



BURNSIDE

## **Asset Management Plan**

**Township of the Lake of Bays  
1012 Dwight Beach Road  
Dwight ON P0A 1H0**



**BURNSIDE**

## **Asset Management Plan**

### **Township of the Lake of Bays**

**1012 Dwight Beach Road  
Dwight ON P0A 1H0**



**R.J. Burnside & Associates Limited  
15 Townline  
Orangeville ON L9W 3R4 CANADA**

**December 4, 2023  
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## Record of Revisions

Revision	Date	Description
1	November 27, 2023	Draft Report
2	December 4, 2023	Final Report

### R.J. Burnside & Associates Limited

Report Prepared By:



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AK:ei

## Executive Summary

This report contains the Asset Management Plan for the Township of the Lake of Bays (Township) assets. The report has been organized as follows:

- Section 1: Introduction.
- Section 2: State of Local Infrastructure.
- Section 3: Expected Levels of Service.
- Section 4: Asset Management Strategy.
- Section 5: Financing Strategy.
- Section 6: Recommendations.

The “state of local infrastructure” section provides an overview of the capital assets owned by the Township. This includes detailed information on asset inventory, including asset attributes, accounting valuations, replacement costs, useful life, age, and asset condition. This information provides the foundation for other sections of the asset management plan.

Based on data provided by the Township and discussions with Township Staff, it is believed that the Township’s assets have a Good weighted average condition (with the weighting based on asset replacement cost) as outlined in the following assets table. Please note that weighted average conditions do not fully reflect the many assets that need to have capital improvement investments but provide an overall high-level perspective of all the assets found in that asset grouping / network.

Each asset class has been subset for better understanding. Of note during the course of this project the Dorset Pavilion is no longer owned by the Township and the Dorset Seniors Centre has been closed and are not being used in the analysis of this asset management plan.

Looking at a weighted average of remaining life as a percentage of useful life can provide a quick estimate of how quickly the Township may be looking to invest in either capital improvements or asset replacement. It is important to view the Remaining Service Life percentages not as absolutes but as triggers to seek more information about an asset type. For example, the street light assets indicate that they are approaching their ending part of their lifecycle and therefore have average conditions. Please note that it was assumed that most of the streetlights were installed in 1970 and therefore may be approaching the end of their lifecycle, however these assets may have a longer lifecycle than documented and in particular if they have the light converted to LED fixtures. Also when looking at vehicle assets the weighted average useful life is identified as 14 years, but as you will find in the body of this report Public Works vehicles alone have a weighted average useful life of 6 years. So weighted averages are good high-level values that may require some additional detailed information for clarity.

Asset Type	Condition (weighted average)	Risk (weighted average)	Useful Life (UL) - Weighted Average	Remaining Service Life (RSL) - Weighted Average	RSL as a % of UL
Road Base	N/A	Low	60	2.0	3%
Road Surface Asphalt	Good	Low	25	15.0	60%
Roads Surface Surface Treated	Good	Moderate	10	4.5	45%
Road Surface Gravel	Very Good	Low	10	6.7	67%
Bridges & Culverts	Good	Moderate	60	28.0	47%
Sidewalks	Good	Low	50	34.0	68%
Signs	Average	Low	10	5.0	50%
Street Lights	Average	Moderate	50	2.0	4%
Guardrails	Very Good	Low	25	15.0	60%
Docks	Good	Moderate	48	23.0	48%
Trails	Very Good	Low	45	43.0	96%
Catch Basins	Good	Low	100	79.9	80%
Vehicles & Trailers	Good	Moderate	14	6.0	43%
Equipment	Good	Moderate	16	8.0	50%
IT Hardware	Good	Moderate	11	8.0	73%
Facilities	Good	Moderate	60	35.6	59%

Another example can be the Bridge & Culvert assets which are identified with a weighted average of “Good” condition. However, the weighted average remaining service life of this important asset class is less than 50% of the asset useful life indicating more substantial investments will need to be made in this asset class over the next 20-30 years. In fact, based on the Township bridge inspection report the Township has over \$250,000 in capital improvements that will need to be invested over the next ten years. It is also important to state that the Township has been investing well in their bridges / culverts as and Burnside’s recalculation of Bridge Condition Indexes show that all the Township bridges are in Good or Very Good condition.

“Expected levels of service” compares the current level of service provided by the Township, and the recommended levels of service that will help extend the life of the above-mentioned asset types. The Township of the Lake of Bays takes great care in the service levels they offer their constituents and public. This report has made a few additional Levels of Service (LOS) recommendations that can potentially extend the life of the Township’s capital assets and therefore reduce the total lifecycle costs of these assets.

The "asset management strategy" provides a long-term operating and capital forecast for asset related capital costs, indicating the requirements for maintaining, rehabilitating, replacing / disposing, and expanding the Township's assets, while moving towards the specified expected levels of service identified above. The goal of the asset management strategy is to have the Township moving towards a more sustainable asset management position over the 10-year forecast period. We have also taken into consideration the potential risk of each asset by identifying the asset consequence of failure and probability of failure.

Asset risk was assessed based on the asset’s age, condition, consequence of failure, and probability of failure. The following have been identified based on Township data as assets that need to be replaced or have major improvement over the next few years (all values are in 2023 dollars):

## Roads

- Charlie Thompson Road from Dwight Beach Road to 1.4 km southeast – micro-seal surfacing (recommended in 2024, approximate cost \$98,000).
- Dwight Bay Road from Dwight Beach Road to Highway 60 – micro-seal surfacing (recommended in 2024, approximate cost \$28,000).
- Dwight Beach Road from Lake of Bays Lane to 2 km north of Charlie Thompson Road – micro-seal surfacing (recommended in 2024, approximate cost \$195,000).
- Billie Bear Road from 0.5 km north of District Road 8 to Bella Shores Road – Surface treatment resurfacing (recommended in 2024, approximate cost \$295,000).
- Millar Hill Road from Highway 60 to 3.9 km east – Slurry seal surfacing (recommended in 2024, approximate cost \$128,839).
- Point Ideal Road from District Road 22 to 2.8 km westerly – Surface treatment resurfacing (recommended in 2024, approximate cost \$460,000).
- Tally-Ho Winter Park Road from Highway 60 to District Road 8 – Slurry seal surfacing (recommended in 2024, approximate cost \$56,161).
- Grassmere Resort Road from 0.3 km south of Grassmere Road to 1.0 km south - Surface treatment resurfacing (recommended in 2025, approximate cost \$151,200).

- Grassmere Road from Highway 60 to Boundary – Lake of Bays / Huntsville – Surface treatment resurfacing (recommended in 2025, approximate cost \$15,330).
- Point Ideal Road from District Road 22 to 2.8 km westerly – Slurry seal surfacing (recommended in 2025, approximate cost \$95,200).
- Billie Bear Road from 0.5 km north of District Road 8 to Bella Shores Road – slurry seal surfacing (recommended in 2025, approximate cost \$61,200).
- South Camp Lake Road from District Road 8 to 0.8 km east – Surface treatment resurfacing (recommended in 2025, approximate cost \$134,400).
- Grassmere Resort Road from 0.3 km south of Grassmere Road to 1.0 km south – Slurry seal surfacing (recommended in 2026, approximate cost \$34,000).
- Grassmere Road from Highway 60 to Boundary – Lake of Bays / Huntsville – Slurry seal surfacing (recommended in 2025, approximate cost \$6,800).
- South Camp Lake Road from District Road 8 to 0.8 km east – Surface treatment resurfacing (recommended in 2026, approximate cost \$27,200).

### **Bridges**

- Bellwood Acres Road Bridge – Repair abutments and recoat structural steel (recommended in 2026, approximate cost \$64,500).
- Narrows Road Bridge – Recoat structural steel (recommended in 2026, approximate cost \$60,000).

### **Signs**

- General sign replacement – (approximate cost \$10,000 annually).

### **Docks**

- Glenmount Dock and Pavillion at Glenmount Road – Replace dock and pavilion (recommended in 2024, approximate cost \$385,000).
- Rabbits Bay Dock at Rabbits Bay Road – Replace boat ramp (recommended in 2024, approximate cost \$30,000).
- Hillside Doack at Highway 60 – Install helical piles at beam mid-span and resurface deck (recommended in 2026, approximate cost \$17,000).

### **Vehicles**

- Fire - Freightliner Pumper Truck (2004) – Replace with new truck (recommended in 2025, approximate cost \$650,000).
- Parks - Dodge Utility Pickup Truck (2005) – Replace with new truck (recommended in 2025, approximate cost \$60,000).
- Parks - GMC Sierra 2500 Pickup Truck (2013) – Replace with new truck (recommended in 2025, approximate cost \$60,000).
- Public Works – Ram 5500 one-ton truck (2018) – Replace with new truck (recommended in 2025, approximate cost \$125,000).

- Fire - Freightliner Pumper Truck (2001) – Replace with new truck (recommended in 2026, approximate cost \$650,000).
- Parks - Ford 250 pickup truck (2016) – Replace with new truck (recommended in 2026, approximate cost \$60,000).
- Parks – Chevrolet Silverado 3500 HD pickup truck (2019) – Replace with new truck (recommended in 2026, approximate cost \$85,000).
- Parks – Front Mount Mower Kubota F2260 (2003) – Replace with new mower (recommended in 2026, approximate cost \$35,000).
- Parks – Tractor / Backhoe / Loader Kubota B2650HSD (2014) - Replace with new tractor / backhoe / loader (recommended in 2026, approximate cost \$50,000).
- Public Works - Ford 150 pickup truck (2016) – Replace with new truck (recommended in 2026, approximate cost \$60,000).
- Public Works - Chevrolet Silverado 1500 pickup truck (2019) – Replace with new truck (recommended in 2026, approximate cost \$60,000).

### Equipment

- Focus Auto Scrubber (2014) – Replace with new machine (Recommended replacement in 2025, approximate cost \$10,700).

### IT Hardware

- Public Works – Broadband Radios (2013) - Replace with new broadband radios (recommended annual budget for replacements when required of \$4,000 per year).
- Parks – 4 Broadband Radios (2013) - Replace with new broadband radios (recommended replacement in 2024, approximate cost \$6,800).
- Building – 3 Broadband Radios (2013) - Replace with new broadband radios (Recommended replacement in 2024, approximate cost \$5,100).
- Ten Desktop Computers (2014 and 2019) – Replace with new computers (recommended in 2024, approximate cost \$11,900).
- Twelve Laptop Computers (2019 and 2020) – Replace with new laptop computers (recommended in 2024, approximate cost \$20,736).
- Fire – Ten Broadband Radios (2020) – Replace with new broadband radios (recommended in 2025, approximate cost \$21,000).
- Two Laptop Computers (2021) – Replace with new laptop computers (recommended in 2025, approximate cost \$3,456).
- Planning – Three iPad Tablets (2021) – Replace with new iPad tablets (recommended in 2025, approximate cost \$1,728).
- Administration – IT Network Equipment (2020) – Replace with new network equipment (recommended in 2025, approximate cost \$6,000).
- Administration – IT Server (2020) – Replace with new server (recommended in 2025, approximate cost \$10,000).

**Facilities**

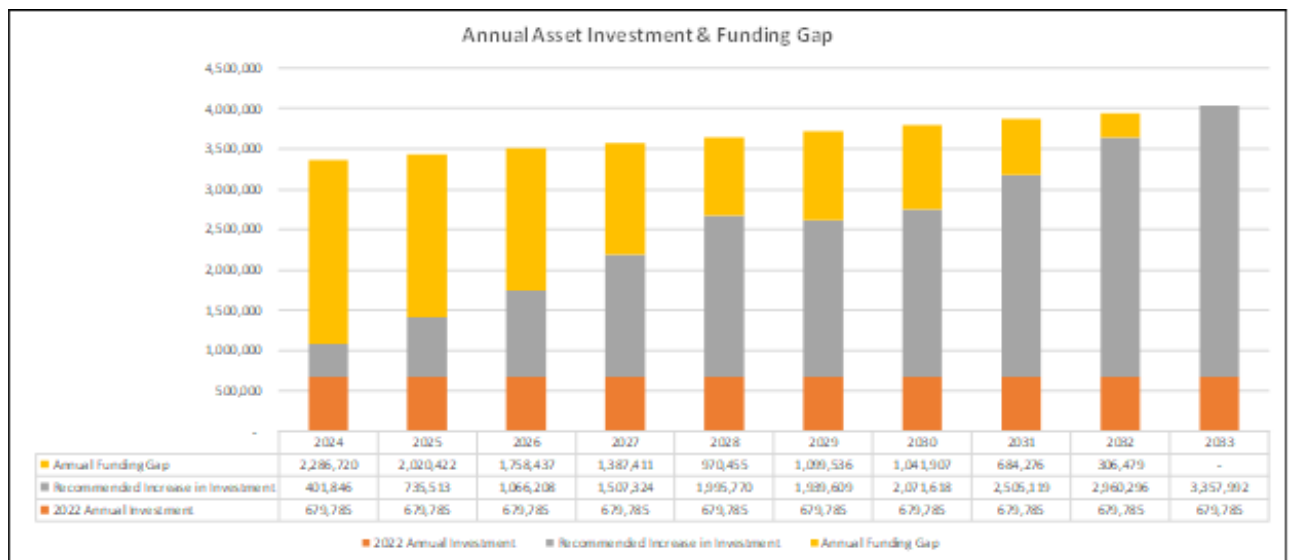
- Municipal Office – HVAC unit – Replace with new (recommended in 2024, approximate cost \$4,000).
- Municipal Office – Skylight and HVAC unit and Hot Water Tank – Replace with new (recommended in 2025, approximate cost \$11,000).
- Archive Building – HVAC unit and Lighting – Replace with new (recommended in 2025, approximate cost \$3,000).
- Lake of Bays Community Centre & Library – flat roof, single hung windows, old exterior door, sealant, vinyl tile, acoustic tile, wall painting, hot water tank, 2<sup>nd</sup> floor plumbing fixtures – Replace with new (recommended in 2024, approximate cost \$181,000).
- Lake of Bays Community Centre & Library – Metal siding on original part of building (1979) – Replace with new (recommended in 2025, approximate cost \$86,000).
- Lake of Bays Community Centre & Library – Enclosed vertical platform lift (1991) – Replace with new (recommended in 2026, approximate cost \$80,000).
- Dwight Community Centre & Library – Aluminum soffit and fascia (1991), wood frame windows (1988), Acoustic tile (1988), HVAC 5 ton (1994), hot water tank (1999), pressure tank (1990) – Replace with new (recommended in 2024, approximate cost \$ 46,000).
- Dwight Community Centre & Library – Skylight window and exterior main entrance door (1991), HVAC exhaust fan (1991), Life Safety Items (2015) – Replace with new (recommended in 2025, approximate cost \$ 31,000).
- Dwight Community Centre & Library – Vinyl flooring (1988), Laminate flooring (1991), acoustic tile (1991) – Replace with new (recommended in 2026, approximate cost \$ 42,000).
- Dorset Change House – exterior painting (recommended in 2026, approximate cost \$2,000).
- Dwight Public Washroom – HVAC exhaust fan – Replace with new (recommended in 2024, approximate cost \$3,000).
- Dwight Outdoor Storage Shed at Rink – Wood siding and wood porch and railings and doors (1995) – Replace (recommended in 2025, approximate cost \$11,000).
- Dwight Outdoor Storage Shed at Rink – HVAC baseboard heater (1995), exterior lighting (2016) – Replace (recommended in 2026, approximate cost \$3,000).
- Dwight Tourism Office – Vinyl frame windows (1994) – Replace (recommended in 2024, approximate cost \$1,000).
- Baysville Seniors Hall – Substructure wall parge coat improvement, HVAC oil furnace replacement (recommended in 2024, approximate cost \$14,000).
- Baysville Seniors Hall – brick masonry improvement, piping and ductwork improvements, exterior door replacement (recommended in 2025, approximate cost \$31,000).

- Baysville Seniors Hall – Asphalt shingles (2011), Replace with new (recommended in 2026, approximate cost \$17,000).
- Dwight Seniors Hall – Metal roofing (1945), Exterior doors (1990), HVAC oil furnace – Replace with new (recommended in 2024, approximate cost \$53,000).
- Dwight Seniors Hall – Wood ramp and stairs (2004), HCAV A/C 4-ton unit (2003), HVAC Bathroom exhaust fan (1960) – Replace with new (recommended in 2025, approximate cost \$10,000).
- Port Cunnington Seniors Hall – Metal roof (1945), HVAC oil furnace (2002), HVAC exhaust fan (2000) – Replace with new (recommended in 2024, approximate cost \$43,000).
- Port Cunnington Seniors Hall – ceiling painting (recommended in 2025, approximate cost \$2,000).
- Port Cunnington Seniors Hall – Wood frame windows and carpet flooring (1945), hot water tank and pressure tank (2011) – Replace with new (recommended in 2026, approximate cost \$9,000).
- Baysville Washroom – Signage (1995) – Replace (recommended in 2024, approximate cost \$5,000).
- Baysville Washroom – Walls and Ceiling painting, Hot water tank (2010), exterior patch paving and light standards (1995) – Replace (recommended in 2025, approximate cost \$33,000).
- Dwight Sand Dome – Roofing PVC Membrane – Replace with new (recommended in 2024, approximate cost \$128,000).
- Public Works Garage 2 – Metal siding (1972), Exterior doors (1972) – Replace with new (recommended in 2025, approximate cost \$69,000).
- Baysville Sand Shed – Hung sliding doors (1992) – Replace with new (recommended in 2025, approximate cost \$12,000).
- Fire Station 20 – Foundation localized repairs (recommended in 2024, approximate cost \$5,000).
- Fire Station 20 – Vinyl frame windows and HVAC – A/C 1 ton unit (1995) – Replace with new (recommended in 2025, approximate cost \$4,000).
- Fire Station 20 – Overhead doors, wood stairs and deck, plumbing fixtures (1995) - Replace with new (recommended in 2026, approximate cost \$17,000).
- Fire Station 30 – Foundation localized repairs (recommended in 2024, approximate cost \$5,000).
- Fire Station 30 – HVAC radiant tube heater, plumbing fixtures, Life safety items (1992) – Replace with new (recommended in 2025, approximate cost \$11,000).
- Fire Station 40 – Foundation localized repairs, Vinyl frame windows (1991) (recommended in 2024, approximate cost \$8,000).
- Fire Station 40 – Carpet flooring – Replace with new (recommended in 2025, approximate cost \$5,000).
- Fire Station 40 – Exterior doors, HVAC radiant tube, HVAC baseboard heaters (1991) – Replace with new (recommended in 2026, approximate cost \$15,000).

- Fire Station 50 – Foundation localized repairs, HVAC radiant tube, hot water tank, pressure tank, plumbing fixtures (1999) (recommended in 2024, approximate cost \$15,000).

The above listed projects summarise the most current asset improvement needs for the Township. Adding up the total costs of these projects and comparing this to the Township’s past capital funding investments shows a growing gap in infrastructure funding, which is found not only in the Township of the Lake of Bays but throughout Ontario, and across Canada. See the graphic representation below that identifies the Township’s funding gap. The Township has been taking steps to close this funding gap and working hard to seek available funding grants to help close the gap. However, more needs to be done to ensure that the Township can offer appropriate levels of service to the public now and into the future.

The "financing strategy" described in Section 5 of this report identifies a funding plan for the recommended asset management strategy, including a review of historical results and recommendations with respect to the required amounts and types of funding (revenue) annually over the forecast period. Also, any infrastructure funding gaps are identified, and recommendations are made regarding potential approaches to reduce and mitigate these gaps over the 10-year forecast period.



Based on an analysis of the Township’s core capital assets in terms of replacement cost and useful life, the following summary of optimal annual asset investment has been created.

Tax Supported Assets	Replacement Cost	Weighted Average Useful Life	Annual Replacement Investment (2023)
Road Surface - Asphalt	6,583,250	25	263,300
Road Surface - Surface Treatment	10,785,020	10	1,078,500
Road Surface - Gravel	3,830,000	10	383,000
Road Base	88,856,400	60	40,000
Bridge & Culverts	10,600,000	60	176,700
Sidewalks	294,000	50	5,900
Signs	105,420	10	10,500
Street Lights	107,200	50	2,100
Guardrails	83,375	25	3,300
Docks	3,152,500	48	65,700
Trails	335,000	45	7,400
Catch Basins	308,000	100	3,100
Vehicles	9,752,000	14	696,600
Equipment	702,600	16	43,900
IT Hardware / Software	553,236	11	50,300
Facilities - Administration	2,029,000	66	30,700
Facilities - Parks & Facilities	10,904,155	59	184,800
Facilities - Public Works	7,978,665	60	133,000
Facilities - Fire	1,907,000	57	33,500
<b>Total</b>	<b>158,866,821</b>		<b>3,212,300</b>

\*\* Road Base annual investment for maintenance only

In summary, an annual asset investment of \$3,212,300 is needed to fund long-term asset management planning needs for tax supported infrastructure. Annual asset investments for road base assets are based on level of service costs identified in this asset management plan and not full replacement.

This \$3,212,300 annual asset investment becomes the funding target over the forecast period. However, this target increases over time as inflation increases this amount annually. Assuming 2% annual inflation, the target annual capital asset investment amount becomes approximately \$3,915,770 by the year 2033.

The Township has used both Canada Community Building Fund (Gas Tax) and OCIF funding as funding sources, as well as transfers from Operating Reserves for funding infrastructure improvements. Our proposed Financial Strategy shows the Township will require \$12.9 million in debt funding from 2024 to 2033 to support the recommended tax supported asset lifecycle needs. Along with the debt funding we propose a Capital tax increase of 6.0% per year from 2024 to 2028 and 4.6% thereafter.

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Overall, this asset management plan is a tool to be used by the Township for capital and financial decision making. It can be tied to various existing reports (such as budget, official plan, and strategic planning reports) to ensure the asset management plan can be updated to reflect any changes in the Township of the Lake of Bay's priorities.

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## **Appendices**

Appendix A: 10-Year Detailed Asset Management Strategy & Financing Strategy

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## **Disclaimer**

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## **1.0 Introduction**

### **1.1 Overview**

R.J. Burnside & Associates Limited (Burnside) was retained by the Township of the Lake of Bays (Township) to prepare an asset management plan for Township assets. This plan is intended to be a tool for the Township to use during various decision-making processes, including the annual budget process and Provincial / Federal capital grant application processes. This plan will serve as a road map for sustainable infrastructure planning going forward.

Assets included in this asset management plan are the following:

- Roads (Bases and Surfaces - Asphalt, Surface Treatment, Gravel)
- Bridges / Culverts
- Sidewalks
- Signs
- Guardrails
- Docks
- Trails
- Storm Water (Catch Basins)
- Vehicles
- Equipment
- IT Hardware
- Facilities

It is recommended that this plan be updated on an annual basis to ensure that it is kept up to date. All assets listed above are tax supported and are discussed more thoroughly in this report.

### **1.2 Plan Objectives**

The Township's goals and objectives with respect to their capital assets relate to the level of service being provided to the Township's residents and visitors. Services are currently provided at current levels of service. It is recommended that the Township provided these services at expected levels, as defined within this asset management plan. The Township's infrastructure and other capital assets are anticipated to be maintained at condition levels that provide for a safe and functional environment for its residents and visitors. Therefore, the asset management plan and its implementation will be evaluated based on the Township's ability to meet these goals and objectives.

### 1.3 Plan Development

The development of the Township's asset management plan was based on the steps summarized below:

- Develop a complete listing of core capital assets to be included in the plan, including attributes such as useful life, age, accounting valuation and current replacement valuation. Update the replacement cost of assets to 2023 dollars, and where required, use applicable inflationary indices.
- Assess current condition of the assets, based on a combination of the following:
  - Existing reports.
  - Road Needs Study.
  - Bridge and Culvert Inspection report.
  - Facilities Inspections and Assessments.
  - Dock Inspections and Assessments.
  - Burnside desktop assessments based on reports.
  - Staff assessments.
  - Asset age analysis.
- Assess the risk of asset failure for each asset, based on determining the probability of each asset failing, as well as the consequence of the asset failing. This risk analysis is one of the components used to identify priority projects for inclusion in the asset management plan, as well as asset risk levels that require mitigation.
- Determine current levels of service, based on standard practices and discussions with Township staff. Further analysis of the maintenance practices and identification of additional measures that can be applied to the assets to extend their lifecycle and potentially provide a lower asset total lifecycle cost.
- Prepare an asset management strategy (i.e., operating, and capital forecast) based on the core asset inventory, identified priorities, forecast scenarios and level of service analysis discussed above.
- Determine a financial strategy to support the asset management strategy, thus determining how the operating and capital related expenditure forecast will be funded over the plan period.
- Prepare a final report, summarizing the process, strategy, and results of the asset management plan.

### 1.4 Maintaining the Asset Management Plan

The asset management plan should be updated as the capital needs and priorities of the Township changes. This can be accomplished in conjunction with the Township's budget process. With the delivery of this project spreadsheet file, the Township will have the tools available to perform updates to the plan when needed.

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When updating the asset management plan, note that the state of local infrastructure, expected levels of service, asset management strategy and financing strategy are integrated and impact each other. Looking at these components in reverse order, one can see the financing strategy outlines how the asset management strategy will be funded. The asset management strategy illustrates the costs required to maintain expected levels of service at a sustainable level. The expected levels of service component summarizes and links each service area to specific assets contained in the state of local infrastructure section and thus determines how these assets will be used to provide expected service levels.

This report covers a forecast period of 10-years; however, it is suggested that more focus and attention be put on the first five years of the asset management plan, to ensure accurate capital planning in the short term. It is also recommended that the Township start moving towards 50-year forecasts. This longer-term vision will ensure that future infrastructure investments are not lost in the shorter 10-year forecast window.

## **1.5 Plan Integration**

The municipal environment is continually changing and demanding when it comes to legislation and other responsibilities. Integrating the asset management plan with the Township's budget process, as well as Public Standards Accounting Board Handbook Section 3150 (tangible capital asset) requirements can make updates in all three areas more efficient.

With respect to integrating the Township's budget process with asset management planning, the Township requires a projection of capital and operating costs over a future period. The budget outlines total operating and capital requirements for the Township, while the asset management plan focuses in on specific asset related requirements. With this link to the annual budget, the budget update process can also become an asset management plan update process.

Both asset management and PSAB 3150 require a complete and accurate asset inventory. The significant difference between the two lies in valuation approaches (PSAB 3150 requires historical cost valuation, while asset management requires future replacement cost valuation). Using a single asset inventory, as developed in the asset management spreadsheets for the Township assets (delivered to the Township as working documents for Township staff), containing both historic and current replacement valuation methods is an effective approach to maintaining the Township's asset data.

Please note that Burnside was not able to extract a complete asset inventory from the Township records and therefore used information provided by staff and other documents to create a single asset registry for the Township. It is recommended that the Township make use of this expanded asset inventory in all future asset and financial reporting.

## 2.0 State of Local Infrastructure

### 2.1 Scope and Process

This section of the plan provides an opportunity to develop a greater understanding of the capital assets owned by the Township. The state of local infrastructure analysis includes:

- An asset inventory documenting asset types, sub-types including quantities, materials, and other similar asset attributes (where available).
- Financial accounting valuation (where available).
- Replacement cost valuation.
- Asset age distribution analysis and asset age as a proportion of expected useful life.
- Asset condition information (mostly based on report and / or staff assessment as well as the age of the asset).
- Documentation of assumptions made in creating the asset inventory.

Burnside developed a detailed asset inventory listing for the Township which was used as a starting point in fulfilling the requirements for this report. This inventory provides current financial accounting valuations (i.e., historical cost, accumulated amortization, and net book value), as well as attributes such as replacement cost, useful life, and age). With respect to replacement cost, the Township provided various recent valuations, which were inflated in order to estimate current 2023 replacement costs. Other valuations were made using a current 2023 replacement cost and deflating the value to the year or estimated year that the asset was constructed and / or acquired.

The following data and reports were used to develop the Township's asset inventory during this project:

- Township past capital improvement asset listings.
- Township reports (such as spreadsheets; documents; and notes from staff).
- Township 2019 Road Needs Study.
- Township 2022 Bridge Inspection Report.
- Burnside 2023 Facility Inspections.
- Burnside 2023 Dock Inspections.
- Recent purchase information from the Township.
- Discussions with Township staff.

Some adjustments to asset useful lives have been made but further analysis may reveal that the Township will want to update some useful life values in the tangible capital asset financial reporting so that they better reflect the lifecycle and remaining life of the Township's assets. Burnside engineers have reviewed the useful lives of the Township assets identified in this project and believe they now better reflect the conditions, maintenance practices and management of the Township's assets.

## 2.2 Capital Asset Overview

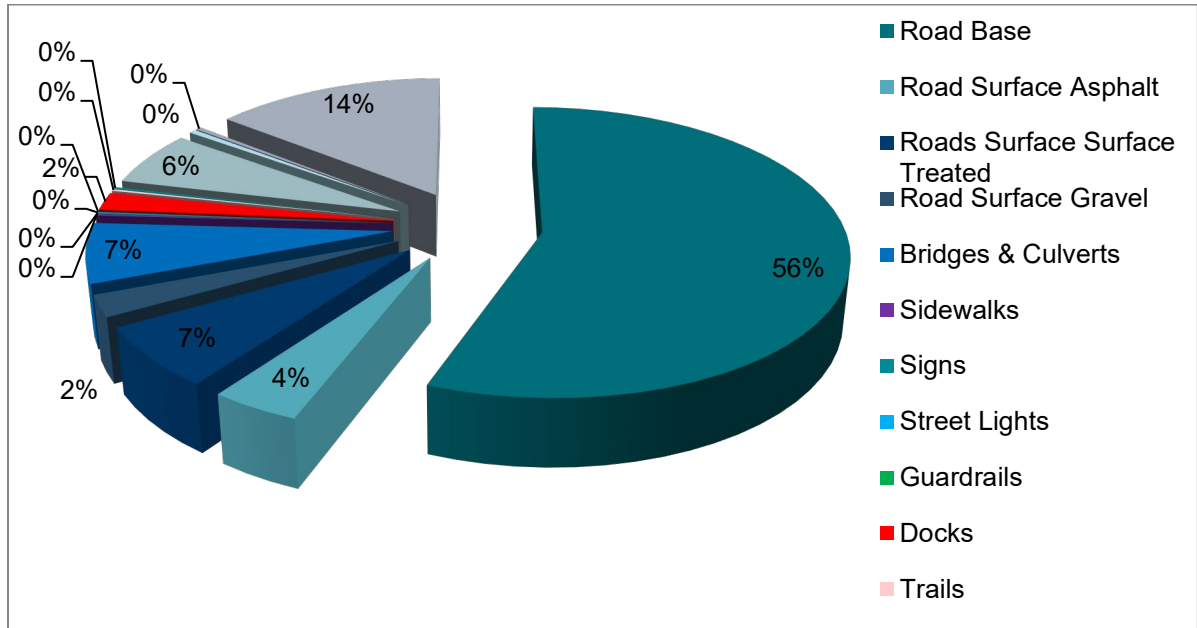
The Township presently owns assets with a 2023 replacement value of approximately \$158.9 million. Close to 56% of the total replacement value is contained in Road Base assets (\$88.9 million) which then results in the remaining replacement asset value of \$70.1 million or approximately 44% of the remaining asset replacement cost. Table 2-1,

**Table 2-1: Asset Assessment Summary**

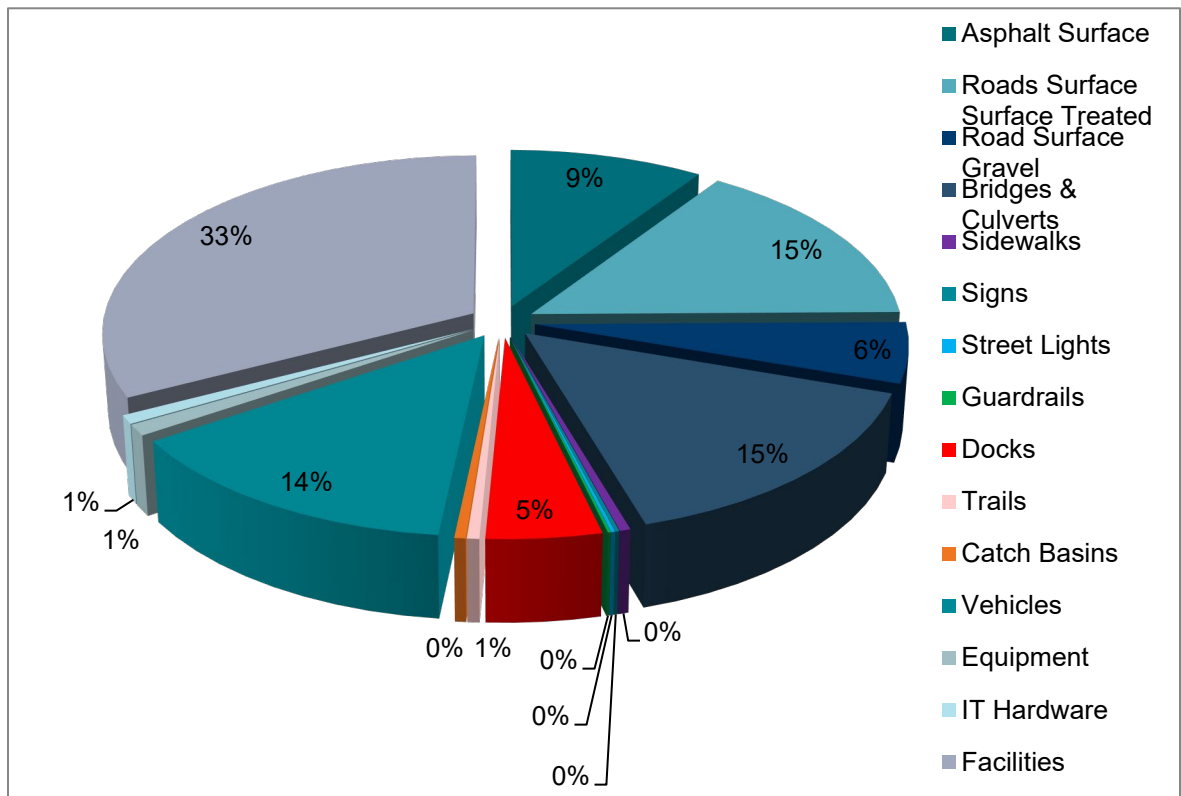
Asset Type	Historic Cost	2022 Accumulated Amortization	2022 Net Book Value	2023 Replacement Cost	Condition Value (weighted average)	Condition Text (weighted average)	Useful Life (weighted average years)	Age (weighted average years)	Remaining Life (weighted average years)	Risk Value (weighted average)	Risk Text (weighted average)
Road Base	\$6,806,551	\$5,175,971	\$1,630,580	\$88,856,400	N/A	N/A	60	61	2	1.0	Low
Road Surface Asphalt	\$4,159,659	\$1,139,498	\$3,020,161	\$6,585,750	8.0	Good	25	9	15	1.0	Low
Roads Surface Surface Treated	\$7,874,535	\$3,541,333	\$4,333,202	\$10,785,020	7.0	Good	10	6	5	2.0	Moderate
Road Surface Gravel	\$3,905,537	\$919,062	\$2,986,475	\$3,830,000	9.0	Very Good	10	3	7	1.0	Low
Bridges & Culverts	\$3,631,487	\$1,023,423	\$2,608,064	\$10,600,000	8.2	Good	60	37	28	2.0	Moderate
Sidewalks	\$98,780	\$34,352	\$64,428	\$294,000	7.0	Good	50	18	34	1.4	Low
Signs	\$197,754	\$131,431	\$66,323	\$105,420	6.0	Average	10	8	5	1.0	Low
Street Lights	\$14,475	\$12,191	\$2,284	\$107,200	5.0	Average	50	51	2	2.0	Moderate
Guardrails	\$52,570	\$3,510	\$49,060	\$83,375	9.0	Very Good	25	20	15	1.0	Low
Docks	\$1,102,805	\$333,232	\$769,573	\$3,152,500	7.0	Good	48	49	23	2.0	Moderate
Trails	\$295,196	\$5,103	\$290,093	\$335,000	10.0	Very Good	45	2	43	1.0	Low
Catch Basins	\$139,369	\$24,237	\$115,132	\$308,000	8.2	Good	100	20.1	79.9	1.0	Low
Vehicles & Trailers	\$6,574,440	\$2,643,317	\$3,931,123	\$9,802,000	7.2	Good	14	8	6	2.0	Moderate
Equipment	\$454,420	\$160,412	\$294,008	\$702,600	7.7	Good	16	11	8	2.0	Moderate
IT Hardware	\$429,458	\$75,082	\$354,376	\$553,236	8.3	Good	11	3	8	2.0	Moderate
Facilities	\$10,349,620	\$3,072,244	\$7,277,376	\$22,818,820	7.2	Good	59.9	23.6	35.6	2.0	Moderate
<b>Total</b>	<b>\$46,086,656</b>	<b>\$18,294,398</b>	<b>\$27,792,257</b>	<b>\$158,919,321</b>	<b>7.0</b>	<b>Good</b>	<b>34.9</b>	<b>18.3</b>	<b>17.7</b>	<b>1.0</b>	<b>Low</b>
<b>Total without Road Base Replacement Costs</b>				<b>\$70,062,921</b>	<b>7.5</b>	<b>Good</b>	<b>38.4</b>	<b>18.9</b>	<b>19.6</b>	<b>1.8</b>	<b>Moderate</b>

Figure 2-1, and Figure 2-2 outline the breakdown of these totals into the Township’s asset categories.

**Figure 2-1: Township Assets Replacement Costs (2023)**



**Figure 2-2: Township Assets Replacement Costs (2023) without Road Bases**



The capital asset inventory was organized in a Microsoft Excel spreadsheet and delivered to the Township in digital form as working documents for Township staff to continue to use and update as required. Each of the asset types were assessed for their age, condition (where available) and for data accuracy and completeness.

Table 2-1 and Figure 2-1 show the Township's financial accounting valuation summary by asset type for core assets. Since 2009, municipalities have been required under the Public Sector Accounting Board Handbook Section 3150 (PSAB 3150) to maintain asset listings complete with historical cost (i.e., the original cost to purchase or construct an asset), accumulated amortization and net book value. These values were to be reported on the Township's audited financial statements each year. Burnside has done the additional work of developing the 2023 cost for assets that have been added to the Township's asset inventory. If the Township chooses to use the asset inventory developed in this project to report the PSAB 3150 values, the data / information is found in the delivered spreadsheets.

Including all the Township's assets studied in this project, the total tangible capital asset historical cost is approximately \$46.1 million or 29.0% of the total replacement cost. The total historic cost of approximately \$39.3 million or approximately 56.1% of the total replacement cost excluding road base historic and replacement costs. It is expected that historical cost totals are less than replacement cost totals, given inflationary adjustments that would occur between the original asset purchase / construction date and 2023. Total accumulated amortization for the Township's assets is approximately \$18.3 million or 11.5% of the total asset historical cost and \$13.1 million or 18.7% without road base costs included. This represents the proportion of tangible capital assets that have been amortized (i.e., used up) to date from a financial valuation perspective. This also leads one to understand that the Township's core assets are mostly in the first one-fifth of their lifecycle.

Clearly the Township's owned facilities, road, bridge, and vehicle assets have the greatest percentage replacement cost even without including road base values (see Table 2-1). Road bases are considered assets that will never be totally replaced but will from time to time be improved and in spot locations reconstructed on an as needed basis. Therefore, by excluding road base asset values (see Figure 2-2), the Township's asset replacement cost distribution becomes more realistic. More in depth discussion of the asset types follows below.

## **2.3 Road Environment Assets**

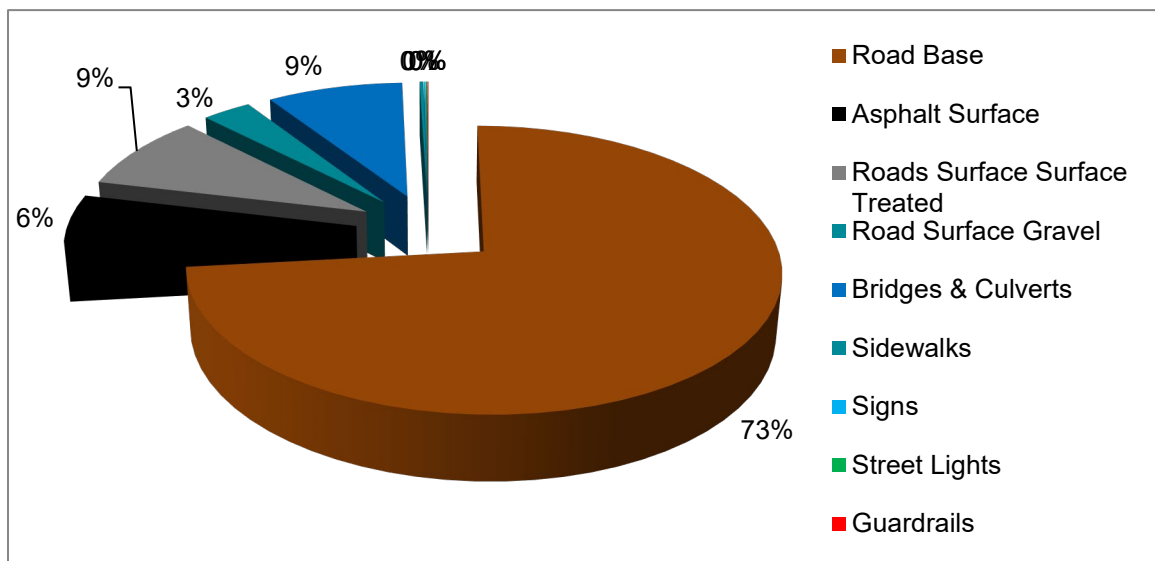
The Township’s Road assets make up a key service that reflects the economic and social development of the community. The road environment or assets found within the road right-of-way make up 76.3% of assets studied in this project or 46.2% of the assets without road bases. The following asset types are the assets found within the road right-of-way (excluding Road Bases):

- Road Surface Asphalt – 9.4% of the total Township’s asset replacement costs.
- Road Surface Treated – 15.4% of the total Township’s asset replacement costs.
- Road Surface Gravel – 5.5% of the total Township’s asset replacement costs.
- Bridges and Culverts – 15.1% of the Township’s asset replacement costs.
- Sidewalks – 0.4% of the Township’s asset replacement costs.
- Signs – 0.2% of the Township’s asset replacement costs.
- Streetlights – 0.2% of the Township’s asset replacement costs.
- Guardrails – 0.1% of the total Township’s asset replacement costs.

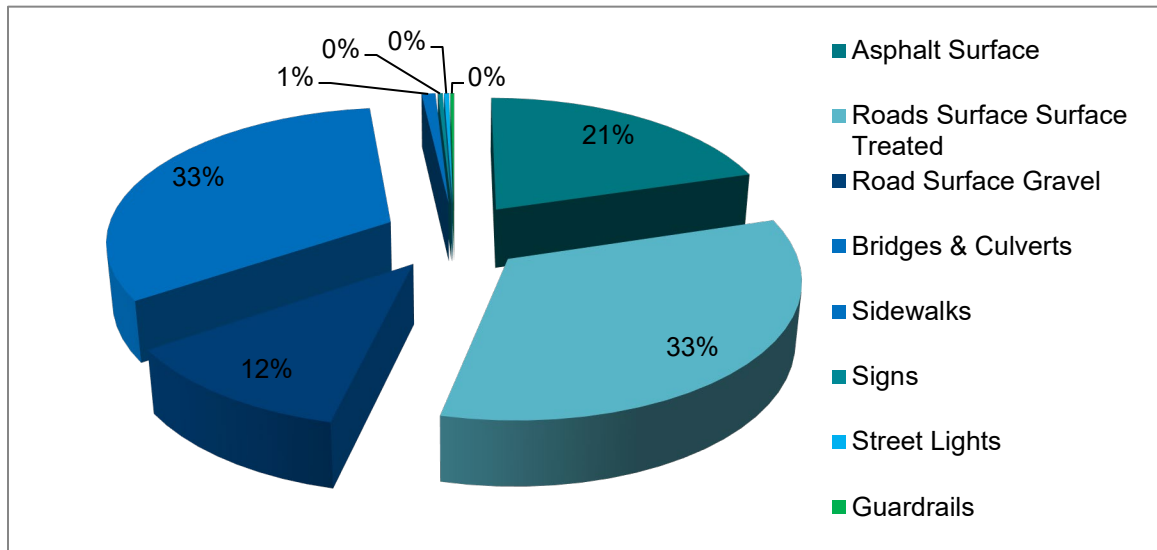


Figure 2-3 and Figure 2-4 outline the replacement cost distribution of Road Environment Assets with and without Road Base values included.

**Figure 2-3: Road Environment Asset Distribution Replacement Costs (2023)**



**Figure 2-4: Road Environment Asset Distribution Replacement Costs (2023) without Road Bases**



Below we provide more detail on the asset groups in the Road Environment group of assets.

**2.3.1 Roads**

At the current replacement cost the road assets account for approximately \$110 million dollars or 69% of the assets studied in this project. Without Road Bases included road assets account for over \$21 million or 30% of the assets studied in this project. The composition of the road surfaces is outlined in Table 2-2.

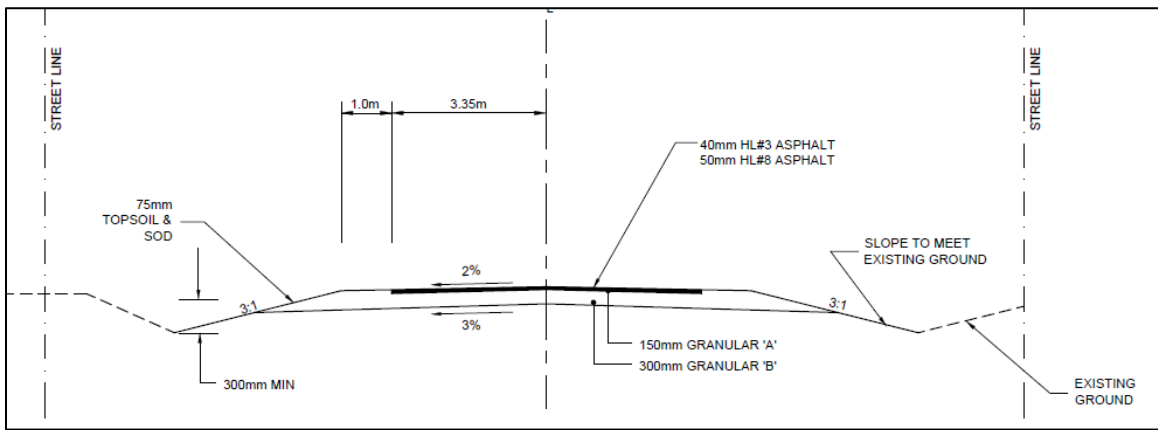
**Table 2-2: Road Surface Assets**

Road Surface	Surface Length (km)	Condition (weighted average)	Condition (Text)	Risk (weighted average)	Replacement Cost
Asphalt (HCB)	27	8.0	Good	1.0	\$6,585,750
Surface Treatment (LCB)	65	7.0	Good	2.0	\$10,785,020
Gravel	125	9.0	Very Good	1.0	\$3,830,000
<b>Total</b>	<b>217</b>	<b>7.7</b>	<b>Good</b>	<b>1.5</b>	<b>\$21,200,770</b>

The Township completes Road Needs Studies every 5 years which is an excellent practice and assists the Township in prioritizing both capital and operational maintenance programs. The next Road Needs Study will be completed in 2024 and therefore the results from the 2019 study are being projected out to assist in road work recommendations developing an asset strategy for this project.

Key to all roads is the road base on which they are built. These road bases in most cases were established many years ago. Hard top (asphalt, and surface treated) road surface roads provide the longest life cycle with best level of service when constructed on excellent road bases. Once the road base becomes soft it cannot economically support a hardtop road surface and it is best to convert it to a gravel road until funding is made available and the base has been reinforced. Figure 2-5 provides a typical road cross-section diagram. This can be applied for all surface types as asphalt (shown in figure), and without asphalt for surface treatment or gravel road surfaces.

**Figure 2-5: Typical Asphalt Road Surface Cross-Section**



The Township's gravel surface roads are upgraded approximately every 10-years or as required with surface gravel replacement / top-up.

In some locations additional gravel is at times required to help reinforce the road base. It is important to note that the Township uses crushed granite as the material for gravel surfaces which is holding up much better than the standard limestone gravel found in more southern Ontario municipalities. It is for this reason as well as the Township's efforts to reinforce / strengthen its road bases that the gravel road surface roads have a longer lifecycle than most southern Ontario municipalities. Another factor is the methods used by the Township staff in winter maintenance of Township roads.

The 2024 Road Needs Study report will provide more detailed explanations of the Township's road conditions and related deficiencies that impact longevity or operations of the roads, including road widths, drainage, surface type, alignment, and brushing maintenance where required. Only the road conditions from the 2019 road study were incorporated into this asset management plan. These road conditions were degraded along road surface degradation models to estimate their potential condition in 2023.

### 2.3.2 Bridges & Culverts

The Township has twelve bridges and culverts structures over the span of 3.0 m inspected in 2022. The inspection report was reviewed, and information used in this asset management analysis.

Visual inspections are required to be carried out every two years in accordance with the Ministry of Transportation – Ontario Structure Inspection Manual (OSIM). The inspections are to be completed under the direction of a Professional Engineer to assess their condition and identify any material defects, performance deficiencies, maintenance needs, additional studies and / or repairs / rehabilitation work required on a structure-by-structure basis.

The Township has a total of \$10.6 million replacement cost of bridge and culvert assets. Table 2-3 provides the distribution of the types of bridges that the Township owns.

**Table 2-3: Structure Types**

Bridge Type	Number	Replacement Cost
Steel I-Girder (Timber Deck)	1	\$750,000
Modular (Steel & Timber)	2	\$1,350,000
Timber Girder	1	\$2,200,000
Precast Concrete Girder	1	\$1,500,000
Cast-In-Place Concrete Ridge Frame	1	\$850,000
Precast Concrete Culvert	2	\$1,200,000
CSP Round Culvert	2	\$1,500,000
CSP Multi-Plate Arch Culvert	2	\$1,250,000
<b>Total</b>	<b>12</b>	<b>\$10,600,000</b>

Load postings may be recommended for structures based on age, condition, noted performance deficiencies or based on the findings of a structural evaluation. There is currently one structure in the Township's inventory that has a load posting. See Table 2-4 for Load Posting details.

**Table 2-4: Township Bridge Load Limit Posting**

Asset ID	Bridge Asset Name	Structure Type	Load Posting
4220	Tasso Lake Dam Bridge	Cast-In-Place Conc. Rigid Frame	10

The Township's inspection report had bridge condition index (BCI) values calculated for the bridges. Burnside reviewed these calculations and found substantial differences in BCI values. Burnside Bridge Engineers recalculated BCI values using the information from the OSIM report with results being much higher than what the OSIM report stated. There can be many reasons for this difference as Burnside did not inspect the Township bridge structures, however in many cases we have found that some consultants do not account for the transition of some individual elements of a structure. For example, each element of a structure is assigned an environment (severe, moderate, and benign) based on the level of exposure. The environment identified for the element has an impact on the condition transition.

It is recommended that the Township have the engineers completing the bridge and culvert inspections use the most up to date Ministry of Transportation inspection forms and calculate appropriate BCI values for each structure.

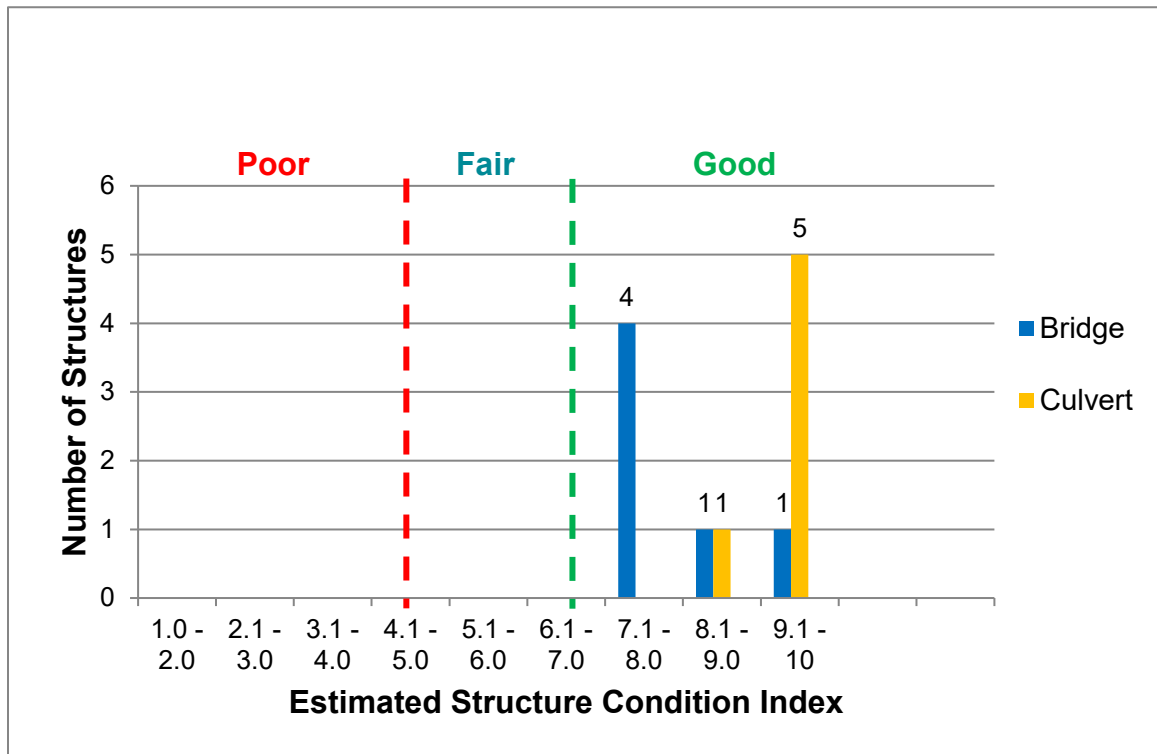
The capital works needs include any repair, rehabilitation or replacement work which would typically be completed by the Township’s hired Contractor, to assist in extending the service life of a structure and increasing the Bridge Condition Index (BCI). In accordance with the OSIM report, the capital and maintenance works required are based on a priority of 6 to 10 years, 1 to 5 years, and urgent now needs have been estimated and incorporated into the asset management strategy. Table 2-5 outlines the potential capital and maintenance works required within the year categories.

**Table 2-5: Bridge and Culvert Needs Costs**

Time Frame (Inspection Report)	Capital and Maintenance Cost
< 1 year	\$64,500
1 – 5 years	\$130,000
6 – 10 years	\$63,000
<b>TOTAL</b>	<b>\$257,500</b>

Based on the biennial inspection of each structure, the estimated Structure Condition Index Distribution graph, shown in Figure 2-6 provides a summary of the current state of the Township’s structures.

**Figure 2-6: Estimated Structure Condition Distribution**



Currently, 100% of the Township's structures are within the "good" range, based on the Burnside recalculated BCI values, as illustrated in Figure 2-6 above. Of interest, the Ministry of Transportation Ontario (MTO) has established a goal to have 85% of their structures in "good" condition by the year 2021, and to maintain that condition moving forward by addressing rehabilitations and replacements as necessary. Burnside recognizes that the above goal was not established by the Township. It should be noted that based on the current state of the inspected structures and Burnside recalculated BCIs the Township is right on track with the management of their bridge assets when compared to the MTO's established goal of 85% of the structures in "good" condition.

### 2.3.3 Sidewalks, Signs, Streetlights and Guardrails

The sidewalks, signs, streetlights, and guardrail assets were not part of the Township's original asset inventory. These assets were added to the Township asset inventory from information provided by Township staff. Estimates of when these assets were constructed were implemented (eg. Streetlights most in 1970 but the true year is unknown). Based on replacement cost the total value of these assets is close to \$590,000, which is a significant value.

**Table 2-6: Sidewalks, Signs, Streetlights and Guardrails**

Asset Type	Condition Text (weighted average)	Useful Life (years)	Age (weighted average)	Remaining Life (weighted average)	2021 Replacement Cost
Sidewalks	Good	50	18	34	\$294,000
Signs	Average	10	8	5	\$105,420
Streetlights	Average	50	51	2	\$107,200
Guardrails	Very Good	25	20	15	\$83,375
<b>Total</b>					<b>\$589,995</b>

Condition estimates of the sidewalks, streetlights and guardrails were made using a simple useful life depreciation based on age. The sidewalks and guardrail assets are relatively new it is not expected that these assets will require major replacements over the 10-year project period. However, as all assets there will be a need for simple maintenance to ensure these assets achieve their full lifecycle and maintain a high level of service to the public.

The majority of the streetlights based on the information received have exceeded their useful life and have been identified to be replaced in 2030, and for budget purposes this has been included in the financial strategy. Please note that these assets may need to have their useful life increased as they are still in very good working order. It is recommended that the Township have these streetlights inspected and develop a more detailed plan to upgrade these assets moving into the future.

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Street sign assets are inspected by a consultant annually collecting each sign retro-reflectivity. Based on these inspections the Township replaces the signs that fail and / or close to fail a reflectance threshold. The Township invests approximately \$10,000 annually in sign replacements.

## 2.4 Docks

Burnside completed the inspection of the major docks across the Township. The visual surface inspections were completed in May 2023. All working documents and spreadsheet calculations were delivered to the Township for staff to review and use moving forward. These inspected docks have a total replacement cost of approximately \$3.2 million or 4.5% of the Township's assets excluding road bases. The Township values these waterfront areas and continues to work at maintaining the over all "Good" condition.



The various components of the docks were identified, for relative condition and remaining life. Photos were taken of the various elements and delivered to the Township for staff reference. Then replacement costs were calculated for each component and totals tabulated.



**Table 2-7: Inspected Township Dock Assets**

<b>Asset Type</b>	<b>Condition Text (weighted average)</b>	<b>Useful Life (weighted average)</b>	<b>Age (weighted average)</b>	<b>Remaining Life (weighted average)</b>	<b>2023 Replacement Cost</b>
<b>Baysville Docks West</b>	Good	65	28	37	\$660,000
<b>Baysville Riverfront Dock</b>	Good	33	23	12	\$450,000
<b>Baysville Docks East</b>	Good	44	59	18	\$470,000
<b>Glenmount Dock</b>	Poor	25	103	0	\$385,000
<b>Norway Point Dock</b>	Good	65	12	53	\$235,000
<b>Cedar Narrows Dock</b>	Average	50	123	0	\$200,000
<b>Rabbits Bay Dock</b>	Average	38	36	5	\$80,000
<b>Hillside Dock</b>	Average	59	25	33	\$205,000
<b>South Portage Dock</b>	Very Good	72	5	68	\$147,500
<b>Dwight Beach Dock</b>	Good	39	65	17	\$320,000
<b>Total</b>					<b>\$3,152,500</b>

## 2.5 Township Trails

The Township has recently developed two trails which are not natural but constructed – Echo Valley Boardwalk Trail and Baysville Interlock Trail. The Echo Valley trail had tornado damage in 2020, and since the Township has been working on rebuilding this trail. Baysville Interlock trail and the rebuilt portions of Echo Valley Boardwalk trail are in Very Good condition providing additional park features for residence to enjoy and to attract tourism to the area. Once the Echo Valley trail is rebuilt then both constructed trails are not expected to have any capital expenditures over the 10-year project period. The Township has volunteer groups providing trail inspection assistance, and minor maintenance.

## 2.6 Township Catch Basins

The Township does not have many Storm Water assets, but does have identified 38 catch basins. The catch basins are not very old and as such are still in “Good” condition and are not expected to require any capital improvements over the 10-year project period. The Township cleans out the catch basins every year to ensure optimal level of service. Also, the Township continues to replace their crossroad culverts (less than 3m in diameter) to ensure appropriate water drainage. It is recommended that in the future these assets be located using GPS equipment and documented for length, diameter, and material, as well as condition as this will assist in prioritising any future water diversion needs from extreme weather events.

## 2.7 Township Vehicles & Trailers

Township vehicles are a very important asset class used by Township staff to deliver services to the Lake of Bays community with a weighted average “Good” condition. The total vehicles replacement cost value is approximately \$9.8 million or 14.0% of Township assets excluding road bases. Table 2-8 provides a summary of vehicles grouped by Township department, clearly showing that Fire and Public Works departments hold the greatest value in vehicles.



**Table 2-8: Township Vehicles & Trailers**

Asset Type	Condition Text (weighted average)	Useful Life (weighted average)	Age (weighted average)	Remaining Life (weighted average)	Risk Text (weighted average)	2023 Replacement Cost
Bylaw	Average	15	8	7	Moderate	\$50,000
Building	Good	25	15	10	Low	\$10,000
Fire	Good	18	12	7	High	\$3,739,000
Parks	Good	10	10	2	Low	\$693,000
Public Works	Good	11	5	6	Moderate	\$5,310,000
<b>Total</b>						<b>\$9,802,000</b>

**2.8 Township Equipment, and Information Technology Hardware**

Township equipment and information technology (IT) hardware asset inventory was developed with the help of Township staff and consultant. It is expected that this inventory will expand as the Township gains greater understanding of what equipment and IT hardware provides asset management value in tracking and forecasting for future replacements.

Most of the Township identified equipment inventory is used and maintained by the Fire Department. However, it is important to note that Public Works equipment assets replacement costs total \$323,200 or 46% of all listed equipment.

The combined asset replacement cost of Township equipment and IT hardware is approximately \$1.3 million, with 1.8% of the Township assets without road bases. Table 2-9 provides a summary of the state of these two asset classes. Both asset classes are in “Good” condition.

**Table 2-9: Township Equipment and IT Hardware**

Asset Type	Condition Text (weighted average)	Useful Life (weighted average)	Age (weighted average)	Remaining Life (weighted average)	Risk Text (weighted average)	2023 Replacement Cost
Equipment	Good	16	11	8	Moderate	\$702,600
IT Hardware	Good	11	3	8	Moderate	\$553,236
<b>Total</b>	<b>Good</b>					<b>\$1,255,836</b>

## 2.9 Township Facilities

All of the Township facilities were inspected by Burnside in May 2023. During the inspections each facility had listed the various assets that are incorporated into the building for appropriate operation and service to the public. The main categories of asset types identified where applicable were:

- Substructure – building foundation.
- Structure – type of building structure (e.g., wood frame; steel frame with concrete block, etc.).
- Exterior Enclosure – type of enclosure around structure (e.g., wood siding; metal or shingle roof; windows; exterior doors; etc.).
- Partitions and Doors – interior partitions and doors.
- Finishes – flooring and ceiling, as well as kitchen etc.
- Fittings and Equipment – general as well as concrete block bleachers and dashboards etc.
- Mechanical – HVAC systems and other specialty mechanical equipment.
- Electrical – Life safety items, and both interior and exterior lighting.
- Site Works – parking lot, landscaping, and walkways.
- Below Grade Services – water, wastewater, and stormwater assets for the building.



As a weighted average the overall condition of the Township facilities is Good. This asset class has a total replacement cost of over \$22.8 million or 32.6% of the Township asset value not including road bases. Township facilities are a major investment to the Township to serve the public. Table 2-10 and Figure 2-7 provide a summary of the facilities inspected, grouped

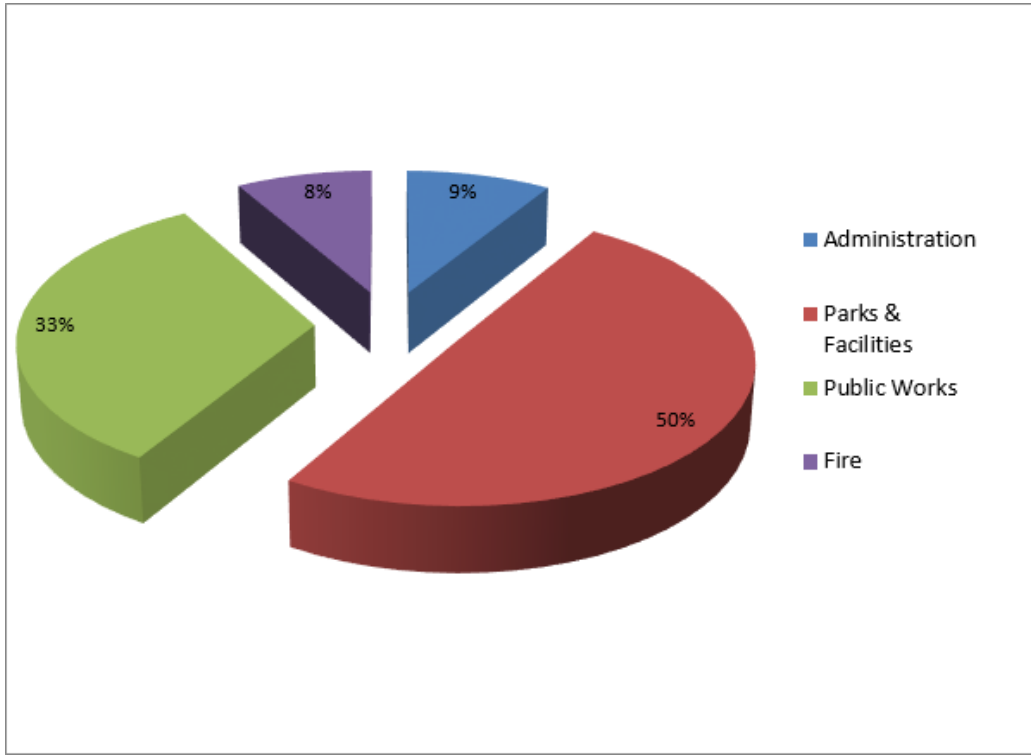
by Township Department. Photos and additional analysis and detail of each building was provided as working documents to Township staff for their continued update and use.



**Table 2-10: Township Facilities Summary**

Facility (Department)	Condition Text (weighted average)	Useful Life (weighted average)	Age (weighted average)	Remaining Life (weighted average)	Risk Text (weighted average)	2023 Replacement Cost
Administration	Good	66	18	43	Moderate	\$2,029,000
Parks & Facilities	Good	59	29	32	Moderate	\$11,351,820
Public Works	Good	61	15	40	Moderate	\$7,531,000
Fire	Average	57	28	32	Moderate	\$1,907,000
<b>Total</b>	<b>Good</b>	<b>60</b>	<b>24</b>	<b>36</b>	<b>Moderate</b>	<b>\$22,818,820</b>

**Figure 2-7: Township Facilities Groups by Department**



### 3.0 Expected Levels of Service

The Township has been offering and maintaining for its residents and visitors, good service levels, during challenging economic times. The Province has demanded via Ontario Regulation 588/17 that municipalities complete asset management plans on a regular basis to ensure that appropriate investments are being made in municipal infrastructure. Reviewing past records has shown that some investments were being made into maintaining and replacing the Township's core infrastructure. It is important to note that the long-term objective of the Township needs to be infrastructure sustainability. In general, the Township is performing maintenance activities when required.

#### 3.1 Scope and Process

A levels of service (LOS) analysis gives the Township an opportunity to document the levels of service that are currently being provided and compare it to the levels of service that will ensure the assets achieve their full lifecycle potential. This can be done through a review of current practices and procedures, an examination of trends or issues facing the Township and / or through an analysis of performance measures and targets that staff can use to measure performance.

Expected LOS can be impacted by a number of factors, including:

- Legislative requirements (e.g., minimum maintenance standards for roads, etc.).
- Strategic planning goals and objectives.
- Resident expectations.
- Visitor expectations.
- Council expectations.
- Financial or resource constraints.

The previous task of determining the state of the Township's local infrastructure establishes the asset inventory and condition, as well as asset management policies and principles to guide the refinement and upkeep of asset infrastructure. The LOS analysis utilizes this information and factors in the impact of asset service level targets. It is important to document an expected LOS that is realistic to the community. It is common to strive for the highest LOS; however, these service levels usually come at a cost. It is also helpful to consider the risk associated with a certain LOS. Therefore, expected LOS should be determined in a way that balances both level of investment and associated risk to the Township.

Burnside received verbal confirmation of maintenance practices that the Township staff and service contractor undertake. We recommend that the Township move forward with a new Road Needs Study in 2024 and the biannual bridge inspections and analysis utilizing the most up to date MTO bridge / culvert degradation models. These engineering-based inspection practices provide historic condition information as well as

information related to any changes to asset maintenance. This will also help better determine the remaining life of the municipality's assets.

This information will help not only identify the current Township needs but also future requirements due to Levels of Service changes. Ensuring that appropriate levels of service are determined and recorded helps during the Township's future growth.

The strategy of investing more often in smaller amounts which provides higher levels of service and better asset condition with an over all lower total cost over the lifecycle of the asset is recommended.

### **3.2 Current Levels of Service versus Expected Levels of Service**

The Township's current LOS has resulted in the current state of infrastructure as discussed in the previous section of the report. The current LOS also relates to the risk assessment discussed in later report sections. Regarding the cost of this LOS, the Township has established an operating and capital budget for the current year that includes the cost of providing this LOS. After many discussions with Township staff, it was determined that an additional \$228,250 per year was identified as additional cost to deliver identified expected levels of service for Township assets.

Table 3-1 outlines broad LOS descriptions (both current and enhanced LOS). This analysis was noted through discussions with the Township's staff and engineering best practices. Based on the information provided there are a few enhanced maintenance related LOS identified. The Levels of Service cost impact analysis was factored into the financial strategy discussed in Section 5 of this report.

Table 3-1: Road Expected Levels of Service

Roads Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Increase in Cost from Current to Expected LOS	Cost Description
<b>Safe Roads</b>	Meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02 and Amendments.	Meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02 and Amendments.	Regulation Standard		Lynxfields AVL and tracking. Township completes inspections for Class 6 every 30 days and Seasonal Roads every 60 days. Township to explore a maintenance tracking system to assist in compliance with Regulation
<b>Fix Public Identified Issues Quickly</b>	Track complaints and resolve them as per requirements	Track complaints by road segment so that history can be recorded.	Respond to Public Inquiry within 7 days		Township prioritizes issues and resolves within scheduled operations services
<b>Maintain Road System Network Condition for safe use</b>	Road Maintenance is completed regularly and when required	Maintain adequate road network condition index to ensure safe roads	Assess Road Conditions every 5 years with Internal assessment annually	\$60,000	Township provides this level of service. Cost reflects Capital budget required for Road Needs Study completed every 5 years. The next Road Needs Study is expected in 2024 with a potential cost of \$55,000.
<b>Hardtop Roads are Clean and Clear</b>	Street sweeping completed annually	Maintain clean safe roads			Spot clean ups completed by Township when required
<b>Follow Best Practice for Asphalt Roads</b>	Low traffic and only single lift of asphalt prevents Township from initiating a crack seal program. A micro-seal pilot will be attempted	Completing a regular crack seal program.		\$10,000	Single lift of asphalt is not able to take seal properly. Micro-surface is being tested.
<b>Surface Treatment Roads are well maintained</b>	Low traffic roads are inspected and repaired appropriately	Meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02 and Amendments.		\$5,000	Township pilot potential use of re-slurry in year 4/5 to explore a longer life and lower lifecycle cost
<b>Gravel Roads are well maintained and Dust Inhibited</b>	Gravel roads are smoothed when required, and Calcium Chloride to reduce segregation and separation of gravel surface	Gravel roads are smoothed when required, and Calcium Chloride applied for greater stability of surface material			Township provides this level of service
<b>Safe and well maintained Roadsides</b>	Township provides brushing, ditching, grass mowing, and shoulder maintenance to ensure roadsides are safe and well maintained. Blasting as required	Roadsides are clear of obstructions and well maintained for safe road travel.		\$40,000	Additional brushing via contractor will provide improved level of service and extend road lifecycle
<b>Winter Road Maintenance</b>	Winter roads are cleared and safe based on Minimum Maintenance Standards	Roads are maintained and meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02 and Amendments.			Township provides this level of service
<b>Weather forecast information</b>	Township staff check weather forecasts minimum 3 times per day in the Winter months (October 1 - April 30)	Weather forecasts are reviewed three times per day during the Winter Maintenance months.			Township provides this level of service
<b>Signs can be seen clearly</b>	Sign retro-reflectivity measurements collected via contractor annually	Signs: Visual inspections. Replace when needed.	Reflectivity Standard		Township provides this level of service

Roads Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Increase in Cost from Current to Expected LOS	Cost Description
Traffic Counts are completed regularly	Updated traffic counts are recorded when required	Clear understanding of traffic counts is updated			Township provides this level of service
Road Line Painting is clear and maintained	Township applies road line paint annually for appropriate roads	Proper road lane paint distinction			Township provides this level of service
Guardrails are safe and well maintained	Township inspects the guardrails during road patrols	Meet Provincial Standards			Township provides this level of service
Sidewalks are safe and well maintained	Township inspects the sidewalks every fall and takes appropriate action when required	Meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02 and Amendments.	Regulation Standard		Township provides this level of service
Safe Well lit Urban/Semi-Urban Street areas	Maintenance activated by Public Notice for Street Lights	Maintenance activated by Public Notice for Street Lights	Correction of Issues within MMS		Township contractor requires minimum 5 street light bulbs to be out before coming to replace. Township has not had Public identified issues with streetlights

Table 3-2: Bridge Expected Levels of Service

Bridge Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Increase in Cost from Current to Expected LOS	Cost Description
Safe Bridges	Maintain good bridge condition with 1 bridge having load limit.	Maintain good condition and no load limits.	MTO bridge guides	\$5,000	Old Sinclair Bridge required Structural Inspection.
Bridges Maintained	Follow Bridge Inspection Report recommendations for Bridge and Culvert maintenance.	Proactive Bridge and Culvert maintenance (based on bridge inspection report).			Township provides this level of service
Proper Bridge Spring Maintenance	Township sweeps bridges where required	Blowing out Expansion Joints & Washing of Bridges in Spring			Low salt content of winter road maintenance materials has not shown for as great a need for bridge washing in the Spring. Recommend that Township still wash appropriate bridges in Spring to ensure maximizing bridge lifecycle. Township has the required equipment.
Bridge Inspections	Bridge inspections (i.e., using OSIM forms) required every 2 years.	Bridge inspections (i.e., using current OSIM forms) required every 2 years.	Completed every 2 years		Township provides this level of service

**Table 3-3: Storm Water Expected Levels of Service**

Storm Water Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Increase in Cost from Current to Expected LOS	Cost Description
<b>Effective Storm Water Management</b>	Investigate and respond based on public complaints/concerns	Proper flows and clear system with little to no inhibitors	No storm water back-up incidents		Township provides this level of service
<b>Cross Road Culverts are Appropriately Sized and Maintained</b>	Cross Road Culverts are replaced when required	Climate Change and/or Extreme Weather events do not cause adverse issues with the Municipal road network			Township provides this level of service
<b>Catch Basins are clear and well Maintained</b>	Catch Basin cleaning every year	Annual Catch Basin cleaning			Township provides this level of service
<b>Storm Water Mains are clear and well Maintained</b>	Only real storm mains are French Drains that have not had any issues	Regular inspection for condition and no physical obstructions			Township provides this level of service
<b>Discharge Points are clear and well Maintained</b>	No identified issues	Regular inspection for condition and no physical obstructions			Township provides this level of service

**Table 3-4: Facilities Expected Levels of Service**

Facilities Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Increase in Cost from Current to Expected LOS	Cost Description
<b>Facilities are clean and safe for Public Use</b>	Meet all legislative requirements.	Meet all Provincial legislative requirements.	Provincial Guidelines		Township provides this level of service
<b>Source Water is well Protected</b>	Lake of Bays does not have a requirement for Source Water Protection Reporting but takes care in water wells and septic systems	Maintaining appropriate Zoning and Planning to ensure Source Water Protection			Township provides this level of service
<b>Wells are well Maintained</b>	Appropriate maintenance is undertaken when required.	Appropriate maintenance is undertaken when required			Township provides this level of service
<b>Water Treatment Processes Meet Legislative Requirements</b>	Meet all Provincial legislative requirements.	Meet all Provincial legislative requirements.	Provincial Guidelines		Township provides this level of service
<b>Well Maintained Generators where applicable</b>	Inspections completed every 3 months, tested weekly.	Tested and well-maintained generator			Township provides this level of service
<b>Safe Wastewater Treatment Structures (Tanks and Septic Beds)</b>	Meet legislative requirement (Building Code, Fire Code, Health & Safety, etc.)	Meet legislative requirement (Building Code, Fire Code, Health & Safety, etc.)	Provincial Guidelines		Septic tanks cleaned out every 1 - 3 years
<b>Facilities meet all Fire Code Requirements</b>	Meet all legislative requirements.	Meet all Provincial legislative requirements.	Provincial Guidelines		Annual inspections by First Alert (fire ext. and lights) Huronia Alarms Fire Alarm Systems and Sprinklers
<b>Heating Systems are inspected and maintained</b>	Meet all manufacturers maintenance schedules	Meet all manufacturers maintenance schedules	Manufacturers Maintenance Schedule		Contractor completes inspections/service 2 times a year
<b>Air ducts are cleaned as required</b>	Not completed on regular basis	Meet standard maintenance schedules		\$15,000	Recommend duct cleaning to be implemented on a 3 - 5-year rotation. Annual cost identified to improve level of service
<b>Fix Public Identified Issues Quickly</b>	Track complaints and resolve them as quickly as possible	Track complaints by road segment so that history can be recorded.	Respond to Public Inquiry within 7 days		Township provides this level of service.
<b>Facilities have Handicap Accessibility</b>	Meet all legislative requirements.	Meet all Provincial legislative requirements.			Township provides this level of service

Table 3-5: Parks Expected Levels of Service

Parks Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Increase in Cost from Current to Expected LOS	Cost Description
<b>Parks are Safe and well maintained</b>	Inspections occur every 2 weeks, and weekly garbage pick-up in Season	Meet all Provincial legislative requirements.	Provincial Guidelines	\$20,000	Additional staff needs to be added to ensure work crews are able to fulfill all maintenance needs
<b>Trails are well maintained</b>	Meet legislative requirement (Building Code, Fire Code, Health & Safety, etc.)	Meet legislative requirement (Building Code, Fire Code, Health & Safety, etc.)	Provincial Guidelines		Volunteer inspections working well with Township. Require added staff to complete inspections and winter ice rink maintenance
<b>Playground Structures are Safe</b>	Inspections occur once monthly	Meet all Provincial legislative requirements.			Township provides this level of service
<b>Waterfront areas and structures are safe and well maintained</b>	Inspections occur every 2 weeks	Meet all Provincial legislative requirements.			RFAM program being implemented to track inspections
<b>Township Owned Docks are safe and well maintained</b>	Inspections occur every 2 weeks from May until October	Public access structures are well maintained and safe			Township provides this level of service
<b>Trails are safe and well maintained</b>	Township only inspects hard top trails, but uses volunteers to inspect all loose top trails	Due diligence is completed and documented			Township provides this level of service
<b>Fix Public Identified Issues Quickly</b>	Track complaints and resolve them within 24 hours and safety related issues as soon as practicable	Track complaints by road segment so that history can be recorded.	Respond to Public Inquiry within 7 days		Township provides this level of service
<b>Outdoor Ice Rinks and Structures are Safe</b>	Inspected and cleared daily. Fire Department completes resurfacing.	Review of flows to be completed when septic tanks are cleaned out.			Challenges with Volunteer Fire Department staff being able to provide ice surface flooding at appropriate times of winter season

**Table 3-6: Vehicles & Equipment Expected Levels of Service**

Vehicles & Equipment Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Increase in Cost from Current to Expected LOS	Cost Description
<b>Vehicles are Safe and well maintained</b>	Meet all manufacturers maintenance schedules	Meet all manufacturers maintenance schedules	Manufacturers Maintenance Schedule		Township provides this level of service
<b>Equipment is safe and well maintained</b>	Meet all manufacturers maintenance schedules	Meet all manufacturers maintenance schedules	Manufacturers Maintenance Schedule		Township provides this level of service
<b>IT Data is Secure</b>	Meet all current IT Safety Protocols, with Backup and Redundancy Processes are implemented	Meet all current IT Safety Protocols, with Backup and Redundancy Processes are implemented	IT Standards		Township provides this level of service
<b>IT Hardware and Software are well Maintained</b>	Meet all manufacturers maintenance schedules	Meet all manufacturers maintenance schedules	Manufacturers Maintenance Schedule	\$15,000	IT Consultant is to add staff and therefore increase costs to maintain service levels

### 3.3 Township Growth

The Township continues to grow, and potentially will expand with new developments over the next ten years. The new developments over the next ten years will add roads, sidewalks, streetlights, and storm water assets to the Township asset inventory. Detailed information was not available for this Asset Management Plan; however, it is recommended that this be added to the next Township AMP in the future.

## 4.0 Asset Management Strategy

### 4.1 Scope and Process

The asset management strategy provides the recommended course of actions required to maintain (or move towards) a sustainable asset position while delivering the levels of service discussed in the previous section. The course of actions, when combined, form a long-term operating and capital forecast that includes:

- **Non-infrastructure solutions:** Reduce costs and / or extend expected useful life estimates.
- **Maintenance activities:** Regularly scheduled activities to maintain existing levels of service levels, or repairs needed due to unplanned events.
- **Renewal / Rehabilitation:** Significant repairs or maintenance planned to maintain the levels of service and increase the remaining life of assets.
- **Replacement / Disposal:** Complete disposal and replacement of assets when renewal or rehabilitation is no longer an option.

Priority identification becomes a critical process during the development of an asset management strategy. Priorities have been determined based on assessment of the overall risk of asset failure, which is determined by looking at both the probability of an asset failing, as well as the consequences of asset failure. The consequences of the municipality not meeting desired levels of service must also be considered in determining risk. As discussed in Section 3.0, adding enhanced levels of service results in both operating and capital budget impacts over the 10-year forecast period has to be taken into consideration, with the overall objective of reaching sustainable levels while mitigating risk.

### 4.2 Risk Assessment

The risk of an asset failing is defined by the following calculation:

**Risk of Asset Failure = Probability of Failure X Consequence of Failure**

Probability of failure has been linked to the condition assessment for each asset, assuming that an asset in “very good” condition has a “rare” probability of failure. The following table outlines the probability factor tied to each condition rating:

**Table 4-1: Probability of Failure Matrix**

Condition (value 0-10)	Condition	Probability of Failure
10 - 9	Very Good	Rare
8 - 7	Good	Unlikely
6 - 5	Average	Possible
4 - 3	Poor	Likely
2 - 1	Very Poor	Almost Certain

Consequence of failure has been determined by examining each asset type separately. Consequence refers to the impact on the municipality if a particular asset were to fail.

Types of impacts include the following:

- **Cost Impacts:** the cost of failure to the Township (i.e., capital replacement, rehabilitation, fines and penalties, damages, etc.).
- **Social impacts:** potential injury or death to residents/public.
- **Environmental impacts:** the impact of the asset failure on the environment.
- **Service delivery impacts:** the impact of the asset failure on the Township's ability to provide services at desired levels.

Each type of impact was reviewed and consequence of failure for each asset type was determined by using the information contained in Table 4-2 as a guide to assess the level of impact. Levels of impact were documented as ranging from "significant" to "insignificant".

**Table 4-2: Consequence of Failure Matrix**

	Cost	Social	Environmental	Service Delivery
Significant	Significant Cost – Difficult to Recover	Death, Serious Injury	Long-term Impact – Permanent	Major Interruptions
Major	Substantial Cost – Multi-year Budget Impacts	Major Injury	Long-term Impact – Fixable	Significant Interruptions
Moderate	Considerable Cost – Requires Revisions to Budget	Moderate Injury	Medium-term Impact – Fixable	Moderate Interruptions
Minor	Small/Minor Cost – within Budget Allocations	Minor Injury	Short-term/Minor Impact – Fixable	Minor Interruptions
Insignificant	Negligible or Insignificant Cost	No Injury	No Impact	No Interruptions

With both probability of failure and consequence of failure documented, total risk of asset failure was determined using the matrix contained in Table 4-3. Total risk has been classified under the following categories:

- **Extreme Risk (E):** Risk beyond acceptable levels.
- **High Risk (H):** Risk slightly beyond acceptable levels.
- **Medium/Moderate Risk (M):** Risk at acceptable levels, monitoring required to ensure risk does not become high.
- **Low Risk (L):** Very little risk.

**Table 4-3: Total Risk of Asset Failure Matrix**

Probability of Failure	Consequence of Failure				
	Significant	Major	Moderate	Minor	Insignificant
Almost Certain	E	E	H	H	M
Likely	E	E	H	M	M
Possible	H	H	M	M	L
Unlikely	H	M	M	L	L
Rare	M	M	L	L	L

Risk levels can be reduced or mitigated through planned maintenance, rehabilitation and / or replacement of an asset. An objective of this asset management plan is to identify ways to reduce risk levels where they are deemed to be too high, as well as ensure assets are maintained in a way that keeps risk at acceptable levels.

### 4.3 Priority Identification

Through a review of the asset risk of failure assessment, the asset / categories listed below were identified as being priorities of the Township over the next few years. These lists of capital asset improvements / replacements are only for the next few years, and do not limit the needs that the Township requires to become fully sustainable. The Asset Management Finance Strategy will further outline the needs for investing in assets annually via reserves to ensure that funds are available for future asset replacements.

#### 4.3.1 Roads

- Charlie Thompson Road from Dwight Beach Road to 1.4 km southeast – micro-seal surfacing (recommended in 2024, approximate cost \$98,000).
- Dwight Bay Road from Dwight Beach Road to Highway 60 – micro-seal surfacing (recommended in 2024, approximate cost \$28,000).
- Dwight Beach Road from Lake of Bays Lane to 2 km north of Charlie Thompson Road – micro-seal surfacing (recommended in 2024, approximate cost \$195,000).
- Billie Bear Road from 0.5 km north of District Road 8 to Bella Shores Road – Surface treatment resurfacing (recommended in 2024, approximate cost \$295,000).

- Millar Hill Road from Highway 60 to 3.9 km east – Slurry seal surfacing (recommended in 2024, approximate cost \$128,839).
- Point Ideal Road from District Road 22 to 2.8 km Westerly – Surface treatment resurfacing (recommended in 2024, approximate cost \$460,000).
- Tally-Ho Winter Park Road from Highway 60 to District Road 8 – Slurry seal surfacing (recommended in 2024, approximate cost \$56,161).
- Grassmere Resort Road from 0.3 km south of Grassmere Road to 1.0 km south - Surface treatment resurfacing (recommended in 2025, approximate cost \$151,200).
- Grassmere Road from Highway 60 to Boundary – Lake of Bays / Huntsville – Surface treatment resurfacing (recommended in 2025, approximate cost \$15,330).
- Point Ideal Road from District Road 22 to 2.8 km westerly – Slurry seal surfacing (recommended in 2025, approximate cost \$95,200).
- Billie Bear Road from 0.5 km orth of District Road 8 to Bella Shores Road – slurry seal surfacing (recommended in 2025, approximate cost \$61,200).
- South Camp Lake Road from District Road 8 to 0.8 km east – Surface treatment resurfacing (recommended in 2025, approximate cost \$134,400).
- Grassmere Resort Road from 0.3 km south of Grassmere Road to 1.0 km south – Slurry seal surfacing (recommended in 2026, approximate cost \$34,000).
- Grassmere Road from Highway 60 to Boundary – Lake of Bays / Huntsville – Slurry seal surfacing (recommended in 2025, approximate cost \$6,800).
- South Camp Lake Road from District Road 8 to 0.8 km east – Surface treatment resurfacing (recommended in 2026, approximate cost \$27,200).

#### 4.3.2 Bridges

Bellwood Acres Road Bridge – Repair abutments and recoat structural steel (recommended in 2026, approximate cost \$64,500).

Narrows Road Bridge – Recoat structural steel (recommended in 2026, approximate cost \$60,000).

#### 4.3.3 Signs

General sign replacement – (approximate cost \$10,000 annually).

#### 4.3.4 Docks

- Glenmount Dock and Pavillion at Glenmount Road – Replace dock and pavilion (recommended in 2024, approximate cost \$385,000).
- Rabbits Bay Dock at Rabbits Bay Road – Replace boat ramp (recommended in 2024, approximate cost \$30,000).
- Hillside Doack at Highway 60 – Install helical piles at beam mid-span and resurface deck (recommended in 2026, approximate cost \$17,000).

#### 4.3.5 Vehicles

- Fire - Freightliner Pumper Truck (2004) – Replace with new truck (recommended in 2025, approximate cost \$650,000).
- Parks - Dodge Utility Pickup Truck (2005) – Replace with new truck (recommended in 2025, approximate cost \$60,000).
- Parks - GMC Sierra 2500 Pickup Truck (2013) – Replace with new truck (recommended in 2025, approximate cost \$60,000).
- Public Works – Ram 5500 one-ton truck (2018) – Replace with new truck (recommended in 2025, approximate cost \$125,000).
- Fire - Freightliner Pumper Truck (2001) – Replace with new truck (recommended in 2026, approximate cost \$650,000)
- Parks - Ford 250 pickup truck (2016) – Replace with new truck (recommended in 2026, approximate cost \$60,000).
- Parks – Chevrolet Silverado 3500 HD pickup truck (2019) – Replace with new truck (recommended in 2026, approximate cost \$85,000).
- Parks – Front Mount Mower Kubota F2260 (2003) – Replace with new mower (recommended in 2026, approximate cost \$35,000).
- Parks – Tractor / Backhoe / Loader Kubota B2650HSD (2014) - Replace with new tractor / backhoe / loader (recommended in 2026, approximate cost \$50,000).
- Public Works - Ford 150 pickup truck (2016) – Replace with new truck (recommended in 2026, approximate cost \$60,000).
- Public Works - Chevrolet Silverado 1500 pickup truck (2019) – Replace with new truck (recommended in 2026, approximate cost \$60,000).

#### 4.3.6 Equipment

Focus Auto Scrubber (2014) – Replace with new machine (Recommended replacement in 2025, approximate cost \$10,700).

#### 4.3.7 IT Hardware

- Public Works – Broadband Radios (2013) - Replace with new broadband radios (recommended annual budget for replacements when required of \$4,000).
- Parks – 4 Broadband Radios (2013) - Replace with new broadband radios (recommended replacement in 2024, approximate cost \$6,800).
- Building – 3 Broadband Radios (2013) - Replace with new broadband radios (Recommended replacement in 2024, approximate cost \$5,100).
- Ten Desktop Computers (2014 and 2019) – Replace with new computers (recommended in 2024, approximate cost \$11,900).
- Twelve Laptop Computers (2019 and 2020) – Replace with new laptop computers (recommended in 2024, approximate cost \$20,736).
- Fire – Ten Broadband Radios (2020) – Replace with new broadband radios (recommended in 2025, approximate cost \$21,000).

- Two Laptop Computers (2021) – Replace with new laptop computers (recommended in 2025, approximate cost \$3,456).
- Planning – Three iPad Tablets (2021) – Replace with new iPad tablets (recommended in 2025, approximate cost \$1,728).
- Administration – IT Network Equipment (2020) – Replace with new network equipment (recommended in 2025, approximate cost \$6,000).
- Administration – IT Server (2020) – Replace with new server (recommended in 2025, approximate cost \$10,000).

#### 4.3.8 Facilities

- Municipal Office – HVAC unit – Replace with new (recommended in 2024, approximate cost \$4,000).
- Municipal Office – Skylight and HVAC unit and Hot Water Tank – Replace with new (recommended in 2025, approximate cost \$11,000).
- Archive Building – HVAC unit and Lighting – Replace with new (recommended in 2025, approximate cost \$3,000).
- Lake of Bays Community Centre & Library – flat roof, single hung windows, old exterior door, sealant, vinyl tile, acoustic tile, wall painting, hot water tank, 2<sup>nd</sup> floor plumbing fixtures – Replace with new (recommended in 2024, approximate cost \$181,000).
- Lake of Bays Community Centre & Library – Metal siding on original part of building (1979) – Replace with new (recommended in 2025, approximate cost \$86,000).
- Lake of Bays Community Centre & Library – Enclosed vertical platform lift (1991) - Replace with new (recommended in 2026, approximate cost \$80,000).
- Dwight Community Centre & Library – Aluminum soffit and fascia (1991), wood frame windows (1988), Acoustic tile (1988), HVAC 5 ton (1994), hot water tank (1999), pressure tank (1990) – Replace with new (recommended in 2024, approximate cost \$ 46,000).
- Dwight Community Centre & Library – Skylight window and exterior main entrance door (1991), HVAC exhaust fan (1991), Life Safety Items (2015) – Replace with new (recommended in 2025, approximate cost \$ 31,000).
- Dwight Community Centre & Library – Vinyl flooring (1988), Laminate flooring (1991), acoustic tile (1991) – Replace with new (recommended in 2026, approximate cost \$ 42,000).
- Dorset Change House – exterior painting (recommended in 2026, approximate cost \$2,000).
- Dwight Public Washroom – HVAC exhaust fan – Replace with new (recommended in 2024, approximate cost \$3,000).
- Dwight Outdoor Storage Shed at Rink – Wood siding and wood porch and railings and doors (1995) – Replace (recommended in 2025, approximate cost \$11,000).
- Dwight Outdoor Storage Shed at Rink – HVAC baseboard heater (1995), exterior lighting (2016) – Replace (recommended in 2026, approximate cost \$3,000).
- Dwight Tourism Office – Vinyl frame windows (1994) – Replace (recommended in 2024, approximate cost \$1,000).

- Baysville Seniors Hall – Substructure wall parge coat improvement, HVAC oil furnace replacement (recommended in 2024, approximate cost \$14,000).
- Baysville Seniors Hall – brick masonry improvement, piping and ductwork improvements, exterior door replacement (recommended in 2025, approximate cost \$31,000).
- Baysville Seniors Hall – Asphalt shingles (2011), Replace with new (recommended in 2026, approximate cost \$17,000).
- Dwight Seniors Hall – Metal roofing (1945), Exterior doors (1990), HVAC oil furnace – Replace with new (recommended in 2024, approximate cost \$53,000).
- Dwight Seniors Hall – Wood ramp and stairs (2004), HCAV A/C 4-ton unit (2003), HVAC Bathroom exhaust fan (1960) – Replace with new (recommended in 2025, approximate cost \$10,000).
- Port Cunnington Seniors Hall – Metal roof (1945), HVAC oil furnace (2002), HVAC exhaust fan (2000) – Replace with new (recommended in 2024, approximate cost \$43,000).
- Port Cunnington Seniors Hall – ceiling painting (recommended in 2025, approximate cost \$2,000).
- Port Cunnington Seniors Hall – Wood frame windows and carpet flooring (1945), hot water tank and pressure tank (2011) – Replace with new (recommended in 2026, approximate cost \$9,000).
- Baysville Washroom – Signage (1995) – Replace (recommended in 2024, approximate cost \$5,000).
- Baysville Washroom – Walls and Ceiling painting, Hot water tank (2010), exterior patch paving and light standards (1995) – Replace (recommended in 2025, approximate cost \$33,000).
- Dwight Sand Dome – Roofing PVC Membrane – Replace with new (recommended in 2024, approximate cost \$128,000).
- Public Works Garage 2 – Metal siding (1972), Exterior doors (1972) – Replace with new (recommended in 2025, approximate cost \$69,000).
- Baysville Sand Shed – Hung sliding doors (1992) – Replace with new (recommended in 2025, approximate cost \$12,000).
- Fire Station 20 – Foundation localized repairs (recommended in 2024, approximate cost \$5,000).
- Fire Station 20 – Vinyl frame windows and HVAC – A/C 1 ton unit (1995) – Replace with new (recommended in 2025, approximate cost \$4,000).
- Fire Station 20 – Overhead doors, wood stairs and deck, plumbing fixtures (1995) – Replace with new (recommended in 2026, approximate cost \$17,000).
- Fire Station 30 – Foundation localized repairs (recommended in 2024, approximate cost \$5,000).
- Fire Station 30 – HVAC radiant tube heater, plumbing fixtures, Life safety items (1992) – Replace with new (recommended in 2025, approximate cost \$11,000).
- Fire Station 40 – Foundation localized repairs, Vinyl frame windows (1991) (recommended in 2024, approximate cost \$8,000).

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- Fire Station 40 – Carpet flooring – Replace with new (recommended in 2025, approximate cost \$5,000).
- Fire Station 40 – Exterior doors, HVAC radiant tube, HVAC baseboard heaters (1991) – Replace with new (recommended in 2026, approximate cost \$15,000).
- Fire Station 50 – Foundation localized repairs, HVAC radiant tube, hot water tank, pressure tank, plumbing fixtures (1999) (recommended in 2024, approximate cost \$15,000).

#### 4.4 Climate Change

Over the past decade there has been increased numbers of extreme weather events which are putting greater stress on municipal infrastructure, and pressure to ensure levels of service are maintained. Climate change poses a real risk management question which needs to be addressed within the context of municipal decision making.

Some climate change projections (Federation of Canadian Municipalities):

- Warmer summer temperatures.
- Warmer winter temperatures.
- More intense storms.
- Longer droughts.
- Increased frequency and amount of ice.
- Summers stretching longer;
- Sea level rising.

The Township of the Lake of Bays has witnessed some of these climate change projections already causing potential challenges with road washouts from extreme weather events, or quick winter thaw runoff. Many roads as well as crossroad culverts have not been designed for such intense high-volume rainstorms.

Identifying areas of concern will help the Township to design road and storm water assets to improve resiliency to extreme weather events. This type of investment will reduce risk of failure of infrastructure and ensure appropriate levels of service are maintained for the public.

Another factor to climate change issues is the materials used in asset construction. The focus is to reduce the total carbon footprint on the construction of infrastructure assets. Investing in infrastructure with a long-term view provides both better levels of service as well as reducing the total carbon footprint.

As noted above it is recommended that the Township undertake a project to inspect the crossroad culverts to determine condition and a true remaining life. This type of project will provide guidance to the Township on the crossroad culverts that need to be replaced and potentially increased in size for better water flow during extreme weather events. This will also help the Township make good progress to becoming a more climate change resilient municipality.

## 4.5 Long-term Forecast

For many years, lifecycle costing has been used in the field of engineering to evaluate the advantages of using alternative materials in construction or production design. The method has gained wider acceptance and use recently in the management of capital assets. By definition, lifecycle costs are **all** the costs which are incurred during the lifecycle of a capital asset, from the time it is purchased or constructed, to the time it is taken out of service for disposal/replacement.

In defining the long-term forecast for the Township's asset management strategy, costs incurred through an asset's lifecycle, the asset's condition, expected LOS, and risk were considered and documented. Asset replacement analysis in forecasting the Township's asset replacement needs are summarized in Figure 4-1 which we are calling Asset Strategy based on expected levels of service.

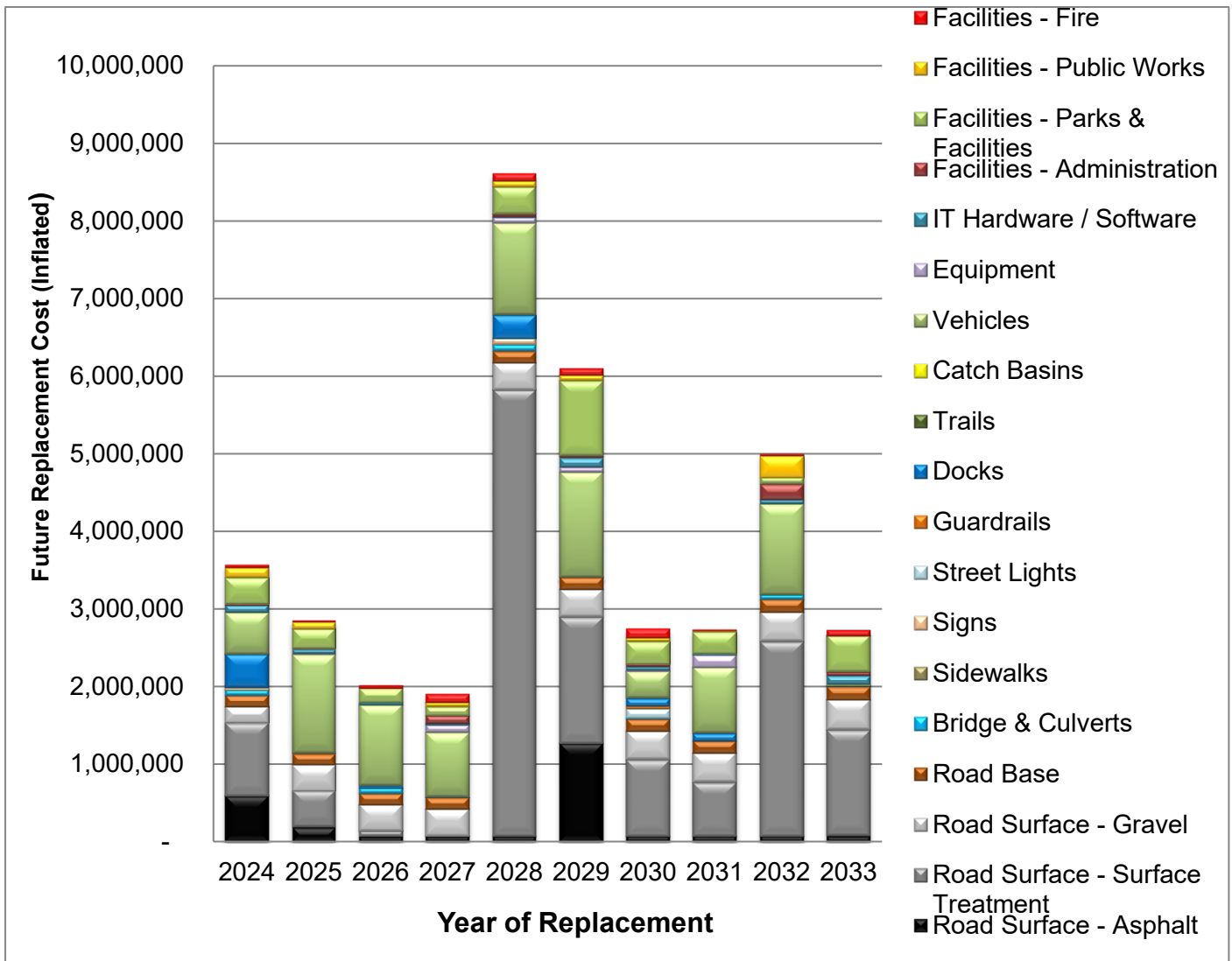
The asset strategy incorporated all of the information discussed above in this report and based on the information provided by the Township, past reports, staff input, and understanding of the asset's reaction in their current environment as well as the expected asset maintenance levels, and the current asset condition, which is expected to produce a reduced asset potential risk of failure. The outcome of this approach was to provide appropriate asset service levels, and the assets were expected to meet or exceed their useful life which reduces expected infrastructure deficits. In total, \$38.2 million in assets (inflated to appropriate year) are shown as maintenance, improvement, rehabilitation and replacement needs over the 10-year forecast. This is the recommended asset strategy for the Township of the Lake of Bays.

Assets like Bridges, and major culverts, are not expected to be replaced for usually over 50-years. It needs to be stated, to ensure that these assets have reserve funding for their rehabilitation / replacement schedule in the future. The Financial Strategy provides the Township with an investment plan into their reserve accounts.

For the recommended asset strategy to be feasible, the expected level of service adjustments discussed in Section 4.0 are needed in conjunction with the current level of service amounts in order to effectively maintain and rehabilitate the assets as required.

The financing strategy discussed in the next section will incorporate the level of service adjustments into the recommended financing analysis.

**Figure 4-1 : Proposed Asset Strategy Based on Expected Levels of Service**



## 5.0 Financing Strategy

### 5.1 Scope and Process

The financing strategy provides the recommended use of various funding sources to finance the asset management strategy and levels of service recommendations discussed in chapters 3 and 4. The financing strategy also provides recommendations to increase annual investments in assets that will be used beyond this report’s 10-year forecast period.

## 5.2 Funding Sources

The following funding sources have been used within the financing strategy:

**Grant Funding:** It has been assumed that Gas Tax Funding (now called the Canada Community Building Fund) will continue throughout the forecast period. The Township's allocation is calculated to be \$104,809 in 2023 and it has been assumed that funding will remain constant at this amount moving forward.

It has been assumed that Ontario Community Infrastructure Fund (OCIF) amounts will remain at 2023 levels over the forecast period, at \$174,976 per year. The province has recently updated the formula for OCIF funding and has dedicated additional funding to this program.

**Operating Budget:** The Township includes annual amounts in the tax supported operating budget to fund capital. It has been assumed that \$400,000 of this funding will be dedicated to tax supported infrastructure annually throughout the forecast period.

Given that there are levels of service recommendations that are operating in nature, it has been assumed that these costs will be funded from the annual operating budget and are shown as proposed operating budget increases throughout the forecast period.

**Reserves:** The Township's existing reserves have been utilized as a funding source for tax supported infrastructure capital needs over the forecast period. This includes existing reserves for parks, fire, roads, general surplus, and lakeshore road allowance. Reserves become the primary source of capital funding over the forecast period. It is recommended that increases in annual asset investment for infrastructure be allocated to reserves for capital use.

**Debt:** If all other funding sources fall short in funding recommended lifecycle needs each year, debt financing is recommended. Debt financing is anticipated within the forecast period for infrastructure (see the analysis provided below).

## 5.3 Historic Asset Investment

The following table outlines the Township's historic capital investment in tax supported infrastructure assets. As shown, the annual investment has fluctuated over the last three years.

**Table 5-1: Historic Asset Investment - Capital**

Funding Type - Tax Supported Assets	2021	2022	2023
Canada Community Building Fund (Gas Tax)	100,442	100,442	104,809
OCIF Funding	87,640	205,854	174,976
Transfer from Operating	1,067,860	877,746	400,000
<b>Total Asset Investment - Capital (Sustainable)</b>	<b>1,255,942</b>	<b>1,184,042</b>	<b>679,785</b>

\* Excludes the Safe Restart and OMPF grants as they are operating in nature.

\*\* Excludes the use of debt and existing reserve balances.

Therefore, a capital asset investment in 2023 of \$679,785 becomes the starting point for recommending increases in annual asset investments over the forecast period.

### Optimal Asset Investment

Based on an analysis of the Township's capital assets in terms of replacement cost and useful life, the following summary of optimal annual asset investment has been created (see Table 5-2).

In summary, an annual asset investment of \$3,212,300 is needed to fund long-term asset management planning needs for tax supported infrastructure. Annual asset investments for road base assets are based on level of service costs identified in this asset management plan and not full replacement.

This \$3,212,300 annual asset investment becomes the funding target over the forecast period. However, this target increases over time as inflation increases this amount annually. Assuming 2% annual inflation, the target annual capital asset investment amount becomes approximately \$3,915,770 by the year 2033.

**Table 5-2: Optimal Asset Investment Summary**

Tax Supported Assets	Replacement Cost	Weighted Average Useful Life	Annual Replacement Investment (2023)
Road Surface - Asphalt	6,583,250	25	263,300
Road Surface - Surface Treatment	10,785,020	10	1,078,500
Road Surface - Gravel	3,830,000	10	383,000
Road Base	88,856,400	60	40,000
Bridge & Culverts	10,600,000	60	176,700
Sidewalks	294,000	50	5,900
Signs	105,420	10	10,500
Street Lights	107,200	50	2,100
Guardrails	83,375	25	3,300
Docks	3,152,500	48	65,700
Trails	335,000	45	7,400
Catch Basins	308,000	100	3,100
Vehicles	9,752,000	14	696,600
Equipment	702,600	16	43,900
IT Hardware / Software	553,236	11	50,300
Facilities - Administration	2,029,000	66	30,700
Facilities - Parks & Facilities	10,904,155	59	184,800
Facilities - Public Works	7,978,665	60	133,000
Facilities - Fire	1,907,000	57	33,500
<b>Total</b>	<b>158,866,821</b>		<b>3,212,300</b>

\*\* Road Base annual investment for maintenance only

#### 5.4 Tax Supported Financing Strategy

The detailed 10-year financing strategy is provided in Appendix A to this report.

All recommendations provided in this chapter are recommended to be implemented starting in 2024. Also, similar to chapter 4, a 2% inflation factor has been applied annually to all costs.

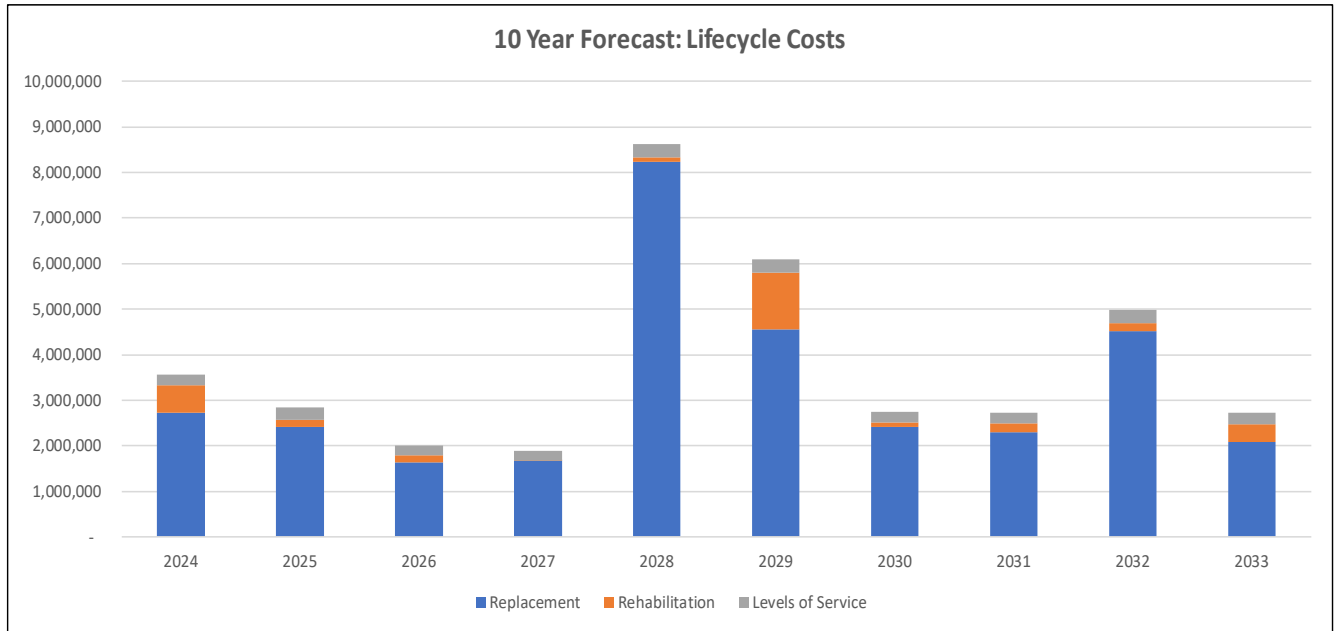
The following table provides a high-level summary of the 10-year forecast by cost type (i.e., asset replacement needs, asset rehabilitation needs, and levels of service recommendations) for tax supported infrastructure assets.

**Table 5-3: Forecast Summary**

Forecast - Tax Supported	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Replacement	2,737,596	2,420,781	1,642,800	1,676,287	8,237,557	4,558,695	2,411,586	2,303,161	4,517,615	2,083,604
Rehabilitation	588,500	160,038	161,782	4,245	97,419	1,246,286	98,877	198,149	174,109	394,142
Levels of Service	236,000	265,200	202,878	213,302	278,184	284,852	230,863	234,331	302,288	249,176
<b>Total</b>	<b>3,562,096</b>	<b>2,846,019</b>	<b>2,007,460</b>	<b>1,893,834</b>	<b>8,613,160</b>	<b>6,089,833</b>	<b>2,741,326</b>	<b>2,735,641</b>	<b>4,994,012</b>	<b>2,726,922</b>

Figure 5-1 shows the same forecast in graph form. As illustrated, there are fluctuations in annual lifecycle needs throughout the forecast.

**Figure 5-1: Lifecycle Forecast**



As shown in Appendix A, the 10-year forecast has a recommended funding plan as follows:

Asset Management Plan  
December 4, 2023

**Table 5-4: Capital Forecast with Funding Sources**

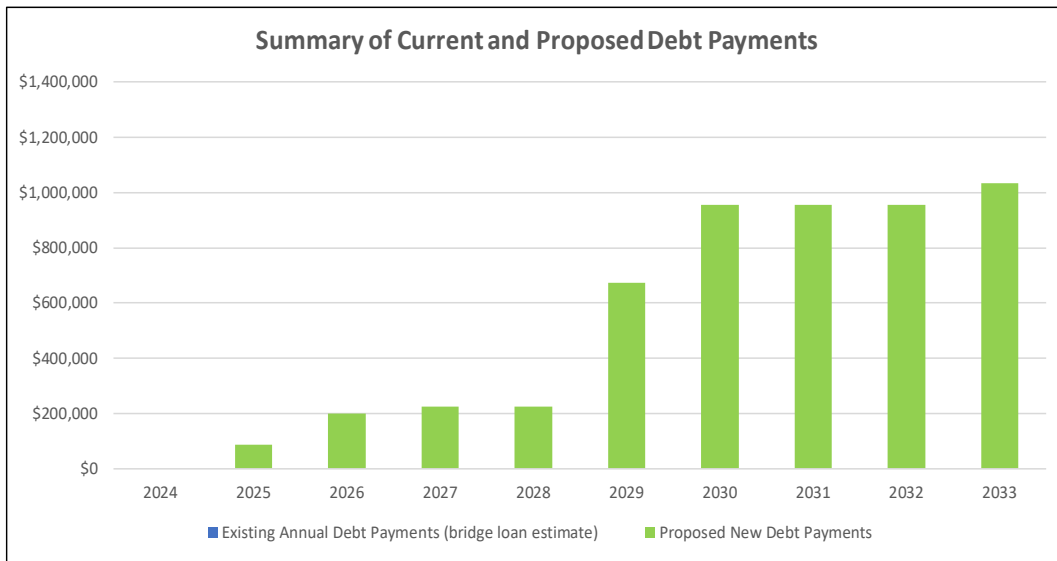
Asset Class	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
<b>Totals by Asset Class (Replacement, Rehabilitation and Levels of Service)</b>											
Road Surface - Asphalt	585,000	186,150	62,424	63,672	64,946	1,261,965	67,570	68,921	70,300	71,706	2,502,654
Road Surface - Surface Treatment	945,000	471,577	75,949	5,306	5,757,965	1,629,733	986,890	694,082	2,506,578	1,369,110	14,442,190
Road Surface - Gravel	210,000	331,500	338,130	344,893	351,790	358,826	366,003	373,323	380,789	388,405	3,443,659
Road Base	140,000	142,800	145,656	148,569	151,541	154,571	157,663	160,816	164,032	167,313	1,532,961
Bridge & Culverts	69,500	5,100	67,626	5,306	75,770	-	14,640	-	58,583	-	296,525
Sidewalks	-	-	-	-	-	-	-	-	-	-	-
Signs	30,660	-	-	-	80,923	-	-	-	-	-	111,583
Street Lights	-	-	-	-	-	-	116,220	-	-	-	116,220
Guardrails	-	-	-	-	-	-	33,644	-	-	-	33,644
Docks	433,000	510	28,611	4,245	303,081	-	101,355	94,767	-	11,951	977,520
Trails	-	-	-	-	-	-	-	-	-	-	-
Catch Basins	-	-	-	-	-	-	-	-	-	-	-
Vehicles	535,000	1,269,900	1,040,400	830,926	1,185,263	1,358,019	349,110	854,622	1,171,659	17,926	8,612,825
Equipment	-	10,914	-	95,509	71,441	61,387	15,203	154,843	-	-	409,297
IT Hardware / Software	96,936	58,328	35,382	23,986	16,236	121,504	44,275	17,230	52,725	109,537	576,139
Facilities - Administration	19,000	14,280	-	101,876	32,472	24,290	39,415	5,743	203,869	47,804	488,749
Facilities - Parks & Facilities	337,000	250,920	179,989	115,671	347,460	967,175	287,171	277,982	83,188	467,879	3,314,435
Facilities - Public Works	128,000	83,640	-	49,877	75,770	68,453	45,046	19,528	277,684	-	747,998
Facilities - Fire	33,000	20,400	33,293	103,998	98,502	83,910	117,121	13,784	24,605	75,291	603,904
<b>Total</b>	<b>3,562,096</b>	<b>2,846,019</b>	<b>2,007,460</b>	<b>1,893,834</b>	<b>8,613,160</b>	<b>6,089,833</b>	<b>2,741,326</b>	<b>2,735,641</b>	<b>4,994,012</b>	<b>2,726,922</b>	<b>38,210,303</b>
<b>Funding Analysis</b>											
Canada Community Building Fund (Gas Tax)	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809	1,048,090
OCIF Funding	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976	1,749,760
Transfer from Operations	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	4,000,000
Transfer from/(to) Capital Reserves:											
Asset Management: Consolidated Reserves	1,595,953	672,594	932,165	1,116,629	2,234,005	1,808,688	1,958,151	1,950,396	3,206,657	1,937,417	17,412,655
Canada Community Building Fund (Gas Tax) Reserve	94,558	-	-	-	-	-	-	-	-	-	94,558
Operating Funding (LOS Impacts)	91,800	93,640	95,510	97,420	99,370	101,360	103,390	105,460	107,570	109,720	1,005,240
Debt Funding (see section 2)	1,100,000	1,400,000	300,000	-	5,600,000	3,500,000	-	-	1,000,000	-	12,900,000
<b>Total</b>	<b>3,562,096</b>	<b>2,846,019</b>	<b>2,007,460</b>	<b>1,893,834</b>	<b>8,613,160</b>	<b>6,089,833</b>	<b>2,741,326</b>	<b>2,735,641</b>	<b>4,994,012</b>	<b>2,726,922</b>	<b>38,210,303</b>

As noted in section 5.2 above, Canada Community Building Fund (Gas Tax) and OCIF funding are shown as funding sources in each year of the forecast period, reserves are used as a primary funding source, operating budget funding is used for capital needs as well as levels of service recommendations that are considered operating in nature, and debt funding is used to finance the remaining funding needs each year.

**Debt Funding**

Debt funding is anticipated within the forecast period for tax supported infrastructure. As shown above in Table 5-4, debt principal amounts of \$12,900,000 is required in total from 2024 to 2033 to fund recommended tax supported asset lifecycle needs. Given that the Township’s ability to use debt funding is restricted based on the province’s debt capacity (annual repayment limit) calculations, an analysis of all current and proposed debt was completed (see Figure 5-2 and Figure 5-3)

**Figure 5-2: Summary of Current and Proposed Debt Payments**



**Figure 5-3: Percent of Annual Repayment Limit Used**

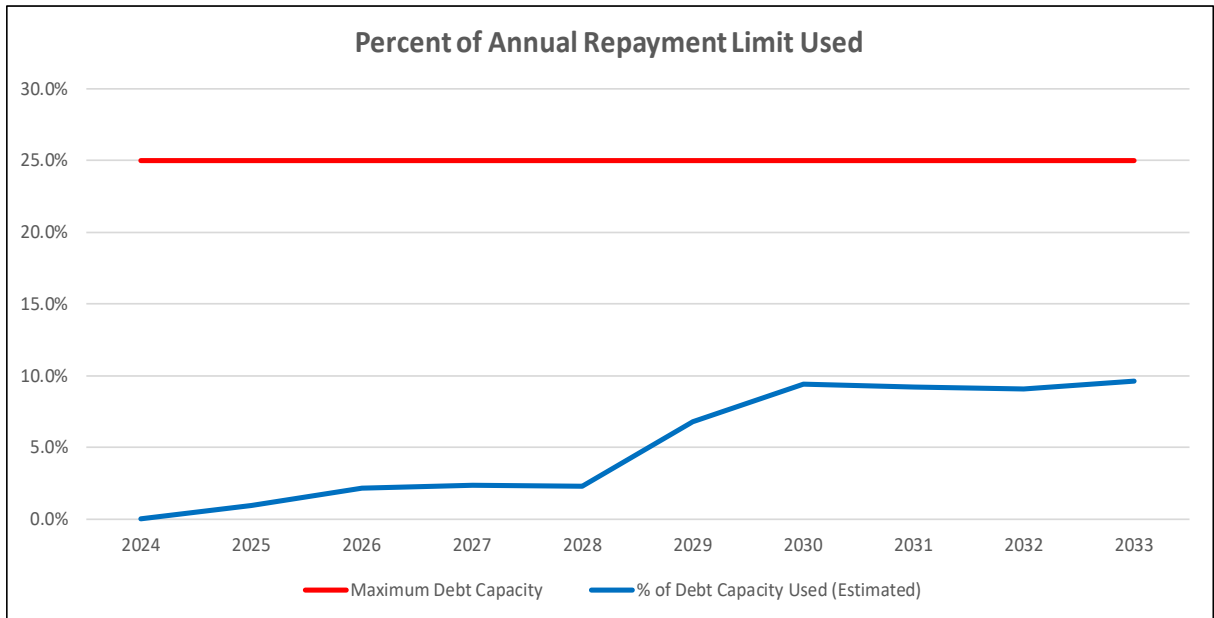


Figure 5-2 and Figure 5-3 above show that current and projected debt requirements are well within the annual debt capacity limits of 25% of Township revenues, reaching a maximum level of 9.6% of revenues in 2033. This leaves significant capacity for unplanned debt, if required. Future debt payments have been estimated assuming an interest rate of 5.0% over a 20-year term.

Reserve Funding

With reserve funding becoming a primary source of funding within this financing strategy, a recommended phased-in approach to increasing contributions to reserves is provided. Table 5-5 below outlines that recommendations include a transfer of \$310,046 in 2024 with increasing transfers annually, reaching \$3,248,272 by 2033. This combined with anticipated grant funding and pre-existing operating funding allows the Township to reach the optimal annual asset investment amount in 2033.

Asset Management Plan  
December 4, 2023

**Table 5-5: Contributions to Reserves**

Funding Type - Tax Supported Assets	Forecast									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Transfer to Reserves for Asset Management	310,046	641,873	970,698	1,409,904	1,896,400	1,838,249	1,968,228	2,399,659	2,852,726	3,248,272
<b>Total</b>	<b>310,046</b>	<b>641,873</b>	<b>970,698</b>	<b>1,409,904</b>	<b>1,896,400</b>	<b>1,838,249</b>	<b>1,968,228</b>	<b>2,399,659</b>	<b>2,852,726</b>	<b>3,248,272</b>
Transfer from Operations to Capital	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000
Canada Community Building Fund (Gas Tax)	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809
OCIF Funding	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976
<b>Total Asset Investment</b>	<b>989,831</b>	<b>1,321,658</b>	<b>1,650,483</b>	<b>2,089,689</b>	<b>2,576,185</b>	<b>2,518,034</b>	<b>2,648,013</b>	<b>3,079,444</b>	<b>3,532,511</b>	<b>3,928,057</b>

### Operating Budget Funding

As discussed earlier in this chapter, the recommended financing strategy assumes that \$400,000 will be available annually from the operating budget to fund tax supported infrastructure capital needs.

From a level of service perspective, many recommendations outlined in chapter 3 are already implemented by the Township. Section 4 of Appendix A to this report outlines that some adjustments are needed to the Township's operating budget to account for further levels of service impacts that are not currently funded.

When debt financing is needed to fund the recommended financing strategy, this has an impact on the Township's operating budget going forward. It has also been assumed that when existing debt payments are complete, the budget space created will be used to either fund new debt or to increase transfers to reserves to fund the asset management plan recommendations. This is outlined in Appendix A and summarized below in Table 5-6.

**Table 5-6: Increase in Funding Summary**

Increase in Funding	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Increase (Decrease) in Transfers to Reserves	310,046	331,828	328,825	439,206	486,496	(58,151)	129,979	431,432	453,067	395,546
Increase (Decrease) in Operating - LOS	91,800	1,840	1,870	1,910	1,950	1,990	2,030	2,070	2,110	2,150
Increase (Decrease) in Operating - Debt	-	88,270	112,340	24,070	-	449,360	280,850	-	-	80,240
<b>Total Impact on Annual Tax Supported Budget</b>	<b>401,846</b>	<b>421,938</b>	<b>443,035</b>	<b>465,186</b>	<b>488,446</b>	<b>393,199</b>	<b>412,859</b>	<b>433,502</b>	<b>455,177</b>	<b>477,936</b>
Estimated Taxation Impact: 1% in 2023 = 63785	6.00%	6.00%	6.00%	6.00%	6.00%	4.60%	4.60%	4.60%	4.60%	4.60%

Table 5-6 above outlines the total annual increase in funding recommended from 2024 to 2033. These increases can be incorporated through:

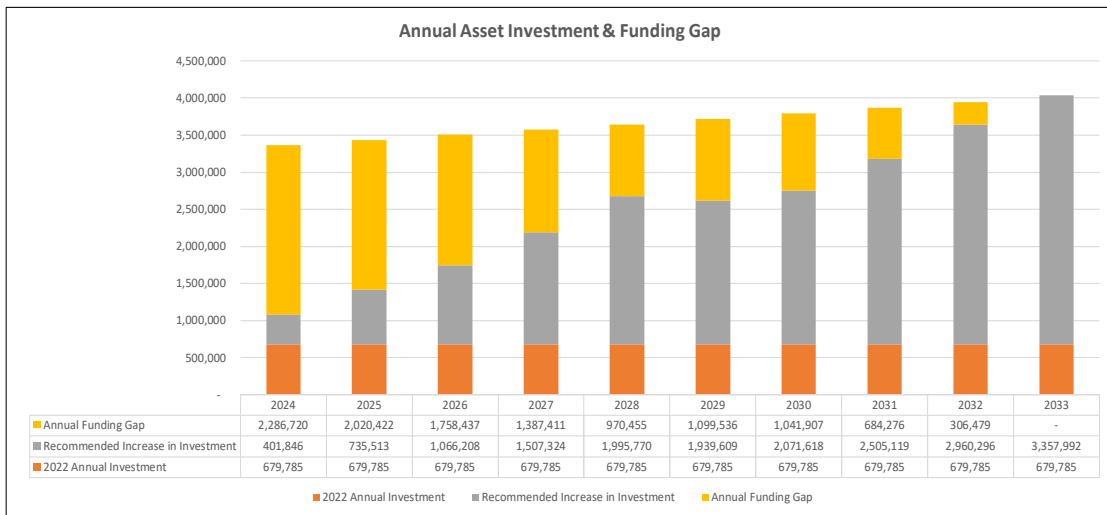
- Finding efficiencies in the annual budget.
- Increase in external funding (i.e., grants or third-party contributions).
- Allocations of annual Township surpluses to capital reserves (if available).
- Recommending budget (i.e., taxation) increases.

As shown in Table 5-6, if taxation increases are required each year to allow for the total recommended increases in funding (i.e., items a, b, and c above are not available), an increase in taxation would be required annually. This increase is estimated to be 6.0% per year from 2024 to 2028 and 4.6% thereafter. Taxation rate increases are higher in the first 5 years in order to build the annual asset investment and minimize the need for additional debt. This calculation assumes 2.0% assessment growth annually within the Township’s operating budget.

Funding Gap

Figure 5-4 below provides an overall summary of the recommended annual investment levels (shown in orange and gray) as well as the funding gap (shown in yellow). The funding recommendations outlined in this chapter ensure the funding gap is eliminated by 2033.

**Figure 5-4: Annual Asset Investment & Funding Gap**



This figure is also provided in Appendix A to this report, along with detailed figures to support the calculations.

## 5.5 Summary of Financing Strategy Recommendations

The following represents a list of financing strategy recommendations:

- Use the following reserves to fund asset management capital needs:
  - Parks
  - Fire
  - Roads
  - General Surplus
  - Lakeshore Road Allowance
- Use capital reserves as a primary source of asset investment annually. Funds should flow from the operating budget to these reserves, which are then used to fund capital projects.
- Increase asset management funding annually as outlined in Table 5-6.
- Transfer any annual Township surpluses to capital reserves annually.
- Dedicate any budget savings from the elimination of debt payments to funding asset management needs (i.e., either new debt or transfers to capital reserves).
- Update this financing strategy at a minimum every 5 years as per legislation. Consider updates before 5 years when variables change significantly.

## 6.0 Recommendations

The following recommendations have been provided for the Township of the Lake of Bays' consideration:

- That this Asset Management Plan be received and approved by the Township Council.
- That consideration of this Asset Management Plan be given as part of the annual budgeting process to ensure sufficient capital funds are available to fund capital requirements over the 10-year period.
- The current level of funding for asset replacement and renewal at the Township will not sufficiently fund required capital needs or close the infrastructure funding gap. As such, it is recommended that the following be considered:
  - That the “levels of service” strategies discussed in this report be approved.
  - The Township uses the identified in the previous chapter Reserves to fund infrastructure capital needs.
  - The Township uses capital reserves as the primary source of asset investment annually. Funds should flow from the operating budget to these reserves, which are then used to fund capital projects.
  - The Township increase asset management funding as outlined in Section 4.0.
  - The Township transfer annual surpluses to capital reserves.
  - The Township dedicates any budget savings from the elimination of debt payments to funding asset management needs (i.e., either new debt or transfers to reserves).
  - The Township updates the financing strategy every 5 years as per legislation or when there is significant change.
  - That this Asset Management Plan be updated as per the Township's Asset Management Strategy Policy.
  - The Township considers the capital priorities identified within this report when applying for future grants or deciding on how to utilize Gas Tax, OCIF funding, and / or other funding that becomes available.



**BURNSIDE**

[THE DIFFERENCE IS OUR PEOPLE]



## **Appendix A**

# **10-Year Detailed Asset Management Strategy & Financing Strategy**

**Township of Lake of Bays  
2023 Asset Management Plan  
Financing Strategy**

**Table of Contents:**

**Section 1: Capital Forecast and Funding Analysis**

**Section 2: Future Debt**

**Section 3: Reserve Schedules**

**Section 4: Budget Impacts & Funding Gap**

**Section 1: Capital Forecast and Funding Analysis**

Asset Class	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
<b>Capital Replacement</b>											
Road Surface - Asphalt	204,000	124,950	-	-	-	1,195,720	-	-	-	-	1,524,670
Road Surface - Surface Treatment	755,000	306,949	-	-	5,752,553	377,927	897,022	493,062	2,385,194	968,993	11,936,700
Road Surface - Gravel	210,000	331,500	338,130	344,893	351,790	358,826	366,003	373,323	380,789	388,405	3,443,659
Road Base	50,000	51,000	52,020	53,060	54,122	55,204	56,308	57,434	58,583	59,755	547,486
Bridge & Culverts	-	-	-	-	-	-	-	-	-	-	-
Sidewalks	-	-	-	-	-	-	-	-	-	-	-
Signs	30,660	-	-	-	80,923	-	-	-	-	-	111,583
Street Lights	-	-	-	-	-	-	116,220	-	-	-	116,220
Guardrails	-	-	-	-	-	-	33,644	-	-	-	33,644
Docks	415,000	-	-	-	281,432	-	101,355	91,895	-	11,951	901,633
Trails	-	-	-	-	-	-	-	-	-	-	-
Catch Basins	-	-	-	-	-	-	-	-	-	-	-
Vehicles	535,000	1,269,900	1,040,400	830,926	1,185,263	1,358,019	349,110	854,622	1,171,659	17,926	8,612,825
Equipment	-	10,914	-	95,509	71,441	61,387	15,203	154,843	-	-	409,297
IT Hardware / Software	81,936	43,028	19,776	8,068	-	104,943	27,383	-	35,150	91,611	411,895
Facilities - Administration	4,000	14,280	-	101,876	16,236	-	36,037	5,743	186,294	47,804	412,270
Facilities - Parks & Facilities	311,000	165,240	159,181	88,080	273,855	897,618	251,134	245,819	59,755	421,868	2,873,550
Facilities - Public Works	128,000	82,620	-	49,877	75,770	68,453	45,046	19,528	221,444	-	690,738
Facilities - Fire	13,000	20,400	33,293	103,998	94,172	80,598	117,121	6,892	18,747	75,291	563,512
<b>Subtotal - Capital Replacement</b>	<b>2,737,596</b>	<b>2,420,781</b>	<b>1,642,800</b>	<b>1,676,287</b>	<b>8,237,557</b>	<b>4,558,695</b>	<b>2,411,586</b>	<b>2,303,161</b>	<b>4,517,615</b>	<b>2,083,604</b>	<b>32,589,682</b>
<b>Capital Rehabilitation</b>											
Road Surface - Asphalt	321,000	-	-	-	-	-	-	-	-	-	321,000
Road Surface - Surface Treatment	185,000	159,528	70,747	-	-	1,246,286	84,237	195,277	115,526	394,142	2,450,743
Road Surface - Gravel	-	-	-	-	-	-	-	-	-	-	-
Road Base	-	-	-	-	-	-	-	-	-	-	-
Bridge & Culverts	64,500	-	62,424	-	75,770	-	14,640	-	58,583	-	275,917
Sidewalks	-	-	-	-	-	-	-	-	-	-	-
Signs	-	-	-	-	-	-	-	-	-	-	-
Street Lights	-	-	-	-	-	-	-	-	-	-	-
Guardrails	-	-	-	-	-	-	-	-	-	-	-
Docks	18,000	510	28,611	4,245	21,649	-	-	2,872	-	-	75,887
Trails	-	-	-	-	-	-	-	-	-	-	-
Catch Basins	-	-	-	-	-	-	-	-	-	-	-
Vehicles	-	-	-	-	-	-	-	-	-	-	-
Equipment	-	-	-	-	-	-	-	-	-	-	-
IT Hardware / Software	-	-	-	-	-	-	-	-	-	-	-
Facilities - Administration	-	-	-	-	-	-	-	-	-	-	-
Facilities - Parks & Facilities	-	-	-	-	-	-	-	-	-	-	-
Facilities - Public Works	-	-	-	-	-	-	-	-	-	-	-
Facilities - Fire	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal - Capital Rehabilitation</b>	<b>588,500</b>	<b>160,038</b>	<b>161,782</b>	<b>4,245</b>	<b>97,419</b>	<b>1,246,286</b>	<b>98,877</b>	<b>198,149</b>	<b>174,109</b>	<b>394,142</b>	<b>3,123,547</b>

Asset Class	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
<b>Levels of Service Costs</b>											
Road Surface - Asphalt	60,000	61,200	62,424	63,672	64,946	66,245	67,570	68,921	70,300	71,706	656,984
Road Surface - Surface Treatment	5,000	5,100	5,202	5,306	5,412	5,520	5,631	5,743	5,858	5,975	54,747
Road Surface - Gravel	-	-	-	-	-	-	-	-	-	-	-
Road Base	90,000	91,800	93,636	95,509	97,419	99,367	101,355	103,382	105,449	107,558	985,475
Bridge & Culverts	5,000	5,100	5,202	5,306	-	-	-	-	-	-	20,608
Sidewalks	-	-	-	-	-	-	-	-	-	-	-
Signs	-	-	-	-	-	-	-	-	-	-	-
Street Lights	-	-	-	-	-	-	-	-	-	-	-
Guardrails	-	-	-	-	-	-	-	-	-	-	-
Docks	-	-	-	-	-	-	-	-	-	-	-
Trails	-	-	-	-	-	-	-	-	-	-	-
Catch Basins	-	-	-	-	-	-	-	-	-	-	-
Vehicles	-	-	-	-	-	-	-	-	-	-	-
Equipment	-	-	-	-	-	-	-	-	-	-	-
IT Hardware / Software	15,000	15,300	15,606	15,918	16,236	16,561	16,892	17,230	17,575	17,926	164,244
Facilities - Administration	15,000	-	-	-	16,236	24,290	3,378	-	17,575	-	76,479
Facilities - Parks & Facilities	26,000	85,680	20,808	27,591	73,605	69,557	36,037	32,163	23,433	46,011	440,885
Facilities - Public Works	-	1,020	-	-	-	-	-	-	56,240	-	57,260
Facilities - Fire	20,000	-	-	-	4,330	3,312	-	6,892	5,858	-	40,392
<b>Subtotal - Levels of Service</b>	<b>236,000</b>	<b>265,200</b>	<b>202,878</b>	<b>213,302</b>	<b>278,184</b>	<b>284,852</b>	<b>230,863</b>	<b>234,331</b>	<b>302,288</b>	<b>249,176</b>	<b>2,497,074</b>

Asset Class	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
<b>Totals by Asset Class (Replacement, Rehabilitation and Levels of Service)</b>											
Road Surface - Asphalt	585,000	186,150	62,424	63,672	64,946	1,261,965	67,570	68,921	70,300	71,706	2,502,654
Road Surface - Surface Treatment	945,000	471,577	75,949	5,306	5,757,965	1,629,733	986,890	694,082	2,506,578	1,369,110	14,442,190
Road Surface - Gravel	210,000	331,500	338,130	344,893	351,790	358,826	366,003	373,323	380,789	388,405	3,443,659
Road Base	140,000	142,800	145,656	148,569	151,541	154,571	157,663	160,816	164,032	167,313	1,532,961
Bridge & Culverts	69,500	5,100	67,626	5,306	75,770	-	14,640	-	58,583	-	296,525
Sidewalks	-	-	-	-	-	-	-	-	-	-	-
Signs	30,660	-	-	-	80,923	-	-	-	-	-	111,583
Street Lights	-	-	-	-	-	-	116,220	-	-	-	116,220
Guardrails	-	-	-	-	-	-	33,644	-	-	-	33,644
Docks	433,000	510	28,611	4,245	303,081	-	101,355	94,767	-	11,951	977,520
Trails	-	-	-	-	-	-	-	-	-	-	-
Catch Basins	-	-	-	-	-	-	-	-	-	-	-
Vehicles	535,000	1,269,900	1,040,400	830,926	1,185,263	1,358,019	349,110	854,622	1,171,659	17,926	8,612,825
Equipment	-	10,914	-	95,509	71,441	61,387	15,203	154,843	-	-	409,297
IT Hardware / Software	96,936	58,328	35,382	23,986	16,236	121,504	44,275	17,230	52,725	109,537	576,139
Facilities - Administration	19,000	14,280	-	101,876	32,472	24,290	39,415	5,743	203,869	47,804	488,749
Facilities - Parks & Facilities	337,000	250,920	179,989	115,671	347,460	967,175	287,171	277,982	83,188	467,879	3,314,435
Facilities - Public Works	128,000	83,640	-	49,877	75,770	68,453	45,046	19,528	277,684	-	747,998
Facilities - Fire	33,000	20,400	33,293	103,998	98,502	83,910	117,121	13,784	24,605	75,291	603,904
<b>Total</b>	<b>3,562,096</b>	<b>2,846,019</b>	<b>2,007,460</b>	<b>1,893,834</b>	<b>8,613,160</b>	<b>6,089,833</b>	<b>2,741,326</b>	<b>2,735,641</b>	<b>4,994,012</b>	<b>2,726,922</b>	<b>38,210,303</b>

Funding Analysis	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
<b>Total Funding by Source</b>											
Canada Community Building Fund (Gas Tax)	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809	1,048,090
OCIF Funding	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976	1,749,760
<b>Transfer from Operations</b>	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	4,000,000
<b>Transfer from/(to) Capital Reserves:</b>											
Asset Management: Consolidated Reserves	1,595,953	672,594	932,165	1,116,629	2,234,005	1,808,688	1,958,151	1,950,396	3,206,657	1,937,417	17,412,655
Canada Community Building Fund (Gas Tax) Reserve	94,558	-	-	-	-	-	-	-	-	-	94,558
Operating Funding (LOS Impacts)	91,800	93,640	95,510	97,420	99,370	101,360	103,390	105,460	107,570	109,720	1,005,240
Debt Funding (see section 2)	1,100,000	1,400,000	300,000	-	5,600,000	3,500,000	-	-	1,000,000	-	12,900,000
<b>Total</b>	<b>3,562,096</b>	<b>2,846,019</b>	<b>2,007,460</b>	<b>1,893,834</b>	<b>8,613,160</b>	<b>6,089,833</b>	<b>2,741,326</b>	<b>2,735,641</b>	<b>4,994,012</b>	<b>2,726,922</b>	<b>38,210,303</b>
<b>Total Cost less Funding</b>	-	-	-	-	-	-	-	-	-	-	-

**Section 2: Future Debt**

Year	Principal Amount	New Annual Payments									
		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
2024	1,100,000		88,270	88,270	88,270	88,270	88,270	88,270	88,270	88,270	88,270
2025	1,400,000			112,340	112,340	112,340	112,340	112,340	112,340	112,340	112,340
2026	300,000				24,070	24,070	24,070	24,070	24,070	24,070	24,070
2027	-					-	-	-	-	-	-
2028	5,600,000					449,360	449,360	449,360	449,360	449,360	449,360
2029	3,500,000						280,850	280,850	280,850	280,850	280,850
2030	-							-	-	-	-
2031	-								-	-	-
2032	1,000,000									80,240	80,240
2033	-										
<b>Total</b>	<b>12,900,000</b>	<b>-</b>	<b>88,270</b>	<b>200,610</b>	<b>224,680</b>	<b>224,680</b>	<b>674,040</b>	<b>954,890</b>	<b>954,890</b>	<b>954,890</b>	<b>1,035,130</b>

Assumptions:

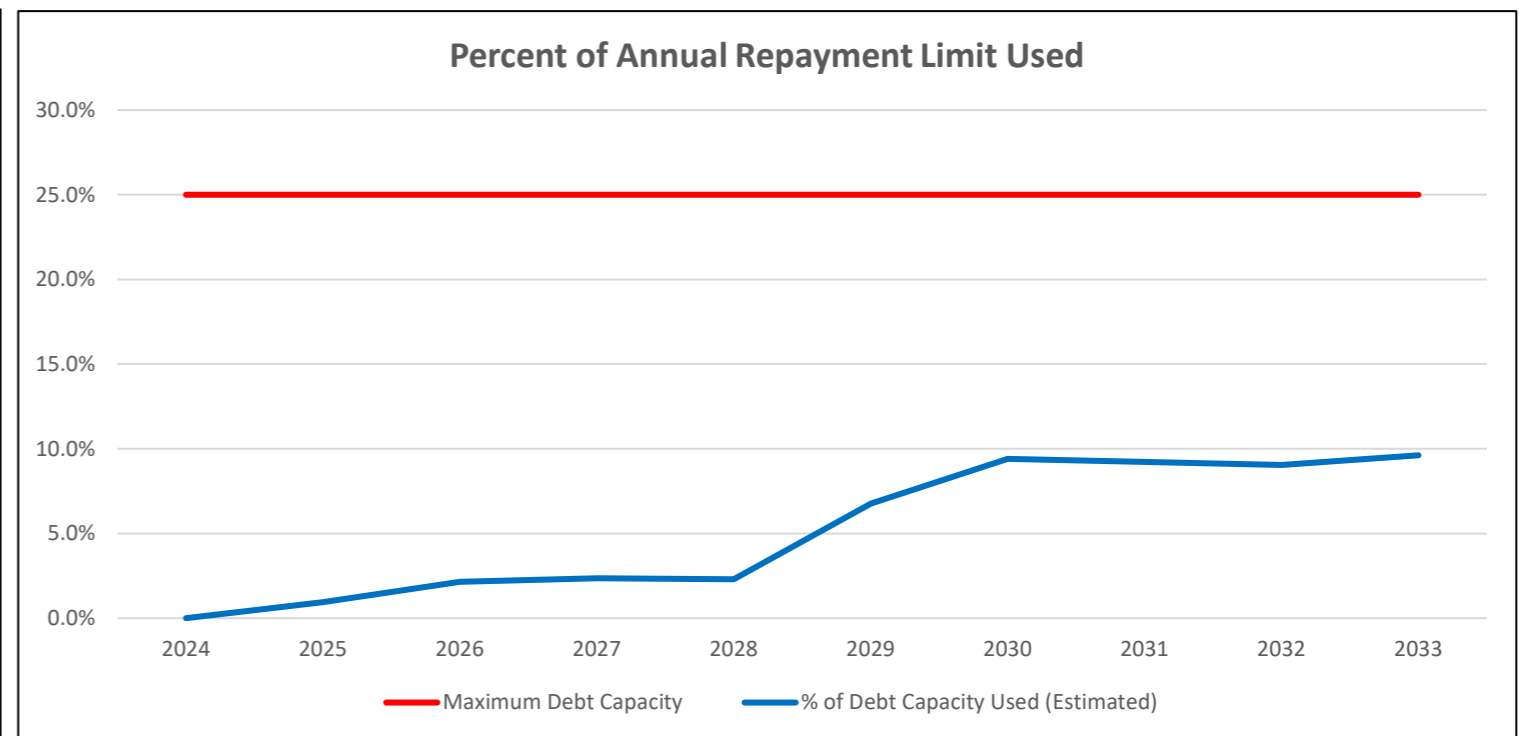
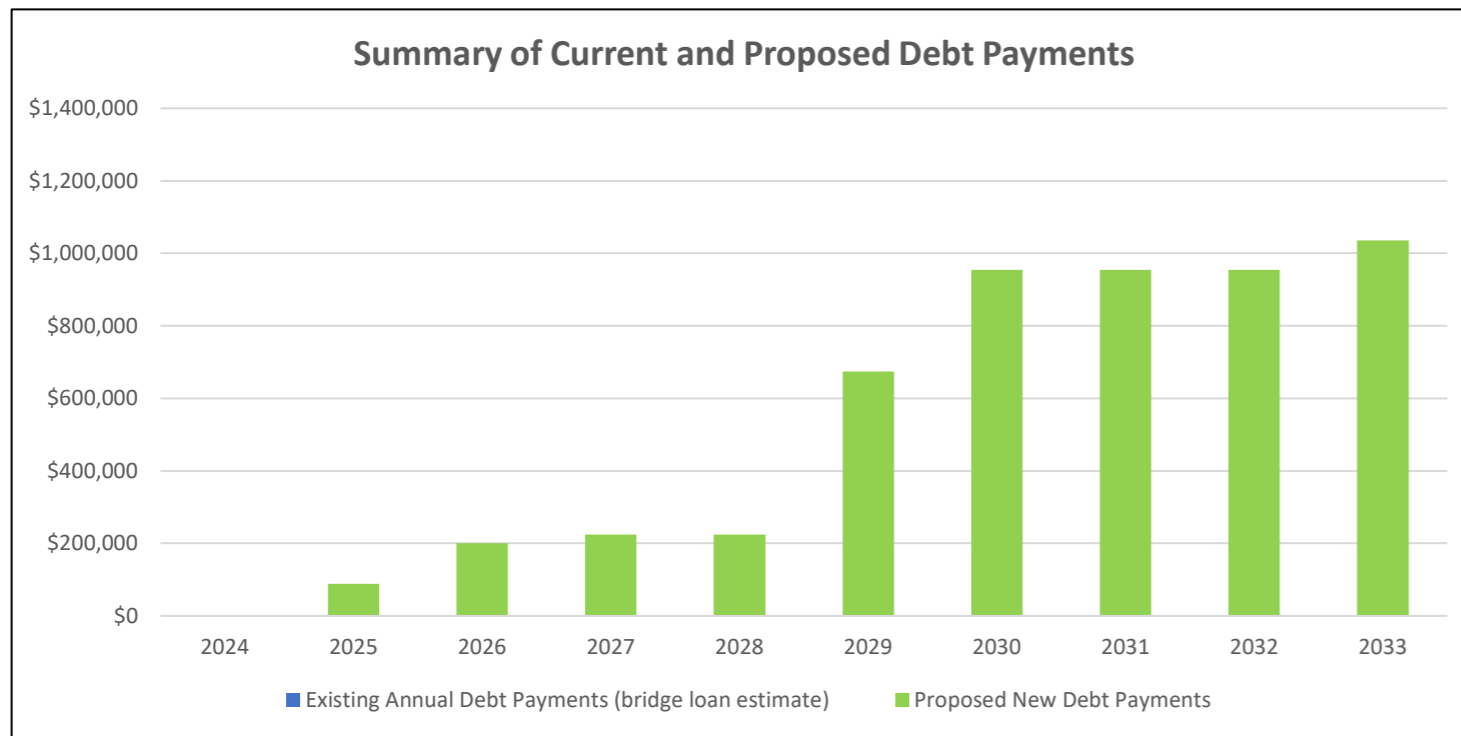
Term: 20 years  
 Rate: 5% per year  
 Timing: Debt is incurred at the end of the given year, with principal & interest payments starting in the following year.

**Debt Capacity Analysis**

\* Ontario municipalities must maintain annual debt principal and interest payments below the equivalent of 25% of revenues.

Debt Analysis	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Existing Annual Debt Payments (bridge loan estimate)	-	-	-	-	-	-	-	-	-	-
Proposed New Debt Payments	-	88,270	200,610	224,680	224,680	674,040	954,890	954,890	954,890	1,035,130
<b>Total Anticipated Debt Payments</b>	<b>-</b>	<b>88,270</b>	<b>200,610</b>	<b>224,680</b>	<b>224,680</b>	<b>674,040</b>	<b>954,890</b>	<b>954,890</b>	<b>954,890</b>	<b>1,035,130</b>
Estimated Revenues*	9,006,051	9,186,172	9,369,895	9,557,293	9,748,439	9,943,408	10,142,276	10,345,122	10,552,024	10,763,064
Maximum Debt Capacity	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
<b>% of Debt Capacity Used (Estimated)</b>	<b>0.0%</b>	<b>1.0%</b>	<b>2.1%</b>	<b>2.4%</b>	<b>2.3%</b>	<b>6.8%</b>	<b>9.4%</b>	<b>9.2%</b>	<b>9.0%</b>	<b>9.6%</b>

\* Annual revenue estimate assumes inflation of 2% annually.



### Section 3: Reserve Schedules

Asset Management: Consolidated Reserves	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Opening Balance	1,539,562	253,655	222,934	261,467	554,742	217,137	246,698	256,775	706,038	352,107
Add: Contributions from Operating	310,046	641,873	970,698	1,409,904	1,896,400	1,838,249	1,968,228	2,399,659	2,852,726	3,248,272
Less: Contributions to/(from) Capital	(1,595,953)	(672,594)	(932,165)	(1,116,629)	(2,234,005)	(1,808,688)	(1,958,151)	(1,950,396)	(3,206,657)	(1,937,417)
Interest Earned (if applicable)	-	-	-	-	-	-	-	-	-	-
<b>Ending Balance</b>	<b>253,655</b>	<b>222,934</b>	<b>261,467</b>	<b>554,742</b>	<b>217,137</b>	<b>246,698</b>	<b>256,775</b>	<b>706,038</b>	<b>352,107</b>	<b>1,662,962</b>

### Section 4: Budget Impacts & Funding Gap

Impact Analysis	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<b>Replacement, Rehabilitation &amp; LOS Impacts (Capital)</b>										
<b>Optimal Investment - Capital</b>	3,276,550	3,342,080	3,408,920	3,477,100	3,546,640	3,617,570	3,689,920	3,763,720	3,838,990	3,915,770
<b>Optimal Investment - Operating LOS</b>	91,800	93,640	95,510	97,420	99,370	101,360	103,390	105,460	107,570	109,720
<b>Total Optimal Investment</b>	<b>3,368,350</b>	<b>3,435,720</b>	<b>3,504,430</b>	<b>3,574,520</b>	<b>3,646,010</b>	<b>3,718,930</b>	<b>3,793,310</b>	<b>3,869,180</b>	<b>3,946,560</b>	<b>4,025,490</b>
<b>Recommended Investment - Capital</b>										
Canada Community Building Fund (Gas Tax)	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809	104,809
OCIF Funding	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976	174,976
Transfer from Operations (for capital)	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000
Transfer from/(to) Capital Reserves:										
Asset Management: Consolidated Reserves	310,046	641,873	970,698	1,409,904	1,896,400	1,838,249	1,968,228	2,399,659	2,852,726	3,248,272
<b>Total Recommended Investment - Capital</b>	<b>989,831</b>	<b>1,321,658</b>	<b>1,650,483</b>	<b>2,089,689</b>	<b>2,576,185</b>	<b>2,518,034</b>	<b>2,648,013</b>	<b>3,079,444</b>	<b>3,532,511</b>	<b>3,928,057</b>
<i>% of Optimal Investment (Capital) Reached</i>	30%	40%	48%	60%	73%	70%	72%	82%	92%	100%
<b>LOS Impacts - Operating</b>										
Recommended Investment	91,800	93,640	95,510	97,420	99,370	101,360	103,390	105,460	107,570	109,720
<b>Total Recommended Investment - LOS Operating</b>	<b>91,800</b>	<b>93,640</b>	<b>95,510</b>	<b>97,420</b>	<b>99,370</b>	<b>101,360</b>	<b>103,390</b>	<b>105,460</b>	<b>107,570</b>	<b>109,720</b>
<b>Total Recommended Investment - Capital &amp; Operating</b>	<b>1,081,631</b>	<b>1,415,298</b>	<b>1,745,993</b>	<b>2,187,109</b>	<b>2,675,555</b>	<b>2,619,394</b>	<b>2,751,403</b>	<b>3,184,904</b>	<b>3,640,081</b>	<b>4,037,777</b>
<i>% of Optimal Investment (Operating &amp; Capital) Reached</i>	32%	41%	50%	61%	73%	70%	73%	82%	92%	100%
<b>Funding (Gap) / Surplus</b>	<b>(2,286,720)</b>	<b>(2,020,422)</b>	<b>(1,758,437)</b>	<b>(1,387,411)</b>	<b>(970,455)</b>	<b>(1,099,536)</b>	<b>(1,041,907)</b>	<b>(684,276)</b>	<b>(306,479)</b>	<b>12,287</b>

Investment in Capital	2023
Canada Community Building Fund (Gas Tax)	104,809
OCIF Funding	174,976
Transfer from Operating	400,000
Transfer to Reserves	-
<b>Total Investment</b>	<b>679,785</b>

*Investment in capital "starting point" for the capital forecast.*

Impact on Funding	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<b>Total Recommended Investment - Capital</b>	<b>989,831</b>	<b>1,321,658</b>	<b>1,650,483</b>	<b>2,089,689</b>	<b>2,576,185</b>	<b>2,518,034</b>	<b>2,648,013</b>	<b>3,079,444</b>	<b>3,532,511</b>	<b>3,928,057</b>
<b>Previous Year's Investment</b>	<b>679,785</b>	<b>989,831</b>	<b>1,321,658</b>	<b>1,650,483</b>	<b>2,089,689</b>	<b>2,576,185</b>	<b>2,518,034</b>	<b>2,648,013</b>	<b>3,079,444</b>	<b>3,532,511</b>
<b>Annual Increase in Capital Investment</b>										
Grants	-	-	-	-	-	-	-	-	-	-
Tax Supported	310,046	331,828	328,825	439,206	486,496	(58,151)	129,979	431,432	453,067	395,546
<b>Total Change</b>	<b>310,046</b>	<b>331,828</b>	<b>328,825</b>	<b>439,206</b>	<b>486,496</b>	<b>(58,151)</b>	<b>129,979</b>	<b>431,432</b>	<b>453,067</b>	<b>395,546</b>
<b>Total Recommended Investment - Operating LOS (Increase Only)</b>	<b>91,800</b>	<b>93,640</b>	<b>95,510</b>	<b>97,420</b>	<b>99,370</b>	<b>101,360</b>	<b>103,390</b>	<b>105,460</b>	<b>107,570</b>	<b>109,720</b>
<b>Previous Year's Investment Increase</b>	<b>-</b>	<b>91,800</b>	<b>93,640</b>	<b>95,510</b>	<b>97,420</b>	<b>99,370</b>	<b>101,360</b>	<b>103,390</b>	<b>105,460</b>	<b>107,570</b>
<b>Annual Increase / (Decrease) in Operating LOS Investment</b>										
Tax Supported	91,800	1,840	1,870	1,910	1,950	1,990	2,030	2,070	2,110	2,150
<b>Total Change</b>	<b>91,800</b>	<b>1,840</b>	<b>1,870</b>	<b>1,910</b>	<b>1,950</b>	<b>1,990</b>	<b>2,030</b>	<b>2,070</b>	<b>2,110</b>	<b>2,150</b>
<b>A Total Change - Capital &amp; LOS (excluding Grant Increase)</b>	<b>401,846</b>	<b>333,668</b>	<b>330,695</b>	<b>441,116</b>	<b>488,446</b>	<b>(56,161)</b>	<b>132,009</b>	<b>433,502</b>	<b>455,177</b>	<b>397,696</b>
<b>B Net Increase / (Decrease) in Debt Payments</b>	<b>-</b>	<b>88,270</b>	<b>112,340</b>	<b>24,070</b>	<b>-</b>	<b>449,360</b>	<b>280,850</b>	<b>-</b>	<b>-</b>	<b>80,240</b>
<b>A + B Total Impact on Annual Tax Supported Budget</b>	<b>401,846</b>	<b>421,938</b>	<b>443,035</b>	<b>465,186</b>	<b>488,446</b>	<b>393,199</b>	<b>412,859</b>	<b>433,502</b>	<b>455,177</b>	<b>477,936</b>
<i>Estimated Taxation Impact: 1% in 2023 =</i>	<i>63,785</i>	<i>6.00%</i>	<i>6.00%</i>	<i>6.00%</i>	<i>6.00%</i>	<i>6.00%</i>	<i>4.60%</i>	<i>4.60%</i>	<i>4.60%</i>	<i>4.60%</i>

