

Council Workshop

# Asset Management Plan



Township of Brock  
February 12, 2024



# Topics for Discussion

1. Asset Management Definition and Overview
2. Regulatory Requirements
3. Elements of the Township's Asset Management Plan
4. Approach to Update the 2024 AMP
5. Next Steps

# Asset Management Definition for Municipalities

## What is asset management?

**Asset Management (AM)** is the process of maintaining assets in the most cost effective way

### KEY OBJECTIVES

Maximize  
Benefits

Manage  
Risks

Sustainable  
Service  
Delivery

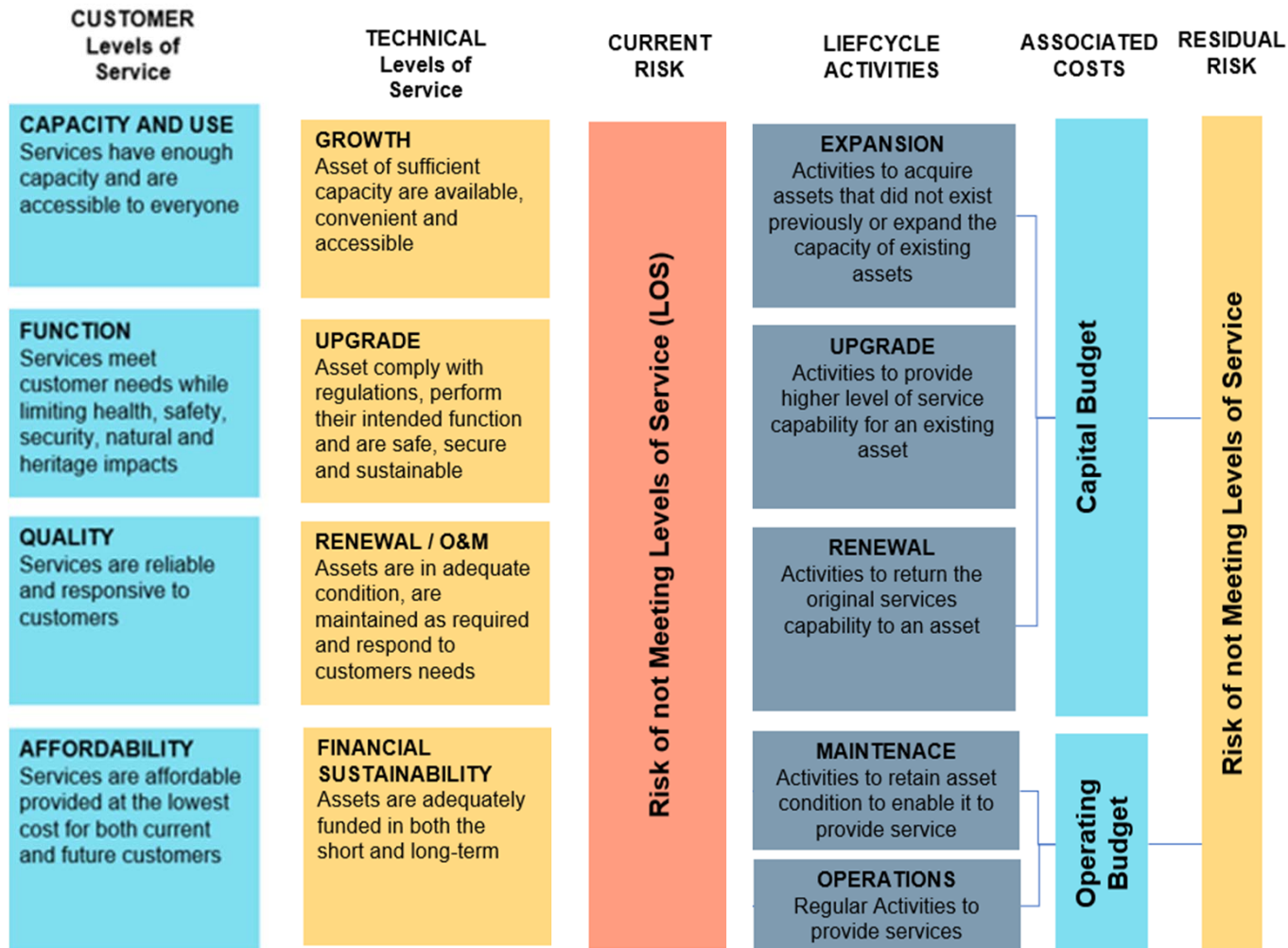
# Asset Management Overview

- Municipalities are responsible for ensuring infrastructure is planned, built and maintained in a sustainable way
- Township has applied sound asset management principles and processes to date
- Asset Management Plan is a useful tool for identifying long-term infrastructure requirements and plan how to **manage** those requirements today

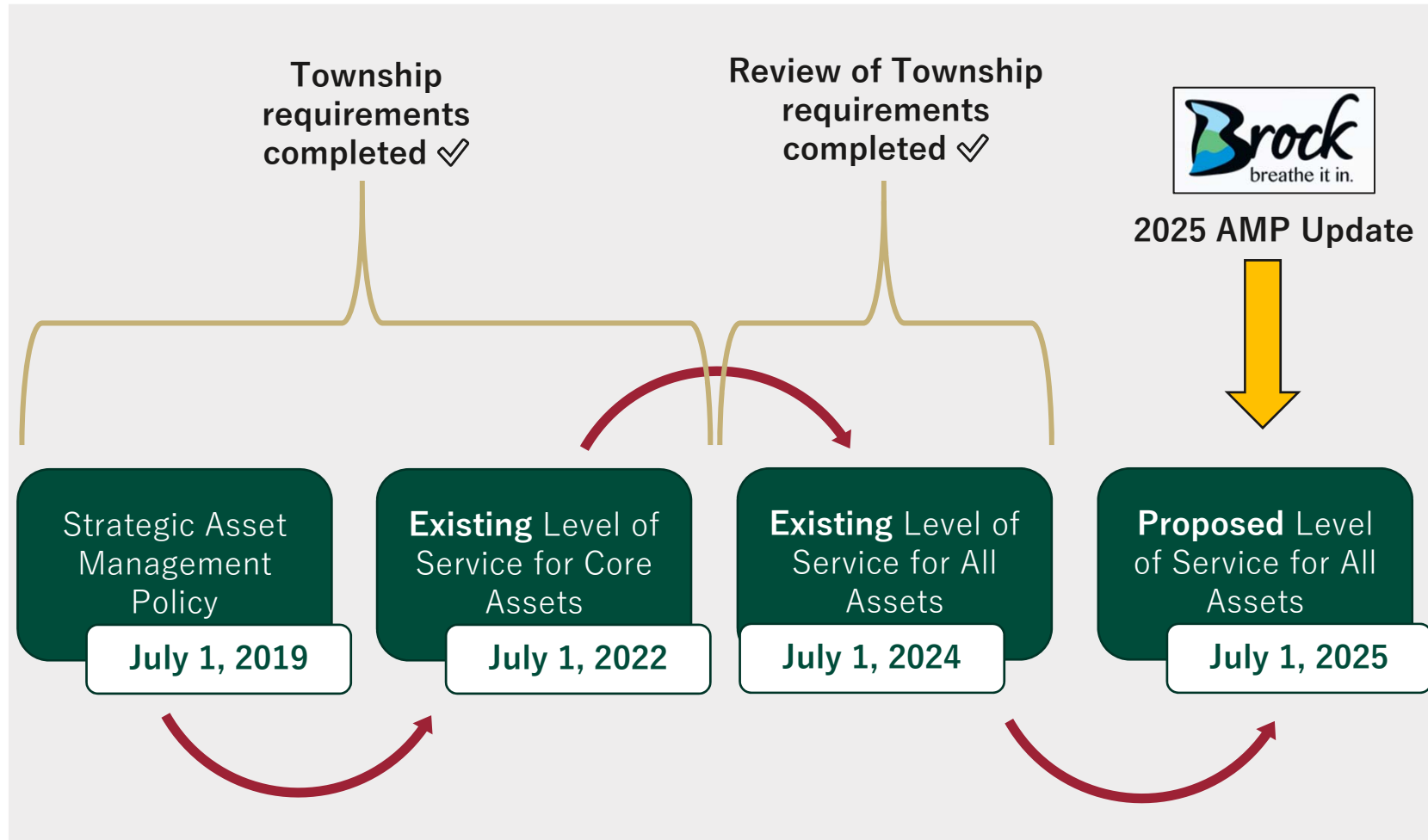
# Asset Management Plan Objectives

- Provide staff and Council information to guide sustainable infrastructure investment decisions
- Meet requirements of Ontario Regulation 588/17
- To have a readily available document to support future Provincial/Federal grant applications and support CCBF funding agreement (formerly gas tax)
- AMP must consider all assets owned by the Township
  - Core assets (Engineered assets)
  - Non-core assets (General service assets)

# Line of Sight of Asset Management Planning

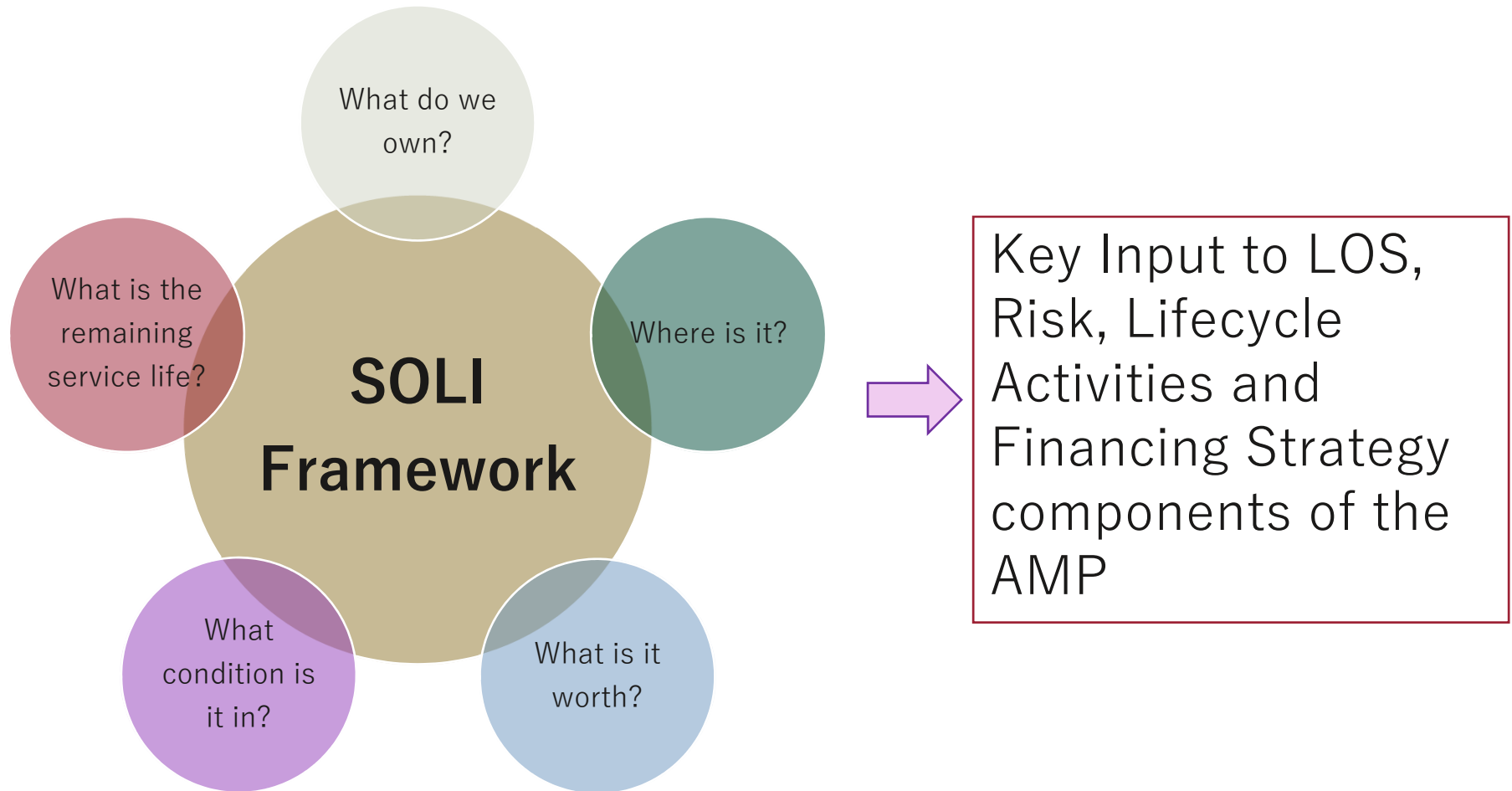


# Timeline and Requirements of Ontario Regulation 588/17



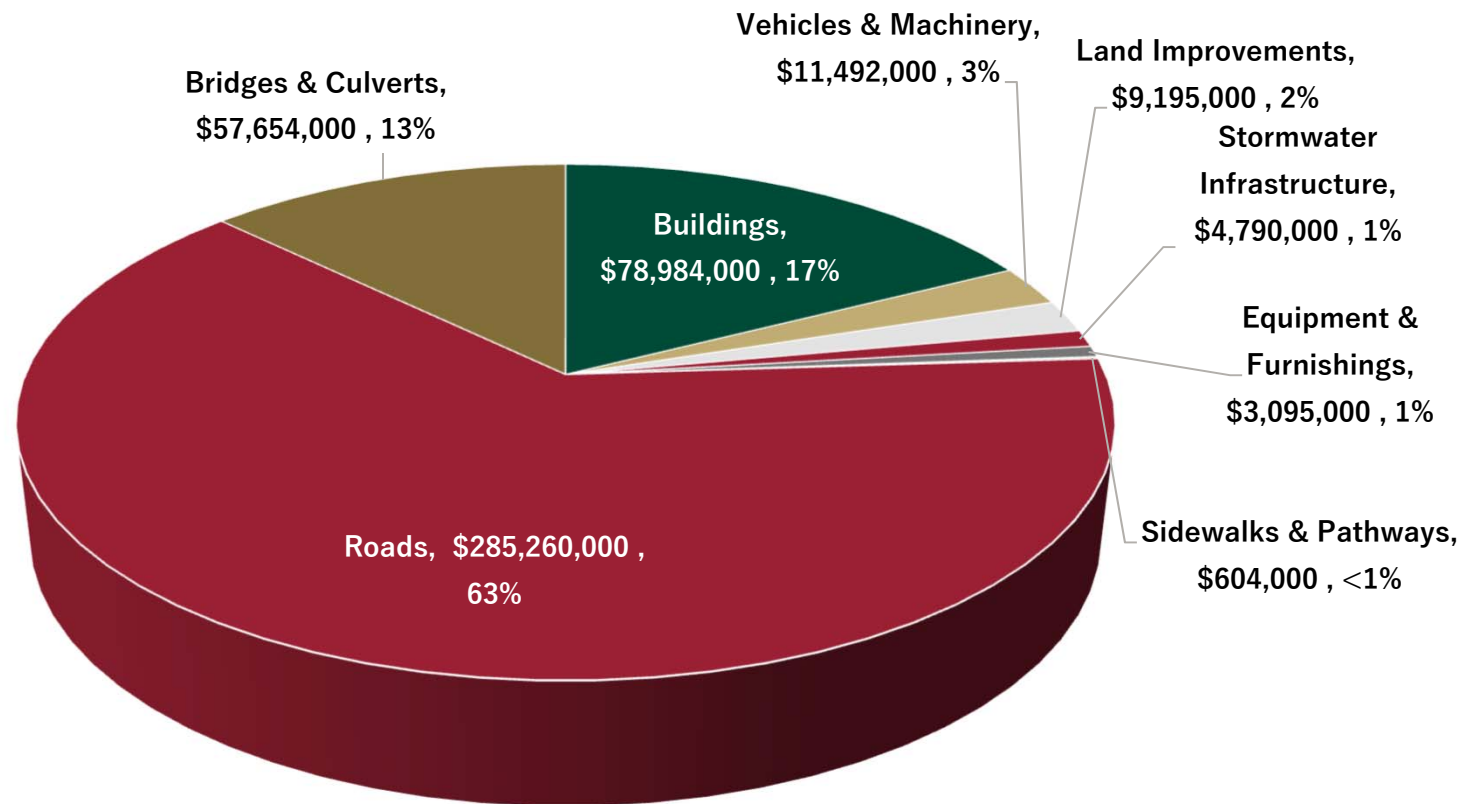
6 *Note: In 2018 the Township completed a Road Needs Study that helped inform development of the AMP.*

# Elements of the Plan: State of Local Infrastructure (SOLI)





# Asset Replacement Value (2022 \$)



**Total Replacement Value = \$451.1 million**

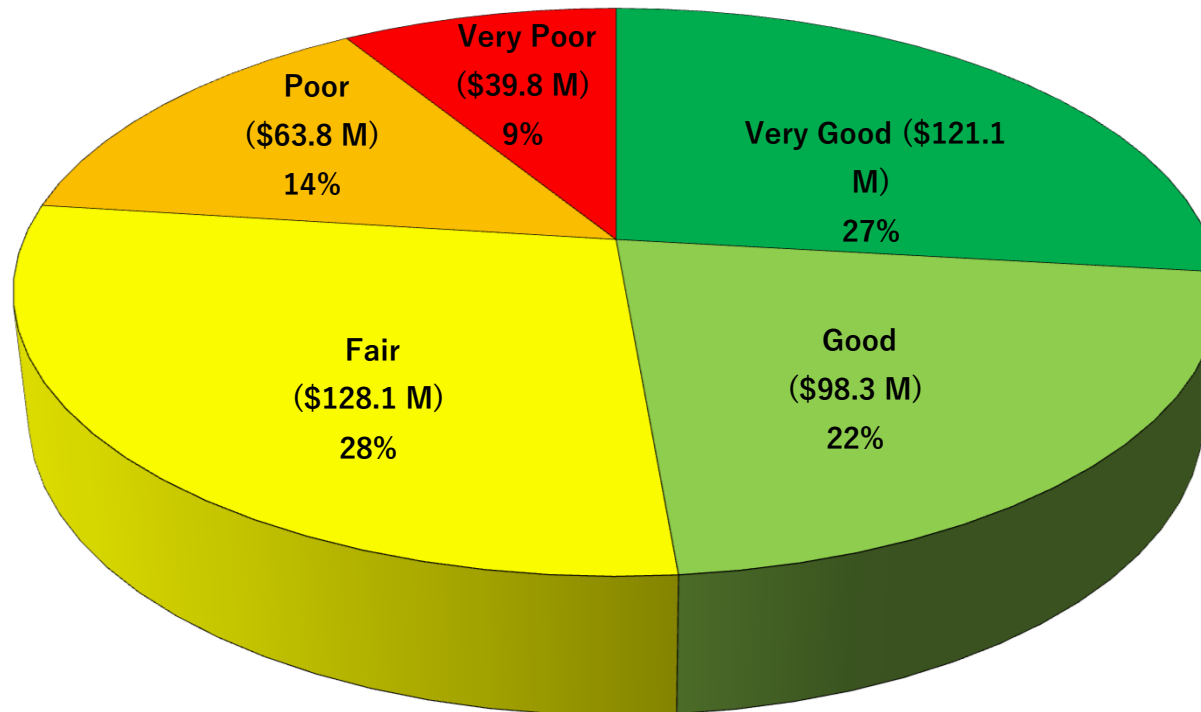
*Note: Figures based on 2019 AMP and 2023 Review.*

# Asset Condition Reporting Approach

- Asset condition is rated on a 5-point scale from Very Poor to Very Good
- Condition assessments in 2019 AMP are derived from:
  - Age-based assessment
  - Inspection-Based Assessment
    - 2018 Road Needs Study
    - 2017 Structures Report
    - Staff based reporting



# Summary of Asset Condition (2022 \$)



**Total Replacement Value = \$451.1 million**

*Note: Figures based on 2019 AMP and 2023 Review.*

# State of Local Infrastructure Summary

Summary State of Local Infrastructure					
Asset Type	Replacement Cost 2022	Useful Life (Years)	Remaining Useful Life (Weighted Average)	Condition (Weighted Average)	
Buildings	\$ 78,984,000	10/15/20/25/30/40/ 50/60/100	43	Fair	2.9
Vehicles & Machinery	\$ 11,492,000	10/15	2	Fair	2.5
Land Improvements	\$ 9,195,000	10/15/20/30	1	Poor	2.4
Stormwater Infrastructure	\$ 4,790,000	75	57	Good	4.3
Equipment & Furnishings	\$ 3,095,000	5/7/8/10/15/30	-1	Fair	2.9
Sidewalks & Pathways	\$ 604,000	25/30	16	Fair	3.5
Bridges & Culverts	\$ 57,654,000	60	9	Fair	3.5
Roads	\$ 285,260,000	40	22	Good	3.6
<b>Total</b>	<b>\$ 451,074,000</b>		<b>23</b>	<b>Fair</b>	<b>3.4</b>

*Note: Figures based on 2019 AMP and 2023 Review.*

# Elements of the Plan: Level of Service

- Municipalities are required to report on levels of service
  - Core assets - outlined in the regulation
  - Non-core assets - determined at discretion of the Township
- The Township completed a level of service report as part of development of the 2019 AMP
- The 2019 AMP covered the **current level of service**

# Level of Service Tracker Sample

Service Area	Measure of Current Level of Service	Current LOS
<b>Non-Core Services (Example from Vehicles &amp; Machinery)*</b>	Average weighted condition assessment	Fair
	Percentage of assets at or above “Good” or “Very Good” condition	15%
<b>Stormwater</b>	Percentage of properties resilient to a 100-year storm (O. Reg. 588/17)	100% in the urban area (Assumed)
<b>Bridges &amp; Culverts</b>	For bridges, the average condition index	70 (out of 100)
	For culverts, the average condition index	70 (out of 100)
<b>Roads</b>	For paved roads, the average pavement condition index	75 (out of 100)
	For unpaved roads, the average condition index	64 (out of 100)

*Note\*: Sample shown is for Vehicles & Machinery, however, all non-core assets report the same measures.*

*Note: Figures based on 2019 AMP.*

# Elements of the Plan: Lifecycle Activities

## Non-Infrastructure Solutions

- Actions or policies that can lower costs or extend asset life
- Not necessarily related to direct work on assets, but facilitates asset management activities

## Expansion Activities

- Acquiring assets or expanding the capacity of current assets
- In the municipal context, typically what we would call “growth-related” infrastructure (but not always)
- Can include enhancements in some cases

## Maintenance Activities

- Servicing assets on a regular basis in order to fully realize the original service potential
- Maintenance will not necessarily extend the life of an asset or add to its value
- Not performing regular maintenance may reduce an asset’s useful life

# Elements of the Plan: Lifecycle Activities

## Renewal/Rehabilitation Activities

- Enhancements that improve the service potential of an asset
- Allows an asset to reach its target functional condition and to meet regulations
- May increase the remaining life of the asset

## Replacement Activities

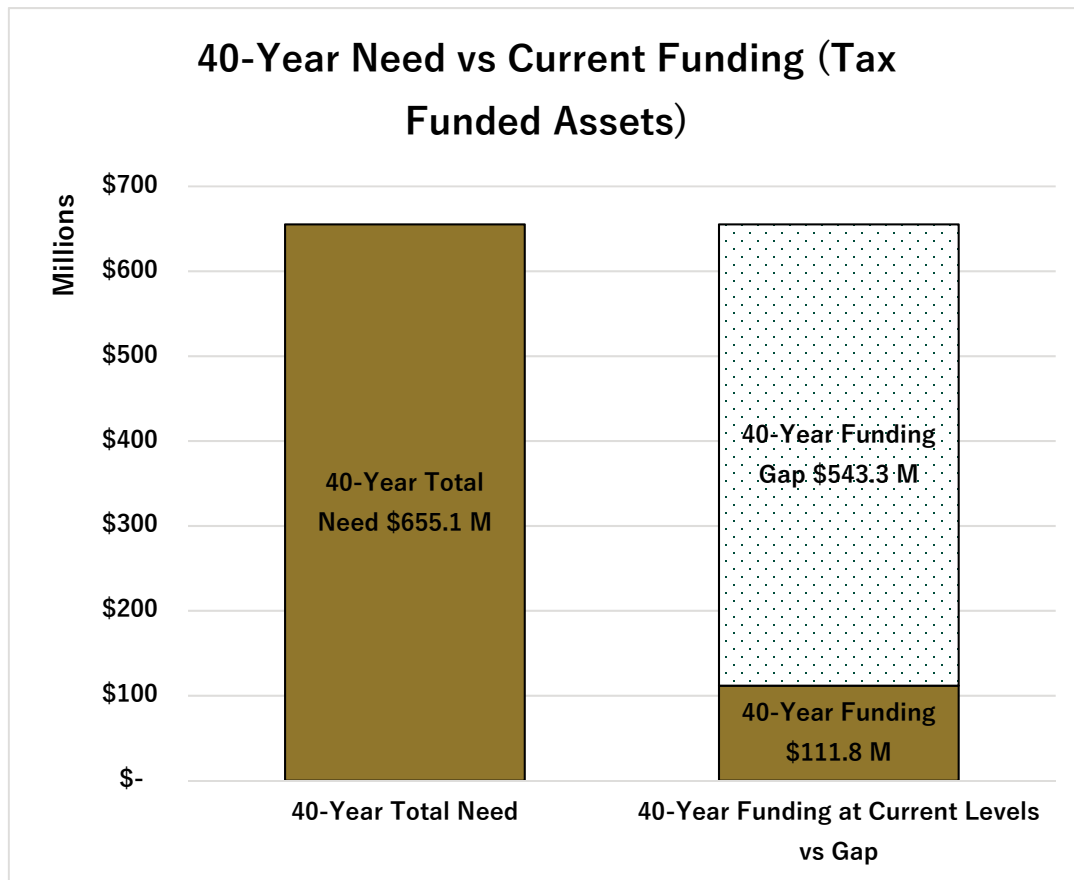
- Allows an asset to reach its target functional condition and to meet regulations by completely replacing or reconstructing the asset
- Replacement would assume “like for like”

## Disposal Activities

- Some assets will require costs of disposal or demolition
- Important to note some assets will require perpetual maintenance



# Elements of the Plan: Identify Funding Gap



*Note: All figures in constant 2022 dollars.*

*Note: Estimated reserve funds have been incorporated into the total 40-year need.*

*Note: Estimated existing tax supported in-year capital based on 2022 budget.*

- Estimated tax supported capital funding in 2022 was about \$2.0 million
- Funding accounts for existing reserves, CCBF, OCIF and other grants over the 40-year period
- 40-year funding gap equates to just over \$543 million

# Lifecycle Cost Approach to Update the AMP: Non-Core Assets

Asset Category	Task	Approach for 2024 Plan
Buildings	Proposed Level of Service	<ul style="list-style-type: none"> <li>• Work with Township staff to determine level of service measures utilized at the service area level</li> <li>• Determine the feasibility of developing level of service targets for these measures</li> <li>• Estimate cost to achieve target</li> </ul>
	Lifecycle Cost Methodology	<ul style="list-style-type: none"> <li>• Develop lifecycle cost model that focuses on renewal/rehabilitation vs. asset replacement</li> <li>• Evaluate buildings which would not be replaced</li> <li>• Review the assumptions on operating cost efficiencies under the renewal/rehabilitation lifecycle cost model approach</li> <li>• Review useful life of assets to determine feasibility of extending the useful life of certain components</li> </ul>

# Lifecycle Cost Approach to Update the AMP: Non-Core Assets

Asset Category	Task	Approach for 2024 Plan
Other Non-Core Assets <ul style="list-style-type: none"> <li>• Vehicles &amp; Machinery</li> <li>• Land Improvements</li> <li>• Equipment and Furnishings</li> <li>• Sidewalks &amp; Pathways)</li> </ul>	Proposed Level of Service	<ul style="list-style-type: none"> <li>• Work with Township staff to determine proposed level of service targets for these assets using the existing approach (average weighted condition and assets in Good/Very Good condition)</li> <li>• Work with Township staff to determine other level of service measures utilized at the service area level</li> <li>• Estimate cost to achieve target</li> </ul>
	Lifecycle Cost Methodology	<ul style="list-style-type: none"> <li>• Review and update replacement values and useful life assumptions</li> <li>• Age based replacement appropriate for vehicles and equipment</li> <li>• Evaluate alternative replacement needs for land improvements assets (i.e. no replacement of fields, lighting, etc.)</li> <li>• Rehabilitation/renewal for sidewalks and pathways vs. replacement</li> <li>• Extend useful of equipment and furnishing assets</li> </ul>

# Lifecycle Cost Approach to Update the AMP: Core Assets

Asset Category	Task	Approach for 2024 Plan
Stormwater Infrastructure	Proposed Level of Service	<ul style="list-style-type: none"> <li>Review levels of service related to resilience of 5 and 100-year storms</li> <li>Evaluate a target</li> </ul>
	Lifecycle Cost Methodology	<ul style="list-style-type: none"> <li>Review whether the existing asset replacement lifecycle cost methodology continues to be appropriate for this asset category</li> </ul>
Bridges and Culverts	Proposed Level of Service	<ul style="list-style-type: none"> <li>Work with Township staff to identify targets for proposed levels of service for bridge condition index</li> <li>Cost associated with different targets</li> </ul>
	Lifecycle Cost Methodology	<ul style="list-style-type: none"> <li>Review latest version of the Structures Report to incorporate recommended works into the AMP</li> <li>Assess feasibility of the recommendations</li> <li>Determine if additional asset renewal/replacement needs to be layered onto the structures report outcomes</li> </ul>

# Lifecycle Cost Approach to Update the AMP: Core Assets

Asset Category	Task	Approach for 2024 Plan
Roads	Proposed Level of Service	<ul style="list-style-type: none"> <li>• Work with Township staff to identify targets for proposed levels of service for condition index</li> <li>• Review the feasibility of assessing this level of service on a road by road basis</li> <li>• Estimate cost to achieve target</li> </ul>
	Lifecycle Cost Methodology	<ul style="list-style-type: none"> <li>• Review Road Needs Study to incorporate and update recommended works in the AMP and assess feasibility of the recommendations</li> <li>• Review the feasibility of a lifecycle cost model that focuses on renewal/rehabilitation</li> <li>• Review unit costs for recommended works and replacement values for the road network</li> <li>• Review the assumptions and feasibility of operating cost efficiencies based on assessment of the Road Needs Study</li> </ul>

# Level of Service Tracker Sample

Service Area	Measure of Current Level of Service	Current LOS	Proposed LOS	Estimated Gap
<b>Non-Core Services (Example from Vehicles &amp; Machinery)*</b>	Average weighted condition assessment	Fair		<ul style="list-style-type: none"> <li>• Cost</li> <li>• Estimated Strategies to manage gap</li> <li>• Timeline to Achieve Targets</li> <li>• Risk of not achieving LOS</li> </ul>
	Percentage of assets at or above “Good” or “Very Good” condition	15%		
<b>Stormwater</b>	Percentage of properties resilient to a 100-year storm (O. Reg. 588/17)	100% in the urban area (Assumed)		
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*Note\*: Sample shown is for Vehicles & Machinery, however, all non-core assets report the same measures.*

*Note: Figures based on 2019 AMP.*

# Next Steps

- Hemson and Township staff will initiate background work needed to update the AMP model
- Consultation with staff and Council on proposed levels of service
- Final Report to Council in January 2025
  - This project timeline is well in advance of regulatory requirement of July 2025