%
Fleet	3.8%
Machinery, Furniture, and Equipment	2.3%
Land Improvements	1.5%
Natural Assets	0.0%
Total	30.9%

Previous versions of the AMP have recommended the use of debt reductions savings to reduce the funding required to achieve full funding. The Township is anticipating the assumption of additional debt and as such debt reduction savings could be significantly reduced or eliminated.

Table 68: Tax Levy Increase Scenarios

	Without Capturing Changes				Capturing Changes			
	5 Years	10 Years	15 Years	20 Years	5 Years	10 Years	15 Years	20 Years
Infrastructure Deficit	6,135,194	6,135,194	6,135,194	6,135,194	6,135,194	6,135,194	6,135,194	6,135,194
Change in Debt Costs	N/A	N/A	N/A	N/A	(200,200)	(240,000)	(358,900)	(446,500)
Resulting Infrastructure Deficit:	6,135,194	6,135,194	6,135,194	6,135,194	5,934,994	5,895,194	5,776,294	5,688,694
Tax Increase Required	28.6%	28.6%	28.6%	28.6%	27.7%	27.5%	26.9%	26.5%
Annually:	5.7%	2.9%	1.9%	1.4%	5.5%	2.7%	1.8%	1.3%

Recommendations

It is recommended that the Township implement the 20-year option that does not include the use of reductions in debt payments. This involves full funding being achieved over 20 years by:

- Increasing tax revenues by 1.4% each year for the next 20 years solely for the purpose of phasing in full funding to the asset categories covered in this section of the AMP.
- Allocating the CCBF and OCIF revenue as outlined previously.
- Increasing existing and future infrastructure budgets by the applicable CPI on an annual basis in addition to the deficit phase-in.

It is understood that raising tax revenues by the amounts recommended above for infrastructure purposes will be difficult to do. However, considering a longer phase-in window may have greater consequences in terms of infrastructure failure.

The previous plan had envisioned using reductions in debt servicing costs to minimize the increases however with the on-going WJH Project and other capital projects additional debt will be needed in the short-term eliminating those potential savings. The Township has also not kept pace with Growth and CPI adjustments to the existing infrastructure budgets as intended due to the higher-than-normal rate of inflation the last few years.

Based on the 2025 AMP the infrastructure deficit has continued to increase due to growth, revised replacement costs and inflation and is now \$0.7M higher than 2024. To continue to meet the 20-

year target, the annual increase in tax revenues for capital asset management would need to be increased from 1.1% to 1.3% if debt savings were included and 1.4% without.

Although the recommendation achieves full funding on an annual basis in 20 years and provides financial sustainability over the period modeled, the recommendations do require prioritizing capital projects to fit within the resulting annual funding available. Table 69 outlines the current investment backlog of \$15.2 million (+\$4.0M) by asset category.

Table 69: Tax-Funded Assets - Investment Backlog

Asset Category	Investment Backlog
Road Network	6,000
OSIM Bridges and Culverts	-
Fleet	8,120,800
Storm Network	1,818,700
Buildings	2,624,300
Machinery, Furniture, and Equipment	1,193,200
Land Improvements	1,415,100
Total	15,178,100

Prioritizing future projects will require the current data to be updated with condition-based data. Although the recommendations do not include further use of debt, the results of the condition-based analysis may require otherwise.

O.Reg. 588/17 will require that the Township integrates the proposed LOS for all asset categories in its AMP updates in future years. It is recommended that future planning reflect adjustments to LOS and their potential impacts on reserve fund balances.

5.3. USER-FUNDED ASSETS

Debt Issuances

Table 70 and Table 71 demonstrate how the Township has historically utilized debt for investing in user-funded assets. There is currently \$3.8 million (-\$0.6M) of debt outstanding for the user-funded assets covered by this AMP, with corresponding principal and interest payments of \$697,800 (-\$40,500). These are well within provincially prescribed limits.

Table 70: User-Funded Assets - Historical Debt Issuances

Asset Category	Current Outstanding Debt	Use of Debt in the Last Five Years				
		2020	2021	2022	2023	2024
Core Water System	1,362,700	-	-	-	-	-
Core Sewer System	2,437,600	-	-	-	-	-
Other User-Funded Assets	-	-	-	-	-	-
Total User-Funded	3,800,300	-	-	-	-	-

The Township anticipates the assumption of new debt in the upcoming years related to various capital projects.

Table 71: User-Funded Assets - Future Debt Repayments

Asset Category	Principal & Interest Payments in the Next Twenty Years (\$)								
	2025	2026	2027	2028	2029	2030	2035	2040	2045
Total User-Funded - Water	239,000	152,200	149,400	146,700	143,900	141,100	71,600	57,700	-
Total User-Funded - Sewer	458,800	450,300	449,700	312,100	246,900	128,400	88,100	38,300	-
Total	697,800	602,500	599,100	458,800	390,800	269,500	159,700	96,000	-

Reserve Funds

Reserve Funds are a crucial tool in long-term financial planning. The benefits of reserve funds being available for infrastructure planning include:

- Ability to stabilize user rates when addressing variable and at times unforeseen factors.
- Financing one-time or short-term investments.
- Accumulating the funding for significant future infrastructure investments.
- Managing the use of debt.
- Normalizing infrastructure funding requirements.

Table 72 outlines the reserve funds available for user-funded assets and the asset categories they are applicable. The Township completes a water and sewer user rate study every five years that incorporates the fluctuations in Annual Requirements and the use of reserve funds within the user-funded asset categories.

Table 72: User-Funded Assets - Reserve Funds

Reserve/Reserve Fund	Balance (December 31, 2024) (\$) ³¹	Asset Category
Water Capital Reserve Fund	0	All water infrastructure
Water Impost Fees - Club Fee Reserve Fund	4,739,154	
Sewer Capital Reserve Fund	368,314	All sewer infrastructure
Sewer Impost Fees - Club Fee Reserve Fund	6,227,138	
Fleet & Equipment Replacement Reserve Fund	-	Utilities Fleet, Machinery, Furniture and Equipment
Total:	11,334,606	

³¹ Balances subject to revision during finalization of 2024 Financial Statements.

Current Funding

Table 73 shows, by asset category, the Township's average Annual Requirements, current funding positions, and funding increases required to achieve full funding on assets funded by user revenue.

Table 73: User-Funded Assets - Current Funding

Asset Category	Avg. Annual Requirement (\$)	Annual Funding Available (\$)			Annual Deficit (\$)
		User Rates	Other	Total Available	
Water System	3,173,418	2,474,800	-	2,474,800	698,618
Sewer System	3,063,267	915,700	-	915,700	2,147,567
Total:	6,236,685	3,390,500	-	3,390,500	2,846,185

The average Annual Requirement for the above asset categories is \$6.2 million (+\$0.3M). Annual revenue currently allocated to these assets for capital purposes is \$3.4 million. This results in an annual funding gap of \$2.8 million (+\$0.2M). This means that the above infrastructure categories are currently funded at 46% (-11%) of their long-term requirements.

Funding Requirement

In 2024, the Township had annual user revenues of \$12,363,800. Table 74 illustrates, without consideration of any other revenue sources or cost containment strategies, the user revenue changes necessary over time to achieve full funding.

Table 74: User-Funded Assets - Revenue Change Required

Asset Category	Rate Change Required for Full Funding
Water System	10.1%
Sewer System	39.6%
Total	23.0%

Previous versions of the AMP have recommended the use of debt reductions savings to reduce the funding required to achieve full funding. The Township is anticipating the assumption of additional debt and as such debt reduction savings could be significantly reduced or eliminated.

Table 75: Water User Rate Increase Scenarios

	Without Capturing Changes				Capturing Changes			
	5 Years	10 Years	15 Years	20 Years	5 Years	10 Years	15 Years	20 Years
Infrastructure Deficit	698,618	698,618	698,618	698,618	698,618	698,618	698,618	698,618
Change in Debt Costs	N/A	N/A	N/A	N/A	(97,900)	(167,400)	(181,300)	(239,000)
Resulting Infrastructure Deficit:	698,618	698,618	698,618	698,618	600,718	531,218	517,318	459,618
Rate Increase Required	10.1%	10.1%	10.1%	10.1%	4.9%	4.3%	4.2%	3.7%
Annually:	2.0%	1.0%	0.7%	0.5%	1.0%	0.4%	0.3%	0.2%

Table 76: Sewer User Rate Increase Scenarios

	Without Capturing Changes				Capturing Changes			
	5 Years	10 Years	15 Years	20 Years	5 Years	10 Years	15 Years	20 Years
Infrastructure Deficit	2,147,567	2,147,567	2,147,567	2,147,567	2,147,567	2,147,567	2,147,567	2,147,567
Change in Debt Costs	N/A	N/A	N/A	N/A	(330,400)	(370,700)	(420,500)	(458,800)
Resulting Infrastructure Deficit:	2,147,567	2,147,567	2,147,567	2,147,567	1,817,167	1,776,867	1,727,067	1,688,767
Rate Increase Required	39.6%	39.6%	39.6%	39.6%	14.7%	14.4%	14.0%	13.7%
Annually:	7.9%	4.0%	2.6%	2.0%	2.9%	1.4%	0.9%	0.7%

Recommendations

It is recommended that the Township implement the 20-year option that does not include the use of reductions in debt payments. This involves full funding being achieved over 20 years by:

- Increasing water user revenues by 0.5% each year for the next 20 years solely for the purpose of phasing in full funding to the asset categories covered in this section of the AMP
- Increasing sewer user revenues by 2% each year for the next 20 years solely for the purpose of phasing in full funding to the asset categories covered in this section of the AMP
- Increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.

It is understood that raising user revenues by the amounts recommended above for infrastructure purposes will be difficult to do. However, considering a longer phase-in window may have greater consequences in terms of infrastructure failure.

The previous plan had envisioned using reductions in debt servicing costs to minimize the increases however with various on-going capital projects additional debt will potentially be needed in the short-term eliminating those savings. The Township has also not kept pace with Growth and CPI adjustments to the existing infrastructure budgets as intended due to the higher-than-normal rate of inflation the last few years.

Although the recommendation achieves full funding on an annual basis in 20 years and provides financial sustainability over the period modeled, the recommendations do require prioritizing capital projects to fit within the resulting annual funding available. Table 77 outlines the current investment backlog of \$15.3 million by asset category.

Table 77: User-Funded Assets - Investment Backlog

Asset Category	Investment Backlog
Core Water System	14,266,860
Core Sewer System	859,707
Other User-Funded Assets	195,130
Total	15,321,697

Prioritizing future projects will require the current data to be updated with condition-based data. Although the recommendations do not include further use of debt, the results of the condition-based analysis may require otherwise.

O.Reg. 588/17 will require that the Township integrates the proposed LOS for all asset categories in its AMP updates in future years. It is recommended that future planning reflect adjustments to LOS and their potential impacts on reserve fund balances.

6. IMPACTS OF GROWTH

6.1. GROWTH PROJECTIONS

Growth in the Township will play a significant role in AM and the need to expand infrastructure to ensure LOS are continually met. Various studies such as the Infrastructure Master Plan, the Development Charges Study and the Connection Fee Study identify growth-related capital infrastructure that will likely be required to service growth. These studies incorporate growth projections from the Township's Population, Housing, and Employment Projections study that was completed in 2019. According to this study, the Township is anticipating growth via population and employment outlined in Table 78. Approximately 96% of the growth projected by 2046 is derived from development occurring in the urban areas of Amherstview, Bath, and Odessa.

Growth projections act as a tool to guide municipal practices and documents such as the Infrastructure Master Plan completed in 2024, and the Township's updated Official Plan approved by Council in 2021. It is important to note that actual results may deviate from these studies, as it the current case. For example, the growth projection study predicted 6,960 occupied households by 2021 while the 2021 census results note 7,145 dwelling units. Additionally, growth in 2022 and 2023 outpaced the predicted 122 units per year by an average of 75% and the projected household estimate for 2026 was achieved three years early. While housing starts have slowed in 2024, the total number of occupied households remains slightly ahead of the 2019 study projections.

Table 78: Growth Study Projections

Year	Population	Growth from 2021	Occupied Households	Growth from 2021	Employment	Growth from 2021
2021	18,390		6,960		4,980	
2026	19,450	1060	7,570	610	5,260	280
2031	20,430	2,040	8,210	1,250	5,530	550
2036	21,260	2,870	8,740	1,780	5,760	780
2041	21,960	3,570	9,200	2,240	5,960	980
2046	22,600	4,210	9,730	2,770	6,140	1,160

6.2. IMPLICATIONS TO ASSET MANAGEMENT

By July 1, 2025, the Township's AMP must indicate how the assumptions regarding future changes in population and economic activity inform the preparation of the lifecycle management and financial strategy.

The AMP is focused on the costs related to LOS for existing assets, however the Infrastructure Master Plan includes expanded infrastructure and services necessitated by forecasted population growth. The Township incorporates planned growth-related infrastructure in its 10-year capital budget, development charges studies, impost studies and long-range financial plan. As growth-related assets are constructed or acquired, they shall be integrated into the Township's AMP. While the addition of residential units will add to the existing assessment base and offset some costs associated with growth, the Township will need to review the lifecycle costs of growth-related infrastructure additions. These costs will be considered in long-term funding strategies that are designed to, at a minimum, maintain the current LOS.

APPENDIX A – CITYWIDE ASSET HIERARCHY

APPENDIX A - CITYWIDE ASSET HIERARCHY

Class	General Infrastructure		Core Infrastructure	
Category	Building Fleet Furniture & Equipment Information Technology	Land Land Improvements Machinery and Equipment Road Network	Sanitary System Storm Sewer System Water System	
Segments	Facilities Fleet	Equipment	Right of Way (ROW)	
Department	Asset type			
Corporate Services (CS)	120 Odessa Admin Office	510 Glenwood Cemetery	515 Fourth Line Cemetery	
	123 Corporate IT Support	511 Lutheran Union Cemetery	519 Bell Cemetery	
	128 Odessa Garage (FM)	512 Pentland Cemetery	700 Vacant Land	
	135 88 Main St. Bath	513 Switzerville Cemetery		
Emergency Services (ES)	210 Emergency Services	218 Amherstview Fire Station	224 Fire Training Ground Facility	
	212 Fire Training Classroom Facility	219 Bath Fire Station	700 Vacant Land	
	217 Odessa Fire Station	220 Amherst Island Fire Station		
Community & Customer Services (CCS)	332 Township Safety Devices	704 Bayview Pioneer Park	728 Loyalist Park	
	333 Transportation Services	705 Amherst Island Big Marsh Wetland	729 Bath Bayshore Drive Parkette	
	337 Amherst Island Garage	706 Bridge Street Park Odessa	731 McPherson Park	
	338 Transportation Vehicles & Equipment	707 Briscoe Park	732 Millcreek Park	
	339 Bath Public Works Garage	708 Bulch Park	733 Odessa William St Park	
	340 Roads Hardtop	709 Odessa Centennial Park	734 Ridge Park	
	341 Bridges & Culverts	710 Recreation Services	736 Sk8er Park	
	343 Roads Loosetop	711 Amherst Island Centennial Park	737 Kilminster Park	
	345 Roads Equipment	712 Amherstview Centennial Park	738 Sunnyside Park	
	347 County Road 6 Garage	713 Dinosaur Park	739 Willie Pratt Sports Field	
	348 County Rd 6 Sand and Salt Storage Facility	714 Elwood Dopking Park	742 Leisure and Activity Centre	
	349 Millhaven Salt Dome and Shed	715 W.J. Henderson Rec Centre	750 Parks	
	350 Storm Sewer System Urban	716 Island View Park	753 Sports fields	
	351 Rural Storm Sewer System	717 Eastside Park	754 Sand Beach	
	361 Streetlights	718 Jessup Lane Park	760 Babcock Mill & Park	
	366 Sidewalks/ Curbs	719 Finkle's Shore Park	761 Fairfield House & Park	
	382 Transit	721 Harewood Park	771 Amherstview Community Hall	
	465 Violet Landfill	722 Hawley Court Park	774 Neilson Store & Stella Bay Park	
	480 Loyalist Waste	723 Heritage Park	776 Wilton Hall	
	485 Amherst Island Landfill	724 J. Earl Burt Memorial Park	777 Wilton Park	
	700 Vacant Land	725 Recreation Vehicles & Equipment	778 Wilton Cenotaph	
	701 Bath Centennial Park South	726 Lakeview Park	782 Odessa Library	
	702 Bath Centennial Park North	727 Lighthouse Park	783 Amherst Island Library & Ferry Office	
	703 Bath Park			
Economic Growth & Community Development Services (EGCDS)	401 Loyalist East Sewage Treatment Plant	413 Bath Sewage Pumping Station #1	436 Fairfield Distr Reservoir	
	402 Loyalist East Sewer Collection System	414 Bath Sewage Pumping Station #2	441 Bath Water Treatment Plant	
	403 Lakeview Sewage Pumping Station	415 Bath Sewage Pumping Station #3	442 Bath Water Distribution	
	404 Islandview Sewage Pumping Station	416 Bath Sewage Pumping Station #4	443 Bath Water Tower	
	405 Bridge Street Pumping Station	431 Fairfield Water Treatment Plant	451 Utilities Vehicles & Equipment	
	406 Taylor Kidd Sewage Pumping Station	432 Fairfield Water Distribution	452 Millhaven Garage	
	411 Bath Sewage Treatment Plant	433 Fairfield Distr Booster Station	700 Vacant Land	
	412 Bath Sewer Collection System	434 Odessa Water Tower	810 Planning and Development Services	
		435 Amherstview Water Tower		

Asset Subtype	Component
7101 Land	
7402 Siteworks	Boat Ramps & Docks
	Outdoor Recreation
	Play Structures
	Siteworks - Other
	Siteworks - Parks
	OSIM Bridge
7403 Building Electrical	
7404 Building Fixtures	
7405 Building HVAC	
7406 Building Mechanical	
7407 Building Structural	
7408 Electrical Equip/Control & Instrumentation	
7409 Mechanical Equipment	
7410 Tankage	
7411 Machinery & Equipment	
7412 Furniture, Fixtures & Office Equipment	
7413 Sites Services	Outdoor Recreation
	Siteworks - Other
	Siteworks - Parks
7421 Manholes	
7422 Catchbasins	
7423 Stormwater Treatment Unit	
7424 Stormwater Management Facilities	
7446 Streetlights Pole	
7448 Bridges	Sizes in mm
	OSIM Bridge
7450 Bridge Guiderails	OSIM Culvert
7452 Steel Cross Road Culverts	Sizes in mm
7453 Driveway Culverts	
7454 Plastic/Precast Cross Road Culverts	Sizes in mm
7455 Road Base	
7456 Road Guiderails	
7457 Road Surface - Paved	
7458 Road Surface - Surface Treatment	
7460 Sidewalks/curbs	
7463 Communication & Security	
7464 Fleet	
7465 Software (Excluding Licenses)	
7466 Personal Computers	
7467 Servers and Networks	
7468 Printers & Photocopiers	
7469 Mobile Devices	
7470 Streetlights - Arm and Lumiere	
7471 Signs	
7475 Sanitary Sewer Pipes (50mm - 150mm)	03 - HDPE
7476 Sanitary Sewer Pipes (200mm - 250mm)	04 - Ductile Iron (DI)
7477 Sanitary Sewer Pipes (300mm - 375mm)	05 - PVC
7478 Sanitary Sewer Pipes (400mm - 450mm)	06 - Asbestos Cement (AC)
7479 Sanitary Sewer Pipes (525mm - 750mm)	07 - Concrete
7482 Water Pipes (25mm - 50mm)	01 - Cast Iron (CI)
7483 Water Pipes (100mm - 150mm)	02 - Copper
7484 Water Pipes (200mm - 250mm)	03 - HDPE
7485 Water Pipes (300mm)	04 - Ductile Iron (DI)
	05 - PVC
7486 Water Pipes (400mm)	06 - Asbestos Cement (AC)
7487 Water Pipes (N/A mm)	09 - Unknown
7488 Water Meters	01 - 5/8"
	02 - 3/4"
	03 - Oversized
	04 - Unknown
	05 - 5/8" x 3/4"
7489 Hydrant	
7490 Storm Sewer Pipes (<450mm)	03 - HDPE
	05 - PVC
7491 Storm Sewer Pipes (450mm- 750mm)	07 - Concrete
7492 Storm Sewer Pipes (800mm- 1200mm)	08 - Corrugated Steel (CSP)
7493 Storm Sewer Pipes (>1200mm)	09 - Unknown
7494 Valves	Sizes in mm

APPENDIX B – INFRASTRUCTURE MAPS

B.1. Roads Map

LOYALIST TOWNSHIP ROADS & COMMUNITIES



GIS Services - IT Division
P.O. Box 70, 263 Main Street
Odessa, Ontario
K0H 2H0
613-386-7351

Production Date: April 5, 2024
Datum/Projection: Nad 83, UTM 18

Data Sources: Loyalist Township Database
Land Information Ontario

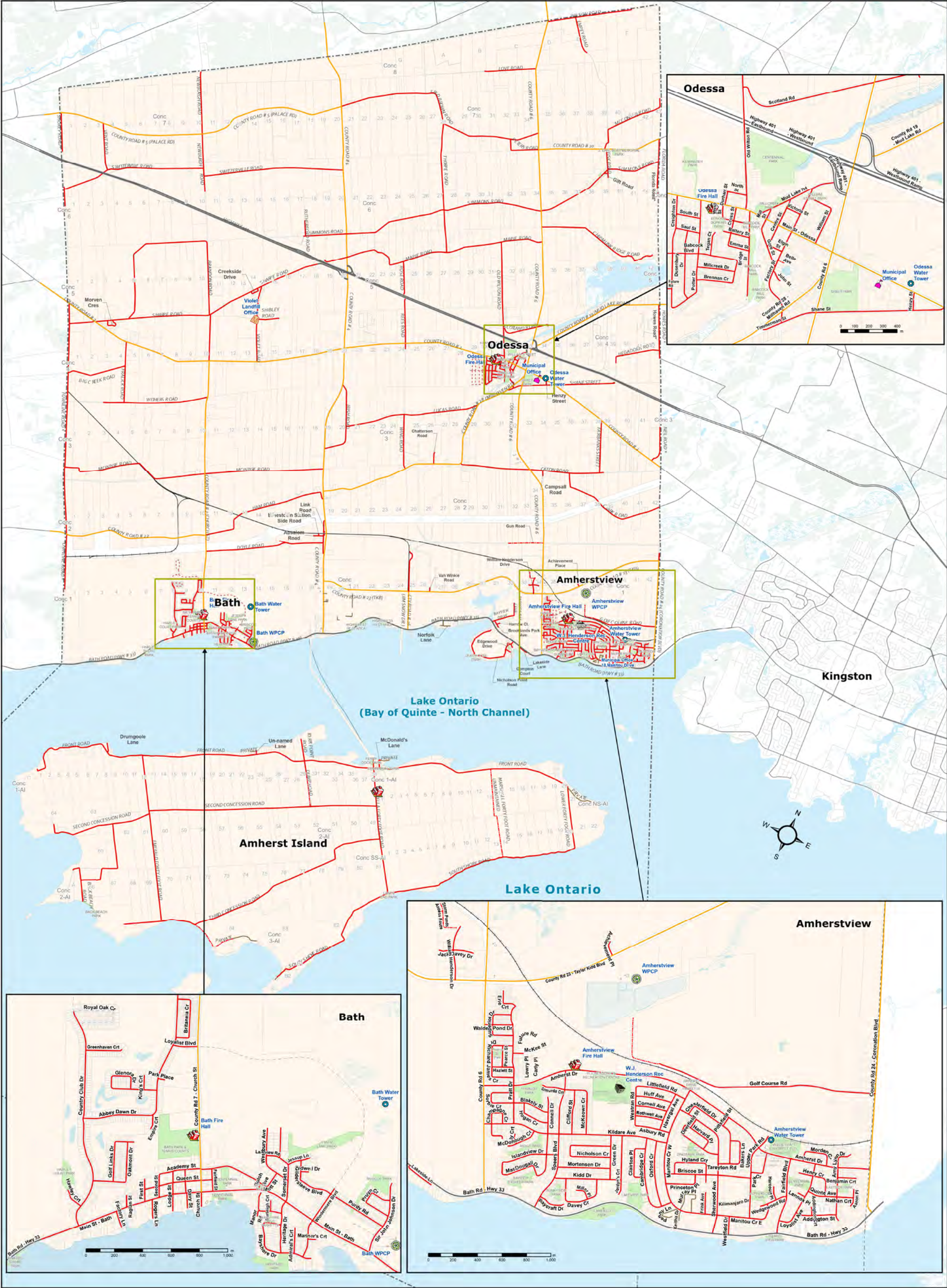
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Legend

- Township Road - Maintained
- Township Road - Not Maintained
- Future Road (potential)
- County Road
- MTO Road
- Private Road

Parcel Fabric
Sewage Lagoons
Parcel Fabric
Geographic Lot



B.2. Bridges & Culverts Map

OSIM Bridges and Higher Risk Structures



GIS Services - IT Division
P.O. Box 70, 263 Main Street
Odessa, Ontario
K0L 2J6
813-386-7351

Production Date: December 4th, 2024

Datum/Projection: NAD 83, UTM 18

Data Sources: Loyalist Township Database
Land Information Ontario

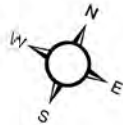
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Road Network

- Township - Maintained
- Township - Not Maintained
- County Road
- MTO Road

Bridges

- Bridge
- OSIM Culverts
- StaffGeo.DBO.Stm_Culverts selection 1



0 1 2 3 4 Km



B.3. Storm System Maps

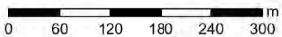
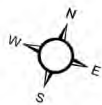
STORM SEWER & MANHOLE MAPS

AMHERSTVIEW



Prepared by:
Corporate Services
IT Division
P.O. Box 70, 263 Main Street
Odessa, Ontario
K0H 2H0
613-366-7351

- | | | | | | |
|--|----------------|---------------------------------|-----------------------|--------|--------|
| ✕ Non-Township Structure - Do Not Maintain | • Sewer Outlet | — Walkways - Parks + Recreation | Storm Pipe Sizes (mm) | — 600 | — 1650 |
| ✕ Private Structure | • Cleanout | — Walkways - Transportation | — 100 | — 675 | |
| • Stormwater Treatment Unit | • Yard Basin | • Site Storm Structures | — 150 | — 700 | |
| • Catchbasin | | • Site Storm Sewers | — 200 | — 750 | |
| • Catchbasin MH | | • Arch Culvert | — 250 | — 825 | |
| • Ditch Inlet CB | | • Culvert | — 300 | — 900 | |
| • Twin Inlet CB | | • Driveway Culvert | — 375 | — 975 | |
| • Manhole | | • Other Culvert | — 400 | — 1050 | |
| • Ditch Inlet MH | | | — 450 | — 1200 | |
| • Culvert | | | — 500 | — 1350 | |
| • Sewer Inlet | | | — 525 | — 1500 | |

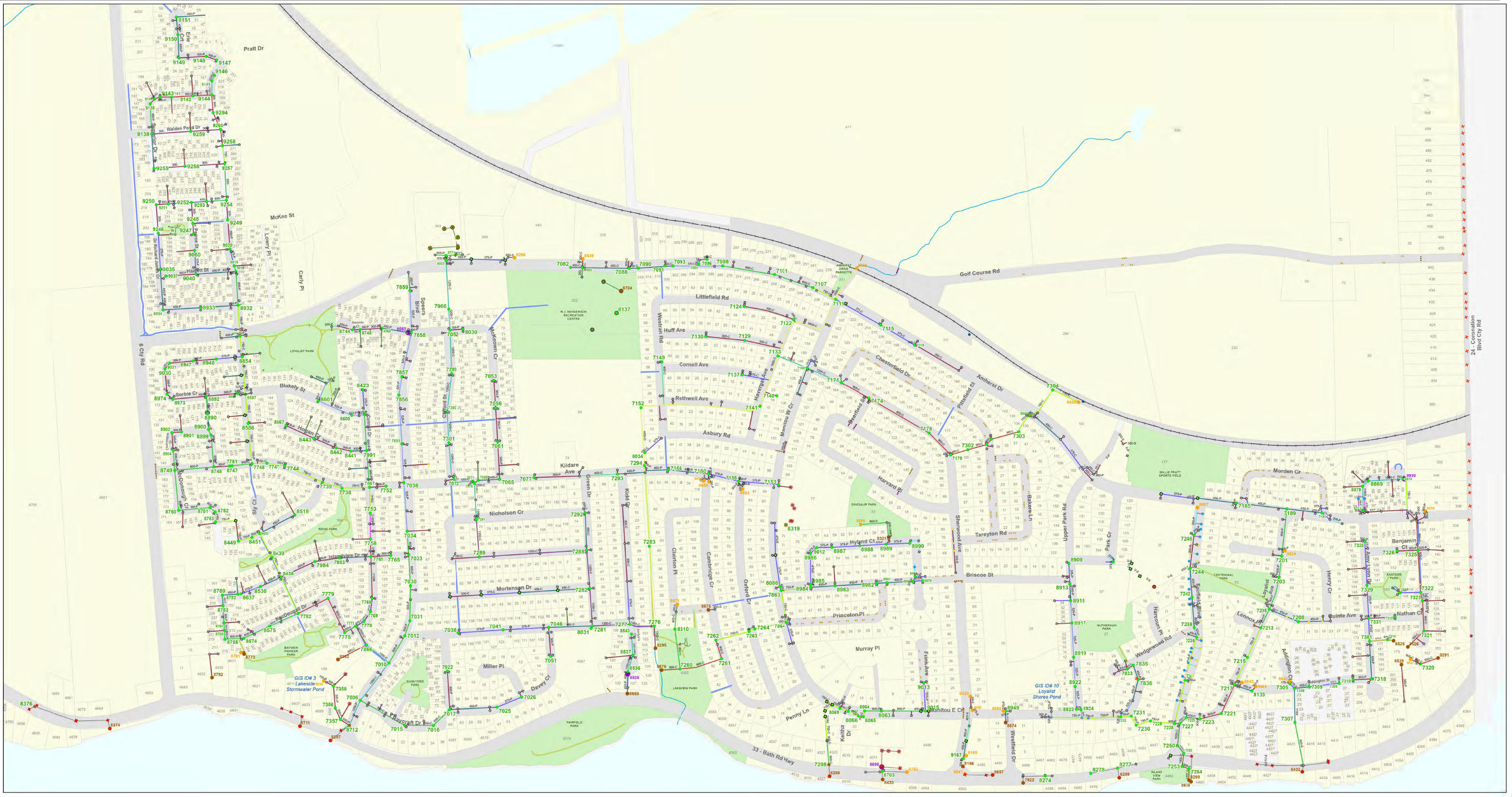


Production Date: April 09, 2024

Datum/Projection: Nad 83, UTM 18

Data Sources: Loyalist Township Database
Land Information Ontario

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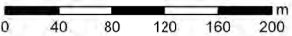
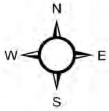
STORM SEWER & MANHOLE MAPS

ODESSA



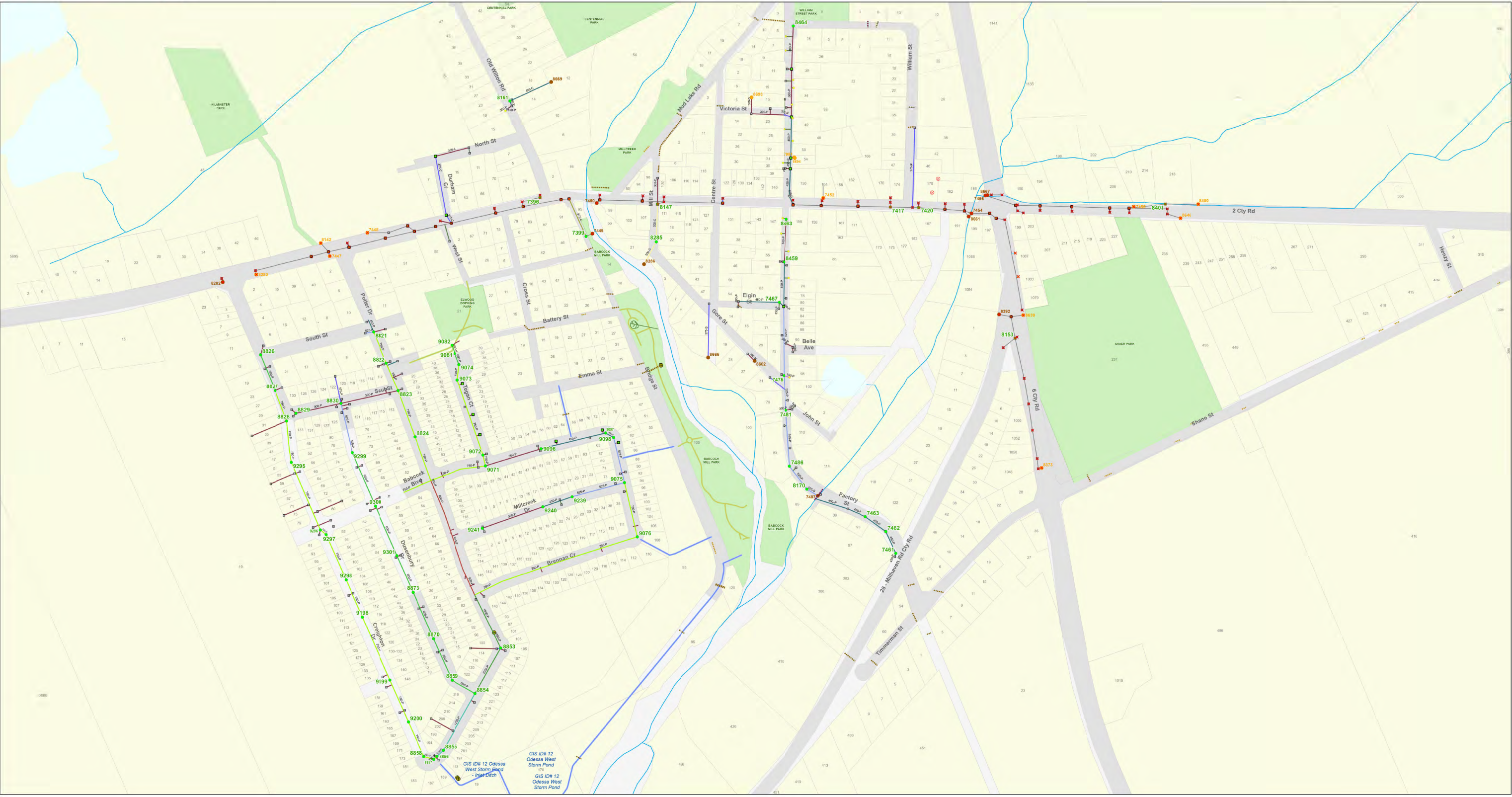
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IT Division
P.O. Box 70, 263 Main Street
Odessa, Ontario
K0H 2H0
613-366-7351

- | | | | | |
|--|----------------|-----------------------|------|-------------------------------|
| ✱ Non-Township Structure - Do Not Maintain | ● Sewer Outlet | Storm Pipe Sizes (mm) | 600 | Walkways - Parks + Recreation |
| ✱ Private Structure | ● Yard Basin | 150 | 675 | Walkways - Transportation |
| ■ Catchbasin | | 200 | 750 | ● Site Storm Structures |
| ■ Catchbasin MH | | 250 | 900 | ● Site Storm Sewers |
| ■ Ditch Inlet CB | | 300 | 1050 | Culverts |
| ■ Twin Inlet CB | | 375 | 1200 | Arch Culvert |
| ● Manhole | | 450 | | Culvert |
| ● Ditch Inlet MH | | 500 | | Driveway Culvert |
| ● Sewer Inlet | | 525 | | Other Culvert |



Production Date: April 10, 2024
Datum/Projection: Nad 83, UTM 18
Data Sources: Loyalist Township Database
Land Information Ontario

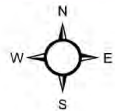
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IT Division
P.O. Box 70, 263 Main Street
Odessa, Ontario
K0H 2H0
613-366-7351

- | | | | | |
|--|----------------|-----------------------|------|------------------------------|
| ✖ Non-Township Structure - Do Not Maintain | ● Sewer Inlet | Storm Pipe Sizes (mm) | 525 | Wakways - Parks + Recreation |
| ✖ Private Structure | ● Sewer Outlet | 200 | 600 | Wakways - Transportation |
| ● Stormwater Treatment Unit | ● Yard Basin | 225 | 675 | Site Storm Sewers |
| ■ Catchbasin | | 250 | 750 | Culverts |
| ■ Catchbasin MH | | 275 | 900 | Arch Culvert |
| ■ Ditch Inlet CB | | 300 | 1050 | Culvert |
| ■ Twin Inlet CB | | 375 | 1200 | Driveway Culvert |
| ● Manhole | | 400 | | Other Culvert |
| ● Ditch Inlet MH | | 450 | | |



Production Date: April 10, 2024
Datum/Projection: Nad 83, UTM 18
Data Sources: Loyalist Township Database
Land Information Ontario

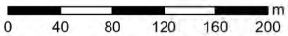
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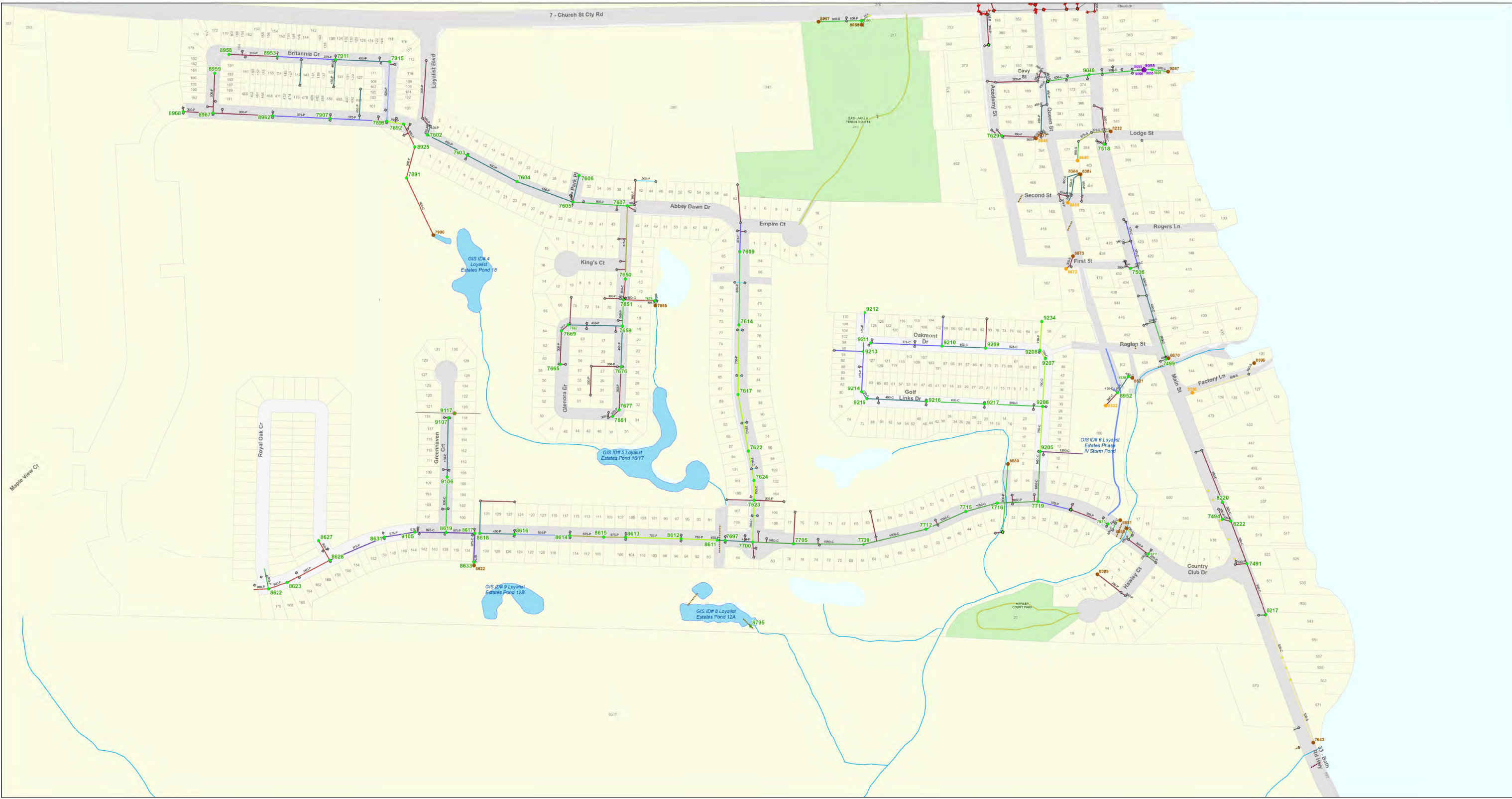
Prepared by:
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IT Division
P.O. Box 70, 263 Main Street
Odessa, Ontario
K0H 2H0
613-366-7351

- | | | | | |
|--|----------------|------------------------------|------|-------------------------------|
| ✱ Non-Township Structure - Do Not Maintain | • Sewer Inlet | Storm Pipe Sizes (mm) | 600 | Walkways - Parks + Recreation |
| • Private Structure | • Sewer Outlet | 150 | 675 | Walkways - Transportation |
| • Stormwater Treatment Unit | • Yard Basin | 200 | 750 | Storm Ponds |
| ■ Catchbasin | | 250 | 900 | Culverts |
| ■ Catchbasin MH | | 300 | 975 | Arch Culvert |
| ■ Ditch Inlet CB | | 375 | 1050 | Culvert |
| ■ Twin Inlet CB | | 450 | 1350 | Driveway Culvert |
| • Manhole | | 500 | | Other Culvert |
| • Ditch Inlet MH | | 525 | | |



Production Date: April 10, 2024
Datum/Projection: Nad 83, UTM 18
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B.4. Buildings Map

Township Facilities & Buildings



Corporate Services, Strategy & Innovation
GIS Services, IT Division
P.O. Box 70, 263 Main Street
Odessa, Ontario
K0H 2H0
613-386-7351

Production Date: December 4, 2024

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Legend

Township Building

Township Road - Maintained

Township Road - Not Maintained

Future Road

County Road

MTO Road

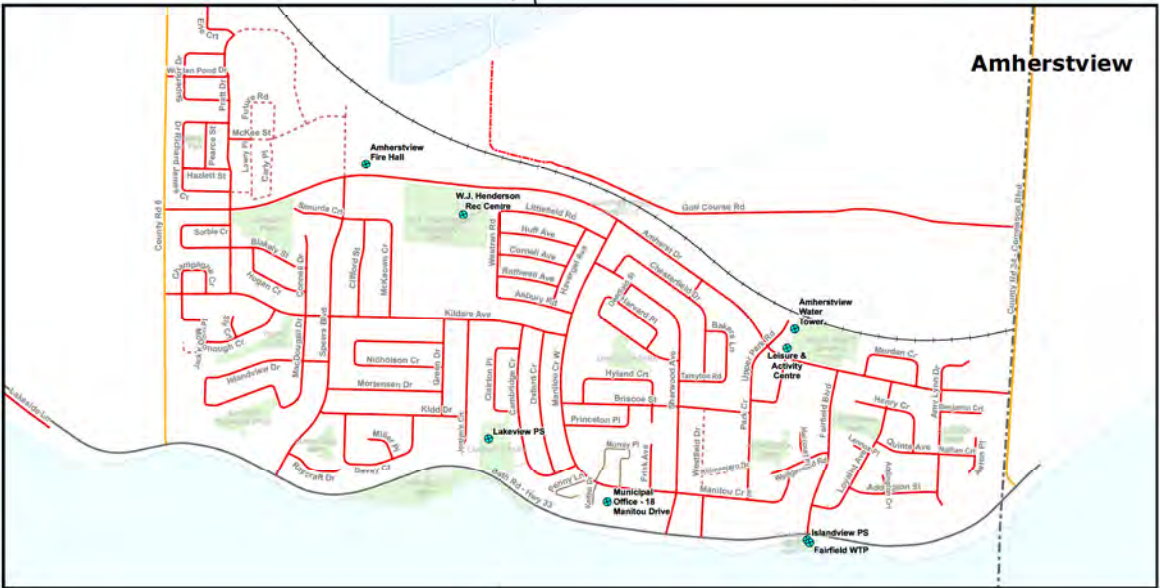
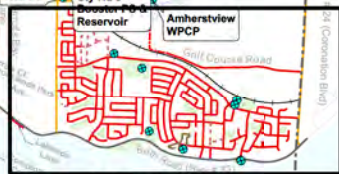
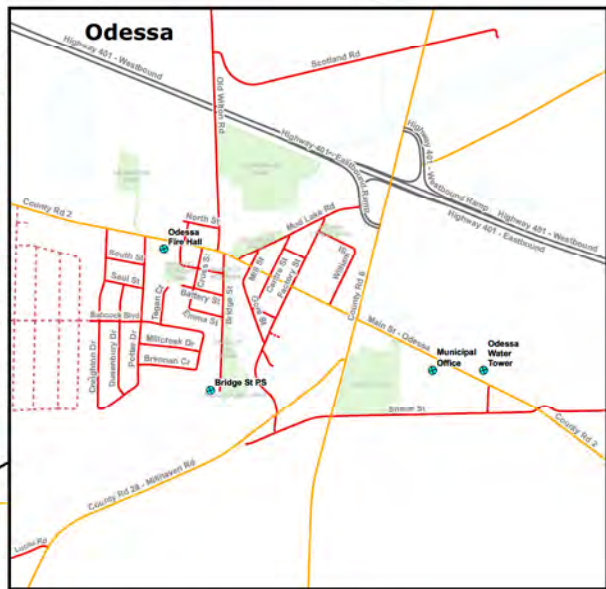
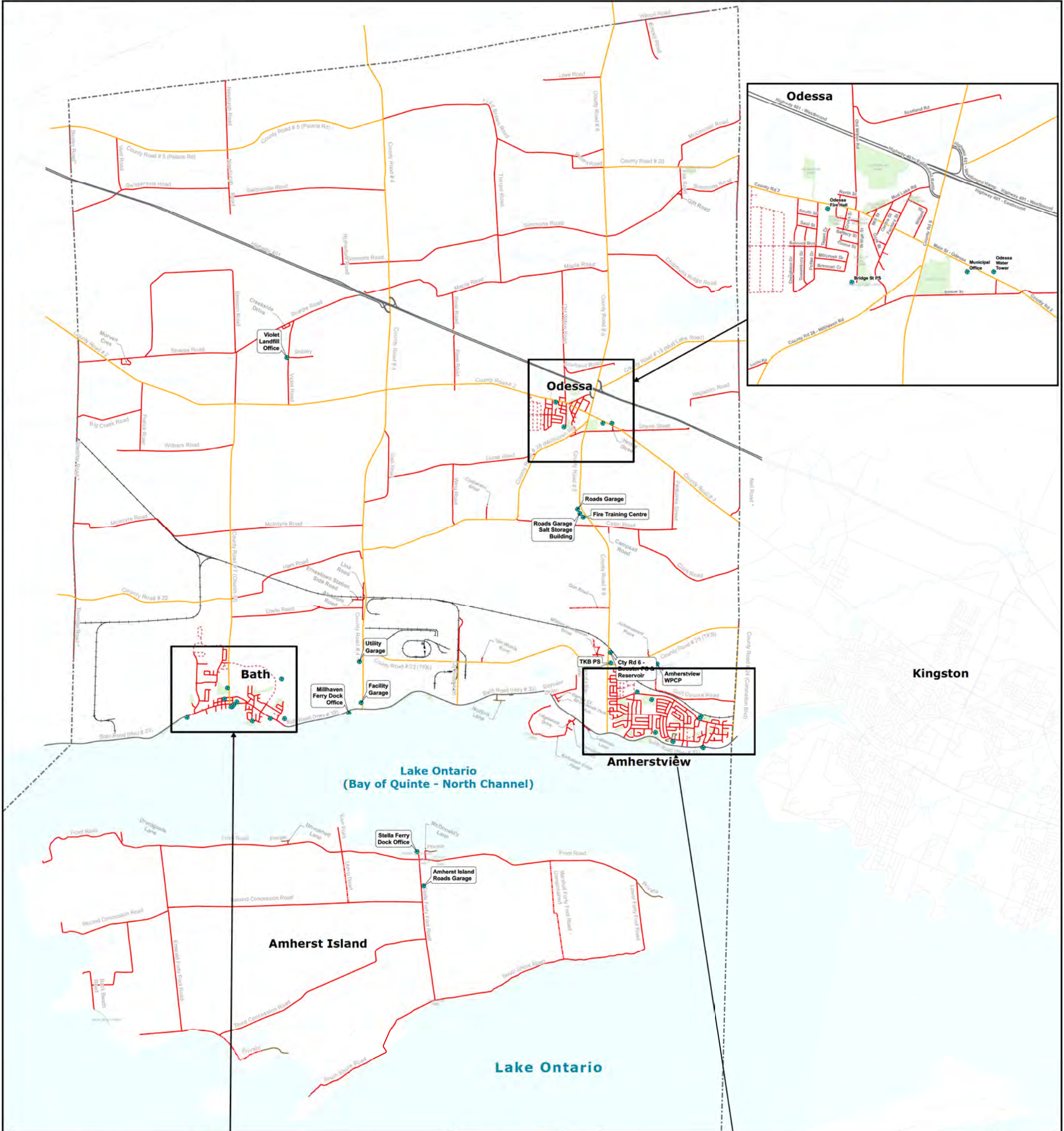
Private Road

Township Building selection



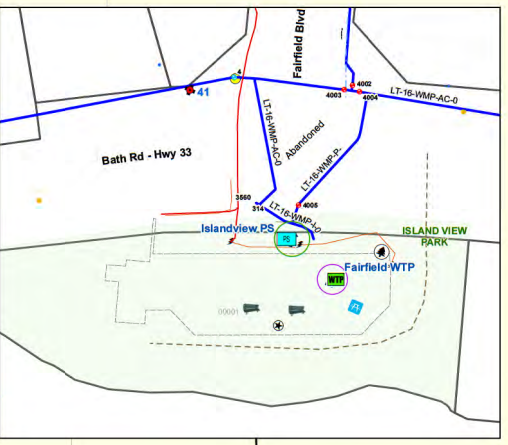
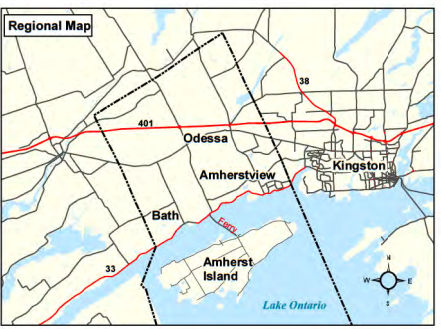
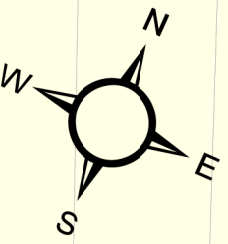
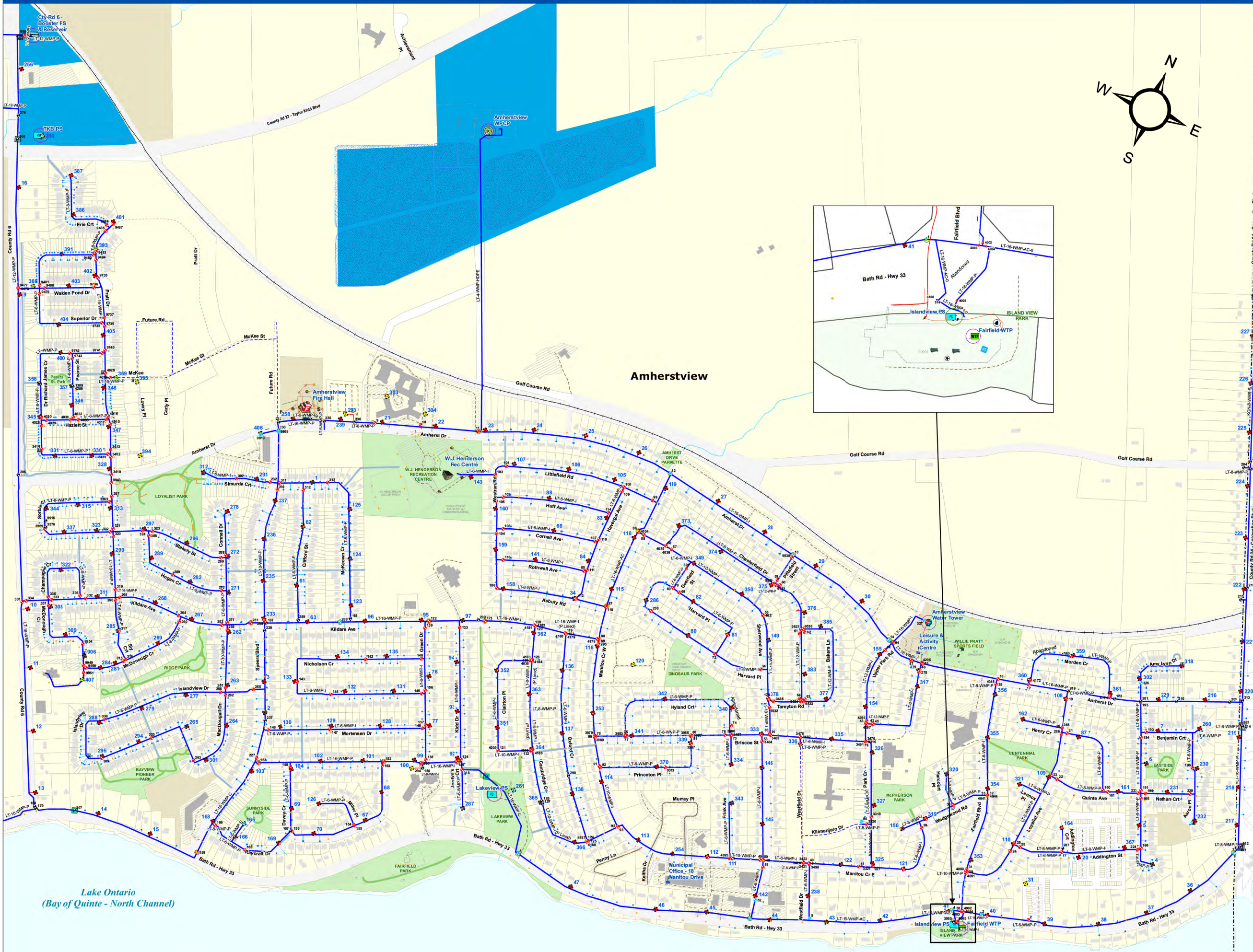
0 1 2 3 4 Km

Regional Map



B.5. Water System Maps

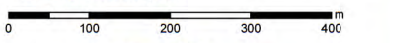
AMHERSTVIEW WATER SYSTEM



Legend

- Streetlights
- Valve, Clockwise Open
- Valve, Counter Clockwise Open
- Valve, Unknown
- Curbstop
- Fire Hydrant
- Fire Hydrant - Temporary
- Private Fire Hydrant
- Yard Hydrant
- Active Watermain
- Proposed Watermain
- Disposed Watermain
- Water Service
- Hydrant Lead
- Blowoff Lead
- Sampling Station Lead
- Sampling Stations
- Diversion Chamber
- Drain Chamber
- Meter Chamber
- Valve Chamber
- Walkway - Parks
- Walkway - Public Works
- Fire Hall
- Water Pollution Control Plant
- Water Tower
- Pumping Station
- Water Treatment Plant
- City Rd 6 - Booster PS & Reservoir
- W.J. Henderson Recreation Centre
- Facility Locations (Point)
- Site Electrical Structures
- Site Lighting
- Site Sanitary Structure
- Site Storm Structures
- Site Water Valves
- Site Electric Lines
- Site Sanitary Laterals
- Site Storm Sewers
- Site Water Services
- Two Fences
- PLC (Programmable Logic Controller)
- PLC and Communication
- Loyalist.DBO.FacilityFootprints
- Sportsfield
- ParkingLot
- Sewage Lagoons
- Loyalist Township Boundary
- Railway
- Future Road
- Private Road
- Private Lane - Emergency Access

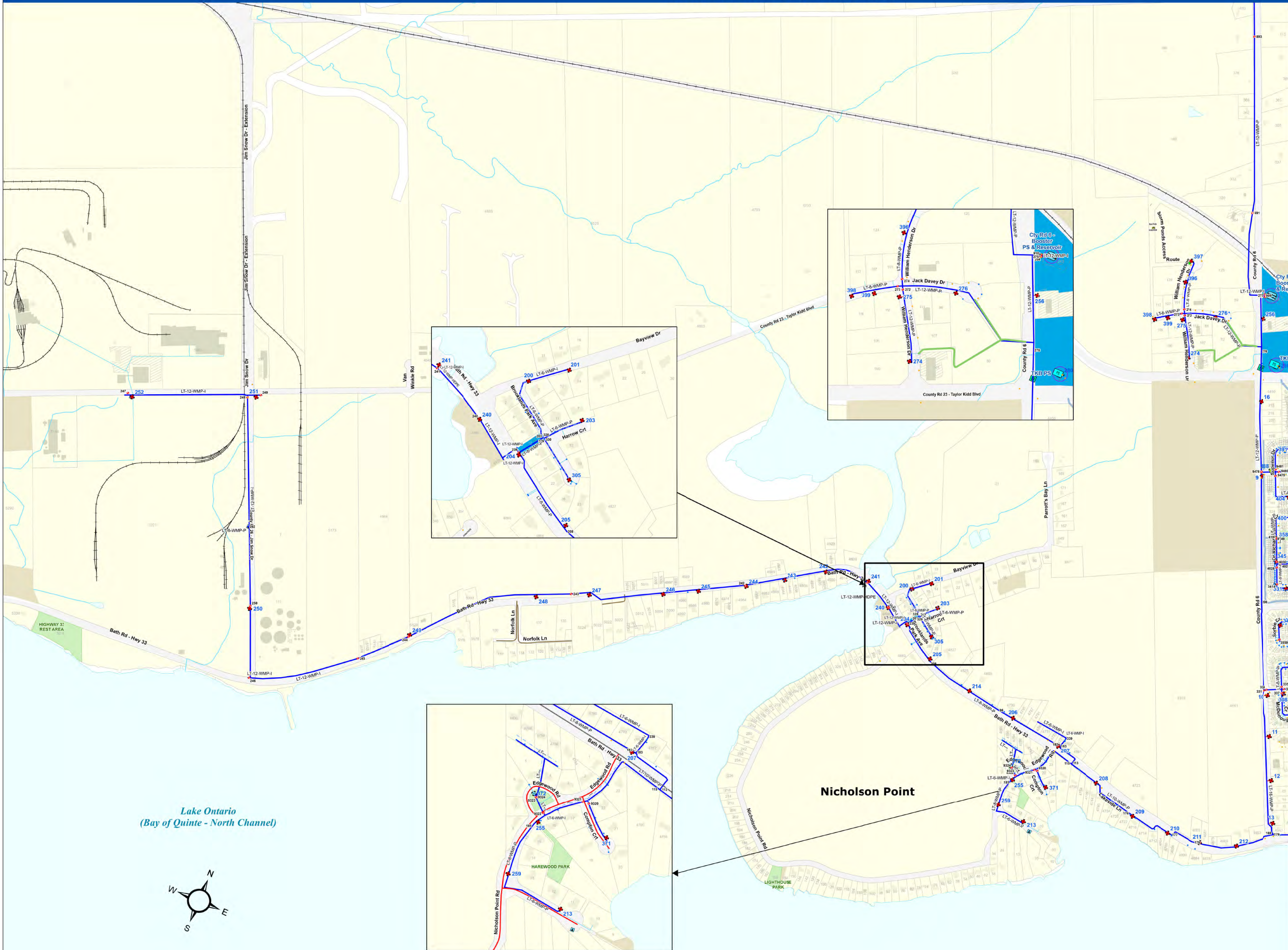
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K0H 2H0
613-386-7351
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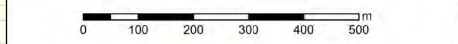
Lake Ontario
(Bay of Quinte - North Channel)

HIGHWAY 33 - WATER SYSTEM



- Legend**
- Streetlights
 - Walkway - Parks
 - Walkway - Public Works
 - Fire Hall
 - Pumping Station
 - Cty Rd 6 - Booster PS & Reservoir
 - Facility Locations (Point)
 - Site Lighting
 - Site Sanitary Structure
 - Site Storm Structures
 - Site Water Valves
 - Site Electric Lines
 - Site Sanitary Laterals
 - Site Storm Sewers
 - Site Water Services
 - Twp Fences
 - PLC and Communication
 - Loyalist.DBO.FacilityFootprints
 - Sportsfield
 - Sewage Lagoons
 - Curbstop
 - Valve - Clockwise Open
 - Valve - Unknown Direction
 - Fire Hydrant
 - Fire Hydrant - Temporary
 - Private Fire Hydrant
 - Yard Hydrant
 - Active Watermain ¹
 - Proposed Watermain
 - Disposed Watermain
 - Water Service
 - Hydrant Lead
 - Sampling Station Lead
 - Sampling Stations
 - Diversion Chamber
 - Drain Chamber
 - Valve Chamber
 - Railway
 - Future Road
 - Private Road
 - Private Lane - Emergency Access
 - Parks
 - Township Property
 - Utility Department Property
 - Properties

¹ Watermain labels adhere to standards published by the Canadian Standards Association (CSA).



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613-386-7351

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COUNTY ROAD 6 & LOYALIST EAST BUSINESS PARK WATER SYSTEM



Corporate Services
IT Division
P.O. Box 70, 263 Main Street
Odessa, Ontario
K0H 2H0
613-386-7361

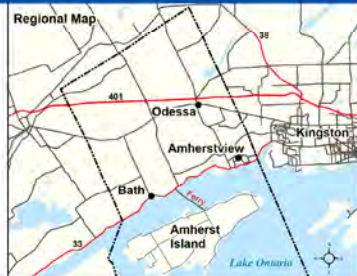
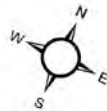
Production Date: April 28, 2024

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Land Information Ontario

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- Legend**
- | | | | |
|-----------------------|----------------------------|------------------------|-----------------------------|
| Streetlights | Hydrant Lead | Site Water Valves | ParkingLot |
| Valve, Clockwise Open | Diversion Chamber | Site Electric Lines | Sewage Lagoons |
| Valve, Unknown | Drain Chamber | Site Sanitary Laterals | Railway |
| Curbstop | Walkway - Parks | Site Storm Sewers | Utility Department Property |
| Fire Hydrant | Walkway - Public Works | Site Water Services | Township Property |
| Yard Hydrant | Site Electrical Structures | Twp Fences | Road (Right of Way) |
| Active Watermain | Site Lighting | PLC and Communication | StaffGeo.DBO.Parcel |
| Water Service | Site Storm Structures | | |



ODESSA WATER SYSTEM



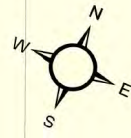
Legend

- Streetlights
- Walkway - Parks
- Fire Hall
- Water Tower
- Pumping Station
- Municipal Office
- Facility Locations (Point)
- Site Electrical Structures
- Site Lighting
- Site Sanitary Structure
- Site Electric Lines
- Site Sanitary Laterals
- Site Sanitary Sewer
- Site Storm Sewers
- Site Water Services
- Twp Fences
- PLC and Communication
- Loyalist.DBO.FacilityFootprints
- Sportsfield
- Curbstop
- Valve - Clockwise Open
- Valve - Counter Clockwise Open
- Valve - Unknown Direction
- Fire Hydrant
- Yard Hydrant
- Active Watermain ¹
- Proposed Watermain
- Disposed Watermain
- Water Service
- Hydrant Lead
- Sampling Stations
- Future Road
- Parks
- Township Property
- Utility Department Property
- Properties

¹ Watermain labels adhere to standards published by the Canadian Standards Association (CSA).

0 50 100 150 200 m

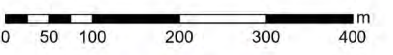
BATH WATER SYSTEM



Legend

- Streetlights
- Walkway - Parks
- Walkway - Public Works
- Fire Hall
- Water Pollution Control Plant
- Water Tower
- Pumping Station
- Water Treatment Plant
- Facility Locations (Point)
- Site Lighting
- Site Water Structures
- Site Storm Sewers
- Site Water Services
- Twp Fences
- PLC (Programmable Logic Controller)
- PLC and Communication
- Fire Hydrant
- Private Fire Hydrant
- Yard Hydrant
- Curbstop
- Valve - Counter Clockwise Open
- Valve - Unknown Direction
- Active Watermain ¹
- Proposed Watermain
- Disposed Watermain
- Water Service
- Hydrant Lead
- Sampling Stations
- Future Road
- Parks
- Township Property
- Utility Department Property
- Properties
- Road (Right of Way)

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Land Information Ontario

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B.6. Sewer System Maps

AMHERSTVIEW SANITARY COLLECTION SYSTEM



Legend

- Manhole
- Walkway - Parks
- Walkway - Public Works
- Fire Hall
- Water Tower
- Cty Rd 6 - Booster PS & Reservoir
- W.J. Henderson Recreation Centre
- PLC (Programmable Logic Controller)
- PLC and Communication
- FacilityFootprints
- Sportsfield
- Sewage Lagoons
- Storm Ponds
- Loyalist Township Boundary
- Future Road
- Private Road
- Private Lane - Emergency Access
- Intake Protection Zone - 1km around Intake & 12 m on shore
- Intake Protection Zone 2 - 2 hour travel time to Intake
- Parks
- Properties
- Air Release Valve
- ByPass
- Diversion Chamber
- Pumping Station
- Valve Chamber
- Water Pollution Control Plant

0 100 200 300 400

Sanitary Sewers - All Sanitary Sewers are Separated

Diversion 600 mm	Forcemain 450 mm	Sewer 150 mm	Sewer 350 mm	Sewer 525 mm
Forcemain 150 mm	Forcemain 550 mm	Sewer 200 mm	Sewer 375 mm	Sewer 600 mm
Forcemain 200 mm	Forcemain 600 mm	Sewer 250 mm	Sewer 400 mm	Sewer 675 mm
Forcemain 300 mm	Overflow 400 mm	Sewer 300 mm	Sewer 450 mm	Sewer 750 mm

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613-386-7351

SANITARY SEWERS - COUNTY ROAD 6 & LOYALIST EAST BUSINESS PARK



Corporate Services
IT Division
P.O. Box 70, 263 Main Street
Odessa, Ontario
K0H 2H0
613-386-7351

Production Date: April 05, 2024

Datum/Projection: Nad 83, UTM 18

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- Walkway - Parks
Walkway - Public Works
Water Tower
City Rd 6 - Booster PS & Reservoir
Municipal Office
Township Garage
Sanitary Manhole

- Sanitary Auxiliary Equipment
- ByPass
 - Diversion Chamber
 - Meter
 - Pumping Station
 - Valve Chamber
 - Water Pollution Control Plant

- System Control
- PLC and Communication

Legend

- Sanitary Sewers
- Diversion 600 mm
 - Forcemain 150 mm
 - Forcemain 300 mm
 - Forcemain 450 mm
 - Forcemain 550 mm

- Forcemain 600 mm
- Sewer 150 mm
- Sewer 200 mm
- Sewer 250 mm
- Sewer 375 mm
- Sewer 450 mm
- FacilityFootprints

Sportsfield - Maintenance Level

- Sportsfield
- Parking Lot
- Sewage Lagoons
- Railway
- Future Road
- Parks



ODESSA SANITARY COLLECTION SYSTEM



Legend

- Fire Hall
- Water Tower
- Municipal Office
- Manhole

Sanitary Auxilliary Equipment TYPE

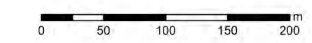
- ByPass
- Meter
- Pumping Station
- Walkway - Parks
- Walkway - Public Works

System Control Type

- PLC and Communication
- FacilityFootprints
- Sportsfield
- Parking Lot
- Future Road
- Parks

Sanitary Sewers - All Sewers are Separated

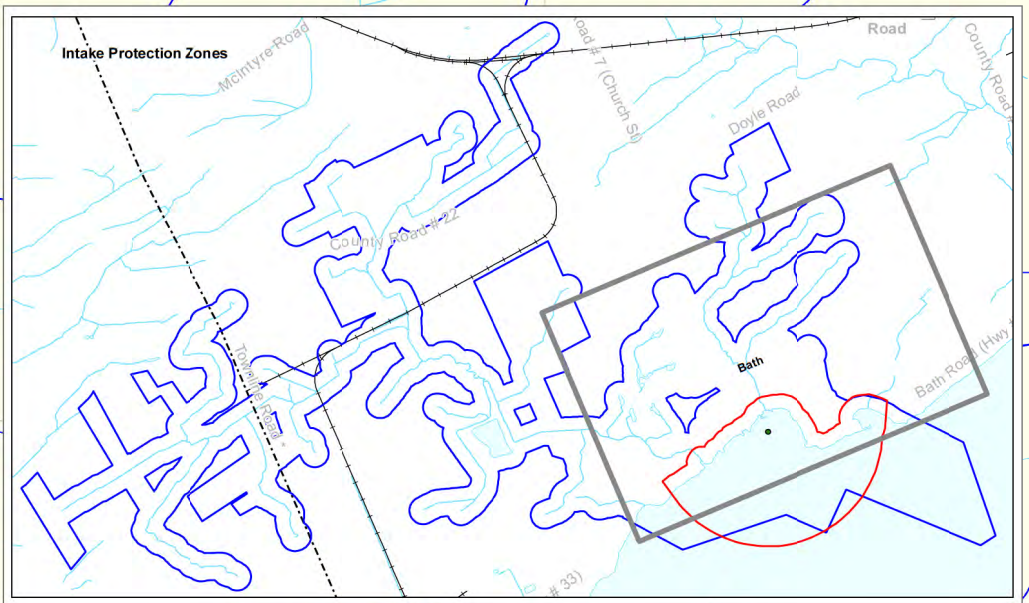
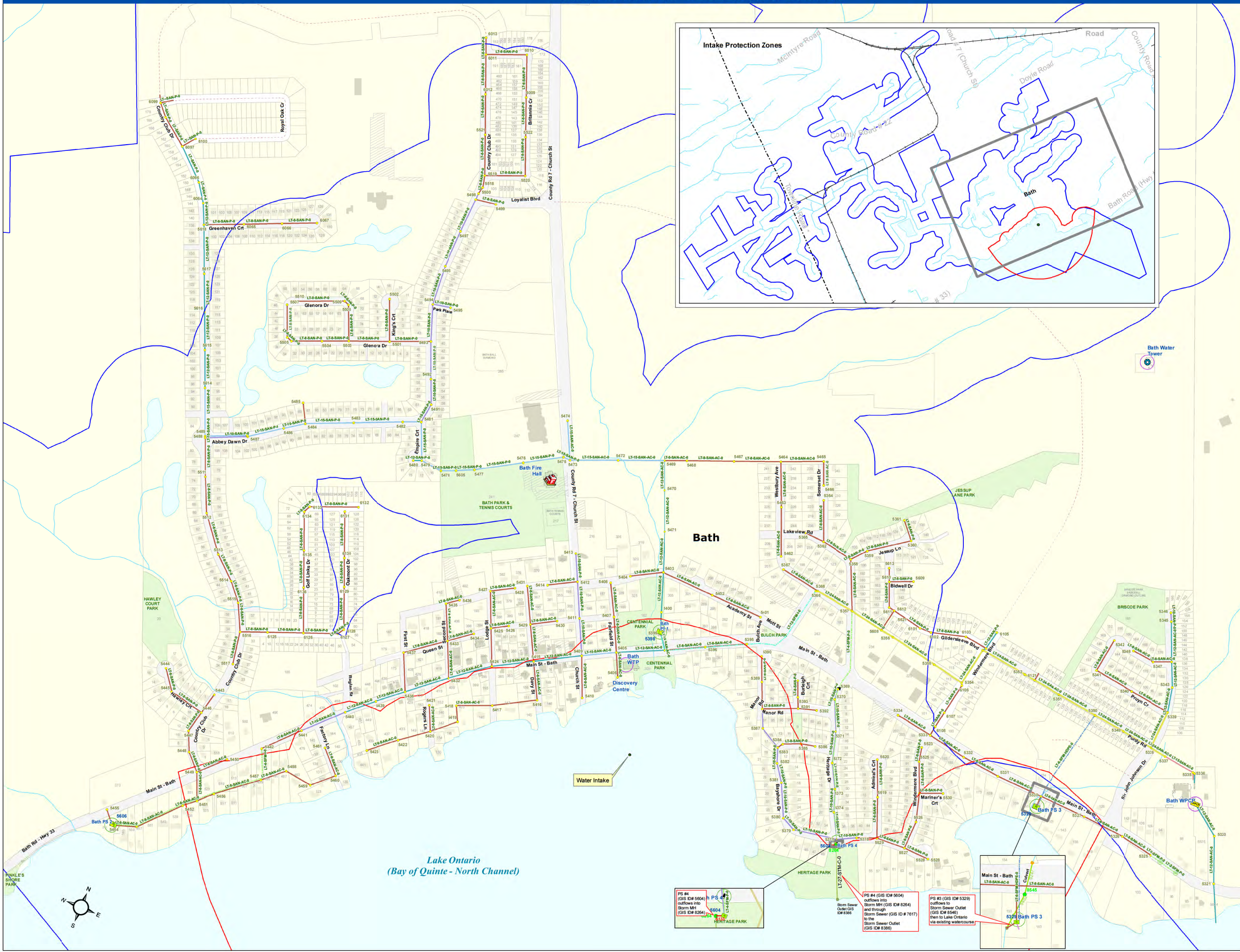
- Forcemain 300 mm
- Forcemain 450 mm
- Sewer 150 mm
- Sewer 200 mm
- Sewer 250 mm
- Sewer 375 mm
- Sewer 450 mm
- Proposed Sewer



Production Date: April 3, 2024
Datum/Projection: Nad 83, UTM 18
Data Sources: Loyalist Township Database
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P.O. Box 70, 263 Main Street
Odessa, Ontario
K0H 2H0
613-385-7351

BATH SANITARY COLLECTION SYSTEM



- Legend**
- Manhole
 - Sewer Outlet
 - Active Storm Sewer
 - Fire Hall
 - Water Tower
 - Intake Protection Zone - 1 km around Intake & 12 m on shore
 - Intake Protection Zone 2 - 2 hour travel time to Intake
 - Manhole
 - Sanitary Auxiliary Equipment**
 - Air Release Valve
 - ByPass Chamber
 - Pumping Station
 - Valve Chamber
 - Water Pollution Control Plant
 - Sanitary Sewers**
 - Forcemain 50 mm
 - Forcemain 100 mm
 - Forcemain 150 mm
 - Forcemain 300 mm
 - Overflow 200 mm
 - Sewer 125 mm
 - Sewer 200 mm
 - Sewer 250 mm
 - Sewer 300 mm
 - Sewer 375 mm
 - Sewer 450 mm
 - Sewer 600 mm
 - Water/Sanitary System Controls**
 - System Control Type
 - PLC (Programmable Logic Controller)
 - PLC and Communication
 - FacilityFootprints
 - Sportsfield
 - Parking Lot
 - DrinkingWaterIntakes
 - Parks

NOTE: All Sanitary Sewers are separated

0 110 220 330 m

Loyalist Township

GIS Services, IT Division
P.O. Box 70, 263 Main Street
Odessa, Ontario
K0H 2H0
613-386-7351

Production Date: April 5, 2024
Datum/Projection: Nad 83, UTM 18
Data Sources: Loyalist Township Database
Land Information Ontario

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PS #4 (GIS ID# 5804) h PS #5 (GIS ID# 5805) outflows into Storm MH (GIS ID# 5804) and through Storm Sewer (GIS ID# 7617) to the Storm Sewer Outlet (GIS ID# 8396)

PS #4 (GIS ID# 5804) outflows into Storm MH (GIS ID# 8254) and through Storm Sewer (GIS ID# 8546) to the Storm Sewer Outlet (GIS ID# 8396)

PS #3 (GIS ID# 5329) outflows to Storm Sewer Outlet (GIS ID# 8546) then to Lake Ontario via existing watercourse



APPENDIX C – ANNUAL REQUIREMENTS AND 10-YEAR CAPITAL PLANS

Appendix C - 10-Year Capital Plans

Tax-funded - Road Network												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Gravel Roads	-	-	-	-	-	-	-	-	-	-	-	-
HCB Road Base	-	1,188,702	1,585,720	2,183,430	2,545,341	2,100,969	1,564,115	1,428,722	658,625	1,838,954	343,948	15,438,527
LCB Road Base	-	24,944	194,744	1,170,096	69,482	382,696	176,336	966,410	321,207	847,824	542,225	4,695,965
Road Guiderails	-	-	-	-	-	-	-	-	-	-	-	-
Sidewalks/Curbs	-	-	-	375	-	5,869,890	-	4,172,362	-	2,628,997	161,966	12,833,589
Signs	5,976	-	6,896	-	28,963	-	-	-	3,678	-	-	45,513
Streetlights	-	-	-	-	-	-	-	-	-	-	4,608	4,608
Shoreline Protection	-	-	-	-	-	-	-	-	-	-	-	-
Total Annual Requirement	5,976	1,213,646	1,787,360	3,353,901	2,643,786	8,353,555	1,740,451	6,567,493	983,510	5,315,775	1,052,748	33,018,202

Tax-funded - Bridges & Culverts												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
OSIM-Bridges	-	560,000	667,000	157,000	496,000	66,000	-	-	-	-	-	1,946,000
OSIM-Culverts	-	-	-	908,000	-	-	-	1,019,000	-	349,000	-	2,276,000
Total Annual Requirement	-	560,000	667,000	1,065,000	496,000	66,000	-	1,019,000	-	349,000	-	4,222,000

Tax-funded - Storm Network												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Cross Culverts	3,013,404	178,335	104,753	840,485	62,550	263,404	287,015	97,476	104,272	7,566	372,331	5,331,591
Driveway Culverts	4,863,014	-	-	-	-	-	-	-	-	-	-	4,863,014
Catchbasins	12,138	-	4,046	40,460	-	-	-	-	-	-	222,530	279,174
Storm Manholes	-	-	-	-	-	-	-	-	-	-	-	-
Storm Mains	197,950	379,150	-	39,495	-	57,260	-	-	-	-	-	673,855
Storm Water Management Facilities	34,321	-	-	-	-	-	-	-	4,542	-	-	38,863
Total Annual Requirement	8,120,827	557,485	108,799	920,440	62,550	320,664	287,015	97,476	108,814	7,566	594,861	11,186,497

Tax-funded - Buildings												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Corporate Services	-	-	56,800	260,180	117,409	128,489	198,479	452,762	6,399	241,622	-	1,462,140
Emergency Services	-	46,100	602,236	432,635	795,522	170,535	344,376	1,169,170	261,185	478,050	-	4,299,809
Recreation & Facilities Services	1,699,510	16,800	3,424,418	1,529,334	1,025,113	174,937	788,105	313,951	952,791	362,619	933,663	11,221,240
Transit Services	119,172	-	-	-	-	-	-	-	33,324	13,943	19,856	186,295
Transportation Services	-	-	432,110	334,868	638,159	126,122	859,568	1,316,080	239,040	114,636	-	4,060,583
Waste Management Services	-	2,250	6,720	13,500	20,876	7,488	300	53,720	-	10,774	-	115,628
Total Annual Requirement	1,818,682	65,150	4,522,284	2,570,516	2,597,079	607,571	2,190,828	3,305,682	1,492,739	1,221,644	953,519	21,345,695

Tax-funded - Machinery, Furniture, and Equipment												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Corporate Services	142,730	231,929	104,834	130,907	87,621	196,872	44,568	46,234	121,132	369,804	60,075	1,536,706
Emergency Services	152,597	-	19,798	101,522	61,678	168,100	94,452	13,015	-	805,280	197,229	1,613,671
Recreation & Facilities Services	286,823	33,623	296,554	-	194,152	28,328	218,931	200,765	166,151	62,411	-	1,487,738
Transportation Services	611,017	1,046,944	76,723	-	677,756	87,929	94,219	429,922	114,718	-	88,653	3,227,881
Waste Management Services	-	-	-	-	-	331,240	733,071	-	-	-	-	1,064,311
Total Annual Requirement	1,193,167	1,312,496	497,909	232,429	1,021,207	812,469	1,185,241	689,936	402,001	1,237,495	345,957	8,930,307

Appendix C - 10-Year Capital Plans

Tax-funded - Fleet												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Emergency Services	1,650,000	1,700,980	400,000	-	60,000	1,000,000	-	-	-	1,000,000	132,000	5,942,980
Transportation Services	937,638	652,394	789,774	-	403,672	924,621	860,320	-	-	-	760,879	5,329,298
Building Services	-	-	-	-	-	-	-	-	44,295	-	-	44,295
Recreation & Facilities Services	36,707	-	93,390	63,501	-	53,629	70,644	-	78,310	-	-	396,181
Total Annual Requirement	2,624,345	2,353,374	1,283,164	63,501	463,672	1,978,250	930,964	-	122,605	1,000,000	892,879	11,712,754

Tax-funded - Land Improvements												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Siteworks - Parks	260,247	15,001	2,564	323,946	-	15,750	5,941	24,378	28,243	73,490	51,426	800,986
Play Structures	35,000	-	172,010	188,998	177,020	-	183,700	-	167,000	34,230	-	957,958
Outdoor Recreation	493,610	1,942	-	209,486	-	-	153,824	57,318	-	125,993	-	1,042,173
Boat Ramps & Docks	-	-	-	-	-	-	-	-	-	-	-	-
Siteworks - Other	626,208	-	-	132,463	-	-	-	85,443	27,329	20,326	-	891,769
Total Annual Requirement	1,415,065	16,943	174,574	854,893	177,020	15,750	343,465	167,139	222,572	254,039	51,426	3,692,886

Tax-funded - Natural Assets												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Wetlands	-	-	-	-	-	-	-	-	-	-	-	-
Significant Wetlands	-	-	-	-	-	-	-	-	-	-	-	-
Wooded Areas	-	-	-	-	-	-	-	-	-	-	-	-
Significant Forests												
Alvars	-	-	-	-	-	-	-	-	-	-	-	-
Total Annual Requirement	-	-	-	-	-	-	-	-	-	-	-	-

All Tax-funded Assets												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Road network	5,976	1,213,646	1,787,360	3,353,901	2,643,786	8,353,555	1,740,451	6,567,493	983,510	5,315,775	1,052,748	33,018,202
Bridges & Culverts	-	560,000	667,000	1,065,000	496,000	66,000	-	1,019,000	-	349,000	-	4,222,000
Storm Network	8,120,827	557,485	108,799	920,440	62,550	320,664	287,015	97,476	108,814	7,566	594,861	11,186,497
Buildings	1,818,682	65,150	4,522,284	2,570,516	2,597,079	607,571	2,190,828	3,305,682	1,492,739	1,221,644	953,519	21,345,695
Fleet	2,624,345	2,353,374	1,283,164	63,501	463,672	1,978,250	930,964	-	122,605	1,000,000	892,879	11,712,754
Machinery, Furniture, and Equipment	1,193,167	1,312,496	497,909	232,429	1,021,207	812,469	1,185,241	689,936	402,001	1,237,495	345,957	8,930,307
Land Improvements	1,415,065	16,943	174,574	854,893	177,020	15,750	343,465	167,139	222,572	254,039	51,426	3,692,886
Total Tax-funded assets	15,178,062	6,079,094	9,041,090	9,060,680	7,461,314	12,154,259	6,677,964	11,846,727	3,332,241	9,385,519	3,891,390	94,108,341

Appendix C - 10-Year Capital Plans

User-funded - Water System												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Hydrants	97,039	41,588	-	-	69,314	55,451	13,863	13,863	13,863	249,529	277,254	831,763
Water Valves	-	-	-	-	4,475	-	-	-	-	-	154,560	159,035
Water Meters	805,700	117,600	221,200	257,600	145,600	208,600	401,100	150,500	262,500	123,900	231,700	2,926,000
Water Mains	11,434,195	4,963,499	1,502,843	1,433,494	1,792,268	-	-	-	-	119,460	8,058,506	29,304,265
Water Treatment Facilities	1,289,679	330,436	444,735	646,770	1,312,397	760,710	495,984	1,412,814	372,711	190,975	-	7,257,211
Water Distribution Facilities	640,247	92,534	146,545	57,718	59,900	1,352	760,898	37,600	11,846	12,365	60,442	1,881,447
Total Annual Requirement	14,266,860	5,545,657	2,315,323	2,395,582	3,383,954	1,026,113	1,671,845	1,614,777	660,920	696,229	8,782,462	42,359,720

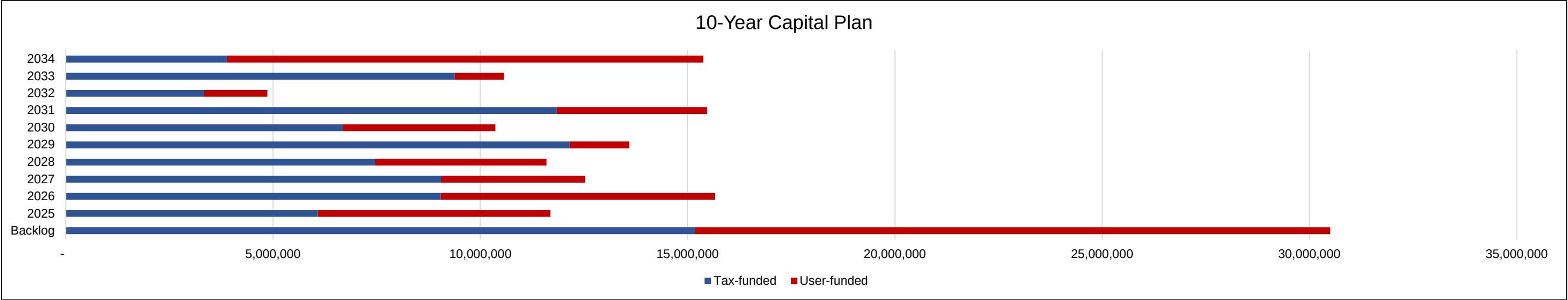
User-funded - Sewer System												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Sanitary Collection Facilities	149,543	16,242	380,766	218,476	454,144	254,119	833,682	967,177	318,817	98,355	79,513	3,770,834
Sanitary Mains	-	-	746,429	-	-	-	-	-	-	-	-	746,429
Sanitary Manholes	-	-	-	-	-	-	-	-	-	-	-	-
Sanitary Treatment Facilities	710,164	8,650	3,034,630	335,269	275,654	52,865	1,053,239	1,010,051	191,048	297,129	2,624,259	9,592,958
Total Annual Requirement	859,707	24,892	4,161,825	553,745	729,798	306,984	1,886,921	1,977,228	509,865	395,484	2,703,772	14,110,221

Other User-funded Assets												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Utilities Buildings	-	-	-	376,995	22,838	-	130,886	31,950	135,509	39,002	-	737,180
Utilities Machinery & Equipment	59,801	40,521	-	21,423	-	107,068	-	-	30,954	-	-	259,767
Utilities Fleet	135,329	-	140,217	120,986	-	-	-	-	197,776	56,685	-	650,993
Total Annual Requirement	195,130	40,521	140,217	519,404	22,838	107,068	130,886	31,950	364,239	95,687	-	1,647,940

All User-funded Assets												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Water System	14,266,860	5,545,657	2,315,323	2,395,582	3,383,954	1,026,113	1,671,845	1,614,777	660,920	696,229	8,782,462	42,359,720
Sewer System	859,707	24,892	4,161,825	553,745	729,798	306,984	1,886,921	1,977,228	509,865	395,484	2,703,772	14,110,221
Other user-funded assets	195,130	40,521	140,217	519,404	22,838	107,068	130,886	31,950	364,239	95,687	-	1,647,940
Total User-funded Assets	15,321,697	5,611,070	6,617,365	3,468,731	4,136,590	1,440,165	3,689,652	3,623,955	1,535,024	1,187,400	11,486,234	58,117,881

Appendix C - 10-Year Capital Plans

All Asset Categories												
Subcategory	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Tax-funded	15,178,062	6,079,094	9,041,090	9,060,680	7,461,314	12,154,259	6,677,964	11,846,727	3,332,241	9,385,519	3,891,390	94,108,341
User-funded	15,321,697	5,611,070	6,617,365	3,468,731	4,136,590	1,440,165	3,689,652	3,623,955	1,535,024	1,187,400	11,486,234	58,117,881
Total Asset Categories	30,499,760	11,690,164	15,658,454	12,529,411	11,597,904	13,594,423	10,367,616	15,470,682	4,867,265	10,572,919	15,377,625	152,226,222



APPENDIX D – RECOMMENDED ASSET MANAGEMENT PRACTICES

State of the Local Infrastructure	
1.	Consider the development of a formal data governance strategy to support the consistent and accurate collection and presentation of data. This would include the processes to align asset inventory in Citywide with the Township's GIS.
2.	Develop a formal process that ensures the periodic update of Asset Classifications, and more specifically, Asset Attributes upon completion of operational tasks (e.g., traffic counts if applicable to models).
3.	Periodically review and update Lifecycle Costs, including Replacement Cost where applicable.
4.	Develop a workplan that will initiate the improvement of various pooled asset data in Citywide including but not limited to signs, sidewalks/curbs, cross culverts, driveway culverts, and land improvements. Ensure any improvements compliment the Township's AMP, LOS, and operational practices.
5.	Develop a formal process that ensures the periodic condition assessments of assets upon completion of relevant work tasks. Consider the use of Public Sector Digest's Maintenance Manager module that is currently being utilized by the Township to document work orders and service requests. In the case of asset subcategories subject to external condition assessments, continue to ensure the periodic update of asset conditions in Citywide for proper projection (e.g., Roads Needs Study, OSIM, structural building assessments, etc.).
6.	Develop a formal strategy to develop condition assessment approaches for the Township's Non-Core Assets.
Levels of Service	
1.	Continue to measure current LOS in accordance with O.Reg. 588/17.
2.	Work towards enhancing the documentation of LOS by incorporating the Corporate LOS and six value-added Community LOS developed by the Township's senior management. Develop processes to ensure corresponding Technical LOS are established. Align any LOS with ISO 55000 series of standards.
3.	Work towards identifying proposed LOS as per O.Reg. 588/17 and identify strategies required to close the gap between the Township's current and proposed LOS.
4.	Strengthen the alignment with the Township's Strategic Plan and various master plans. Ensure the update of future AMPs reflect any alterations to these plans. This may include the recognition of improved lifecycle strategies that may impact the Township's overall AM practices and processes.
5.	Engage the community by facilitating discussions about the Township's infrastructure and community the benefits of AM. A communication strategy should be development and information about the SOLI should be made available. Additionally, engage the public via surveys to develop proposed LOS.

Lifecycle Management

1. Periodically review the Township's Tangible Capital Asset Policy and identify variances between financial EUL in which the asset is amortized and lifecycle EUL.
2. Periodically evaluate the efficacy of current lifecycle strategies to determine impact on Lifecycle Costs, performance, and risk.
3. Formalize lifecycle strategies for those asset categories lacking. More specifically, Non-Core Assets. Continually evaluate the efficacy of these strategies to ensure optimization of Lifecycle Costs, performance, and risk.

Risk Management

1. Continue to implement risk-based decision making as part of the capital budgeting process and tie in with risk models developed within Citywide. This practice would include the continual review of high-risk assets.
2. Review risk models as new information becomes available that merits the alteration of risk associated with an asset group. New information should yield data that is or can be readily available in Citywide.

Financial Strategy

1. Review finance strategies and processes. Focus on improving financial reporting capabilities and the integration AM activities with the Township's budget development process. In conjunction with the enhancement of LOS, improve financial metrics that analyze the cost/benefit of providing units of service relative to its capital and operating spending.

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APPENDIX F – GLOSSARY OF TERMS

Annual Requirement is the annual amount of funds required to fully fund an asset at the time of replacement relative to its total EUL. In the context of this AMP, the Annual Requirement is in present value.

Arterial Road Class means Class 1 and Class 2 highways as determined under the Table to section 1 of Ontario Regulation 239/02 (Minimum Maintenance Standards for Municipal Highways) made under the Municipal Act, 2001.

Asset Attribute or “Attribute” is a database of key attributes tailored for an asset, which may include but is not limited to GIS ID, QMS risk number, and road class.

Asset Classification is the assignment of certain characteristics to assets to effectively group them within the Asset Hierarchy (Appendix A).

Asset Hierarchy is the structure in which assets are presented and reported within Citywide and as outlined in Appendix A.

Asset Management Plan or “AMP” is a strategic document that states how a group of assets are to be managed over a period. The plan describes the characteristics and condition of infrastructure assets, the levels of service expected from them, planned actions to ensure the assets are providing the expected level of service, and financing strategies to implement the planned actions.

Asset Type is an Asset Classification that mirrors the established departments under the Township’s financial general ledger structure.

Asset Sub-Type is an Asset Classification that exhibits similar characteristics and perform a similar service.

Capital Cost is a significant expenditure that generates a benefit beyond one year. This includes the acquisition, replacement, and betterment of capital assets.

Capital Reinvestment Rate is the ratio of funds allocated for capital investment relative to Replacement Cost.

Citywide Asset Manager or “Citywide” is a software developed by Public Sector Digest that the Township uses to house its asset inventory and manage its assets.

Collector Road Class means Class 3 and Class 4 highways as determined under the Table to section 1 of Ontario Regulation 239/02 (Minimum Maintenance Standards for Municipal Highways) made under the Municipal Act, 2001.

Community Levels of Service or “Community LOS” reflects the categories or themes that are most valued by the community.

Component is an Asset Classification that componentizes assets within a constant Asset Sub-Type (e.g., diameter size of a water valve).

Core Asset is any infrastructure asset that is defined as following:

- Water asset that relates to the collection, production, treatment, storage, supply, or distribution of water.
- Wastewater asset that relates to the collection, transmission, treatment, or disposal of wastewater, including any wastewater asset that from time to time manages storm water.
- Storm water management asset that relates to the collection, transmission, treatment, retention, infiltration, control, or disposal of storm water.
- Road.
- Bridge or culvert.

Corporate Levels of Service or “Corporate LOS” are the core strategic outcomes as aligned with Township’s corporate vision and Strategic Plan.

Development Charges Study is a study required under the Development Charges Act, 1997, for a municipality to have the ability to charge a fee from developers to fund tax-funded capital infrastructure relating to growth.

Estimated Useful Life or “EUL” is the period in which an asset is estimated to be in service. EULs by asset category are determined under the Township’s Tangible Capital Asset Policy.

Funding Gap is an instance where an asset investment requirement does not have dedicated monetary resources to fund it.

Geospatial Information System/Geographic Information System (GIS) is a framework for gathering, managing, and analyzing data. Capable of integrating multiple data sets to produce spatial location and layers of information into visualizations using maps and 3D scenes.

Impost Study is a study issued by the Township that supports the imposition of charges permitted under the Municipal Act, 2001, to fund water and sewer capital infrastructure relating to growth.

Infrastructure for Jobs and Prosperity Act (2015) is an Act that establishes mechanisms to encourage principled, evidence based and strategic long-term infrastructure planning that supports job creation and training opportunities, economic growth, and protection of the environment, and incorporate design excellence into infrastructure planning.

Infrastructure Master Plan is a strategic document that sets growth-related goals, objectives, and priorities for municipal infrastructure.

Levels of Service or “LOS” are the parameters or combination of parameters that reflect social, political, economic, and environmental outcomes that the organization delivers. LOS statements describe the outputs or objectives that are intended to be delivered to customers.

Lifecycle Cost Refers to the total costs required for an asset or service over all stages of its life, e.g., acquisition/creation, operation and maintenance, renewal, and disposal.

Local Road Class means Class 5 and Class 6 highways as determined under the Table to section 1 of Ontario Regulation 239/02 (Minimum Maintenance Standards for Municipal Highways) made under the Municipal Act, 2001.

Non-Core Assets is any infrastructure asset that does not fall under one of the Core Asset categories, but is still owned and operated by the Township, such as fleet, equipment, and land improvements.

Official Plan is a plan adopted by the Township that outlines land use policies and ensures future planning and development meets the specific needs of the community.

Ontario Regulation 588/17 – Asset Management Planning for Municipal Infrastructure or “O.Reg.588/17” is an Ontario Regulation made under the *Infrastructure for Jobs and Prosperity Act (2015)* of and filed in December 2017, which prescribes the policies and requirements relating to the preparation of this asset management plan by applicable municipalities.

Public Sector Accounting Standards or “PSAS” represents the accounting framework established by the Public Sector Accounting Standards Board.

Quality Management Standard or “QMS” is a standard and score to assist owners and operating authorities in the effective management and operation of their municipal residential drinking water systems. Staff have developed and implemented a QMS specific to the Township. Certification was originally obtained on February 2009. Recertification was successfully achieved in 2013, 2016, 2019 and 2022.

Replacement Cost in the context of this AMP is the total present value of funds required to replace an asset.

Reserve & Reserve Fund Policy is the policy adopted by the Township that outlines the contribution, use, and reporting requirements of its reserves and reserve funds.

Service Area is a grouping of Asset Classifications that provide similar services.

State of the Local Infrastructure or "SOLI" is the summary on the state of the assets that include information regarding Replacement Cost, average age, and average condition.

Strategic Asset Management Policy is a policy that municipalities must pass that required under O.Reg.588/17 that outlines the various objectives of effectively managing its assets.

Strategic Plan is a planning document endorsed by Council that establishes a common vision for the municipality that will define success. The plan is intended to provide Council and staff with a framework for decision making.

Tangible Capital Asset Policy is the policy adopted by the Township that provides guidance regarding the capitalization and amortization of assets and sets their Estimated Useful Lives.

Technical Levels of Service or "Technical LOS" are detailed metrics that can be used to evaluate and report whether the Community LOS are being achieved.

APPENDIX G – ACRONYMS

Acronym	Meaning
AM	Asset Management
AMP	Asset Management Plan
CCBF	Canada Community Building Fund
CPI	Consumer Price Index
EUL	Estimated Useful Life
GHG	Green House Gas
GIS	Geospatial/Geographic Information System
HCB	High Class Bitumen
KPI	Key Performance Indicator
LCB	Low Class Bitumen
LOS	Levels of Service
O.Reg.	Ontario Regulation
OCIF	Ontario Community Infrastructure Fund
OSIM	Ontario Structure Inspection Manual
PCI	Pavement Condition Index
SCADA	Supervisory Control and Data Acquisition
SOLI	State of the Local Infrastructure