Oshawa

Asset Management Plan

Phase III: Proposed Levels of Service

May 2025

Table of Contents

Glossary of Terms

A.M. – Asset Management

A.M.P. – Asset Management Plan

B.C.I. – Bridge Condition Index

D.C. – Development Charges

F.D.C. – Foundation Drainage Collection

G.I.S. – Geographic Information System

I.T. – Information Technology

K.P.I. – Key Performance Indicator

L.O.S. – Levels of Service

M.F.O.A. – Municipal Finance Officers Association

M.T.O. – Ministry of Transportation

M.U.P. – Multi-Use Path

O. Reg. – Ontario Regulation

O.S.I.M. – Ontario Structure Inspection Manual

P.C.I. – Pavement Condition Index

P.S.A.B. – Public Sector Accounting Board

S.W.M.F. – Stormwater Management Facilities

T.B.D. – To Be Determined

T.C.A. – Tangible Capital Assets

Executive Summary

Maintaining existing assets in a state of good repair and building new infrastructure which meets current and future needs is critical to the success of the City of Oshawa. The City's infrastructure is a vital part of delivering the services that the public expects.

The City of Oshawa owns, operates and maintains $4.0 billion (estimated 2024 replacement cost) for all infrastructure which services the needs of residents, local business and visitors to the City. This Asset Management Plan (the AMP) includes all City owned assets, both core and non-core assets.

What is Asset Management

Asset management is the process of making the best possible decisions regarding the commissioning, operating, maintaining, renewing, replacing and disposing of infrastructure assets. It is a journey that improves decisions over time.

The Plan supports the City's corporate strategic direction found in the Oshawa Strategic Plan, the Financial Strategy and the Official Plan. It is a key step to put in place a more mature business management framework to:

- collect infrastructure data
- integrate the management of assets across all services and departments
- report on the replacement cost, condition and lifecycle costs of assets
- support a long-term approach to investing in the City's assets
    - operate, maintain, renew, replace and dispose of City assets as effectively and efficiently as possible
- move the City from historical-based budgeting to asset needs budgeting

Utilizing this framework will assist in providing the infrastructure required to help ensure the health and prosperity of the City of Oshawa and its residents, maintain a high quality of life, support evidence-based decision-making, help to manage risk and provide satisfactory levels of service to the public in a sustainable manner.

A detailed analysis and summary of all City owned assets was completed and includes the state of the City's infrastructure, such as inventory, replacement costs and condition; current and proposed levels of service; and lifecycle management and financial strategies to support the services delivered today and into the future. The goal is to enable safe and reliable infrastructure to provide the levels of service in a sustainable way, while managing risk, at the lowest lifecycle cost.

Oshawa, like other municipalities, is facing aging infrastructure with an associated increase in operating, maintenance, renewal and replacement costs, along with the physical and financial impacts of climate change. Building a sound knowledge base across the organization regarding the need for and the complexity of asset management will serve to integrate the required practices into the overall culture of the City. This will position Oshawa for successfully making more informed decisions about managing its assets. This Plan will also allow the City to utilize available Federal and Provincial government funding as an Asset Management Plan is a requirement to receive infrastructure funding and it is anticipated that the Province will use it to inform the distribution of funding.

Oshawa's population growth needs to be considered and planned for within operating and capital budgets in a way that is efficient and transparent. Asset management is an efficient tool that can be utilized to achieve this.

O. Reg. 588/17: Asset Management Planning for Municipal Infrastructure came into effect on January 1, 2018 and requires municipalities to have a Council approved Asset Management Plan for all assets by July 1, 2024. Regulatory compliance status for the City's assets is shown below in Figure 1.

Figure 1 – Regulatory Compliance Status – Phase III – Proposed Levels of Service

Asset Class	State of the Infrastructure	Levels of Service Current & Proposed	Lifecycle Management & Financial Strategy	Managing Growth
Roads	Compliant (pg. A-3)	Compliant (pg. A-10)	Compliant (pg. A-21)	Compliant (pg. A-25)
Structures	Compliant (pg. B-3)	Compliant (pg. B-7)	Compliant (pg. B-16)	Compliant (pg. B-18)
Stormwater	Compliant (pg. C-3)	Compliant (pg. C-14)	Compliant (pg. C-22)	Compliant (pg. C-26)

Asset Class	State of the Infrastructure	Levels of Service Current & Proposed	Lifecycle Management & Financial Strategy	Managing Growth
Airport	Compliant (pg. D-4)	Compliant (pg. D-8)	Compliant (pg. D-13)	Compliant (pg. D-15)
Facilities	Compliant (pg. E-3)	Compliant (pg. E-8)	Compliant (pg. E-15)	Compliant (pg. E-17)
Park Facilities	Compliant (pg. F-4)	Compliant (pg. F-9)	Compliant (pg. F-13)	Compliant (pg. F-15)
Parking Services	Compliant (pg. G-3)	Compliant (pg. G-7)	Compliant (pg. G-13)	Compliant (pg. G-15)
Fleet & Equipment	Compliant (pg. H-3)	Compliant (pg. H-9)	Compliant (pg. H-15)	Compliant (pg. H-17)
Active Transportation	Compliant (pg. I-3)	Compliant (pg. I-8)	Compliant (pg. I-12)	Compliant (pg. I-14)
Non-Core Transportation	Compliant (pg. J-3)	Compliant (pg. J-7)	Compliant (pg. J-11)	Compliant (pg. J-12)

There are three phases required in the regulation. Phase one included details of the core assets (Roads, Structures and Stormwater Assets) and was first published and approved through report FIN-21-92 - 2021 Oshawa Asset Management Plan. Phase two required the same information to be included in the Asset Management Plan for all other municipal assets, such as facilities, fleet assets, equipment, parks, etc. The completion of this Plan was approved and published through report CF-24-44 – 2024 Oshawa Asset Management Plan – Phase II: Non-Core Assets.

This asset management plan is for the final phase of the regulation, phase three, which builds upon phase one and two by including proposed levels of service along with a lifecycle management and financial strategy for all classifications of assets. This phase is to be approved and published by July 1, 2025.

Figure 2 - Summary of Key Statistics

Key Statistic	Core Assets	Non-Core Assets	Total Assets
Estimated Replacement Cost of Assets[1]	$2.5 billion	$1.5 billion	$4.0 billion
Estimated Replacement Cost of Assets per household	$35,363 per household	$21,055 per household	$56,418 per household
Percentage of Assets in Good or Better Condition	42.8%	50.4%[2]	45.6%
Percentage of Assets in Fair or Better Condition	75.6%[2]	75.3%[2]	75.5%[2]
Percentage of Assets with Observed Condition Data	79.4%	71.9%	76.6%
Annual Capital Funding Gap Estimate	$14.5 million	$32.7 million	$47.2 million

[1] Cost of staff resources are not included in this calculation
[2] Excludes assets where age or condition data is not available

1. Introduction

1.1 Purpose

This Asset Management Plan reports on the state of the City's assets, how the City manages those assets at the current levels of service and what investment is required to maintain the current levels of service. The focus of this iteration was assessing various proposed levels of service options and the risks associated with these options. Lifecycle management and financial strategies were developed based on the proposed levels of service identified, based on current affordability. This plan includes all City assets, including roads, structures, stormwater, airport, facilities, park facilities, parking services, fleet and equipment, active transportation, and non-core transportation. It has been prepared under the guidance of Ontario Regulation 588/17 Asset Management Planning for Municipal Infrastructure and thus will inform the current budget and the nine-year capital forecast. This document, and the analysis contained within, are dynamic and the quality of the content will continue to improve over time, as the City's asset management, data, information, and processes mature.

Why Are We Doing Asset Management?

Asset management is good business sense and the legislation and regulations require municipalities to create an Asset Management Plan.

Asset management leading practices includes evidence-based decision making, transparency, risk management and public engagement.

The Asset Management Plan will be updated regularly, monitored and reported to Council as required, with a full Plan updated a minimum of every 5 years as per Ontario Regulation 588/17. The result over time will be more comprehensive data, better analysis and, in turn, better decision-making, financial/investment planning and long-term sustainability.

As the City's asset inventory and condition assessment, and proposed levels of service and risk management matures, the City's asset management analysis and decisions will mature and more significantly inform the long-term budget forecast.

1.2 Importance of Infrastructure

The City of Oshawa is responsible for a diverse array of capital assets essential to the delivery of services to residents, businesses and visitors. The commissioning, operation, maintenance, renewal and eventual replacement of such infrastructure has always been and currently is a very important responsibility essential for any successful community. Asset management is vitally important as municipalities address their infrastructure challenges.

1.3 Link to Strategic Documents

The City of Oshawa Council approved the updated Strategic Asset Management Policy through report CF-24-45 in June 2024. This policy is subject to review every 5 years.

The policy establishes formal management controls for the responsible stewardship of capital infrastructure. The policy framework is divided into the following key areas:

- Policies and procedures supported by the Asset Management Plan
- Principles to be followed in the asset management planning process
- Governance and accountability

What are the Benefits of Asset Management?

The key benefits of asset management include:

- Defined and cost-effective levels of service
- Optimized operations and maintenance for reduced lifecycle costs
- Reduced risk
- Be prepared for unexpected problems related to City assets
- Evidence-based financial planning guides investment decisions
- Performance-monitoring system

Both the Oshawa Strategic Plan and the Oshawa Financial Strategy respond to the Council-endorsed principles of sustainability and financial stewardship. Oshawa's Asset Management Plan endeavors to align to the Oshawa Strategic Plan and the Oshawa Financial Strategy, which contains several recommendations that support asset management. The Asset Management Plan will help the City achieve both strategies and improve the information necessary to implement both strategic documents.

The Plan also supports the City's Official Plan, which sets out land use policy, by helping to facilitate growth and intensification, and support transportation, stormwater management and environmental protection.

Finally, the Asset Management Plan also supports other key documents. These documents provide context and perspective to help manage and deliver the City's assets and services. Some of these key planning documents are:

- Accessibility Plan
- Active Transportation Master Plan
- Arts, Culture and Heritage Plan
- City of Oshawa Parking Study
- Community Benefit Charge Strategy
- Community Greenhouse Gas Reduction Plan
- Corporate Energy Management Plan
- Development Charge Background Study
- Downtown Oshawa - Plan 20Thirty
- Economic Development Strategy
- Emergency Master Plan
- Facility Needs Assessment
- Fire Master Plan and Community Risk Assessment
- Growth Related Operations Facility Needs Assessment (G.R.O.F.N.A.)
- Information Technology Strategic Plan
- Integrated Transportation Master Plan
- Oshawa Executive Airport Business Plan
- Parks, Recreation, Library, and Culture Facility Needs Assessment

1.4 Asset Management Framework

Asset management activities and initiatives are proposed to occur within the context established by an asset management framework. The development of this Asset Management Plan is premised on the following vision, mission, goal and objectives:

Vision

To proactively manage Oshawa's significant and varied assets over their lifecycle to maintain service excellence.

Mission

To have corporate asset management become part of the City's culture through:

- The integration of policy, practices, business processes, data, technology, people and finances
- Preservation of assets while protecting the environment, and promoting health and safety
- Financial stewardship that supports evidence-based decision making for operations, maintenance, renewal and replacement of assets

Goal

To enable safe and reliable infrastructure to provide the level of service in a sustainable way, while managing risk, at the lowest lifecycle cost.

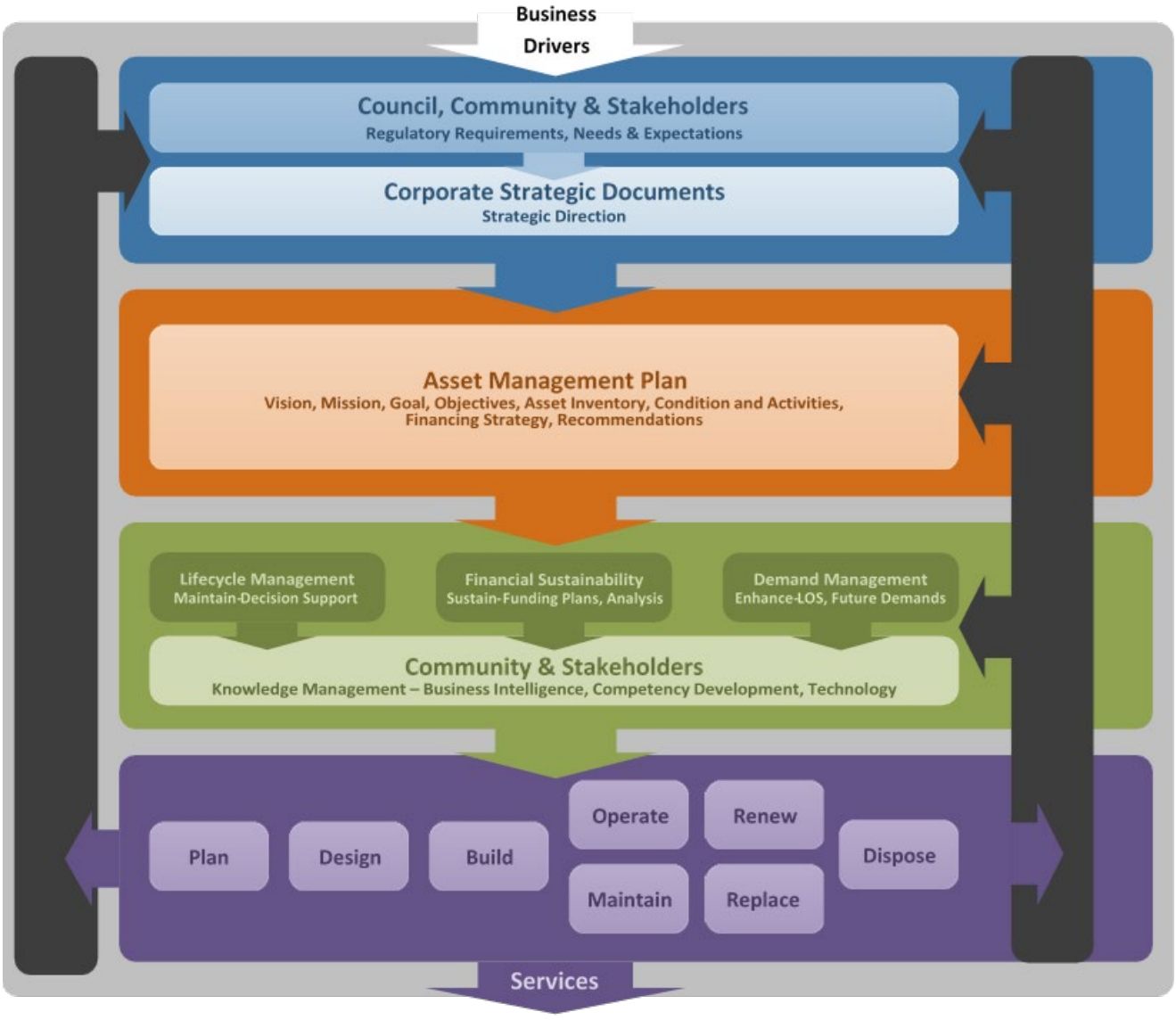
Objectives

- Foster a comprehensive asset management framework based on achievable leading industry practices, which supports transparent and evidence-based decision making across all asset classes
- Establish appropriate levels of service that respond to community needs and desires while minimizing risk
- Apply limited human and financial resources wisely to ensure long-term financial sustainability of the City's capital assets
- Continuous improvement in asset planning and management through performance monitoring
- Improve and/or establish robust maintenance plans for all asset classes, as preventative maintenance assists in extending the life of the assets at the lowest lifecycle cost

Figure 3 outlines the City's proposed asset management process that involves visioning, strategic, tactical and operational stages. The process includes Council direction and community input, guidance provided by corporate strategic documents, development of an Asset Management Plan, lifecycle management, financial sustainability, demand management, and front-line commissioning, operation, maintenance, renewal, replacement and disposal of assets.

Performance monitoring occurs at all stages of the process which allows for regular reporting.

Figure 3 – Asset Management Process



1.5 Asset Management Roadmap

The City retained Watson & Associates Economists Ltd. (Watson) in the fall of 2020 to assist staff with developing an asset management roadmap. The Asset Management Steering Committee worked with Watson to develop the roadmap as shown in Figure 4 below, based on the original timelines in O. Reg. 588/17. The timelines in the regulation were extended by one year, so the completion timelines have been adjusted to account for the new legislated deadline.

Figure 4 – Asset Management Roadmap

Task #	Corporate Planning and Decision-making Framework	Estimated Timelines	Status
1	Review Strategic Asset Management Policy	2024-Q2	Complete
2	Define role of Asset Management Plan	2021-Q3	Complete
Task #	**Asset Summary for Non-Core Assets**	**Estimated Timelines**	**Status**
3	Determine which assets need to be included	2023-Q3	Complete
4	Summary of assets	2024-Q1	Complete
5	Replacement cost	2024-Q1	Complete
6	Average age	2023-Q4	Complete
7	Condition	2024-Q2	Complete
8	Approach to condition assessment	2023-Q4	Complete
Task #	**Levels of Service**	**Estimated Timelines**	**Status**
9	Define approach – service vs asset	2023-Q3	Complete
10	Develop levels of service statements	2024-Q1	Complete
11	Performance measures (technical L.O.S.)	2024-Q1	Complete
12	Set targets for performance measures	2025-Q1	Complete
Task #	**Lifecycle Management Strategy**	**Estimated Timelines**	**Status**
13	Define lifecycle activities (generalized models)	2023-Q2	Complete
14	Costing	2023-Q2	Complete
15	Alternative options	2025-Q1	Complete & Maturing
16	Decision-making process	2025-Q2	In Progress
Task #	**Financial Strategy**	**Estimated Timelines**	**Status**
17	Define role of financial strategy in Asset Management Plan	2025-Q2	Complete & Maturing
18	Identify funding needs	2025-Q2	Complete
19	Identify funding sources	2025-Q2	Complete
20	Consider alternative funding sources	2025-Q2	Complete & Maturing
21	Measure funding needs against funding sources	2025-Q2	Complete
22	Gap identification and mitigation strategy	2025-Q2	Complete & Maturing
Task #	**Asset Management Manual**	**Estimated Timelines**	**Status**
23	Document systems supporting A.M.	2024-Q3	Ongoing

Task #	Asset Management Manual	Estimated Timelines	Status
24	Data improvement plans	2024-Q3	Ongoing
25	Data update protocols	2024-Q4	Ongoing
26	“How Do I?”	2025-Q2	In Progress
27	Establish review of progress	2025-Q3	In Progress
Task #	**Review, Reporting and Audit**	**Estimated Timelines**	**Status**
28	Annual review of progress	2026-Q2	Not Started
Task #	**People**	**Estimated Timelines**	**Status**
29	Governance structure	2025-Q3	In Progress
30	Capacity	2025-Q3	Ongoing
31	Training	2025-Q4	Ongoing
Task #	**Stakeholder Engagement**	**Estimated Timelines**	**Status**
32	Identify stakeholders	2021-Q3	Complete
33	Development engagement plan	2025-Q3	In Progress

2. State of the City's Infrastructure

Ontario Regulation 588/17 requires that each asset category in the Asset Management Plan for all assets includes the following information:

- Summary of the assets in the category
- Replacement cost of the assets
- Average age of the assets, determined by assessing the average age of the assets
- Information available on the condition of the assets
- Description of the approach to assessing the condition

2.1 Inventory Summary

The City of Oshawa maintains several asset inventories at varying levels of detail, summarized as follows:

1. Tangible Capital Asset (T.C.A.) Inventory listing – this registry is maintained in Microsoft Excel and includes all the assets owned by the City. This was implemented in 2009 to achieve the requirements of the Public Sector Accounting Board (P.S.A.B.) 3150 regulation to include full accrual accounting of assets in the City's financial statements. While this register is comprehensive, the level of detail on the linear assets (roads, stormwater, sidewalks, streetlights, etc.) is not ideal to complete the analysis in this report. To simplify financial reporting, the linear assets and a few other asset categories have been pooled together based on year, asset category and financial useful life. Where no other registry was available, the T.C.A. inventory listing was used.

2. G.I.S. (Geographic Information System) – this asset registry includes very detailed information on all the core assets, as well as the active transportation network. There is a significant number of attributes that are tracked and maintained for each asset, broken out into segments. Staff utilize this information for Core Assets in a database as a decision support system that assists with analyzing the future needs and timing of lifecycle activities required to maintain the assets.

3. V.F.A. Facility Software – this software is used to catalogue both vertical assets, such as buildings, as well as Park's assets within the City's portfolio. Assets are broken into components that are primarily categorized by function and lifecycle.

The V.F.A. facility software is aligned to assist with Capital Planning and Asset Management by recording condition assessments, tracking replacement costs, identifying system lifecycles and anticipated replacements, by utilizing industry standards set by RSMeans Construction Cost Data.

4. Microsoft Office Applications – various departments maintain inventory listings with additional detail for the assets managed in their respective department. This is typically maintained in Excel but may also include Word and Access.

5. Maximo – this work management system includes the inventory for the majority of City assets, by interfacing with other software for the other City's asset. The software went live in 2021 phasing in various asset classes. The intention is to utilize the maintenance costs of specific asset classes to inform decision making.

Figure 5 – Inventory of Assets included in this Asset Management Plan

Asset Class / Service	Inventory	Source
Roads		
Arterial	222.1 lane kms	G.I.S.
Collector	149.6 lane kms	Maximo
Local	828.7 lane kms	
Structures		
Bridges	26	G.I.S.
Culverts	50	Maximo
Pedestrian Structures	40	
Stormwater		
Storm	505 kms	G.I.S.
F.D.C. Storm	107 kms	Maximo
Stormwater Management Facility	34	
Airport		
Runways	2	G.I.S.
Taxiways	6	Excel
Aprons	2	
Other Inventory	n/a	
Facilities		
Recreation Centres, Libraries & Galleries	39	V.F.A.
Core Operations Centres	19	T.C.A. Ledger (in Excel)
Fire Stations	6	Maximo
Smaller Service & Community Centres	4	
Parks Facilities		
Regional (Destination) Parks	3	G.I.S.
City Parks	5	V.F.A.
Community Parks	29	Maximo
Neighbourhood Parks	118	

Asset Class / Service	Inventory	Source
Parking Services		V.F.A.
Parking Garages	3	T.C.A. Ledger (in Excel)
Parking Lots	7	
Parking Garage & Lot Equipment	325	Maximo
Fleet & Equipment[1]		
Operations		
Equipment	67	T.C.A. Ledger (in Excel) Maximo
Light Duty	120	
Medium Duty	63	
Heavy Duty	51	
Fire		
Equipment	438	
Administration Vehicles	20	
Emergency Vehicles	11	
Active Transportation[1]		
Sidewalks	704.8 kms	G.I.S. T.C.A. Ledger (in Excel) Maximo
Multi-Use Paths	17.0 kms	
Park Trails	31.3 kms	
Path Pathways	33.7 kms	
Signed On-Road Cycling Routes/Lanes	85.7 kms	
Non-Core Transportation[1]		
Standard Street Light Poles	5,000	G.I.S. Region of Durham
Standard LED Street Lights	10,900	
Decorative Street Light Poles	3,450	
Decorative LED Street Lights	3,450	
Traffic Signals	40	

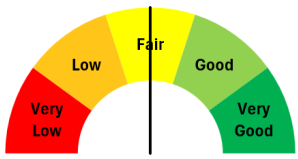
[1] Inventory for Fleet & Equipment, Active Transportation and Non-Core Transportation are as of December 2023, while the remaining assets are based on December 2024.

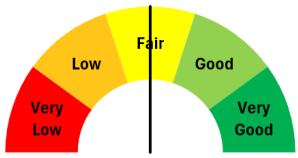
High-quality data is fundamental to effective municipal asset management planning. Accurate, timely, and complete data enables municipalities to make informed decisions about maintenance, rehabilitation, and replacement of infrastructure assets. It ensures that asset conditions are correctly assessed, service levels are appropriately defined, and lifecycle costs are realistically forecasted. Poor data quality can lead to misinformed priorities, inefficient allocation of resources, and under- or over-investment in critical assets.

The City is committed to the continuous improvement of its asset management processes to ensure the ongoing enhancement of data quality. This includes implementing standardized data collection protocols, regular condition assessments, and quality assurance/quality control (QA/QC) procedures. Investments in staff training, digital tools, and data governance practices will support the accuracy, completeness,

and consistency of asset information. The City will also establish routine review cycles to identify data gaps, validate existing data, and integrate feedback from operations and maintenance teams. By embedding continuous improvement into its asset management framework, the municipality aims to strengthen decision-making, optimize resource allocation, and maintain regulatory compliance over time.

Figure 6 – Current Data Quality of Asset Information

Asset Class / Service	Data Quality	Future Improvements / Comments
Roads Inventory Replacement Cost Condition		• Continue to enhance internal processes to ensure accurate and reliable data
Structures Inventory Replacement Cost Condition		• Recommend all future biennial assessments use the same consistent methodology for determining replacement costs, based on the M.T.O. Structural Financial Manual
Stormwater Inventory Replacement Cost Condition		• Move to report condition based on observation, instead of age-based • Include major drainage system once a reasonable process to estimate cost is identified
Airport Inventory Replacement Cost Condition		• Airport has a statutory obligation to comply with approx. 1,000 standards, resulting in high quality data
Facilities Inventory Replacement Cost Condition	 	• Continue to enhance internal processes to ensure accurate and reliable data • Assess and report conditions at the component level, opposed to the facility level. This will more accurately show the value of components that require replacement

Asset Class / Service	Data Quality	Future Improvements / Comments
Parks Facilities Inventory Replacement Cost Condition		• Continue to enhance internal processes to ensure accurate and reliable data
Parking Services Inventory Replacement Cost Condition	 	• Continue to enhance internal processes to ensure accurate and reliable data, including reviewing service life • For Parking Garages assess and report condition at the component level, opposed to the facility level. This will more accurately show the value of components that require replacement
Fleet & Equipment Inventory Replacement Cost Condition		• Continue to enhance internal processes to ensure accurate and reliable data • Move to report condition based on observation, instead of age-based
Active Transportation Inventory Replacement Cost Condition		• Approximately 20% of sidewalk and MUP's dates were estimated based on the related road base date • Review of the construction dates used for Park Pathways
Non-Core Transportation Inventory Replacement Cost Condition		• Standard street light poles have no construction date (30% of inventory) • Condition of standard street light poles were estimated (30% of inventory)

The total replacement cost for the City assets is estimated at $4.0 billion in 2024 dollars, as of December 31, 2024, as identified in Figure 7 below.

Figure 7 – Estimated Replacement Cost by Asset Class

Asset Class / Service	2024 Estimated Replacement Cost	% of Total Assets
Roads	$1,713,284,039	42%
Structures	$298,138,042	7%
Stormwater	$522,275,480	13%
Total Core Assets	**$2,533,697,561**	**62%**
Airport	$24,146,251	1%
Facilities	$726,655,081	18%
Parks Facilities	$188,742,661	5%
Parking Services	$135,040,425	3%
Fleet & Equipment	$52,017,692	1%
Active Transportation	$320,416,313	8%
Non-Core Transportation	$61,586,889	2%
Total Non-Core Assets	**$1,508,605,312**	**38%**
Total Assets	**$4,042,302,873**	**100%**

Unless otherwise stated, all financial figures in this A.M.P are described in current year (2024) Present Value dollar values. This includes values associated with the asset replacement costs, and the forecast replacement, renewal, maintenance and growth costs.

It is important to note that historical cost, as presented in the financial statements, does not reflect the true replacement cost of an asset, but what is required to be reported based upon historical purchase or acquisition cost less amortization. For example, the City has assets on the financial statements that were purchased in the 1940's and the cost today would be significantly higher than 80+ years ago. The estimated replacement cost is the cost the City would incur to completely replace an asset in today's dollars, as well as complying with today's standards and regulations.

2.2 Asset Condition

Understanding the current condition of the assets can provide the City with a more complete picture of its infrastructure portfolio and can also assist in determining future needs. Currently, observed condition data is collected for roads, structures, airport, facilities, park facilities, parking and some non-core transportation assets. This is the preferable option to assess condition.

In other areas, conditions need to be assessed using an alternate method as observed condition may not be feasible for other asset classes. Where observed condition is not available, the condition was determined using the age and remaining useful life of the asset. For some segments of assets in Active Transportation, observed condition and age were not available. As there was no other alternative method to determine the condition, these segments were not included to determine the total condition of the service.

Figure 8 below shows the City's asset classes and how they are currently assessed for condition. Condition is further detailed in the attached Appendices for each asset class/service Area.

Figure 8 – Condition

Asset Class / Service	Methodology	Current Condition
Roads	Observed	Fair (C)
Structures	Observed	Good (B)
Stormwater	Age Based	Fair (C)
Airport	Observed	Good (B)
Facilities	Observed[1]	Good (B)
Parks Facilities	Observed[2]	Fair (C)
Parking Services	Observed[1]	Fair (C)
Fleet & Equipment	Age Based[3]	Fair (C)
Active Transportation	Observed & Age Based[34]	Fair (C)
Non-Core Transportation	Age Based[3]	Fair (C)

[1] Facility assets are reported at the facility level, based on the condition of individual facility components. Although most facility class assets present an overall condition rating of "good," it is important to recognize the limitations of assessing condition solely at the system or facility level. Significant capital investments are often required to address individual components that may be in poor or critical condition—needs that can be obscured when only high-level assessments are used. Evaluating assets at a more granular, component level provides clearer insight into true asset performance, risk exposure, and investment priorities. This approach ensures that critical infrastructure needs are not overlooked, and that capital planning more accurately reflects the condition and lifecycle requirements of high-value components across the asset portfolio. A detailed, component-level asset management framework also strengthens alignment with the City's forecasted annual investment requirements and supports long-term financial sustainability.

[2] 50% of Park Facilities were assessed for condition in 2024. The remaining 50% reports condition assessments from 2022 and prior and will be assessed and updated in 2025. Biennial inspections will become part of the operating processes.

[3] Age-Based - although these assets are inspected regularly for safety and legislated regulations, there has not been a condition assigned to the specific assets. Therefore, age has been used to determine the condition reported, based on the estimated service life.

[4] Trails are based on observed condition

Asset classes are assessed using unique rating scales. For example, roads are assessed using a pavement condition index (P.C.I.) and structures are assessed using a bridge condition index (B.C.I.). These assessments are then translated into a standard condition rating scale so that the evaluation across asset classes may be compared across the organization. Oshawa follows a standard 5 grade scale that is standard in asset management and is shown in Figure 9 below.

Figure 9 – Condition Scale

Grade	Category	Description
A	Very Good	The assets are functioning as intended. Limited, if any, deterioration observed.
B	Good	The assets are functioning as intended. No major maintenance is anticipated within the next 5 years.
C	Fair	The assets are functioning as intended. Normal deterioration and minor distress observed. Maintenance will be required within the next 5 years to maintain functionality.
D	Poor	The assets are starting to not function as intended. Significant distress observed. Maintenance and some repair required within the next few years to restore functionality.
E	Very Poor	The assets are not functioning as intended. Significant deterioration and major distress observed, with possible damage to the base. Requires immediate attention.

3. Levels of Service – Current and Proposed

The focus of public sector asset management are three fundamental considerations: providing satisfactory levels of service (L.O.S.) to the public, ensuring the sustainability of infrastructure assets over the long term, and managing an acceptable level of risk.

Asset management ultimately has a service-based focus, as the purpose of assets are to be used to deliver services. This focus leads to the discussion of L.O.S., which are a measure of the quality, quantity and/or reliability of a City service from the perspective of residents, businesses and other customers. Council then establishes quality thresholds at which municipal services should be provided to the community. Specific levels of service metrics for core assets have been established by legislation. Municipalities are to establish levels of service for non-core asset and should be measurable so they can be tracked and performance can be determined. The levels of service associated with all City assets are contained in the appendices attached.

The City of Oshawa is in the business of delivering services at certain L.O.S., both internally and externally. The delivery of services is made possible, either directly or indirectly, via the assets owned by the City. L.O.S. provided by the City are affected by several factors including:

- legislated requirements
- affordability and fiscal constraints
- minimum maintenance standards
- maintenance plans
- internal strategic documents that establish desired outcomes
- Council direction
- leading municipal practices
- climate change impacts
- expected asset performance
- rate of growth
- customer expectations

For example, Ontario Regulation 239/02, sets out minimum maintenance standards for municipal roads; Ontario Structure Inspection Manual (O.S.I.M.), which sets the standards for detailed bridge inspections; Water Opportunities Act, 2010, which sets the framework for a performance measurement regime and sustainability for stormwater over the lifetime of the infrastructure assets; and the Accessibility for Ontarians with

Disabilities Act, 2005, which develops, implements and enforces accessibility standards.

The current legislation O. Reg. 588/17, requires municipalities to link the services it provides and the L.O.S. it delivers to risk-based asset management. Two L.O.S. come into consideration for asset management. The most common is the community L.O.S. provided to residents, businesses and other customers. This L.O.S. is the standard expected of the service being provided. For clarity, such L.O.S. are normally clearly defined, for example:

- Residential street snow clearing - The minimum standard to address snow accumulation on a class 4 road (residential) is to provide a center bare total lane width of at least (5) five metres within 16 hours while not exceeding a snow depth of 8cm.
- Potholes - If a pothole on class 4 road (residential) exceeds 1,000 square centimetres and a depth of 8cm the pothole must be repaired within 14 days.
- Sidewalks - If a surface discontinuity (trip hazard) on a sidewalk exceeds (2) two centimetres, the minimum standard to treat the surface discontinuity (trip hazard) is within 14 days.
- Street Sweeping - The minimum frequency for street sweeping Arterial and Collector roads is once every (6) six weeks.

The second L.O.S. is the technical L.O.S., which is what an asset is expected to provide in terms of performance. This L.O.S. is of more relevance internally to the City. For example, a stormwater pipe that has the capacity to convey a five-year storm. Technical L.O.S. support the delivery of City services.

L.O.S. standards are typically categorized into service attributes shown in Figure 9, which are the basis for understanding the impact of risk on L.O.S.

Figure 10 – Service Level Attributes

Service Level Attribute	Description
Scope	Services provided at a level of acceptable capacity, convenience and accessibility for the whole community
Cost Effective	Services are affordable and provided at the lowest possible cost for both current and future customers
Quality	Services provided at a predictable and continuous level
Responsive	Opportunities for community involvement in decision-making. Customers are dealt with fairly and consistently within acceptable timeframes with respect, empathy and integrity.
Safety	Services provision that minimizes health, safety and security risks
Accessibility	Services provided to meet the accessibility needs of people with disabilities
Function	Services are suitable for the intended function (fit with purpose)
Environmental Stewardship	Services that consider the natural environment

3.1 Funding Options Evaluated to Inform Proposed Levels of Service

Under O. Reg 588/17, the 2025 requirements focus on enhancing the Asset Management Plan by including the proposed levels of service for all assets. These requirements go beyond documenting the current levels of service to include planning for the future service delivery. Levels of service are all about balancing the cost of service delivery with the performance of the assets and the risks associated with the determined levels of service.

The plan must also identify what lifecycle management strategies are required to achieve the proposed levels of service, along with a financial strategy.

The regulation does not require municipalities to make any adjustment to the current levels of service. For all compliance intents and purposes, “proposed” levels of service can simply be equal to current levels of service. Adjusting the levels of service is a big decision that requires significant analysis and feedback from stakeholders. Until the City evolves more along the maturity scale with respect to asset management planning, the proposed levels of service were evaluated solely based on current financial capacity.

Various proposed levels of service were evaluated to determine the most appropriate targets for the City, based on current needs, available financial resources, and long-term strategic objectives. A summary of the options is below:

Option 1 – Incremental Increase based on the Oshawa Financial Strategy

- This option includes a key recommendation from the Oshawa Financial Strategy to increase the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026
- The result was an increase in the infrastructure investment of $17.1 million over the 10-year period
- $22.8 million average annual funding

Option 2 – Maintain Current Funding

- Maintains the current funding level based on the 2025 approved funding
- $21.1 million average annual funding

Option 3 – Maintain the Current Level of Service

- Is the calculated cost of maintaining the current level of service
- Did not have the ability to calculate this for stormwater assets, structures
- $44.9 million average annual funding required

Option 4 – Fully Funded

- Shows the renewal investments that would occur if assets were renewed immediately upon reaching the end of the asset life
- $113.4 million average annual funding required

This asset management plan utilized Option 1 as the funding strategy to determine the infrastructure funding gap (shortfall). Currently, Option 1 is recommended as it strikes the best balance between fiscal responsibility consistent with the Oshawa Financial Strategy.

4. Lifecycle Management Strategy

The purpose of this section is to establish a set of planned actions to achieve the City's goal of providing L.O.S. in a sustainable way, while managing risk, at the lowest lifecycle cost.

At the City of Oshawa, asset management begins the moment the City plans for an asset. The City's approach has evolved over time and is still evolving.

This approach, coupled with aging infrastructure and increasing funding requirements to operate, maintain, renew and replace the City's assets, generally incurs the highest lifecycle costs.

Going forward, the City plans to achieve a more comprehensive and sustainable approach to asset management to improve decision-making and reduce both risk and cost over the lifecycle of capital assets.

The following is a description of activities and practices currently used to assess asset condition, support lifecycle analysis, decide interventions and prioritization, determine risk and inform the City's capital and operating expenditures, and annual budgeting process.

Understanding Costs in Asset Management

Commissioning Cost – these are incurred at the beginning of the asset lifecycle, to obtain the asset and put it into operation.

Operational Cost – these are incurred during normal business operations of the asset.

Maintenance Cost – these are the result of maintaining the asset to keep it functioning and achieve the levels of service. It is a type of recurring expenditure throughout the entire lifecycle of the asset.

Renewal Cost – these are above and beyond every day maintenance including retrofits and upgrades that extend the life of the asset.

Replacement Cost – these are estimates related to the replacement of an asset at the end of its lifecycle.

Disposal Cost – these are for disposing or decommissioning the asset at the end of the asset lifecycle.

4.1 Lifecycle Management

Assets need to be managed over their lifetime. Infrastructure assets typically have a maximum service life after which costly capital renewal or replacement can be expected. As a result, it is possible to anticipate waves of capital renewal needs by reviewing the installation year of different asset classes. In addition to costly capital replacement and renewals, maintenance is also included in the planning for assets.

In the attached appendices, the lifecycle activities and expenditures associated with undertaking those activities, required over the next 10 years are detailed for the core assets. Future iterations of the A.M.P. will show lifecycle activities for the entire portfolio of assets.

4.2 Non-Infrastructure Solutions

The following non-infrastructure solutions are in use at the City of Oshawa to help lower costs or extend the life of City assets:

- Oshawa Strategic Plan
- Financial Strategy
- Official Plan
- Other master plans that provide for the comprehensive future planning of the City's infrastructure (e.g. Integrated Transportation Master Plan and the Active Transportation Master Plan)
- Use of Lean methodologies to improve efficiencies, effectiveness and control costs at the operational level
- Observed condition assessments (e.g. roads, bridges, culverts, and facilities)
- Public consultation on municipal projects, land use developments and budget priorities
- Use of design standards
- Maintenance plans
- Inspections
- Coordination of efforts between governments and agencies regarding timing of construction
- Employee training and education programs
- Ongoing efforts to identify additional funding sources

4.3 Asset Management Activities

Applicable to all asset classes, the City has identified subject matter experts. In an effort to minimize redundancy, the City has identified who is accountable and responsible for the maintenance of assets at the strategic, tactical and operational levels. Figure 11 provides an example of this level of information specific to roads, one of the City's core assets.

Figure 11 – Asset Managers – Roads Example

Level	Function	Who	What
Strategic (long-term)	Set the asset strategy and plans and ensure cost and performance meets the wider business requirements	Engineering Services and Planning Services	Big Picture Growth Plans
Tactical (medium-term)	Systematic responders, condition, cost effectiveness, safety, L.O.S.	Infrastructure Services	Annual Overlay and Reconstruction
Operational (short-term)	Responds to operational demands of maintenance (primarily reactive and preventative decisions)	Operations Services	Reactive daily work and preventative maintenance

The City also currently undertakes various activities to manage assets throughout their lifecycle. A registry of activities by asset class is presented in Figure 12.

Figure 12 – Registry of Oshawa Activities by Asset Class

Asset Class / Services	Activities
Roads	Official Plan Review, Transportation Master Plan Update, Growth & Development Review, Design Criteria Review, Design, Observed Data Collection, Needs Analysis, Budgeting/Forecasting, Inspection, Maintenance, Renewal, Replacement, Expansion Snow/Refuse Removal, Road Occupancy Permits, Line Painting, Brush/Grass Trimming, Animal Control & Removal
Structures	Official Plan Review, Transportation Master Plan Update, Growth & Development Review, Design Criteria Review, Design, Observed Data Collection, Needs Analysis, Budgeting/Forecasting, Biennial Inspection based on Ontario Structure Inspection Manual, Maintenance, Renewal, Replacement
Stormwater	Official Plan Review, Transportation Master Plan Update, Growth & Development Review, Design Criteria Review, Design, Observed Data Collection, Needs Analysis, Budgeting/Forecasting, Inspection, Maintenance, Renewal, Replacement
Airport	Official Plan Review, Master Plan Update, Transportation Master Plan Update, Airport Business Plan, Budgeting/Forecasting, Inspection, Maintenance, Renewal, Replacement, Aesthetic Upkeep
Facilities	Master Plan Update, Budgeting/Forecasting, Inspection, Maintenance, Renewal, Replacement, Aesthetic Upkeep
Parks Facilities	Master Plan Update, Connectivity Analysis, Official Plan Review, Active Transportation Master Plan Update, Growth & Development Review, Design Criteria Review, Design, Grading Review, Width Analysis, Amenity Coordination, Candidate Identification, Budgeting/Forecasting, Inspection, Vegetative Studies, Infill, Maintenance, Renewal, Replacement, Brush/Grass Trimming
Parking Services	Budgeting/Forecasting, Inspection, Maintenance, Renewal, Replacement, Aesthetic Upkeep, Growth & Development Review, Observed Data Collection, Needs Analysis

Asset Class / Services	Activities
Fleet & Equipment	Master Planning, Budgeting/Forecasting, Needs Assessment, Condition Assessment, Daily Operations, Testing and Certification, Planned/Unplanned Maintenance, Renewal, Replacement, Expansion, Disposal, Periodic Mandatory Commercial Vehicle Inspection
Active Transportation	Official Plan Review, Transportation Master Plan Update, Growth & Development Review, Design Criteria Review, Design, Observed Data Collection, Needs Analysis, Budgeting/Forecasting, Inspection, Maintenance, Renewal, Replacement, Line Painting, Brush/Grass Trimming
Non-Core Transportation	Official Plan Review, Connectivity Analysis, Transportation Master Plan Update, Amenity Coordination, Growth & Development Review, Observed Data Collection, Needs Analysis, Budgeting/Forecasting, Inspection, Maintenance, Renewal, Replacement

Additional opportunities also exist, including possible procurement methods. These are presented under the following five categories, including but not limited to:

Maintenance

- Increase the use of maintenance strategies using lifecycle cost analysis
- More inter-municipal bundling of existing contracted maintenance services

Renewal/Rehabilitation

- Early tender approval for all capital related projects
- Approval of multi-year projects for renewal/rehabilitation contracts
- Increase the use of renewal and rehabilitative strategies over reactive and replacement strategies using lifecycle cost analysis
- More inter-municipal bundling of renewal/rehabilitation contracts

Replacement

- Treatment timing and optimization of the investment and coordination of work among asset classes internally and with external agencies
- Early tender approval for all capital related projects
- More inter-municipal bundling of replacement contracts

Expansion

- Comply with legislation to include all Development Charges By-law listed projects into the Asset Management Plan, including whole lifecycle costing
- Continue to align expansion plans to the City's Official Plan, Oshawa Strategic Plan and Financial Strategy

Disposal

- Analyze entire asset registry for surplus/redundant assets

4.4 Procurement

The City's Purchasing By-law 80-2020 is publicly available on the City's website at http://www.oshawa.ca/city-hall/Purchasing-Information.asp.

The By-law provides authority and guidelines to conduct purchasing transactions to ensure fair and open competition using a variety of source selection methods under varying market conditions. The City should continue with joint co-operative purchasing with purchasing co-operatives, as well as exploring alternative financing and procurement options regarding capital purchases.

5. Risk Management

Infrastructure risk management is the process of identifying and mitigating risks for existing infrastructure that may affect the ongoing delivery of services at specified L.O.S. Risk management is an integral part of leading-practice lifecycle asset management as it enables fair and equal analysis of different assets with different needs and priorities.

Risks associated with asset management include, for example:

- Asset Management Plan is not kept up-to-date or followed
- Infrastructure failure and associated liability
- Maintenance plans that are not comprehensive and proactive
- Insufficient human resources
- Inadequate funding
- Inadequate or poor quality asset information
- Incorrect assumptions
- Unaware of regulatory requirements or changes

- Climate change
- Growth projections do not meet expectations

Any approach that the City takes with respect to the management and maintenance of its assets involves the acceptance of a level of risk. Rarely, if ever, can an organization mitigate all risks. Risk management entails understanding the risk profile in the asset portfolio and establishes strategies to manage the risk at acceptable levels. It is common for municipalities to keep costs low or constant and unintentionally assume more and more risk over time. Risk assessment is a valuable tool for asset investment prioritization and informed decision-making.

Asset risk arises from the potential of events or failures to occur, and will vary depending on the location, capacity, age and condition of the asset, and other factors. Risk is managed via processes in place that ensure maintenance and renewal intervention occur in an appropriate and timely manner. The calculation of risk exposure is a combination of two factors – likelihood of asset failure and impact of asset failure.

The likelihood of failure is the probability that an asset may fail within a year. Likelihood of failure can be determined based on capacity, efficiency, age, condition and L.O.S. The City estimates likelihood on a scale of one to five.

The second factor is the impact of failure on the City, which is the direct and indirect consequence if an asset failure were to occur. The City estimates impact using a one to five scale against a number of criteria including legal, environmental, reputation, health and safety, financial, etc. Where more than one criterion is applicable to an asset for a particular failure mode, the City will use the highest consequence of failure. This will take into account the greatest impact to the asset.

The risk score helps to prioritize where and how to focus City resources, including staff time for developing processes, collecting and analyzing data, and/or financial investment in assets and supporting systems. In prioritizing maintenance and renewal projects, generally preventive work should be prioritized over corrective work because preventive action will help delay the need for costly corrective maintenance. This reduces the risk of increased lifecycle costs.

Budgeting constraints must also be taken into consideration when determining what priority projects can be executed in any given year.

This Asset Management Plan includes a summary of risks, to not achieving the proposed levels of service, by asset category and is contained within the appendices.

Future iterations of the Asset Management plan will include a more detailed asset specific risk and will quantify asset risk based on the likelihood of failure and the consequence of failure.

6. Financial Strategy

Asset management is closely integrated with the City's Financial Strategy and the annual budgeting process. The Oshawa Financial Strategy 2025-2029 identifies "Infrastructure Investment" as one of five strategic areas. The goal of infrastructure investment is to ensure long-term planning and commitment of adequate funds to build, maintain and renew City infrastructure; this includes addressing the existing infrastructure gap to protect the City's investments and ensure infrastructure continues to meet the needs of the community within the financial capacity of residents and businesses.

The Oshawa Financial Strategy also contains many strategies found within the other four strategic areas dealing with reserve funds, debt management, revenue sources and operating costs that directly or indirectly relate to asset management.

Sustainable financing strategies are a key component of an Asset Management Plan. As such, this section discusses the recommended option for the proposed levels of service based on funding options, capital expenditures, revenue sources, funding shortfalls, and strategies to close the infrastructure gap.

6.1 Recommended Funding Option Informing the Proposed Levels of Service

There were several options evaluated to determine the recommended proposed level of service. This asset management plan utilized Option 1 as the funding strategy to determine the infrastructure funding gap (shortfall). Currently, Option 1 is recommended as it strikes the best balance between fiscal responsibility consistent with the Oshawa Financial Strategy.

Option 1 – Incremental Increase based on the Oshawa Financial Strategy

- This option includes a key recommendation from the Oshawa Financial Strategy to increase the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026
- The result was an increase in the infrastructure investment of $17.1 million over the 10-year period
- $23.5 million average annual funding

6.2 Expenditures

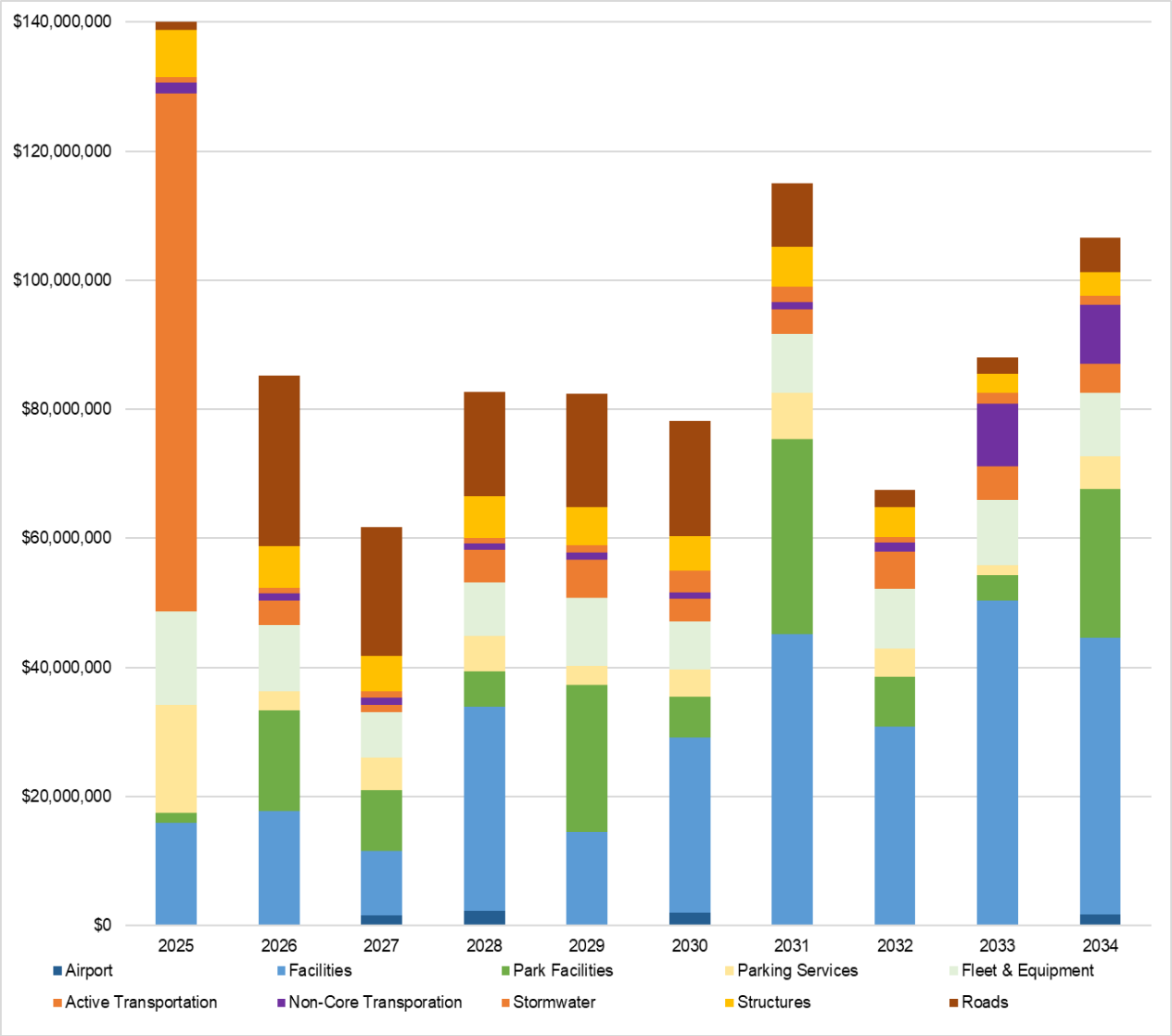
The City's Capital Budget, including a nine-year expenditure forecast, is created as a result of extensive analysis of capital infrastructure needs. Projects are identified by staff and then are prioritized using a prioritization model within the available funding.

The prioritization model is used to objectively evaluate and prioritize projects to ensure the City's limited financial resources are allocated to the City's highest priority projects. The model aligns with the City's strategic goals, risk management framework and sound financial principles. The model includes the following scoring criteria: project criticality; alignment with the Oshawa Strategic Plan; operating budget impact; risk assessment; financing; cost/benefit; service levels and community/corporate economic impact. The model will be further revised and utilized to assist in determining future budgets.

The average total approved capital budget from the past nine years (2016-2024) is $38.8 million. This includes the costs for replacement assets ($25.8 million) and the growth-related assets, as well as various studies and condition audits. This may not be indicative of the future investments required, as past approved budgets have included financial and human resource constraints.

Figure 13 below represents the total 10-Year investment needs for replacement assets for 2025-2034 which is approximately $909 million. Growth related assets of $905 million are not incorporated in the chart below.

Figure 13 – 2025 to 2034 Investment Needs for Replacement Assets



6.3 Revenues

Infrastructure service levels must be balanced against the availability of funding. Presently, Oshawa's infrastructure investment is funded by internal sources for all asset classes (tax levy dollars, reserves and reserve funds, as well as debt) and external sources (federal and provincial grants, Canada Community-Building Fund, development charges, as well as user fees). As most funding comes from the community via property taxation, increases must be kept within reasonable levels. For this reason, a long-term outlook is essential, including a clear understanding and further development of financial policies that support long-term planning and sustainable funding of the City's infrastructure.

The Province is encouraging municipalities to be “open to all available revenue and financing tools and to revisit their policies regarding user fees.” In response, the City will need to give consideration to new user-fee based initiatives. For example, some municipalities have successfully transferred the stormwater management function from a property tax funded program to a user based funded program. This funding model allows the municipality to fund a service directly that is typically underfunded.

There are several revenue sources that the City’s utilizes to fund replacement and rehabilitation of existing capital infrastructure:

6.3.1 - Tax Levy Funding

Tax levy funding for existing capital can be levied in the current budget year to be used directly to fund capital projects. The City has revised its process and no longer funds capital directly from tax levy, instead the funding is contributed into reserves as a funding source for capital.

Tax Levy funding is utilized for the maintenance costs that are included as part of the Operating Budget.

6.3.2 – Tax Levy Funded Reserves

The City of Oshawa annually contributes to reserves to fund current and future capital investments. The 2025 budget included a contribution to infrastructure reserves in the amount of $13,486,800. These reserves can be utilized to fund current year capital projects or remain in the reserve for future use. With the process of contributing amounts annually, instead of utilizing tax levy funding for capital directly, this assists with providing stable amount to be levied in the budget.

6.3.3 – Canada Community-Building Fund

The Canada Community-Building Fund (C.C.B.F.), previously known as the Federal Gas Tax Fund, has been a stable source of funding provided to municipalities to support local infrastructure priorities. Municipalities determine how best to direct funds to make strategic investments across several different project categories, such as local roads and bridges, stormwater, sport and recreation, community energy systems, and capacity building. The current agreement with the Government of Canada has an estimated average annual payment of approximately $6.0 million. Although this has been a stable source of funding historically, it is important to note that the agreement includes a clause that the agreement may be terminated with two years written notice.

Therefore, there is an element of risk if the C.C.B.F. funding is included as a funding source to support the sustainable investment of the City's assets.

6.3.4 – Development Charges

In addition to maintaining the City's existing infrastructure, the City needs to build new infrastructure including roads, bridges, parks, trails, recreation facilities and fire halls to service growth related needs. While development charges paid by developers cover a large portion of the City's growth-related capital costs there is still a significant portion that municipalities must fund, in addition to the operating costs required to service new growth. Current proposed legislation, specifically Bill 17 Protect Ontario by Building Faster and Smarter Act, has not been incorporated into this plan.

6.3.5 - Grants

Both the Provincial and Federal Governments have grant programs available to assist local government to sustain their infrastructure needs. When opportunities become available, the City will apply to grant programs for specific capital projects that fall within the criteria of the grant program. Although when grant funding is awarded to the City, this does assist with investing in the City's assets, it is considered to be a one-time funding source that cannot be relied upon for future funding.

6.3.6 – Parkland Cash In Lieu

This is a non-discretionary reserve fund that accumulates contributions from developers in lieu of the land requirement of 5% of parkland within a subdivision and outside the plan of a subdivision, as per the Planning Act. The funds received can only be used for parkland acquisitions, including as well as for park or other public recreational purposes.

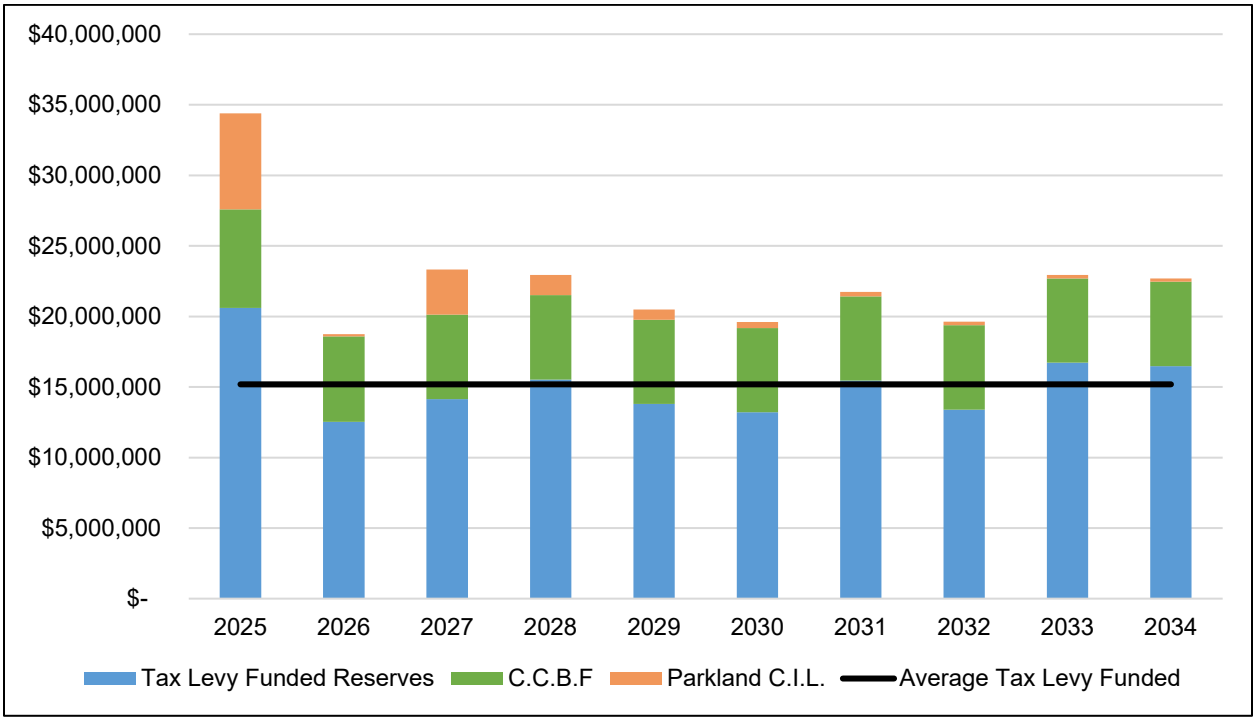
The Planning Act was recently amended with a requirement for municipalities to spend or allocate at least 60 percent of the monies received that are in the parkland cash in lieu account. With this change, the City will be utilizing this funding on more park facility improvement projects.

6.3.7 – Other Funding Sources

There are various other funding sources that can be utilized to assist with funding infrastructure projects. The majority would be contributions from others, such as developers, property owners, partners and the projects delivered jointly with the Region of Durham. These sources are also considered to be one-time funding sources and cannot be used in future planning of funding infrastructure.

Figure 14 shown below provides a summary of the estimated funding sources for 2025-2034 for replacement assets by funding source. The average annual tax levy funded reserves over the 10-year period is $15.2 million.

Figure 14 – 2025-2034 Estimated Funding Based on Financial Strategy for Replacement Assets



6.4 Funding Shortfall

Oshawa has a practice of making annual contributions to the capital program for asset replacement. This contribution only partially satisfies capital infrastructure needs. Further, in accordance with the Development Charges Act 1997, Regulation 82/98 as amended, the City will need to respond to the requirement to demonstrate that all the assets mentioned in the City's Development Charge Background Study are financially sustainable over their full lifecycle. This will provide an opportunity to better plan for the City's long-term infrastructure investments, beyond the 10-year horizon.

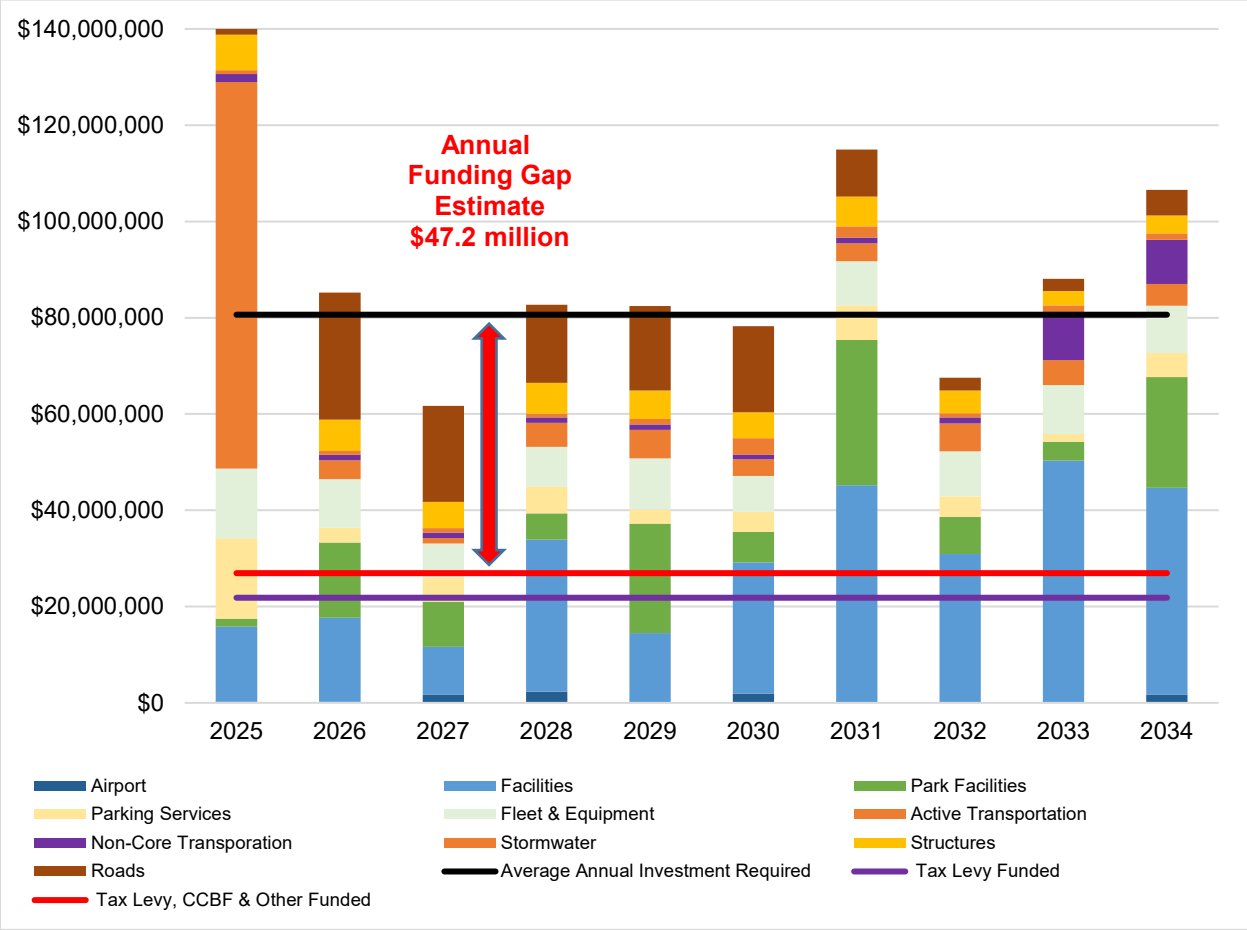
Based on the lifecycle activities required for the core and non-core assets, the average annual investment required is $80.6 million, represented by the black line in Figure 15.

The 10-year funding strategy includes Tax Levy Funding and Tax Levy Supported Reserves in the amount of $27.4 million. This includes the annual maintenance

activities funded from the operating budget (tax levy funding). Canada Community-Building Fund (C.C.B.F.) is also a significant funding source for capital and has included spending the full annual amount of approximately $6.0 million. This federal funding has been a stable funding source in the past, but it needs to be noted that the C.C.B.F. could be cancelled at any point in the future. Therefore, caution should be taken if this funding is included with planning for infrastructure sustainability.

The estimated annual funding gap over the 10-year period based on projected funding is $54.7 million when utilizing City only funds and $47.2 million when the C.C.B.F. and Other Funding is taken into consideration for all City assets.

Figure 15 – Estimated 10-Year Investment for All Assets



6.5 Strategies to Close the Infrastructure Funding Gap

Addressing an infrastructure funding gap often requires a combination of strategies. Some strategies to consider are:

- Continue to proactively apply to all grants available to municipalities
- Advocate to senior levels of government for financial assistance
- Develop or improve robust comprehensive and proactive maintenance plans to prolong the service life of the assets, therefore reducing the overall lifecycle costs
- Analyze additional options and scenarios for increasing the dedicated infrastructure levy, for future Council consideration
- Investigate the implementation of a stormwater management fee to provide funding for capital infrastructure requirements
- Reduce near term renewal needs by deferring capital renewal projects on lower risk assets
- Consider Public-Private Partnerships to share costs, risks and responsibilities
- Consider Shared Service Agreements with neighboring municipalities to share infrastructure and reduce costs

7. Conclusion

The City's level of responsibility has been enhanced with the new provincial requirement for municipalities to develop Asset Management Plans under O. Reg. 588/17 - Asset Management Planning for Municipal Infrastructure. Asset management requires a thorough understanding of the characteristics and condition of infrastructure assets, as well as the service levels expected from them. It also involves setting strategic priorities to optimize decision making about when and how to proceed with investments. Finally, it requires the development of a financing strategy, critical to putting the Plan into action.

This Asset Management Plan is a living document, which is based on currently available information with improvements expected in future updates. To maintain existing momentum around asset management, a key focus in the short-term will be on improving staff, Council and the community's overall understanding and value of asset management. This will go a long way to incorporating asset management into the City's culture. Attention will be given to sharing and progressing on the detailed asset management roadmap, recognizing and responding to the changes required to processes, policies and procedures, and improving asset management data and information, including observed condition data.

There will also be effort engaging the public and City Council on determining future proposed levels of service related performance measures and developing more fulsome Asset Management Plans that provide the required analysis for the most efficient decisions. A full asset management analysis will be completed at least every five years.

As the City's asset management capability improves, the City will gain an enhanced

ability to make informed decisions and be able to support requests for senior government infrastructure funding. Achieving this will go a long way to support Oshawa as a prosperous, collaborative, vibrant, inclusive and green city where people and businesses are proud to live, work, learn and play.

8. Short and Long-Term Recommended Actions

This is the City's first comprehensive asset management plan covering the State of the Infrastructure, current and Proposed Levels of Service, current Lifecycle Management Strategies and the Funding Requirements for all of the City's assets. As the Asset Management Plan is a living document, it will continually be updated and built upon.

This version is considered to be Phase III, the final phase which builds on the Asset Management Plan to include the proposed levels of service, including a lifecycle management and financial strategy that supports the proposed levels of service.

To ensure future Asset Management Plans are meaningful documents that support the City's ability to build a strong asset management program, the below items should be considered.

In order for all of the recommendations to be implemented, the City need will need to be sufficiently resourced to undertake these initiatives.

Figure 16 – Timelines for Recommended Actions

Item	Recommended Actions	Estimated Timelines
1	Develop and/or improve robust, comprehensive and proactive maintenance plans for all of its assets with a view to extending the service life and derive maximum value for each capital expenditure.	Ongoing
2	Continue to develop and document reliable replacement values for all assets, as well as processes to calculate and update estimated replacement costs including methodologies used to ensure comparability.	Ongoing
3	Continue to improve the data quality of assets, such as year of construction or acquisition.	Ongoing
4	Develop a method for assessing the condition of all assets. The condition of some asset groups have been estimated based on age, where direct observation was not available, such as stormwater, sidewalks and non-core transportation assets. Future iterations of the Asset Management Plan will strive to have more observed condition assessments.	Ongoing

Item	Recommended Actions	Estimated Timelines
5	Continue to review and/or develop a methodology for tracking and reporting on various performance metrics.	Ongoing
6	Expand the asset management program to identify the steps being taken to ensure climate change strategies have been considered to assist with the resiliency of the infrastructure.	Ongoing
7	Continue documenting proposed levels of service (L.O.S.) for asset classes and create a central L.O.S. database.	Ongoing
8	Continue to ensure the importance and value of the City's Asset Management Plan are communicated to the community on an on-going basis as a direct input to the Financial Strategy and annual budgeting process.	Ongoing
9	Continue to ensure asset management is aligned with the implementation of the Financial Strategy.	Ongoing
10	Continue to seek senior government funding for infrastructure projects and develop a list of shovel ready projects to be prepared when grant opportunities arise.	Ongoing
11	Continue to develop the asset management program by documenting and formalizing roles and responsibilities within the various levels of the organization. Begin to incorporate the responsibilities into the job descriptions of the applicable staff via a governance policy.	Ongoing
12	Continue to develop, document and implement lifecycle operations, maintenance and renewal programs and strategies for asset classes to develop a consistent and proactive approach and incorporate into future investment needs forecasts.	Ongoing
13	Continue to align the reporting of assets between the Development Charge Background Study and the Asset Management Plan, as per the Development Charges Act 1997, Regulation 82/98 as amended.	Ongoing
14	Continue to integrate Asset Management outputs into key planning documents to ensure the documents are used in the preparation of the Asset Management Plan.	Ongoing
15	Continue the staff-based Asset Management Team to further collaboration and communication between departments.	Ongoing
16	Continue to refine the accuracy and replicability of the City's asset management data.	Ongoing
17	Continue to investigate the efficiencies of combining all inventory listings across the City into one central asset repository. The inventory listing and detail for financial reporting purposes should be combined with the detail for Asset Management Plan to avoid duplication of work. Growth related assets should be added to the central asset repository.	2025-2026

Item	Recommended Actions	Estimated Timelines
18	Continue to investigate options to implement an asset management/decision support software that can be utilized for all City assets. An RFP has been issued for consulting services to support this initiative.	2025-2026
19	Develop an asset management governance policy.	2025-2026
20	Investigate best practices of including natural and green infrastructure, such as the major drainage system for overland flow routes within creeks, ditches, open spaces and parkland channels.	2025-2026
21	Further revise the Capital and Major Initiative Prioritization Model as the City's Asset Management Plan evolves to provide more information for scoring and prioritizing capital projects, based on the efficient use of funds, as noted in the Financial Strategy.	2025-2026
22	Develop and implement a change management framework for implementation across the organization, inclusive of Council, to further an understanding of the importance of asset management.	2025-2026
23	Establish a process to capture the expenditure break-down of non-infrastructure solutions, maintenance, renewal, replacement, expansion and disposal activities in the Asset Management Plan.	2025-2026
24	Continue to review the alignment of the T.C.A. useful life for financial reporting purposes compared to the asset service life (lifecycle) and make revisions where required.	2025-2026
25	Develop a policy and internal process for Asset Tagging, in some asset classes, that will ensure inventory thresholds included are documented and agreed into all systems they integrate with.	2025-2027
26	Develop a policy and internal process for reviewing future new subdivision assets and include in future iterations of the AMP the maintenance costs of these assets.	2025-2027
27	Consider the use of net present value analysis of asset renewal options.	2025-2030
28	Develop a policy and internal process for reviewing the appropriate reporting level for each class of assets as part of our continuous improvement initiatives to ensure the most transparent and appropriate aspects of our infrastructure are reported. In some cases, the granularity of reporting may be increased for infrastructure like facilities.	2025-2030
29	Develop a policy and internal process to ensure each class of assets have a comprehensive risk assessment that is reviewed and updated on a timely basis. For those assets with risk assessments done within the branch coordinate and consolidate relevant information.	2025-2030

9. Appendices

Appendix A

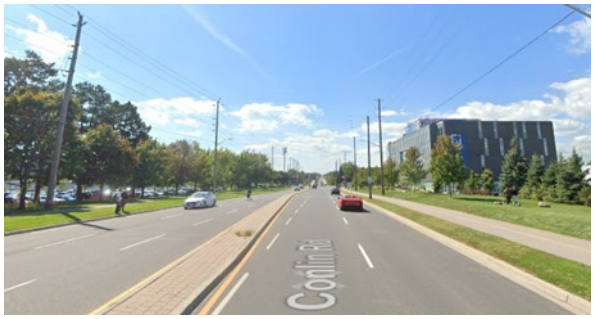
City Roads

May 2025

Roads

Description of City Roads

Arterial Road



Collector Road

Local Road

The City owns and maintains a network of arterial, collector, and local roads which provide the service of transportation and connect to the transportation networks of the Region of Durham and the Province. The goal is to have a sustainable transportation system through:

- Improving mobility through connectivity, efficiency and safety
- Alleviating congestion
- Encouraging sustainability to both the long-term environmental and economic conditions

Table 5 of the City's Official Plan sets out the criteria for the classification of roads:

- Arterial Roads carry large volumes of traffic with a 2-4 lane cross-section that generally only intersect with collector roads and other arterial roads
- Collector Roads carry moderate volumes of short distance traffic and intersect with arterial and local roads
- Local Roads carry light volumes between points of origin and the collector roads systems

City staff strive to manage the roads as a complete street approach with respect to the rehabilitation and reconstruction of City owned assets in the road right-of-way. This means less disruption to residents by completing works for sidewalk, curbs and gutters at the same time as completing the road work.

Roads

Inventory and Estimated Replacement Cost

Road Network by Class	Quantity (lane kilometers)[1]	Estimated Replacement Cost[1]
Arterial	222.1	$358,133,266
Collector	149.6	$264,945,872
Local	828.7	$1,090,204,901
Total Roads	**1,200.4**	**$1,713,284,039**

Road Network by Surface Type	Quantity (lane kilometers)[1]	Estimated Replacement Cost[1]
Hard Surfaces	1,103.1	$1,537,596,780
L.C.B.	89.6	$165,367,989
Unpaved	7.7	$10,319,270
Total Roads	**1,200.4**	**$1,713,284,039**

[1] As per the boundary road agreements currently in place, all boundary roads have been included at 50% of both the lane kilometer and estimated replacement cost. The municipality that shares the boundary reports the remaining 50%.

Inventory is collected, tracked and maintained through the Geographic Information System (G.I.S).

The City owns a total of 1,200.4 lane kilometers of roads, comprising of:

- 222.1 lane kilometers of arterial roads
- 149.6 lane kilometers of collector roads
- 828.7 lane kilometers of local roads

Estimated replacement values are based on a 3-year rolling average of unit costs, reflecting recent road construction contract costs that considers inflation, quantities, type of material, environment or location, type of construction/installation method and various other factors.

The total estimated replacement cost of the road network is $1,713,284,039 based on 2024 dollars.

The City also tracks the roads by surface type:

1. Hard Surfaces, which includes H.C.B. (high class bituminous) which represents 75% of the road network and I.C.B. (intermediate class bituminous)
2. L.C.B. (low class bituminous, also known as surface treated)
3. Unpaved Roads, such as gravel roads

Roads

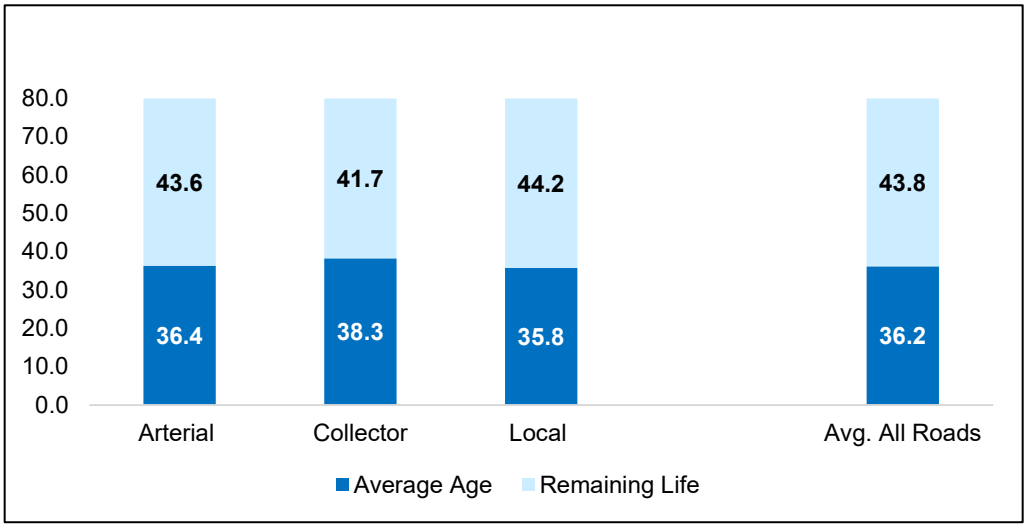
Average Age and Asset Installation Profile

Age is based on initial construction year and tracked by the different components within the road network. The average age of the City's road network, based on the granular road base year, is 36.2 years and is broken down by Road Class:

- 36.4 years for Arterial Roads
- 38.3 years for Collector Roads
- 35.8 years for Local Roads

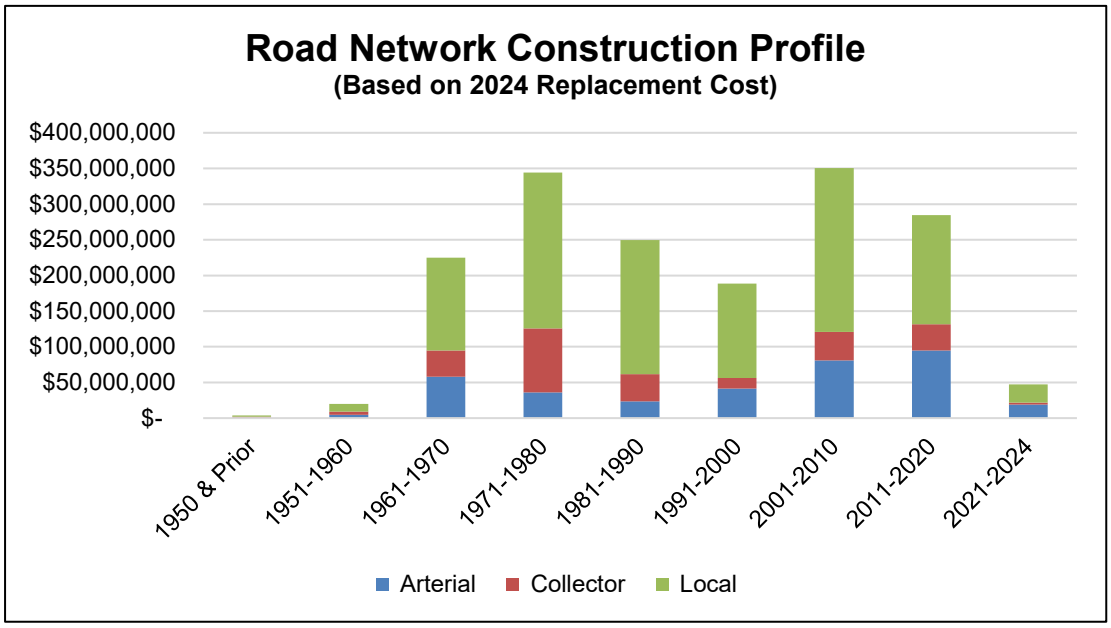
The service life of roads as a whole asset is estimated at 80 years, The target of 80 years includes applying asset management lifecycle maintenance and renewal treatments at the appropriate time during the lifecycle of the road (see lifecycle section).

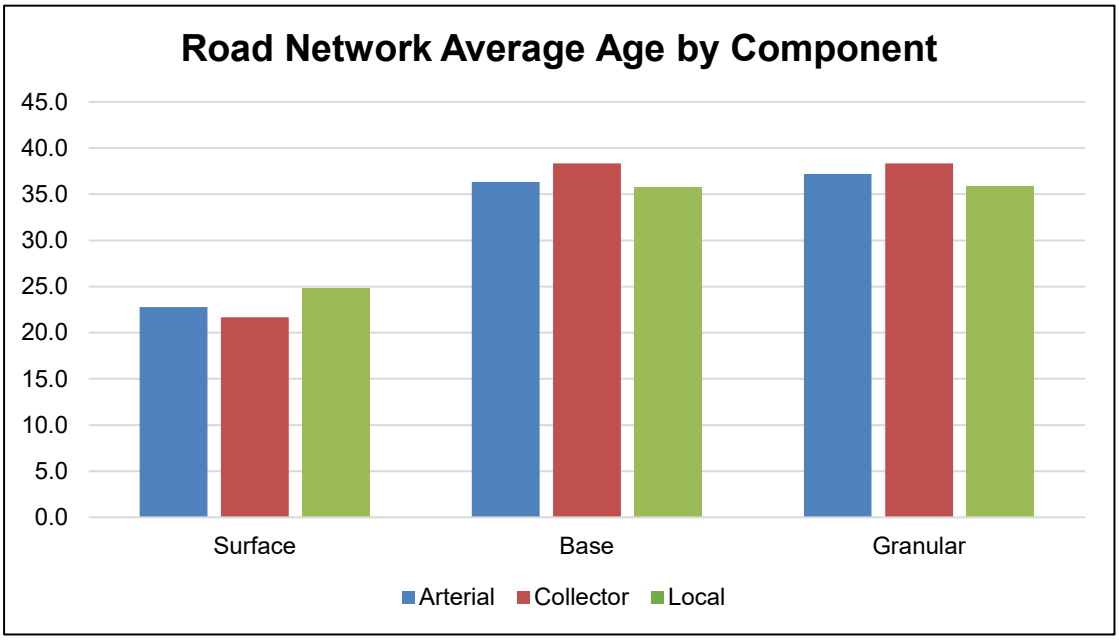
If funding limitations exist and the lifecycle activities are not able to be completed, the road would have an estimated life of 50 years. This would not only reduce the life of the asset but would also involve a more invasive and costly treatment for the eventual replacement of the road. It would also reduce the level of service, have more frequent replacements and result in higher total costs of ownership over the lifetime of the roads.



Roads

Average Age and Asset Installation Profile





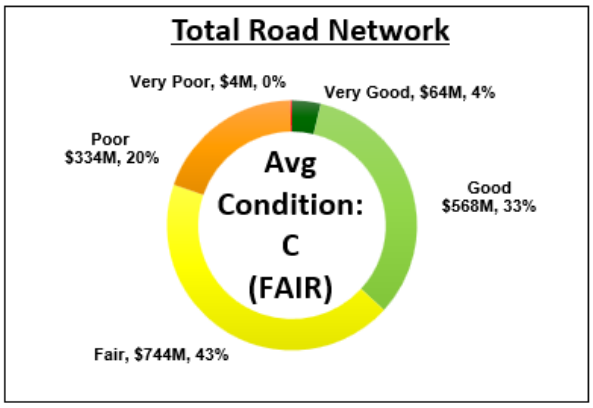
Roads

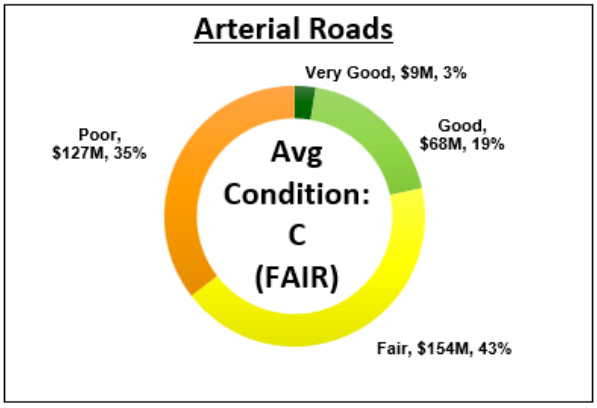
Levels of Service – Current and Proposed

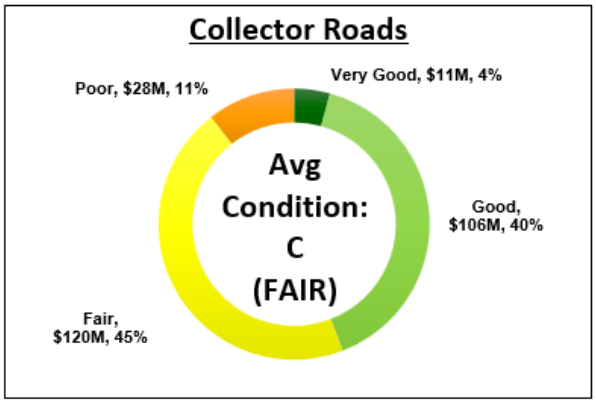
The condition of the City's roads are assessed for structural adequacy and pavement surface condition. One-third of all the City's roads are inspected annually. Condition assessment results are calculated into a Pavement Condition Index (P.C.I.) and then translated into a condition grade. The higher the index rating, the better the condition.

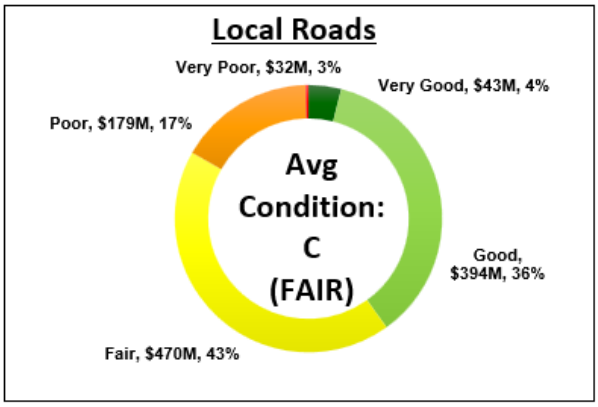
Overall, the City's road network is at the very top end of FAIR condition (C Grade) with an average P.C.I. of 70.86

- C – Fair – Arterial Roads (P.C.I. of 66.28)
- C – Fair – Collector Roads (P.C.I. of 73.27)
- C – Fair – Local Roads (P.C.I. of 71.78)

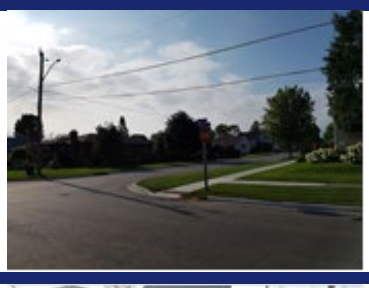




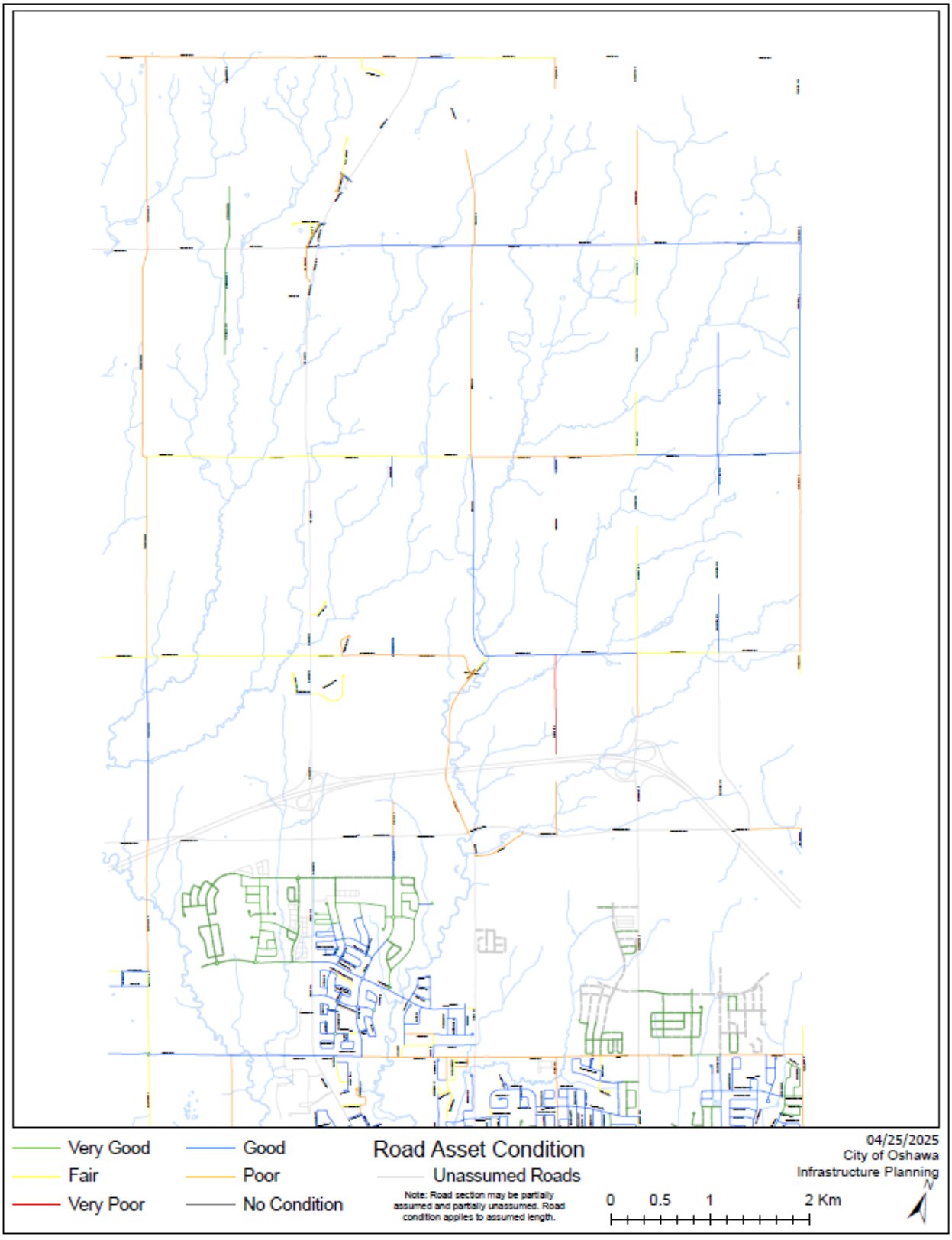




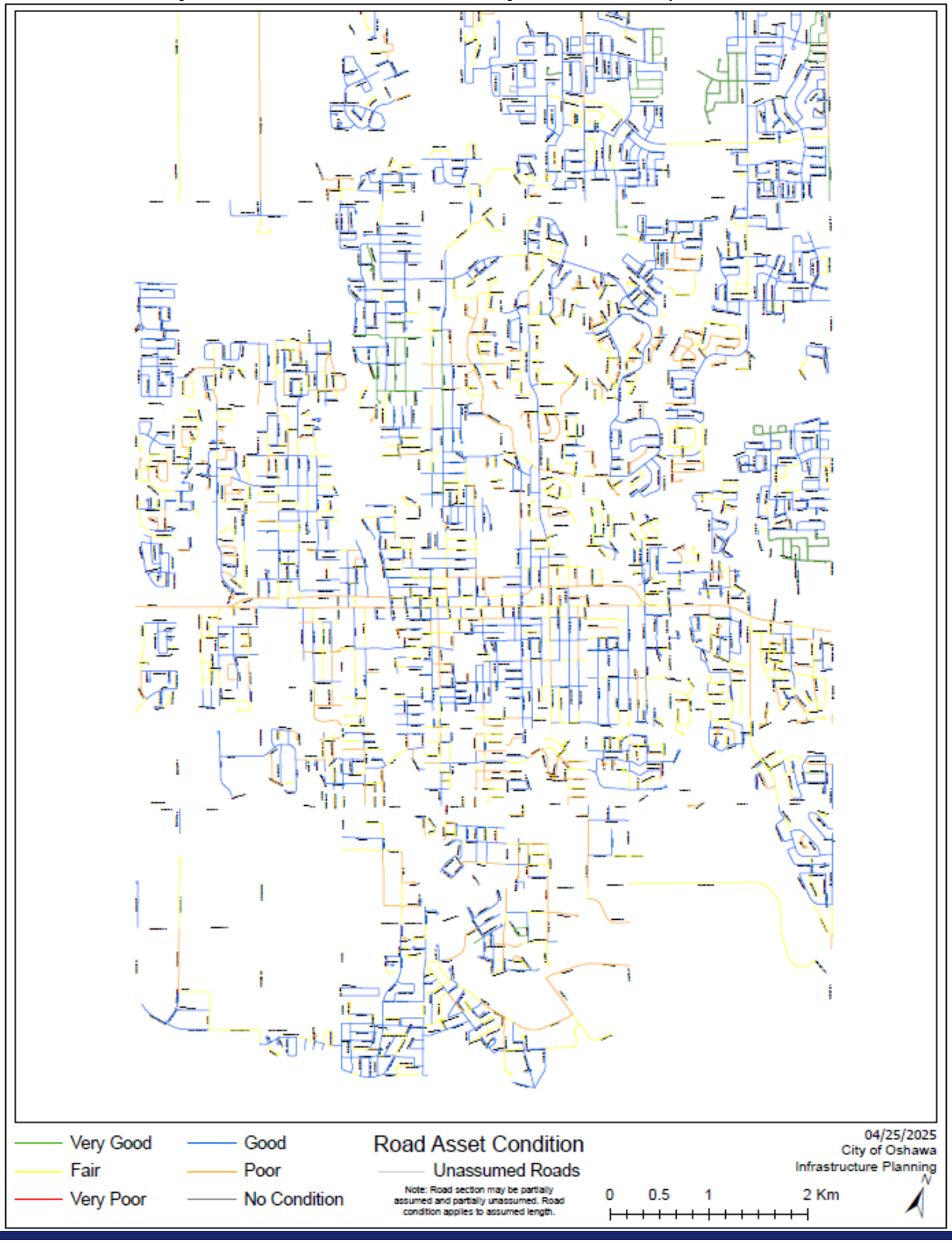
Roads

Condition	Condition Rating (BCI)	Grade	Category	Description
	90-100	A	Very Good	The roads are functioning as intended. Limited, if any, deterioration observed.
	75-90	B	Good	The roads are functioning as intended. No maintenance is anticipated within the next 5 years.
	60-75	C	Fair	The roads are functioning as intended. Normal deterioration and minor distress observed. Maintenance will be required within the next 5 years to maintain functionality.
	35-60	D	Poor	The roads are starting to not function as intended. Significant distress observed. Maintenance and some repair required within the next few years to restore functionality.
	0-35	E	Very Poor	The roads are not functioning as intended. Significant deterioration and major distress observed, with possible damage to the base. Requires immediate attention

City of Oshawa Roads Network by Condition Map – North Extent



City of Oshawa Roads Network by Condition Map– South Extent



Roads

Levels of Service – Current and Proposed

Preliminary levels of service for the City's roads are below. These were established based on:

- Oshawa Strategic Plan 2024-2027
- Oshawa Financial Strategy 2025-2029
- Development Services Business Plan 2021
- Integrated Transportation Master Plan (2015)
- Ontario Regulation 588/17 and
- Other regulatory requirements and guidelines

Technical and Community based specific service levels and current performance are highlighted in the subsequent tables and sections below. City staff continually measure and monitor performance.

Moving forward, City staff will update levels of service and performance for the road network as a new Transportation Master Plan is contemplated, as well as other plans and studies are updated over time.

Roads

Levels of Service – Current and Proposed

Roads	Option 1: Financial Strategy	Option 2: Maintain Current Funding	Option 3: Maintain Current L.O.S.	Option 4: Unlimited Funding	Option 5: Stable Funding (PCI 55)
2025 Pavement Condition Index	70.9	70.9	70.9	70.9	70.9
Average Annual Investment	$3,553,604	$3,167,303	$11,519,024	$60,557,614	$9,391,051
2034 Pavement Condition Index	50.2	47.3	70.6	91.8	55.3
Condition Trend	Decrease	Decrease	Maintain	Increase	Decrease

Option 1: shows incremental investment, into the capital reserves, as a key recommendation of the Oshawa Financial Strategy. Specifically, this shows an increase in the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026.

Option 2: shows the impact of not increasing dedicated infrastructure levy.

Option 3: is the calculated cost of maintaining the current levels of service.

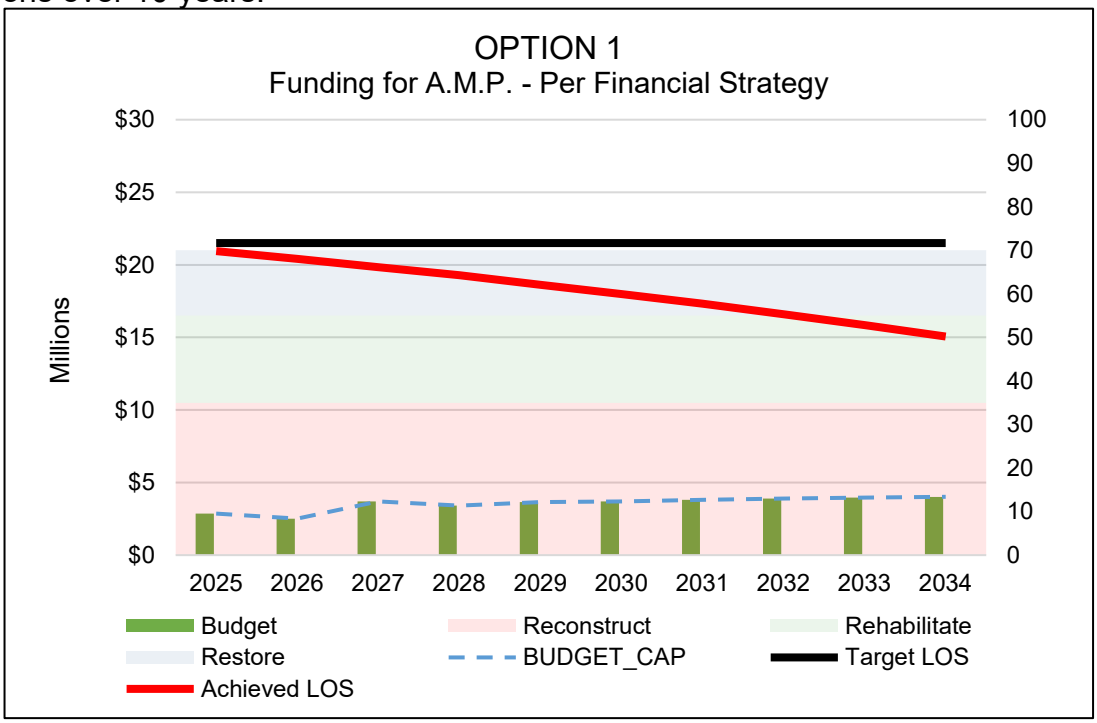
Option 4: is the levels of service that could be maintained, with unlimited funding.

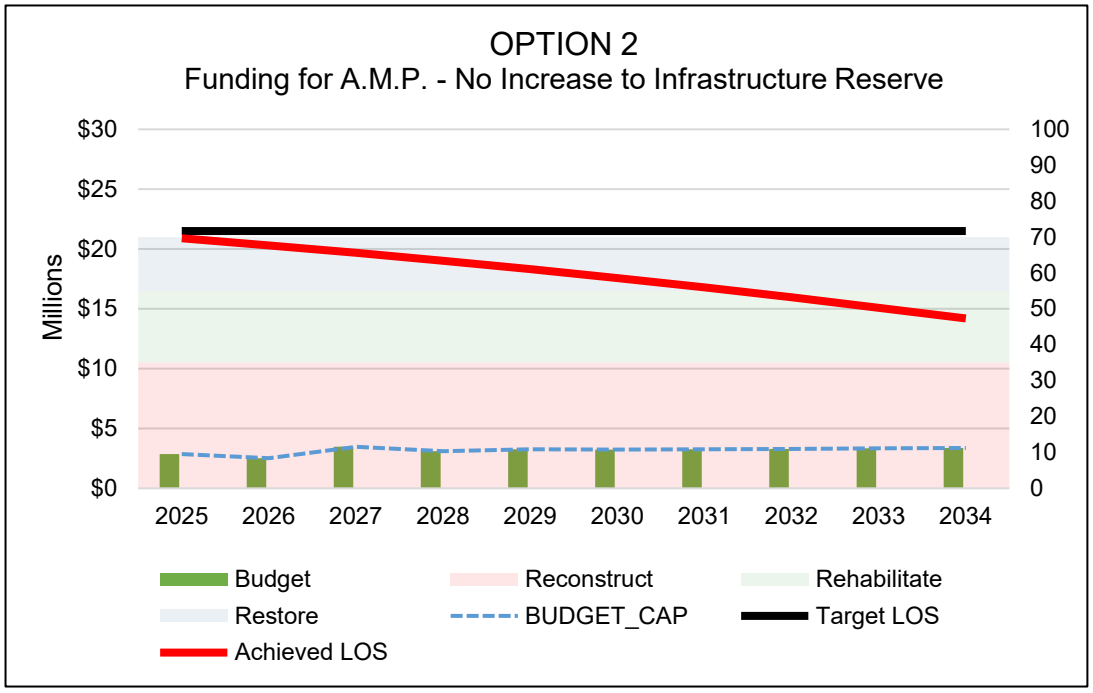
Option 5: is a stable funding strategy. It is a more affordable strategy that keeps the network in a reconstructive state, with a PCI greater than 55%. This avoids reconstruction, a significantly more expensive lifecycle activity.

Roads

Levels of Service – Current and Proposed

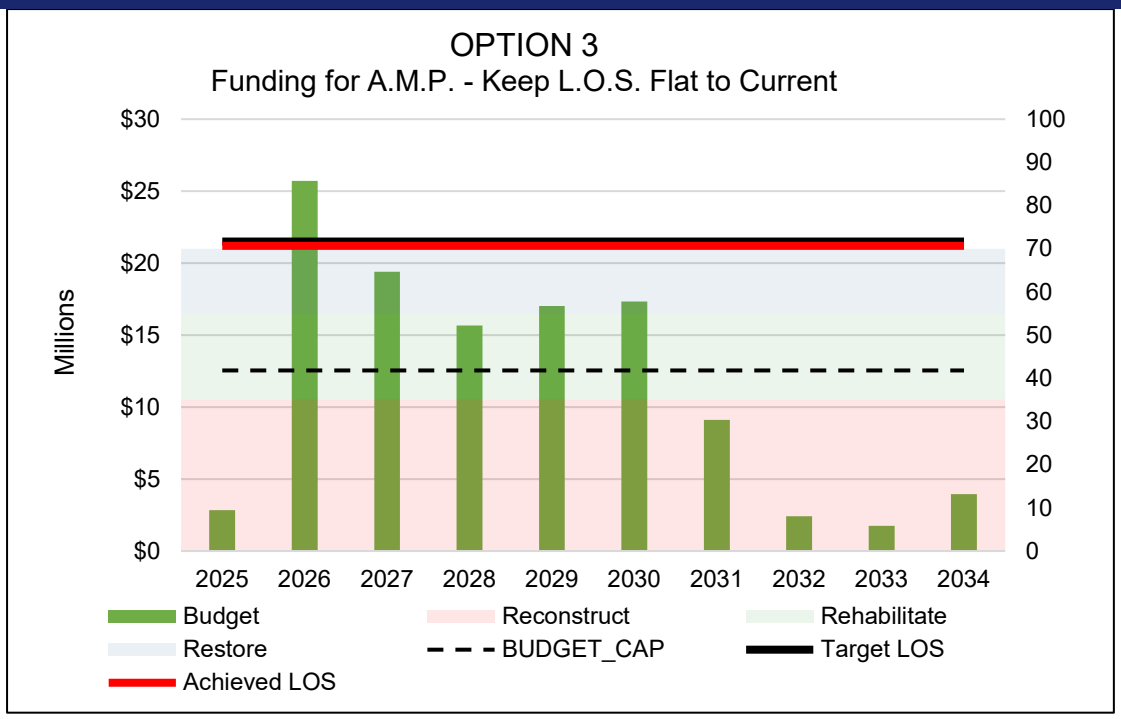
The graphs below compare the condition of the assets for each of the five funding options over 10 years.

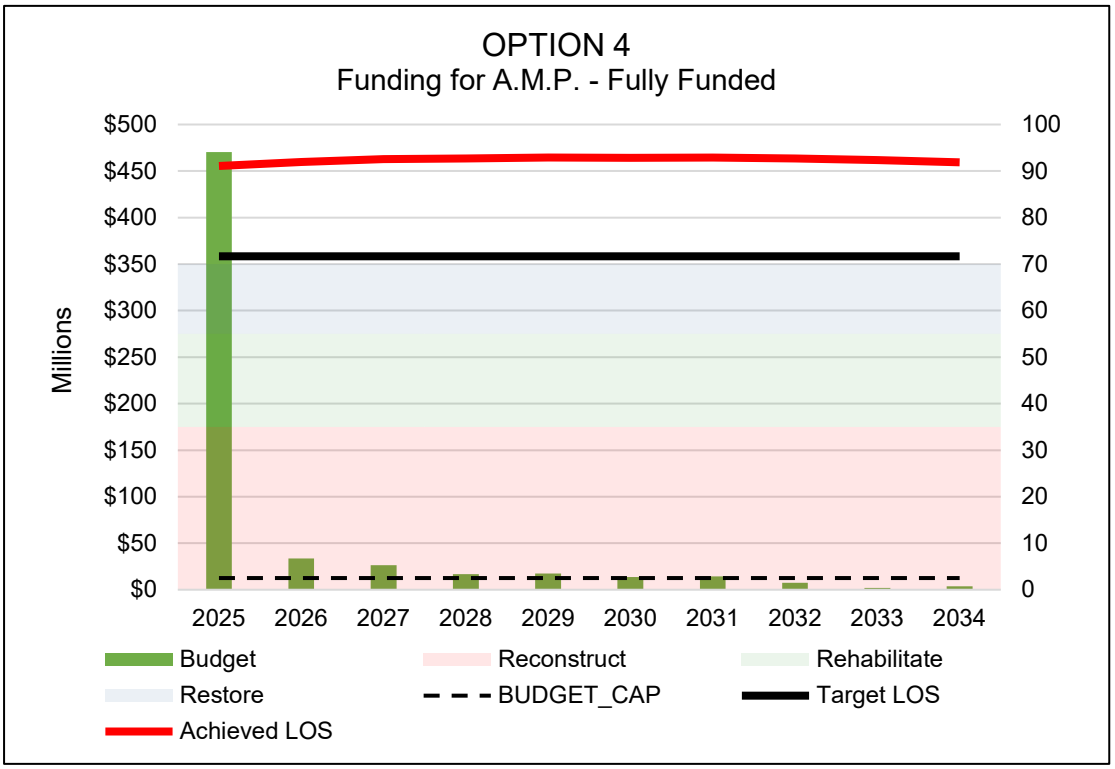




Roads

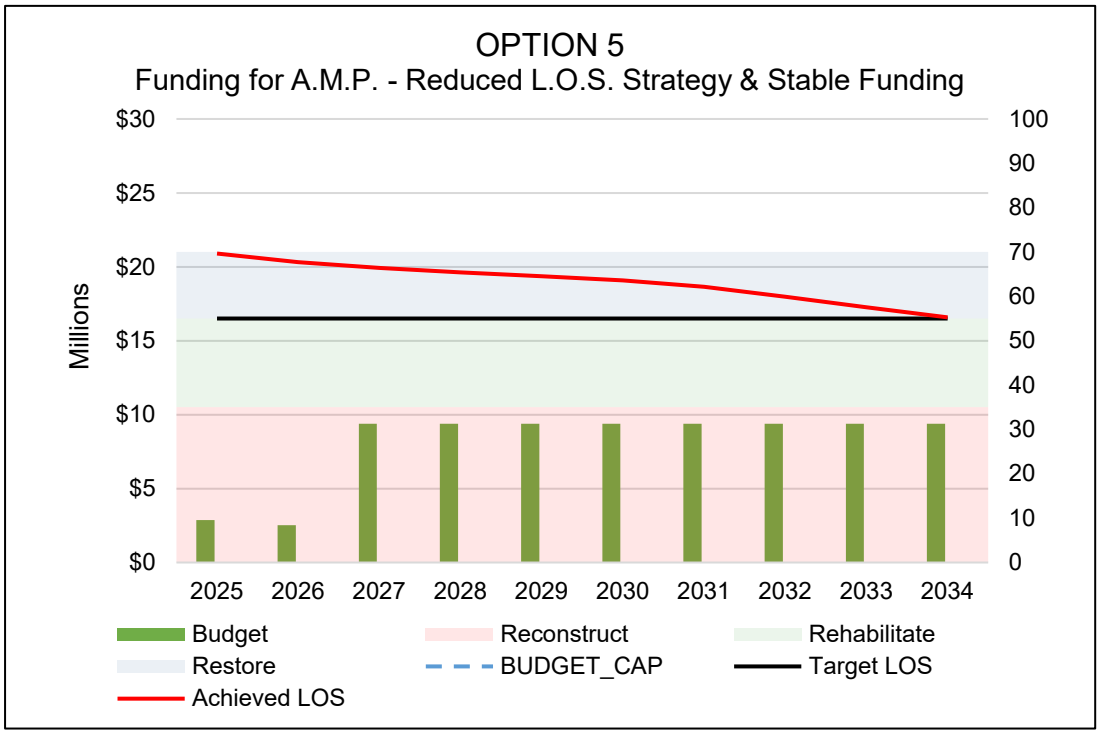
Levels of Service – Current and Proposed





Roads

Levels of Service – Current and Proposed



Roads

Levels of Service and Related Risks

The following table outlines identified risks to delivering the levels of service as well as potential impacts and mitigating actions.

Identified Risk	Potential Impact	Mitigating Actions
Failed Equipment / Infrastructure	• The condition of transportation assets directly affects their reliability, with deteriorating assets leading to more frequent service interruptions • Negative press leading to further safety concerns	• Repair and rehabilitate as necessary • Routine maintenance & inspections • Increase investment in life-cycle activities • Explore different lifecycle strategies to optimize asset management, including preventive maintenance, rehabilitation, and replacement
Inadequate Funding	• Delivery of service • Increased risk of failure • Shorten asset life • Insufficient funding often leads to deferred maintenance, resulting in deteriorating infrastructure and higher long-term costs • Defer cost to future generations	• Reduction of levels of service • Find additional revenue sources • Explore different lifecycle strategies to optimize asset management, including preventive maintenance to lower total lifecycle expenditures • Utilize provincial and federal grants and funding programs to support infrastructure investments, maximizing available resources
Regulatory Requirements	• Non-compliance • Mandatory investments • Increase costs	• Reduction or alteration of services • Find additional revenue sources • Utilize provincial and federal grants and funding programs to support infrastructure investments, maximizing available resources

Strategic Documents Unharmonized with Future Needs	• Increasing population and urbanization put pressure on existing transportation systems leading to congestion and reduced • Limited funding can restrict the ability to expand or upgrade transportation infrastructure to meet growing demand	• Planning transportation assets and levels of service that respond to the needs of the people living in Oshawa • Investigate and implement design standards that enhance the resilience and efficiency of transportation assets, considering factors such as climate change and technological advancements • Engage with the community through public consultations and transparent communication to gather input and build support for infrastructure projects
Plans not Followed /Not Undertaking the Required Lifecycle Activities	• Shorten asset life • Insufficient investments • Failure to deliver desired level of service	• Monitor, review and report on asset management activities • Explore different lifecycle strategies to optimize asset management including preventative maintenance, rehabilitation and replacement.

- Failed Infrastructure - can be a result of age, condition, vandalism, or climate change to name a few.
- Inadequate funding could be based on changing shifts of needs within the portfolio of assets and services in the Asset Management Plan.
- Regulatory requirements could be based on changes to legislation impacting services and assets.
- Strategic documents being unharmonized could result from forecasting assumptions being inaccurate.
- Plans not being followed or lifecycle activities not actioned could be a result for many reasons. Some examples are shortages of staff, the inability to procure replacements on a timely basis and competing priorities.

Roads

Levels of Service – Current and Proposed

Service Attribute	Technical Levels of Service[1]	2021 A.M.P. L.O.S.	2025 A.M.P. L.O.S.	2034 Proposed L.O.S.
Scope	Number of lane-kilometers of arterial roads as a proportion of square kilometers of land area for the City of Oshawa[2]	1.6	1.6	1.6
Scope	Number of lane-kilometers of collector roads as a proportion of square kilometers of land area for the City of Oshawa[2]	1.1	1.1	1.1
Scope	Number of lane-kilometers of local roads as a proportion of square kilometers of land area for the City of Oshawa[2]	5.9	5.8	5.8
Quality	Average pavement condition index (P.C.I.) for paved roads	74.7	70.9	50.2
Quality	Average condition for unpaved roads	POOR	FAIR	FAIR
Quality	Percentage of Hard Surface roads that are in good or better condition (P.C.I. greater than 75)	56.2%	37.0%	N/A[3]

[1] Ontario Regulation 588/17, Asset Management Planning for Municipal Infrastructure
[2] Total land area for Oshawa is 143km^2
[3] Unable to predict

Roads

Community - Current Levels of Service

One of the key customer focused community service levels the City provides is to improve mobility (connectivity and efficiency) and alleviate congestion on its road network.

The City strives to ensure the road network is a dynamic system whose connectivity is constantly evolving to meet the needs of the community. Connectivity throughout the City is managed and improved upon by assessing the density of connections, directness of links and identifying opportunities for creating a more accessible and resilient system.

Another key customer focused community service level is the provision of a smooth and safe riding surface through maintained roads.

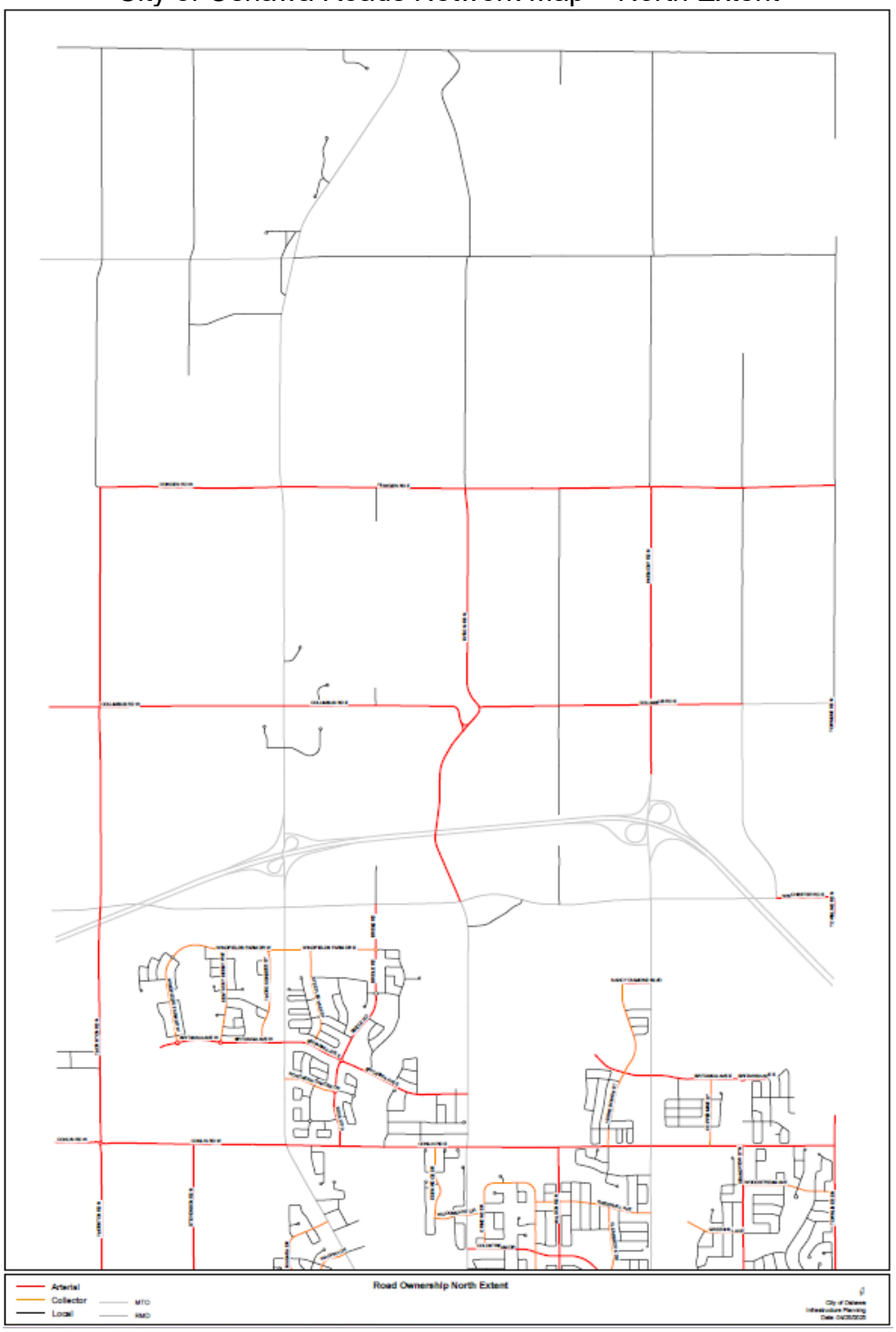
The City's road network has an average pavement condition index (P.C.I.) of 70.86 (out of 100), indicating an average condition rating of FAIR overall for the entire road network. A description and images illustrating the different pavement conditions for the roads is identified under the condition section.

A map highlighting the City's road network and connectivity is below. Also, the number of lane kilometers by type of road as a proportion of the City's land area is reported above.

Roads

Community - Current Levels of Service

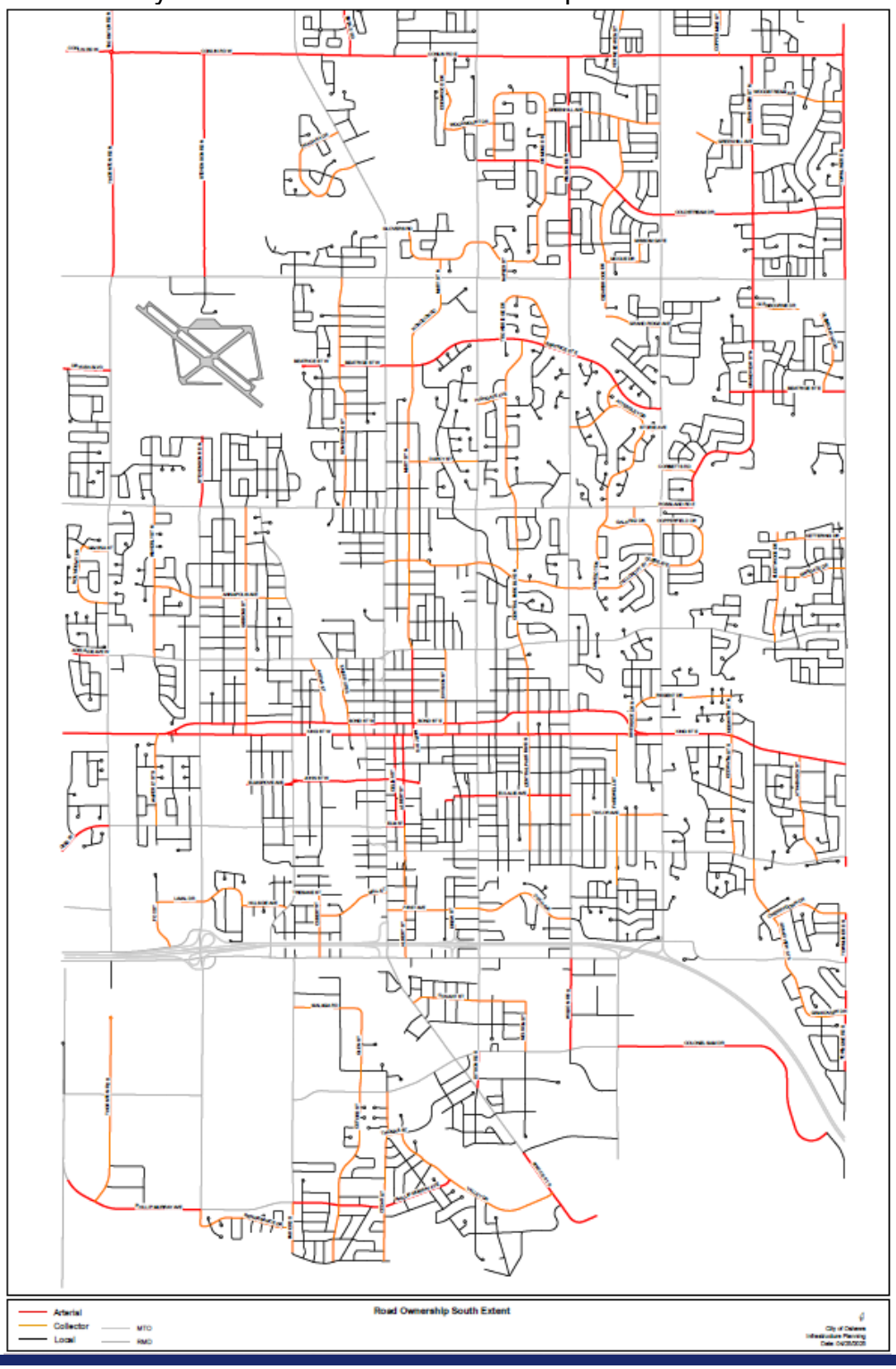
City of Oshawa Roads Network Map – North Extent



Roads

Community - Current Levels of Service

City of Oshawa Roads Network Map – South Extent



Roads

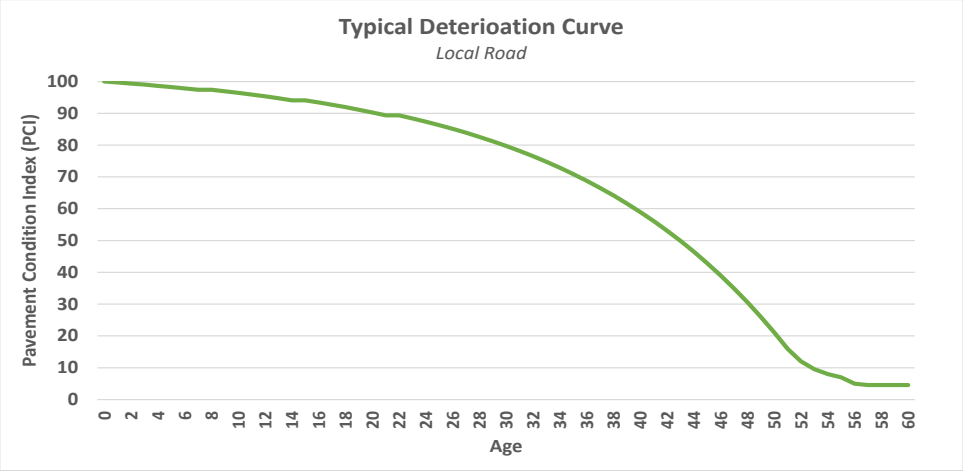
Lifecycle Management Strategies

The City applies systematic processes that facilitate decision-making for the construction, acquisition, operation, maintenance, renewal, replacement, and disposition of roads in the most cost-effective manner. This approach considers whole life costs, climate change adaptation, and potential risks.

Statistical regression algorithms are used in pavement management to evaluate and prioritize pavement needs. By using deterioration models generated from historical condition assessment data, the City can predict future conditions and evaluate the effects of potential treatments over the entire lifespan of the road. The focus is on advancing life-cycle costing analysis, optimization algorithms, and performance prediction methods.

Oshawa's roads condition is assessed every three years, with approximately one-third of the City inspected annually. In 2024 the City assessed the entire road network as a benchmark year. This condition data drives the candidate identification process, the City's in-house decision-support system analyzes the best return on investment across strategies for all candidates, considering parameters such as condition, age, cost, budget constraints, and level of service.

The figure below shows how local roads deteriorate over time developed from condition assessments – one of the City's the Statistical regression models.



Typical Road Lifecycle Management Treatments:

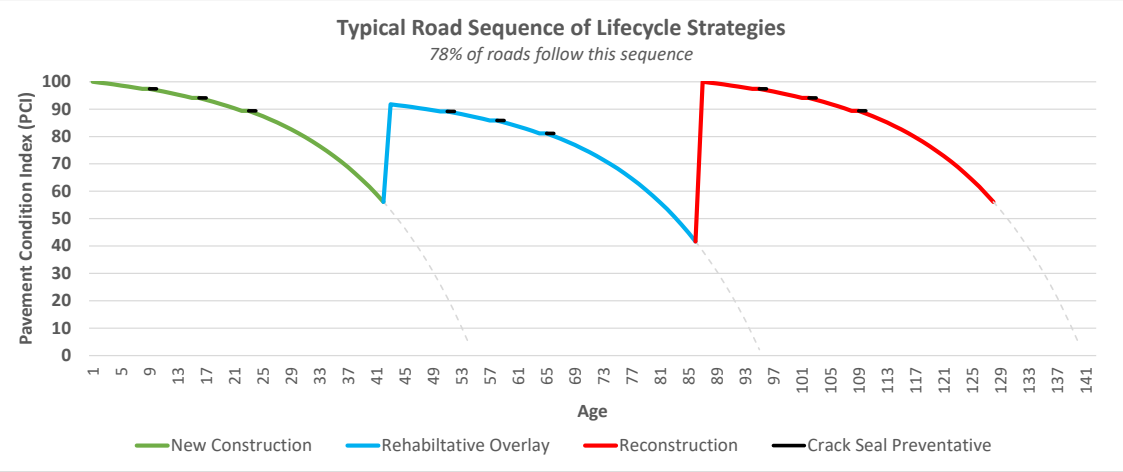
1. **Preventative**: Prevents or minimizes deterioration. Crack sealing at 7 and 14 years extends life by 2 years. Micro surfacing lasts 7 years but is costly.

Roads

Lifecycle Management Strategies

2. **Rehabilitative**: Restores to like-new condition. Mill and overlay at 40-55 PCI restores to 90 PCI, extending life by 20 years. Full depth removal restores to 95 PCI, extending life by 25 years. Addresses 45% of ancillary assets.
3. **Replacement**: Planned by condition and coordination with stakeholders. Factors include age, environment, demand/use, and material.

The Typical Lifecycle Sequence of Treatments Oshawa:



To best manage the City's Roads within the limited resources allocated to roads, the City is considering adapting its lifecycle sequence of treatment strategy and proposing to lower the proposed Level of Service (LOS).

This would focus on Arterial and Collector Roads first, moving away from the traditional road lifecycle sequences of restoration, rehabilitation and reconstruction, Oshawa would run roads to a condition between 50-60 PCI then resurface the full depth of asphalt; Rehabilitative Overlay. Local roads would be resurfaced when underground services like sewers and water pipes are planned to be replaced.

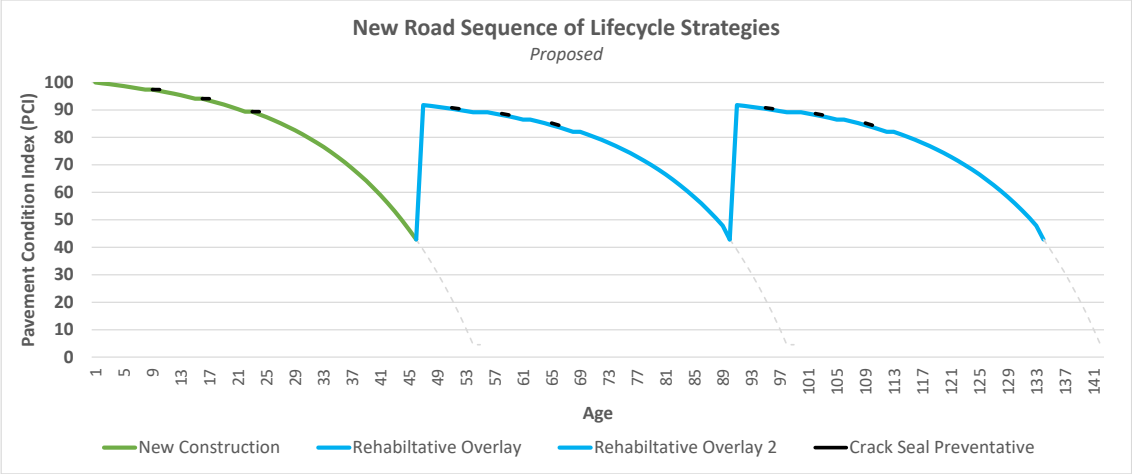
This strategy aims to save costs, improve road conditions, and ensure better coordination with underground infrastructure, particularly with the Region's services, with a goal of reducing the total lifecycle costs.

Roads

Lifecycle Management Strategies

The estimated cost of this approach is estimated to be $37.7 million dollars over the 10-year forecast, of which $2.08 million is eligible to be funded by DC funds through the Arterial Road Resurfacing Program.

Potential Alternative Lifecycle Sequence



It is anticipated that this affordable strategy would mitigate risk by focusing on the higher-order roads, which are subject to higher volumes of traffic and weight. While the Level of Service (LOS) for local roads may deteriorate, this strategy is the most effective use of tax dollars at this time. Currently, the decision-support system is unable to predict the future network condition under this strategy.

The City will continue to explore ways to sustain the Level of Service (LOS) by continually testing new construction methods and materials, and encouraging the public to shift its mindset towards more sustainable and multi-modal transportation options. This approach aligns with goals in the City's Integrated Transportation Master Plan and the City's Strategic Plan 2024-2027: Innovate. Belong. Care. Lead.

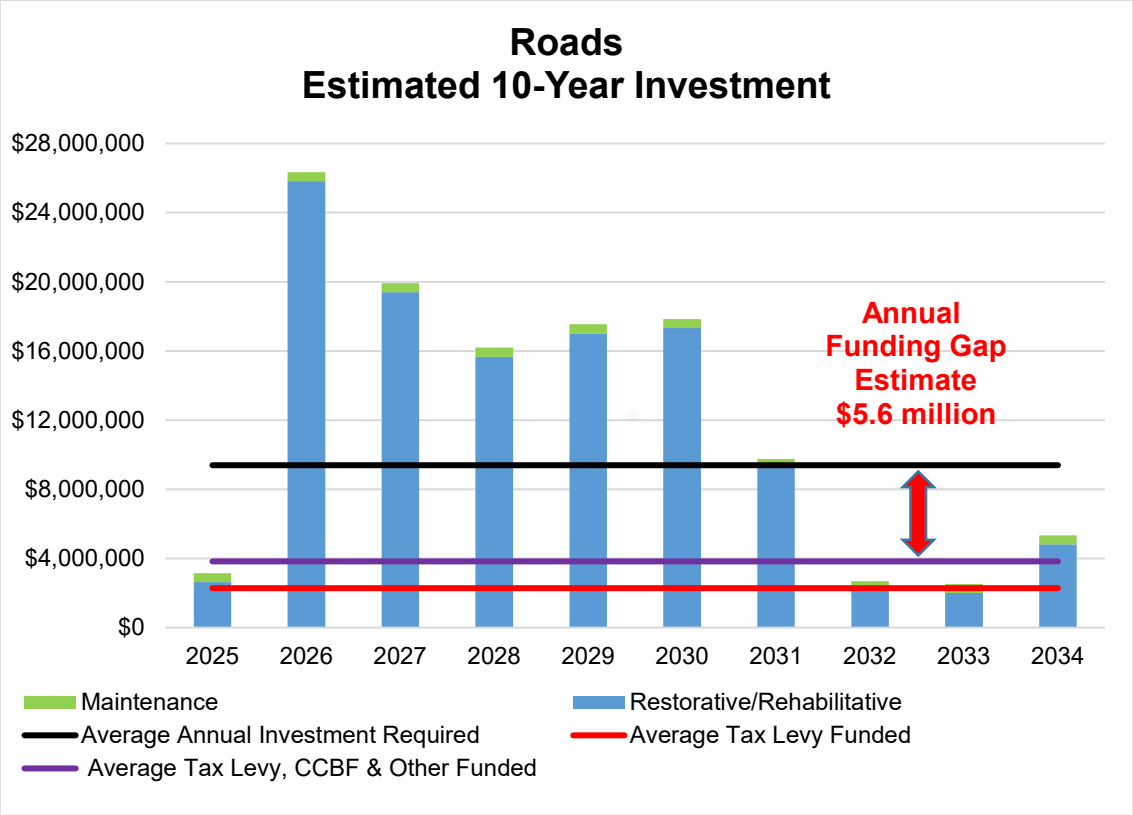
Roads

Lifecycle Management and Financial Strategy

The following 10-year lifecycle forecast shown below does not account for budget constraints. The average annual investment required, based on a modified level of service, using option 5 – maintaining the network within a restorative state at a PCI of 55 or higher, is estimated at $9.4 million (in 2024 $). This option has been utilized to determine the infrastructure gap, as this strategy is a more affordable option to maintain a reasonable network condition at lower lifecycle costs.

The restorative and rehabilitative estimates have been identified through the City's decision support system. Included in the annual maintenance cost are asphalt paving and patching, crack sealing and other maintenance costs, such as gravel and grading, and line painting.

Using Option1 of increase the total dedicated infrastructure levy identified in the Oshawa Financial Strategy, the annual investment in Roads from Tax Levy and Canada Community Benefit Fund (previously Federal Gas Tax Funding) is $3.8 million. This results in an estimated annual funding gap of $5.6 million.



Roads

Managing Growth – Capital and Operating Expenditure Forecast

The 2021 population for the City of Oshawa was 182,020 and is anticipated to increase to 239,390 by 2036.

City of Oshawa[1]	2021	2026	2031	2036
Total Population	182,020	200,280	219,990	239,390
Total Households	66,640	73,800	81,450	89,060
Total Employment	63,740	70,600	78,070	85,250

[1] Note: Per 2025 Durham Regional Official Plan

The population growth is expected to result in incremental service demands that may impact the current level of service. In order to accommodate the projected increases in demand caused by growth, the City has undertaken a number of master planning studies which identify the need for new infrastructure and infrastructure upgrades. These growth-related needs have been included in the City's 2024 Development Charges Background Study and the 10-year capital forecast. Utilizing development charges to fund the growth-related initial capital costs helps to ensure the results of future growth do not increase the cost of maintaining levels of service for existing taxpayers.

There are no significant maintenance costs in the next 10 years for growth-related infrastructure upgrades or assets acquired through subdivision assumptions. The first significant capital activity would occur approximately 35 years after construction and will eventually need to be funded by the City.

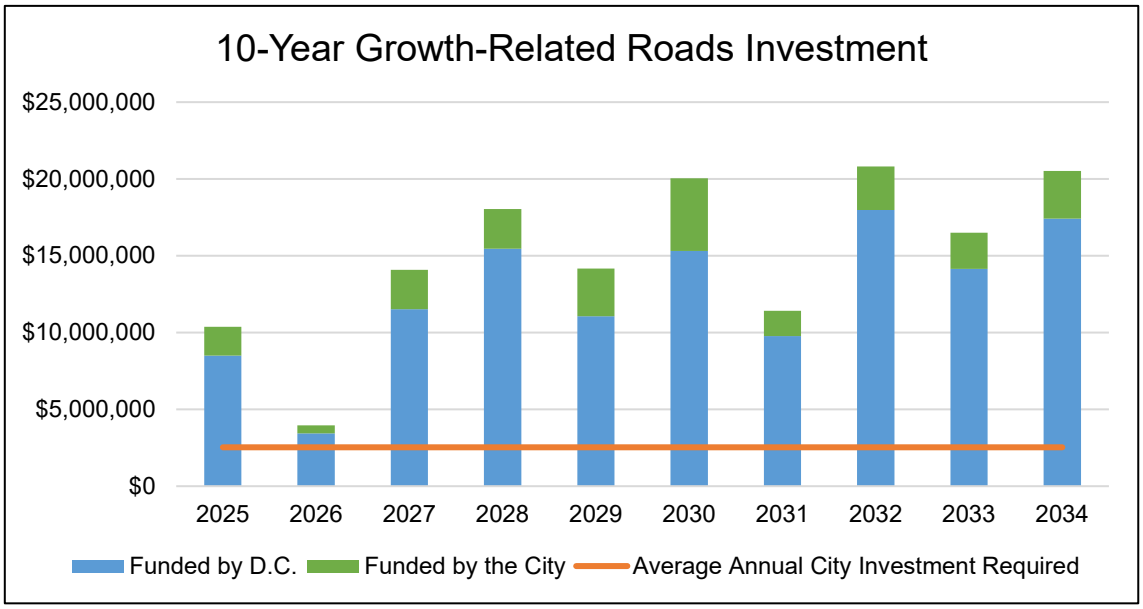
The majority of new roads will be assumed through subdivision assumption agreements. The maintenance of these roads have not been incorporated.

The City's Official Plan references that build-out is estimated to occur in 2031. The operating costs related to assumed assets are difficult to estimate and are really dependent on what future proposed levels of service is approved by Council. As asset management practices continue to mature and better information is gathered, more specific information relating to operating costs will be determined.

The majority of growth-related capital projects include a small proportion of improvements that benefit the existing residents. These costs are required to be funded by the City, while development charges pay for the majority of the cost. Over the 10-year forecast, the average annual contribution required for the non-growth-related capital portion is $2,531,000. Annually, the City budgets a contribution from operating to a Growth-Related Non-D.C. reserve to fund the City's portion of growth-related capital investments.

Roads

Managing Growth – Capital and Operating Expenditure Forecast



Appendix B

Structures

May 2025

Structures

Description of Structures Assets

Bridge

Culvert

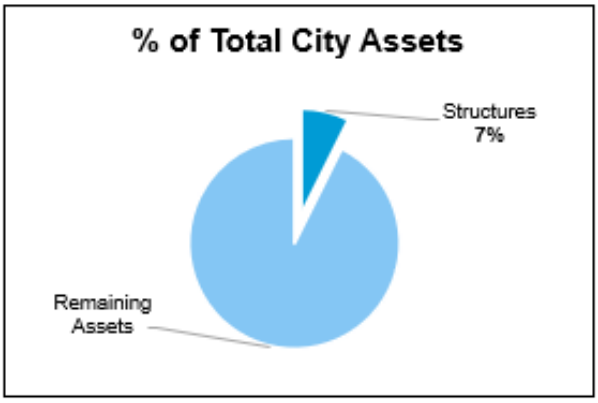
Pedestrian Bridge

- The City owns and maintains bridges and culverts to support the service of transportation and the movement of goods and people throughout the City.
- The City's structures inventory is collected and tracked through the City's corporate Geographic Information System (G.I.S.).
- Road bridges, road culverts and pedestrian structures are the three primary classifications of the structure's assets.
- Structures support vehicular and active transportation. Additionally, the City's structures serve to provide service connections for overland drainage and watercourses within the City.
- The City engages a professional structural engineer to complete legislated inspections on a biennial basis. This inspection provides the City with a 10-year renewal and replacement forecast which the City attempts to implement through the Capital Budget process.
- Expansion of current and construction of new structures is undertaken as part of the Capital Budget process and are identified in the City's Development Charges Background Study.

Structures

Inventory and Estimated Replacement Cost

Structures	Quantity (each)	Estimated Replacement Cost
Road Bridges	26	$108,772,728
Road Culverts	50	$156,453,915
Pedestrian Structures	40	$32,911,399
Total Structures	**116**	**$298,138,042**



Inventory is collected, tracked and maintained through the G.I.S.

The City owns a total of 116 structures, which consists of 26 road bridges, 50 road culverts and 40 pedestrian structures.

The total estimated replacement cost of these structures is $298,138,042 based on 2024 dollars.

Estimated replacement costs are unique to each structure and are an important part of the Biennial Municipal Structure Inspection Report. The estimated replacement costs are based on reproduction costs (replacing like for like). When a structure is replaced, typically the structure is upgraded to accommodate for growth and current standards.

The last inspection report was completed in 2023, and as such, the estimated replacement costs were indexed using the Non-Residential Building Construction Price Index (NRBCPI). For 2024, this amounted to an inflationary factor of 4.02%.

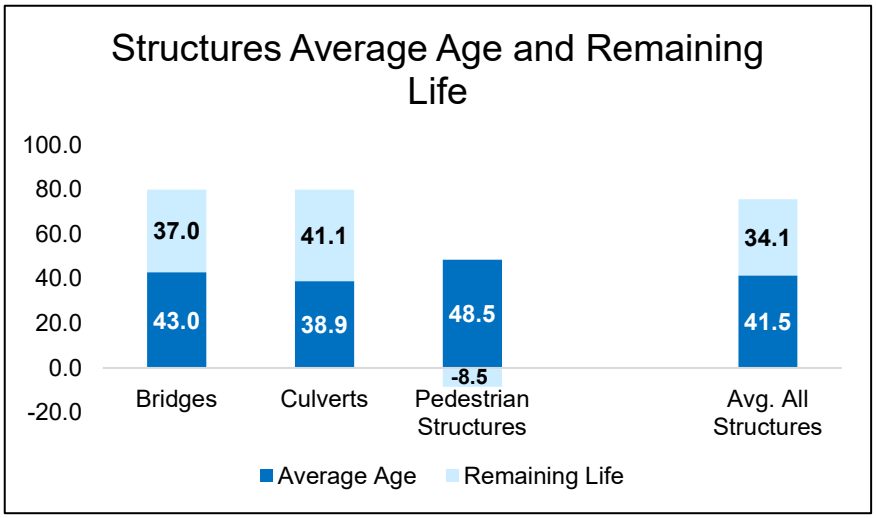
Structures

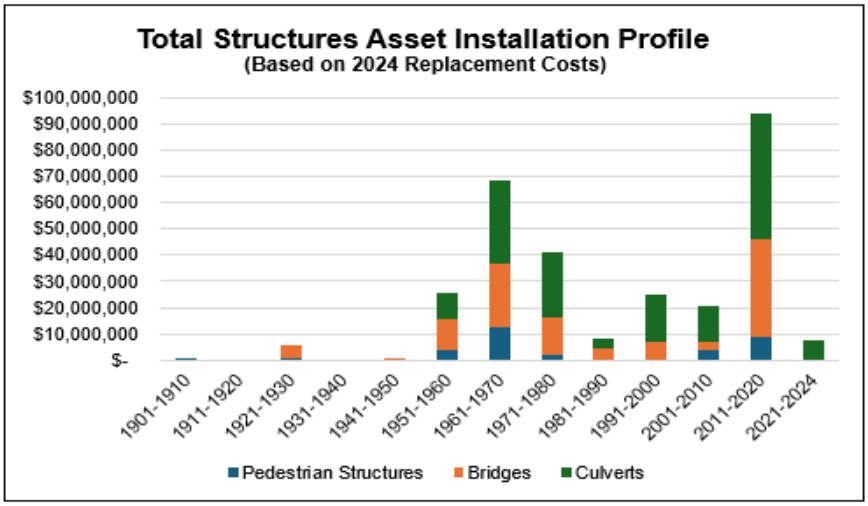
Average Age and Asset Installation Profile

Age is based on initial construction year and tracked separately for each type of structure. The average age of the City's road bridges, road culverts and pedestrian structures is 41.5 years and is broken down by:

- 43.0 years for Road Bridges
- 38.9 years for Road Culverts
- 48.5 years for Pedestrian Structures

The service life of Structures is estimated at 80 years for bridges and culverts and 40 year for pedestrian structures. Although the average life span of a pedestrian structure is 40 years and the average age currently is 48.5 years, for the most part the structures are still functioning well, and several will far exceed the average based on construction type and materials. Condition is a function of observation, not age.





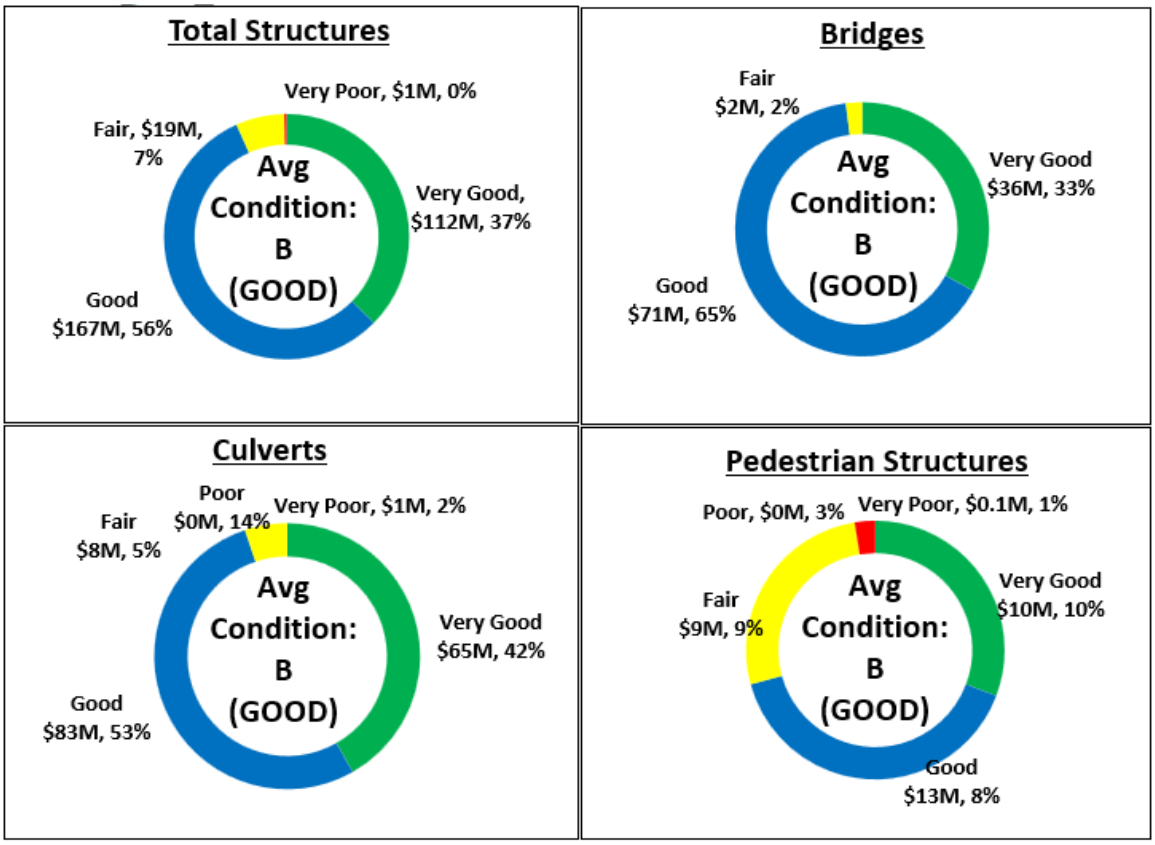
Structures

Condition

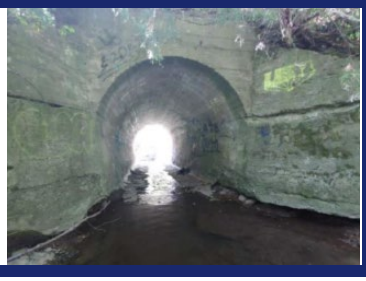
Ontario Regulation 104/97 requires all Structures to be inspected on a biennial basis. The results are reported on a Biennial Municipal Structure Report. Each structure is assessed for condition using the Bridge Condition Index (B.C.I.). As the B.C.I. conveys the condition, but does not look into the future of what the structures will experience, City staff enhance the B.C.I. using a formula of 90% of B.C.I. + 10% based on the remaining service life in relation to the estimated service life.

Overall, the City's structure assets are in GOOD condition (B Grade)

- B – Good – Road Bridges
- B – Good – Road Culverts
- B – Good – Pedestrian Structures



Structures

Condition	Condition Rating (BCI)	Grade	Category	Description
	80-100	A	Very Good	The structures are functioning as intended. Limited, if any, deterioration observed.
	60-80	B	Good	The structures are functioning as intended. No major maintenance is anticipated within the next 5 years.
	40-60	C	Fair	The structures are functioning as intended. Normal deterioration and minor-moderate distress observed. Maintenance will be required within the next 5 years to maintain functionality.
	20-40	D	Poor	The structures are starting to not function as intended. Significant distress observed. Maintenance and some repair required within the next few years to restore functionality.
	0-20	E	Very Poor	The structures are not functioning as intended. Significant deterioration and major distress observed. Requires immediate attention.

Structures

Current Levels of Service

Preliminary levels of service for the City's structure assets are below. These were established based on:

- Oshawa Strategic Plan 2024-2027
- Oshawa Financial Strategy 2025-2029
- Development Services Business Plan 2021
- Oshawa Quality Standards
- Ontario Regulation 588/17 requirements and guidelines

Technical and Community based specific service levels and current performance are highlighted in the subsequent tables and sections below. City staff continually monitor performance.

Structures

Levels of Service – Current and Proposed

Only two options were included in this analysis. Other options were considered but without software, specific to asset management, the confidence level of the output was too low to be formalized and included. In future iterations, when we have asset management software, we will be able to create more options and add a higher level of confidence to all of our output.

Future versions of Asset Management Plan will report on critical versus less critical infrastructure to reflect the shift in lifecycle management strategies being employed to manage roads.

Structures	Option 1: Financial Strategy	Option 4: Fully Funded
2025 A.M.P. % Fair or Better Condition	99%	99%
Average Annual Investment	$1,332,706	$1,571,846
2034 % Fair or Better Condition	99%	100%
Condition Trend	Maintain	Increase

Option 1: shows incremental investment, into the capital reserves, as a key recommendation of the Oshawa Financial Strategy. Specifically, this shows an increase in the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026.

Option 4: is the levels of service that could be maintained, with unlimited funding.

Structures

Levels of Service - Current and Proposed

Service Attribute	Technical Levels of Service	2021 AMP L.O.S.	2025 AMP L.O.S.	2034 Proposed L.O.S.[1]
Scope	% of vehicular bridges in the City with Loading or dimensional restrictions	0%	0%	N/A[3]
Scope	% of pedestrian bridges in the City with loading or dimensional restrictions	31%	31%	N/A[3]
Quality	For bridges in the City, the average bridge condition index value	77.3	75.7	62.0
Quality	For structural culverts in the City, the average bridged condition index value	75.2	78.7	66.0
Quality	For pedestrian structures[2] in the City, the average bridge condition index value	71.9	70.2	66.0

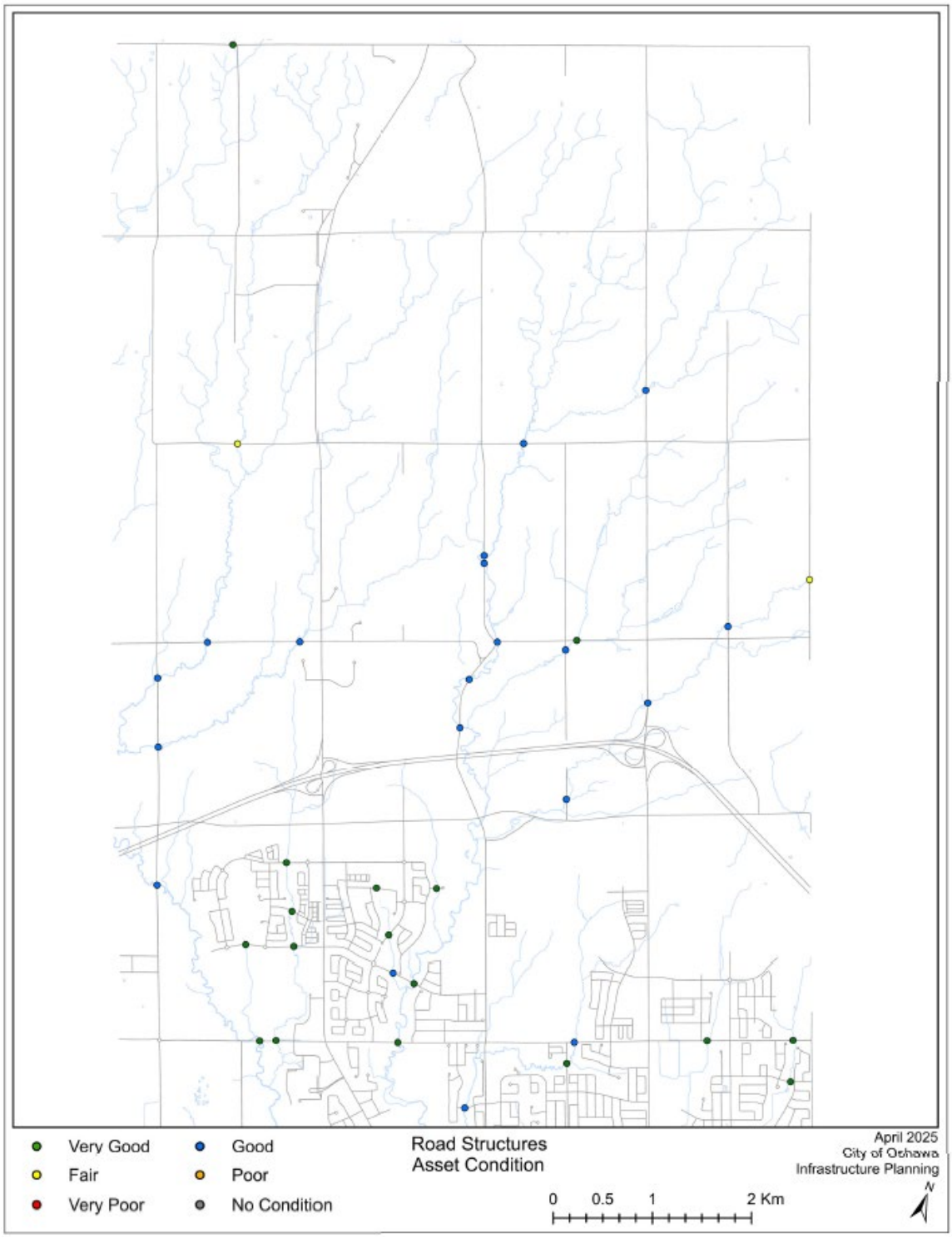
[1] Based on Option 1 – Financial Strategy
[2] Less critical infrastructure
[3] Unable to predict

Service Attribute	Technical Levels of Service[1]	Performance
Scope	Description of the traffic that is supported by municipal bridges (e.g. heavy, transport vehicles, motor vehicles, emergency vehicles, pedestrians and cyclists)	Bridges and structural culverts support the movement of motor vehicles, heavy transport vehicles, emergency vehicles, pedestrians and cyclists throughout the City's road network.
Scope	Description or images of the condition of bridges and how this would affect use of the bridges. Descriptions or images of the condition of bridges and how this would affect the use of the culverts.	See the following maps showing locations

[1] Ontario Regulation 588/17, Asset Management Planning for Municipal Infrastructure

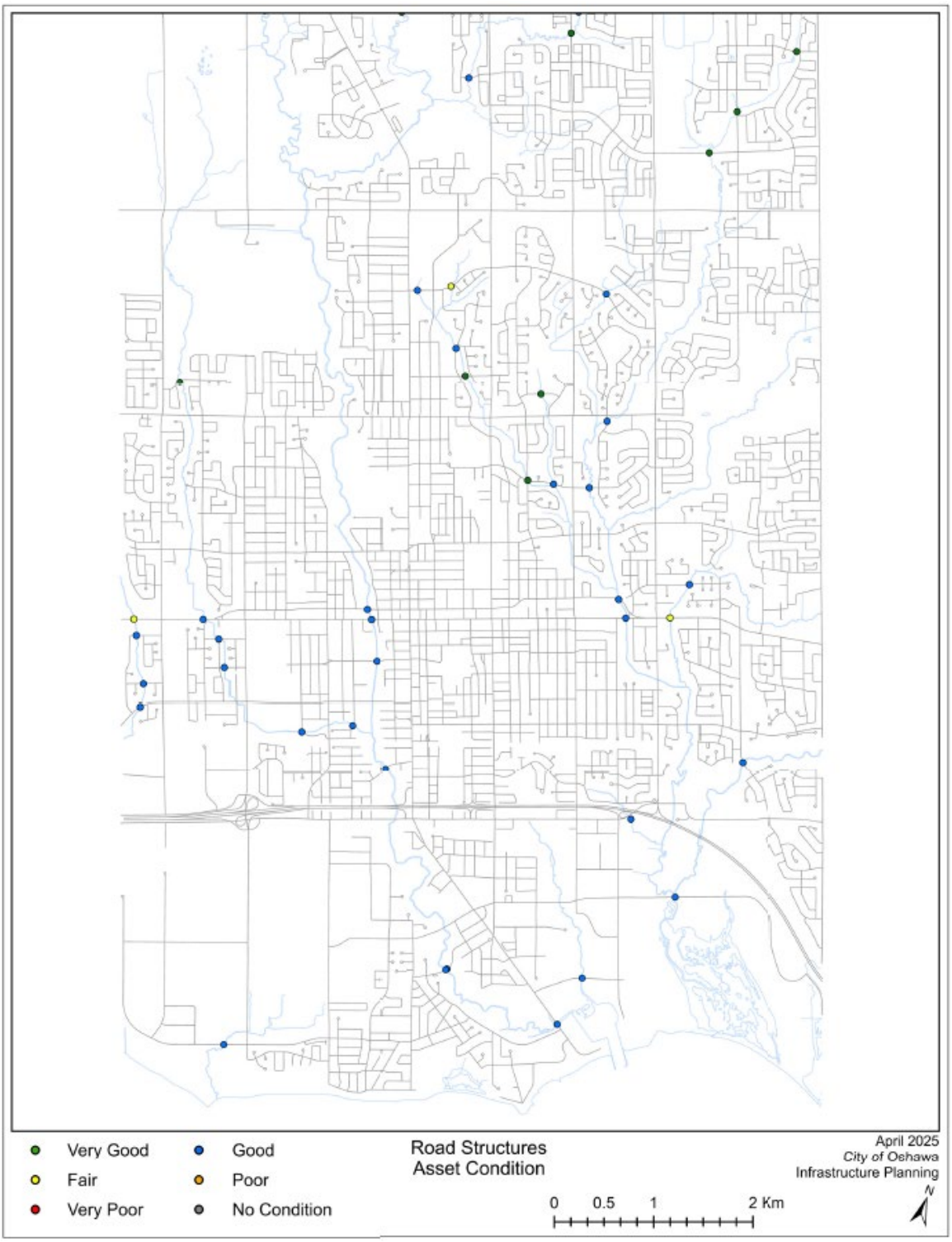
Structures

City of Oshawa Road Structures by Condition Map – North Extent



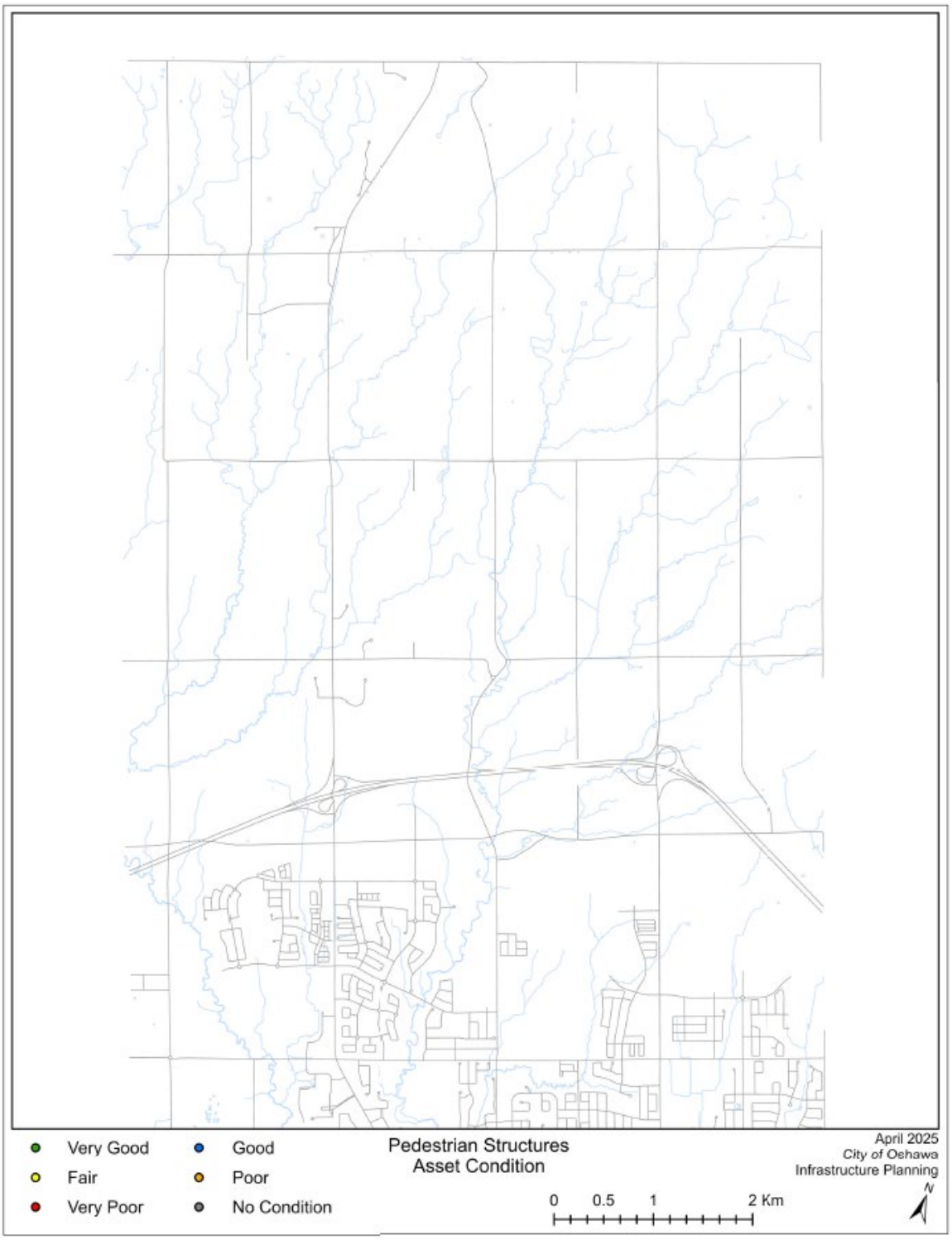
Structures

City of Oshawa Road Structures by Condition Map – South Extent



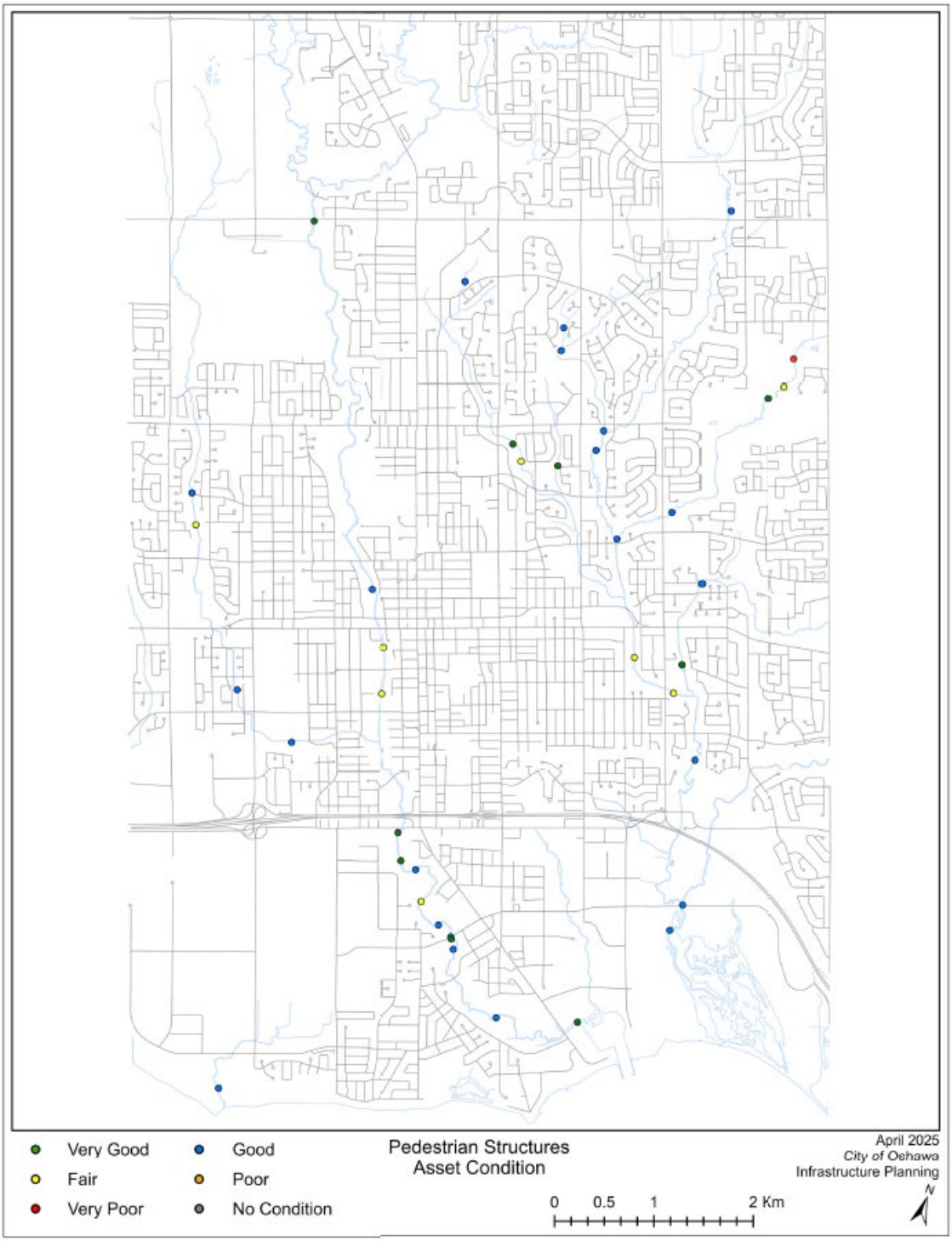
Structures

City of Oshawa Pedestrian Structures by Condition Map – North Extent



Structures

City of Oshawa Pedestrian Structures by Condition Map – South Extent



Structures

Levels of Service and Related Risks

The following table outlines identified risks to delivering the levels of service as well as potential impacts and mitigating actions.

Identified Risk	Potential Impact	Mitigating Actions
Failed Equipment / Infrastructure	• The condition of structures directly affects their reliability, with deteriorating assets leading to more frequent service interruptions • Negative press leading to further safety concerns	• Repair and rehabilitate as necessary (OSIM) • Routine maintenance & inspections • Increase investment in life-cycle activities • Explore different lifecycle strategies to optimize asset management, including preventive maintenance, rehabilitation, and replacement
Inadequate Funding	• Delivery of desired service levels • Increased risk of failure • Shorten asset life • Insufficient funding often leads to deferred maintenance, resulting in deteriorating infrastructure and higher long-term costs • Defer cost to future generations	• Reduction of levels of service • Find additional revenue sources • Explore different lifecycle strategies to optimize asset management, including preventive maintenance to lower total lifecycle expenditures • Utilize provincial and federal grants and funding programs to support infrastructure investments, maximizing available resources
Regulatory Requirements	• Non-compliance • Mandatory investments • Increase costs	• Reduction or alteration of services • Find additional revenue sources • Utilize provincial and federal grants and funding programs to support infrastructure investments, maximizing available resources

Strategic Documents Unharmonized with Future Needs	• Increasing population and urbanization put pressure on existing structures leading to congestion and reduced • Limited funding can restrict the ability to expand or upgrade structures infrastructure to meet growing demand	• Planning structure assets and levels of service that respond to the needs of the people living in Oshawa • Investigate and implement design standards that enhance the resilience and efficiency of transportation assets, considering factors such as climate change and technological advancements • Engage with the community through public consultations and transparent communication to gather input and build support for infrastructure projects
Plans not Followed / Not Undertaking the Required Lifecycle Activities	• Shorten asset life • Insufficient investments • Failure to deliver desired level of service	• Monitor, review and report on asset management activities • Explore different lifecycle strategies to optimize asset management including preventative maintenance, rehabilitation and replacement.

- Failed Infrastructure - can be a result of age, condition, vandalism, or climate change to name a few.
- Inadequate funding could be based on changing shifts of needs within the portfolio of assets and services in the Asset Management Plan.
- Regulatory requirements could be based on changes to legislation impacting services and assets.
- Strategic documents being unharmonized could result from forecasting assumptions being inaccurate.
- Plans not being followed or lifecycle activities not actioned could be a result for many reasons. Some examples are shortages of staff, inability to procure replacements on a timely basis and competing priorities.

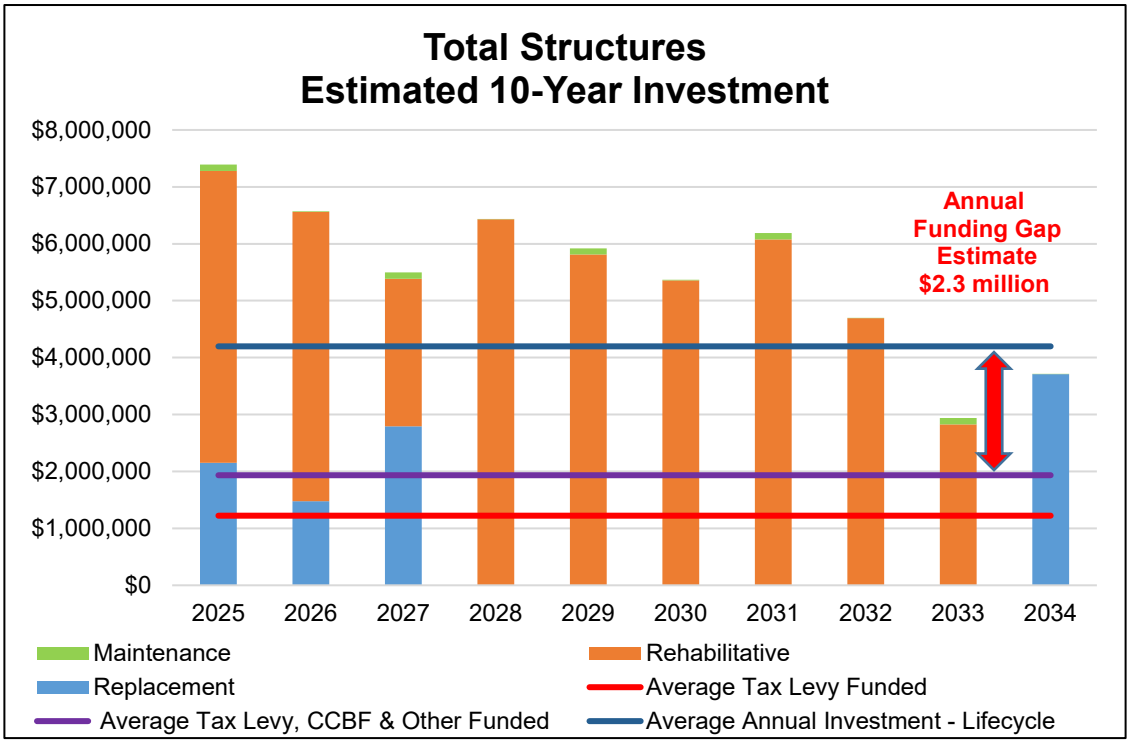
Structures

Lifecycle Management and Financial Strategy

The Biennial Municipal Structure Inspection Report outlines the required expenditures required to maintain the City's portfolio of structures. Each structure is inspected, and recommendations are detailed for replacement, major rehabilitation, minor rehabilitation, as well as specific maintenance by structure.

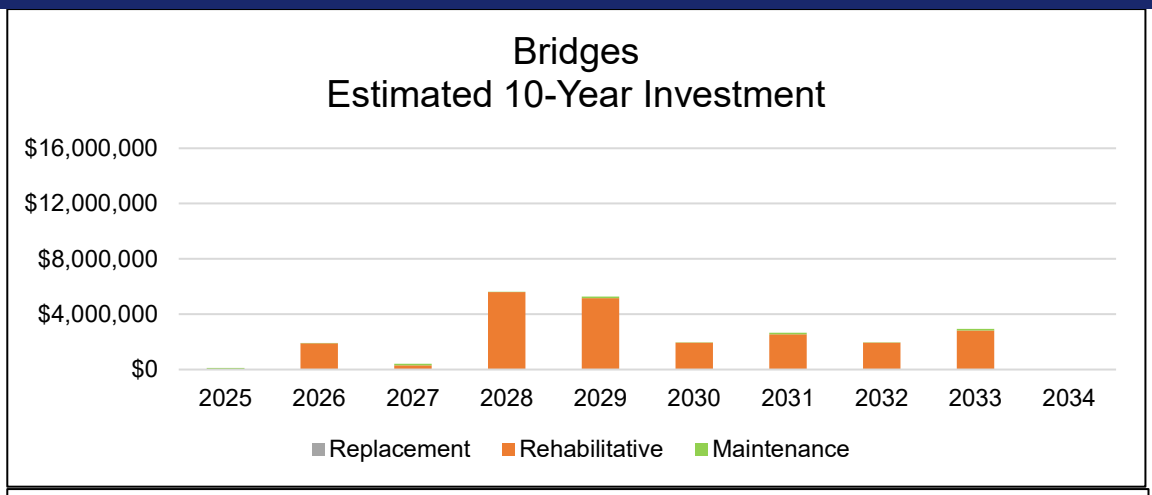
Staff prepare the City's capital budget, using information from the Biennial Municipal Structure Inspection Report, along with professional judgement on the timing. The capital scoring model is used to prioritize risk and the needs of the structures, along with the needs of other areas requiring capital.

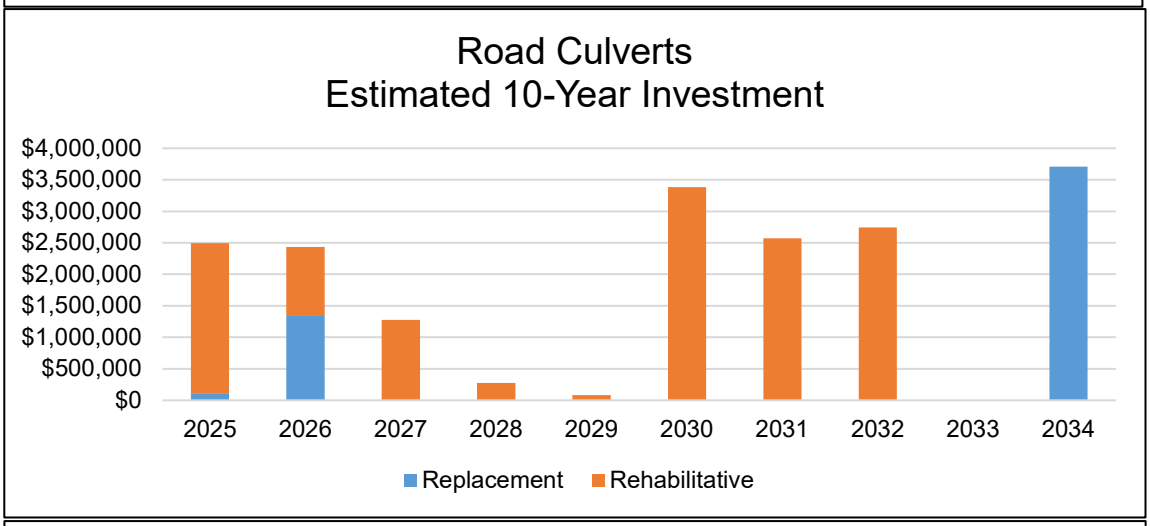
The 10-year estimated forecast shows an average annual investment of just over $4.2 million to maintain the current levels of service. Using Option 1 of increasing the total dedicated infrastructure levy identified in the Oshawa Financial Strategy, the annual investment in structure assets from Tax Levy and Canada Community Benefit Fund (previously Federal Gas Tax Funding), is $1.9 million. This results in an estimated annual funding gap of $2.3 million.

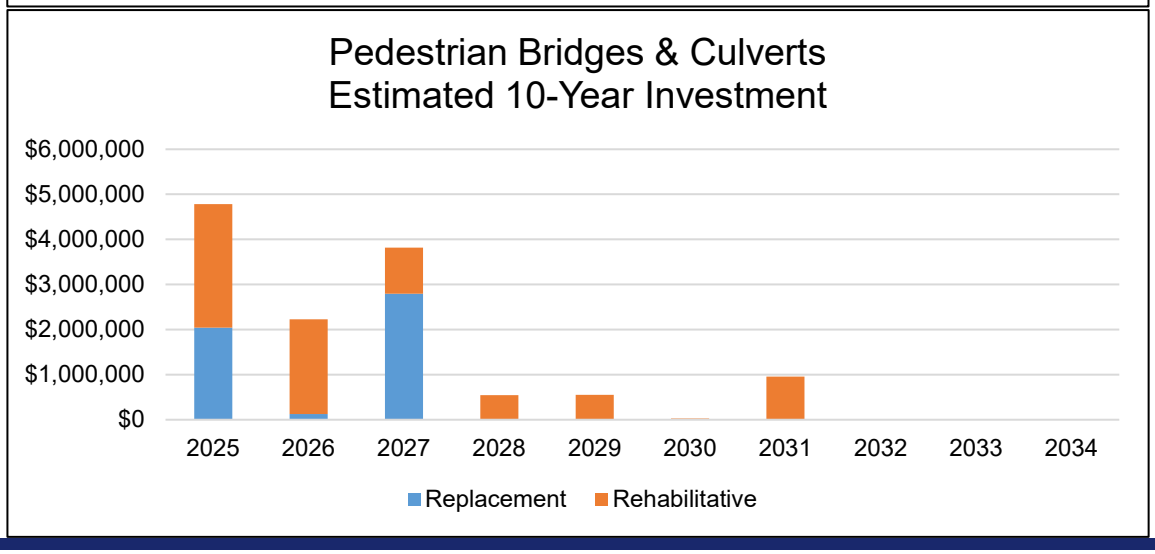


Structures

Lifecycle Management Strategies







Structures

Managing Growth – Capital and Operating Expenditure Forecast

The 2021 population for the City of Oshawa was 182,020 and is anticipated to increase to 239,390 by 2036.

Total Population	182,020	200,280	219,990	239,390
Total Households	66,640	73,800	81,450	89,060
Total Employment	63,740	70,600	78,070	85,250

Note:[1] Per 2025 Durham Regional Official Plan

The population growth is expected to result in incremental service demands that may impact the current level of service. In order to accommodate the projected increases in demand caused by growth, the City has undertaken a number of master planning studies which identify the need for new infrastructure and infrastructure service expansion. These growth-related needs are included in the City's 2024 Development Charges Background Study and the 10-year capital forecast. Utilizing development charges to fund the growth-related capital costs helps to ensure the results of future growth do not increase the cost of maintaining levels of service for existing taxpayers.

There are no significant maintenance or capital costs in the next 10 years related to growth-related infrastructure service expansion or assets acquired through subdivision assumptions. As the average useful life of structures are 80 years, the eventual replacement cost of the growth assets are not included in this plan but will eventually need to be funded by the City.

Some structures will be assumed through subdivision assumption agreements. The maintenance of these structures have not been incorporated.

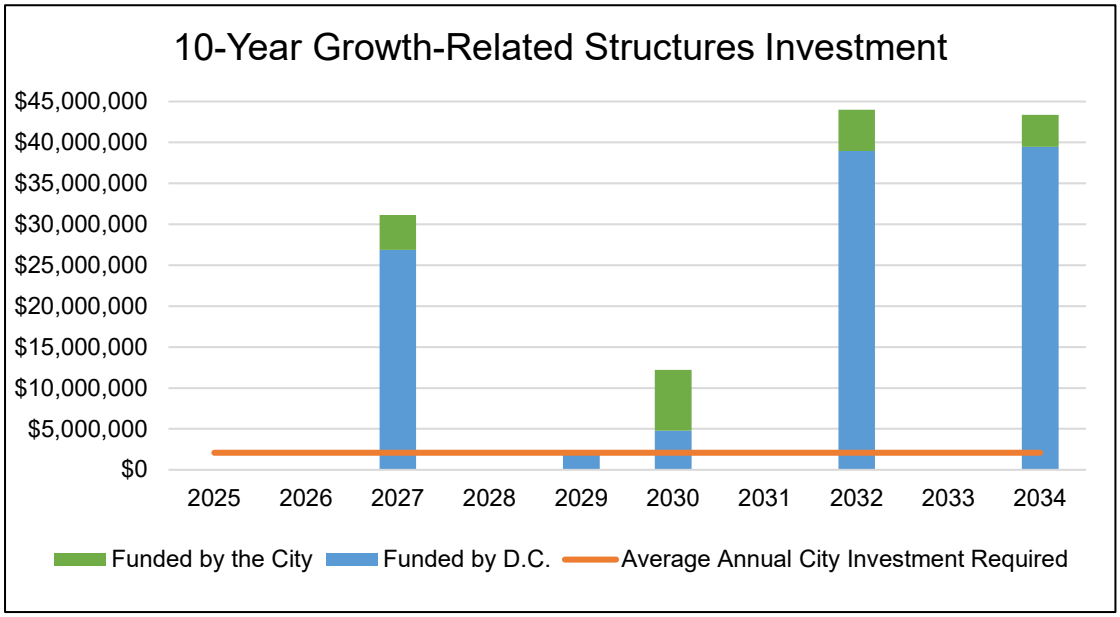
As part of our ongoing commitment to sustainable growth and infrastructure development, the City is actively pursuing grant opportunities to support and enhance our municipal services. Grants provide essential funding that helps cities accommodate growth, enhance services, relieve financial burdens on taxpayers, and support sustainable development. The city has applied for provincial and federal grant like the Housing Enabling Core (HEC) Servicing Stream grant for projects Britannia Bridge.

The City's Official Plan references that build-out is estimated to occur in 2051. The operating costs related to assumed assets are difficult to estimate and is really dependent on what future proposed levels of service are approved by Council. As asset management practices continue to mature and better information is gathered, more specific information relating to operating costs will be determined.

Structures

Managing Growth – Capital and Operating Expenditure Forecast

The 10-year forecast includes $132.9 million for new structures and the majority of these growth-related capital projects include a small proportion of improvements that benefit the existing residents. These costs are required to be funded by the City, while development charges pay for the majority of the cost. Over the 10-year forecast, there are 7 structures anticipated to be built which requires a total contribution from the City in the amount of $20.9 million (or an average annual amount of $2,089,000). Annually, the City budgets a contribution from operating to a Growth-Related Non-D.C. reserve to fund the City's portion of growth-related capital investments.



Appendix C

Stormwater Assets

May 2025

Stormwater Assets

Description of Stormwater Assets

Storm Sewer Line

Catch Basin

Stormwater Management Facility

- The goal of stormwater management is to maintain the health of streams, lakes, and aquatic life. The Municipal Act requires management of the collection of stormwater and other drainage from land.
- The City owns and maintains a 2 layered system – minor and major, which in combination are designed to manage a 100-year storm.
- Storm sewers are designed to convey flows during the most frequent rainfall events and are designed for a certain magnitude of storm events and thus make up what is called the “minor: drainage system.
- Flows that exceed the capacity of the storm sewers are conveyed along the ground surface (i.e. “overland”). The overland system makes up what is called the “major” drainage system since it conveys flows in excess of the minor system during larger magnitude, infrequent storm events.
- In addition to managing the minor and major systems, the City also provides these services related to land drainage:
  - Channel work (quality, erosion)
  - Water conveyance
  - Drainage
  - Flood prevention and control
  - Monitoring & Assessment (quality & quantity)

Stormwater Assets

Storm Sewer Assets	Qty	Estimated Replacement Cost
Sewer lines (kilometer)	505	$271,654,678
Manholes (each)	6,682	$70,680,997
Catch Basins (each)	12,314	$76,611,644
Inlets/Outlets (each)	392	$4,002,128
Services (kilometers)	47	$5,934,376
Total Storm Sewer		**$428,064,078**

F.D.C. Storm Sewer Assets	Qty	Estimated Replacement Cost
Sewer lines (kilometers)	107	$29,787,529
Manholes (each)	1,784	$18,533,135
Services (kilometers)	113	$13,455,019
Total F.D.C. Storm Sewer		**$61,775,682**

S.W.M.F. Assets	Qty	Estimated Replacement Cost
Stormwater Management Facilities	34	$31,615,974

Asset	Estimated Replacement Cost
Total Stormwater Assets	**$522,275,480**

Inventory is collected, tracked and maintained through the G.I.S.

The City owns a total of 612 kilometers of storm sewer lines and 34 Stormwater Management Facilities. The Stormwater Assets included in this plan have a total estimated replacement cost of $522,275,480 based on 2024 dollars.

Estimated replacement costs are based on a 3-year rolling average of unit costs, reflecting recent road construction contract costs and development costs from assumed subdivision assets.

The minor drainage system consists of assets within roads, parks, and parking lots.

1. Storm Sewer Assets – used to collect and convey stormwater directly to streams, rivers, and waterways.
2. Foundation Drainage Collection (F.D.C.) Storm Sewer Assets – collect and convey groundwater from private weeping systems directly to streams, creeks, rivers, and waterways.
3. Stormwater Management Facilities (S.W.M.F.) - also known as stormwater management ponds, provide water quantity, quality, and/or erosion control for the majority of recently developed areas.

Although a significant component of the stormwater system, the major drainage system for overland flow routes within creeks, ditches, and open spaces are not included in this A.M.P. as there is no reasonable process to estimate the replacement cost.

Stormwater assets identified here represent 13% of the total portfolio of assets.

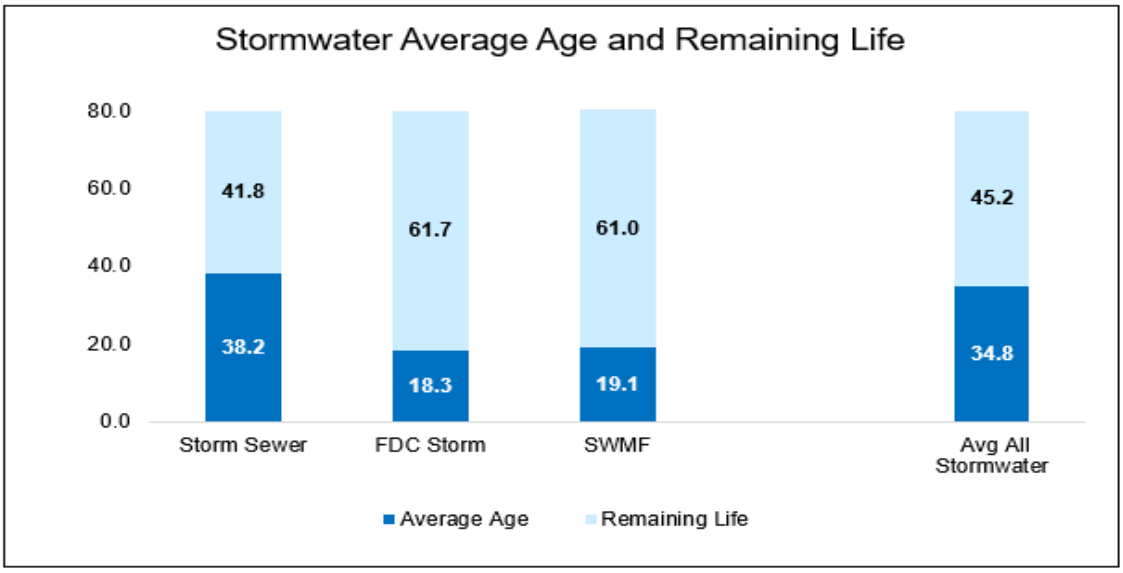
Stormwater Assets

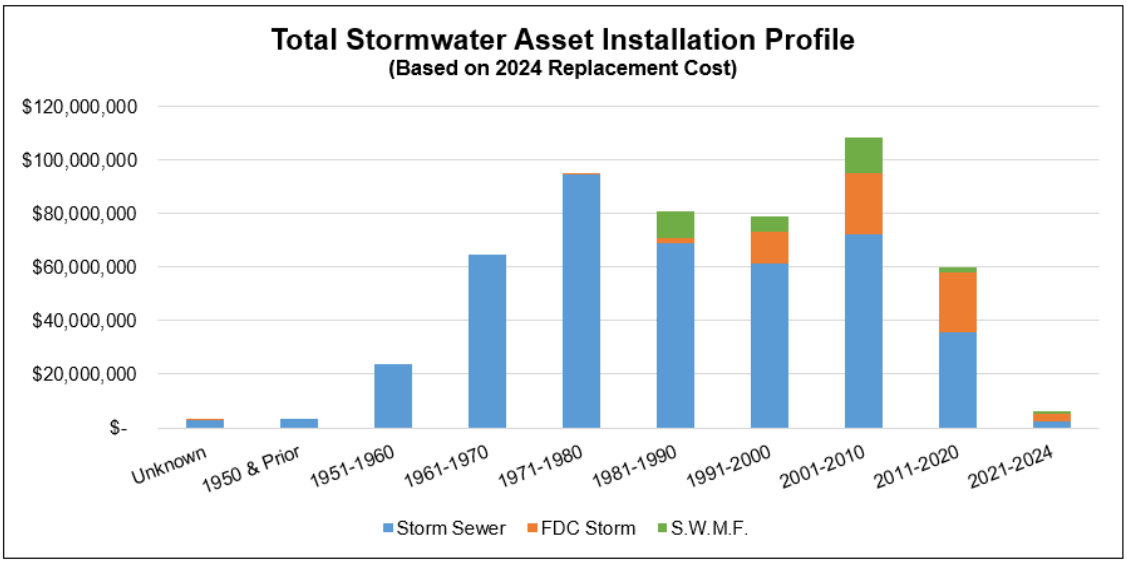
Average Age and Asset Installation Profile

Age is based on initial construction year and tracked by the different components within the stormwater system. The average age of the City's stormwater network is 34.8 years and is broken down by:

- 38.2 years for Storm Sewers
- 18.3 years for F.D.C. Storm Sewers
- 19.1 years for Stormwater Management Facilities

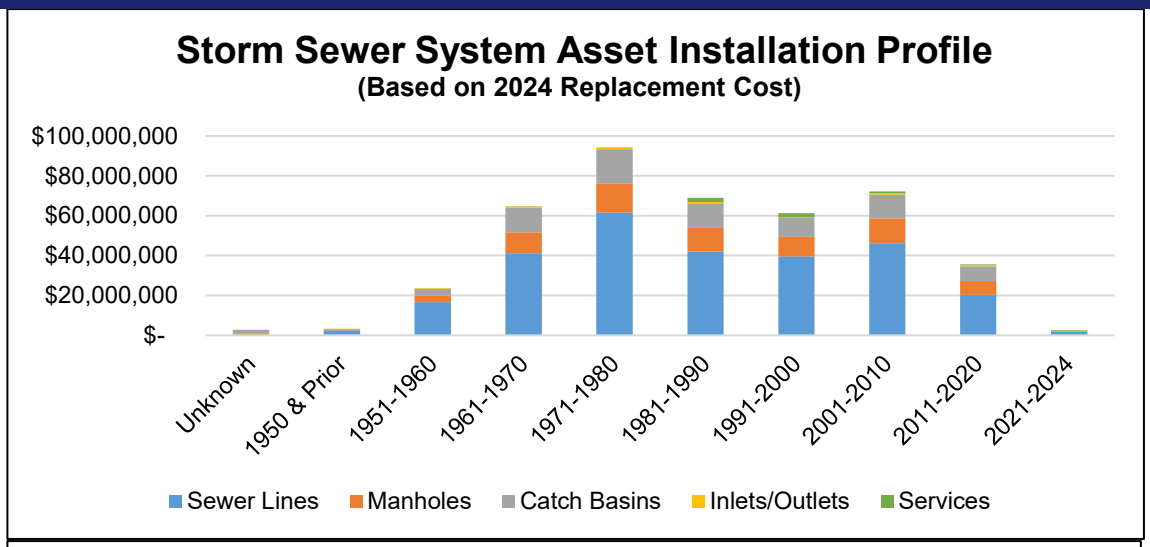
The service life of stormwater assets is estimated at 80 years, per industry standards.

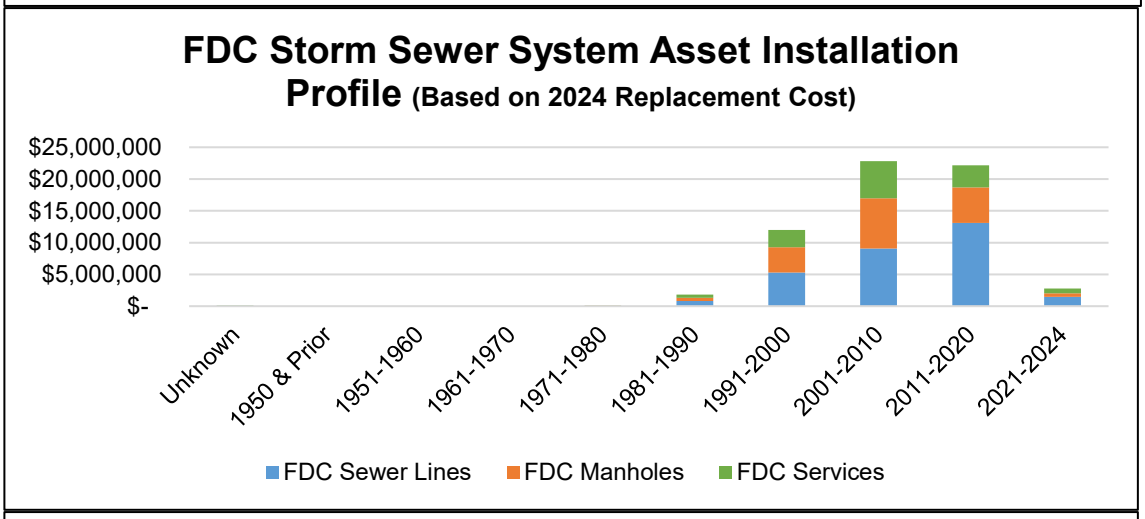


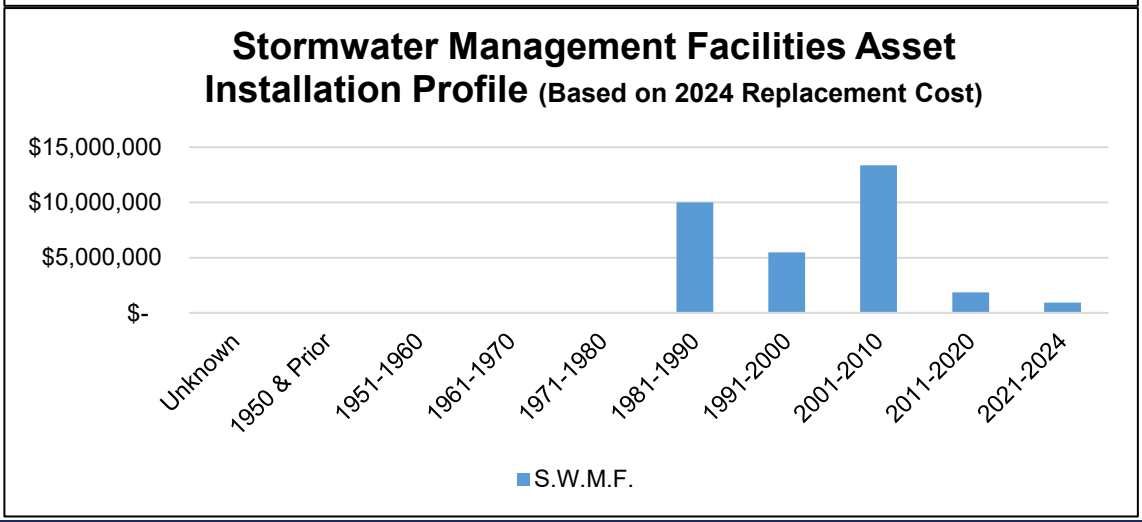


Stormwater Assets

Average Age and Asset Installation Profile







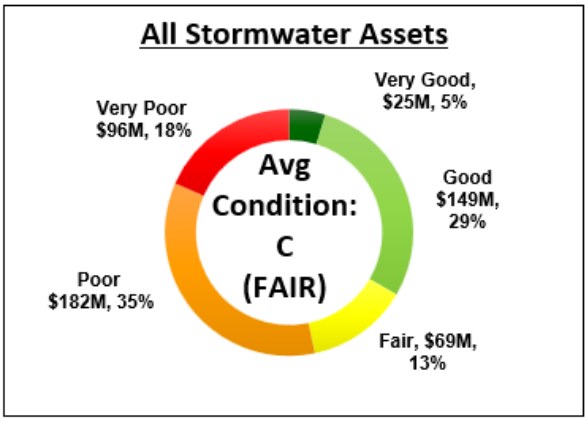
Stormwater Assets

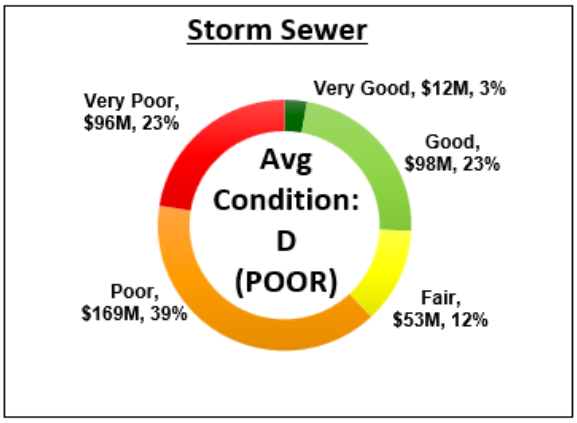
Condition

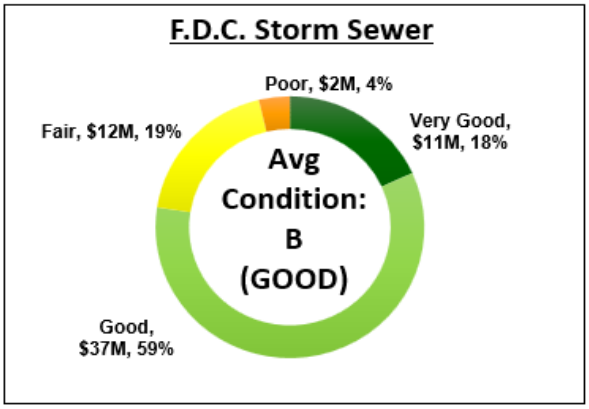
For the purposes of this asset management plan, age has been used to determine the condition, based on the estimated useful life of the assets. The measure used is the percentage of the estimated useful life consumed (UL %) based on each asset's age and the average life expectancy based on industry standards. Assets do undergo regular inspection, which identifies maintenance and repairs needs, but does not provide an overall condition rating of the asset.

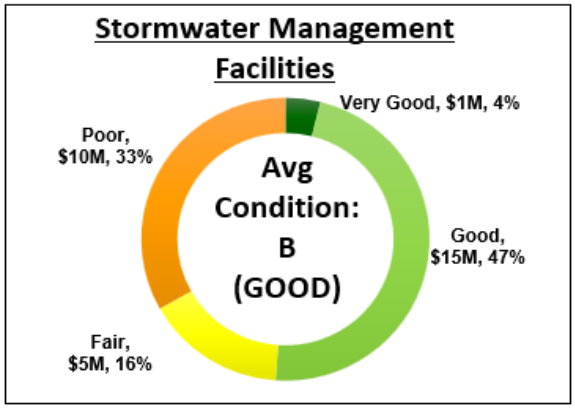
Overall, the City's stormwater assets are in FAIR condition (C Grade)

- D – Poor – Storm Sewer System
- B – Good – F.D.C. Storm Sewer System
- B – Good – Stormwater Management Facilities







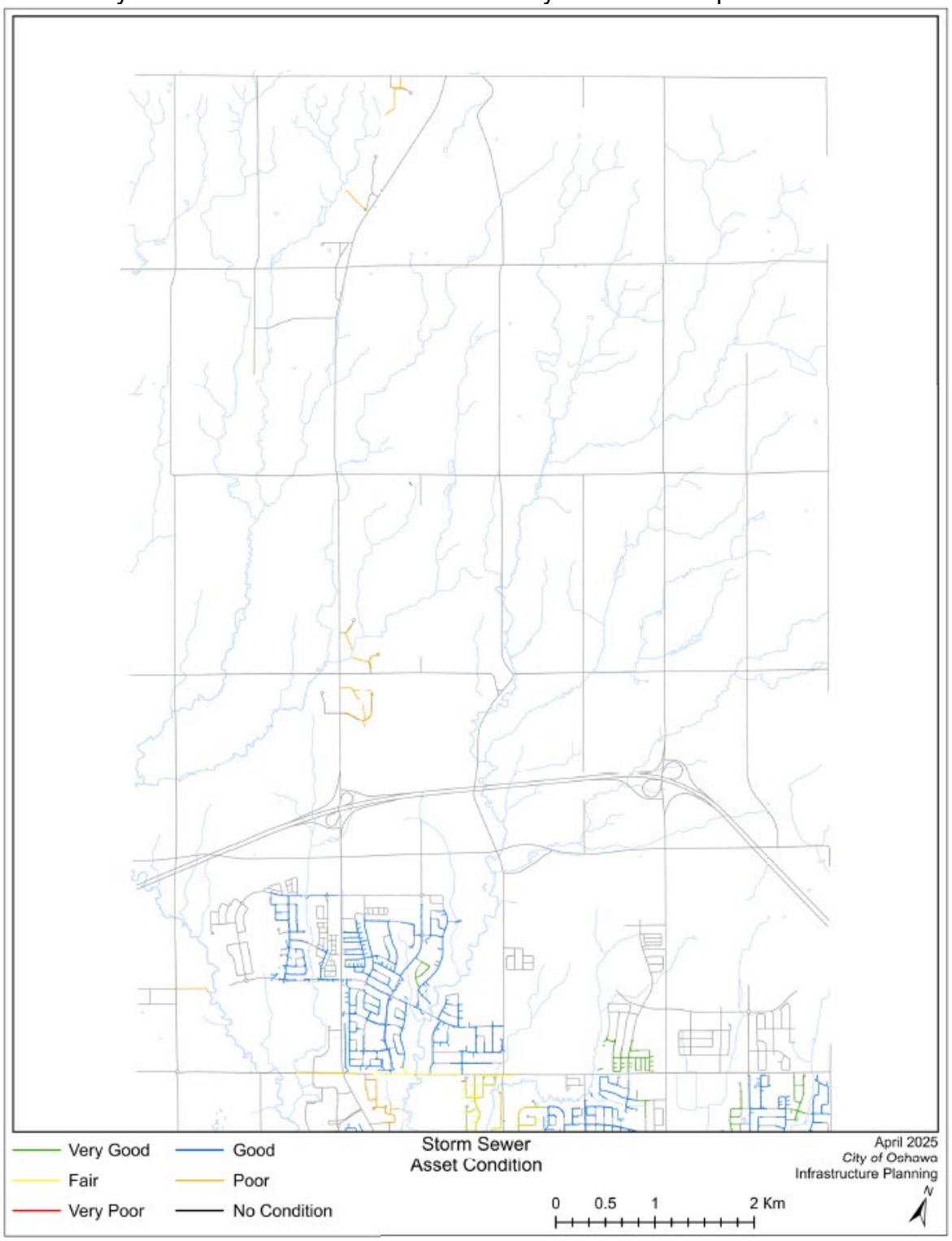


Stormwater Assets

Example of Sewer lines	Condition Rating	Grade	Category	Description
	90-100	A	Very Good	The stormwater assets are functioning as intended. Limited, if any, deterioration observed.
	70-90	B	Good	The stormwater assets are functioning as intended. No maintenance is anticipated within the next 5 years.
	60-70	C	Fair	The stormwater assets are functioning as intended. Normal deterioration and minor distress observed. Maintenance will be required within the next 5 years to maintain functionality.
	35-60	D	Poor	The stormwater assets are starting to not function as intended. Significant distress observed. Maintenance and some repair required within the next few years to restore functionality.
	0-35	E	Very Poor	The stormwater assets are not functioning as intended. Significant deterioration and major distress observed. Requires immediate attention.

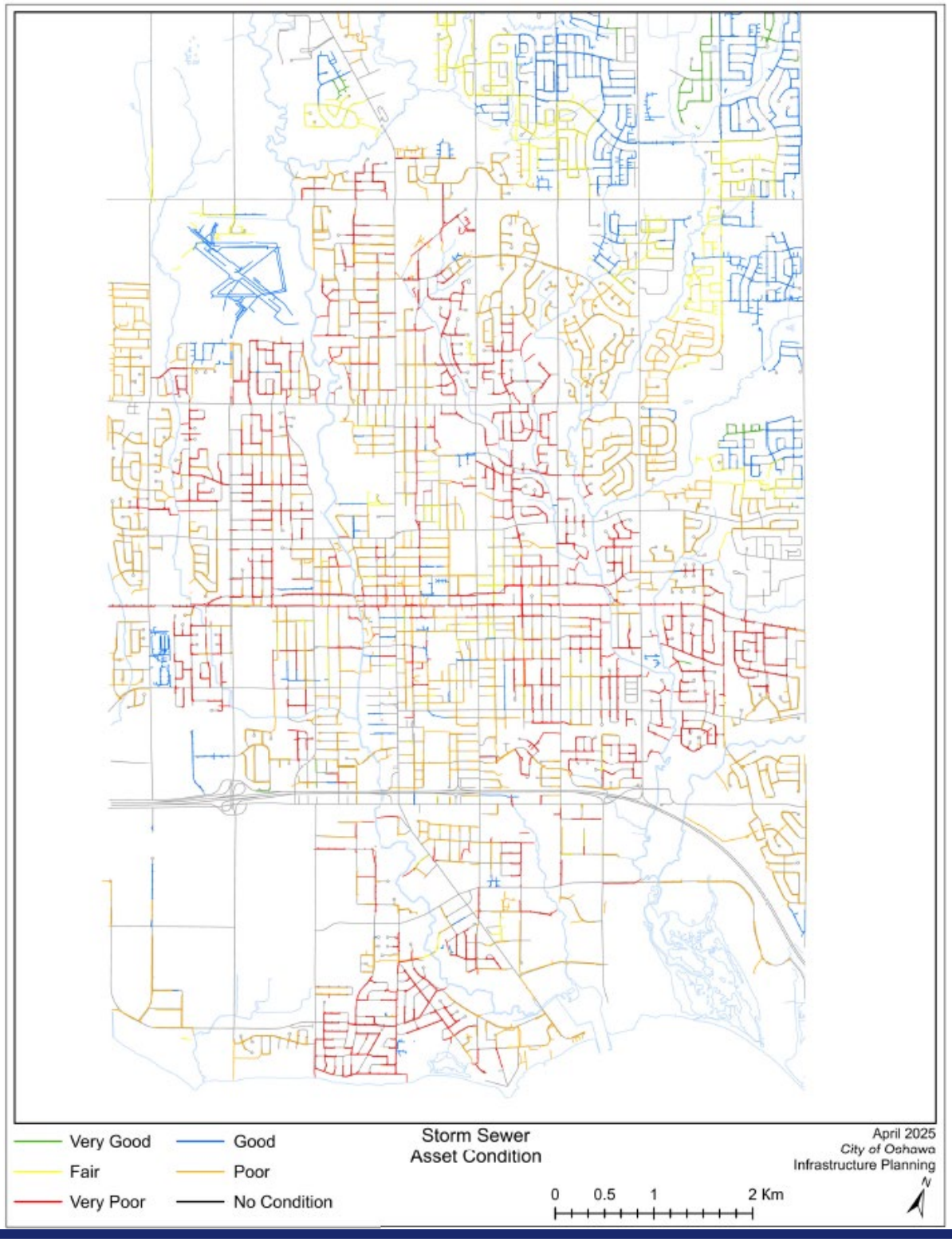
Stormwater Assets

City of Oshawa Storm Sewer Network by Condition Map – North Extent



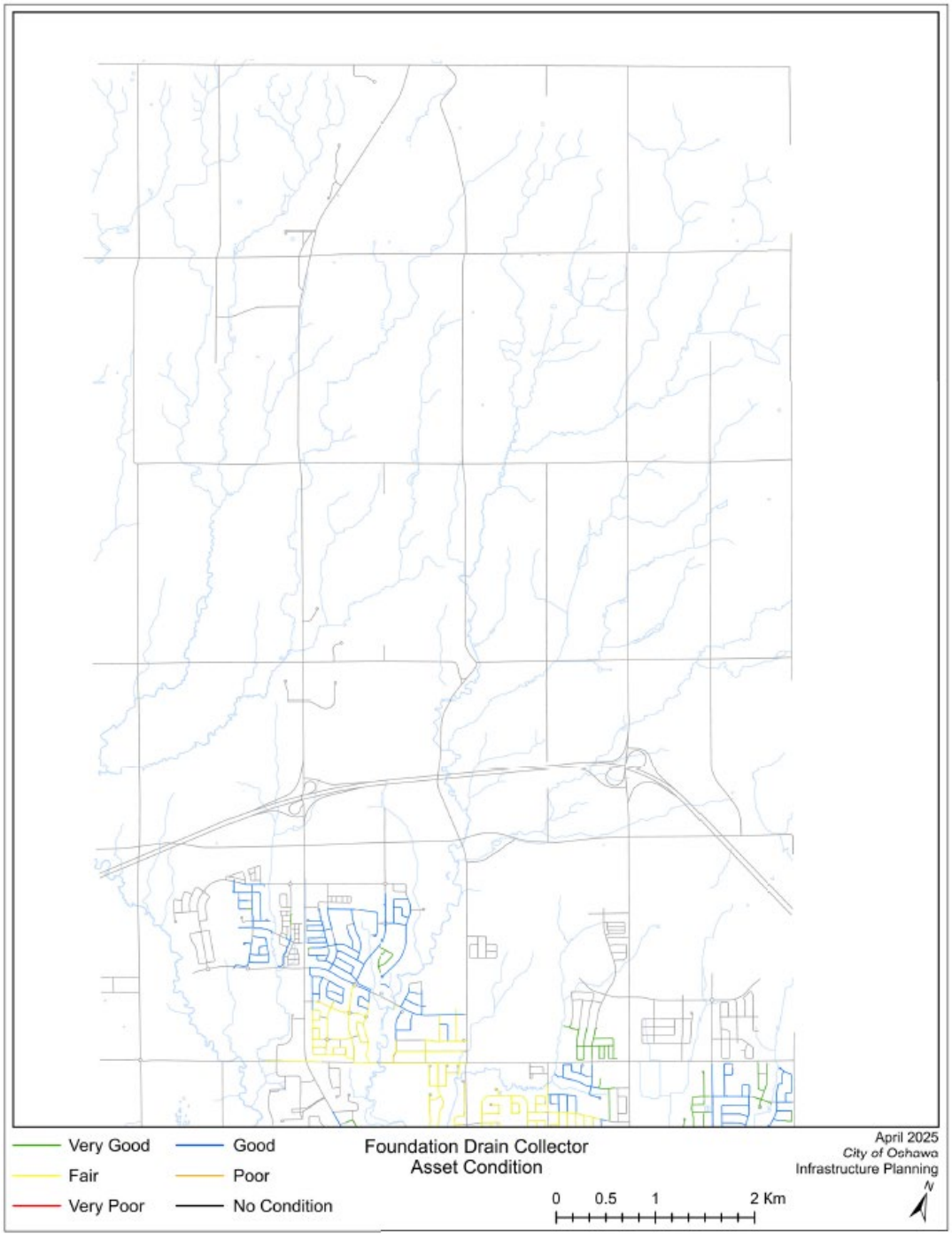
Stormwater Assets

City of Oshawa Storm Sewer Network by Condition Map – South Extent



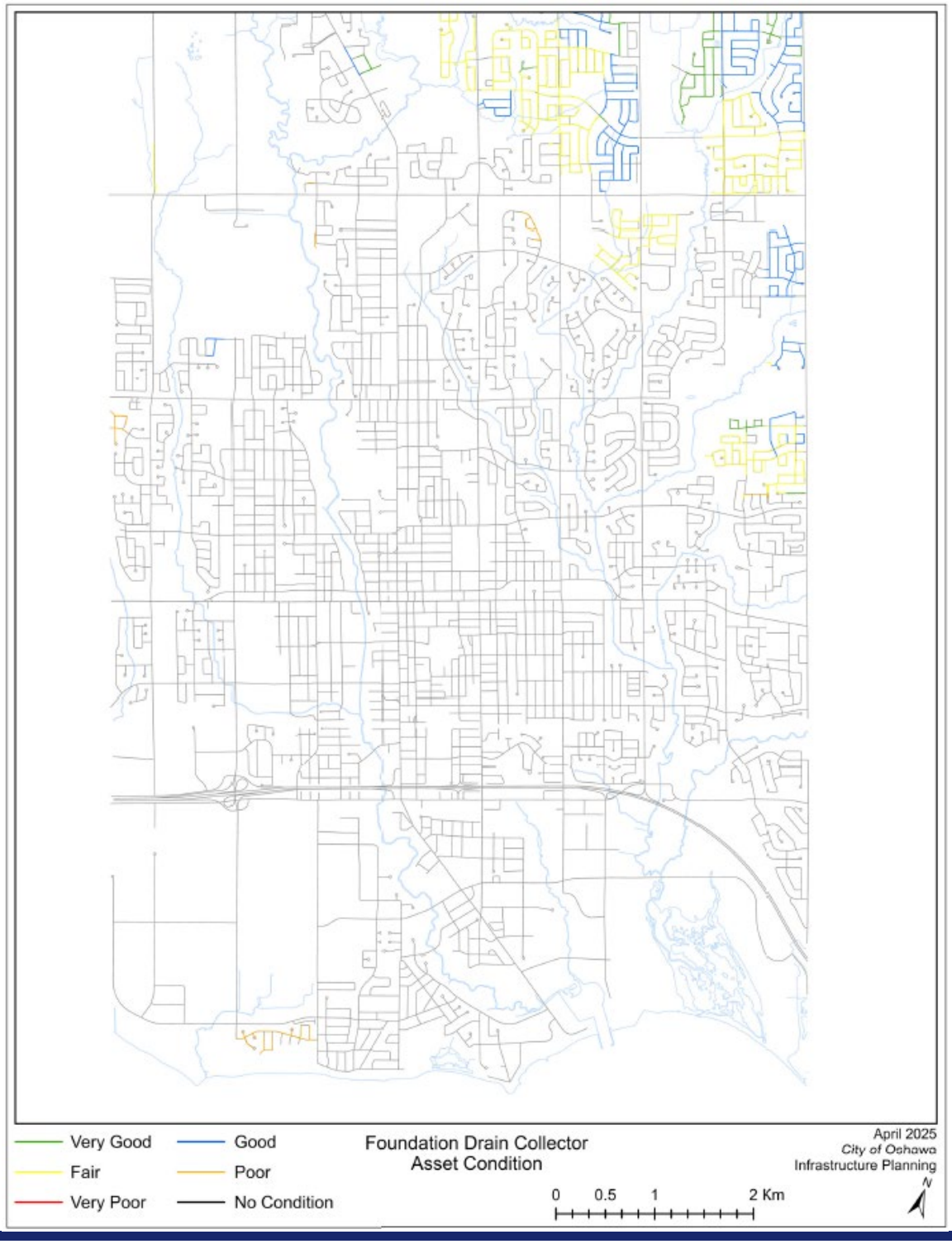
Stormwater Assets

City of Oshawa F.D.C. Storm Network by Condition Map – North Extent



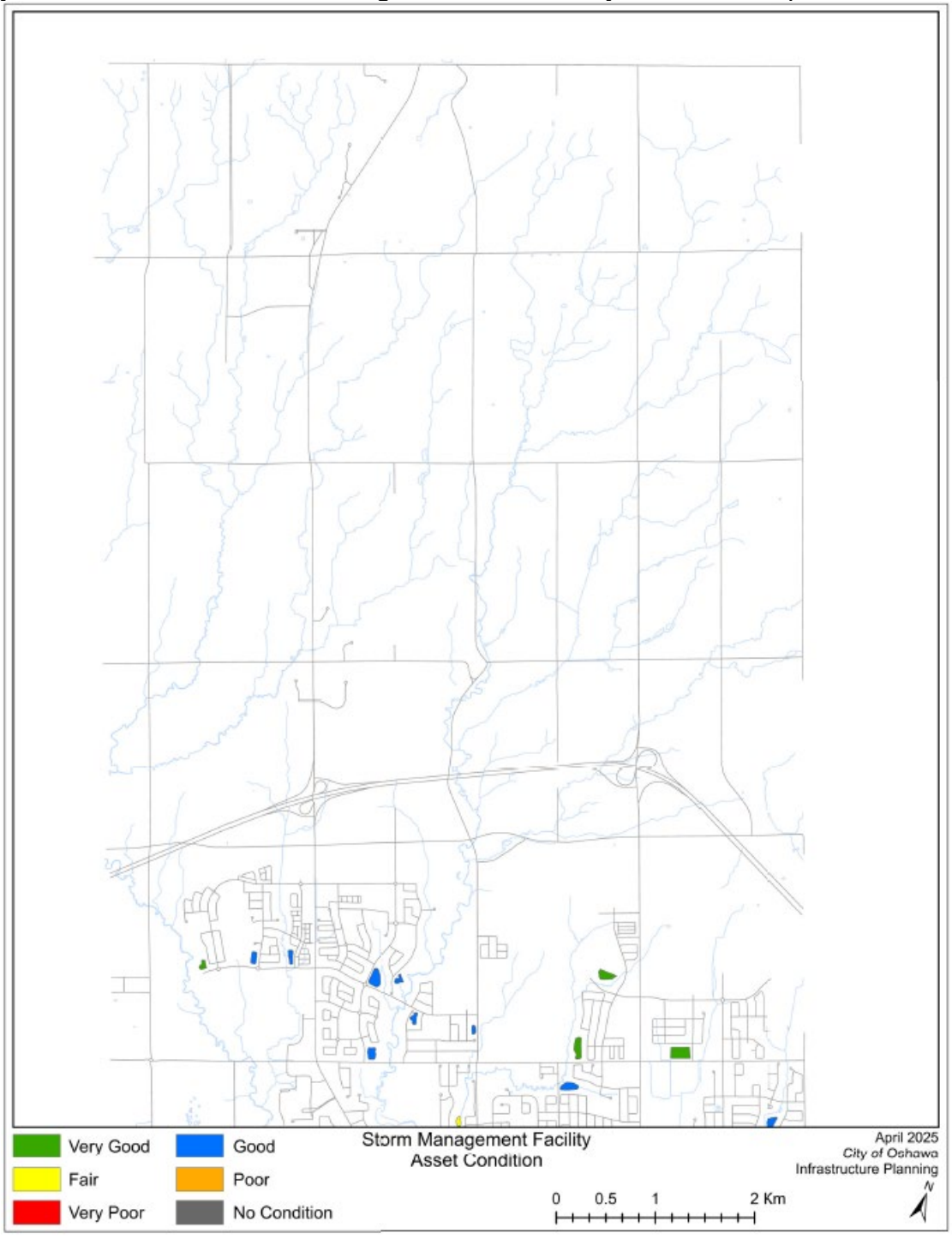
Stormwater Assets

City of Oshawa F.D.C. Storm Network by Condition Map – South Extent



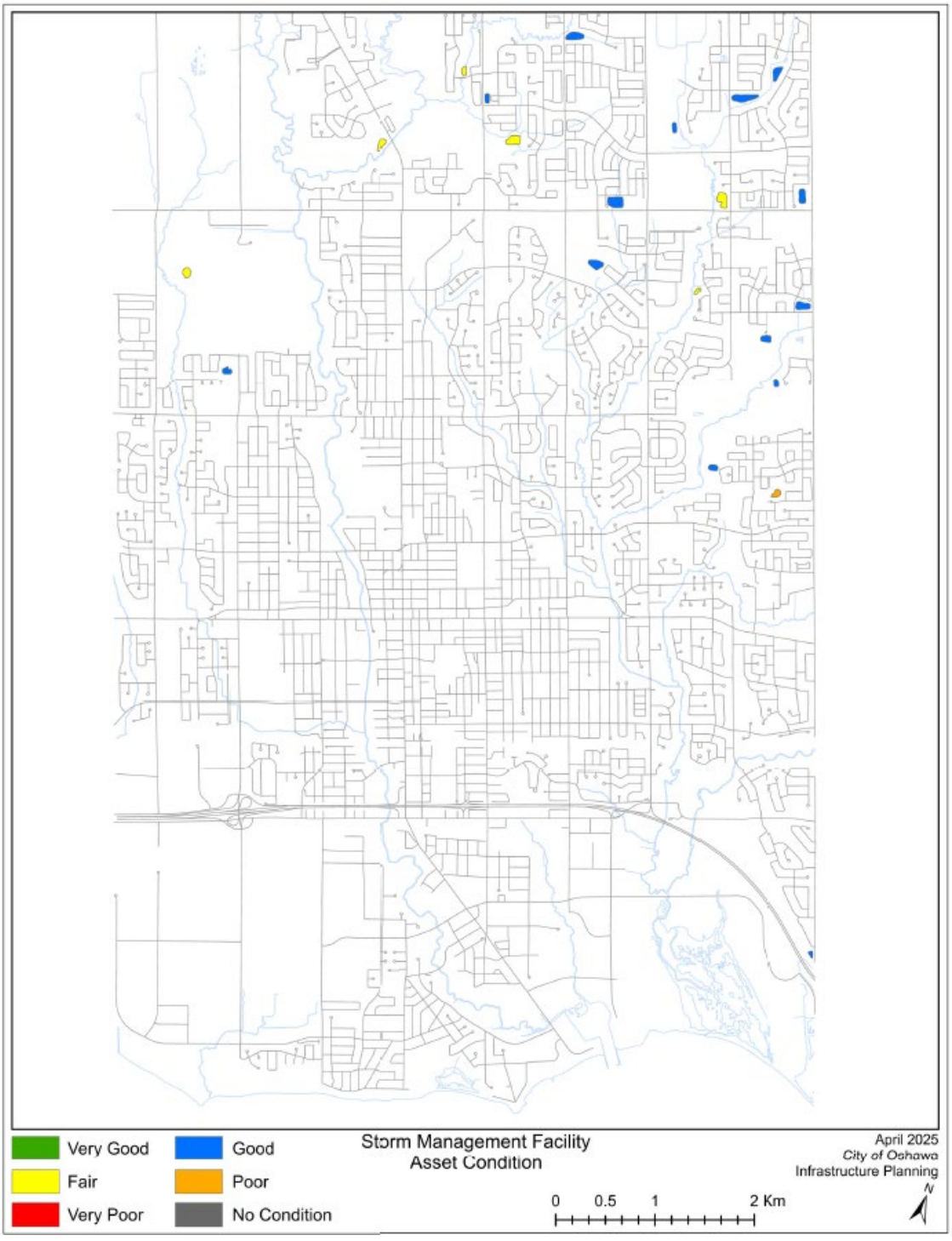
Stormwater Assets

City of Oshawa Stormwater Management Facilities by Condition Map – North Extent



Stormwater Assets

City of Oshawa Stormwater Management Facilities by Condition Map – South Extent



Stormwater Assets

Levels of Service – Current and Proposed

Preliminary levels of service for the City's stormwater assets are below. These were established based on:

- Oshawa Strategic Plan 2024-2027
- Oshawa Financial Strategy 2025-2029
- Development Services Business Plan 2021
- Ontario Regulation 588/17 requirements and guidelines

Technical and Community-based specific service levels and current performance are highlighted in the subsequent tables and sections below. City staff continually monitor performance.

Moving forward, City staff will update levels of service and performance for the stormwater assets as a new Stormwater Master Plan is completed. Other plans and studies are updated over time.

Stormwater Assets

Levels of Service – Current and Proposed

The table below shows one option for investment in our stormwater assets. Other options were considered, but without asset management software, the confidence level was too low to formalize and include in our report. Future iterations will consider additional options, once software is obtained, and a higher level of confidence can be obtained.

Storm Water	Option 1: Financial Strategy – Storm Sewer	Option 1: Financial Strategy – FDC	Option 1: Financial Strategy – S.W.M.F
2025 A.M.P. % Fair or Better Condition	41%	96%	67%
Average Annual Investment	$578,804	$83,370	$42,668
2034 % Fair or Better Condition	24%	70%	40%
Condition Trend	Decrease	Decrease	Decrease

Option 1: shows incremental investment, into the capital reserves, as a key recommendation of the Oshawa Financial Strategy. Specifically, this shows an increase in the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026.

Stormwater Assets

Levels of Service and Related Risks

The following table outlines identified risks to delivering the levels of service as well as potential impacts and mitigating actions.

Identified Risk	Potential Impact	Mitigating Actions
Failed Equipment / Infrastructure	• The condition of stormwater assets directly affects their reliability, with deteriorating assets leading to more frequent service interruptions • Negative press leading to further safety concerns	• Repair and rehabilitate as necessary • Routine inspections via CCTV • Explore different lifecycle strategies to optimize asset management, including preventive maintenance, rehabilitation, and replacement
Inadequate Funding	• Delivery of service • Increased risk of failure • Shorten asset life • Defer cost to future generations	• Reduction of levels of service • Find additional revenue sources • Explore different lifecycle strategies to optimize asset management, including preventive maintenance to lower total lifecycle expenditures • Utilize provincial and federal grants and funding programs to support infrastructure investments, maximizing available resources
Regulatory Requirements	• Non-compliance • Mandatory investments • Increase costs	• Reduction or alteration of services • Find additional revenue sources • Utilize provincial and federal grants and funding programs to support infrastructure investments,

		maximizing available resources
Strategic Documents Unharmonized with Future Needs	• Increasing population and urbanization put pressure on existing stormwater systems, leading to congestion and reduced capacity • Limited funding can restrict the ability to expand or upgrade stormwater infrastructure to meet growing demand	• Planning stormwater assets and levels of service that respond to the needs of people living in Oshawa • Investigate and implement design standards that enhance the resilience and efficiency of stormwater assets, considering factors such as climate change and technological advancements • Engage with the community through public consultations and transparent communication to gather input and build support for infrastructure projects.
Plans are not Followed / Not Undertaking the Required Lifecycle Activities	• Shorten asset life • Inefficient investments • Failure to deliver desired levels of service	• Monitor, review and report on asset management activities • Explore different lifecycle strategies to optimize asset management, including preventive maintenance, rehabilitation, and replacement

- Failed Infrastructure - can be a result of age, condition, vandalism, or climate change impacts to name a few.
- Inadequate funding could be based on changing shifts of needs within the portfolio of assets and services in the Asset Management Plan.
- Regulatory requirements could be based on changes to legislation impacting services and assets.
- Strategic documents being unharmonized could result from forecasting assumptions being inaccurate.
- Plans not being followed or lifecycle activities not actioned could result from many reasons, some examples are shortages of staff, inability to procure replacements on a timely basis, and competing priorities.

Stormwater Assets

Technical Levels of Service and Current Performance

Service Attribute	Technical Levels of Service[1]	2021 A.M.P L.O.S.	2025 A.M.P. L.O.S.[2]	2034 Proposed L.O.S.
Scope	Percentage of properties in the City resilient to a 100-year storm.	96%[1]	97%[1]	97%[1]
Scope	Percentage of the City stormwater management system resilient to a 5-year storm.	90-95%	93-97%	93-97%
Quality	% of Stormwater Assets in Fair or Better Condition	53%	47%	31%

Note:
[1] Ontario Regulation 588/17, Asset Management Planning for Municipal Infrastructure
[2] Current performance is based on the City's subject matter expert opinion

Stormwater Assets

Community - Current Levels of Service

Stormwater management includes grey infrastructure and green infrastructure. Grey infrastructure includes assets such as storm sewers, roadway culverts, inlets, outfalls, and ponds. While green infrastructure includes open spaces and parkland that is designed to be a part of the City's overland flow routes (designed to convey stormwater from the right of way to creeks). This includes low impact development features, and natural heritage components such as forests and wetlands.

Urban flooding refers to the surcharging of the minor storm sewer system, and often results in basement flooding, while riverine flooding occurs when the major stormwater management system is unable to protect against flooding and damage to buildings and infrastructure. Oshawa's system uses traditional engineering methods to determine the sizing of the sewers, however with shorter inlet entry time. Oshawa's sewer design maintains an adequate level of service when coupled with the City's major system that is designed to manage flows in excessive of the storm sewer capacity. This approach has proven to effectively reduce risk of flooding in basements and private property.

To achieve the goal of stormwater management is to maintain the health of streams, lakes, and aquatic life, as well as provide opportunities for human uses of water by mitigating the effects of urban development. The City strives to:

- Maintain the natural hydrologic cycle
- Prevent an increased risk of flooding
- Prevent undesirable stream erosion
- Protect water quality

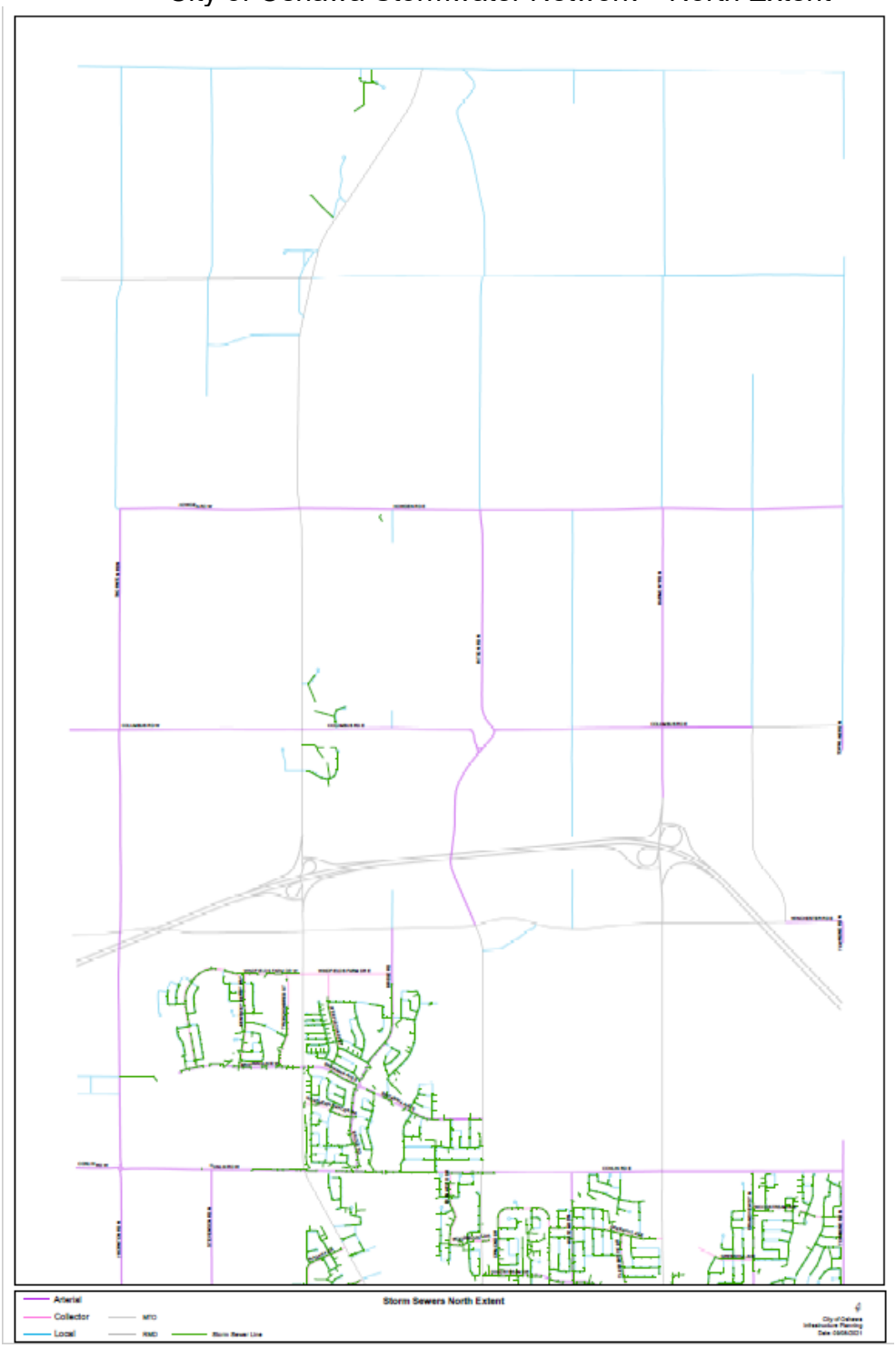
The City's upcoming Stormwater Management Master Plan will help the City of Oshawa to see opportunities for improving the knowledge of the risks, methods for planning that support growth and intensification, and decision-making regarding municipal stormwater infrastructure, grey, green, and even our natural assets. The City will also work with partners to ensure the City is resilient to climate change and continue to shift towards a focus on environmental sustainability across the larger watershed.

A map highlighting the City's stormwater network is below.

Stormwater Assets

Community - Current Levels of Service

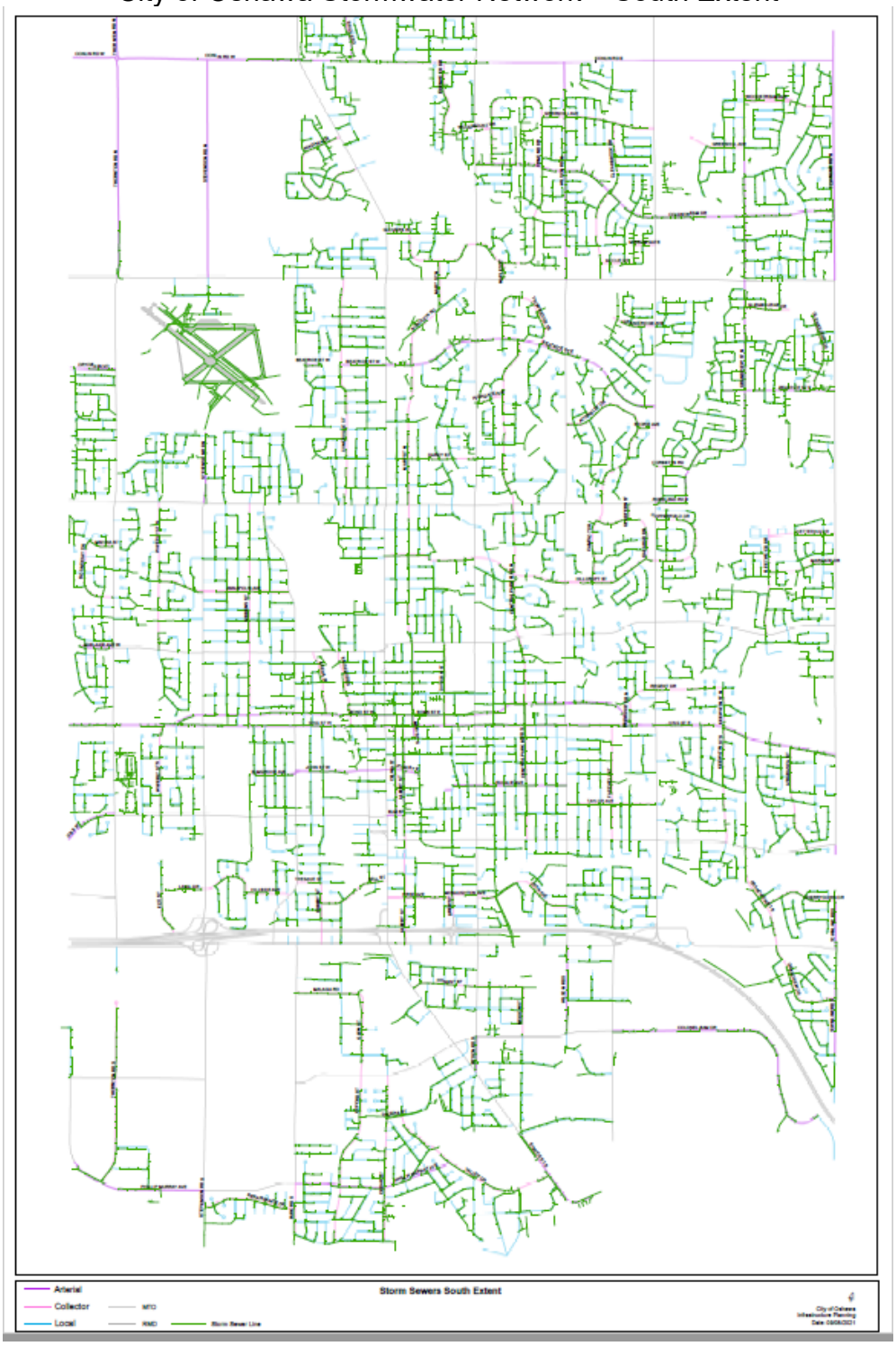
City of Oshawa Stormwater Network – North Extent



Stormwater Assets

Community - Current Levels of Service

City of Oshawa Stormwater Network – South Extent



Stormwater Assets

Lifecycle Management and Financial Strategy

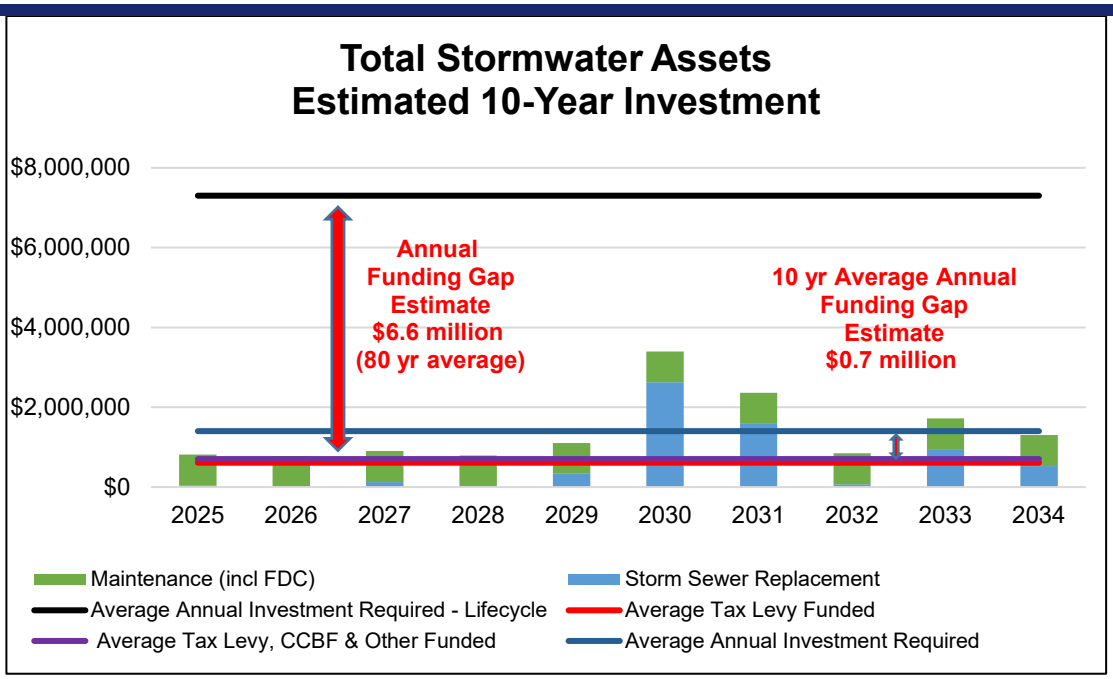
Storm sewer assets undergo regular cleaning and inspection which identify proactive and reactive maintenance and repair requirements. C.C.T.V. (Closed Circuit Television) inspections are performed annually which includes approximately 25 kilometers or 1/20th of the storm sewer network.

The City currently only performs replacement lifecycle activities for the storm sewer and F.D.C. storm sewer assets. The replacement forecast determined for the purposes of this asset management plan is solely based on replacing the asset at the end of its useful life. As the F.D.C. storm sewer assets are relatively new, there are no anticipated capital replacements in the next 40 years.

There are other factors that influence the timing of replacement, such as the timing of the reconstruction of the road in the existing right of way, coordination with the Region of Durham for replacement of water and sewer assets, as well as any inspections that show significant deterioration of the assets.

The 10-year estimated forecast shows an average annual investment of just over $1.4 million to maintain the current levels of service. Using Option 1 of increasing the total dedicated infrastructure levy identified in the Oshawa Financial Strategy, the annual investment in stormwater assets from Tax Levy and Canada Community Benefit Fund (previously Federal Gas Tax Funding) is $0.7 million. This results in an estimated annual funding gap of $0.7 million.

The 80-year estimated forecast shows a much larger average annual investment gap of $6.6 million to maintain the current levels of service. This is due to the age profile of the assets. In future years, as the assets need to be replaced at the end of their lifecycle, more significant investments will be required to maintain the network.


Total Stormwater Assets
Estimated 10-Year Investment
$8,000,000
$6,000,000
$4,000,000
$2,000,000
$0
Annual
Funding Gap
Estimate
$6.6 million
(80 yr average)
10 yr Average Annual
Funding Gap
Estimate
$0.7 million
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
Maintenance (incl FDC)
Storm Sewer Replacement
Average Annual Investment Required - Lifecycle
Average Tax Levy Funded
Average Tax Levy, CCBF & Other Funded
Average Annual Investment Required

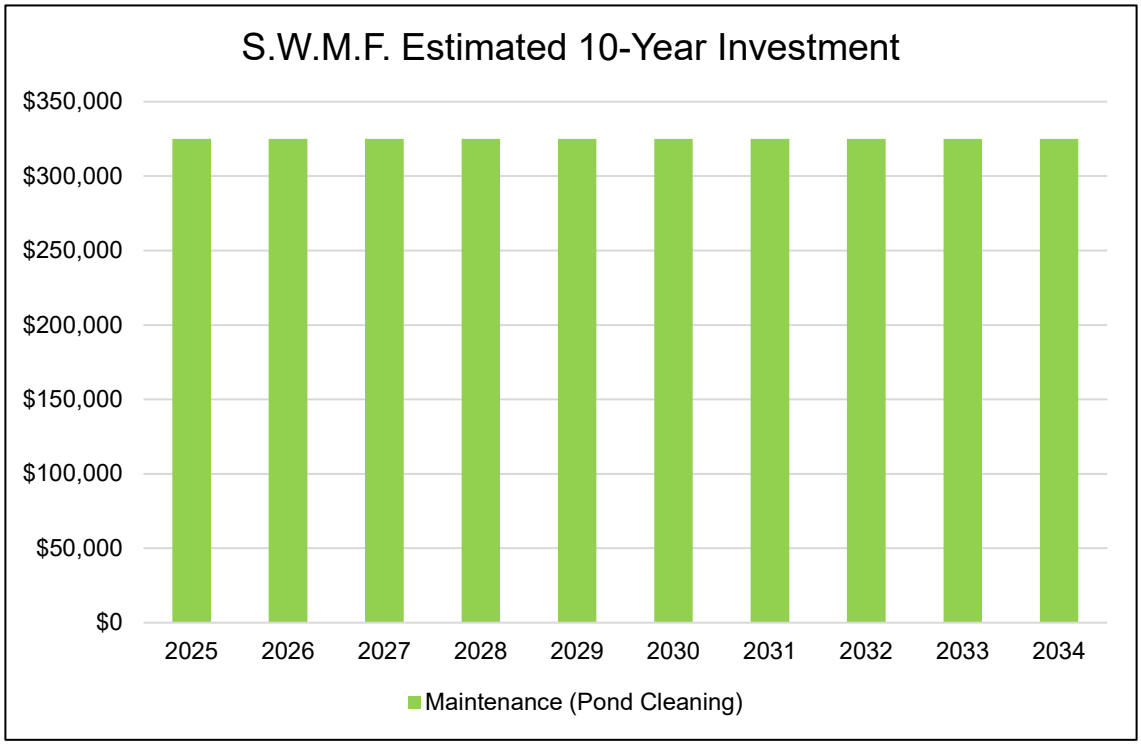
Stormwater Assets

Lifecycle Management Strategies

Stormwater Management Facilities (S.W.M.F.) are relatively new and are expected to have long lives. The majority of the S.W.M.F. construction costs originate from excavating the initial basin. As such, the initial capital expenditure is a one-time only cost. The ongoing expense will occur as it relates to maintenance and sediment control through a cleaning process. Each facility should be cleaned approximately every 10 years, to maintain full serviceability of these critical components.

Visual inspections are completed several times a year to determine the facilities that are required to be cleaned. One pond is cleaned out per year based on affordability, not on actual needs. The pond cleaning program is underfunded.

In order to assist with the future lifecycle costs, City Council endorsed a Stormwater Pond Maintenance Fee Policy in 2016 that requires developers to pay a fee that will be used for one future clean-out of a pond.

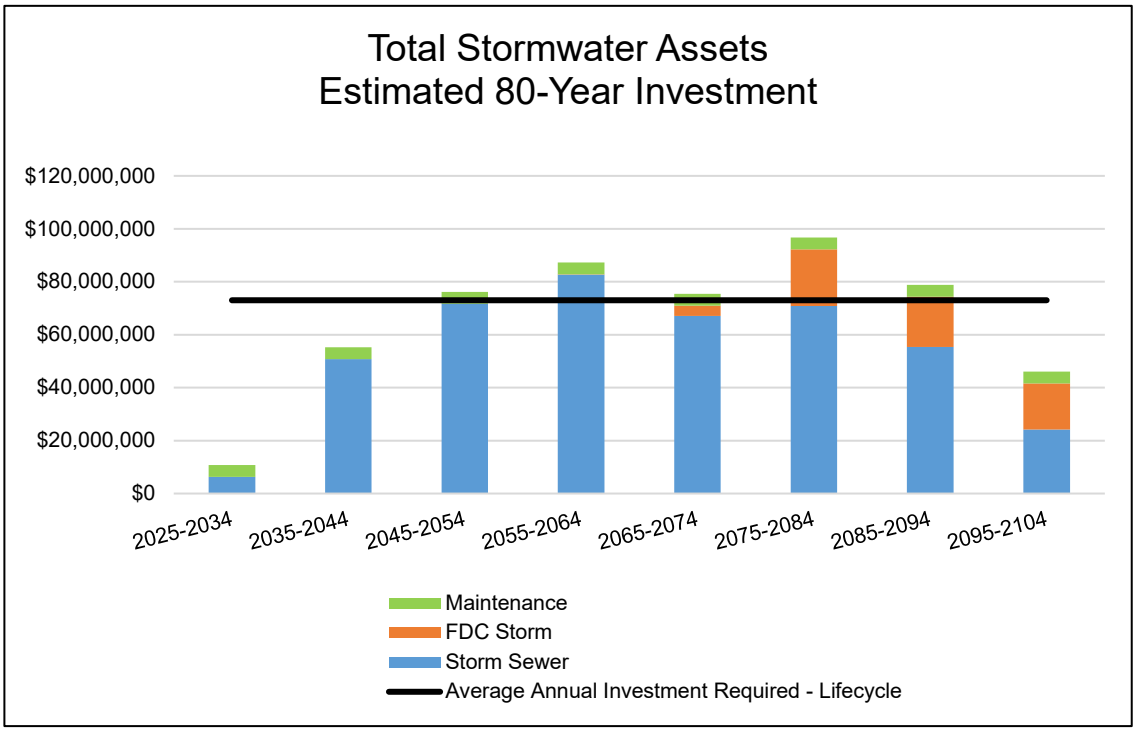


Stormwater Assets

Lifecycle Management Strategies

Ontario Regulation 588/17 requires municipalities to include the costs required to maintain the current levels of service for the next 10-year period. Best practices recommend including a long-range forecast for up to 100-years.

The figure below represents the long-range forecast of estimated expenditures required for stormwater assets, which aligns with the full 80-year estimated service life. As asset management plans are to be updated every five years, these amounts will continue to be refined based on new information and potentially new technology.



Stormwater Assets

Managing Growth – Capital and Operating Forecast

The 2021 population for the City of Oshawa was 182,020 and is anticipated to increase to 239,390 by 2036.

City of Oshawa[1]	2021	2026	2031	2036
Total Population	182,020	200,280	219,990	239,390
Total Households	66,640	73,800	81,450	89,060
Total Employment	63,740	70,600	78,070	85,250

Note: [1] Per 2025 Durham Regional Official Plan

The population growth is expected to result in incremental service demands that may impact the current level of service. In order to accommodate the projected increases in demand caused by growth, the City has undertaken several master planning studies which identify the need for new infrastructure and infrastructure service expansions. These growth-related needs have been included in the City's Development Charges Background Study and the 10-year capital forecast. Utilizing development charges to fund the growth-related initial capital costs helps to ensure the results of future growth do not increase the cost of maintaining levels of service for existing taxpayers.

There are no significant maintenance or capital costs in the next 10 years for growth-related infrastructure service expansions or assets acquired through subdivision assumptions. As the average useful life of stormwater assets is 80 years, the eventual replacement cost of the growth assets are not included in this plan but will eventually need to be funded by the City.

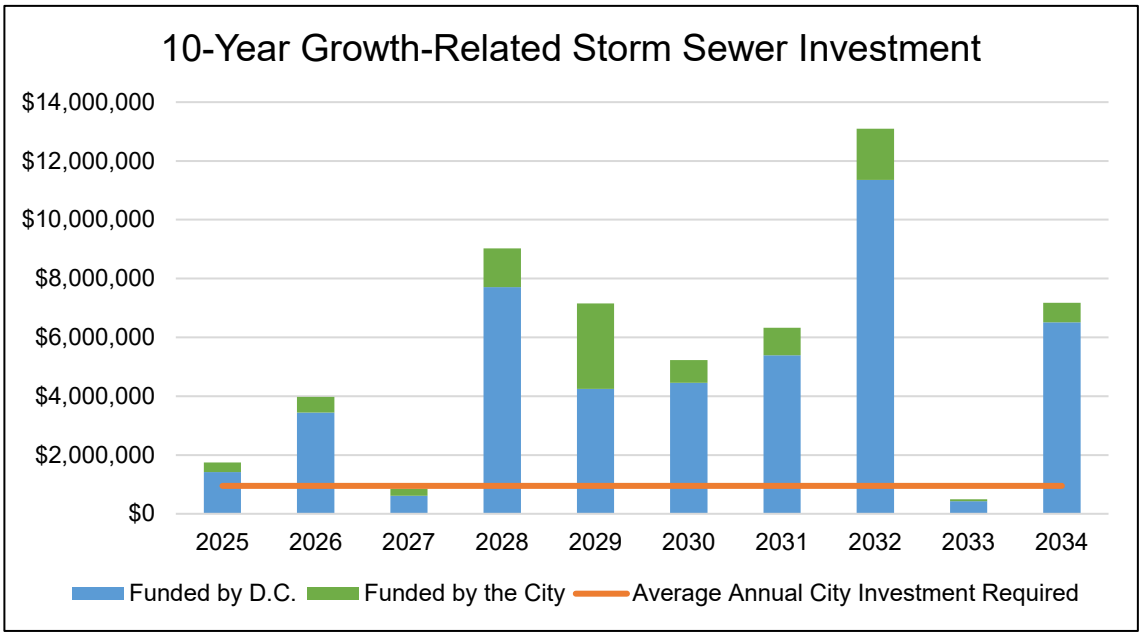
The majority of new stormwater assets will be assumed through subdivision assumption agreements. The maintenance of these assets has not been incorporated.

The City's Official Plan references that build-out is estimated to occur in 2051. The operating costs related to assumed assets are difficult to estimate and is dependent on what future proposed levels of service are approved by Council. As asset management practices continue to mature and better information is gathered, more specific information relating to operating costs will be determined.

The majority of growth-related capital projects include a small proportion of improvements that benefit the existing residents. These costs are required to be funded by the City, while development charges pay for the majority of the cost. Over the 10-year forecast, the average annual contribution required for the non-growth-related capital portion of stormwater assets is $949,000. Annually, the City budgets a contribution from operating to a Growth-Related Non-D.C. reserve to fund the City's portion of growth-related capital investments.

Stormwater Assets

Managing Growth – Capital and Operating Forecast



Appendix D

Oshawa Executive Airport (CYOO)

May 2025

Airport Assets

Description of Airport Assets

The City of Oshawa owns and operates the Oshawa Executive Airport, through a third-party contractor. The Oshawa Executive Airport was one of the many Airports that were transferred to local governments as a result of the 1994 National Airports Policy.

In 1997, the City of Oshawa signed a 50-year Operating and Options Agreement with the Federal government for the operation of the Airport. As a result, the City is required to operate the Airport until 2047.

The Airport plays an important role in supporting emergency services, general aviation, and attracting and retaining aviation businesses in the area.

Oshawa's Airport is an executive level regional airport centrally located within the City of Oshawa and the Region of Durham.

The Oshawa Executive Airport is the only business and general aviation airport within the Region of Durham and features:

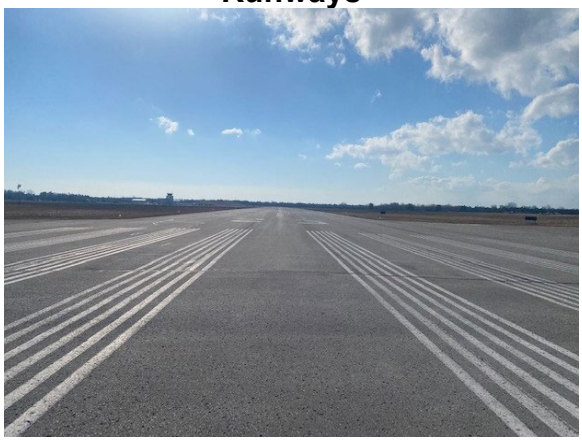
- A modern terminal building supporting charter service and corporate business travel;
- Dual runways able to service a broad range of aircraft;
- Modern navigational aids including GPS based instrument approaches;
- Canada Customs and Border Services on demand;
- Automated weather observation system (AWOS);
- A NAV Canada Control Tower; and,
- A variety of aviation services such as aviation fuel, maintenance and logistical support.

Flight training, air ambulance, passenger charter services, freight services, aerial police operations, aircraft maintenance, and aircraft restoration services are all provided at the airport.

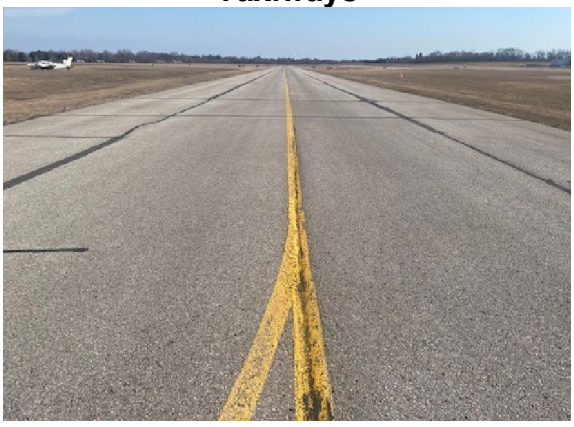
Airport Assets

Description of Airport Assets

Runways



Taxiways



Aprons

Runways:

- Runway 12-30 (1219m x 30m)
- Runway 15-23 (814mx30m)
- Includes: pavement, approach lighting, edge lighting, wind direction indicators, and field electrical center assets (pavement, regulators, lighting and generator)

Taxiways:

- Taxiway Alpha
- Taxiway Bravo
- Taxiway Charlie South
- Taxiway Charlie Mid
- Taxiway Charlie North
- Taxiway Delta
- Includes: pavement and edge lighting

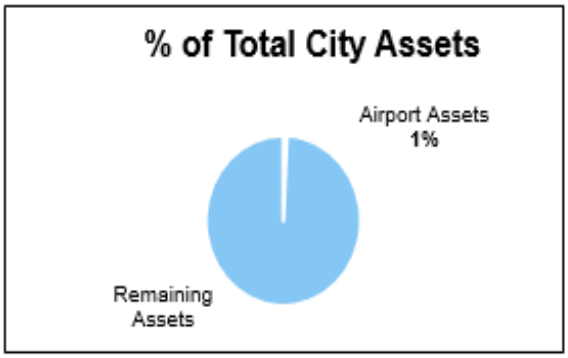
Aprons:

- Apron 1
- Apron 2
- Includes: pavement and solar edge lighting

Airport Assets

Inventory and Estimated Replacement Cost

Airport	Quantity	Estimated Replacement Cost
Runways	2	$13,272,458
Taxiways	6	$5,226,735
Aprons	2	$3,547,718
Other Inventory	n/a	$2,099,340
Total Airport Assets		**$24,146,251**



Inventory is collected, tracked, and maintained through the Geographic Information System (G.I.S) and Excel.

The Airport's assets, covered under this Asset Management Plan, include the following:

- Runways
- Taxiways
- Aprons
- Other

The total estimated replacement cost of these assets is $24,146,251.

Estimated replacement values, in this iteration, were based on: The Airport Business Plan 2015-2019 and the Capital Plan update in 2024. These documents were prepared by industry expert consultants and the Airport operator with costs inflated to current (2024) dollars.

In addition, for some assets the acquisition costs from the tangible capital asset ledger were used and inflated to current (2024) dollars.

The Airport's buildings and parking lots are not included in this appendix but rather included in the Facilities appendix with all other City owned facilities. Similarly, stormwater assets, including stormwater ponds, are not included in the scope of this appendix but rather the Stormwater assets appendix. In addition, the NAV Canada Control tower is owned by the City of Oshawa, however all capital and operating costs are the responsibility of the Federal Government.

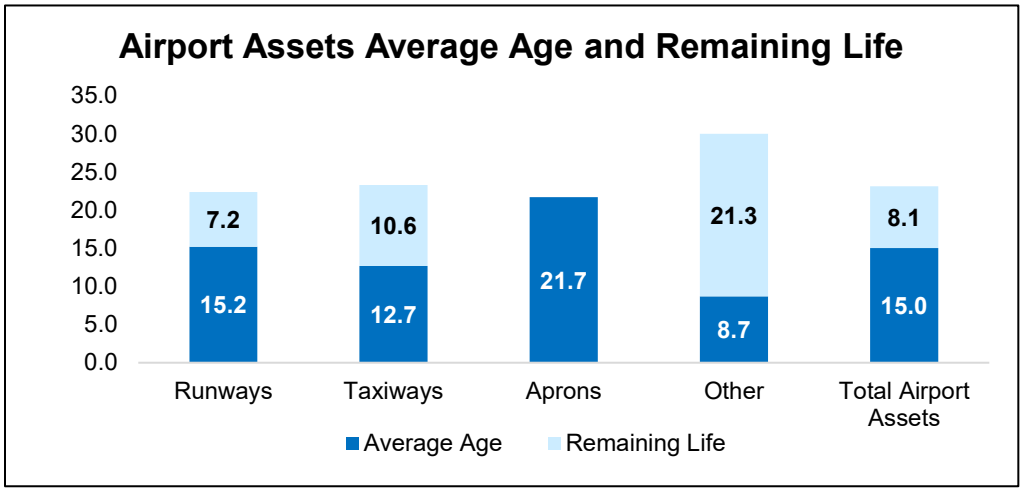
Airport Assets

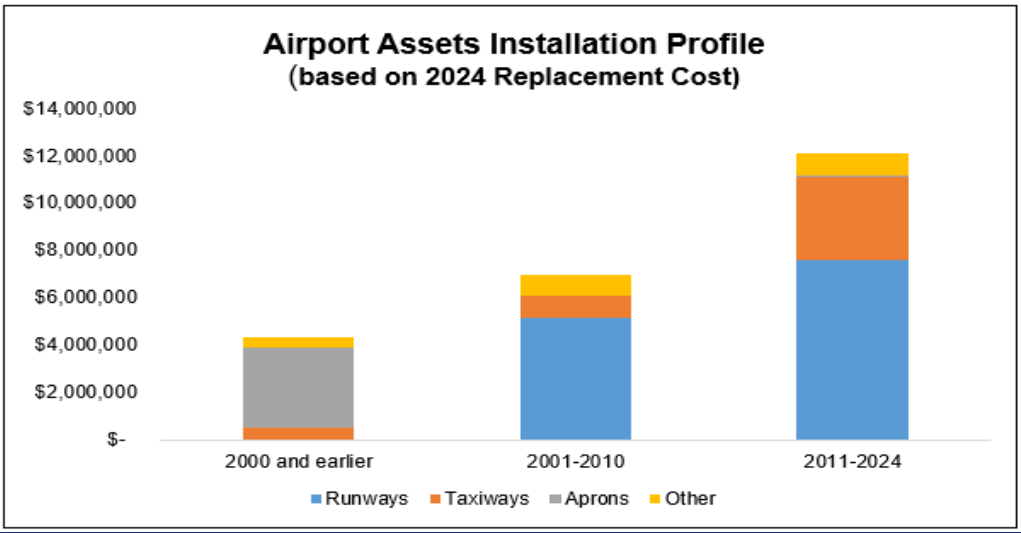
Average Age and Asset Installation Profile

Age is based on the construction year and tracked by the different components within the specific asset. The average age of the City's airport assets is 15.0 years and broken down by:

- 15.2 years for Runways
- 12.7 years for Taxiways
- 21.7 years for Aprons
- 8.4 years for Other Assets

The service life of the Airport Assets as a whole is estimated at 24.9 years. The target of 24.9 years includes applying asset management lifecycle maintenance and renewal treatments at the appropriate time during the lifecycle of the Airport Assets (see lifecycle section).





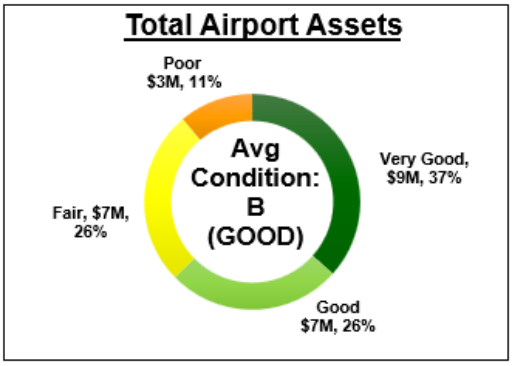
Airport Assets

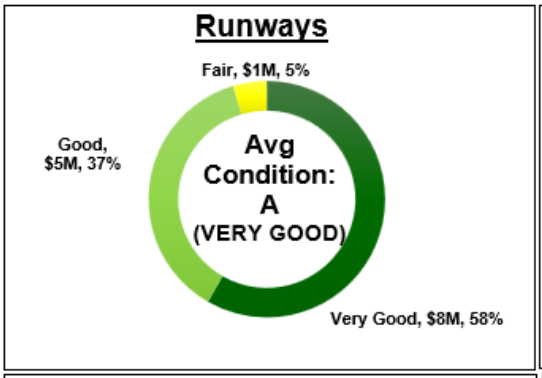
Condition

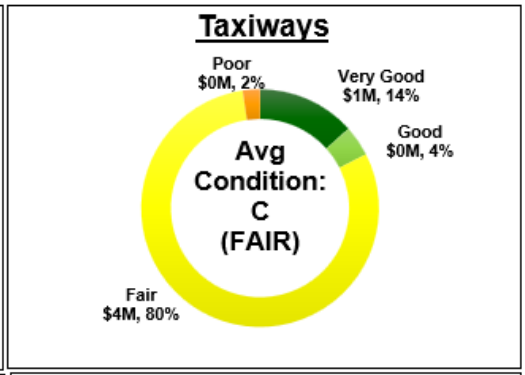
The condition of the City's Airport Assets are observed and documented formally for the development of the Capital Plan.

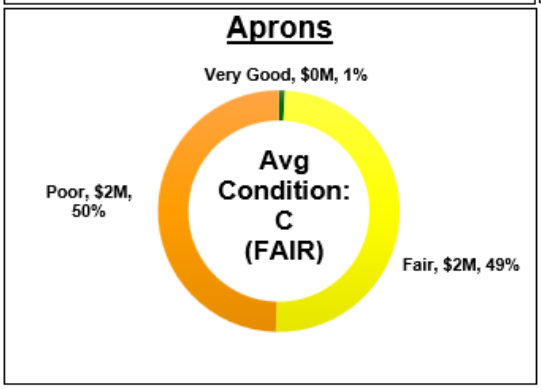
Overall, the City's Airport Assets are in GOOD condition (B Grade)

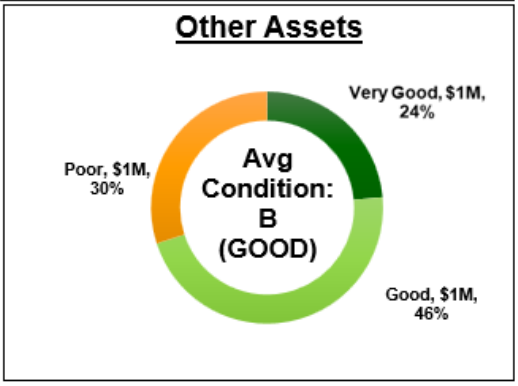
- A – Very Good - Runways
- C – Fair – Taxiways
- C – Fair – Aprons
- B – Good – Other











Airport Assets

Condition	Condition Rating	Grade	Category	Description
	90-100	A	Very Good	The assets are functioning as intended. Limited, if any, deterioration observed.
	75-90	B	Good	The assets are functioning as intended. No maintenance is anticipated within the next 5 years.
	60-75	C	Fair	The assets are functioning as intended. Normal deterioration and minor distress observed. Maintenance will be required within the next 5 years to maintain functionality.
	35-60	D	Poor	The assets are starting to not function as intended. Significant distress observed. Maintenance and some repair required within the next few years to restore functionality.
There are no assets currently in this category at the Oshawa Executive Airport	0-35	E	Very Poor	The assets are not functioning as intended. Significant deterioration and major distress observed, with possible damage to the base. Requires immediate attention.

Airport Assets

Levels of Service – Current and Proposed

Preliminary levels of service for the City's Airport Assets are below. These were established based on:

- Oshawa Strategic Plan 2024-2027
- Oshawa Financial Strategy 2025-2029
- Integrated Transportation Master Plan 2015
- The Oshawa Executive Airport Business Plan 2015-2019
- Canadian Aviation Regulations and Standards
- Other regulatory requirements and guidelines

Technical and Community based specific service levels and current performance are highlighted in the subsequent tables and sections below. City staff continually measure and monitor performance.

The Oshawa Executive Airport is a component of the transportation infrastructure of the City of Oshawa and the Region of Durham.

The role of the Oshawa Executive Airport is to provide high quality aviation services that:

- Encourage economic growth,
- Meet local and corporate aviation needs,
- Respect the surrounding neighbourhoods.

Airport Assets

Levels of Service – Current and Proposed

The Oshawa Executive Airport serves the City of Oshawa and the Region of Durham as a vital component of the transportation infrastructure, supporting business and community, by achieving the level of service objectives listed below.

Airport	Option 1: Financial Strategy	Option 4: Fully Funded
2025 A.M.P. % Fair or Better Condition	92%	92%
Average Annual Investment	$208,000	$863,000
2034 % Fair or Better Condition	72%	99%
Condition Trend	Decrease	Increase

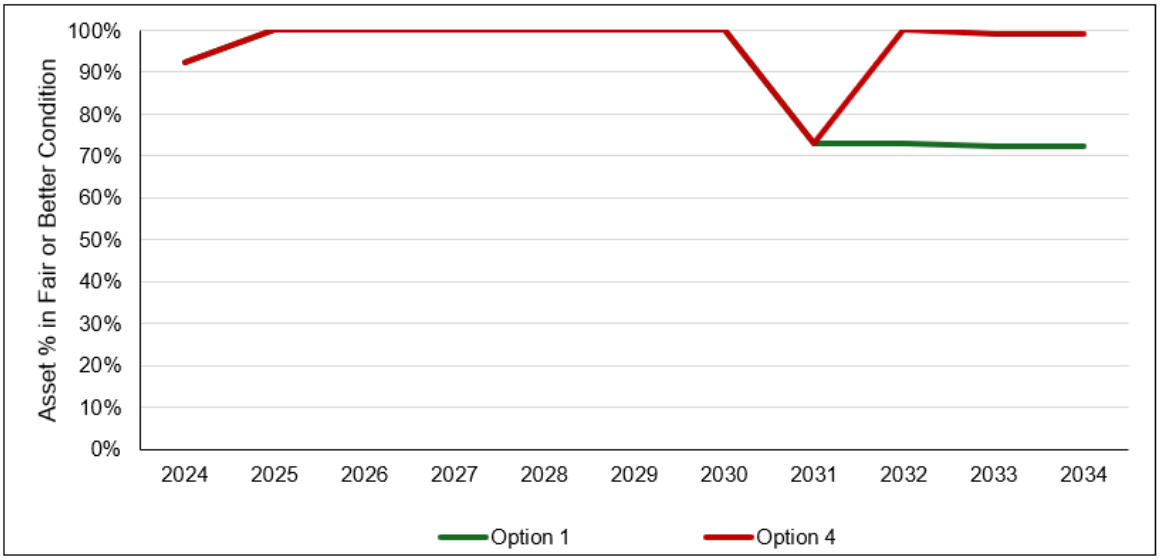
Option 1: shows incremental investment, into the capital reserves, as a key recommendation of the Oshawa Financial Strategy. Specifically, this shows an increase in the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026.

Option 4: is the levels of service that could be maintained, with unlimited funding. Only options **1** & **4** were considered. Option 2 yielded the same net result as option **1** as the Airport is not funded from the infrastructure reserve. The option **3** scenario was identical to option **4** as the current level of service is fully funded.

Airport Assets

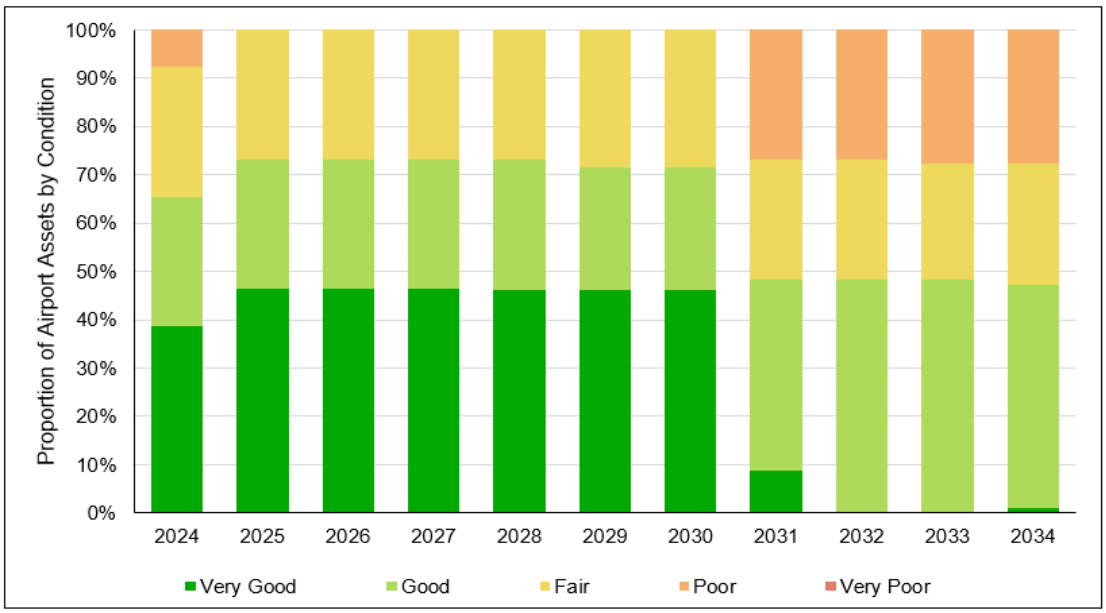
Levels of Service – Current and Proposed

The graph below compares the condition of the assets for each of the two funding options over 10 years.



Option 1 is recommended as it strikes the best balance between fiscal responsibility consistent with the Financial Strategy and delivers the levels of service that better meets the needs of our residents.

The graph below shows the condition for the next 10 years based on funding Option 1 - Financial Strategy.



Airport Assets

Levels of Service – Current and Proposed

Service Attribute	Technical Levels of Service	2024 A.M.P. L.O.S.	2025 A.M.P. L.O.S.	2034 Proposed L.O.S.[1]
Quality & Safety	Airport is inspected in compliance with Federal regulations, and all findings are resolved within a 24-month period	100%	100%	100%
Quality & Safety	Internal inspections are completed annually derived from Federal regulations	100%	100%	100%
Quality & Safety	% of assets in Fair or better condition	89%	92%	65%

[1] Based on Option 1 - Financial Strategy

The Oshawa Executive Airport has a statutory obligation to comply with approximately 1,000 prescriptive rules, regulations, and standards. The statutory obligation governs the design and operation of the airport. This includes everything from the height of lights along the runways or trees near the airport, to the nature of complex guidance documents such as the Airport Operations Manual, the Emergency Response Plan, and the Wildlife Management Plan.

The purpose of the rules, regulations, and standards is to ensure safety and can be found in the Aeronautics Act of Canada, the Canadian Aviation Regulations and Standards, and various technical publications relating to the airport.

In 2009, Transport Canada mandated that every certified airport must establish and utilize a Safety Management System.

The Oshawa Municipal Airport Safety Management System is a planned, documented, organized, and proactive approach to safety.

Airport Assets

Levels of Service and Related Risks

The following table outlines identified risks to delivering the levels of service as well as potential impacts and mitigating actions.

Identified Risk	Potential Impact	Mitigating Actions
Failed Equipment/Infrastructure	• Service interruptions • Negative press leading to less service demands & negative impact to revenue	• Repair and rehabilitate as necessary • Routine maintenance & inspections • Increase investment in life-cycle activities • Continue updating capital planning needs every 2 years by external industry specific experts
Inadequate Funding	• Delivery of service • Negative press leading to less service demands & negative impact to revenue • Increased risk of failure • Shorten asset life • Defer cost to future generations • Out of compliance with regulations	• Reduction of levels of service • Find additional revenue sources
Regulatory Requirements	• Non-compliance • Mandatory investments • Increase costs • Out of compliance with regulations	• Reduction or alteration of services • Find additional revenue sources • Regulatory enforcement
Strategic Documents Unharmonized with Future Needs	• Less service demands based on options available • Different services than needed not utilized • Out of compliance with regulations	• Ensuring assets and levels of service that respond to the needs of people living in Oshawa are built.
Plans are not Followed / Not Undertaking the required Lifecycle Activities	• Shorten asset life • Inefficient Investments • Failure to deliver desired levels of service	• Monitor, review and report on asset management activities • Explore alternative lifecycle activities that may be more efficient

Airport Assets

Lifecycle Management Strategies

The Airport has an asset preservation plan and regularly performs preventative maintenance on assets. This work is funded through the Airport's operating budget and is currently approximately $138,000 per year for the assets included in this appendix.

The goal of the asset preservation plan is to take advantage of opportunities to extend the service life of assets. Examples of preventative maintenance work the Airport performs are crack sealing and line painting on paved surfaces, repairs to the bulk aviation fuel plant, hangars, and perimeter fence, and replacement of lights, signage, and other electrical components.

If preventative maintenance requirements for an asset are higher than expected, it can trigger a review of the asset to determine if there is an underlying factor causing a problem. This analysis can lead to the replacement of an asset.

The airport maintains a 25-year capital plan. Costs are updated annually with assistance from external aviation engineers with broad industry knowledge.

The runway typically has a major rehabilitation after 25 years and a full depth reconstruction after 40 years.

Projects are bundled to achieve economies of scale. Typically, smaller projects are scheduled to align with larger planned rehabilitation projects. Currently projects are being deferred to 2026, if possible, to align with a larger project scheduled for that year. The asset preservation plan has helped the Airport extend the useful lives of some of its assets to 2026.

The year before planned execution of capital projects, engineers review them to determine if they can be deferred, perhaps with a rehabilitation investment, without compromising performance or safety.

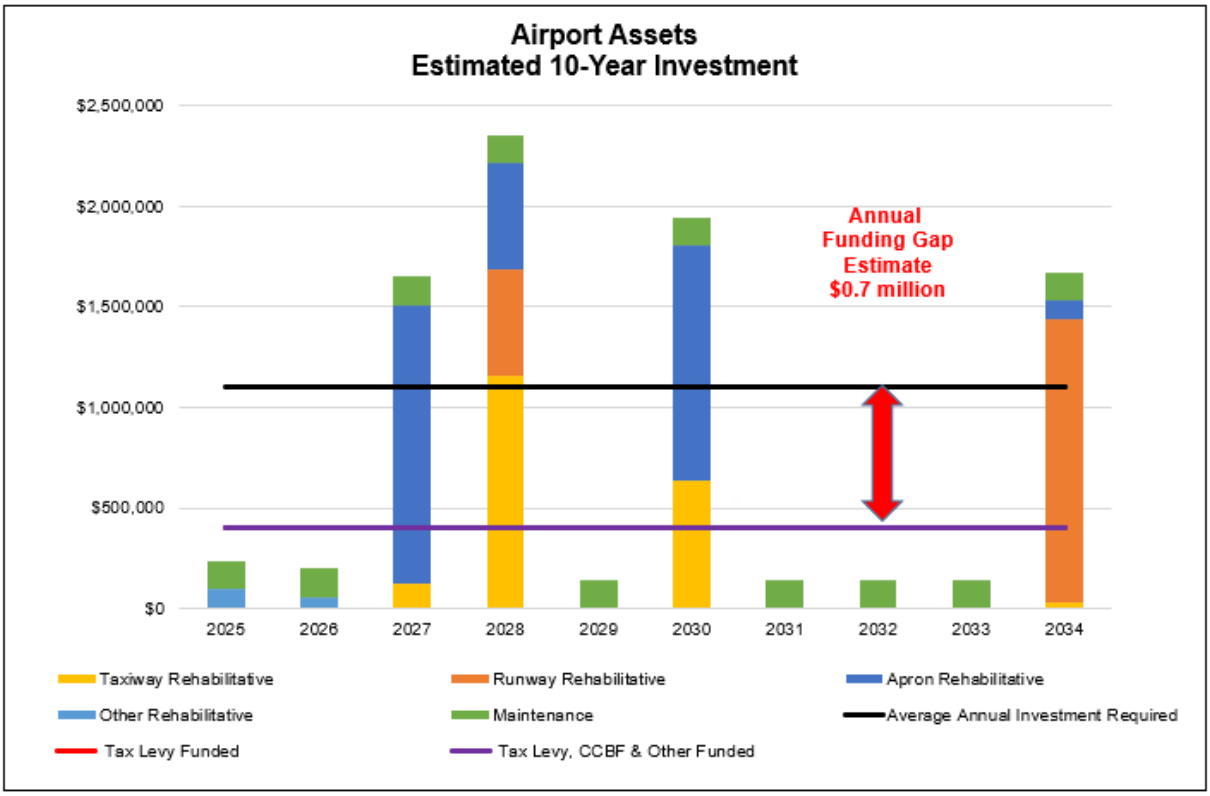
Maintaining standards set in Federal regulations is the main driver of short-term capital planning. Any deficiencies that are identified are addressed to maintain certification.

Airport Assets

Lifecycle Management and Financial Strategy

The following 10-year lifecycle forecast is shown below. It has been created using the Airport's most recent capital plan, prepared in October of 2024, assuming no budget constraints.

Using Option 1 of increasing the total dedicated infrastructure levy identified in the Oshawa Financial Strategy, the annual investment in the Oshawa Municipal Airport's assets from tax levy funding and Canada Community Benefit Fund (previously the Federal Gas Tax Funding) is $400K. The result based on historical investments is an estimated annual funding gap of $705K.



Airport Assets

Managing Growth – Capital and Operating Expenditure Forecast

The 2021 population for the Region of Durham was 723,270 and is anticipated to increase to 1,001,550 by 2036.

Region of Durham[1]	2021	2026	2031	2036
Total Population	723,270	810,840	907,290	1,001,550
Total Households	243,040	276,540	313,410	350,010
Total Employment	241,660	272,880	307,430	340,670

[1] Note: Per 2025 Durham Regional Official Plan

City of Oshawa[1]	2021	2026	2031	2036
Total Population	182,020	200,280	219,990	239,390
Total Households	66,640	73,800	81,450	89,060
Total Employment	63,740	70,600	78,070	85,250

[1] Note: Per 2025 Durham Regional Official Plan

The population growth anticipated for the Region of Durham and the City of Oshawa is not expected to result in incremental service demands for the Airport.

During the 2025 Capital budget process, a project was approved for the Airport to enhance aircraft safety and noise mitigation. This will include sound barriers and jet-blast deflection technology that will allow more aircraft to depart from Runway 30, reducing noise exposure to the surrounding residential areas. The total project is estimated at $6.6M.

Appendix E

Facilities

May 2025

Facilities

Description of Facilities Assets

Recreation & Culture Centres

Core Operations Centres

Fire Stations

Smaller Service and Community Centres

The City owns and maintains several different types of facilities.

Many facilities provide services to users directly, for example arenas, recreation centers, and libraries. While other facilities are necessary to support the operations of those facilities and services, for example operations depots and administrative buildings.

Facilities reported in this appendix include the related parking lots and have been grouped into the following categories:

- Recreation & Cultural Centres, Libraries, and Galleries
- Core Operations Centres
- Fire Stations
- Smaller Service and Community Centres

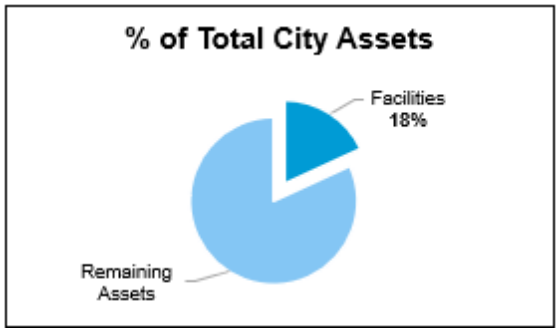
Parks facilities including playground equipment, parking lots, sports fields and the like are reported separately in the Parks Facilities Appendix. Similarly, the parking garages and lots associated with paid parking are also reported separately in the Parking Services Appendix.

Expansion of current and construction of new facilities are endeavored under the guidance of the applicable master planning documents and studies and result in inclusions to our financial planning process.

Facilities

Inventory and Estimated Replacement Cost

Facilities	Quantity (each)	Estimated Replacement Cost
Recreation Centres, Libraries and Galleries	39	$523,036,354
Core Operations Centres	19	$155,063,393
Fire Stations	6	$40,818,205
Smaller Service and Community Centres	4	$7,737,130
Total Facilities	**68**	**$726,655,081**



The City's facilities inventory, including the related parking lots are collected and tracked through the City's Capital Planning Software (V.F.A.) as well as the Tangible Capital Asset (T.C.A.) Ledger in Excel and Maximo.

The City owns a total of 68 Facilities, which consists of 39 Recreation Centres, Libraries, and Galleries, 19 Core Operations Centres, 6 Fire Stations and 4 Smaller Service and Community Centres.

The replacement cost of these Facilities is $726,655,081 based on 2024 dollars.

Estimated replacement costs are based on the replacement costs of the components and are updated regularly in the V.F.A. Capital Planning Software.

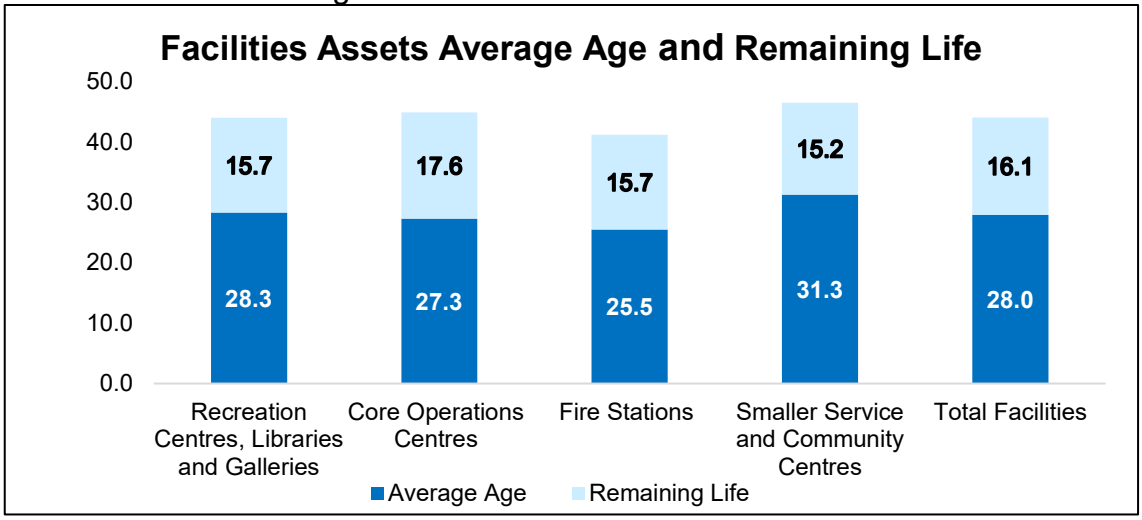
Facilities

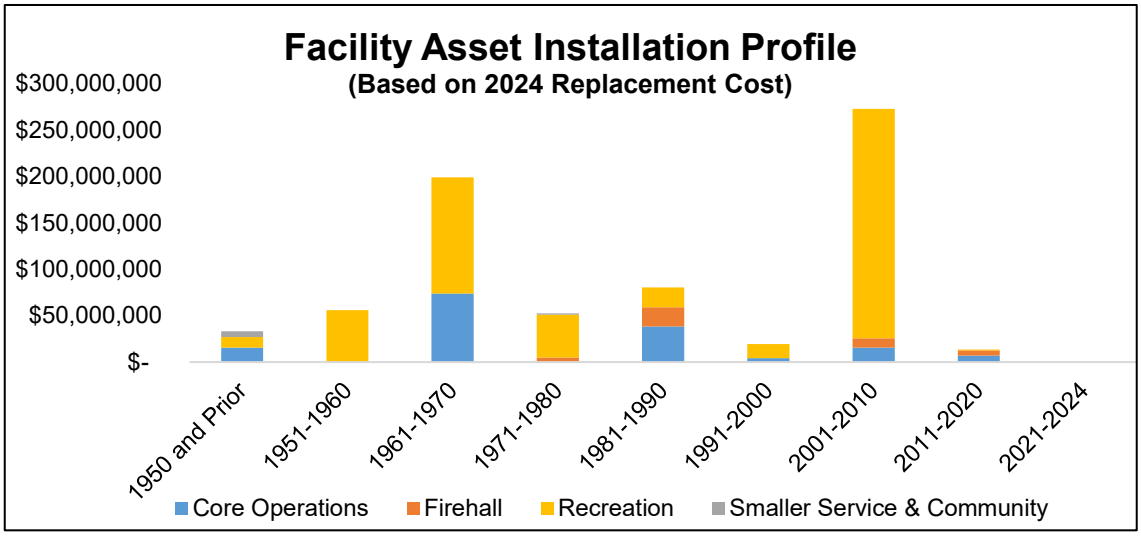
Average Age and Asset Installation Profile

Age is based on initial construction year or renovation year and tracked separately for each facility and associated parking lot. The average age of the City's Facilities is 28.0 years. This is a simple average of the components of a facility and will be improved in future iterations.

- 28.3 years - Recreation Centres, Libraries and Galleries
- 27.3 years - Core Operations Centres
- 25.5 years - Fire Stations
- 31.3 years - Smaller Service and Community Centres

The service life of Facilities is estimated at 33 years. The service life is calculated by the sum of the components within the facility and ranges between 31-34 years depending on the particular mix. The remaining service life is based on the observed assessment and not the age.





Facilities

Condition

The condition of the City's facilities is assessed on an annual audit program, with all assets evaluated within a two-year period. Assessments are conducted by both an external agency and internal staff. A facility condition score is calculated and reported at the facility level, based on the condition of individual facility components. These scores are then summarized by facility type as shown below. In addition, related parking lots are inspected annually, and their condition is documented accordingly.

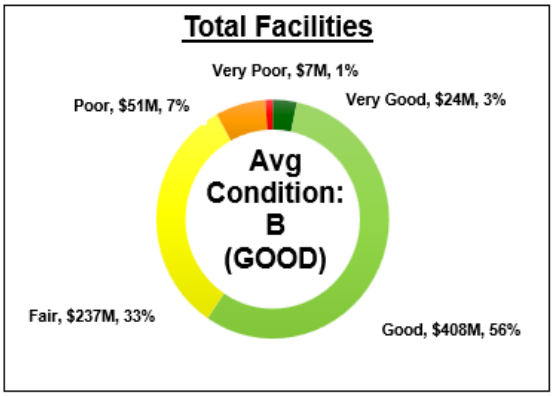
Although the majority of facility class assets present an overall condition rating of "good," it is important to recognize the limitations of assessing condition solely at the system or facility level. Significant capital investments are often required to address individual components that may be in poor or critical condition—needs that can be obscured when only high-level assessments are used. Evaluating assets at a more granular, component level provides clearer insight into true asset performance, risk exposure, and investment priorities. This approach ensures that critical infrastructure needs are not overlooked, and that capital planning more accurately reflects the condition and lifecycle requirements of high-value components across the asset portfolio. A detailed, component-level asset management framework also strengthens alignment with the City's forecasted annual investment requirements and supports long-term financial sustainability.

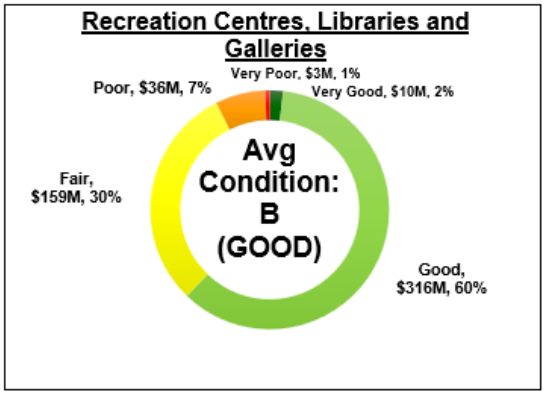
Facilities

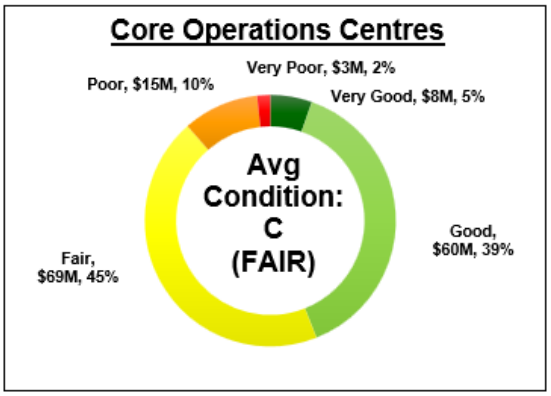
Condition

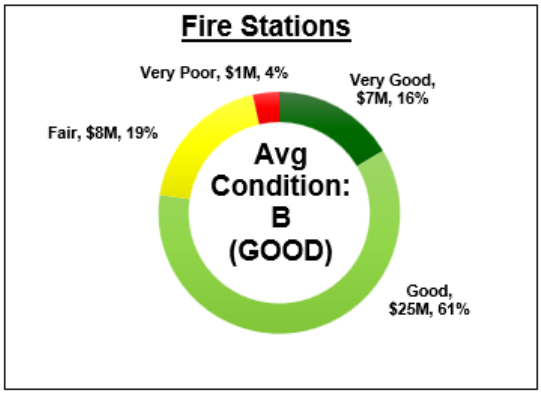
Overall, the City's Facility assets are in GOOD condition (B Grade), based on the average condition of the facility.

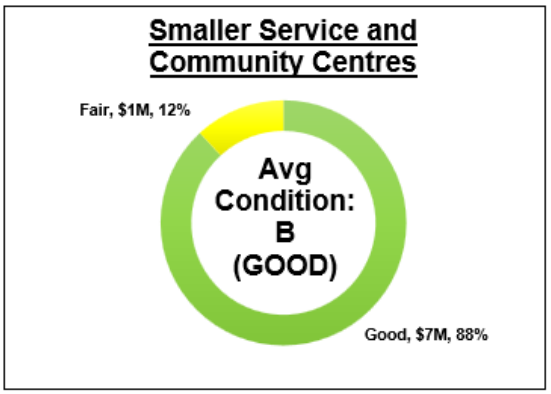
- B – Good – Recreation Centres, Libraries, and Galleries
- C – Fair – Core Operations Centres
- B – Good – Fire Stations
- B – Good – Smaller Service and Community Centres











Facilities

Facility Condition Index	Grade	Category	Description
FCI < = 0.05	A	Very Good	Well maintained, good condition, new or recently rehabilitated.
0.05 < FCI < = 0.15	B	Good	Acceptable, generally approaching mid stage of expected service life.
0.15 < FCI < = 0.30	C	Fair	Signs of deterioration, some elements exhibit deficiencies.
0.30 FCI < = 0.50	D	Poor	Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration.
FCI >= 0.50	E	Very Poor	Near or beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable.

Facilities

Levels of Service – Current and Proposed

Preliminary levels of service for the City's facility assets are below. These were established based on:

- Oshawa Strategic Plan 2024-2027
- Oshawa Financial Strategy 2025-2029
- Oshawa Quality Standards
- Oshawa's Corporate Energy Management Plan

Technical and Community based specific service levels and current performance are highlighted in the subsequent tables and sections below. City staff continually monitor performance.

The table below shows four options for investment in the asset portfolio for Facilities which directly impacts the Levels of Service.

Facilities	Option 1: Financial Strategy	Option 2: Maintain Current Funding	Option 3: Maintain Current L.O.S.	Option 4: Fully Funded
2025 A.M.P. % Fair or Better Condition	92%	92%	92%	92%
Average Annual Investment	$5,017,000	$4,532,000	$21,526,000	$22,098,000
2034 % Fair or Better Condition	68%	65%	89%	89%
Condition Trend	Decrease	Decrease	Maintain	Maintain

Option 1: shows incremental investment, into the capital reserves, as a key recommendation of the Oshawa Financial Strategy. Specifically, this shows an increase in the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026.

Option 2: shows the impact of not increasing dedicated infrastructure levy.

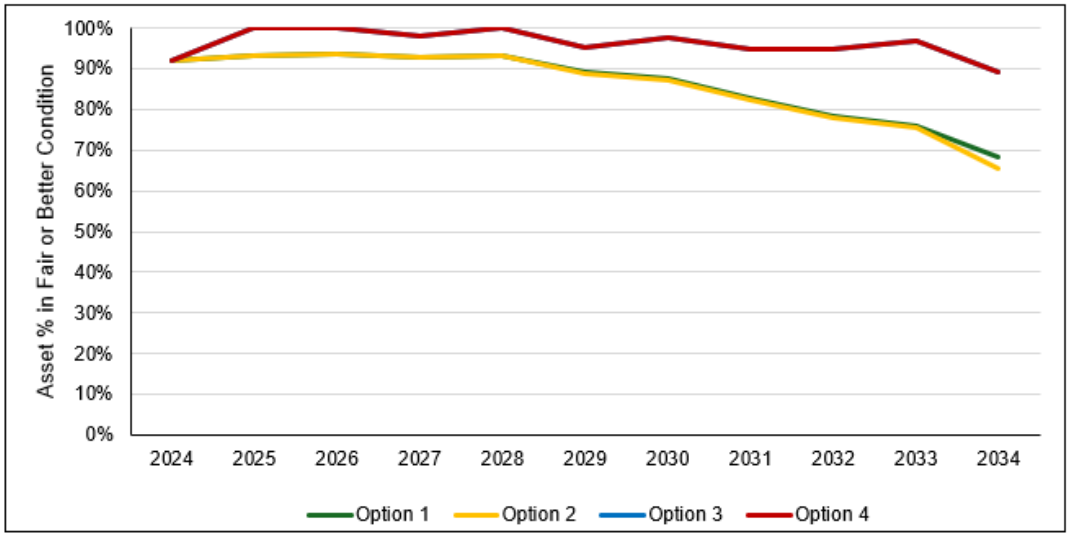
Option 3: is the calculated cost of maintaining the current levels of service.

Option 4: is the levels of service that could be maintained, with unlimited funding.

Facilities

Levels of Service – Current and Proposed

The graph below compares the condition of the assets for each of the four funding options over 10 years:



Option 1 is recommended as it strikes the best balance between fiscal responsibility consistent with the Financial Strategy and delivers the levels of service that better meets the needs of our residents.

The graph below shows the condition for the next 10 years based on Funding Option 1 – Financial Strategy.

Facilities

Levels of Service – Current and Proposed

Service Attribute	Technical Levels of Service	2024 A.M.P. L.O.S.	2025 A.M.P. L.O.S.	2034 Proposed L.O.S.[1]
Environmental Responsibility	EV Charging Stations[2]	10 Dual Charging EV Units (20 Chargers)	10 Dual Charging EV Units (20 Chargers)	10 Dual Charging EV Units (20 Chargers)[3]
Safe and Reliable Infrastructure	% of Facilities that have undergone a detailed condition assessment within 24 months	100%	100%	100%

1 Based on Option 1 - Financial Strategy
2 Public facing charging stations
3 There is currently no plan to increase the number of public facing EV chargers, however there is some potential for this to change if a broader policy is put in place

Facilities

Levels of Service - Current and Proposed

Service Attribute	Technical Levels of Service	2024 A.M.P. L.O.S.	2025 A.M.P. L.O.S.	2034 Proposed L.O.S.[1]
Safe and Reliable Infrastructure	% of Core Operations Facilities in fair or better condition	97.0%	88.5%	63.3%
	Core Operations Facility Condition Index[2]	FCI = 0.17 (Fair)	FCI = 0.18 (Fair)	N/A[3]
Safe and Reliable Infrastructure	% of Fire Stations in fair or better condition	86.9%	96.5%	73.2%
	Fire Stations Facility Condition Index	FCI = 0.16 (Fair)	FCI = 0.14 (Good)	N/A
Safe and Reliable Infrastructure	% of Recreation Facilities in fair or better condition	96.0%	92.6%	66.2%
	Recreation Facilities Facility Condition Index	FCI = 0.11 (Good)	FCI = 0.15 (Good)	N/A
Safe and Reliable Infrastructure	% of Smaller Service Facilities in fair or better condition	100%	100%	84.9%
	Smaller Service Facilities Facility Condition Index	FCI = 0.11 (Good)	FCI = 0.10 (Good)	N/A

[1] Based on Option 1 - Financial Strategy
[2] See page E-6 for definitions
[3] Current system is unable to predict impact on FCI

Facilities

Levels of Service - Current and Proposed

Service Attribute	Technical Levels of Service	2024 A.M.P. L.O.S.	2025 A.M.P. L.O.S.	2034 Proposed L.O.S.[2]
Environmental Responsibility	Core Operations EUI (kBtu/ft²) Energy Intensification Unit/ft	134 kBtu/ft²	135 kBtu/ft²	N/A
	Core Operations Greenhouse Gas Emissions	779.77 (Metric Tons CO2e)	719.53 (Metric Tons CO2e)	N/A
Environmental Responsibility	Fire Stations EUI (kBtu/ft²) Energy Intensification Unit/ft	159 kBtu/ft²	161 kBtu/ft²	N/A
	Fire Stations Greenhouse Gas Emissions	323.01 (Metric Tons CO2e)	302.64 (Metric Tons CO2e)	N/A
Environmental Responsibility	Recreation Facilities EUI (kBtu/ft²) Energy Intensification Unit/ft	202 kBtu/ft²	200 kBtu/ft²	N/A
	Recreation Facilities Greenhouse Gas Emissions	2980.93 (Metric Tons CO2e)	2826.11 (Metric Tons CO2e)	N/A
Environmental Responsibility	Smaller Service Facilities EUI (kBtu/ft²) Energy Intensification Unit/ft	157 kBtu/ft²	157 kBtu/ft²	N/A
	Smaller Service Greenhouse Gas Emissions	11.46 (Metric Tons CO2e)	10.71 (Metric Tons CO2e)	N/A

[1] Based on Option 1 - Financial Strategy
[2] Future targets do not align with the 10-year time horizon and thus are not included.

Facilities

Levels of Service - Current and Proposed

Energy Use Intensification is weather normalized to account for the changes in demand based on weather discrepancies between years.

Buildings for each category include those reported under the Broader Public Sector O. Reg. 507/18 and omit some of the facilities listed in the A.M.P. that do not have data readily available.

Specific targets for greenhouse gas reductions have not been identified for the forecasted reporting period outlined above. Future iterations will have those identified and incorporated.

Decarbonization feasibility assessments have begun for a select group of facilities. These facilities are defined in the Corporate Energy Management Plan as candidates for Net Zero Emission Retrofit Strategy. The Strategy aims to align retrofits to key facilities, with planned capital replacements to achieve Net Zero Emissions onsite by 2045. Capital planning recommendations will be delivered through the Deep Energy Retrofit Feasibility Studies, providing a roadmap to achieve the City’s decarbonization targets.

Facilities

Levels of Service and Related Risks

The following table outlines identified risks to delivering the levels of service as well as potential impacts and mitigating actions.

Identified Risk	Potential Impact	Mitigating Actions
Failed Equipment / Infrastructure	• Service interruptions • Negative press leading to less service demands & negative impact to revenue	• Repair and rehabilitate as necessary • Routine maintenance & inspections • Increase investment in lifecycle activities
Inadequate Funding	• Delivery of service • Negative press leading to less service demands & negative impact to revenue • Increased risk of failure • Shorten asset life • Defer cost to future generations	• Reduction of levels of service • Find additional revenue sources
Regulatory Requirements	• Non-compliance • Mandatory investments • Increase costs	• Reduction or alteration of services • Find additional revenue sources
Strategic Documents Unharmonized with Future Needs	• Less service demands based on options available • Different services than needed not utilized	• Facilities and levels of service that respond to the needs of people living in Oshawa
Plans are not Followed / Not Undertaking the required Lifecycle Activities	• Shorten asset life • Inefficient Investments • Failure to deliver desired levels of service	• Monitor, review, and report on asset management activities • Explore alternative lifecycle activities that may be more efficient

- Failed infrastructure and equipment can be a result of vandalism, climate change impacts, as well as heavier usage than planned.
- Inadequate funding could be based on changing shifts of needs within the portfolio of assets and services in the Asset Management Plan.
- Regulatory requirements could be based on changes to legislation.
- Strategic documents being unharmonized could result in building facilities that do not meet the needs of users.
- Plans not being followed or lifecycle activities not actioned could result from many reasons, some examples are shortages of staff, inability to procure replacement assets on a timely basis, and competing priorities.

Facilities

Lifecycle Management Strategies

The City has a rolling condition assessment program in place that allows for each facility to have its condition assessed every two years. The assessments are completed by external inspectors or internal staff, alternating so that external inspectors assess each facility once every four years. The assessments by external inspectors are carried out by two inspectors, one specializing in architectural aspects of facilities and the other in mechanical aspects of facilities. Staff inspections are done by one staff member.

Condition assessments are done visually, without dismantling equipment or doing destructive testing. Specialized assessments are carried out on an ad-hoc basis as required. These assessments can help evaluate more complex issues and can improve cost estimates for any improvements that are needed. The condition of facility components is captured as an estimate of the remaining service life.

Components with issues that should be addressed in the short term are identified either based on the condition assessments (having a remaining service life of zero in the year being considered) or based on observations of facility managers. Preliminary cost estimates for replacing components are based on R.S. Means cost data. These estimates can be inaccurate because R.S. Means costing does not include incremental costs for non-like-for-like replacements and costs related to site-specific factors. Preliminary cost estimates are refined by clarifying any ambiguities in project scope and using the best available cost estimates (e.g. in-house data, historical cost data, cost consultants, etc.). The result is a list of candidate projects proposed for inclusion in the budget, which is refined throughout the budget process.

Projects are rated in the capital prioritization model that is applied to capital requests. Common projects that are often small are grouped together into programs (e.g., window replacement). This is done to simplify project tracking. Larger projects (i.e. projects exceeding $200,000) are managed and budgeted for individually.

Facilities

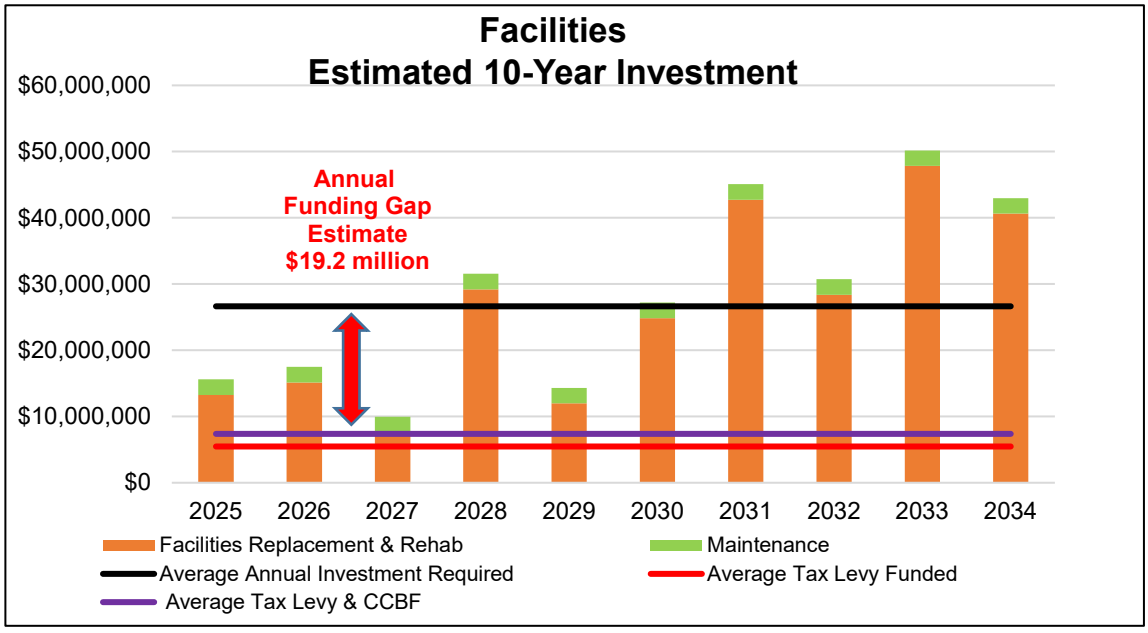
Lifecycle Management and Financial Strategy

Medium- and long-term forecasts are generated by the V.F.A. software based on the remaining service life data from the condition assessments and costing data from R.S. Means Cost Books. A preliminary estimate of the remaining service life for a component is generated from its installation date and the estimated service life for the component from R.S. Means Cost Books. For example, a component installed in 2020 with an expected service life of 30 years (from R.S. Means) would have a preliminary estimate of remaining service life of 27 years in 2023. Staff prepare the City's capital budget using a report from V.F.A., along with professional judgement on the timing.

The following 10-year lifecycle forecast is shown below and does not account for any budget constraints. The average annual investment required, based on the full lifecycle of assets, is estimated at $26.6 million (in 2024 $).

Using Option 1 of increasing the total dedicated infrastructure levy identified in the Oshawa Financial Strategy, the annual investment in Facilities from Tax Levy and the Canada Community Benefit Fund (previously Federal Gas Tax Funding) is $7.4 million. This results in an estimated annual funding gap of $19.2 million.

Future iterations will include additional investments in maintenace, as comprehensive proactive maintenance plans will be developed and incorporated. This will show the impact on the capital replacement expenditures by extending the service life, in order to maximize value from our assets.



Facilities

Managing Growth – Capital and Operating Expenditure Forecast

The 2021 population for the City of Oshawa was 182,020 and is anticipated to increase to 239,390 by 2036.

City of Oshawa[1]	2021	2026	2031	2036
Total Population	182,020	200,280	219,990	239,390
Total Households	66,640	73,800	81,450	89,060
Total Employment	63,740	70,600	78,070	85,250

[1] Note: Per 2025 Durham Regional Official Plan

The population growth is expected to result in incremental service demands that may impact the current level of service. In order to accommodate the projected increases in demand caused by growth, the City has undertaken a number of master planning studies which identify the need for new infrastructure and infrastructure service expansion. These growth-related needs have been included in the City's Development Charges Background Study and the 10-year capital forecast. Utilizing development charges to fund the growth-related initial capital costs helps to ensure the results of future growth do not increase the cost of maintaining levels of service for existing taxpayers. However, the future maintenance and capital costs will be borne by the municipality.

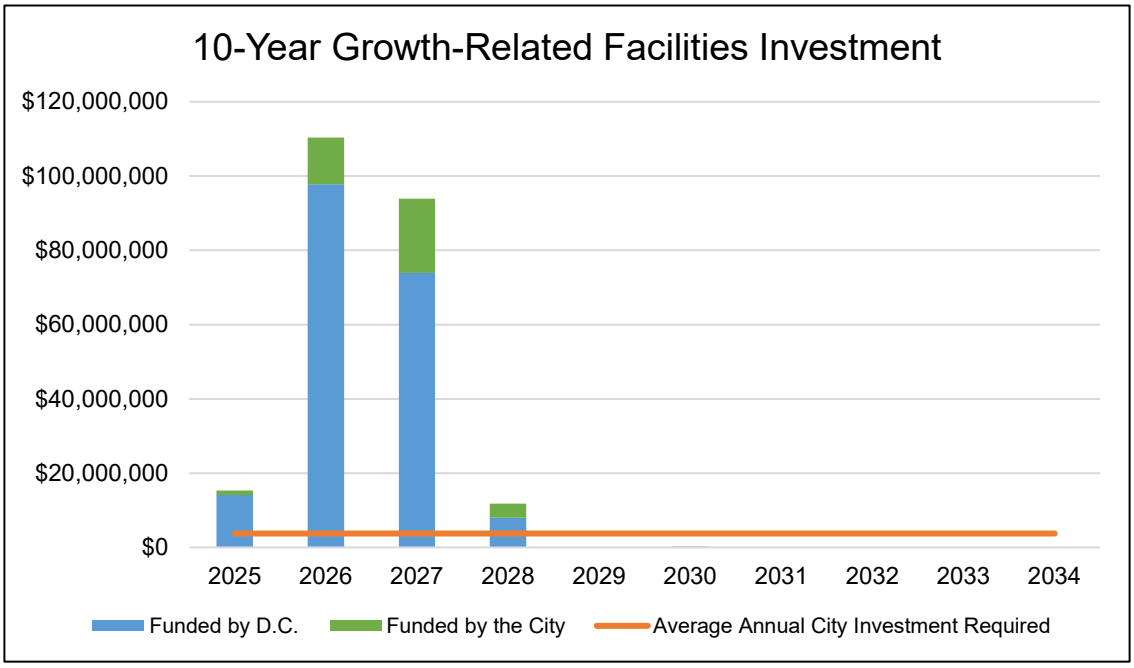
The City's Official Plan references that build-out is estimated to occur in 2051. The operating costs related to assumed assets are difficult to estimate and is dependent on what future proposed levels of service are approved by Council. As asset management practices continue to mature and better information is gathered, more specific information relating to operating costs will be determined.

Facilities

Managing Growth – Capital and Operating Expenditure Forecast

The 10-year forecast includes $231.5 million for new Facilities, including the Northwood Community Centre, construction of a Northern Depot, as well as a fire training facility, and new fire station. The majority of these growth-related capital projects include a proportion of improvements that benefit the existing residents. These costs are required to be funded by the City, while development charges pay for the majority of the cost.

Over the 10-year forecast, these facilities anticipated to be built requires a total contribution from the City in the amount of $37.5 million (or an average annual amount of $3.75 million). Annually, the City budgets a contribution from operating to a Growth-Related Non-D.C. reserve to fund the City's portion of growth-related capital investments.



Appendix F

Parks Facilities

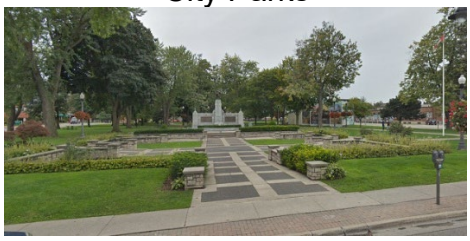
May 2025

Parks Facilities

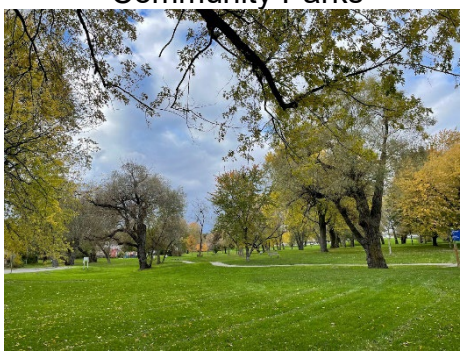
Description of Parks Facilities Assets

Regional Parks

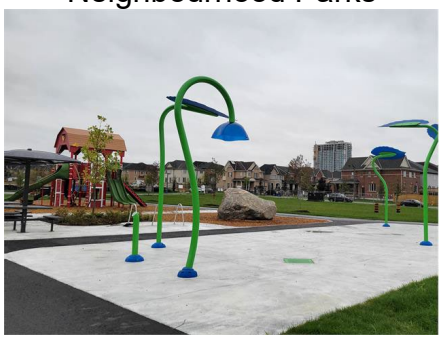
City Parks



Community Parks



Neighbourhood Parks



The City owns and maintains 323 hectares of parkland that are distributed amongst 155 parks as defined under the Official Plan classification system.

The Official Plan classification system defines regional parks (also known as destination parks), city parks, community parks, and neighbourhood parks by their function, facilities, service level, and size. Regional parks are still owned and maintained by the City but attract residents across the region.

These parks provide residents with outdoor recreation and cultural opportunities through sports fields, hard surface courts, picnic areas, band shells, playgrounds, splash pads, and more.

Expansion of current and construction of new Parks Facilities is undertaken as part of the Capital Budget process and are identified in the City's Development Charges Background Study.

The Parks, Recreation, Library and Culture Facility Needs Assessment further expands on needs aimed at enhancing physical, social, and mental health while promoting inclusion and the overall wellbeing of our residents.

Expansion of current and construction of new Parks Facilities are endeavored under the guidance of the applicable master planning documents and studies which result in inclusions to our financial planning process.

Parks Facilities

Classification of Parks

The chart below describes the classifications of the parks as per the City's Official Plan. It should be noted that Regional Parks, also known as Destination Parks, are owned by the City of Oshawa and not the Region of Durham. In addition, Parkettes have been added to Neighbourhood Parks for inventory collection purposes.

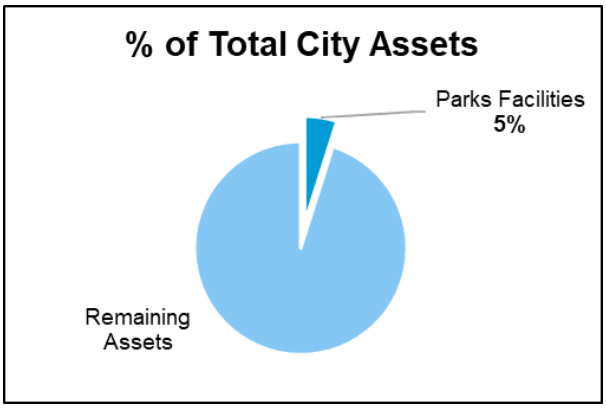
Park Type	Function	Facilities	Service Level	Approximate Size
Regional (Destination)	Serves both local and regional residents	Natural and landscaped areas, areas of unstructured use, passive recreational uses, camping, parking, amenities	Not defined	The size shall be sufficient to contain unique physical features or major recreational facilities
City	Serves the entire City of Oshawa	Civic sports centres, cultural and entertainment centres, historical sites, sports fields, hard surface courts, landscaped and passive areas, areas for unstructured use, parking, amenities	2.43 hectares (6 acres) per 1,000 pop.	Greater than 12 hectares
Community	Serves up to 20,000 persons with active, recreational and passive activities	Lit sports fields, community centres, hard surface courts, playgrounds, landscaped and passive areas, parking, amenities	0.6 hectares (1.5 acres) per 1,000 pop.	8 to 12 hectares
Neighbourhood	Serves up to 5,000 persons with active and passive amenities	Playgrounds, sports fields, hard surface courts, landscaped and passive areas, parking	0.8 hectares (2 acres) per 1,000 pop.	Size: 1.8 to 4 hectares Service area: 180 to 800 metres

Source: City of Oshawa Official Plan 2022

Parks Facilities

Inventory and Estimated Replacement Cost

Parks Facilities	Qty (each)	Estimated Replacement Cost
Regional Parks	3	$33,615,313
City Parks	5	$33,967,260
Community Parks	29	$47,358,143
Neighbourhood Parks	118	$73,801,945
Total Parks Facilities	**155**	**$188,742,661**



Inventory is collected, tracked and maintained through the G.I.S., V.F.A., and Maximo software.

The total estimated replacement cost of these Parks Facilities is $188,742,661 based on 2024 dollars.

Estimated replacement costs are unique to each park and are based on the replacement cost of each individual component in each park.

Included in this appendix are all the park components, such as hard surface courts, sports fields, playground and other equipment, play areas, parking lots, site furnishings, fencing, signage, and softscapes including trees.

Additionally, the City owns 749 hectares of naturalized open spaces. These naturalized spaces consist of woodlots, ravines, valleylands, and unmanicured lands adjacent to active parklands and other naturalized areas. Although there may be passive recreational amenities in these areas, these lands are primarily intended for environmental and ecological purposes and thus not included.

Stormwater assets that are part of the stormwater system that may be within the park are not included in this appendix, as they are included in the Stormwater Appendix. Park pathways are also not included here but are included in the Active Transportation Appendix.

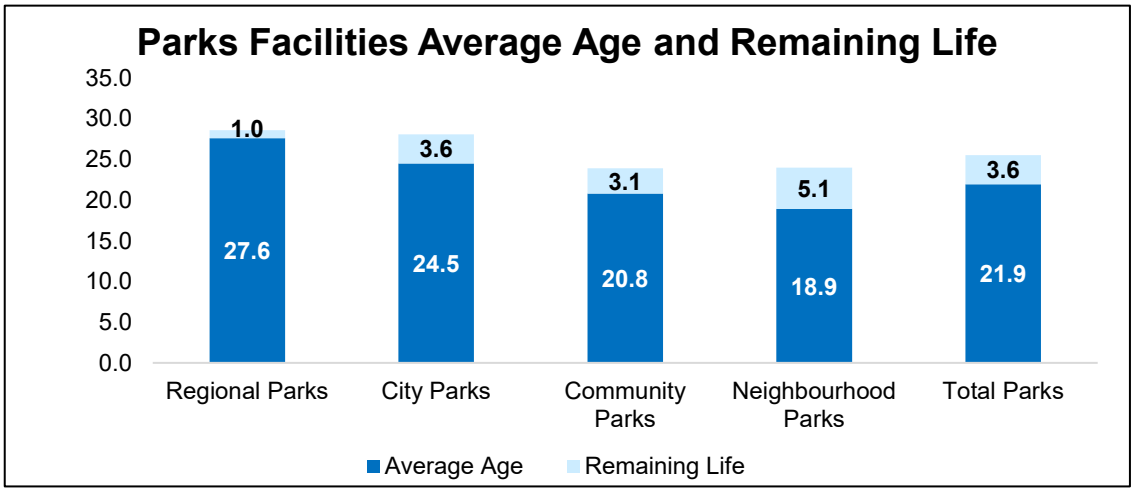
Parks Facilities

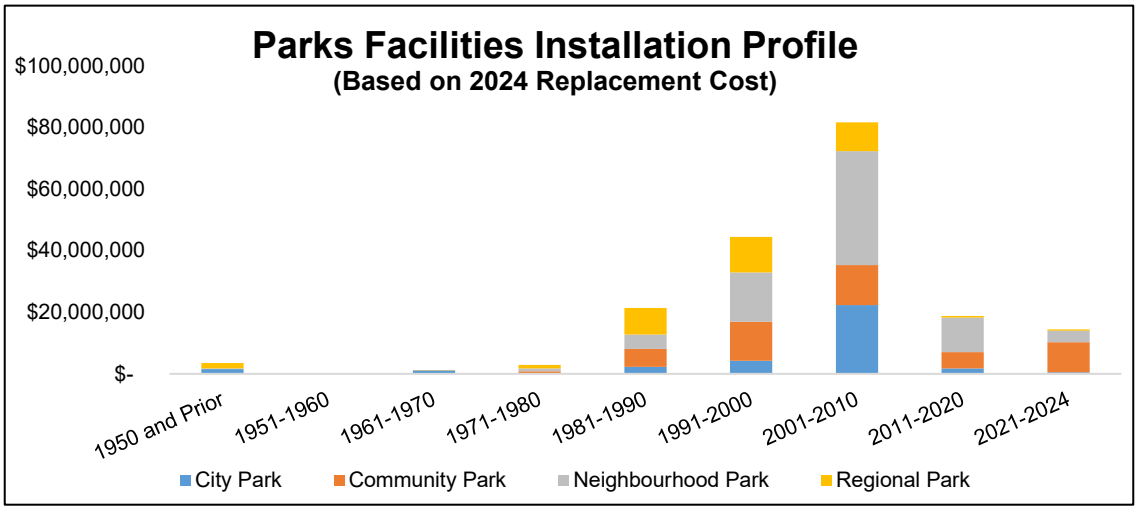
Average Age and Asset Installation Profile

Age is based on initial construction or replacement year and tracked separately for each type of component by park location. The average age of the City's Parks Facilities is 21.9 years and is broken down by:

- 27.6 years - Regional Parks
- 24.5 years - City Parks
- 20.8 years - Community Parks
- 18.9 years - Neighbourhood Parks

The service life of Parks Facilities is estimated to be 24-29 years depending on the asset mix of the park in total. Condition is a function of observation, not age.





Parks Facilities

Condition

Audits of playgrounds are done annually; inspections are done more regularly to ensure compliance with quality standards defined in the City of Oshawa Quality Standard Q4-309-017 – Play space and Equipment Inspection Maintenance, Repair and Replacement. The results of the inspections are currently captured through forms. In the future, the results will be captured in Maximo.

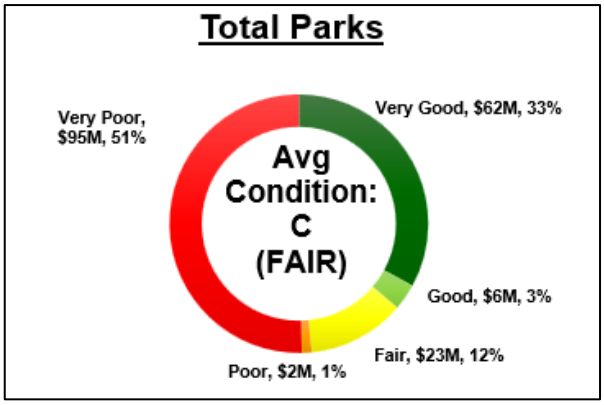
In 2024, 50% of the City's parks were audited for condition, specifically for Asset Management purposes. The results are reflected in the below assessments improving the overall condition.

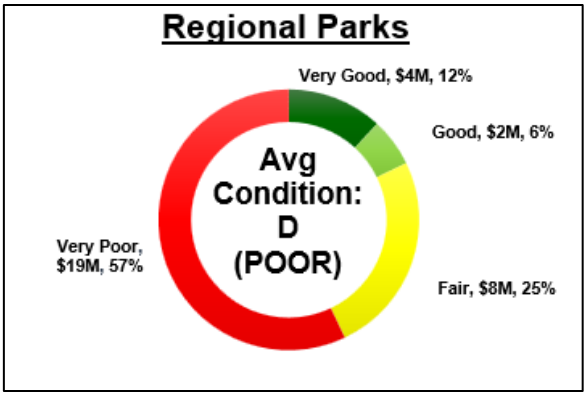
Overall, the City's Parks Facilities assets are in FAIR condition (C Grade)

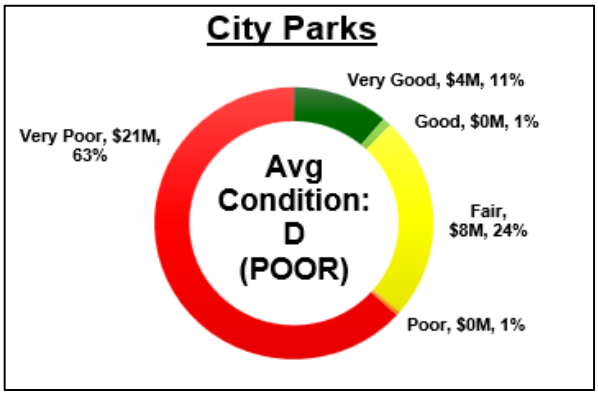
- D – Poor - Regional Parks
- D – Poor - City Parks
- C – Fair - Community Parks
- C – Fair - Neighbourhood Parks

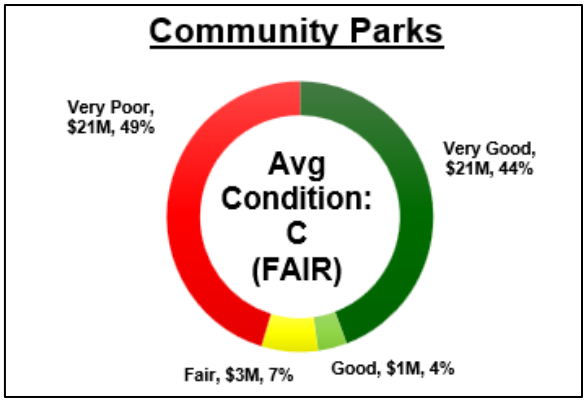
Parks Facilities

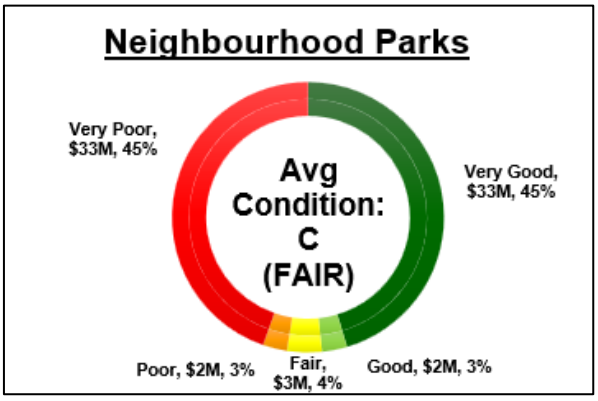
Condition











Parks Facilities

Condition Rating	Grade	Category	Description
9-10	A	Very Good	The Parks Facilities are functioning as intended. Limited, if any, deterioration observed.
7-8	B	Good	The Parks Facilities are functioning as intended. No major maintenance is anticipated within the next 5 years.
5-6	C	Fair	The Parks Facilities are functioning as intended. Normal deterioration and minor distress observed. Maintenance will be required within the next 5 years to maintain functionality.
3-4	D	Poor	The Parks Facilities are starting to not function as intended. Significant distress observed. Maintenance and some repair will be required within the next few years to restore functionality.
1-2	E	Very Poor	The Parks Facilities are not functioning as intended. Significant deterioration and major distress observed. Requires immediate attention.

Parks Facilities

Levels of Service

Preliminary levels of service for the City's parks assets are below. These were established based on:

- Oshawa Strategic Plan 2024-2027
- Oshawa Financial Strategy 2025-2029
- Oshawa Quality Standards
- Parks, Recreation, Library and Culture Facility Needs Assessment 2024

Technical and Community based specific service levels and current performance are highlighted in the subsequent tables and sections below. City staff continually monitor performance.

The table below shows four options for investment into the asset portfolio for Parks Facilities which directly impacts the Levels of Service.

Parks Facilities	Option 1: Financial Strategy	Option 2: Maintain Current Funding	Option 3: Maintain Current L.O.S.	Option 4: Fully Funded
2024 % Fair or Better Condition	48%	48%	48%	48%
Average Annual Investment	$4,589,000	$4,278,000	$2,278,000	$10,547,000
2034 % Fair or Better Condition	60%	59%	48%	89%
Condition Trend	Increase	Increase	Maintain	Increase

Option 1: shows incremental investment, into the capital reserves, as a key recommendation of the Oshawa Financial Strategy. Specifically, this shows an increase in the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026.

Option 2: shows the impact of not increasing dedicated infrastructure levy.

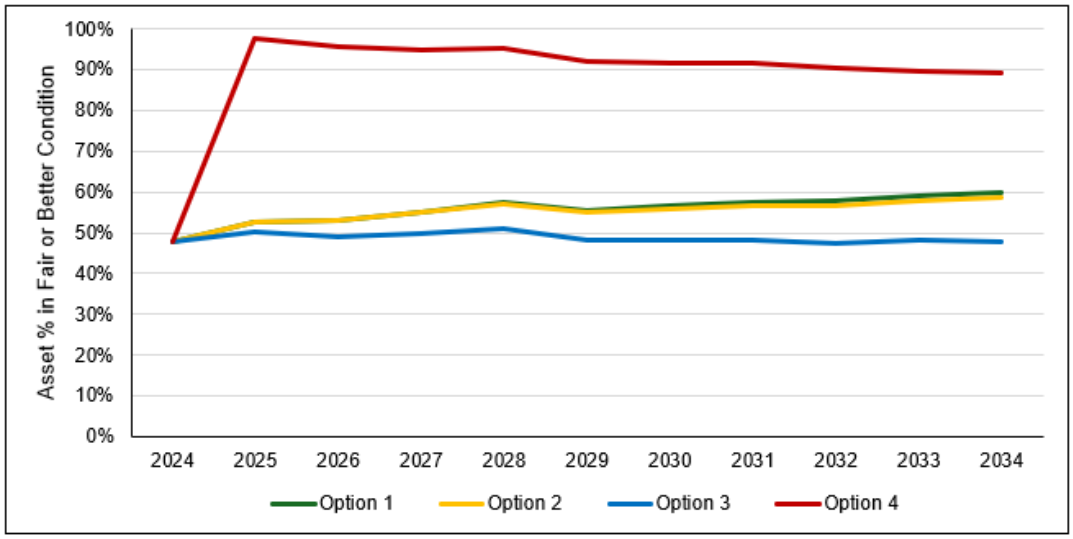
Option 3: is the calculated cost of maintaining the current levels of service.

Option 4: is the levels of service that could be maintained, with unlimited funding.

Parks Facilities

Levels of Service – Current and Proposed

The graph below compares the condition of the assets for each of the four funding options over 10 years:



Option 1 is recommended as it strikes the best balance between fiscal responsibility consistent with the Financial Strategy and delivers the levels of service that better meets the needs of our residents.

The graph below shows the condition for the next 10 years based on Funding Option 1 - Financial Strategy.

Parks Facilities

Levels of Service - Current and Proposed

Service Attribute	Technical Levels of Service	2024 A.M.P. L.O.S.	2025 A.M.P. L.O.S.	2034 Proposed L.O.S.[1]
Quality & Safety	% of Parks Facilities in fair or better condition	45.7%	48.4%	59.8%
Scope	# of parks per 1,000 residents	0.8	0.8	0.8
Scope	# of Hectares' of active parkland heritage lands per 1,000 residents	1.7	1.6	1.7
Scope	# of Hectares' of parkland & natural heritage lands per 1,000 residents	5.5	5.5	4.9

[1] Based on Option 1 - Financial Strategy

Parks Facilities

Levels of Service and Related Risks

The following table outlines identified risks to delivering the levels of service as well as potential impacts and mitigating actions.

Identified Risk	Potential Impact	Mitigating Actions
Failed Equipment / Infrastructure	• Service interruptions • Negative press leading to less service demands	• Repair and rehabilitate as necessary • Routine maintenance & inspections • Increase investment in life-cycle activities
Inadequate Funding	• Delivery of service • Increased risk of failure • Shorten asset life • Defer cost to future generations	• Reduction of levels of service • Find additional revenue sources
Regulatory Requirements	• Non-compliance • Mandatory investments • Increase costs	• Reduction or alteration of services • Find additional revenue sources
Strategic Documents Unharmonized with Future Needs	• Less service demands based on options available • Different services than needed not utilized	• Planning parks and levels of service that respond to the needs of people living in Oshawa
Plans are not Followed / Not Undertaking the Required Lifecycle Activities	• Shorten asset life • Inefficient investments • Failure to deliver desired levels of service	• Monitor, review and report, on asset management activities • Explore alternative lifecycle activities that may be more efficient

- Failed equipment can be a result of vandalism, theft, climate change impacts, as well as different or heavier usage than planned for
- Inadequate funding could be based on changing shifts of needs within the portfolio of assets and services in the Asset Management Plan
- Regulatory requirements could be based on changes to legislation
- Strategic documents being unharmonized could result from forecasting assumptions being inaccurate
- Plans not being followed or lifecycle activities not actioned could result from many reasons, some examples are shortages of staff, inability to procure replacement in a timely basis, and competing priorities

Parks Facilities

Lifecycle Management Strategies

The City's Official Plan, along with several Council-approved guiding documents, shape the development and redevelopment of our parks and trails. These include the Development Charges Background Study, the 10-year capital forecast, Parks, Recreation, Library, and Culture Master Plan (P.R.L.C.) and the Active Transportation Master Plan (A.T.M.P.). These documents take into consideration trends, demographics, existing resources, and service levels.

Park redevelopments are evaluated as part of the City's annual asset management and accessibility audit process, within the framework of the City's budget. They are often not like for like because of the changing regulatory requirements, such as those in the Accessibility for Ontarians with Disabilities Act, and safety requirements

Park redevelopments are prioritized based on the condition of playgrounds. Improvements are made as park amenities approach the end of their safe-use lifespan. Playgrounds have an expected service life of about 20 years which aligns reasonably well with the expected service life of other park facilities (typically 20 to 30 years). Projects are reviewed with stakeholders (Parks Operations, Community Engagement, Oshawa Accessibility Advisory Committee, and Recreation Services) to ensure the projects will meet anticipated programming needs. Projects that address service demands resulting from development are reviewed to ensure their timing aligns with the completion of subdivision developments. Engineering and Planning Services are consulted to coordinate park redevelopment projects with Municipal and Regional infrastructure projects.

Playground components are removed on failure if there is insufficient funding to replace them. Smaller assets such as benches, picnic tables, and temporary stages are not inventoried. An effort is underway to compile an asset register for these assets. Mid-life refurbishments are assumed in lifespans but have not been costed in the strategy.

In addition to capital lifecycle activities, Parks Operations follows various operating programs. These operating programs include:

- Horticulture – includes all plant-based activities, e.g. maintaining flower beds
- Forestry – maintenance of park, street, and woodlot trees
- Park facilities – activities include park patrols, managing playgrounds, and other hardscape assets
- Grounds maintenance – includes grass cutting, garbage collection, trail maintenance, and special events.

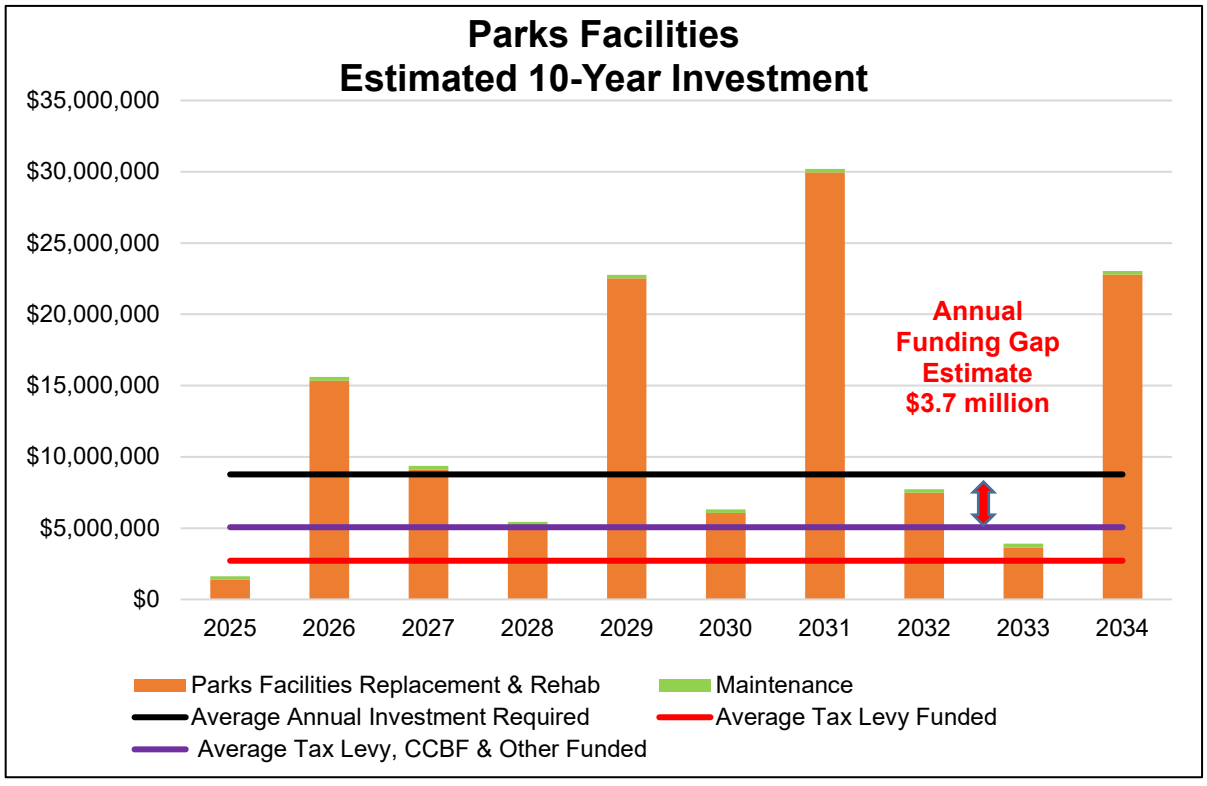
Parks Facilities

Lifecycle Management and Financial Strategy

The following 10-year lifecycle forecast is shown below and does not account for any budget constraints. The average annual investment required, based on the full lifecycle of assets, is estimated at $8.8 million (in 2024 dollars).

Using Option 1 of increasing the total dedicated infrastructure levy identified in the Oshawa Financial Strategy, the annual investment in Parks Facilities from Tax Levy, the Canada Community Benefit Fund (previously Federal Gas Tax Funding) and Other Funding is $5.1 million. This results in an estimated annual funding gap of $3.7 million.

Future iterations will include additional investments in maintenance, as comprehensive proactive maintenance plans will be developed and incorporated. This will show the impact on the capital replacement expenditures by extending the service life, in order to maximize value from our assets.



Parks Facilities

Managing Growth – Capital and Operating Expenditure Forecast

The 2021 population for the City of Oshawa was 182,020 and is anticipated to increase to 239,390 by 2036.

City of Oshawa[1]	2021	2026	2031	2036
Total Population	182,020	200,280	219,990	239,390
Total Households	66,640	73,800	81,450	89,060
Total Employment	63,740	70,600	78,070	85,250

[1] Note: Per 2025 Durham Regional Official Plan

The population growth is expected to result in incremental service demands that may impact the current level of service. In order to accommodate the projected increases in demand caused by growth, the City has undertaken a number of master planning studies which identify the need for new infrastructure and infrastructure service expansion. These growth-related needs have been included in the City's Development Charges Background Study and the 10-year capital forecast. Utilizing development charges to fund the growth-related initial capital costs helps to ensure the results of future growth do not increase the cost of maintaining levels of service for existing taxpayers. However, the future maintenance and capital costs will be borne by the municipality.

The City's Official Plan references that build-out is estimated to occur in 2051. The operating costs related to assumed assets are difficult to estimate and is dependent on what future proposed levels of service are approved by Council. As asset management practices continue to mature and better information is gathered, more specific information relating to operating costs will be determined.

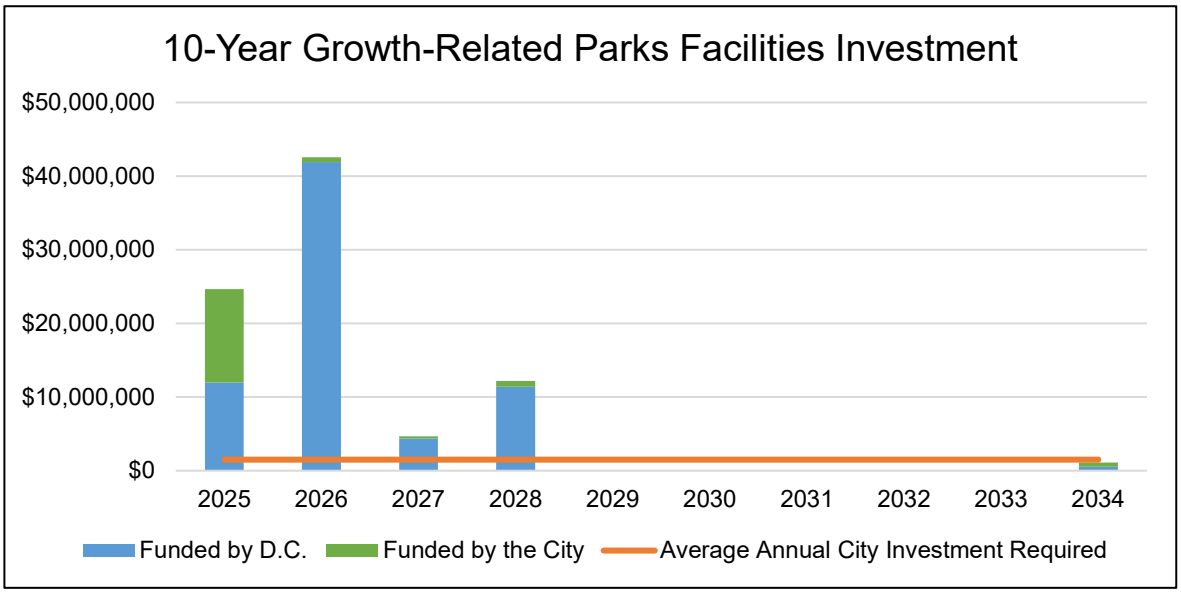
Parks Facilities

Managing Growth – Capital and Operating Expenditure Forecast

The 5-year forecast includes $84.6 million for new Parks Facilities and the majority of these growth-related capital projects include a small proportion of improvements that benefit the existing residents. These costs are required to be funded by the City, while development charges pay for the majority of the cost. The redevelopment of Rotary Park in 2024 and 2025 is an exception, where the cost is divided equally between growth and benefit to existing.

Over the 10-year forecast, there are several Parks Facilities anticipated to be built which requires a total contribution from the City in the amount of $15.0 million (or an average annual amount of $1.5 million). Annually, the City budgets a contribution from operating to a Growth-Related Non-D.C. reserve to fund the City's portion of growth-related capital investments.

The graph below shows 10 years of growth, even though the majority of projects identified in the Development Charges Background Study have an anticipated start date within the first four years.



Appendix G

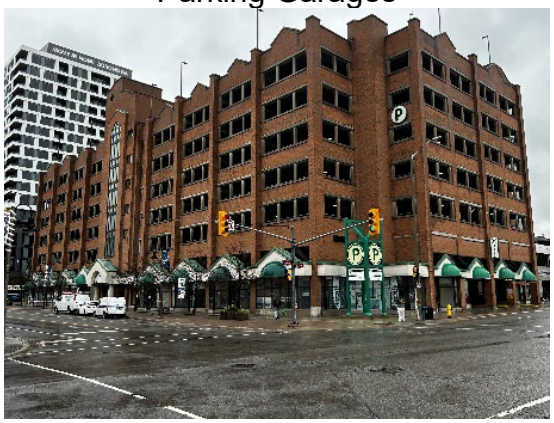
Parking Services

May 2025

Parking Services

Description of Parking Services Assets

Parking Garages



Parking Lots

Parking Equipment

The City owns and maintains parking garages, parking lots, and related equipment to support the service of transportation and the movement of goods and people throughout the City.

In total there are 3,043 paid parking spaces available to the users of Oshawa Parking Services.

Parking garages provide 1,647 spaces, off-street lots provide 654 spaces, and there are 742 on-street spaces.

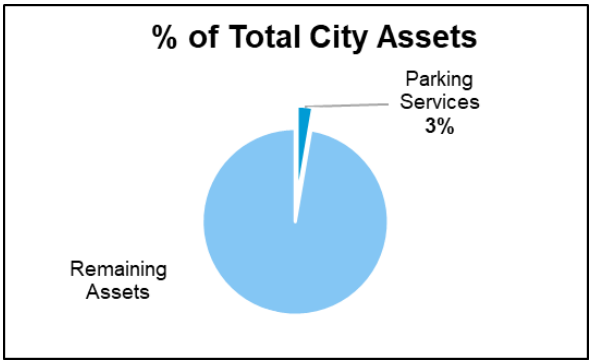
This appendix covers parking assets that are used in the delivery of parking services. Parking services assets are those assets that provide parking for which a fee is paid.

Parking lots that are free to park in, such as those that are part of the various recreation centres, parks, and other facilities, are included in those separate appendices.

Parking Services

Inventory and Estimated Replacement Cost

Parking Services	Quantity (each)	Estimated Replacement Cost
Parking Garages	3	$122,315,241
Parking Lots	7	$9,362,117
Parking Garage & Lot Equipment	325	$3,363,067
Total Parking Services		**$135,040,425**



The City's parking garages, parking lots, and all related parking equipment inventory is collected and tracked through the City's Capital Planning Software (V.F.A.) as well as the Tangible Capital Asset Ledger (Excel), and Maximo.

For Parking Services, the City owns a total of 3 parking garages:

- Centre Street Parking Garage
- McMillan Street Parking Garage
- Mary Street Parking Garage

In addition to the 3 parking garages, the City owns 6 parking lots located throughout the downtown core and 325 pieces of equipment (ticket splitters, ticket validators, pay-on-foot stations, pay-by-plate, single space meters, gate arm controllers, and transponder heads) related to parking services assets which are required to deliver this service.

The total estimated replacement cost of these assets is $135,040,425 based on 2024 dollars.

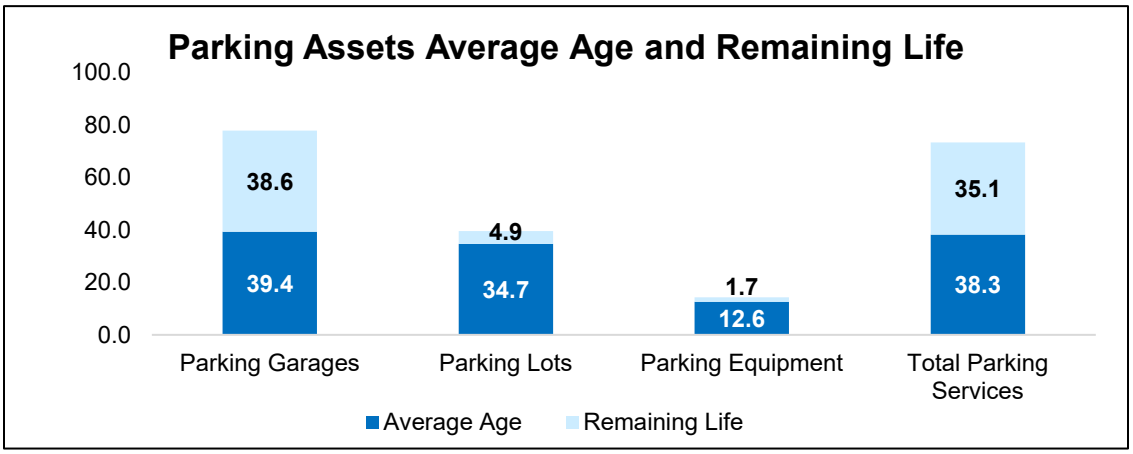
Parking Services

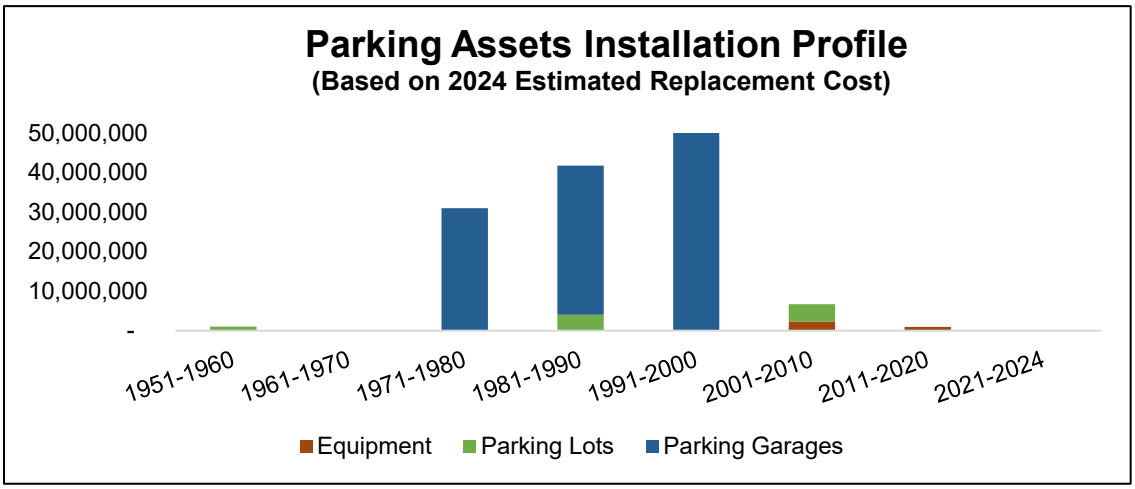
Average Age and Asset Installation Profile

Age is based on the initial construction year, or renovation year for the parking garages and lots. The acquisition year or replacement year is used for the related equipment. Components are tracked separately for each component of the aggregate asset. The average age of the City's Parking Services Assets is 38.3 years and is broken down by:

- 39.4 years - Parking Garages
- 34.7 years - Parking Lots
- 12.6 years - Parking Related Equipment

The service life of Parking Services Assets is estimated at 75 years for garages, 30 years for parking lots and 10-15 years for equipment. Although the average life span of a parking lot is 30 years with an average age of 34 years, for the most part the parking lots are still functioning well, in fair or better condition. Condition is a function of observation for all areas based on inspection.





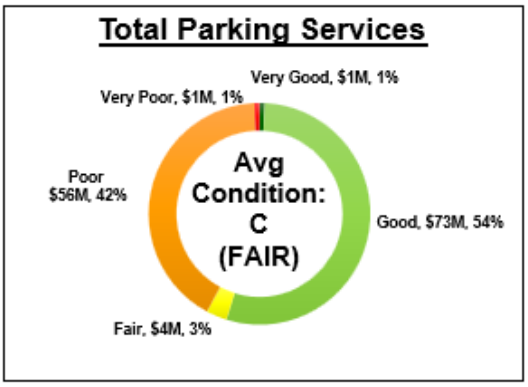
Parking Services

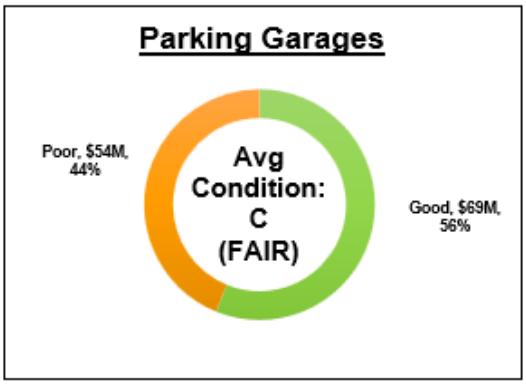
Condition

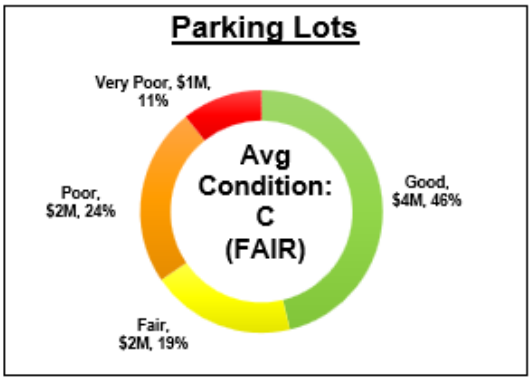
Parking garages are inspected on a rolling basis with all assets being covered within a two-year period. Assessments are done by external inspectors and internal staff. A facility condition number is calculated based on the condition of the individual garage components and reported for the category below. Parking lots are inspected frequently, with a thorough inspection completed annually at a minimum where the condition is documented. Parking equipment assets are inspected by both staff and the equipment vendors. Inspections are documented when performed. Service calls are currently being documented and managed through Maximo for equipment.

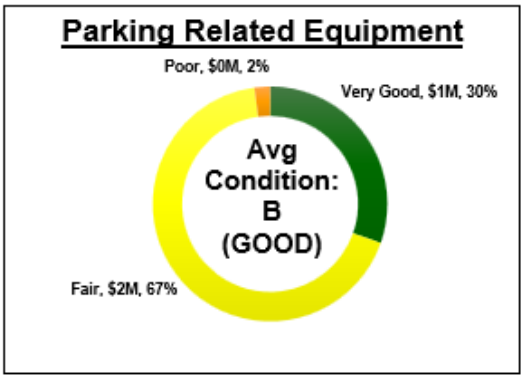
Overall, the City's Parking Lots and Equipment assets are in FAIR condition (C Grade):

- C – Fair – Parking Garages
- C – Fair – Parking Lots
- B – Good – Parking Related Equipment









Parking Services

Condition Rating	Grade	Category	Description
80-100	A	Very Good	The Parking Services assets are functioning as intended. Limited, if any, deterioration observed.
60-80	B	Good	The Parking Services assets are functioning as intended. No major maintenance is anticipated within the next 5 years.
40-60	C	Fair	The Parking Services assets are functioning as intended. Normal deterioration and minor distress observed. Maintenance will be required within the next 5 years to maintain functionality.
20-40	D	Poor	The Parking Services assets are starting to not function as intended. Significant distress observed. Maintenance and some repair will be required within the next few years to restore functionality.
0-20	E	Very Poor	The Parking Services assets are not functioning as intended. Significant deterioration and major distress observed. Requires immediate attention.

Parking Services

Levels of Service – Current and Proposed

Preliminary levels of service for the City's Parking Services assets are below. These were established based on:

- Oshawa Strategic Plan 2024-2027
- Oshawa Financial Strategy 2025-2029
- The City of Oshawa Parking Study 2021
- Oshawa Quality Standards

Technical and Community based specific service levels and current performance are highlighted in the subsequent tables and sections below. City staff continually monitor performance.

The table below shows the options for investment into the asset portfolio for Parking Services which directly impacts the Levels of Service.

Parking Services	Option 1: Financial Strategy	Option 2: Maintain Current Funding	Option 3: Maintain Current L.O.S.	Option 4: Fully Funded
2025 A.M.P. % Fair or Better Condition	58%	58%	58%	58%
Average Annual Investment	$932,000	$839,000	$1,237,000	$6,719,000
2034 % Fair or Better Condition	56%	55%	58%	98%
Condition Trend	Decrease	Decrease	Maintain	Increase

Option 1: shows incremental investment, into the capital reserves, as a key recommendation of the Oshawa Financial Strategy. Specifically, this shows an increase in the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026.

Option 2: shows the impact of not increasing the dedicated infrastructure levy.

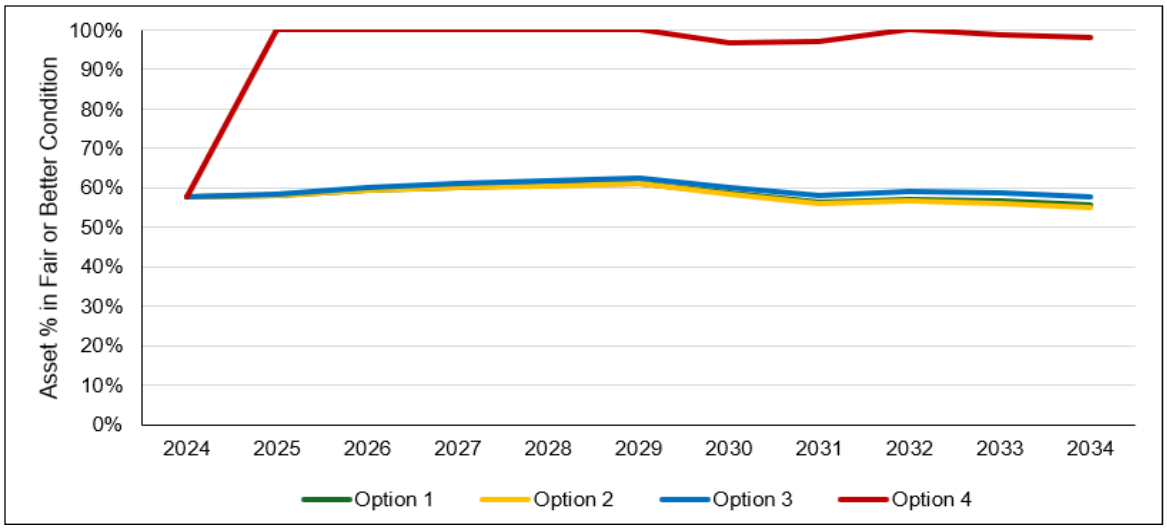
Option 3: is the calculated cost of maintaining the current levels of service.

Option 4: is the levels of service that could be maintained but with unlimited funding.

Parking Services

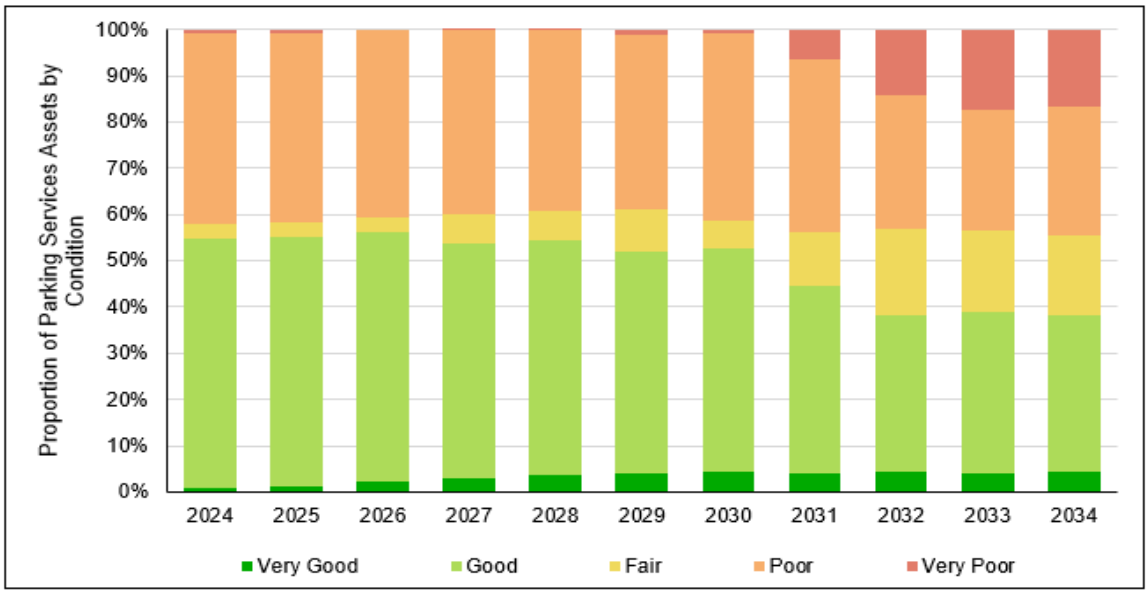
Levels of Service – Current and Proposed

The graph below compares the condition of the assets for each of the four funding options over 10 years:



Option 1 is recommended as it strikes the best balance between fiscal responsibility consistent with the Financial Strategy and delivers the levels of service that better meets the needs of our residents.

The graph below shows the condition for the next 10 years based on Funding Option 1 – Financial Strategy.



Parking Services

Levels of Service – Current and Proposed

Service Attribute	Technical Levels of Service	2024 A.M.P. L.O.S.	2025 A.M.P. L.O.S.	2034 Proposed L.O.S.[1]
Quality & Safety	% parking assets in fair or better condition	98%	58%[2]	56%
Function & Scope	# of parking garage spaces per 1,000 residents	8.5	8.4	7.1
Function & Scope	# of parking lot spaces per 1,000 residents	3.5	3.2	2.8
Function & Scope	# of on-street parking lot spaces per 1,000 residents	4.1	3.8[3]	3.5
Function & Scope	# of accessible spaces per 1,000 residents	0.3	0.3	0.3

[1] Based on Option 1 - Financial Strategy

[2] The condition variance between the 2024 and 2025 A.M.P. is a result of the condition of the Mary Street Parking Garage moving from Fair to Poor, which accounts for 40% of total parking services.

[3] Function & scope changes in 2025 vs 2024 are due to a revision in total parking spaces.

Based on the proposed function and scope levels of service, current projections indicate overall utilization will remain well below the 85% threshold of the projected total capacity of the municipal parking system. While some individual facilities exceed 85% capacity, ample parking remains available within the industry's acceptable walking distance of 300-400 meters from these locations. Based on this information, the proposed levels of service reflect only one change in spaces. The repurposing of changes to population from 2025 to 2034 proposed as the portfolio of spaces has been determined to be sufficient for future needs.

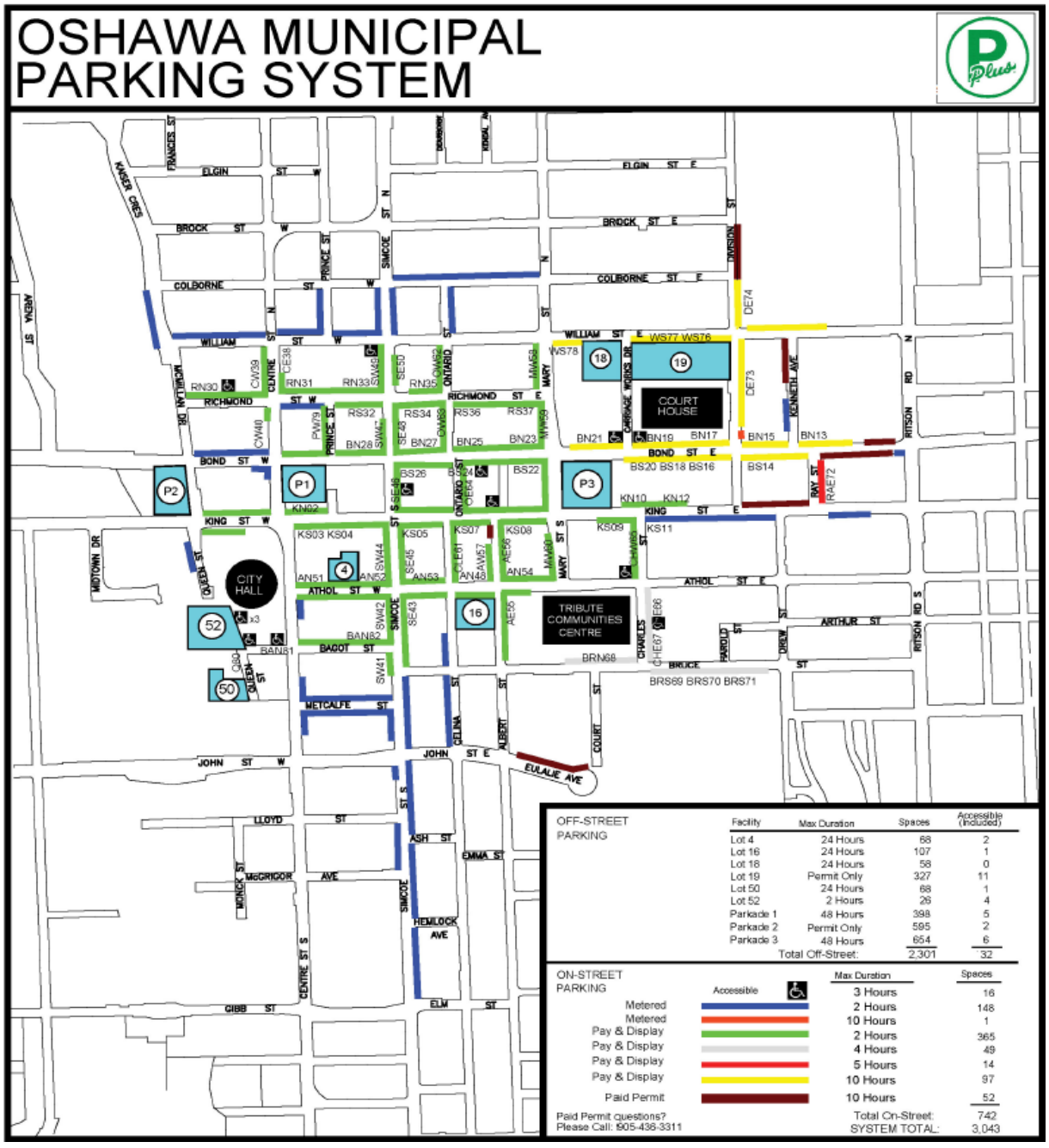
Parking Services

Technical & Community Levels of Service and Current Performance

Service Attribute	Community Levels of Service	Current Performance
Quality	Provide parking services that meet the needs of our users	See the following map showing locations of paid parking spaces and facilities

Parking Services

Technical & Community Levels of Service and Current Performance



The Municipal Parking System Map is updated for 2025. There are slight variances between the map totals and category totals. The inventory totals are from 2024 and include Parking Lot 20, which was taken out of service in January 2025.

Parking Services

Levels of Service and Related Risks

The following table outlines identified risks to delivering the levels of service as well as potential impacts and mitigating actions.

Identified Risk	Potential Impact	Mitigating Actions
Failed Infrastructure (Parking Facilities)	• Impact to service • Impact to reputation • Decrease in revenue	• Annual facility assessment • Capital funding plan • Implement maintenance plan
Failed Equipment	• Impact to service • Impact to reputation • Decrease in revenue • Aging/obsolete equipment will increase repair cost over time	• Annual equipment assessment • Capital funding plan/lifecycle plan •Maintenance plan
Funding/Budget Constraints	• Infrastructure / equipment funding cuts – high replacement cost	• Early capital funding planning
Expanding Development – Loss of Lots	• Selling parking lots for development	• Developer provided supplement parking in design plans
Population Growth/Downtown Expansion	• Inadequate parking to resident ratio	• Monitor development against plans • Promote alternative transportation modes

- Failed infrastructure and equipment can be a result of vandalism, climate change impacts, as well as heavier usage than planned.
- Funding and budget constraints could be based on changing shifts of needs within the portfolio of assets and services in the Asset Management Plan.
- Expanding development leading to loss of lots could be a result of changing development plans.
- Population growth and downtown expansion could lead to inadequate parking if strategic documents are misaligned with future needs.

Parking Services

Lifecycle Management Strategies

For the parking garages, the City has a rolling condition assessment program in place that allows for each facility to have its condition assessed every two years. The assessments are completed by external inspectors or internal staff, alternating so that external inspectors assess each facility once every four years. The assessments by external inspectors are carried out by two inspectors, one specializing in architectural aspects of facilities and the other in mechanical aspects of facilities. Staff inspections are done by one staff member.

Condition assessments are done visually, without dismantling equipment or doing destructive testing. Specialized assessments are carried out on an ad-hoc basis, as required. These assessments can help evaluate more complex issues and can improve cost estimates for any improvements needed. The condition of facility components is captured as an estimate of remaining service life.

Parking lots are inspected by Engineering Services Staff on an annual basis and staff identify a list of improvements for parking lots. Subsequently, projects are prioritized based on condition ratings and other factors such as the criticality of the facility the parking lot serves, and the nature of issues identified at each lot. For example, a parking lot would be given a higher priority if health and safety issues have been identified.

For parking related equipment, issues identified by inspections noted in the condition assessments section are addressed as they arise.

Gates and pay stations at the three municipal garages have annual maintenance performed by the equipment vendor. Depending on their nature, repairs at the municipal garages are either performed by City staff or by the equipment vendor.

Individual pole mounted parking meters are not always replaced with like-for-like. They are replaced by pay-by-plate equipment when they can no longer keep up with the volume of coins being deposited. This would be the result of increased demand for parking in an area.

Maximo is used to manage work orders. It keeps a history of work that is requested and completed.

Parking Services

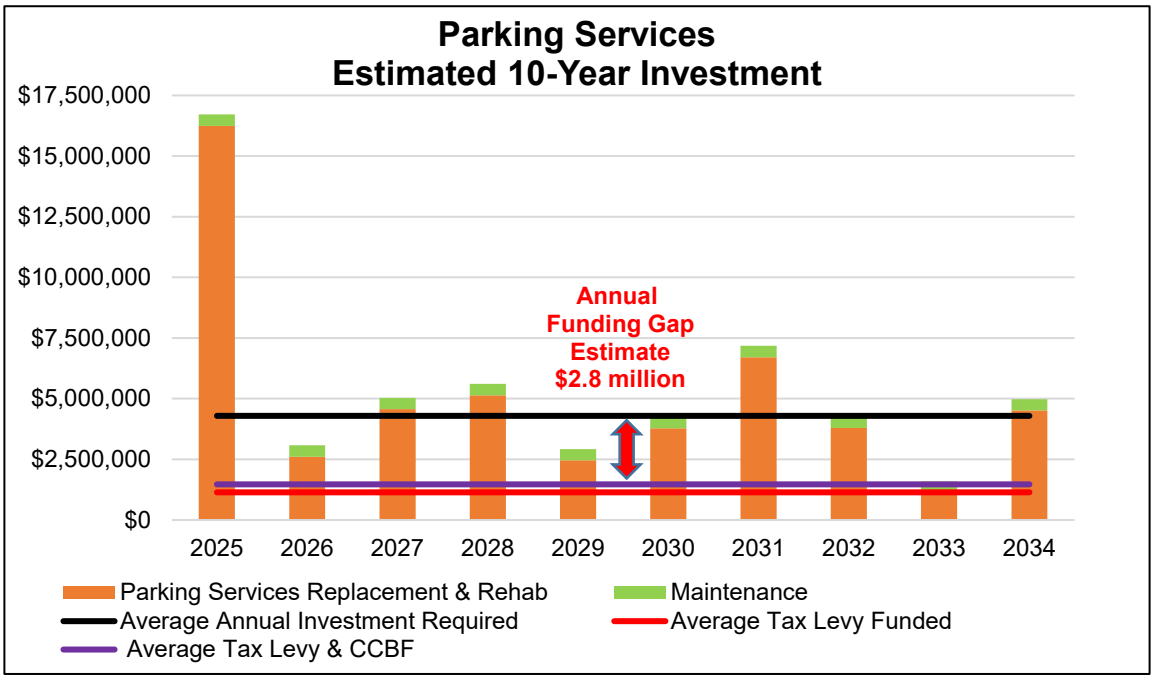
Lifecycle Management and Financial Strategy

Staff prepare the City's Capital Budget, using information gathered during these inspections, along with professional judgement on the timing.

The following 10-year lifecycle forecast is shown below and does not account for any budget constraints. The average annual investment required, based on the full lifecycle of assets, is estimated at $4.3 million (in 2024 $).

Using Option 1 of increasing the total dedicated infrastructure levy identified in the Oshawa Financial Strategy, the annual investment in Parking Services from Tax Levy and the Canada Community Benefit Fund (previously Federal Gas Tax Funding) is $1.5 million. This results in an estimated annual funding gap of $2.8 million.

Future iterations will include additional investments in maintenance, as comprehensive proactive maintenance plans will be developed and incorporated. This will show the impact on the capital replacement expenditures by extending the service life, in order to maximize value from our assets.



Parking Services

Managing Growth – Capital and Operating Expenditure Forecast

The 2021 population for the City of Oshawa was 182,020 and is anticipated to increase to 239,390 by 2036.

City of Oshawa[1]	2021	2026	2031	2036
Total Population	182,020	200,280	219,990	239,390
Total Households	66,640	73,800	81,450	89,060
Total Employment	63,740[1]	70,600	78,070	85,250

[1]Note: Per 2025 Durham Regional Official Plan

The population growth is expected to result in incremental service demands that may impact the current level of service. In order to accommodate the projected increases in demand caused by growth, the City has undertaken a number of master planning studies which identify the need for new infrastructure and infrastructure service expansion. These growth-related needs have been included in the City's Development Charges Background Study and the 10-year capital forecast. Utilizing development charges to fund the growth-related initial capital costs helps to ensure the results of future growth do not increase the cost of maintaining levels of service for existing taxpayers. However, the future maintenance and capital costs will be borne by the municipality.

There are no significant maintenance or capital costs in the next 10 years related to growth for Parking Services.

Appendix H

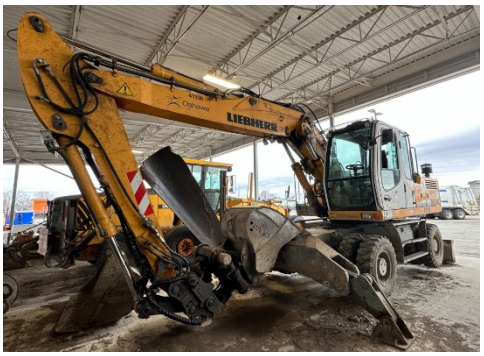
Fleet and Equipment

May 2025

Fleet and Equipment

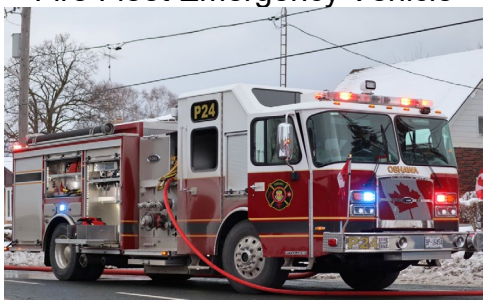
Description of Fleet and Equipment Assets

Operations Fleet Heavy Duty



Operations Fleet Light Duty

Fire Fleet Emergency Vehicle



Fire Equipment

The City owns and maintains equipment and fleet vehicles to provide services and maintain assets.

Fleet and Equipment are divided into two subcategories: Operations Fleet and Equipment, and Fire Fleet and Equipment.

Operations Fleet and Equipment is composed of equipment, light duty fleet vehicles, medium duty fleet vehicles and heavy duty fleet vehicles. These are used to maintain roads, parks and active transportation assets as well as provide passenger vehicles for the various services that require them.

Fire Fleet and Equipment is composed of equipment, administrative vehicles and emergency vehicles. These are used to provide fire services.

Expansion of current and acquisition of new Fleet and Equipment is undertaken as part of the Capital Budget process and are identified in the City's Development Charges Background Study

This appendix covers both Operations Fleet and Equipment as well as Fire Fleet and Equipment.

Information Technology Equipment has not been included as it is transitioning from a capital based expenditure to an operating based expenditure. Software is more subscription based and the amount of hard assets owned vs leased is very small.

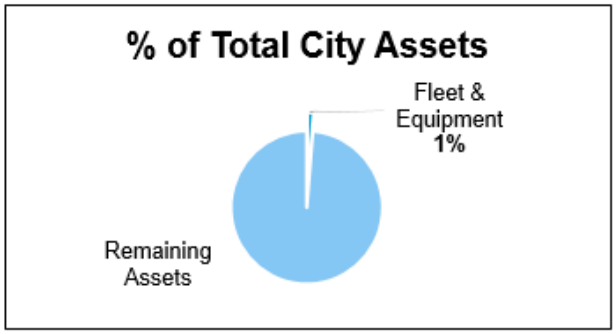
Fleet and Equipment

Inventory and Estimated Replacement Cost

Operations Fleet and Equipment	Quantity (each)	Estimated Replacement Cost
Equipment	67	$1,563,536
Light Duty	120	$6,442,145
Medium Duty	63	$7,898,360
Heavy Duty	51	$16,508,424
Total Operations Fleet and Equipment	**301**	**$32,412,465**

Fire Fleet and Equipment	Quantity (each)	Estimated Replacement Cost
Equipment	438	$2,947,441
Admin. Vehicles	20	$1,033,206
Emergency Vehicles	11	$15,624,582
Total Fire Fleet and Equipment	**469**	**$19,605,228**

Fleet and Equipment	Estimated Replacement Cost
Total Fleet and Equipment	**$52,017,692**



The City's Fleet and Equipment inventory is collected and tracked through the City's Tangible Capital Asset Ledger (T.C.A.) using Excel and Maximo. The inventory quantity is based on the ending inventory of 2023 and values have been inflated to 2024$.

Operations Fleet and Equipment includes vehicles and equipment that maintain roads, bridges and stormwater assets along with park assets, active transportation trails as well as provide fleet vehicles to those services that require them such as Municipal Law Enforcement and Building Services.

Fire Fleet and Equipment includes vehicles and equipment that are used for emergency education and prevention as well as safety standards and enforcement and emergency response.

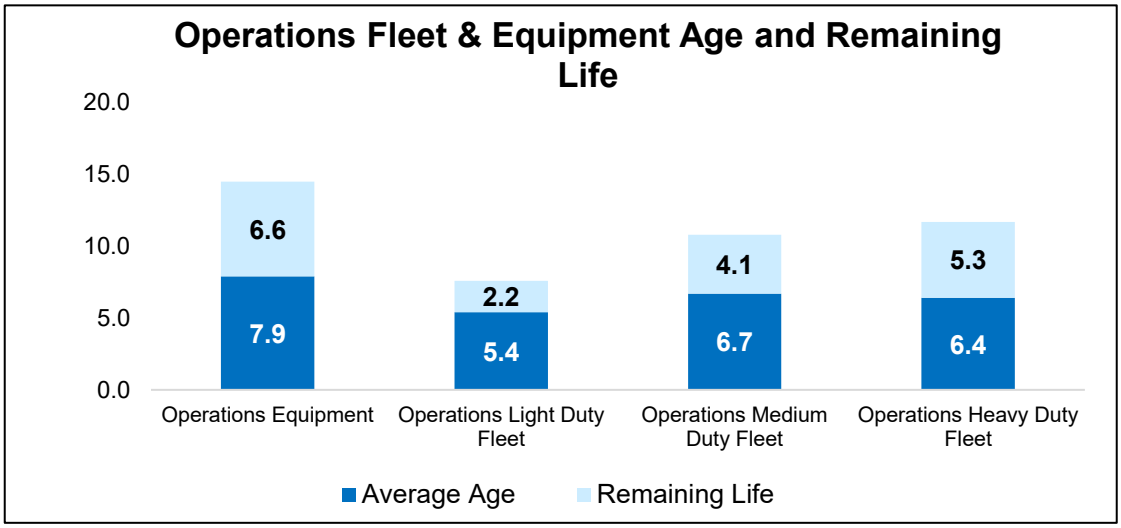
Fleet and Equipment

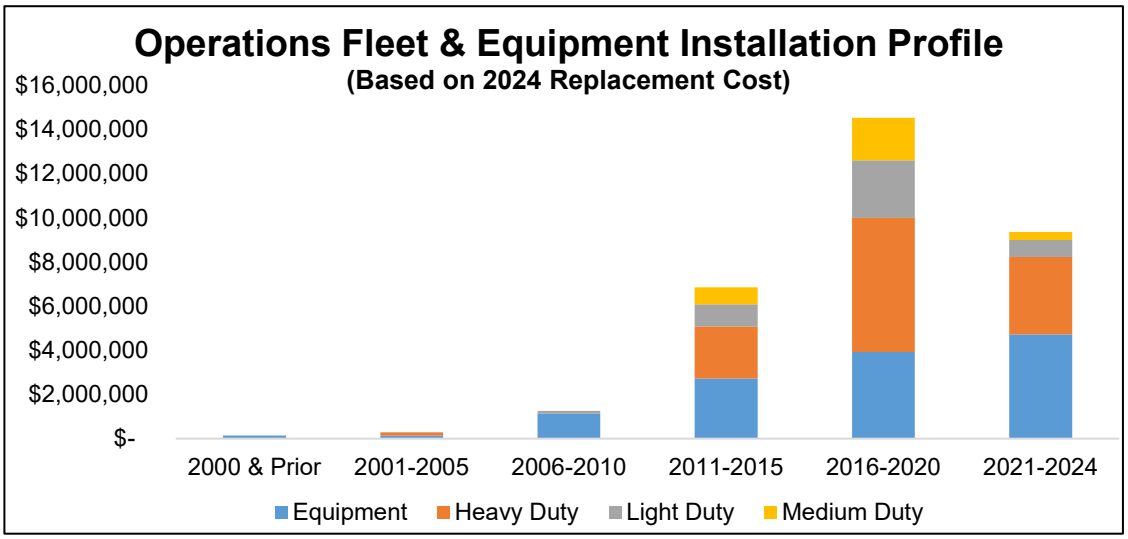
Operations Fleet and Equipment Average Age and Asset Installation Profile

Age is based on first year in service. The average age of the City's Operations Fleet and Equipment is 6.4 years. This can be further broken down by:

- 7.9 years - Equipment
- 5.4 years - Light Duty Fleet Vehicles
- 6.7 years - Medium Duty Fleet Vehicles
- 6.4 years - Heavy Duty Fleet Vehicles

The service life of Fleet and Equipment is estimated between 5 and 25 years depending on the asset class. Condition is a function of age.





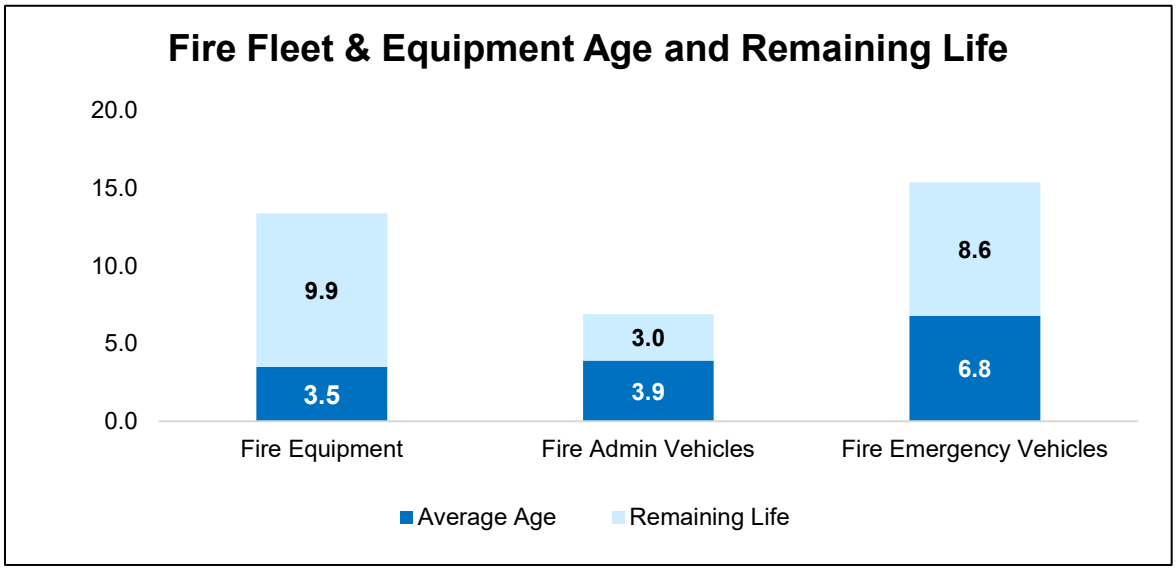
Fleet and Equipment

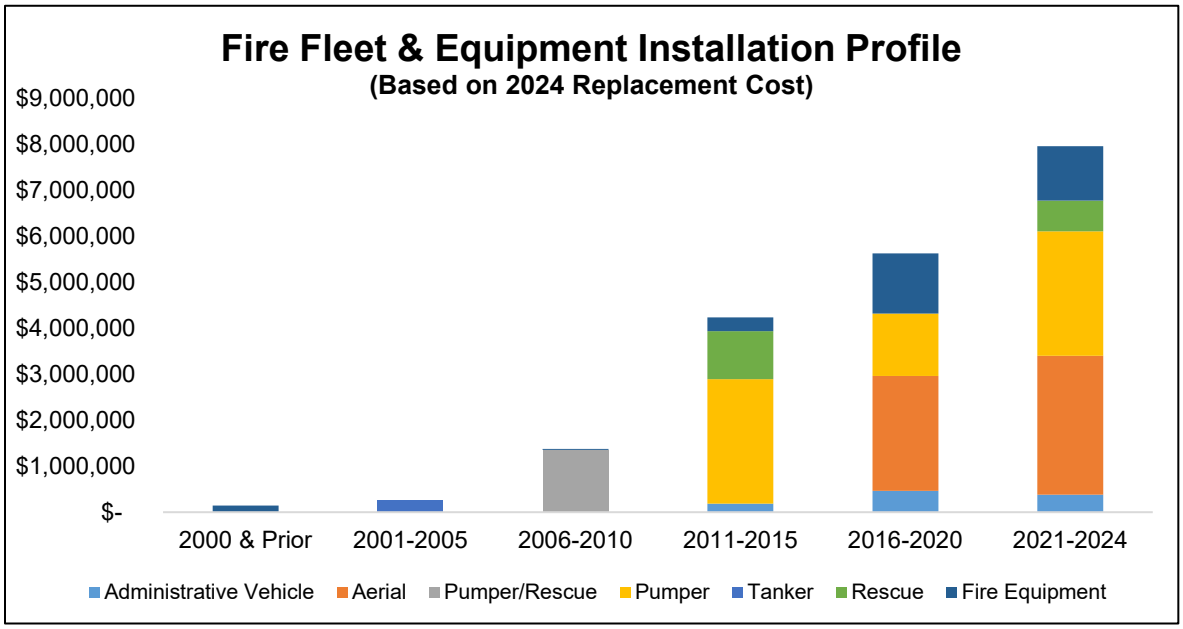
Fire Fleet and Equipment Average Age and Asset Installation Profile

Age is based on first year in service. The average age of the City's Fire Fleet and Equipment is 4.7 years. This can be further broken down by:

- 3.5 years - Fire Equipment
- 3.9 years - Administrative Fleet Vehicles
- 6.8 years - Emergency Fleet Vehicles

The service life of Fire Fleet and Equipment is estimated between 5 and 25 years depending on the asset class. Condition is a function of age.





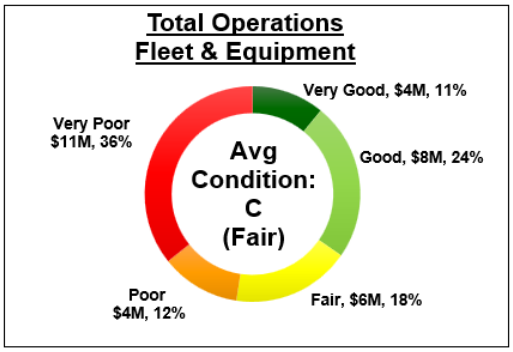
Fleet and Equipment

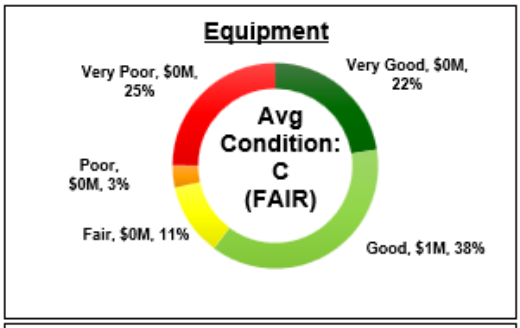
Operations Fleet and Equipment Condition

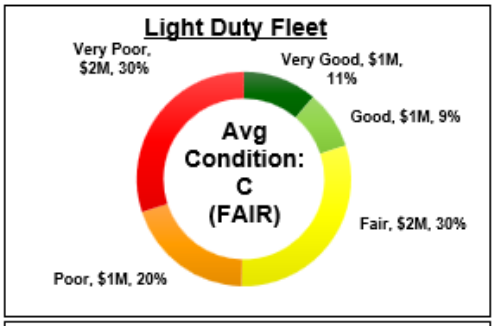
Fleet Services vehicles are subject to one mandatory preventative maintenance inspection per year. Issues that need to be addressed and general observations from the inspections are captured in Maximo.

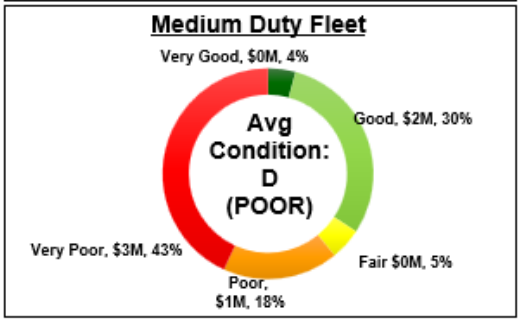
Overall, the City's Operations Fleet and Equipment assets are in FAIR condition (C Grade):

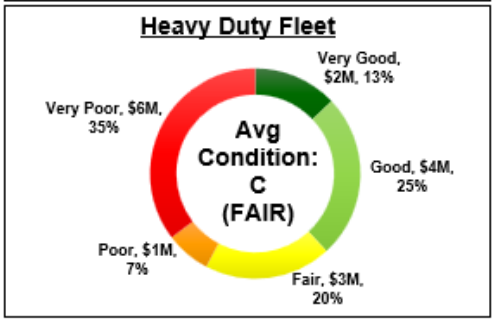
- C – Fair – Equipment
- C – Fair – Light Duty Fleet Vehicles
- D – Poor – Medium Duty Vehicles
- C – Fair – Heavy Duty Vehicles











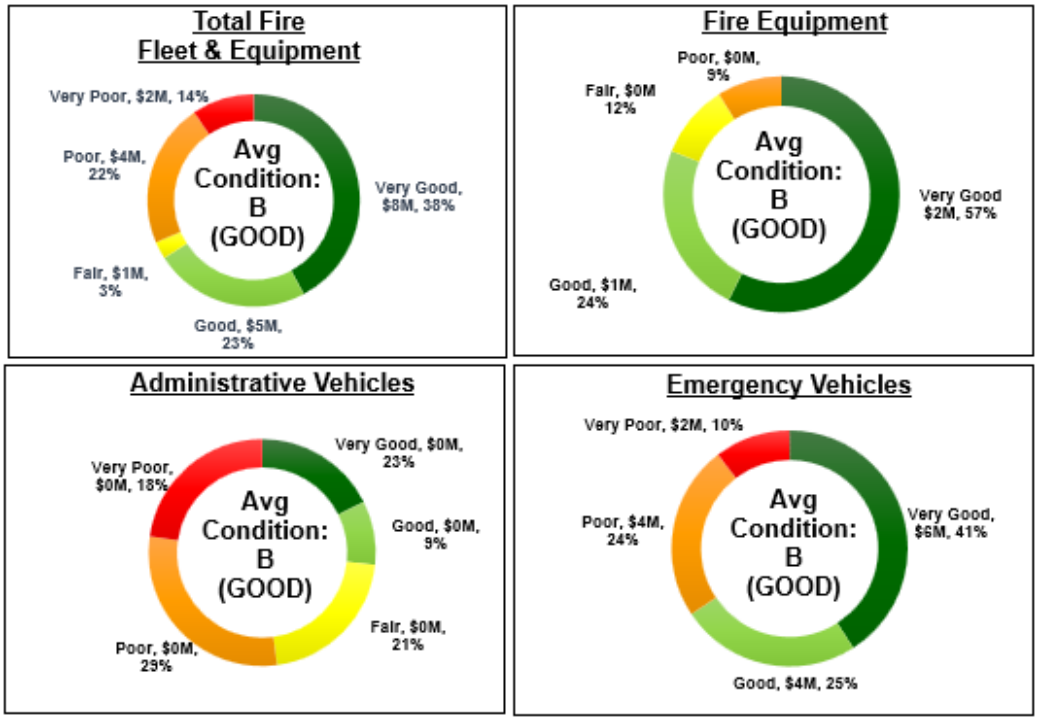
Fleet and Equipment

Fire Fleet and Equipment Conditions

The condition of Fire equipment is continuously monitored as part of daily operations. Any issues that are found are addressed immediately to avoid unnecessary risk of equipment failure that could result in injuries to fire fighters or compromise their ability to perform their jobs. Condition of Fire equipment is not documented formally on an annual basis. For this iteration a one-time documentation of the equipment was performed.

Overall, the City's Fire Fleet and Equipment assets are in GOOD condition (B Grade):

- B – Good – Fire Equipment
- B – Good – Administrative Vehicles
- B – Good – Emergency Vehicles



Fleet and Equipment

Condition Rating	Grade	Category	Description
>85-100	A	Very Good	The Fleet and Equipment are functioning as intended. Limited, if any, deterioration observed. More than 85% remaining useful life.
65-85	B	Good	The Fleet and Equipment are functioning as intended. No major maintenance is anticipated within the next 5 years. Between 65-85% remaining useful life.
45-65	C	Fair	The Fleet and Equipment are functioning as intended. Normal deterioration and minor distress observed. Maintenance will be required within the next 5 years to maintain functionality Between 45-65% remaining useful life.
25-45	D	Poor	The Fleet and Equipment are starting to not function as intended. Significant distress observed. Maintenance and some repair required within the next few years to restore functionality. Between 25-45% remaining useful life.
0-20	E	Very Poor	The Fleet and Equipment are not functioning as intended. Significant deterioration and major distress observed. Requires immediate attention. Less than 20% remaining useful life.

Fleet and Equipment

Levels of Service – Current and Proposed

Preliminary levels of service for the City's Fleet and Equipment assets are below:

- Oshawa Strategic Plan 2024-2027
- Oshawa Financial Strategy 2025-2029
- Oshawa Quality Standards
- Oshawa Fire Master Plan 2020

Technical and Community based specific service levels and current performance are highlighted in the subsequent tables and sections below. City staff continually monitor performance.

The proposed funding within Option 1 was the only option considered as it meets our fleet service needs and is within our financial strategy.

Operations Fleet and Equipment	Option 1: Financial Strategy
2025 A.M.P. % Fair or Better Condition	52%
Average Annual Investment	$2,763,000
2034 % Fair or Better Condition	60%
Condition Trend	Increase

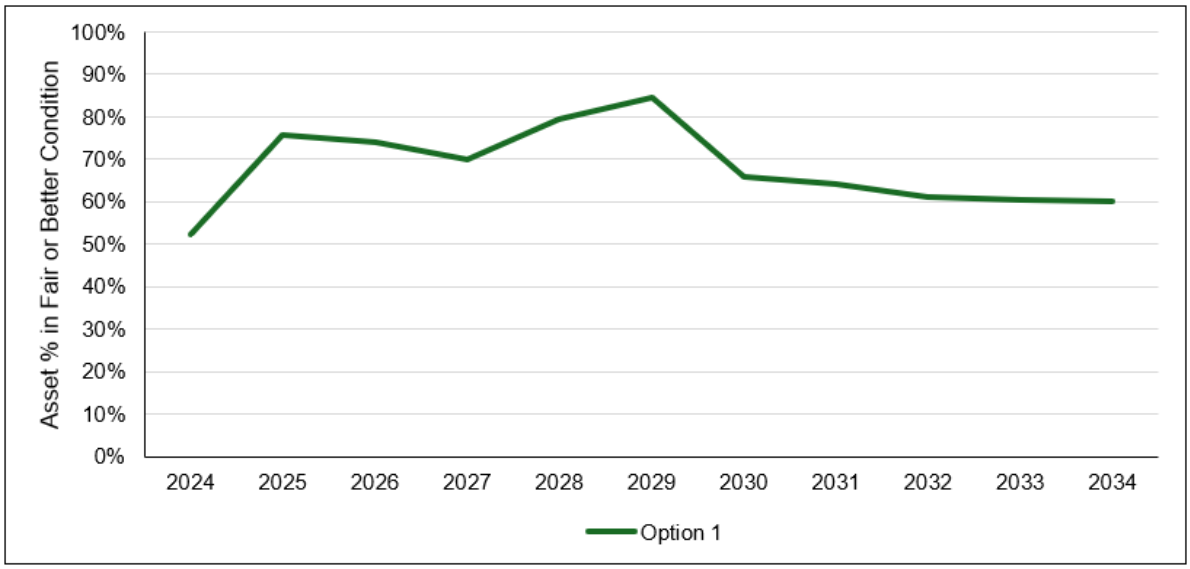
Fire Fleet and Equipment	Option 1: Financial Strategy
2025 A.M.P. % Fair or Better Condition	64%
Average Annual Investment	$880,000
2034 % Fair or Better Condition	73%
Condition Trend	Increase

Option 1: shows incremental investment, into the capital reserves, as a key recommendation of the Oshawa Financial Strategy. Specifically, this shows an increase in the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026.

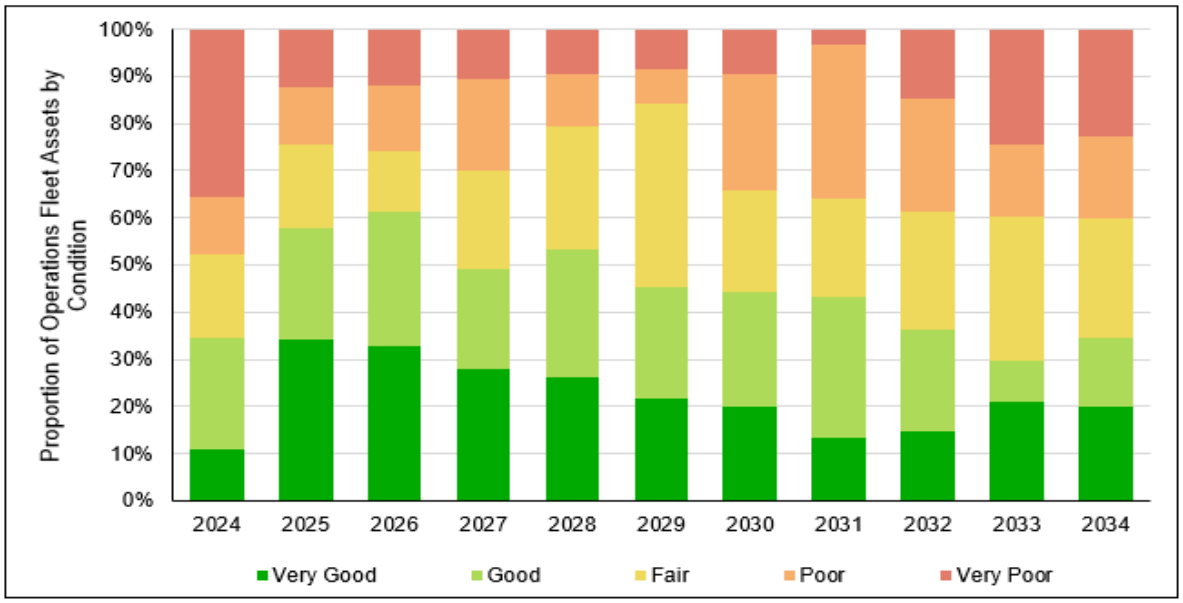
Fleet and Equipment

Operations Fleet and Equipment Levels of Service – Current and Proposed

The graph below shows the condition of the assets for Option 1 over 10 years.



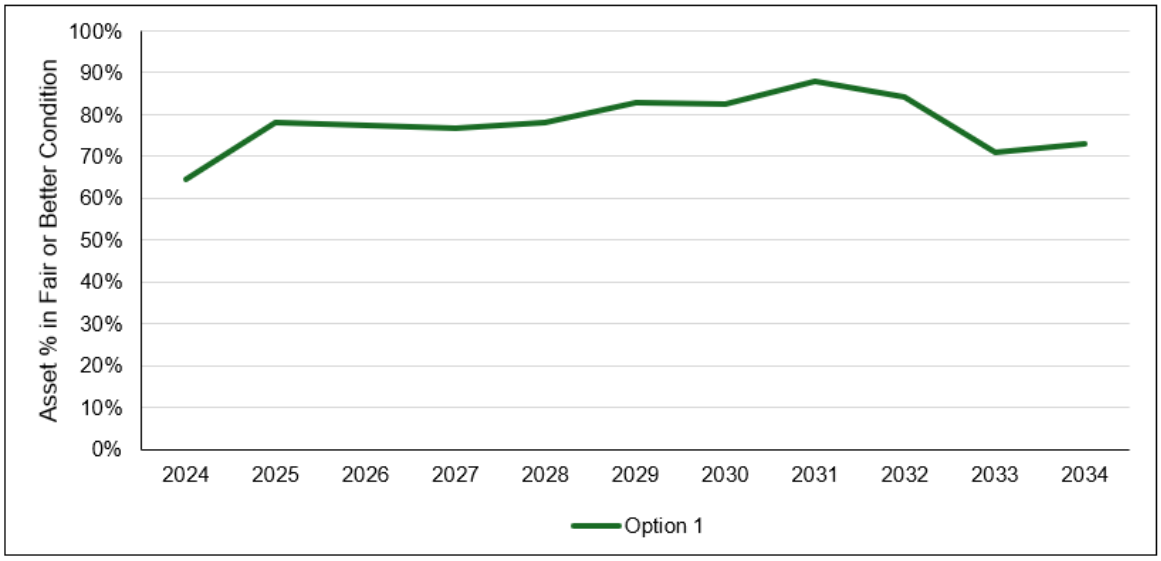
The graph below shows the condition for the next 10 years based on Funding Option 1 – Financial Strategy:



Fleet and Equipment

Fire Fleet and Equipment Levels of Service – Current and Proposed

The graph below shows the condition of the assets for Option 1 over 10 years.



The graph below shows the condition for the next 10 years based on Funding Option 1 – Financial Strategy:

Fleet and Equipment

Operations Fleet and Equipment Levels of Service – Current and Proposed

Service Attribute	Technical Levels of Service	2024 A.M.P. L.O.S.	2025 A.M.P. L.O.S.	2034 Proposed L.O.S.[1]
Quality	% of assets in Fair or better condition	52.4%	52.4%	60.0%
Safety	% of Legislated Inspections Completed	100%	100%	100%
Environmental Stewardship	% of Electric Vehicles[1] % of Hybrid Vehicles[1]	11.0% of Electric Vehicles (E.V.'s), 12.2% of Hybrid Vehicles	16.0% of Electric Vehicles (E.V.'s), 10.0% of Hybrid Vehicles	70.0% of Electric Vehicles (E.V.'s), 30.0% of Hybrid Vehicles[3]
Environmental Stewardship	# of EV Charging stations for fleet vehicles in service	10	35	55[2]
Environmental Stewardship	Annual fuel savings by way of using EV's and Hybrid vehicles vs internal combustion vehicles	15,345 L / $22,127	25,566 L / $34,377	TBD
Environmental Stewardship	# of L's of bio diesel being used per year	319,046 L	410,375 L	TBD

[1] Based on Option 1 - Financial Strategy
[2] There are 20 more charging stations planned in the next 24 months. Additions beyond that time frame are not confirmed.
[3] We cannot forecast exactly where EV/hybrid will fit into our fleet in the long term as we have limited in-service experience. All the data provided was with information available today.

Fleet and Equipment

Fire Fleet and Equipment Levels of Service – Current and Proposed

Service Attribute	Technical Levels of Service	2024 A.M.P. L.O.S.	2025 A.M.P. L.O.S.	2034 Proposed L.O.S.[1]
Quality & Safety	% of Fire assets in fair or better condition	68.2%	68.2%	73%
Safety	% of Emergency Response Times that meet N.F.P.A. Standards	76%	86%	TBD[2]
Environmental Responsibility	# of fire blankets in use	1	1	1

[1] Based on Option 1 - Financial Strategy

[2] This number is not forecasted for this time period. It is expected to fluctuate as the timing of growth and when new stations are equipped and staffed.

Fleet and Equipment

Levels of Service and Related Risks

The following table outlines identified risks to delivering the levels of service as well as potential impacts and mitigating actions.

Identified Risk	Potential Impact	Mitigating Actions
Supply Chain, Procurement, or Funding Delays / Issues Necessitating Assets In-Service Beyond Expected Useful Life	• Escalating corrective maintenance • Service interruptions • Breakdowns • Increased preventative maintenance costs per visit • Poor residual value at resale • Public image impacts • Increased downtime • Reliance on costly rentals • Increased reliance on contracted services • Part availability • Assets in service beyond expected useful life • Tariff exposure • New capital-reliance on costly rentals or contracted services	• Ensure asset lifecycles are accurate and reviewed regularly • Ensure assets are kept in excellent state of good repair • Identify funding sources for tariffs • Low utilization asset repurposing
Rapid Municipal Growth	• Insufficient equipment to provide services • Insufficient staffing levels • Gaps in service	• Utilize contracted services • Utilize rental equipment • Utilize temporary workforce
Municipal Sustainability Directives - Increased Pressure to Acquire Zero-Emission Equipment	• Fueling infrastructure requirements • Keeping current on emerging technology • Technician and Operator Training	• Long-term forecasting of requirements • Ongoing infrastructure installations • Ongoing education/training

Fleet and Equipment

Lifecycle Management Strategies

From a capital perspective, there is only one lifecycle activity for fleet assets – replacement at end of life. Capital planning for existing fleet assets involves determining when vehicles should be replaced. The decision to replace vehicles and equipment is primarily driven by financial considerations. The objective is to minimize total cost of ownership of vehicles and equipment. As a vehicle ages, the cost of repairs and maintenance increases. Eventually it becomes uneconomical to continue operating an older vehicle, and it is replaced. While simple in principle, minimizing total cost of ownership is challenging in practice.

The starting point for replacement decisions is the City's 10-year capital plan, which is developed based on estimates of expected useful lives. Fleet Services estimated expected useful lives for vehicles by class several years ago, and as a result, began a process of contributing the annual lifecycle costs to a tax levy funded reserve for future replacements. For Fire Services vehicles, expected useful lives for vehicles are based on guidance from the National Fire Protection Association.

While the 10-year capital plan is a good starting point for identifying when vehicles should be replaced, adjustments may need to be made because several factors affect the timing of replacement.

The capital scoring model is used to prioritize risk and the needs of the Fleet and Equipment, along with the needs of other areas requiring capital.

Some Fire equipment is replaced based on age, e.g., bunker gear, helmets, boots, defibrillators, and radios. For example, bunker gear is replaced after being in use for 10 years. Firefighters are issued two sets of bunker gear when hired and are provided with a new set every 5 years thereafter.

Examples of Fire equipment that are not currently replaced based on age include nozzles, hydraulic jaws, spreaders, cutters, and hose. Fire is working to manage these assets more systematically. They have reached out to manufacturers for recommendations on expected useful lives for these assets. They are also working to better track these assets, including tracking acquisition dates and replacement costs.

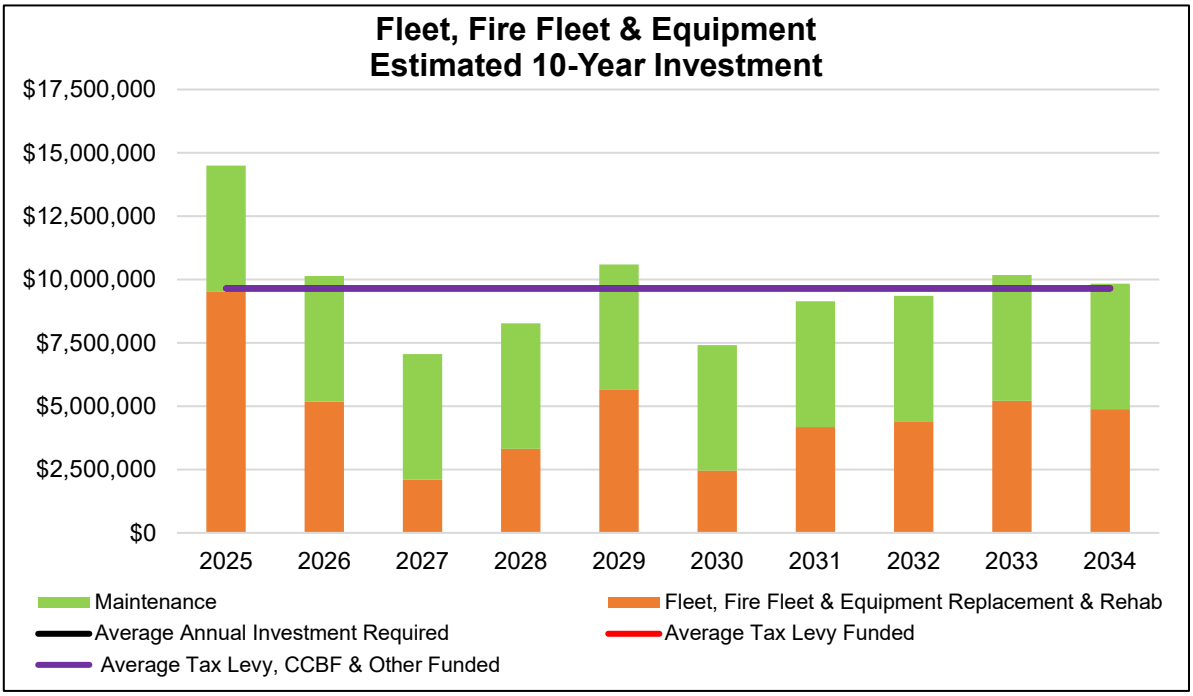
The intent is not to rigorously follow a replacement schedule for these assets. Instead, the condition of these assets will be reviewed when they near their expected service lives and a decision will be made about potentially deferring replacement if their condition is good.

Fleet and Equipment

Lifecycle Management and Financial Strategy

The following 10-year lifecycle forecast is shown below and does not account for any budget constraints. The average annual investment required, based on the full lifecycle of assets, is estimated at $9.6 million (in 2024 $).

Using Option 1 of increasing the total dedicated infrastructure levy identified in the Oshawa Financial Strategy, the annual investment in Fleet and Equipment from Tax Levy, Canada Community Benefit Fund (previously Federal Gas Tax Funding) and Other Funding is $9.6 million. This results in a fully funded program.



Fleet and Equipment

Managing Growth – Capital and Operating Expenditure Forecast

The 2021 population for the City of Oshawa was 182,020 and is anticipated to increase to 239,390 by 2036.

City of Oshawa[1]	2021	2026	2031	2036
Total Population	182,020	200,280	219,990	239,390
Total Households	66,640	73,800	81,450	89,060
Total Employment	63,740	70,600	78,070	85,250

[1] Note: Per 2025 Durham Regional Official Plan

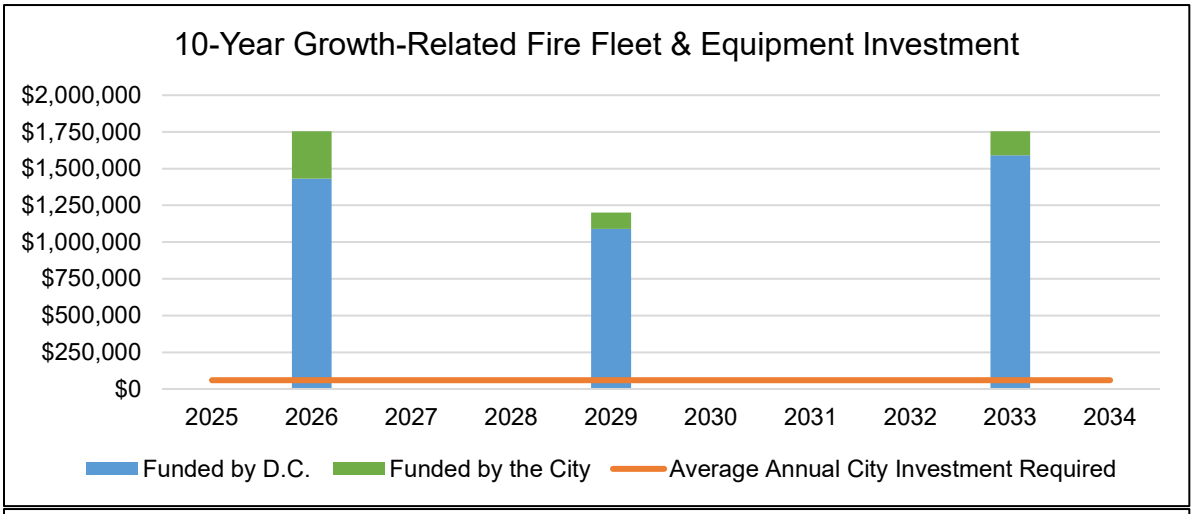
The population growth is expected to result in incremental service demands that may impact the current levels of service. In order to accommodate the projected increases in demand caused by growth, the City has undertaken a number of master planning studies which identify the need for new infrastructure and infrastructure service expansion. These growth-related needs have been included in the City's Development Charges Background Study and the 10-year capital forecast. Utilizing development charges to fund the growth-related initial capital costs helps to ensure the results of future growth do not increase the cost of maintaining levels of service for existing tax payers.

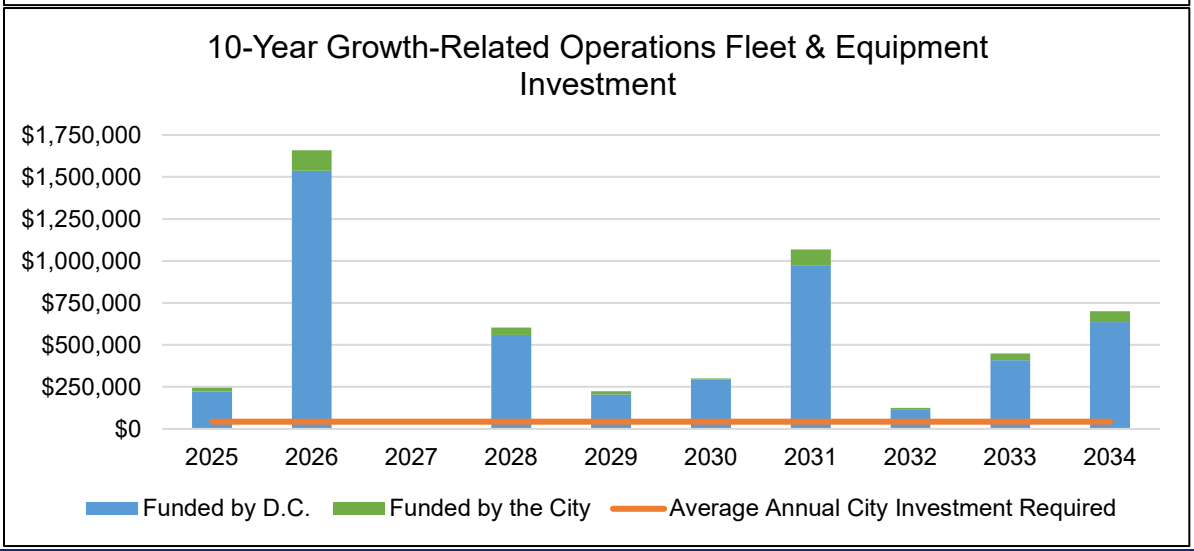
The City's Official Plan references that build-out is estimated to occur in 2051. The operating costs related to assumed assets are difficult to estimate and is really dependent on what future proposed levels of service are approved by Council. As asset management practices continue to mature and better information is gathered, more specific information relating to operating costs will be determined.

Fleet and Equipment

Managing Growth – Capital and Operating Expenditure Forecast

The 10-year forecast includes $10.1 million for new Fleet and Equipment and the majority of these growth-related capital projects include a small proportion of improvements that benefit the existing residents. These costs are required to be funded by the City, while development charges pay for the majority of the cost. Over the 10-year forecast, the Fleet and Equipment anticipated to be acquired requires a total contribution from the City in the amount of $1,024,555 (or an average annual amount of $102,455). Annually, the City budgets a contribution from operating to a Growth-Related Non-D.C. reserve to fund the City's portion of growth-related capital investments.





Appendix I

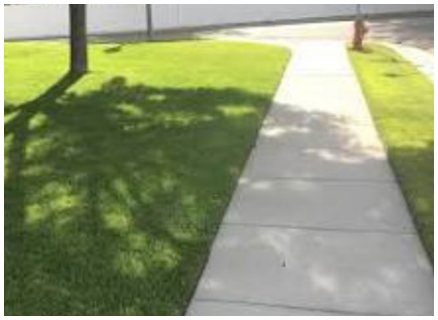
Active Transportation

May 2025

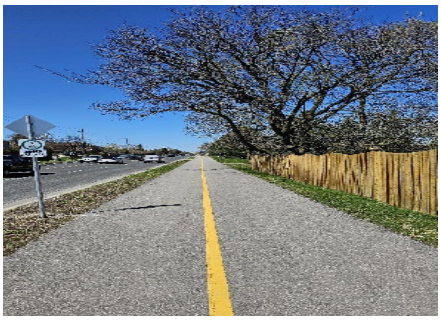
Active Transportation

Description of Active Transportation Assets

Sidewalks



Multi-use Paths



Park Trails

Park Pathways

The City owns and maintains a comprehensive active transportation network of park trails, multi-use paths, sidewalks, park pathways, along with off-road and signed on-road cycling lanes.

The City's vision for an active transportation network is to enhance the quality of life for residents and employees in the City by providing a connected, attractive and convenient active transportation network that offers a high degree of comfort and safety, expands recreation options, encourages sustainable modes of transportation, respects the natural scenic character, and supports economic development.

Recreation trails and internal park pathways provide a healthy, free and environmentally friendly option for people to travel, which makes trails a critical part of sustainable and equitable transportation.

Oshawa's Integrated Transportation Master Plan (I.T.M.P.) along with Oshawa's Active Transportation Master Plan (A.T.M.P.) guides the development of this network of multi-modal transportation system. The Parks, Recreation, Library and Culture (P.R.L.C.) Facility Needs Assessment is also used to plan for the park trails and pathways in a fiscally sustainable manner and respond to the needs of residents.

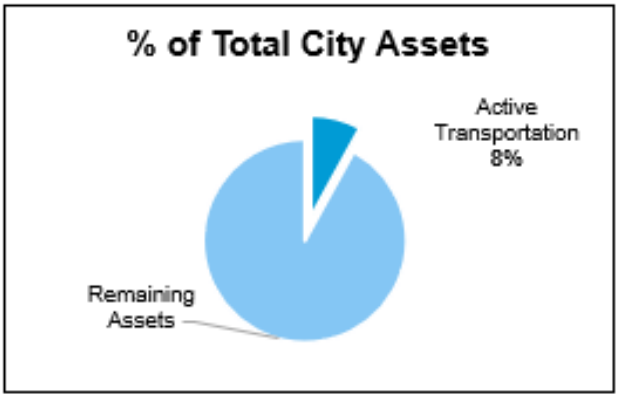
These master planning documents are used to inform the capital budget planning process to determine the needs of the Active Transportation network.

Active Transportation

Inventory and Estimated Replacement Cost

Active Transportation	Qty (km)	Estimated Replacement Cost
Sidewalks	704.8	$254,620,077
Multi-Use Paths	17.0	$11,948,803
Park Trails	31.3	$24,770,612
Park Pathways	33.7	$29,076,823
Signed On-Road Cycling Routes / Lanes[1]	85.7	N/A
Total Active Transportation	**872.5**	**$320,416,313**

[1] Replacement costs, as well as other asset attributes, are part of the Road Network in Appendix A



Inventory is collected, tracked and maintained through the G.I.S. as well in the Tangible Capital Asset Ledger (Excel) and Maximo.

The City owns a total of 872.5 kilometres of active transportation network, (based on December 2023) comprising of:

- 704.8 kilometres of sidewalks
- 17.0 kilometres of multi-use paths
- 31.3 kilometres of park trails
- 33.7 kilometres of park pathways
- 85.7 kilometres of signed on-road cycling routes and lanes

The valuations for the on-road cycling routes and lanes are included in the roads appendix as they are a part of the road asset. The quantity is shown here to advise the user of the scope of the network.

Estimated replacement costs for sidewalks and multi-use paths (M.U.P.'s) are based on unit costs calculated by staff based on material type and width. Age data is not complete and required assumptions and estimates to be made in some areas. Improvements will be made in terms of data collection and data quality in future iterations. Park Trails and Pathways replacement costs were determined by unit rates utilized in the 2024 Development Charge Background Study.

The total estimated replacement cost of these Active Transportation assets is $320,416,313 based on 2024 dollars.

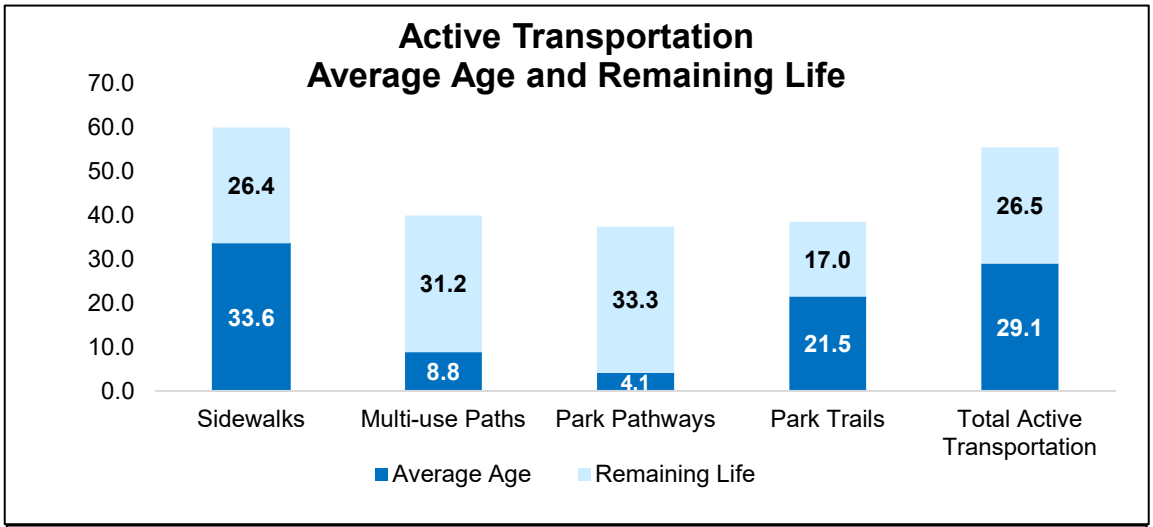
Active Transportation

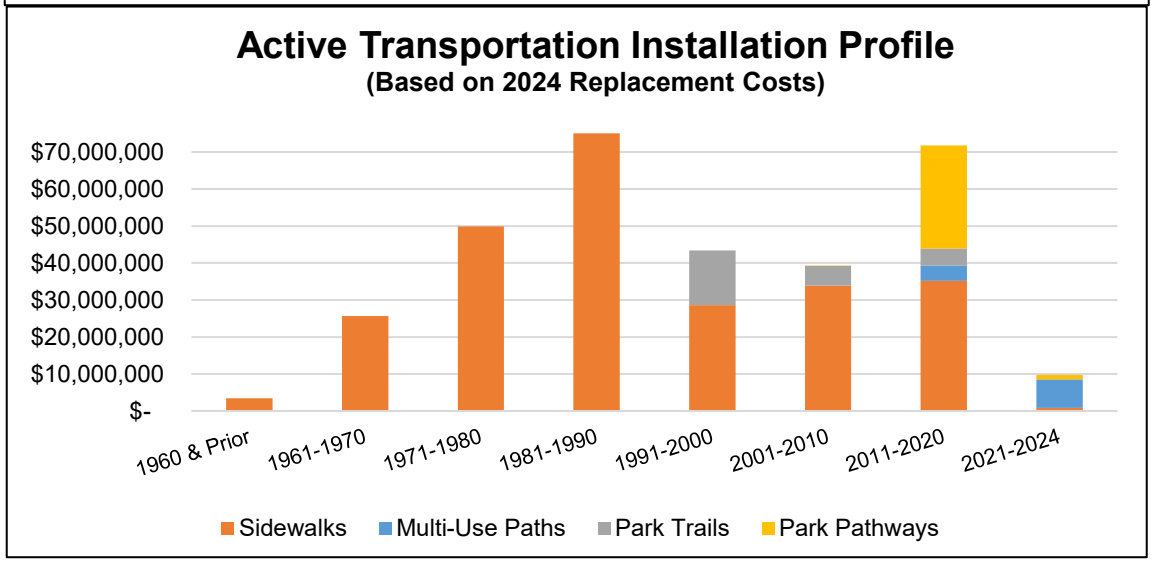
Average Age and Asset Installation Profile

Age is based on an initial construction year or replacement year if applicable. The average age of the City's Active Transportation Network is 29.1 years and further broken down by:

- 33.6 years for Sidewalks
- 8.8 years for Multi-use Paths
- 21.5 years for Park Trails
- 4.1 years for Park Pathways

The service life of Active Transportation is estimated at 60 years for sidewalks, 40 years for multi-use paths, and 20-40 years for park trails and pathways based on material type.





Active Transportation

Condition

While the condition of the City's sidewalks and multi-use paths are inspected regularly in accordance with minimum maintenance standards (trip ledges, severe cracks, etc.), an overall condition rating for each sidewalk segment is not currently undertaken. Therefore, age has been used to determine the condition reported, based on the estimated service life.

For sidewalks, in some instances, construction dates have been estimated, using the construction date of the adjacent road. This applies to 2% of the sidewalk network value.

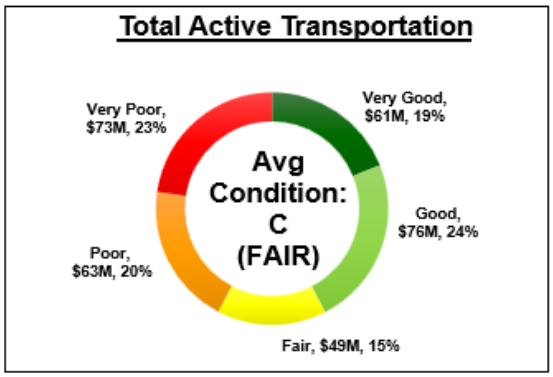
With respect to park trails, an audit for condition was completed in 2024. The prior Asset Management Plan used estimates for condition based on the age of the trails. Although the overall rating for park trails did not change, the percentage of park trails in fair or better condition significantly increased. Using visual inspections for condition is the preferred method, as it improves the confidence level of the data.

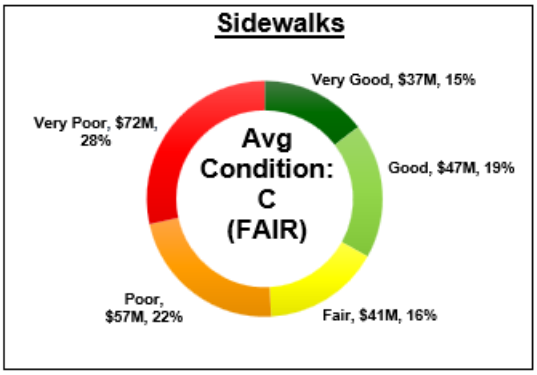
Active Transportation

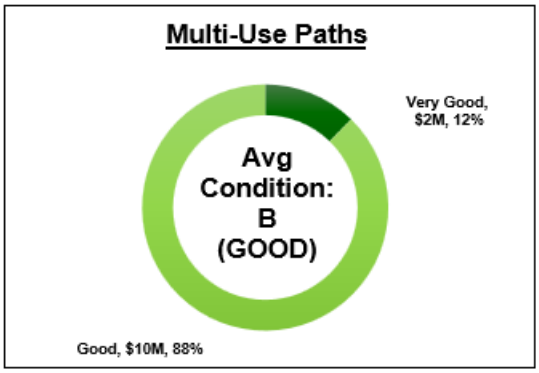
Condition

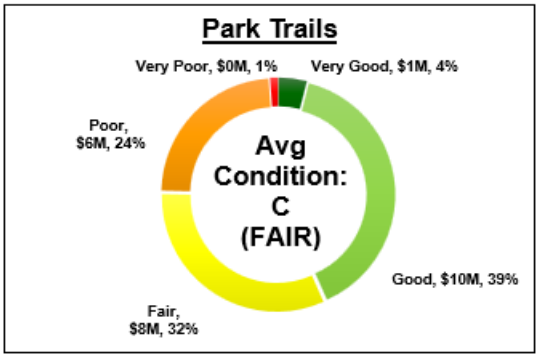
Overall, the City's Active Transportation assets are in FAIR condition (C Grade).

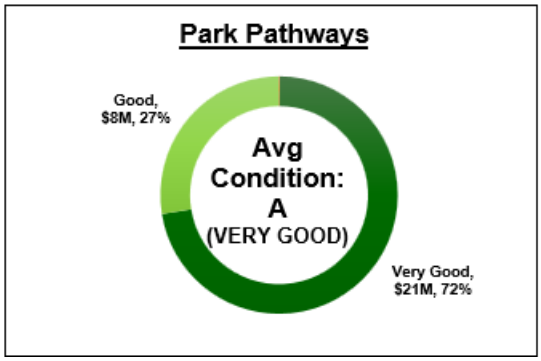
- C – Fair – Sidewalks
- B – Good – Multi-use Paths
- C – Fair – Park Trails
- A – Very Good – Park Pathways











Active Transportation

Condition Rating	Grade	Category	Description
80-100	A	Very Good	The Active Transportation assets are functioning as intended. Limited, if any, deterioration observed.
60-80	B	Good	The Active Transportation assets are functioning as intended. No major maintenance is anticipated within the next 5 years.
40-60	C	Fair	The Active Transportation assets are functioning as intended. Normal deterioration and minor distress observed. Maintenance will be required within the next 5 years to maintain functionality.
20-40	D	Poor	The Active Transportation assets are starting to not function as intended. Significant distress observed. Maintenance and some repairs are required within the next few years to restore functionality.
0-20	E	Very Poor	The Active Transportation assets are not functioning as intended. Significant deterioration and major distress observed. Requires immediate attention.

Active Transportation

Levels of Service – Current and Proposed

Preliminary levels of service for the City's active transportation assets are below. These were established based on:

- Oshawa Strategic Plan 2024-2027
- Oshawa Financial Strategy 2025-2029
- Active Transportation Master Plan 2015
- Integrated Transportation Master Plan 2015
- Oshawa Quality Standards

Technical and Community based specific levels of service and current performance are highlighted in the subsequent tables and sections below. City staff continually monitor performance.

The table below shows four options for investment into the asset portfolio for Active Transportation which directly impacts the Levels of Service.

Active Transportation	Option 1: Financial Strategy	Option 2: Maintain Current Funding	Option 3: Maintain Current L.O.S.	Option 4: Fully Funded
2025 A.M.P. % Fair or Better Condition	58%	58%	58%	58%
Average Annual Investment	$1,290,000	$1,140,000	$2,640,000	$8,239,000
2034 % Fair or Better Condition	53%	52%	58%	75%
Condition Trend	Decrease	Decrease	Maintain	Increase

Option 1: shows incremental investment, into the capital reserves, as a key recommendation of the Oshawa Financial Strategy. Specifically, this shows an increase in the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026.

Option 2: shows the impact of not increasing dedicated infrastructure levy.

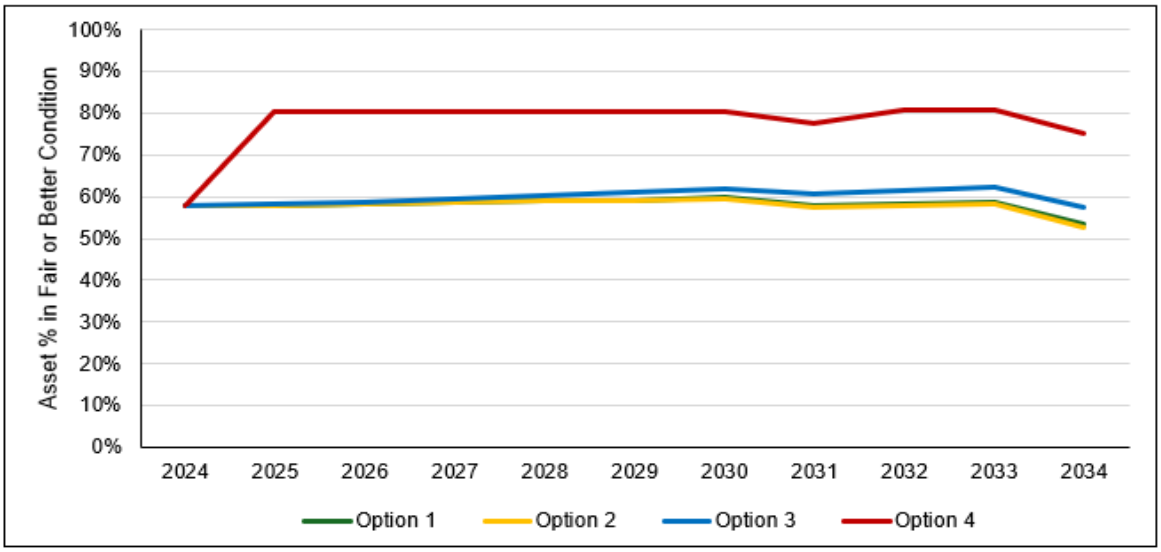
Option 3: is the calculated cost of maintaining the current levels of service.

Option 4: is the levels of service that could be maintained, with unlimited funding.

Active Transportation

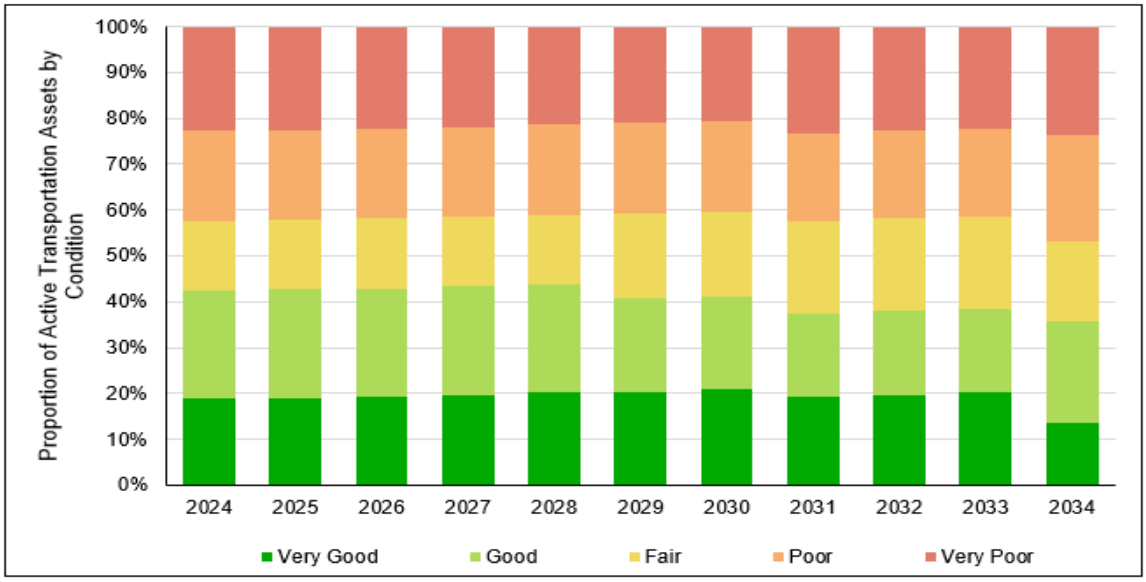
Levels of Service – Current and Proposed

The graph below compares the condition of the assets for each of the four funding options over 10 years:



Option 1 is recommended as it strikes the best balance between fiscal responsibility consistent with the Financial Strategy and delivers the levels of services that better meets the needs of our residents

The graph below shows the condition for the next 10 years based on Funding Option 1 – Financial Strategy:



Active Transportation

Levels of Service - Current and Proposed

Service Attribute	Technical Levels of Service	2024 A.M.P. L.O.S.	2025 A.M.P. L.O.S.	2034 Proposed L.O.S.[2]
Scope	Number of kilometres of sidewalks, multi-use paths, trails and pathways per 1,000 residents	4.5	4.4	4.1
Quality	Percentage of sidewalks in fair or better condition	49%	49%	51%
Quality	Percentage of multi-use paths in fair or better condition	100%	100%	100%
Quality	Percentage of park trails in fair or better condition	30%	76%[3]	30%
Quality	Percentage of park pathways in fair or better condition	100%	100%	73%
Accessibility	Percentage of sidewalks and multi-use paths that are accessible based on current standards	23.4%[1]	23.4%	N/A[4]

[1] The minimum sidewalk width required to be A.O.D.A. compliant is 1.5 meters
[2] Based on Option 1 - Financial Strategy
[3] 2025 is based on observed condition compared to age-based condition estimated in 2024
[4] Increasing as new sidewalks and multi-use paths are designed based on accessibility standards

Active Transportation

Levels of Service and Related Risks

The following table outlines identified risks to delivering the levels of service as well as potential impacts and mitigating actions.

Identified Risk	Potential Impact	Mitigating Actions
Failed Infrastructure	• Service interruptions • Negative press	• Repair and rehabilitate as necessary • Routine maintenance & inspections • Increase investment in life-cycle activities
Inadequate Funding	• Delivery of service • Negative press damage to reputation • Increased risk of failure • Shorten asset life • Defer cost to future generations	• Reduction of levels of service • Find additional revenue sources
Regulatory Requirements	• Non-compliance • Mandatory investments • Increase costs	• Reduction or alteration of services • Find additional revenue sources
Strategic Documents Unharmonized with Future Needs	• Less service demands based on options available • Different services than needed not utilized	• Ensuring assets and levels of service that respond to the needs of people living in Oshawa are built
Plans are not Followed / Not Undertaking the Required Lifecycle Activities	• Shorten asset life • Inefficient Investments • Failure to deliver desired levels of service	• Monitor, review and report on asset management activities • Explore alternative lifecycle activities that may be more efficient

- Failed infrastructure can be a result of vandalism, climate change impacts as well as heavier/different usage than planned. For example, trails were not built to support heavy equipment and vehicles but are sometimes used for that purpose.
- Inadequate funding could be based on changing shifts of needs within the portfolio of assets and services in the Asset Management Plan.
- Regulatory requirements could be based on changes to legislation.
- Strategic documents being unharmonized could result from forecasting assumptions being inaccurate.
- Plans not being followed or lifecycle activates not actioned could result from many reasons, some examples are shortages of staff, inability to procure construction services on a timely basis and competing priorities.

Active Transportation

Lifecycle Management and Financial Strategy

The City's Operations team uses sidewalk and multi-use path condition assessments to establish a prioritized list of deficient assets that need repair. Smaller-scale concrete repairs are handled by City staff and larger-scale repairs are handled through an external contract, which is budgeted for in the City's capital budget. Full-scale replacement of assets within the right-of-way (R.O.W.) (sidewalks and multi-use paths) are generally not planned for independently, but rather in coordination with road reconstruction projects. The current software does not align the timing of the R.O.W. assets with the road segment, so the replacement date is based on the end of the 60-year lifecycle. Once more sophisticated software is acquired, it will assist with aligning the R.O.W. assets with the road projects for the entire lifecycle.

Maintenance and repair needs for park pathways and trails are identified through inspections and service requests received through Service Oshawa. Smaller-scale repairs (e.g. small potholes) are handled by City staff, whereas larger-scale repairs (e.g. if a section of a trail needs repaving) are typically contracted out. Service requests and the associated repair needs are prioritized based on an established Quality Standard. Any comprehensive redevelopment or reconstruction of park pathways and trails is completed as part of park redevelopment projects.

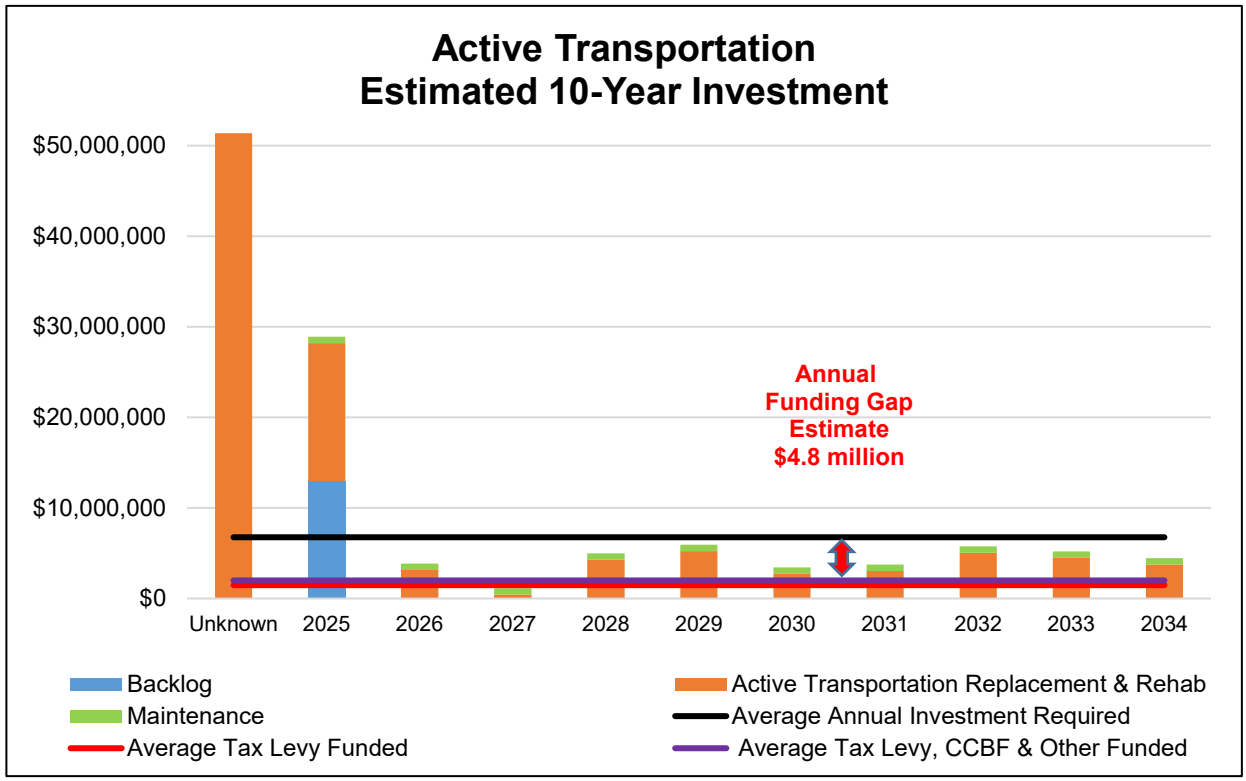
Future iterations will include additional investments in maintenace, as comprehensive proactive maintenance plan will be devoped and incorporated. This will show the impact on the capital replacement expenditures by extending the service life, in order to maximize value from our assets.

The following 10-year lifecycle forecast is shown below and does not account for any budget constraints. The average annual investment required is estimated at $6.8 million (in 2024 dollars), based on the full lifecycle costs of the assets, including the $51 million of sidewalks with an unknown construction date. This unknown portion has been included in the 10-year forecast for illustration purposes but may not require replacement until beyond this period. These assets are primarily within regional road right-of-ways and generally expected to be nearing the end of their service lives.

Using Option 1 of increasing the total dedicated infrastructure levy identified in the Oshawa Financial Strategy, the annual investment in Active Transportation from tax levy and Canada Community Benefit Fund (previously Federal Gas Tax Funding) is $2.0 million. This results in an estimated annual funding gap of $4.8 million.

Active Transportation

Lifecycle Management and Financial Strategy



Active Transportation

Managing Growth – Capital and Operating Expenditure Forecast

The 2021 population for the City of Oshawa was 182,020 and is anticipated to increase to 239,390 by 2036.

City of Oshawa[1]	2021	2026	2031	2036
Total Population	182,020	200,280	219,990	239,390
Total Households	66,640	73,800	81,450	89,060
Total Employment	63,740	70,600	78,070	85,250

[1] Note: Per 2025 Durham Regional Official Plan

The population growth is expected to result in incremental service demands that may impact the current level of service. In order to accommodate the projected increases in demand caused by growth, the City has undertaken a number of master planning studies which identify the need for new infrastructure and infrastructure service expansion. These growth-related needs have been included in the City's Development Charges Background Study and the 10-year capital forecast. Utilizing development charges to fund the growth-related initial capital costs helps to ensure the results of future growth do not increase the cost of maintaining levels of service for existing taxpayers. However, the future maintenance and capital costs are borne by the municipality.

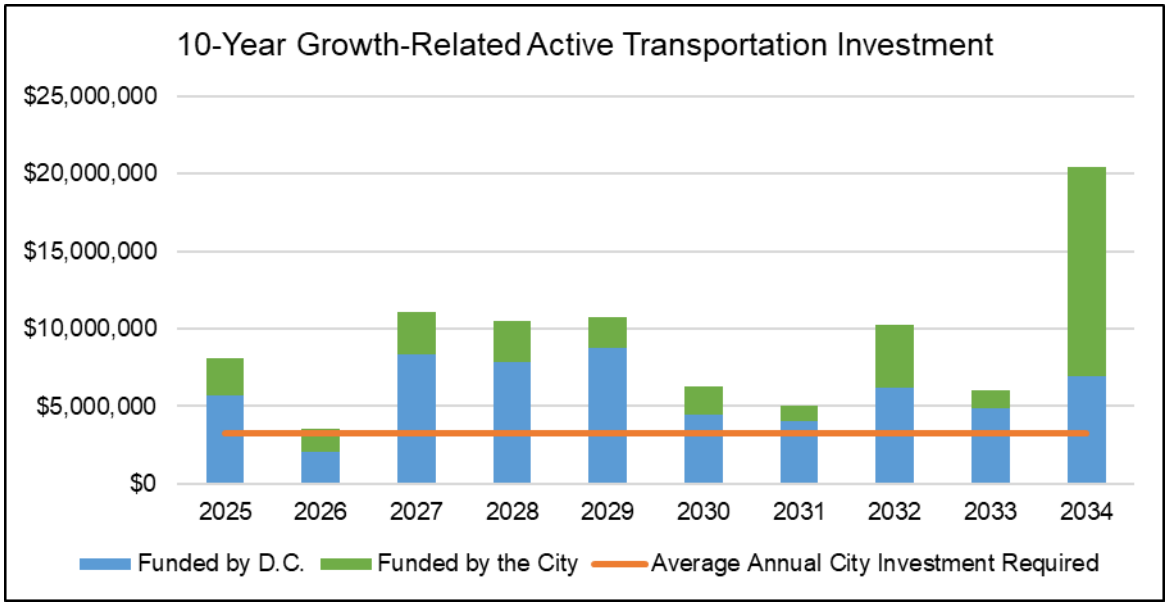
There will be maintenance costs in the next 10 years related to growth-related infrastructure service expansion or assets acquired through subdivision assumptions. As the average service life of Active Transportation is 20-60 years, the eventual replacement cost of the growth assets are not included in this plan but will eventually need to be funded by the City.

The City's Official Plan references that build-out is estimated to occur in 2051. The operating costs related to assumed assets are difficult to estimate and is dependent on what future proposed levels of service are approved by Council. As asset management practices continue to mature and better information is gathered, more specific information relating to operating costs will be determined.

Active Transportation

Managing Growth – Capital and Operating Expenditure Forecast

The 10-year forecast includes $91.8 million for new Active Transportation. The majority of growth-related capital projects include a portion of improvements that benefit the existing residents. These costs are required to be funded by the City, while development charges pay for the remaining $59.2 million. Over the 10-year forecast, the total Active Transportation anticipated to be built requires a total contribution from the City in the amount of $32.6 million (or an average annual amount of $3,260,000). Annually, the City budgets a contribution from operating to a Growth-Related Non-D.C. reserve to fund the City's portion of some growth-related capital investments. Based on the current annual contributions to this reserve fund, there will not be sufficient City funding available to meet the growth-related capital needs.



Appendix J

Non-Core Transportation

May 2025

Non-Core Transportation

Description of Non-Core Transportation Assets

Street Lights

Traffic Signals

The City owns and maintains street lights and traffic signals to support the safe and efficient service of transportation and the movement of vehicles and people throughout the City.

The City's street light inventory is collected and tracked through the City's corporate Geographic Information System (G.I.S.).

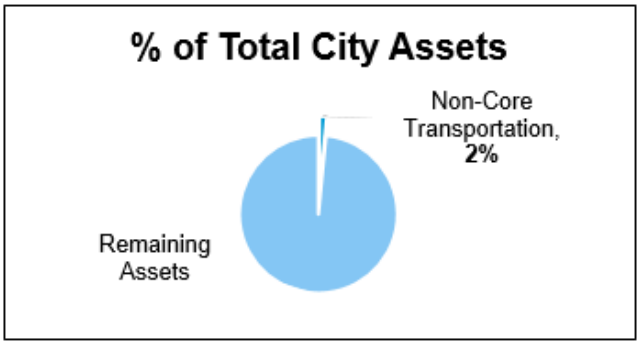
Traffic signals show the right-of-way in conflicting movement. Although the City owns the traffic signals on municipal roads, these assets are maintained by the Region of Durham. The Region also manages the inventory data for these assets.

Expansion of current and construction of new Non-Core Transportation is done under the guidance of master planning documents and studies and results in inclusions to our financial planning documents.

Non-Core Transportation

Inventory and Estimated Replacement Cost

Non-Core Transportation	Qty (each)	Estimated Replacement Cost
Standard Street Light Poles	5,000	$18,235,000
Standard LED Street Lights	10,920	$11,378,640
Decorative Street Light Poles	3,450	$16,177,050
Decorative LED Street Lights	3,450	$5,376,199
Traffic Signals	40	$10,420,000
Total Non-Core Transportation	**22,860**	**$61,586,889**



Inventory is collected, tracked and maintained through the G.I.S and by the Region of Durham.

The City owns a total of 22,860 Non-Core Transportation assets, which consists of approximately 14,370 street light luminaires, 8,450 street light poles and 40 traffic signals (based on December 2023 inventory).

The total estimated replacement costs of these Non-Core Transportation assets are $61,586,889 based on 2024 dollars.

The majority of the street light luminaires were replaced with LED lights in 2016 and 2017. Luminaires can be mounted on City owned poles or poles owned by Oshawa Power. As the inventory of poles has very limited data to only quantity and replacement cost, the inventory is the only place it is reported.

Replacement costs for traffic signals have been reported based on the full reconstruction of a traffic signal location, which typically includes the installation of 4 signals (2 in each direction) and a controller cabinet.

The data quality of the street lights and street light poles was not robust and required several assumptions and estimates to be made. Improvements will be made in terms of data collection and data quality in future iterations.

Non-Core Transportation

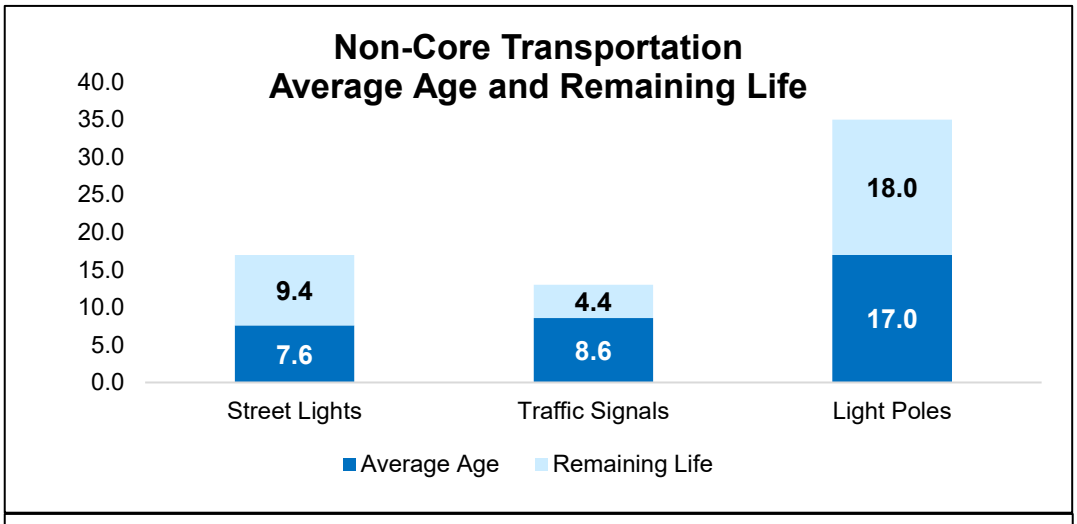
Average Age and Asset Installation Profile

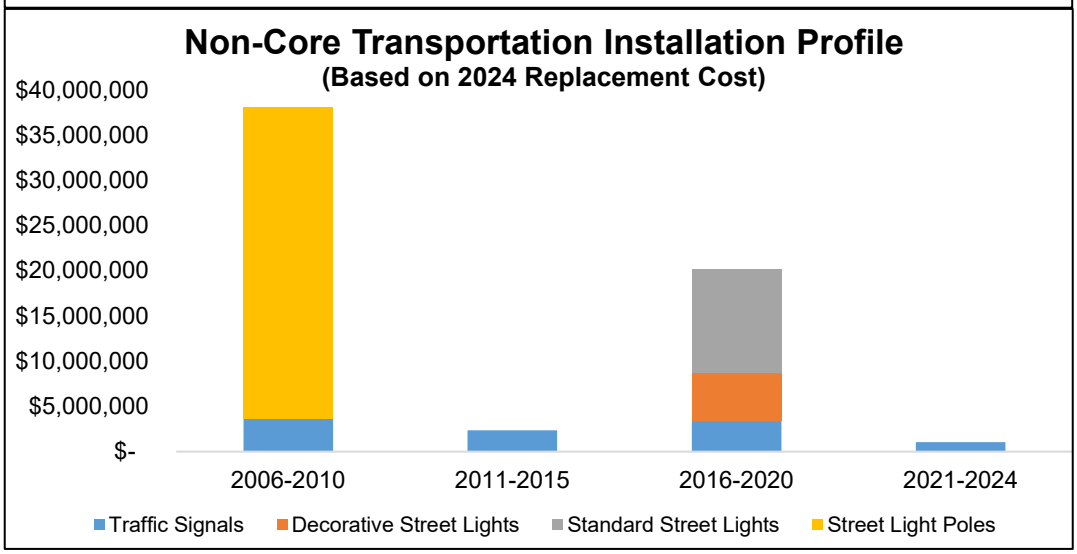
Age is based on installation year and tracked separately for each asset. The average age of the City's non-core transportation is 13.0 years and is broken down by:

- 7.6 years - Street Light Luminaries
- 8.6 years - Traffic Signals
- 17.0 years – Street Light Poles

The service life of Non-Core Transportation is estimated at 17 years for street lights, 13 years for Traffic Signals and 35 years for street light poles. Condition is a function of observation, not age.

The age and condition of street light poles were estimated for this Asset Management Plan as the actuals were unknown.





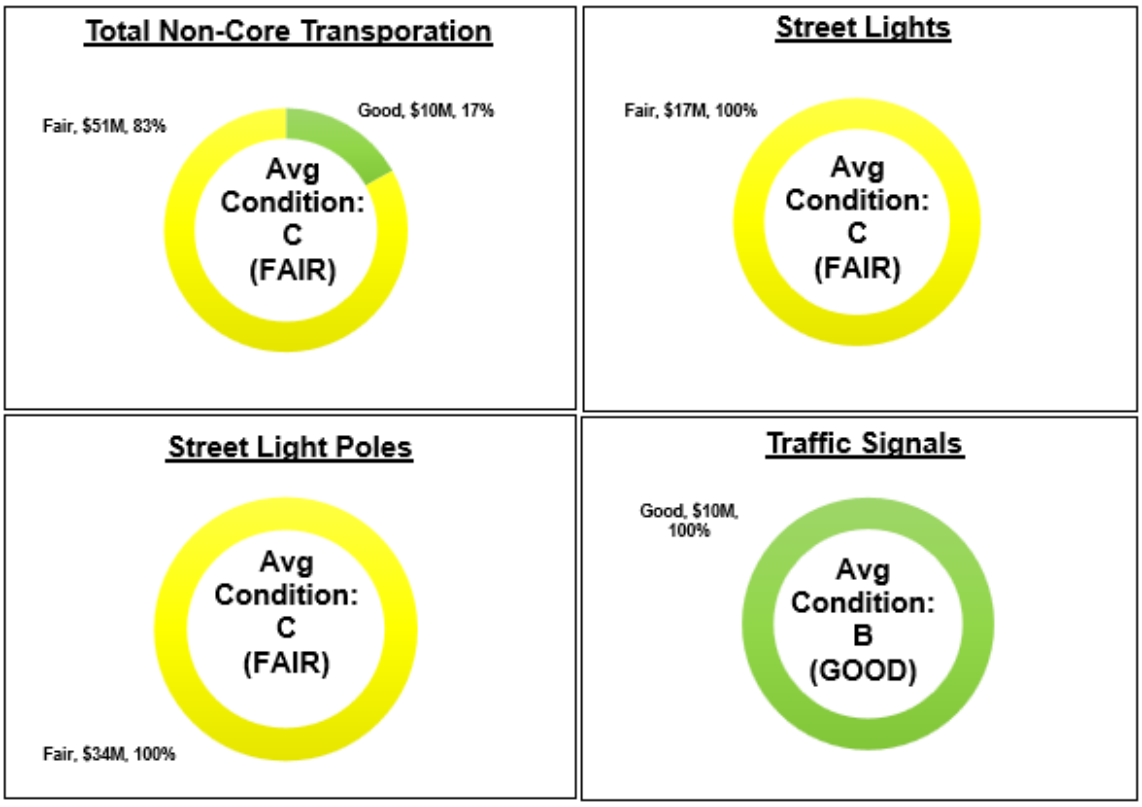
Non-Core Transportation

Condition

The City has a rolling condition assessment program for street light poles where one quarter of the City's street light poles are inspected each year. Street light fixtures are inspected once per year following the Minimum Maintenance Standard. Night patrol uses a data collection app to record observations from the inspections. The traffic signals are inspected annually by a contractor, through the Region, to identify components that need to be replaced. Once the Region provides a list of replacements to the City, those amounts are then included in the capital plan for the following year.

Overall, the City's Non-Core Transportation assets are in FAIR condition (C Grade)

- C – Fair – Street Lights
- C – Fair – Street Light Poles
- B – Good – Traffic Signals



Non-Core Transportation

Condition Rating	Grade	Category	Description
80-100	A	Very Good	Equipment is in excellent condition. No issues and very infrequent maintenance requirements.
60-80	B	Good	Equipment is in good condition and early in its useful service life. Minor cosmetic deficiencies (i.e. Peeling backboard paint, minor pole dents etc.).
40-60	C	Fair	Equipment requires infrequent minor maintenance and partially through useful service life. Only minor deficiencies such as surface cracking on bases, bent or broken anchor bolts, poor detection equipment, loose fittings.
20-40	D	Poor	Equipment requires more frequent minor maintenance and is approaching end of useful service life. Minor safety related issues, broken conduit, abandoned poles, insufficient grounding, leaning poles, poor service connections, hand wells/pole below grade, deteriorating cracked bases.
0-20	E	Very Poor	Equipment requires major maintenance and beyond useful service life. Related items that require extensive repairs beyond emergency maintenance (i.e. Cable hydro vaults, damaged or exposed wiring).

Non-Core Transportation

Levels of Service – Current and Proposed

Preliminary levels of service for the City's structure assets are below. These were established based on:

- Oshawa Strategic Plan 2024-2027
- Oshawa Financial Strategy 2025-2029
- Development Services Business Plan 2022
- Oshawa Quality Standards

Technical and Community based specific service levels and current performance are highlighted in the subsequent tables and sections below. City staff continually monitor performance.

The table below shows four options for investment into the asset portfolio for Non-Core Transportation which directly impacts the Levels of Service.

Non-Core Transportation	Option 1: Financial Strategy	Option 2: Maintain Current Funding	Option 3: Maintain Current L.O.S.	Option 4: Fully Funded
2025 A.M.P. % Fair or Better Condition[1]	100%	100%	100%	100%
Average Annual Investment	$547,000	$493,000	$2,278,000	$2,278,000
2034 % Fair or Better Condition	57%	56%	100%	100%
Condition Trend	Decrease	Decrease	Maintain	Maintain

[1] Age and Condition of street light poles were unknown. For this A.M.P., they have been estimated as being in Fair condition

Option 1: shows incremental investment, into the capital reserves, as a key recommendation of the Oshawa Financial Strategy. Specifically, this shows an increase in the dedicated infrastructure levy from 1.7% to 4.0% over the next five years commencing in 2026.

Option 2: shows the impact of not increasing dedicated infrastructure levy.

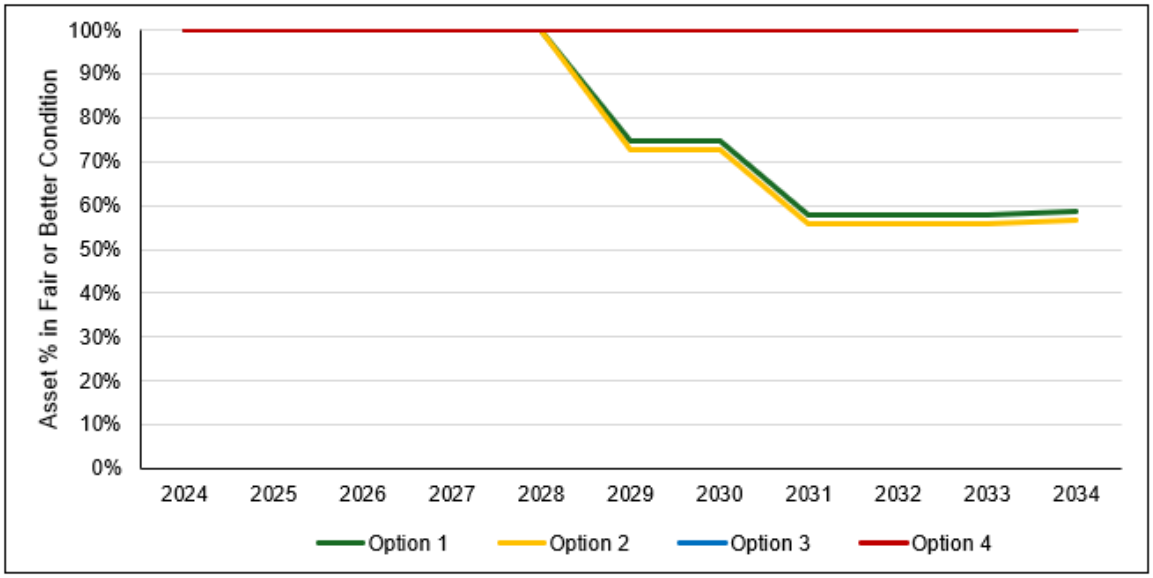
Option 3: is the calculated cost of maintaining the current levels of service. In this instance as close as we can.

Option 4: is the levels of service that could be maintained, with unlimited funding which is coincidentally also the same as option 3.

Non-Core Transportation

Levels of Service – Current and Proposed

The graph below compares the condition of the assets for each of the four funding options over 10 years:



Option 1 is recommended as it strikes the best balance between fiscal responsibility consistent with the Financial Strategy and delivers the levels of service that better meets the needs of our residents.

The graph below shows the condition for the next 10 years based on Funding Option 1 - Financial Strategy.

Non-Core Transportation

Levels of Service - Current and Proposed

Service Attribute	Technical Levels of Service	2024 A.M.P. L.O.S.	2025 A.M.P. L.O.S.	2034 Proposed L.O.S.[1]
Quality & Safety	Percentage of Non-Core Transportation assets in Fair or better condition	100%	100%	100%
Scope	Percentage of Street lights that are LED	95%	95%	100%

[1] Based on Option 1 - Financial Strategy

Scope changes reflect remaining portfolio of street lights replaced by LED within the 10 year forecast.

Non-Core Transportation

Levels of Service and Related Risks

The following table outlines identified risks to delivering the levels of service as well as potential impacts and mitigating actions.

Identified Risk	Potential Impact	Mitigating Actions
Failed Equipment / Infrastructure	• Service interruptions • Negative press	• Repair and rehabilitate as necessary • Routine maintenance & inspections • Increase investment in life-cycle activities
Inadequate Funding	• Delivery of service • Increased risk of failure • Shorten asset life • Defer cost to future generations	• Reduction of levels of service • Find additional revenue sources
Regulatory Requirements	• Non-compliance • Mandatory investments • Increase costs	• Reduction or alteration of services • Find additional revenue sources
Strategic Documents Unharmonized with Future Needs	• Less service demands based on options available	• Planning levels of service that respond to the needs of people living in Oshawa
Plans are not Followed / Not Undertaking the required Lifecycle Activities	• Shorten asset life • Inefficient investments • Failure to deliver desired levels of service	• Monitor, review and report on asset management actives • Explore alternative lifecycle activities that may be more efficient

- Failed infrastructure and equipment can be a result of vandalism or climate change impacts.
- Inadequate funding could be based on changing shifts of needs within the portfolio of assets and services in the Asset Management Plan.
- Regulatory requirements could be based on changes to legislation.
- Strategic documents being unharmonized could result from forecasting assumptions being inaccurate.
- Plans not being followed or lifecycle activities not being actioned could result from many reasons, some examples are shortages of staff, inability to procure replacement assets on a timely basis and competing priorities.

Non-Core Transportation

Lifecycle Management and Financial Strategy

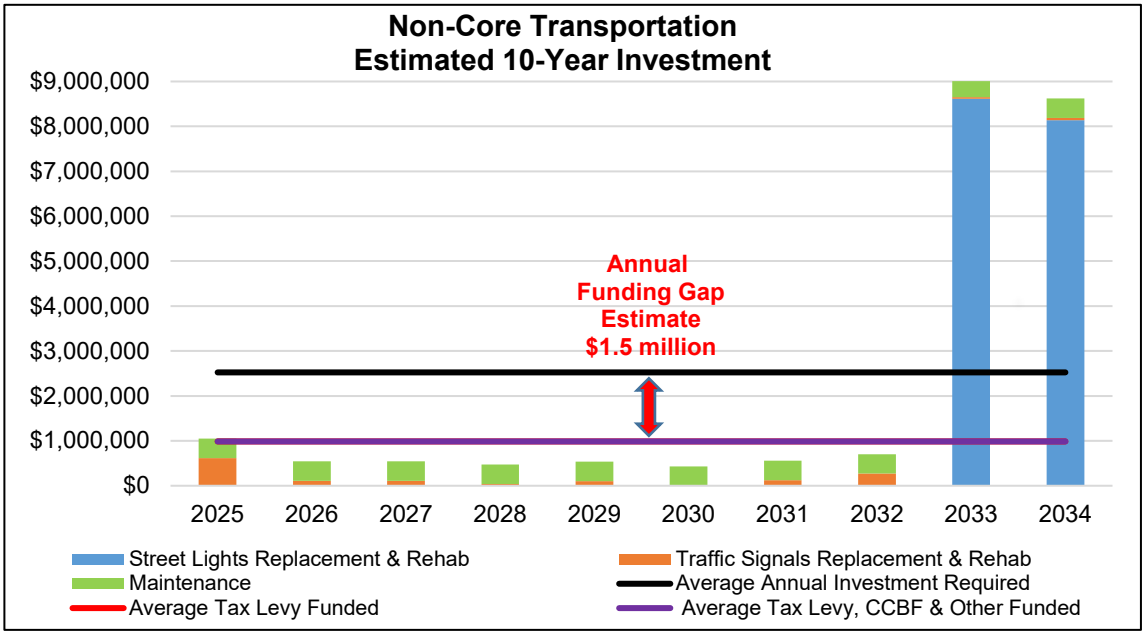
The capital expenditure for street lights occurs when poles are replaced and the City is then charged by Oshawa Power to move the pole arms and fixtures to the new poles. Other street light repairs or replacements are based on regular inspections, night patrol or by resident notification. There are occasional one-off requests for new street lights to cover dark spots from residents and Durham Regional Police.

The Region of Durham is responsible for the traffic signal inspections. They communicate the need for component replacements in an annual letter to the City. The Region completes the necessary replacement of components such as L.E.D. lights and the uninterruptable power supplies.

When road reconstruction and road widening projects are planned, street lighting and traffic signals are reviewed and planned during the construction process and included in those project capital costs.

The following 10-year lifecycle forecast is shown below and does not account for any budget constraints. The average annual investment required, based on the full lifecycle of assets, is estimated at $2.5 million (in 2024 $).

Using Option 1 of increasing the total dedicated infrastructure levy identified in the Oshawa Financial Strategy, the annual investment in Non-Core Transportation from Tax Levy and Canada Community Benefit Fund (previously Federal Gas Tax Funding) is $1.0 million. This results in an estimated annual funding gap of $1.5 million.



Non-Core Transportation

Managing Growth – Capital and Operating Expenditure Forecast

The 2021 population for the City of Oshawa was 182,020 and is anticipated to increase to 239,390 by 2036.

City of Oshawa[1]	2021	2026	2031	2036
Total Population	182,020	200,280	219,990	239,390
Total Households	66,640	73,800	81,450	89,060
Total Employment	63,740	70,600	78,070	85,250

[1] Note: Per 2025 Durham Regional Official Plan

The population growth is expected to result in incremental service demands that may impact the current level of service. In order to accommodate the projected increases in demand caused by growth, the City has undertaken a number of master planning studies which identify the need for new infrastructure and infrastructure service expansion. These growth-related needs have been included in the City's Development Charges Background Study and the 10-year capital forecast. Utilizing development charges to fund the growth-related initial capital costs helps to ensure the results of future growth do not increase the cost of maintaining levels of service for existing tax payers.

There will be maintenance costs in the next 10 years related to growth-related infrastructure service expansion or assets acquired through subdivision assumptions. As the average useful life of Non-Core Transportation are between 13-17 years, the eventual replacement cost of the growth assets are not included in this plan but will eventually need to be funded by the City.

The City's Official Plan references that build-out is estimated to occur in 2051. The operating costs related to assumed assets are difficult to estimate and is dependent on what future proposed levels of service are approved by Council. As asset management practices continue to mature and better information is gathered, more specific information relating to operating costs will be determined.

Non-Core Transportation

Managing Growth – Capital and Operating Expenditure Forecast

The 10-year forecast includes $73.8 million for new Non-Core Transportation and the majority of these growth-related capital projects include a small proportion of improvements that benefit the existing residents. These costs are required to be funded by the City, while development charges pay for the remaining $62.7 million. Over the 10-year forecast, there are multiple growth projects anticipated to be built which requires a total contribution from the City in the amount of $11.1 million (or an average annual amount of $1,110,000). Annually, the City budgets a contribution from operating to a Growth-Related Non-D.C. reserve to fund the City's portion of growth-related capital investments.