## Council Workshop

# Asset Management Plan


Township of Brock
January 15, 2024

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# 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



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# Asset Management Definition for Municipalities

## What is asset management?

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




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# 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



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# 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)



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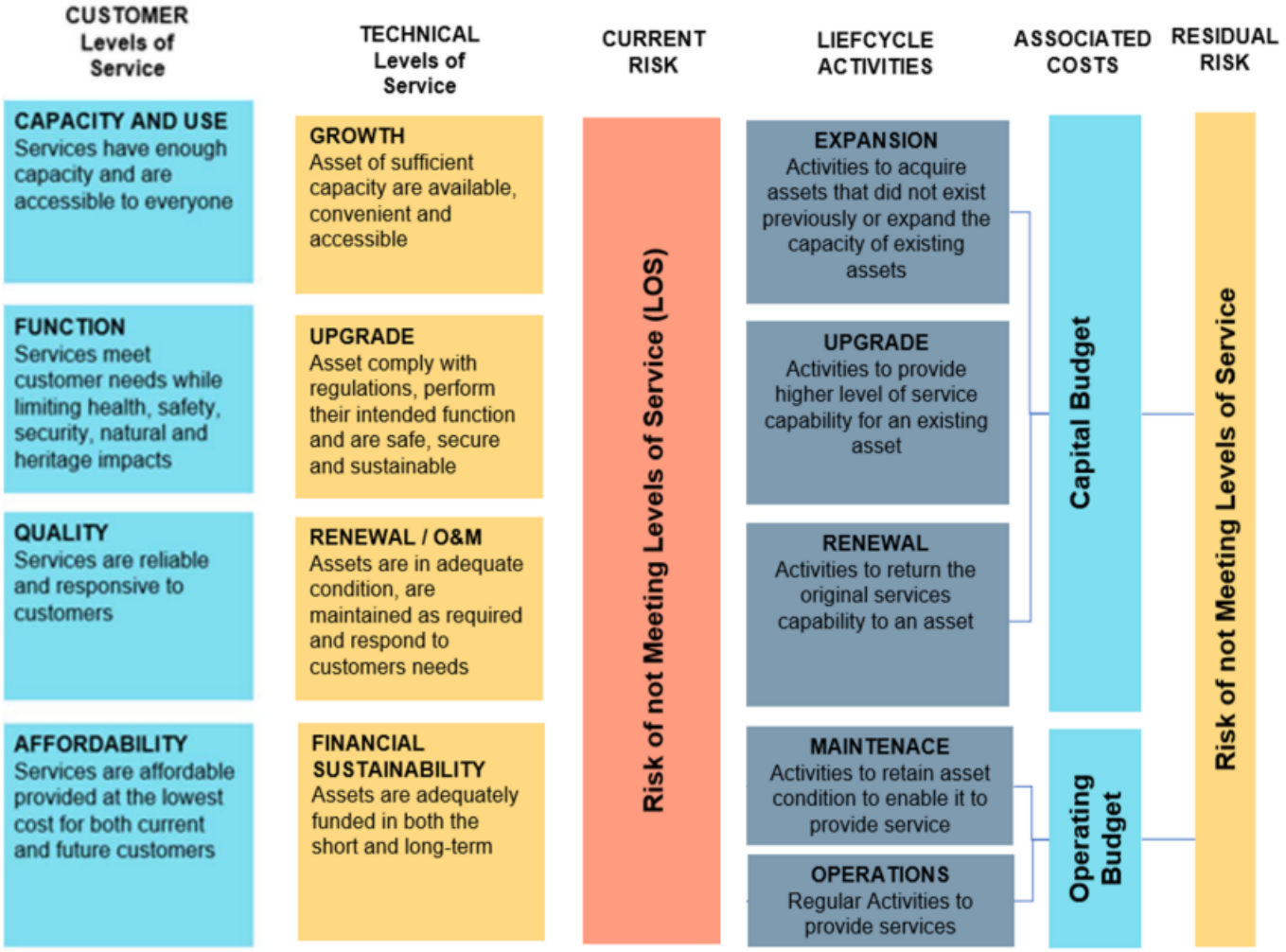
# Line of Sight of Asset Management Planning



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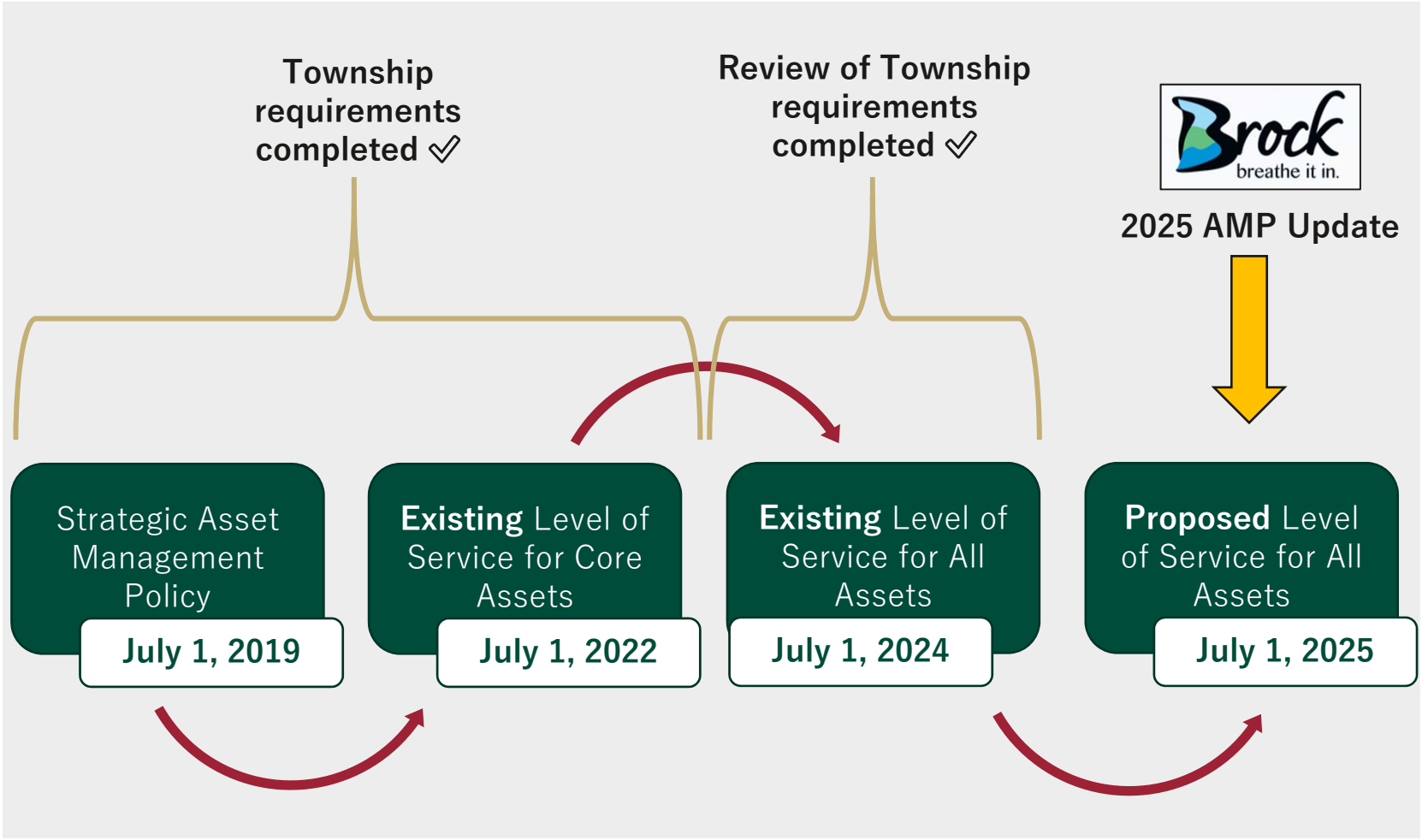
# Timeline and Requirements of Ontario Regulation 588/17




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



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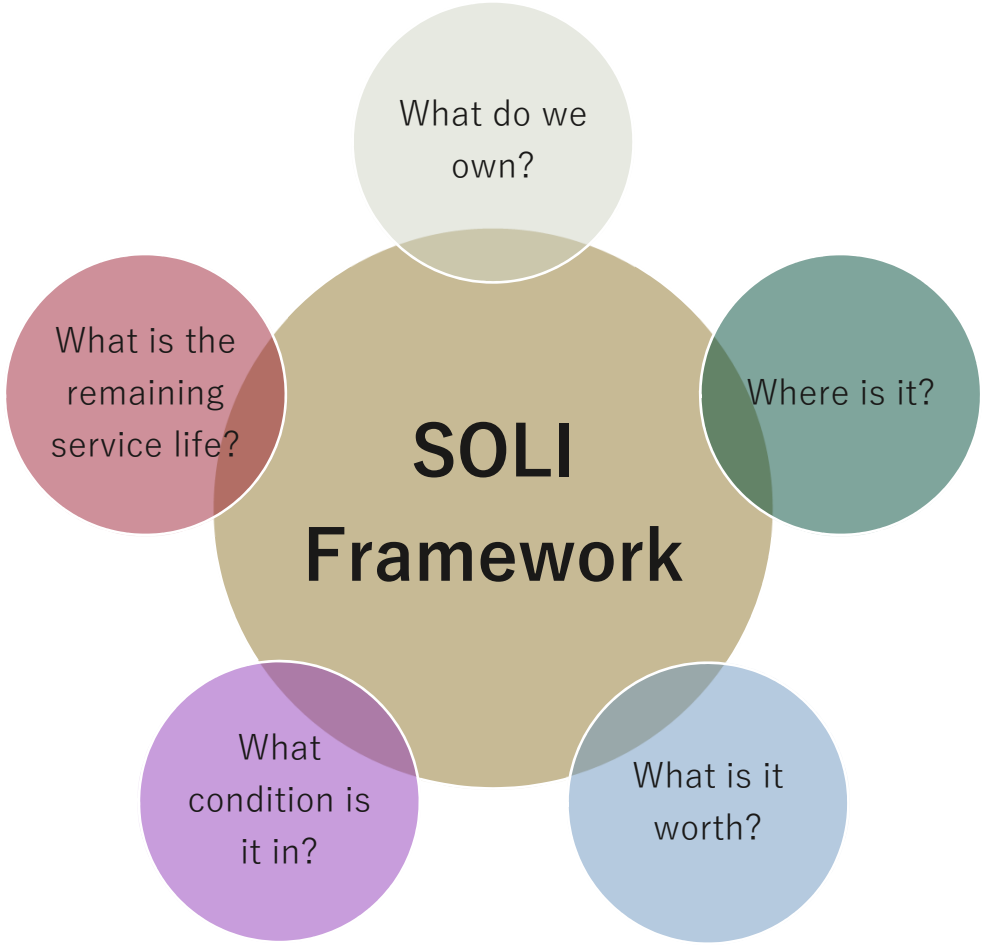
# Elements of the Plan: State of Local Infrastructure (SOLI)




Key Input to LOS, Risk, Lifecycle Activities and Financing Strategy components of the AMP



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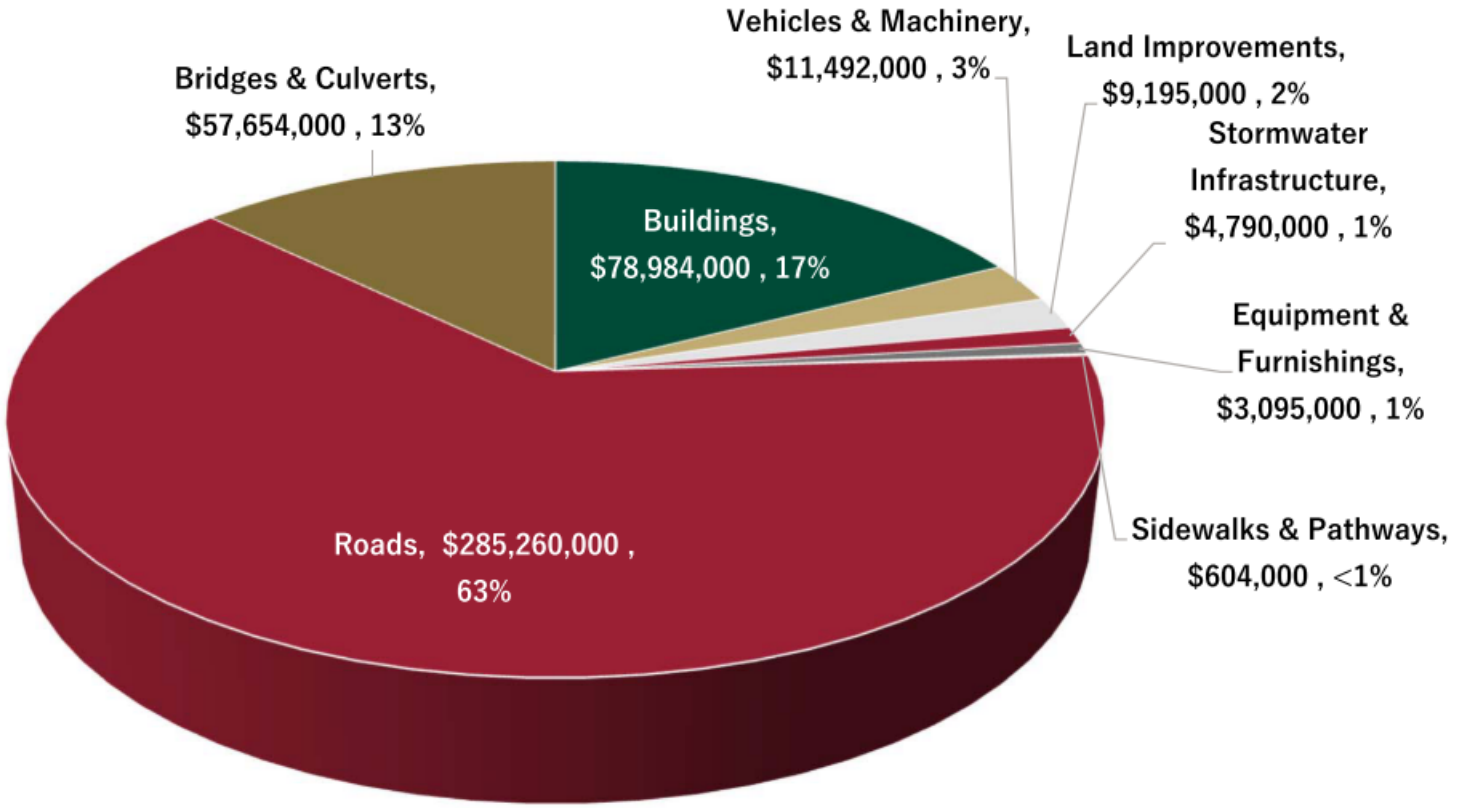
# Asset Replacement Value (2022 $)




**Total Replacement Value = $451.1 million**

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



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# 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




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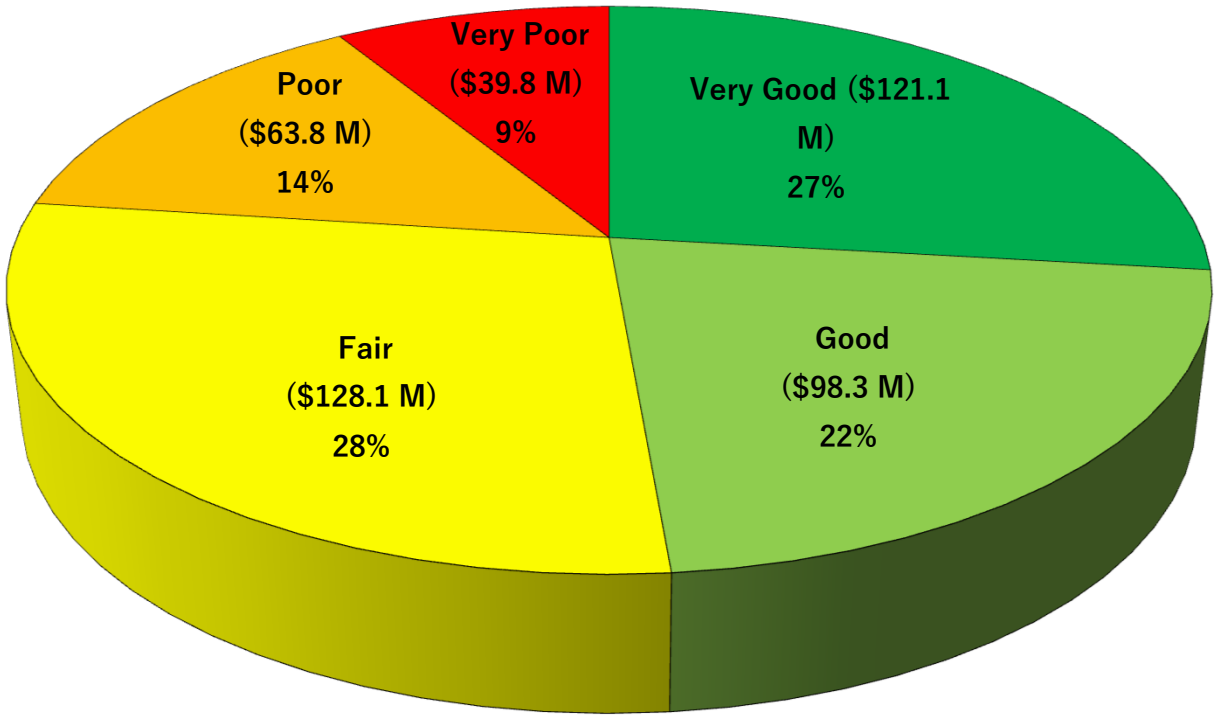
# Summary of Asset Condition (2022 $)




**Total Replacement Value = $451.1 million**

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



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# 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 |
| | | | | | |
| **Total** | **$ 451,074,000** | | **23** | **Fair** | **3.4** |

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



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# 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**



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# Level of Service Tracker Sample

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



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# 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



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# 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



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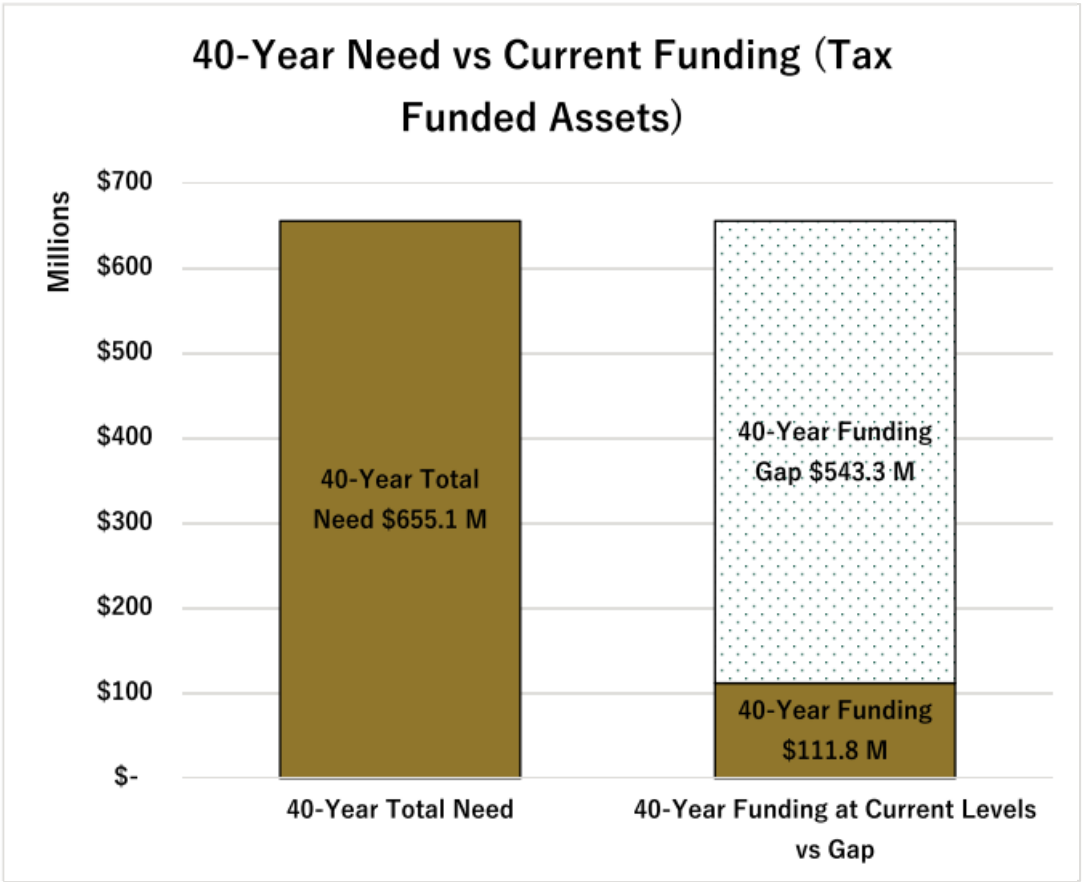
# Elements of the Plan: Identify Funding Gap




*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



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

| Asset Category | Task | Approach for 2024 Plan |
|---|---|---|
| Buildings | Proposed Level of Service | • Work with Township staff to determine level of service measures utilized at the service area level<br>• Determine the feasibility of developing level of service targets for these measures<br>• Estimate cost to achieve target |
| | Lifecycle Cost Methodology | • Develop lifecycle cost model that focuses on renewal/rehabilitation vs. asset replacement<br>• Evaluate buildings which would not be replaced<br>• Review the assumptions on operating cost efficiencies under the renewal/rehabilitation lifecycle cost model approach<br>• Review useful life of assets to determine feasibility of extending the useful life of certain components |



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

| Asset Category | Task | Approach for 2024 Plan |
|---|---|---|
| Other Non-Core Assets<br>• Vehicles & Machinery<br>• Land Improvements<br>• Equipment and Furnishings<br>• Sidewalks & Pathways) | Proposed Level of Service | • 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)<br>• Work with Township staff to determine other level of service measures utilized at the service area level<br>• Estimate cost to achieve target |
| | Lifecycle Cost Methodology | • Review and update replacement values and useful life assumptions<br>• Age based replacement appropriate for vehicles and equipment<br>• Evaluate alternative replacement needs for land improvements assets (i.e. no replacement of fields, lighting, etc.)<br>• Rehabilitation/renewal for sidewalks and pathways vs. replacement<br>• Extend useful of equipment and furnishing assets |



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# Lifecycle Cost Approach to Update the AMP: Core Assets

| Asset Category | Task | Approach for 2024 Plan |
|---|---|---|
| Stormwater Infrastructure | Proposed Level of Service | • Review levels of service related to resilience of 5 and 100-year storms<br>• Evaluate a target |
| | Lifecycle Cost Methodology | • Review whether the existing asset replacement lifecycle cost methodology continues to be appropriate for this asset category |
| Bridges and Culverts | Proposed Level of Service | • Work with Township staff to identify targets for proposed levels of service for bridge condition index<br>• Cost associated with different targets |
| | Lifecycle Cost Methodology | • Review latest version of the Structures Report to incorporate recommended works into the AMP<br>• Assess feasibility of the recommendations<br>• Determine if additional asset renewal/replacement needs to be layered onto the structures report outcomes |



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# Lifecycle Cost Approach to Update the AMP: Core Assets

| Asset Category | Task | Approach for 2024 Plan |
|---|---|---|
| Roads | Proposed Level of Service | • Work with Township staff to identify targets for proposed levels of service for condition index<br>• Review the feasibility of assessing this level of service on a road by road basis<br>• Estimate cost to achieve target |
| | Lifecycle Cost Methodology | • Review Road Needs Study to incorporate and update recommended works in the AMP and assess feasibility of the recommendations<br>• Review the feasibility of a lifecycle cost model that focuses on renewal/rehabilitation<br>• Review unit costs for recommended works and replacement values for the road network<br>• Review the assumptions and feasibility of operating cost efficiencies based on assessment of the Road Needs Study |



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# Level of Service Tracker Sample

| Service Area | Measure of Current Level of Service | Current LOS | Proposed LOS | Estimated Gap |
|---|---|---|---|---|
| **Non-Core Services (Example from Vehicles & Machinery)*** | Average weighted condition assessment | Fair | | • Cost<br>• Estimated Strategies to manage gap<br>• Timeline to Achieve Targets<br>• Risk of not achieving LOS |
| | Percentage of assets at or above "Good" or "Very Good" condition | 15% | | |
| **Stormwater** | 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.*



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# 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



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