Oshawa

# Asset Management Plan

## Phase II: Non-Core Assets


May 2024

# 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.U.P. – Multi-Use Path

O.P.U.C. – Oshawa Power and Utilities Corporation

O. Reg. – Ontario Regulation

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

N.P.V. – Net Present Value

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 $3.8 billion (estimated 2023 replacement cost) for all infrastructure which services the needs of residents, local business and visitors to the City. This Asset Management Plan (the "Plan") 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.

Although this Asset Management Plan includes all City owned assets, a detailed analysis and summary of the City's non-core assets was completed for this iteration of the Plan. The detailed analysis of the core assets were included in the 2021 Asset Management Plan. The detailed analysis includes the state of the City's infrastructure, such as inventory, replacement costs and condition; current levels of service; and lifecycle management strategies to support the services delivered today and into the

future. The goal is to enable safe and reliable infrastructure in order to provide the current 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 in regard to 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 II – Non-Core Assets**

| Asset Class | State of the Infrastructure | Current Levels of Service | Lifecycle Management Strategy | Managing Growth |
|---|---|---|---|---|
| Roads | Compliant (pg. A-3) | Compliant (pg. A-10) | Compliant (pg. A-15) | Compliant (pg. A-20) |
| Structures | Compliant (pg. B-3) | Compliant (pg. B-7) | Compliant (pg. B-14) | Compliant (pg. B-16) |
| Stormwater | Compliant (pg. C-3) | Compliant (pg. C-14) | Compliant (pg. C-19) | Compliant (pg. C-22) |

| Asset Class | State of the Infrastructure | Current Levels of Service | Lifecycle Management Strategy | Managing Growth |
|---|---|---|---|---|
| Airport | Compliant (pg. D-4) | Compliant (pg. D-8) | Compliant (pg. D-11) | Compliant (pg. D-13) |
| Facilities | Compliant (pg. E-3) | Compliant (pg. E-7) | Compliant (pg. E-10) | Compliant (pg. E-13) |
| Park Facilities | Compliant (pg. F-4) | Compliant (pg. F-8) | Compliant (pg. F-10) | Compliant (pg. F-13) |
| Parking Services | Compliant (pg. G-3) | Compliant (pg. G-7) | Compliant (pg. G-11) | Compliant (pg. G-13) |
| Fleet & Equipment | Compliant (pg. H-3) | Compliant (pg. H-9) | Compliant (pg. H-12) | Compliant (pg. H-14) |
| Active Transportation | Compliant (pg. I-3) | Compliant (pg. I-7) | Compliant (pg. I-9) | Compliant (pg. I-11) |
| Non-Core Transportation | Compliant (pg. J-3) | Compliant (pg. J-7) | Compliant (pg. J-9) | Compliant (pg. J-11) |

There are three phases required in the regulation. Phase one included details of the core assets that can be found in Appendix A – Roads, Appendix B – Structures and Appendix C –Stormwater Assets and was first published in 2021. These appendices are linked in each appendix for your information. This asset management phase, phase two, requires 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 to be published by July 1, 2024 will meet the requirements of phase two.

Phase three, the final phase of the regulation, builds on 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 due by July 1, 2025 and will require a significant amount of analysis, as well as public consultation to determine what the proposed levels of service will be for all City provided services.

**Figure 2 - Summary of Key Statistics**

| Key Statistic | Non-Core Assets (2023) | Core Assets (2020)[1] |
|---|---|---|
| Estimated Replacement Cost of Assets[2] | $1.3 billion | $1.8 billion |
| Estimated Replacement Cost of Assets per household | $17,671 per household | $27,071 per household |
| Percentage of Assets in Good or Better Condition | 56.5.%[3] | 51.5% |
| Percentage of Assets in Fair or Better Condition | 77.4.%[3] | 73.9% |
| Percentage of Assets with Observed Condition Data | 67.1% | 84.7% |
| Annual Capital Funding Gap Estimate | $23.3 million | $15.4 million |

[1] All Core Asset information is based on 2020 data
[2] Cost of staff resources are not included in this calculation
[3] 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. Although this Plan includes all City assets, the focus of this iteration is on the non-core assets consisting of the 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 update 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 a Strategic Asset Management Policy in May 2019. This policy is subject to review every 5 years and as such will be reviewed and approved along with this 2024 Asset Management Plan.

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 Financial Strategy respond to the Council-endorsed principles of sustainability and financial stewardship. Oshawa's Asset Management Plan endeavours to align to the Oshawa Strategic Plan and the Oshawa Financial Strategy, which contains a number of 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:

- 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
- Customer Service Strategy
- Development Charge Background Study
- Downtown Oshawa - Plan 20Thirty
- Economic Development - Sector Analysis and Cluster 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 Accessibility Plan
- Oshawa Executive Airport Business Plan
- Parks, Recreation, Library, and Culture Facility Needs Assessment

## 1.4 Asset Management Framework

Asset management activities/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 in order 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
- The 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 in order to provide the current level of service in a sustainable way, while managing risk, at the lowest lifecycle cost.

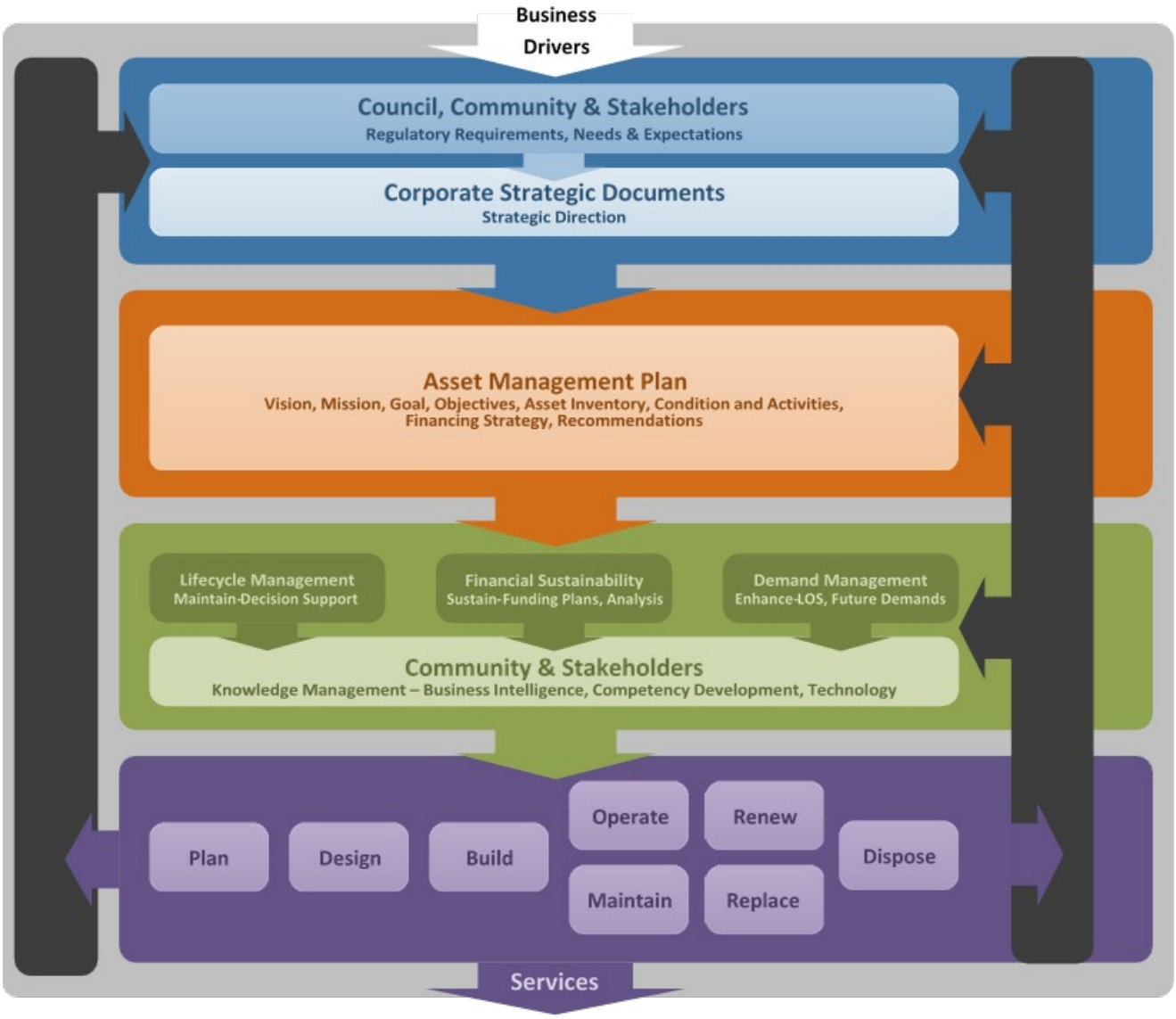
## Objectives

- 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 | Not Started |
| **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 | In Progress |
| 18 | Identify funding needs | 2025-Q2 | In Progress |
| 19 | Identify funding sources | 2025-Q2 | In-Progress |
| 20 | Consider alternative funding sources | 2025-Q2 | In Progress |
| 21 | Measure funding needs against funding sources | 2025-Q2 | In Progress |
| 22 | Gap identification and mitigation strategy | 2025-Q2 | In Progress |
| **Task #** | **Asset Management Manual** | **Estimated Timelines** | **Status** |
| 23 | Document systems supporting A.M. | 2024-Q3 | Ongoing |
| 24 | Data improvement plans | 2024-Q3 | Ongoing |
| 25 | Data update protocols | 2024-Q4 | Ongoing |

| Task # | Asset Management Manual | Estimated Timelines | Status |
|---|---|---|---|
| 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 of 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. In order 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 of the core assets, as well as the active transportation network. There is a significant amount of attributes that are tracked and maintained for each asset, broken out into segments. Staff utilize this information for Core Assets in a database that assists with analyzing the future needs and timing of 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 Building Owners and Managers Association.

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.

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

| Asset Class / Services | Inventory[1] | Source |
|---|---|---|
| **Roads** | | |
| Arterial | 223.2 lane kms | G.I.S. |
| Collector | 154.7 lane kms | |
| Local | 839.0 lane kms | |
| **Structures** | | |
| Bridges | 26 | G.I.S. |
| Culverts | 50 | |
| Pedestrian Structures | 39 | |
| **Stormwater** | | |
| Storm | 499.1 kms | G.I.S. |
| F.D.C. Storm | 103.2 kms | |
| Storm Water Management Facility | 31 | |
| **Airport** | | |
| Runways | 2 | G.I.S. Excel |
| Taxiways | 6 | |
| Aprons | 2 | |
| Other Inventory | n/a | |
| **Facilities** | | |
| Recreation Centres, Libraries & Galleries | 39 | V.F.A. T.C.A Ledger (in Excel) Maximo |
| Core Operations Centres | 19 | |
| Fire Stations | 6 | |
| Smaller Service & Community Centres | 4 | |
| **Parks Facilities** | | |
| Regional (Destination) Parks | 3 | G.I.S. V.F.A Maximo |
| City Parks | 5 | |
| Community Parks | 29 | |
| Neighbourhood Parks | 118 | |

| Asset Class / Services | Inventory[1] | 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** | | |
| **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** | | |
| 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** | | |
| 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 Core Assets (Roads, Structures and Stormwater) are as of December 2021, while the remaining Non-Core Assets is based on December 2023.

The total replacement cost for the City assets is estimated at $3.8 billion in 2023 dollars, as of December 31, 2023, as identified in Figure 6 below.

**Figure 6 – Estimated Replacement Cost by Asset Class**

| Asset Class / Services | 2023 Estimated Replacement Cost | % of Total Assets[1] |
|---|---|---|
| Roads | $1,994,800,252 | 53% |
| Structures | $103,803,971 | 3% |
| Stormwater | $380,510,004 | 10% |
| **Total Core Assets** | **$2,479,114,227** | **66%** |
| Airport | $23,421,919 | 1% |
| Facilities | $536,105,344 | 14% |
| Parks Facilities | $184,075,254 | 5% |
| Parking Services | $101,237,431 | 3% |
| Fleet & Equipment | $49,921,210 | 1% |
| Active Transportation | $320,403,535 | 9% |
| Non-Core Transportation | $59,100,000 | 2% |
| **Total Non-Core Assets** | **$1,274,264,693** | **34%** |
| **Total Assets** | **$3,753,378,920** | **100%** |

[1] May not add due to rounding

Estimated replacement costs are based on current (2023) present value dollars. For core assets (Roads, Structures and Stormwater), the replacement cost from the 2021 Asset Management Plan was inflated to 2023 dollars. No further update of condition, or quantity of Core Assets has been included in this Asset Management Plan. A new iteration of the Plan will be published in 2025 that will have a full and complete update of condition and quantity of all assets.

Unless otherwise stated, all financial figures in this A.M.P are described in current year (2023) 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 depreciation. 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 the 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, condition needs 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 7 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 7 – Condition**

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

[1] 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.

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 or (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 8 below.

**Figure 8 – 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. Current Levels of Service

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 measureable 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 centre 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 the way 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 two-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 9 – 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 take into account the natural environment |

# 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 in order 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 10 provides an example of this level of information specific to roads, one of the City's core assets.

**Figure 10 – 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, LOS | 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 11.

**Figure 11 – 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** | Master Plan Update, 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

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

### Renewal/Rehabilitation

- More inter-municipal bundling of renewal/rehabilitation contracts
- 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

### Replacement

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

### 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 publically available on the City's website at http://www.oshawa.ca/city-hall/Purchasing-Information.asp.

The By-law provides the authority and guidelines to conduct purchasing transactions to ensure a 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 with regard to capital purchases.

## 4.5 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.

# 5. Funding Requirements

Asset management is closely integrated with the City's Financial Strategy and the annual budgeting process. The Oshawa Financial Strategy 2016-2019 identifies "Infrastructure Investment" as one of five strategic areas.

**Infrastructure Investment (section 5.1 of the Financial Strategy)**

*Ensure long-term planning and commitment of adequate funds to build, maintain and renew City infrastructure including addressing the existing infrastructure funding 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.*

It 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 capital expenditures, revenue sources and funding shortfalls.

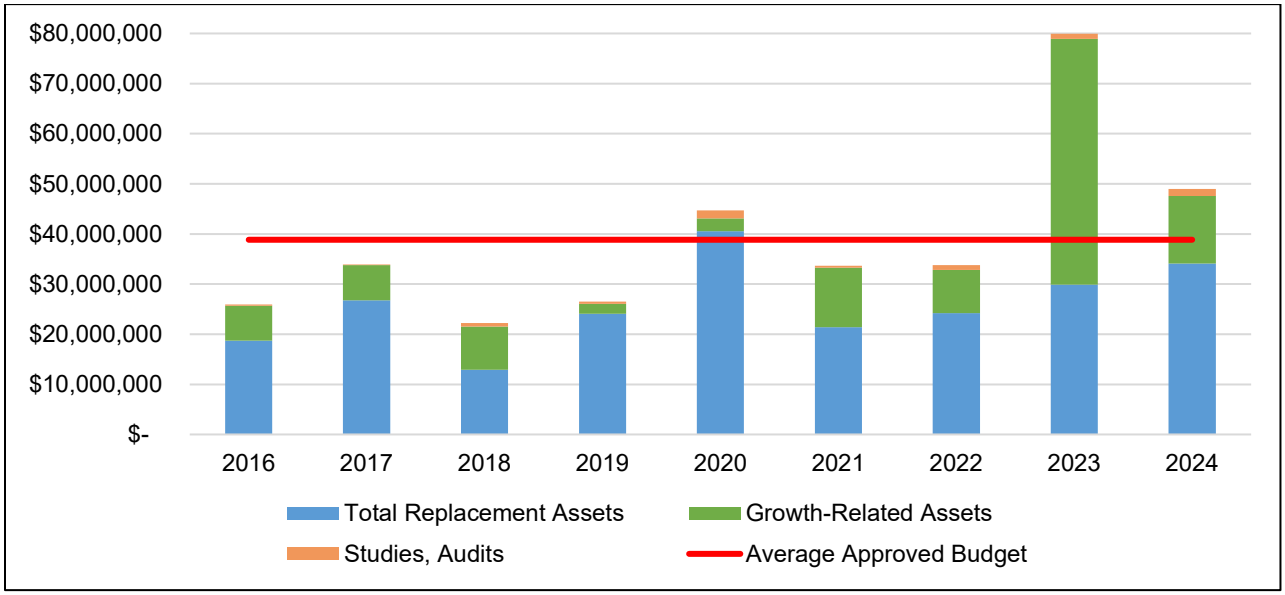
## 5.1 Expenditures

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 six years is $38.8 million. This includes the costs for replacement assets 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 12 below represents the approved annual budget for 2016 to 2024 for all Core and Non-Core Assets.

**Figure 12 – 2016 to 2024 Approved Budget Summary**




## 5.2 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 storm water 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:

### 5.2.1 - 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. It is important to note that the reliance on this funding source has continued to decrease since 2018, with 2021 approved tax levy funding of only $350,000 and now with no direct tax levy funding for capital.

### 5.2.2 – Tax Levy Funded Reserves

The City of Oshawa annually contributes to reserves to fund current and future capital investments. The 2024 budget included a contribution to infrastructure reserves in the amount of $12,010,600. 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.

### 5.2.3 – 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 expired March 31, 2024, with the 2024-2028 agreement out to municipalities in the spring of 2024. The estimated average annual payment for the new agreement is approximately $5.8 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.

### 5.2.4 – 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.

### 5.2.5 - Grants

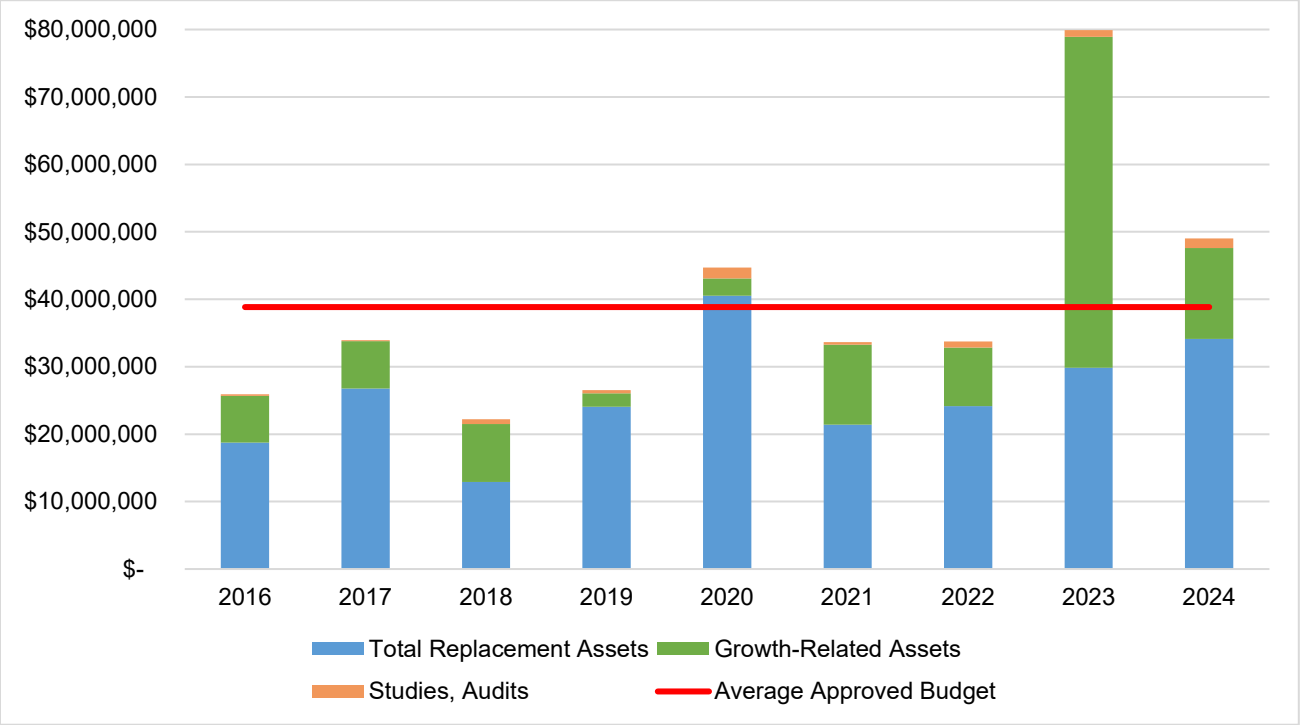
Both the Provincial and Federal Governments have grant programs available to assist local government to sustain their infrastructure needs. When opportunities become available, the City will apply to grant programs for specific capital projects that fall within the criteria of the grant program. Although 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.

### 5.2.6 – 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 13 shown below provides a summary of the approved budget from 2016-2024 for replacement assets by funding source. The average annual tax levy funded portion over these nine years was $16.7 million. This includes annual capital tax levy funding, as well as utilizing tax levy funded reserves.

**Figure 13 – 2016 to 2024 Approved Budget by Funding**




## 5.3 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.

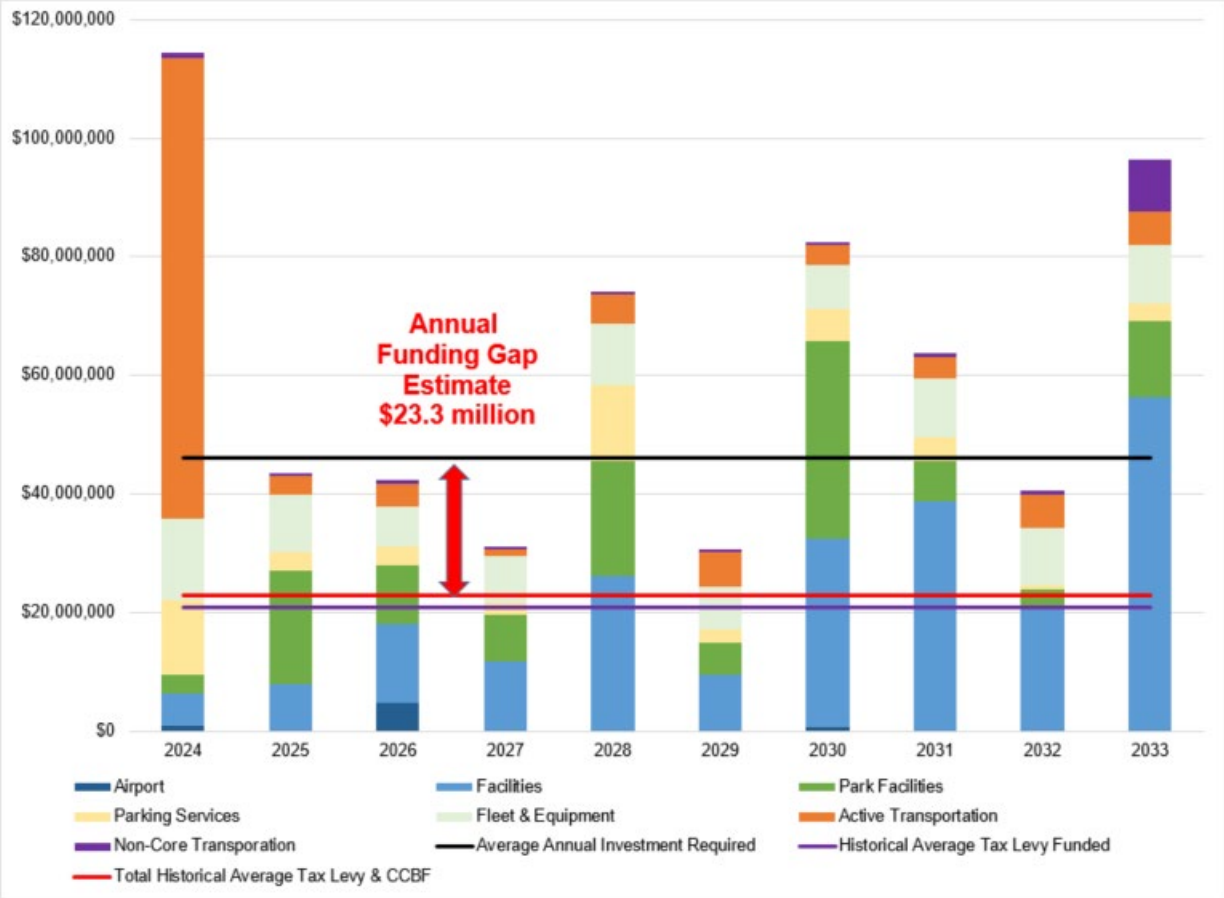
Based on the lifecycle activities required for the non-core assets only, the average annual investment required is $46.1 million, represented by the black line in Figure 14.

The past nine year approved budgets has provided an average annual investment from Tax Levy Funding and Tax Levy Supported Reserves in the amount of $20.8 million. This includes the annual maintenance activities funded from the operating budget. Canada Community-Building Fund (C.C.B.F.) is also a significant funding source for capital, but is utilized for core assets as well. The City has utilized approximately $2.1 million per year for a total average annual funding. 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 historical funding is $25.3 million when utilizing City only funds and $23.3 million when the C.C.B.F. is taken into consideration for the non-core assets.

**Figure 14 – Estimated 10-Year Investment for Non-Core Replacement Assets**




As presented in the 2021 Asset Management Plan, which focused on Core Assets, the annual funding shortfall for core assets in 2021 was $15.4 million. The inventory, condition and lifecycle costs were not updated for this iteration of the Asset Management Plan and will be updated for the 2025 Plan.

# 6. 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 the proposed levels of service related performance measures and developing more fulsome Asset Management Plans that provide the required analysis for the most efficient decisions per asset class. 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.

# 7. Short and Long-Term Recommended Actions

This is the City's first comprehensive asset management plan covering the State of the Infrastructure, current 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 II, which focuses on the City's non-core assets, consisting of facilities, parks facilities, fleet and equipment, active transportation, and non-core transportation as well as the airport and parking services assets. The final and most significant phase, Phase III, builds on the Asset Management Plan to include the proposed levels of service, which includes a lifecycle management and financial strategy that supports the proposed levels of service.

To ensure that these future phases of the Asset Management Plan 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.

1. 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.

2. Continue to investigate options to implement an asset management/decision support software that can be utilized for all City assets.

3. 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.

4. Continue to develop and document reliable replacement values for all assets, as well as a processes to calculate and update estimated replacement costs.

5. Continue to improve the data quality of assets, such as year of construction/acquisition.

6. 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, active transportation and non-core

transportation assets. Future iterations of the Asset Management Plan will strive to have more observed condition assessments (e.g. use of C.C.T.V. inspections for assessing stormwater mains).

7. Develop a methodology for tracking and reporting on the performance metrics of:
    - Percentage of properties in the City resilient to a 100-year storm, and
    - Percentage of the City stormwater management system resilient to a 5-year storm

8. 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; using the recommendations from the Municipal Natural Assets Initiative (M.N.A.I.) project.

9. 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.

10. Further revise the Capital and Major Initiative Prioritization Model as the City's Asset Management Plan evolves in order to provide more information for scoring and prioritizing capital projects, based on the efficient use of funds.

11. 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.

12. 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.

13. Continue documenting proposed levels of service (L.O.S.) for asset classes and create a central L.O.S. database with appropriate key performance indicators (K.P.I.s).

14. 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.

15. 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.

16. Further the use of net present value analysis of asset renewal options.

17. Continue to ensure asset management is aligned with the implementation of the Financial Strategy.

18. Continue to seek senior government funding for infrastructure projects and develop a list of shovel ready projects in order to be prepared when grant opportunities arise.

19. 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.

20. 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.

21. 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.

22. Continue to integrate Asset Management outputs into key planning documents to ensure the documents are used in the preparation of the Asset Management Plan.

23. Continue the staff-based Asset Management Team to further collaboration and communication between departments.

24. Continue to refine the accuracy and replicability of the City's asset management data.

# 8. Appendices

# Appendix A
# City Roads


For more information concerning the City Roads Appendix A please see the below link:

https://pub-oshawa.escribemeetings.com/filestream.ashx?DocumentId=7296

Published October 2021

# Appendix B
# Structures


For more information concerning the Structures Appendix C please see the below link:
https://pub-oshawa.escribemeetings.com/filestream.ashx?DocumentId=7296

Published October 2021

# Appendix C
# Stormwater Assets


For more information concerning the Stormwater Appendix B please see the below link:
https://pub-oshawa.escribemeetings.com/filestream.ashx?DocumentId=7296

Published October 2021

# Appendix D

# Oshawa Executive Airport (CYOO)


**May 2024**

# 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, unless it becomes redundant by the opening of an airport in Pickering. In 2008, Oshawa City Council passed a resolution to continue to operate the Airport until at least 2033 regardless of the status of an airport in Pickering.

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:

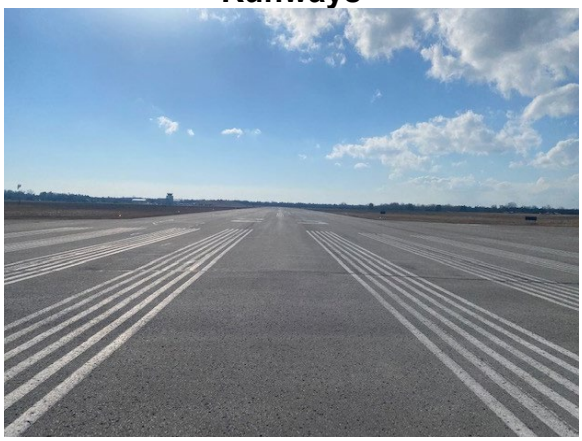
- A modern terminal building supporting charter service and corporate business travel;
- Dual runways able to service a broad range of aircraft;
- Modern navigational aids including GPS based instrument approaches;
- Canada Customs and Border Services on demand;
- Automated weather observation system (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.

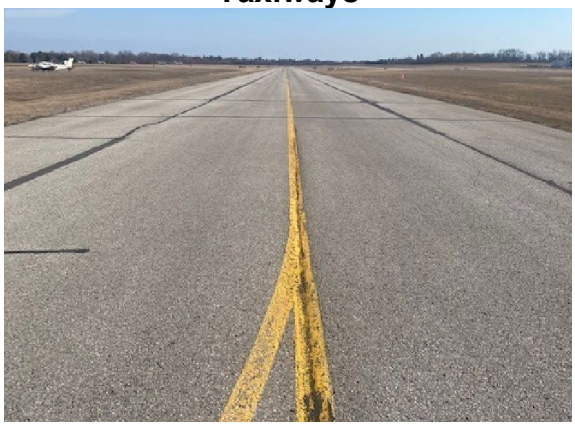
# Airport Assets

## 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

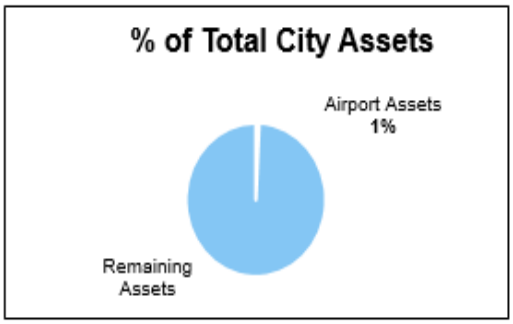
Aprons:

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

# Airport Assets

## Inventory and Estimated Replacement Cost

| Asset Category | Quantity | Estimated Replacement Cost |
|---|---|---|
| Runways | 2 | $12,737,484 |
| Taxiways | 6 | $5,016,061 |
| Aprons | 2 | $3,404,720 |
| Other Inventory | n/a | $2,263,654 |
| **Total Airport Assets** | | **$23,421,919** |




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 $23,421,919.

Estimated replacement values, in this iteration, were based on: The Airport Business Plan 2015-2019 and the Capital Plan updates in 2021 and 2023. These documents were prepared by industry expert consultants and the Airport operator with costs inflated to current (2023) dollars.

In addition, for some assets the acquisition costs from the tangible capital asset ledger were used and inflated to current (2023) 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.

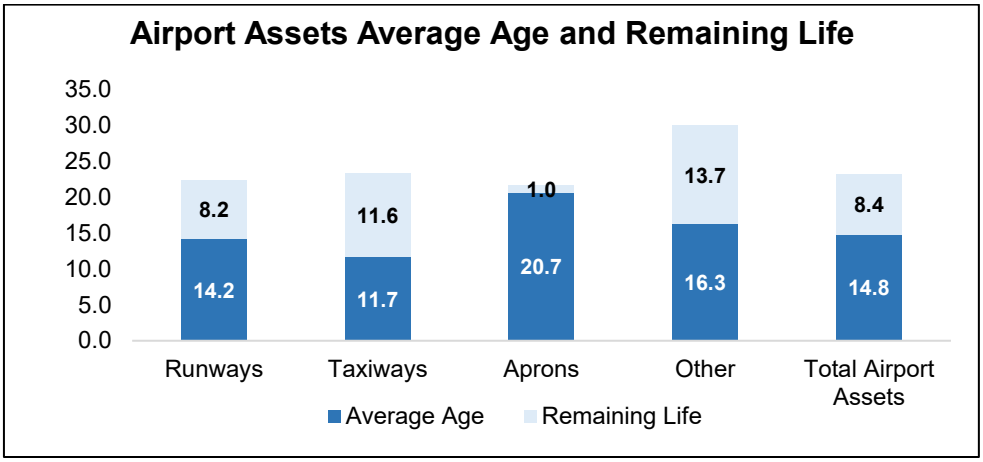
# Airport Assets

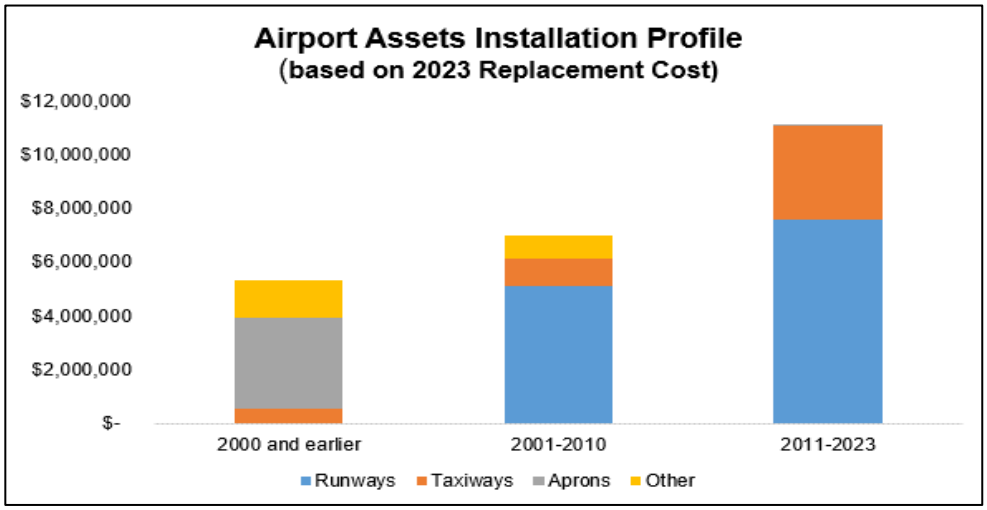
## Average Age and Asset Installation Profile

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 14.8 years and broken down by:

- 14.2 years for Runways
- 11.7 years for Taxiways
- 20.7 years for Aprons
- 16.3 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).



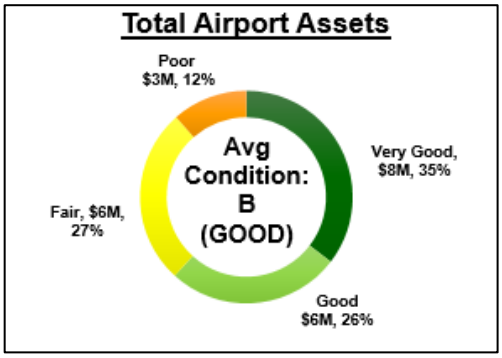
# Airport Assets

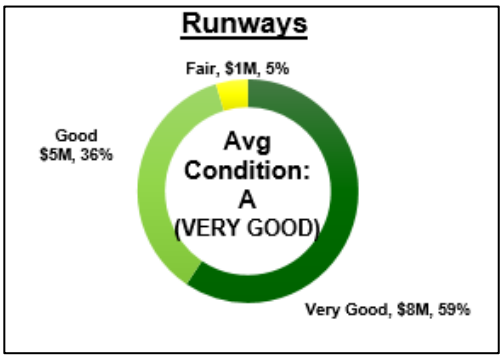
## Condition

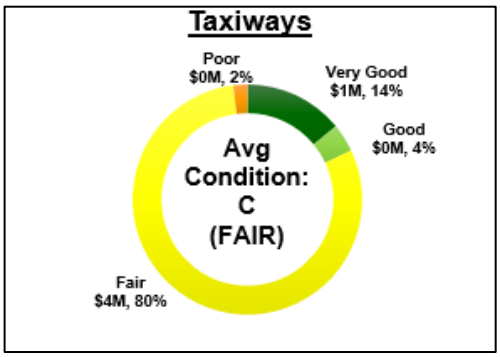
The condition of the City's Airport Assets are observed and documented formally for the development of the Capital Plan.

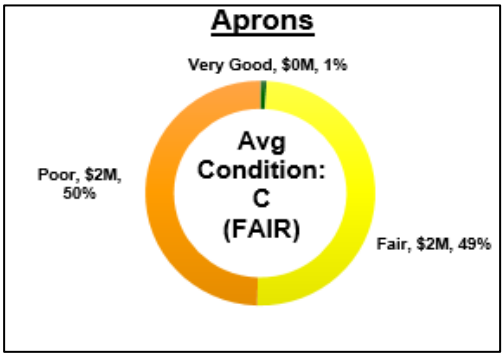
Overall, the City's Airport Assets are in GOOD condition (B Grade)

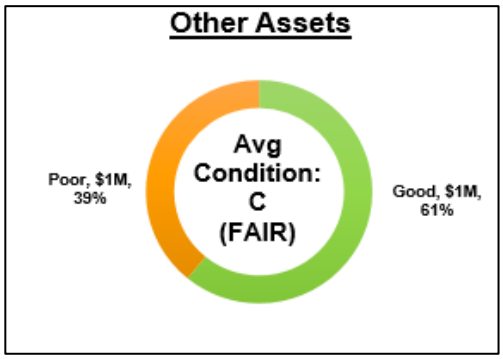
- A – Very Good - Runways
- C – Fair –Taxiways
- C – Fair – Aprons
- C – Fair –Other



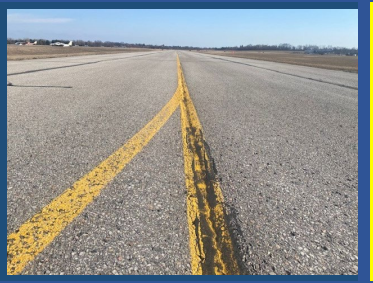



# Airport Assets

| 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

## Current Levels of Service

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

- The Council approved Oshawa Strategic Plan 2020-2023
- Oshawa Financial Strategy 2016-2019
- 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

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 objective listed below.

# Airport Assets

## Technical Levels of Service and Current Performance

| Service Attribute | Level of Service Objective | Technical Levels of Service | Current Performance |
|---|---|---|---|
| Quality & Safety | Operate the Airport in a safe and secure manner | Airport is inspected in compliance with Federal regulations, and all findings are resolved within a 24 month period | 100% |
| Quality & Safety | Operate the Airport in a safe and secure manner | Internal inspections are completed annually derived from Federal regulations | 100% |
| Quality & Safety | Operate the Airport in a safe and secure manner | % of assets in Fair or better condition | 89% |

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

## 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 $132,000 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 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.

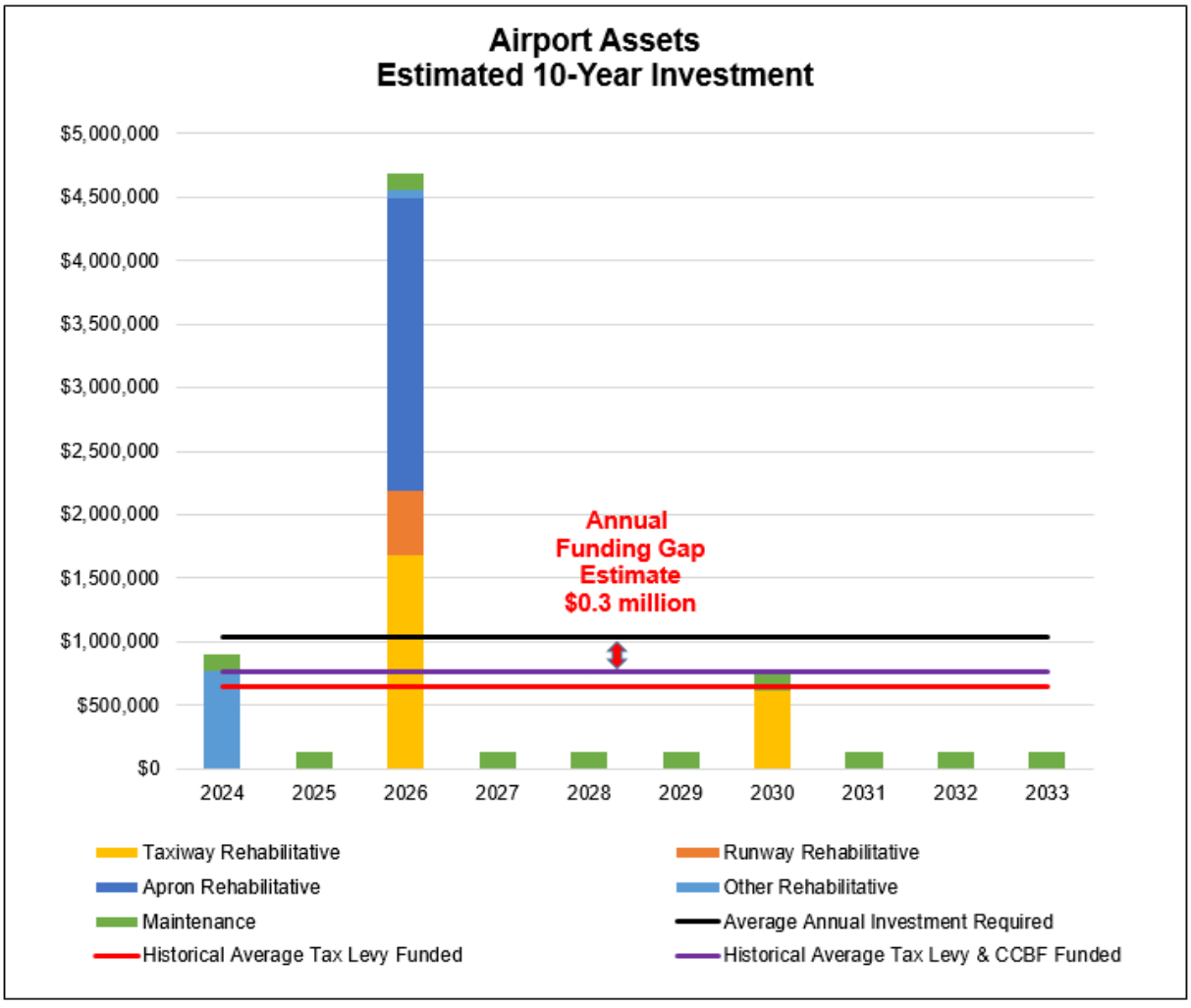
Maintaining standards set in Federal regulations is the main driver of short-term capital planning. Any deficiencies that are identified are addressed to maintain certification.

# Airport Assets

## Lifecycle Management Strategies

The following 10 year lifecycle forecast is shown below. It has been created using the Airport's most recent capital plan, prepared in November of 2023 assuming no budget constraints.

Based on the past 9 years of approved budgets, 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 $766K. The result based on historical investments is an estimated annual funding gap of $278K.



# 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 2023 Durham Regional Official Plan (Draft)

| 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 2023 Durham Regional Official Plan (Draft)

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.

There are no significant growth-related infrastructure upgrades or assets planned or required in the next 10 years.

# Appendix E

# Facilities


**May 2024**

# 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 provide for the operations and support 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

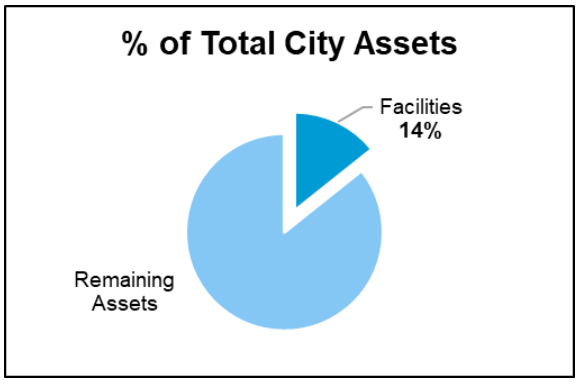
Parks facilities including playground equipment, parking lots, sports fields and the like are reported separately in the Parks Facilities Appendix. Similarly, the parking garages and lots associated with paid parking are also reported separately in the Parking Services Appendix.

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 | $387,677,830 |
| Core Operations Centres | 19 | $113,010,378 |
| Fire Stations | 6 | $30,591,070 |
| Smaller Service and Community Centres | 4 | $4,826,066 |
| **Total Facilities** | **68** | **$536,105,344** |




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 $ 536,105,344 based on 2023 dollars.

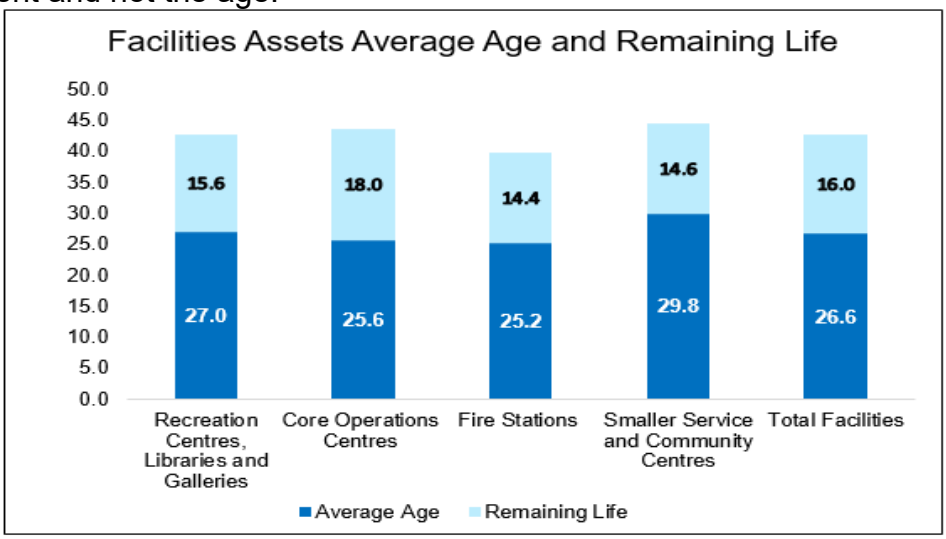
Estimated replacement costs are based on the replacement costs of the components and are updated regularly in the V.F.A. Capital Planning Software.

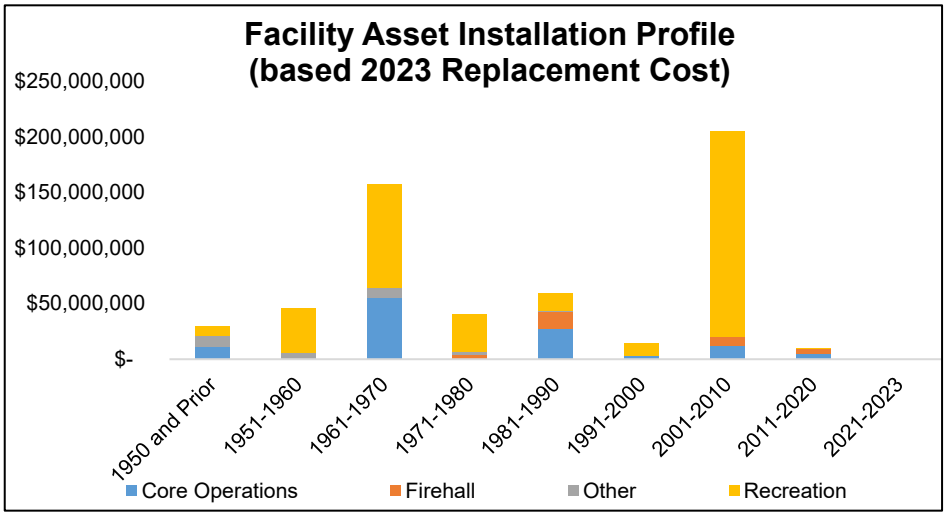
## Average Age and Asset Installation Profile

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 26.6 years. This is a simple average of the components of a facility and will be improved in future iterations.

- 27.0 years - Recreation Centres, Libraries and Galleries
- 25.6 years - Core Operations Centres
- 25.2 years - Fire Stations
- 29.8 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. Remaining service life is based on the observed assessment and not the age.



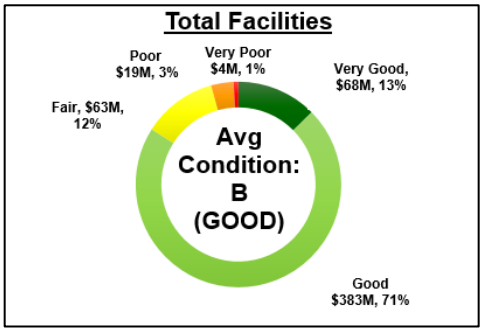
# Facilities

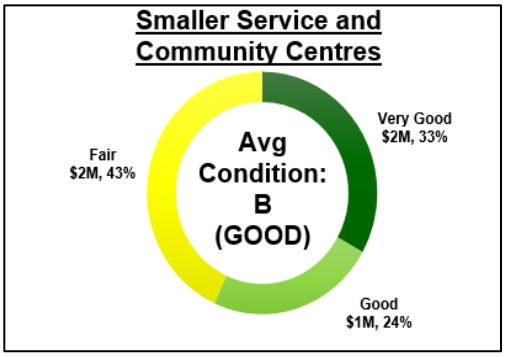
## Condition

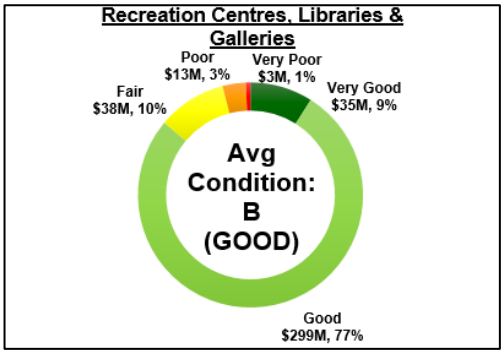
The condition of the City's facilities are assessed on a rolling basis with all assets being covered within a two year period. Assessments are done by external inspectors and internal staff. A facility condition number is calculated based on the condition of the individual facility components and reported for each facility and summarized by facility type below. The related parking lots are inspected, at a minimum annually and the condition is documented.

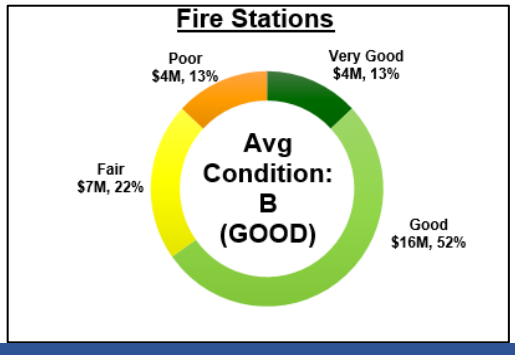
Overall, the City's Facility assets are in GOOD condition (B Grade)

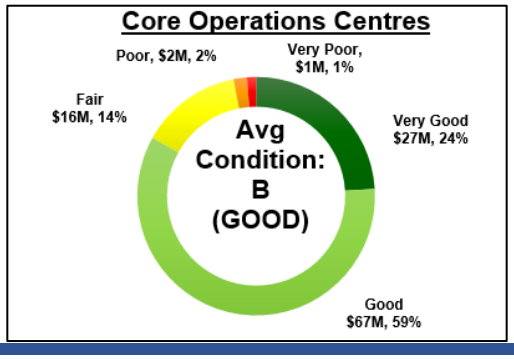
- B – Good – Recreation Centres, Libraries and Galleries
- B – Good – Core Operations Centres
- B – Good – Fire Stations
- B – Good – Smaller Service and Community Centres



# 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 maybe unusable. |

# Facilities

## Current Levels of Service

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

- The Council approved Oshawa Strategic Plan 2020-2023
- Oshawa Financial Strategy 2016-2019
- 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.

# Facilities

## Technical Levels of Service and Current Performance – All Facilities

| Service Attribute | Technical Levels of Service | Current Performance |
|---|---|---|
| Environmental Responsibility | EUI (kBtu/ft²) Energy Intensification Unit/ft[1] | 2025 Metric |
| Environmental Responsibility | EV Charging Stations [2] | 10 Dual Charging EV Units (20 Chargers) |
| Safe and Reliable Infrastructure | % of Facilities that have undergone a detailed condition assessment within 24 months | 100% |

Notes:
1 This metric combines electricity and gas while normalizing for the weather
2 Public facing fleet charging stations

# Facilities

## Technical Levels of Service and Current Performance – By Facility Function

| Service Attribute | Technical Levels of Service | Current Performance[1] |
|---|---|---|
| Safe and Reliable Infrastructure | Core Operations Facility Condition Index[2] | FCI = 0.17 (Fair) |
| Safe and Reliable Infrastructure | Fire Stations Facility Condition Index | FCI = 0.16 (Fair) |
| Safe and Reliable Infrastructure | Recreation Facilities Facility Condition Index | FCI = 0.11 (Good) |
| Safe and Reliable Infrastructure | Smaller Service Facilities Facility Condition Index | FCI = 0.11 (Good) |

Notes:
[1] See page E-6 for definitions
[2] Amount of deferred maintenance ($) divided by overall replacement value

# 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 specialized 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 needed improvements. The condition of facility components is captured as an estimate of 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

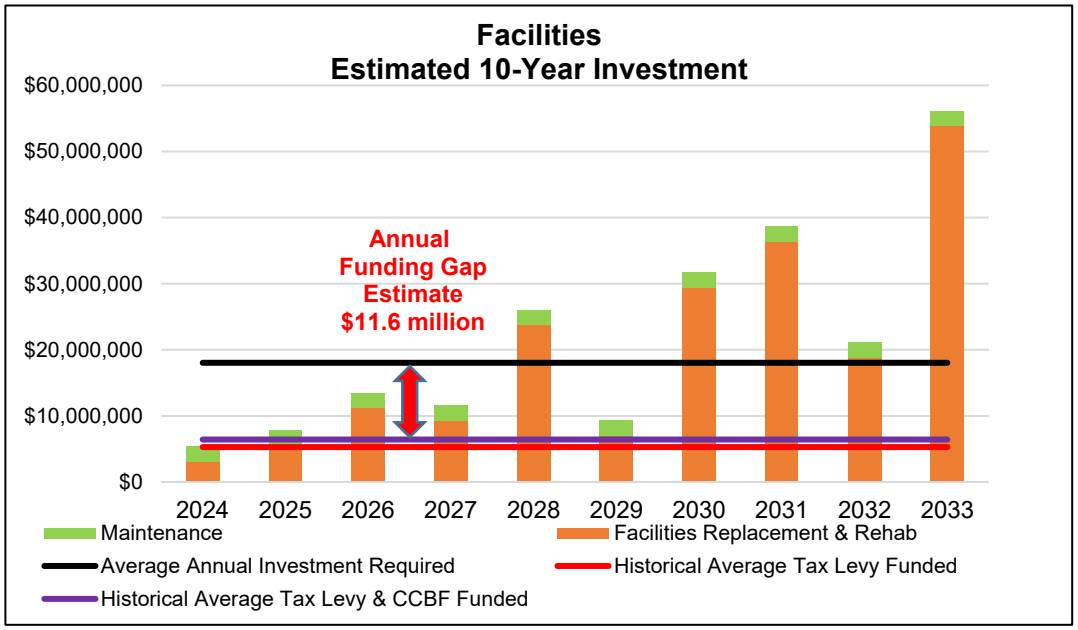
## Lifecycle Management Strategies

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 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 2019 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 is estimated at $18.0 million (in 2023 $).

Based on the average of the last nine years of approved budgets, the annual investment in Facilities from tax levy and Canada Community Benefit Fund (previously Federal Gas Tax Funding) is $6.4 million. This results in an estimated annual funding gap of $11.6 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 2023 Durham Regional Official Plan (Draft)

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. However, the future maintenance and capital costs will be borne by the municipality

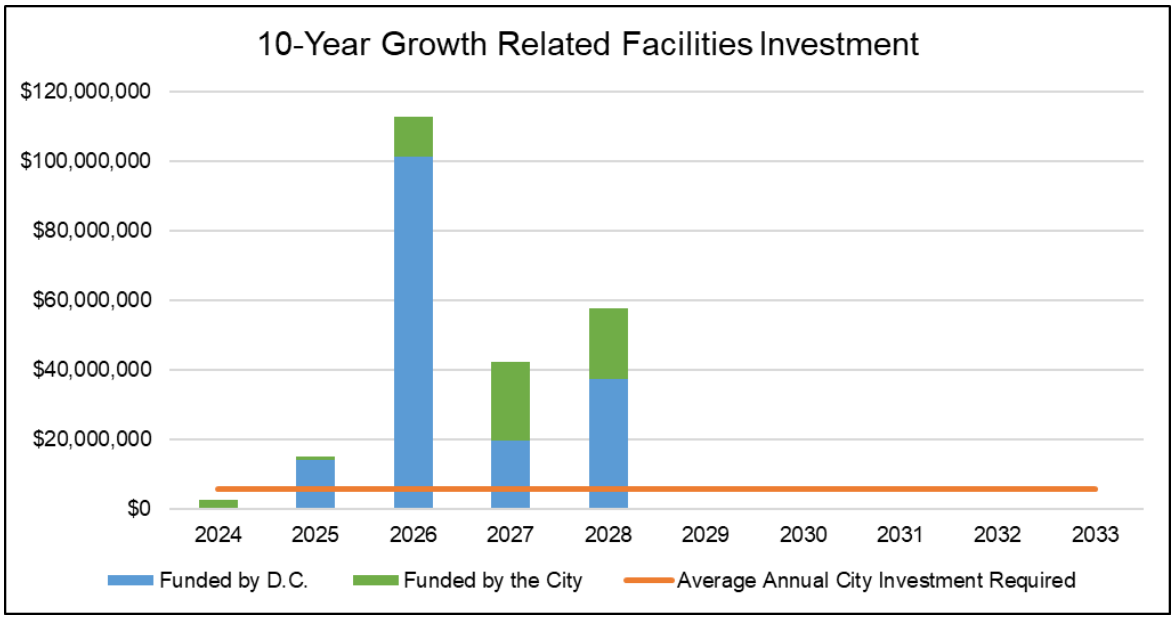
The City's Official Plan references that build-out is estimated to occur in 2051. The operating costs related to assumed assets are difficult to estimate and is really dependent on what future proposed levels of service are approved by Council. As asset management practices continue to mature and better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

# Facilities

## Managing Growth – Capital and Operating Expenditure Forecast

The 10-year forecast includes $236.7 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 $57.5 million (or an average annual amount of $5.7 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 2024

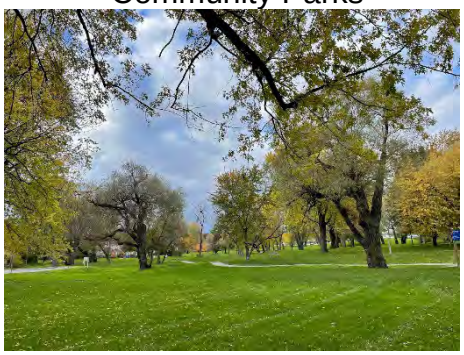
# Parks Facilities

## Description of Parks Facilities Assets

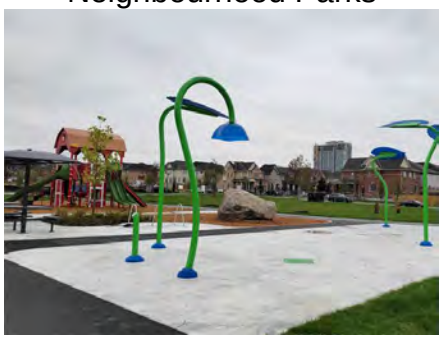
Regional Parks

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 park 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 and 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.

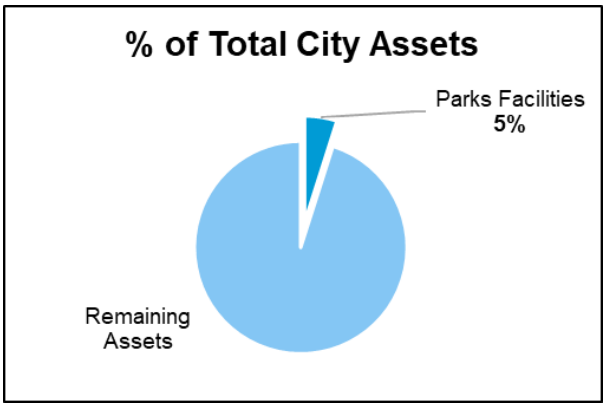
| Park Type | Function | Facilities | Service Level | Approximate Size |
|---|---|---|---|---|
| **Regional (Destination)** | Serves both local and regional residents | Natural and landscaped areas, areas of unstructured use, passive recreational uses, camping, parking, amenities | Not defined | The 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<br><br>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 | $32,654,019 |
| City Parks | 5 | $32,002,428 |
| Community Parks | 29 | $47,711,509 |
| Neighbourhood Parks | 118 | $71,707,298 |
| **Total Parks Facilities** | **155** | **$184,075,254** |




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

The total estimated replacement cost of these Parks Facilities is $184,075,254 based on 2023 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 of 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.

Also, the City owns an additional 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.

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

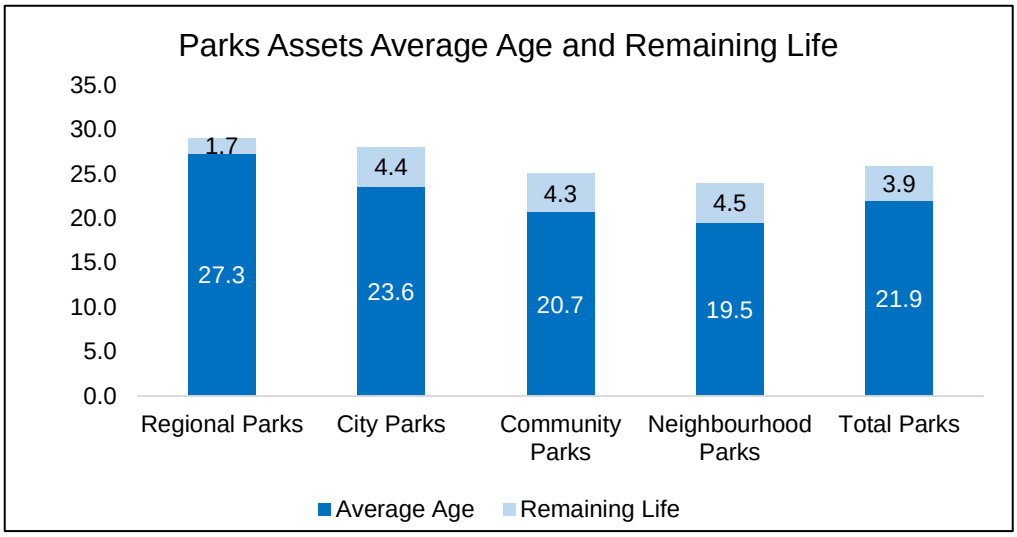
# Parks Facilities

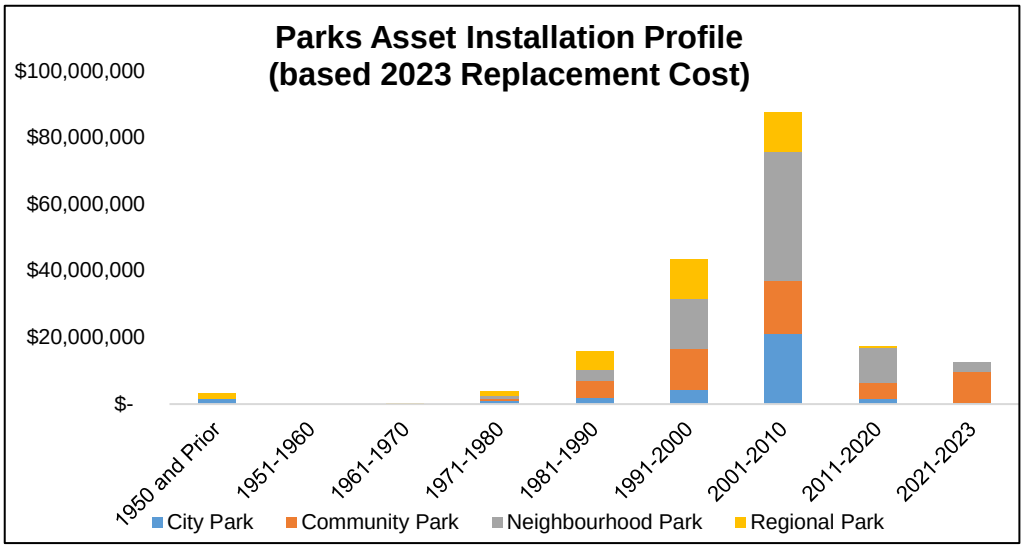
## Average Age and Asset Installation Profile

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:

- 27.3 years - Regional Parks
- 23.6 years - City Parks
- 20.7 years - Community Parks
- 19.5 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.



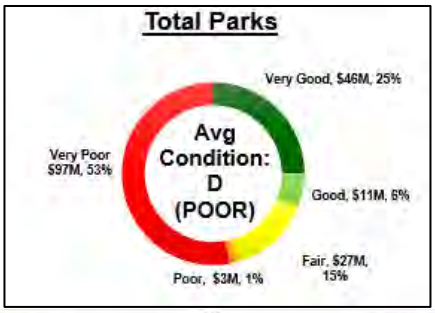
# Parks Facilities

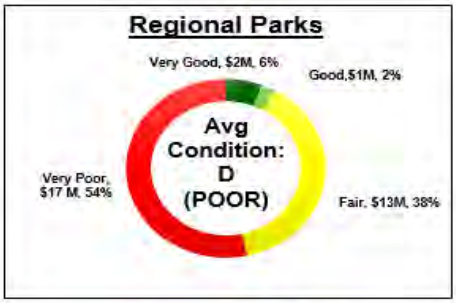
## Condition

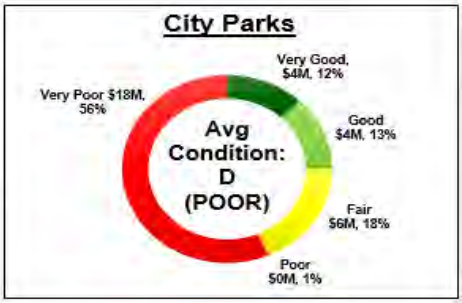
Audits of playgrounds are done annually; inspections are done more regularly to ensure compliance with quality standards defined in the City of Oshawa Quality Standard Q4-309-017 – Play space and Equipment Inspection Maintenance, Repair and Replacement. The results of the inspections are currently captured through forms. In the future, the results will be captured in Maximo. The condition of non-playground facilities is not currently assessed. The City is, however, working on a process to assess the condition of non-playground park assets annually.

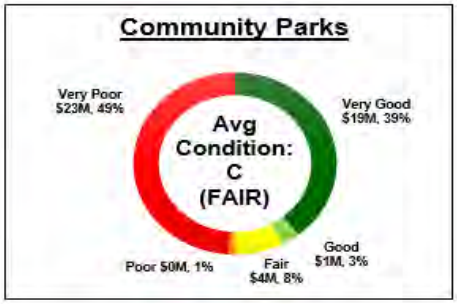
Overall, the City's Parks Facilities assets are in POOR condition (D Grade)

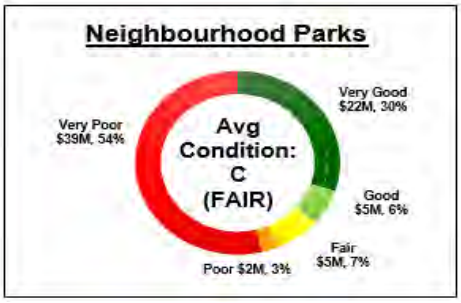
- D – Poor - Regional Parks
- D – Poor - City Parks
- C – Fair - Community Parks
- C – Fair - Neighbourhood Parks



# 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 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

## Current Levels of Service

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

- The Council approved Oshawa Strategic Plan 2020-2023
- Oshawa Financial Strategy 2016-2019
- Oshawa Quality Standards
- Parks, Recreation, Library and Culture Facility Needs Assessment (draft 2023)

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

# Parks Facilities

## Technical & Community Levels of Service and Current Performance

| Service Attribute | Technical Levels of Service | Current Performance |
|---|---|---|
| **Quality & Safety** | % of Parks Facilities in fair or better condition | 45.7% |
| **Scope** | # of parks per 1,000 residents | 0.8 |
| **Scope** | # of Hectares' of active parkland heritage lands per 1,000 residents | 1.7 |
| **Scope** | # of Hectares' of parkland & natural heritage lands per 1,000 residents. | 5.5 |
| **Accessibility** | % of Park amenities that are accessibly compliant | TBD |

# Parks Facilities

## Lifecycle Management Strategies

Replacement of facilities is done by site as a redevelopment project because most facilities need to be replaced at about the same time. Park redevelopments are often not like for like because of 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. 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 Parks Operations and Recreation Operations 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 Services is consulted to coordinate park redevelopment projects with road 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; and
- Grounds maintenance – includes grass cutting, garbage collection, trail maintenance, and special events.

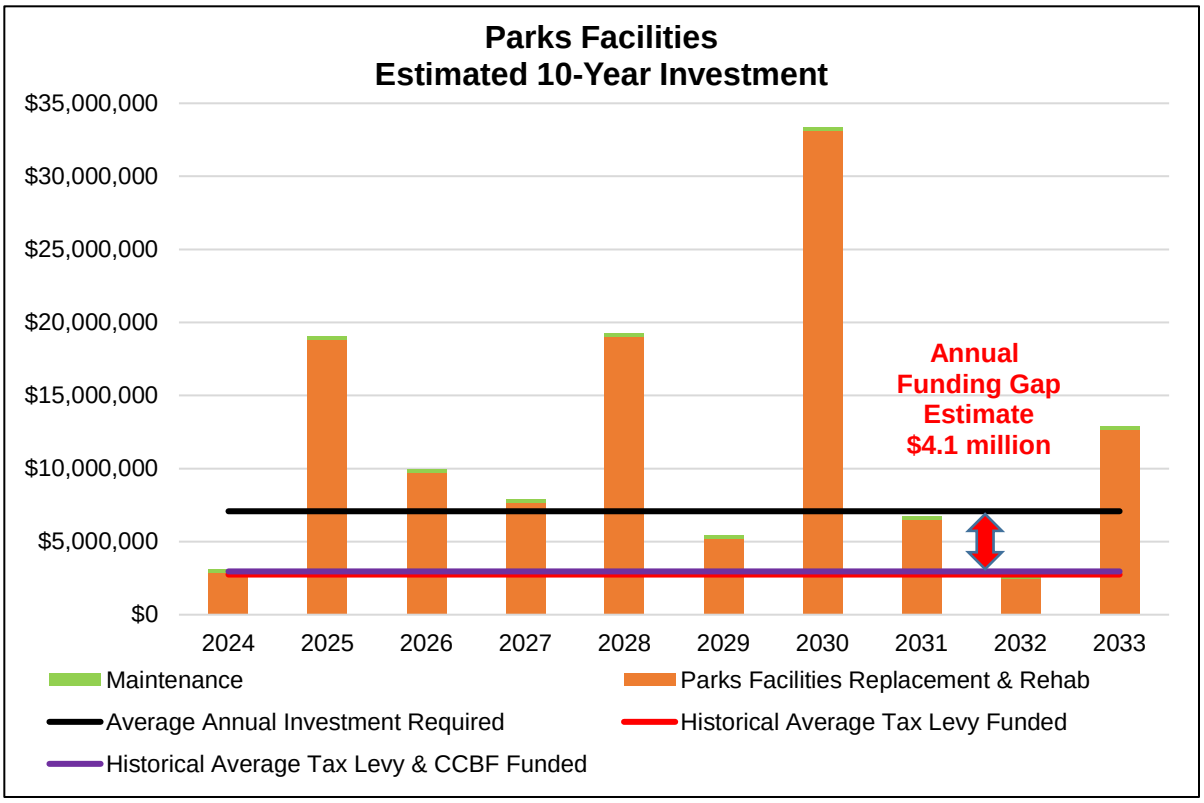
# Parks Facilities

## Lifecycle Management Strategies

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 $7.1 million (in 2023 $).

Based on the average past nine years of approved budget, the annual investment in Parks Facilities from tax levy and Canada Community Benefit Fund (previously Federal Gas Tax Funding) is $3.0 million. This results in an estimated annual funding gap of $4.1 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 2023 Durham Regional Official Plan (Draft)

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. 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 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.

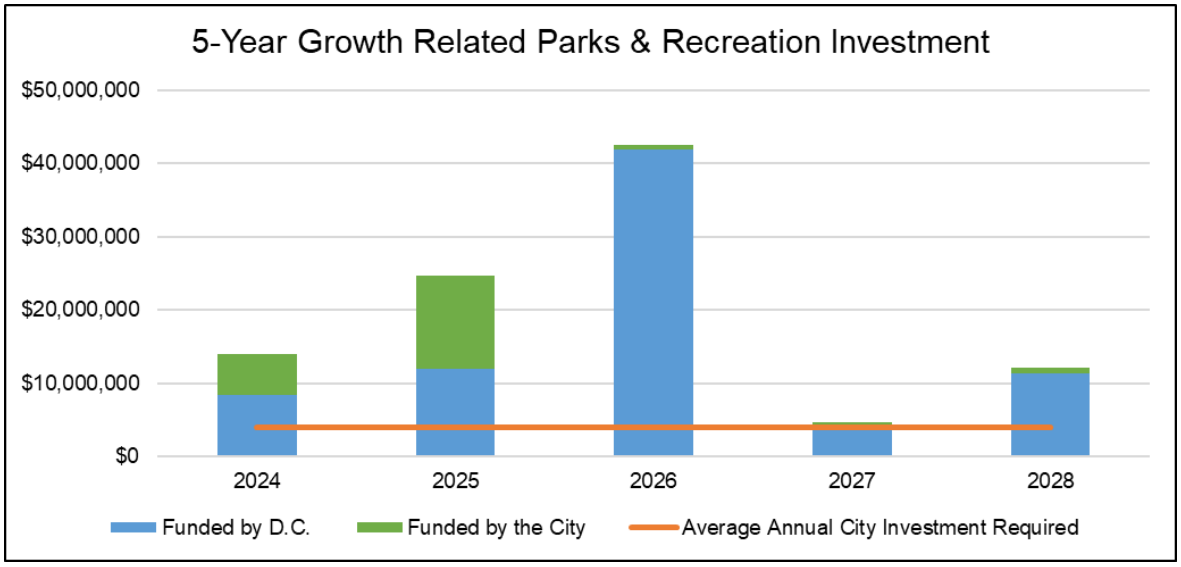
# Parks Facilities

## Managing Growth – Capital and Operating Expenditure Forecast

The 5-year forecast includes $98.0 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 5-year forecast, there are several Parks Facilities anticipated to be built which requires a total contribution from the City in the amount of $20.0 million (or an average annual amount of $4.0 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 only five years of growth, as all the projects identified in the Development Charges Background Study have an anticipated start date within the 5-year period.



# Appendix G

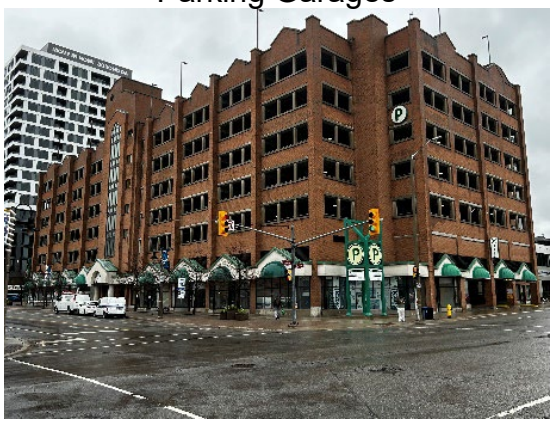
# Parking Services


**May 2024**

# 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 3,131 paid parking spaces available to the users of Oshawa Parking Services.

Parkades and garages provide 1,645 spaces, lots provide 677 spaces and there are 799 on-street spaces.

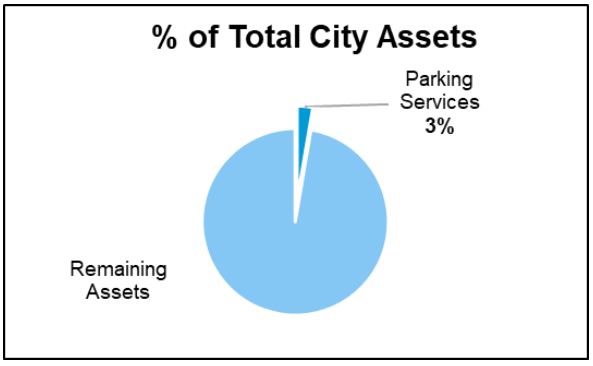
This appendix covers parking assets that are used in the delivery of parking services. Parking services assets are those assets that provide parking for which a fee is paid.

Parking lots that are free to park in, such as those that are part of the various recreation centers, 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 | $91,929,299 |
| Parking Lots | 7 | $6,848,138 |
| Parking Garage & Lot Equipment | 325 | $2,459,993 |
| **Total Parking Services** | | **$101,237,430** |




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 & parkades:

- Centre Street Parking Garage;
- McMillan Parkade; and,
- Mary Street Parkade.

In addition to the 3 parking garages and parkades, the City owns 7 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 & transponder heads) related to parking services assets which is required to deliver this service.

The total estimated replacement cost of these assets is $101,237,431 based on 2023 dollars.

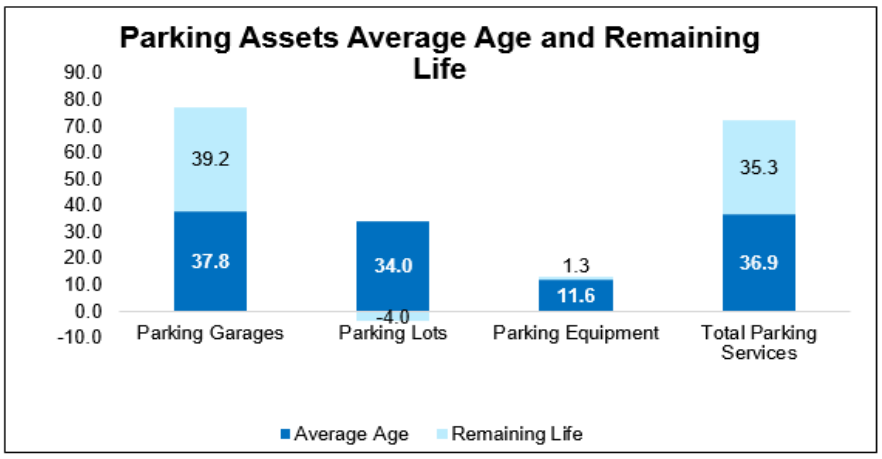
# Parking Services

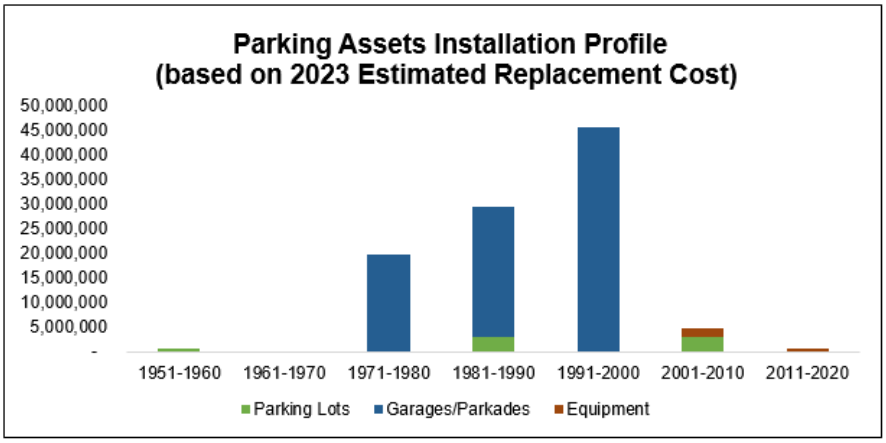
## Average Age and Asset Installation Profile

Age is based on initial construction year, or renovation year for the parking garages, parkades 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 36.9 years and is broken down by:

- 37.8 years - Parking Garages & Parkades
- 34.0 years - Parking Lots
- 11.6 years - Parking Related Equipment

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



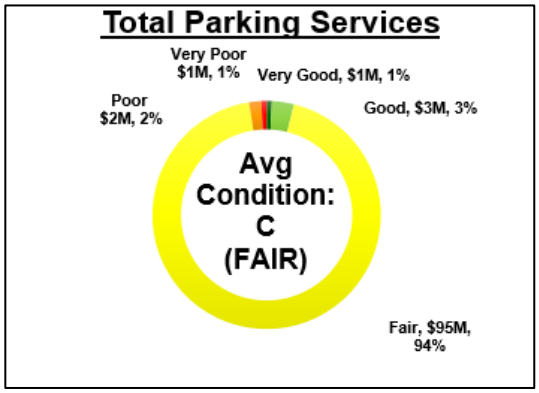
# Parking Services

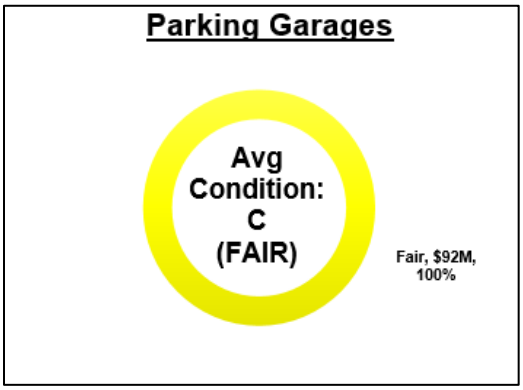
## Condition

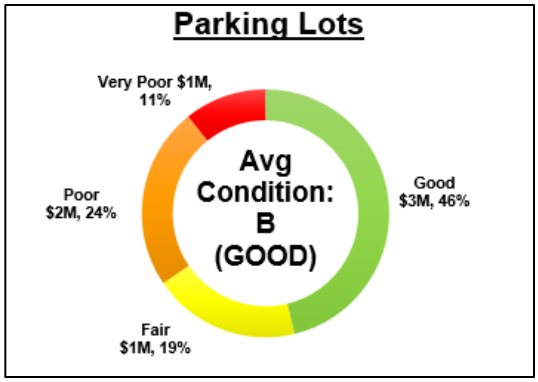
Parking garages are inspected on a rolling basis with all assets being covered within a two year period. Assessments are done by external inspectors and internal staff. A facility condition number is calculated based on the condition of the individual garage components and reported for the category below.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

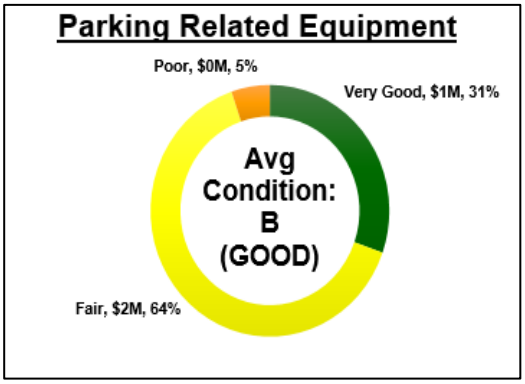
Overall, the City's Parking Lots and Equipment assets are in FAIR condition (C Grade):

- 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 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

## Current Levels of Service

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

- The Council approved Oshawa Strategic Plan 2020-2023
- Oshawa Financial Strategy 2016-2019
- 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.

# Parking Services

## Technical & Community Levels of Service and Current Performance

| Service Attribute | Technical Levels of Service | Current Performance |
|---|---|---|
| Quality & Safety | % parking assets in fair or better condition | 98% |
| Function & Scope | # of parking garage spaces per 1,000 residents | 8.5 |
| Function & Scope | # of parking lot spaces per 1,000 residents | 3.5 |
| Function & Scope | # of on-street parking lot spaces per 1,000 residents | 4.1 |
| Function & Scope | # of accessible spaces per 1,000 residents | 0.3 |

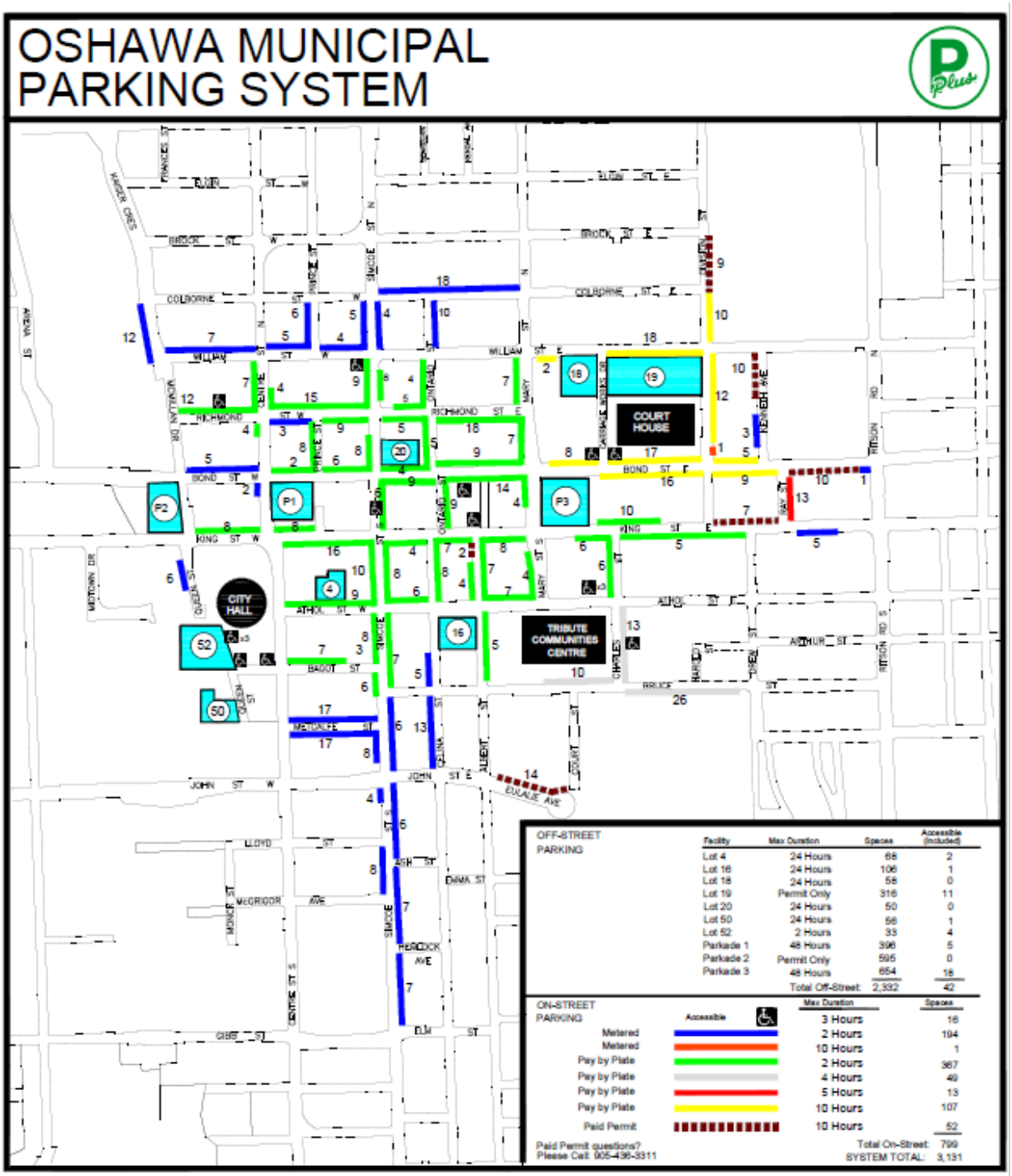
# Parking Services

## 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 following map showing locations of paid parking spaces and facilities |

# Parking Services

## Technical & Community Levels of Service and Current Performance



# 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 specialized 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 needed improvements. The condition of facility components is captured as an estimate of remaining service life.

For parking lots, based on observations from the inspections, 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 a 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

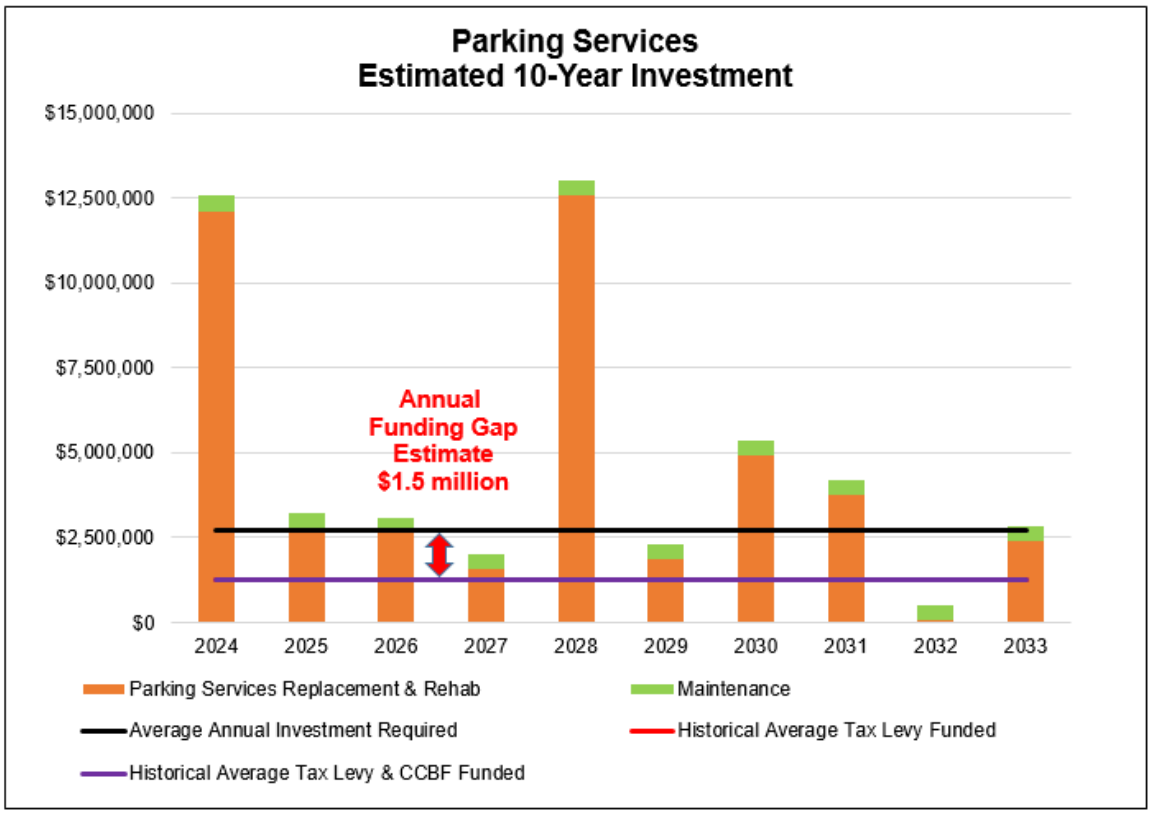
## Lifecycle Management Strategies

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 is estimated at $2.7 million (in 2023 $).

Based on the past nine years of approved budget, the annual investment in Parking Services from tax levy and Canada Community Benefit Fund (previously Federal Gas Tax Funding) is $1.3 million. This results in an estimated annual funding gap of $1.5 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.



# 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 |
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| Total Households | 66,640 | 73,800 | 81,450 | 89,060 |
| Total Employment | 63,740[1] | 70,600 | 78,070 | 85,250 |

[1]Note: Per 2023 Durham Regional Official Plan (Draft)

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. 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

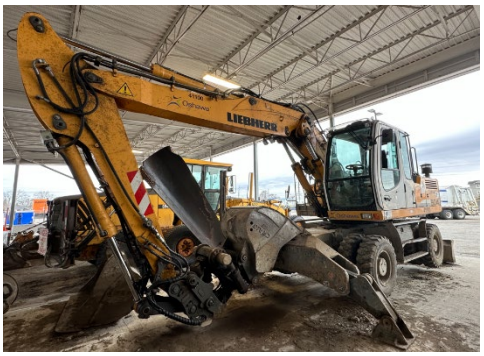
# Fleet and Equipment


**May 2024**

# Fleet and Equipment

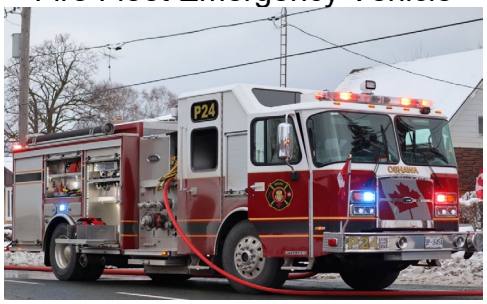
## Description of Fleet and Equipment Assets

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.

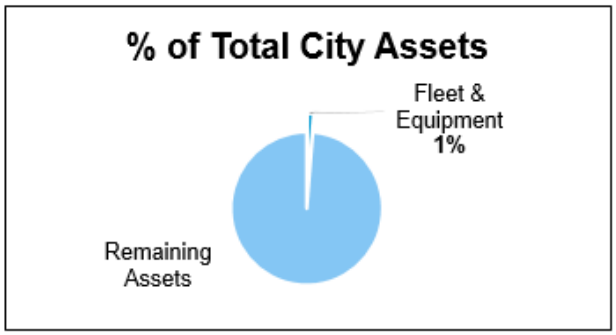
# Fleet and Equipment

## Inventory and Estimated Replacement Cost

| Operations Fleet and Equipment | Quantity (each) | Estimated Replacement Cost |
|---|---|---|
| Equipment | 67 | $1,500,514 |
| Light Duty | 120 | $6,182,481 |
| Medium Duty | 63 | $7,580,000 |
| Heavy Duty | 51 | $15,843,017 |
| **Total Operations Fleet and Equipment** | **301** | **$31,106,012** |

| Fire Fleet and Equipment | Quantity (each) | Estimated Replacement Cost |
|---|---|---|
| Equipment | 438 | $2,828,638 |
| Admin. Vehicles | 20 | $991,560 |
| Emergency Vehicles | 11 | $14,994,800 |
| **Total Fire Fleet and Equipment** | **469** | **$18,814,998** |

| Asset | Estimated Replacement Cost |
|---|---|
| **Total Fleet and Equipment** | **$49,921,210** |




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.

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.

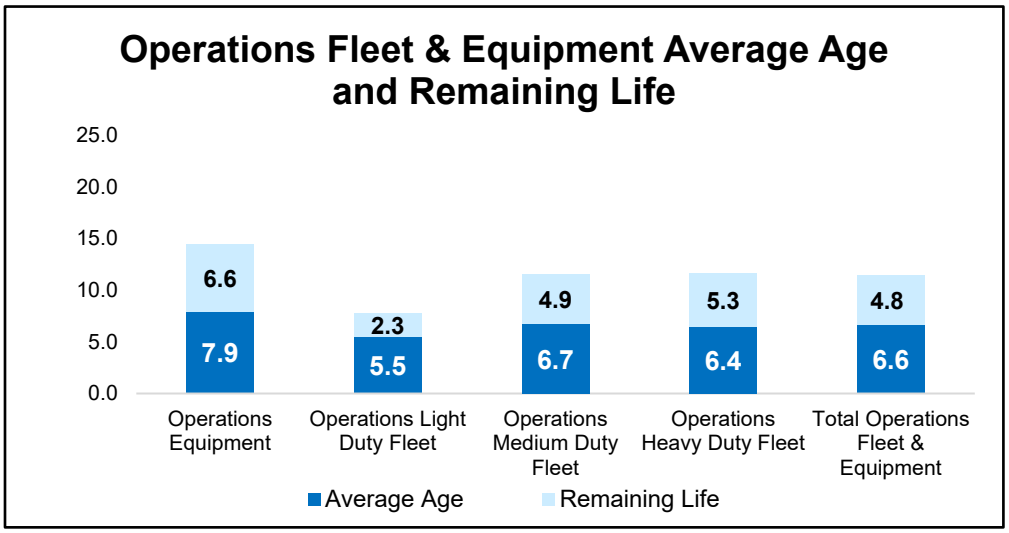
# Fleet and Equipment

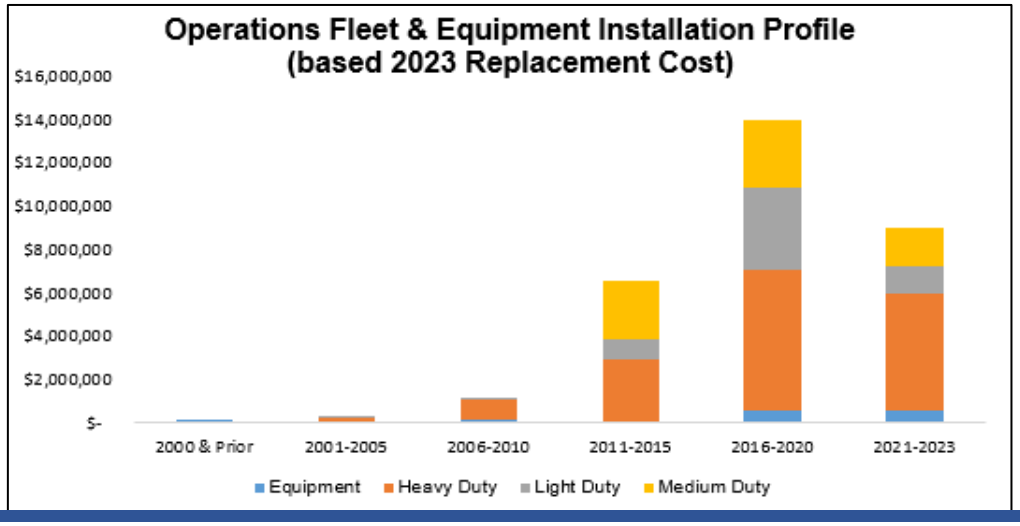
## Operations Fleet and Equipment Average Age and Asset Installation Profile

Age is based on first year in service. The average age of the City's Operations Fleet and Equipment is 6.6 years. This can be further broken down by:

- 7.9 years - Equipment
- 5.5 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.



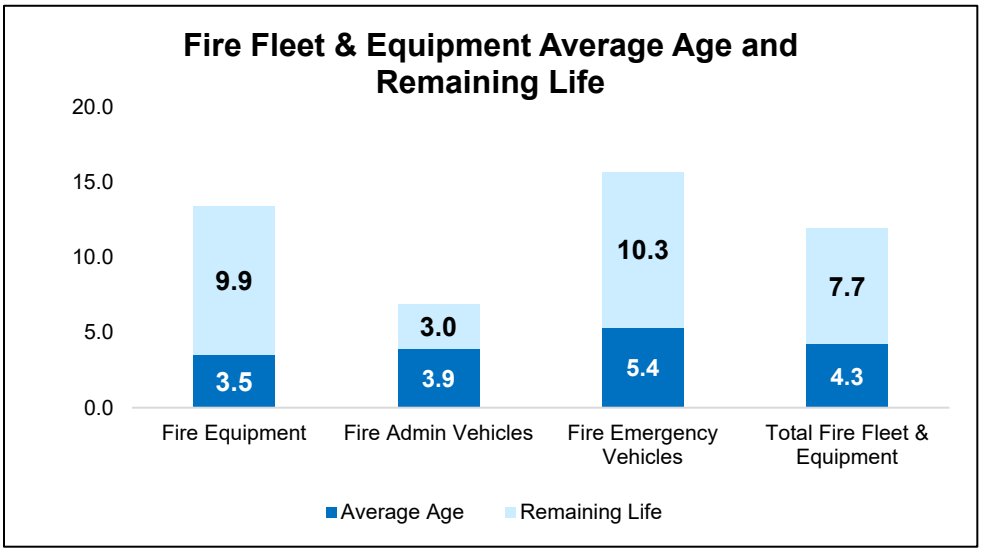
# An Fleet and Equipment

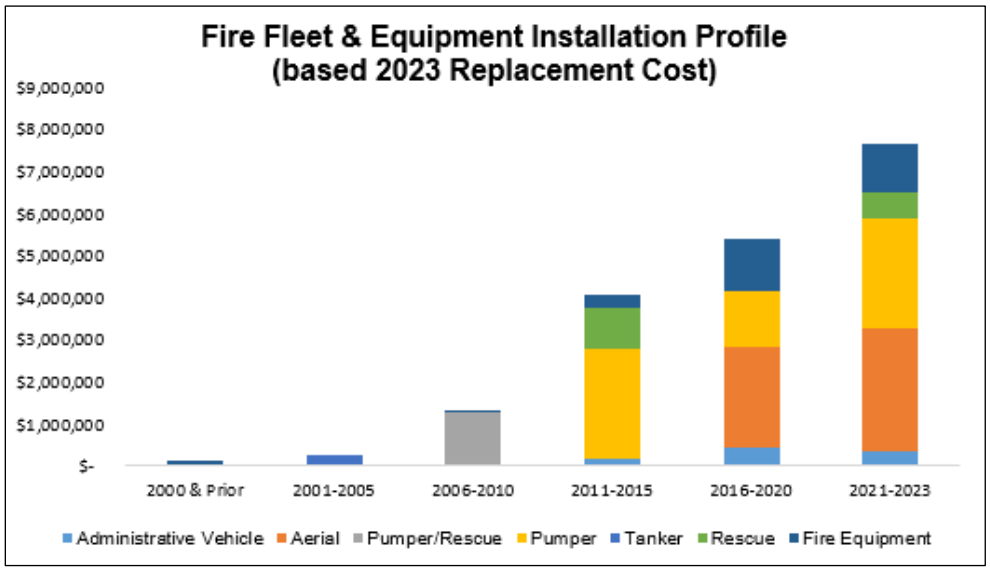
## Fire Fleet and Equipment Average Age and Asset Installation Profile

Age is based on first year in service. The average age of the City's Fire Fleet and Equipment is 4.3 years. This can be further broken down by:

- 3.5 years - Fire Equipment
- 3.9 years - Administrative Fleet Vehicles
- 5.4 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.



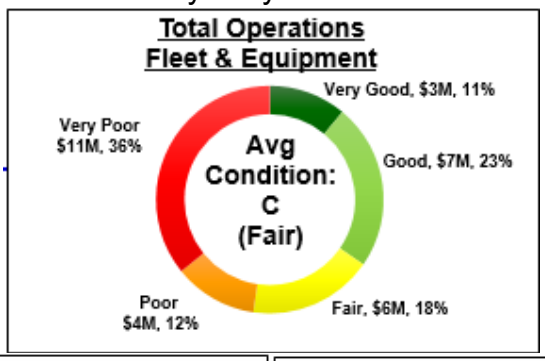
# Fleet and Equipment

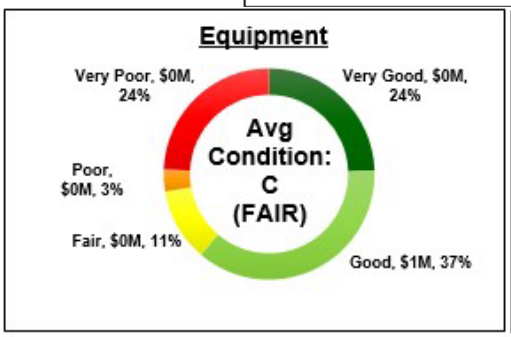
## Operations Fleet and Equipment Condition

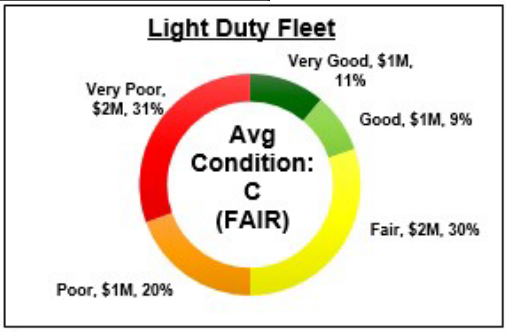
Fleet Services vehicles are inspected four times per year, with one inspection being thorough with wheels off. Issues that need to be addressed and general observations from the inspections are captured in Maximo.

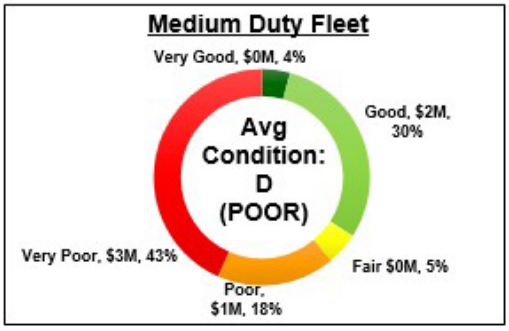
Overall, the City's Operations Fleet and Equipment assets are in FAIR condition (C Grade):

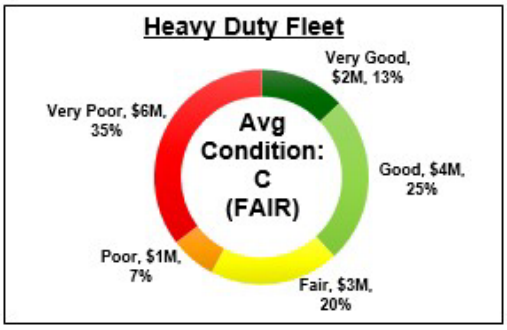
- C – Fair – Equipment
- C – Fair – Light Duty Fleet Vehicles
- D – Poor – Medium Duty Vehicles
- C – Fair – Heavy Duty Vehicles



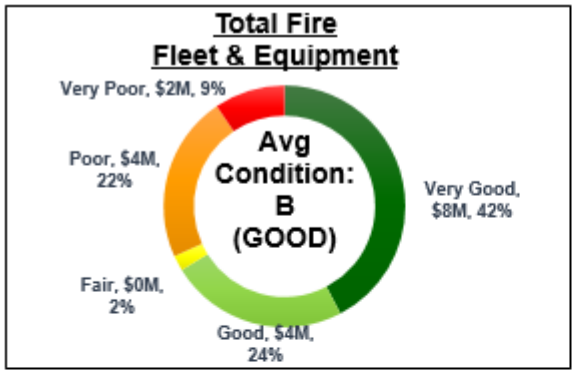
# Fleet and Equipment

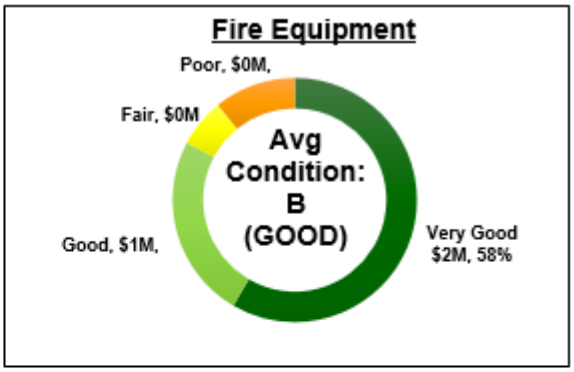
## Fire Fleet and Equipment Conditions

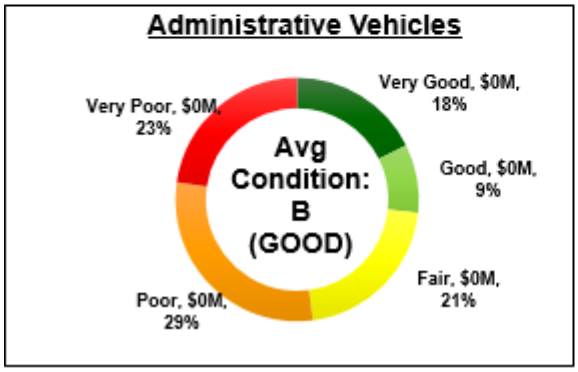
The condition of Fire equipment is continuously monitored as part of daily operations. Any issues that are found are addressed immediately to avoid unnecessary risk of equipment failure that could result in injuries to fire fighters or compromise their ability to perform their jobs. Condition of Fire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

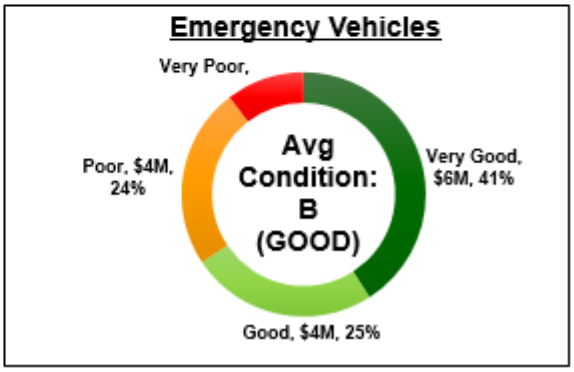
Overall, the City's Fire Fleet and Equipment assets are in GOOD condition (B Grade):

- 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

## Current Levels of Service

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

- The Council approved Oshawa Strategic Plan 2020-2023
- Oshawa Financial Strategy 2016-2019
- Oshawa Quality Standards
- Oshawa Fire Mater 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.

# Fleet and Equipment

## Operations Fleet and Equipment Technical Levels of Service and Current Performance

| Service Attribute | Technical Levels of Service | Current Performance |
|---|---|---|
| Quality | % of assets in Fair or better condition | 52.4% |
| Safety | % of Legislated Inspections Completed | 100% |
| Environmental Stewardship | % of Electric Vehicles[1]<br>% of Hybrid Vehicles[1] | 11.0% of Electric Vehicles (E.V.'s),<br>12.2% of Hybrid Vehicles |
| Environmental Stewardship | # of EV Charging stations for fleet vehicles in service | 10 |
| Environmental Stewardship | Annual fuel savings by way of using EV's and Hybrid vehicles vs internal combustion vehicles | 15,345 L / $22,127 |
| Environmental Stewardship | # of L's of bio diesel being used per year | 319,046 L |

Notes:
[1] % of vehicles is based on total vehicles available as an electric or hybrid vehicle

# Fleet and Equipment

## Fire Fleet and Equipment Technical Levels of Service and Current Performance

| Service Attribute | Technical Levels of Service | Current Performance |
|---|---|---|
| Quality & Safety | % of Fire assets in fair or better condition | 68.2% |
| Safety | % of Emergency Response Times that meet NFPA Standards | 76% |
| Environmental Responsibility | # of fire blankets in use | 1 |

## 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 manufactures 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.

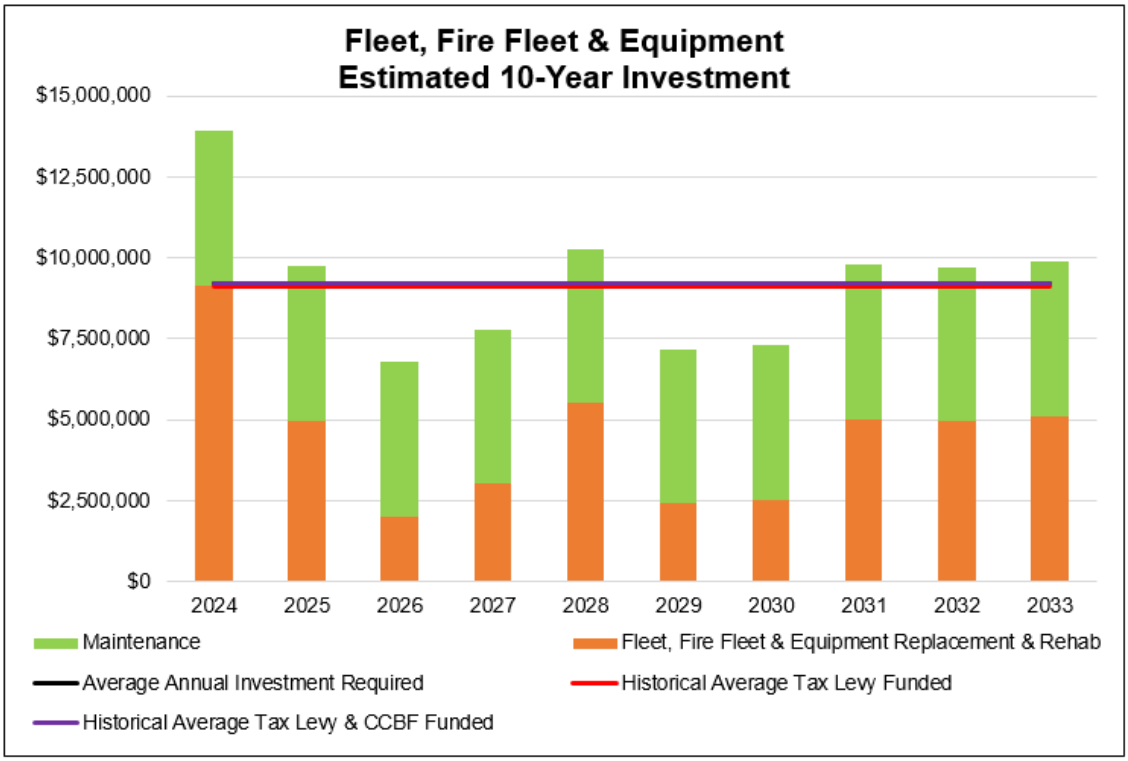
The intent is not to rigorously follow a replacement schedule for these assets. Instead, the condition of these assets will be reviewed when they near their expected service lives and a decision will be made about potentially deferring replacement if their condition is good.

# Fleet and Equipment

## Lifecycle Management Strategies

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 $9.6 million (in 2023 $).

Based on the past nine years of approved budget, the annual investment in Fleet and Equipment from tax levy and Canada Community Benefit Fund (previously Federal Gas Tax 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 2023 Durham Regional Official Plan (Draft)

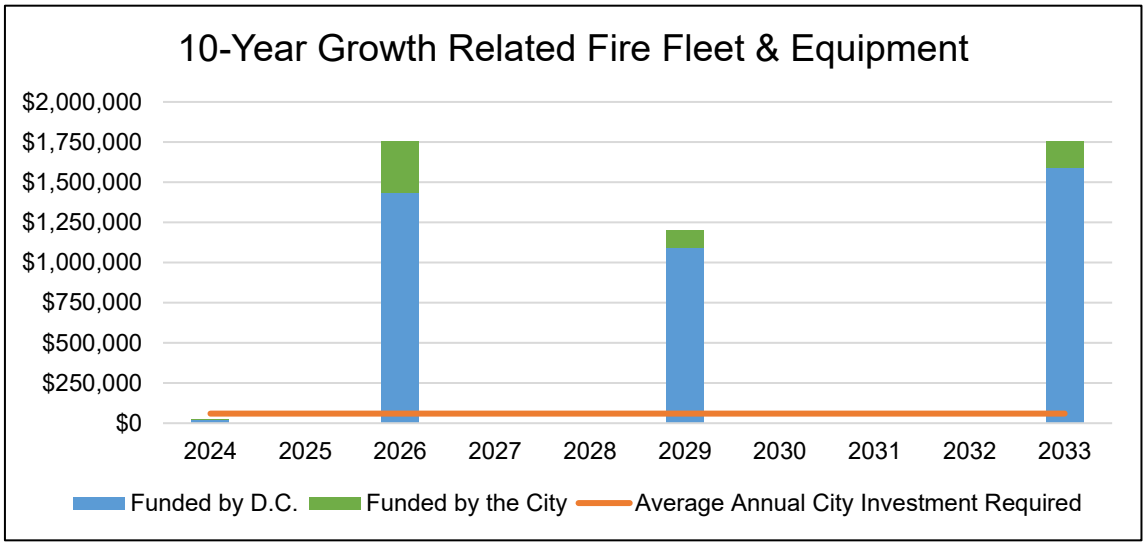
The population growth is expected to result in incremental service demands that may impact the current levels of service. In order to accommodate the projected increases in demand caused by growth, the City has undertaken a number of master planning studies which identify the need for new infrastructure 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.

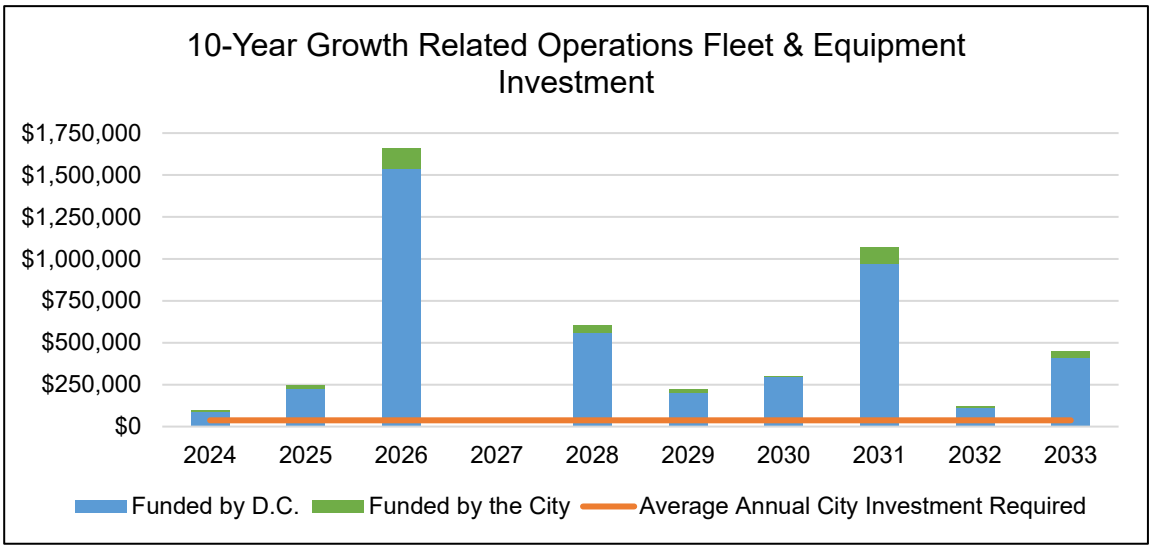
The City's Official Plan references that build-out is estimated to occur in 2051. The operating costs related to assumed assets are difficult to estimate and is really dependent on what future proposed levels of service are approved by Council. As asset management practices continue to mature and better 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 $9.5 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 $971,333 (or an average annual amount of $97,133). 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

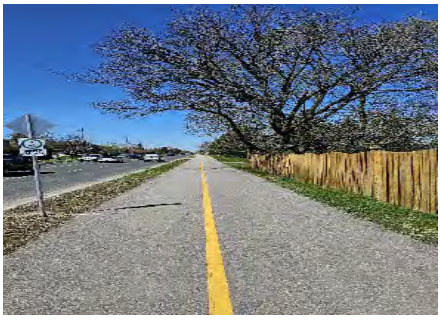

May 2024

# 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.

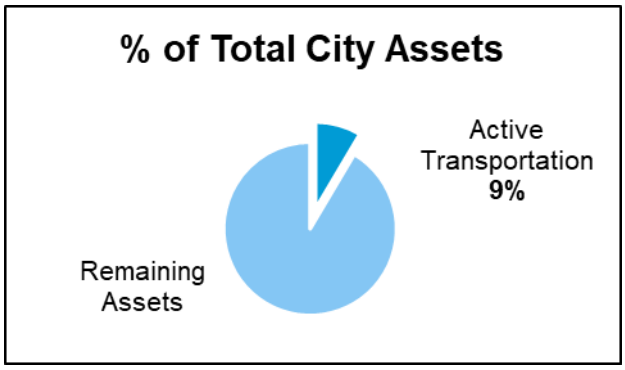
These master planning documents are used to inform the capital budget planning process to determine the needs of the Active Transportation network.

# 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 | $24,757,833 |
| Park Pathways | 33.7 | $29,076,823 |
| Signed On-Road Cycling Routes / Lanes[1] | 85.7 | $0 |
| **Total Active Transportation** | **872.5** | **$320,403,536** |

Notes:
[1] Replacement cost, 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 kilometers of active transportation network, comprising of:

- 704.8 kilometers of sidewalks
- 17.0 kilometers of multi-use paths
- 31.3 kilometers of park trails
- 33.7 kilometers of park pathways
- 85.7 kilometer 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 assumption 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 $320,403,536 based on 2023 dollars.

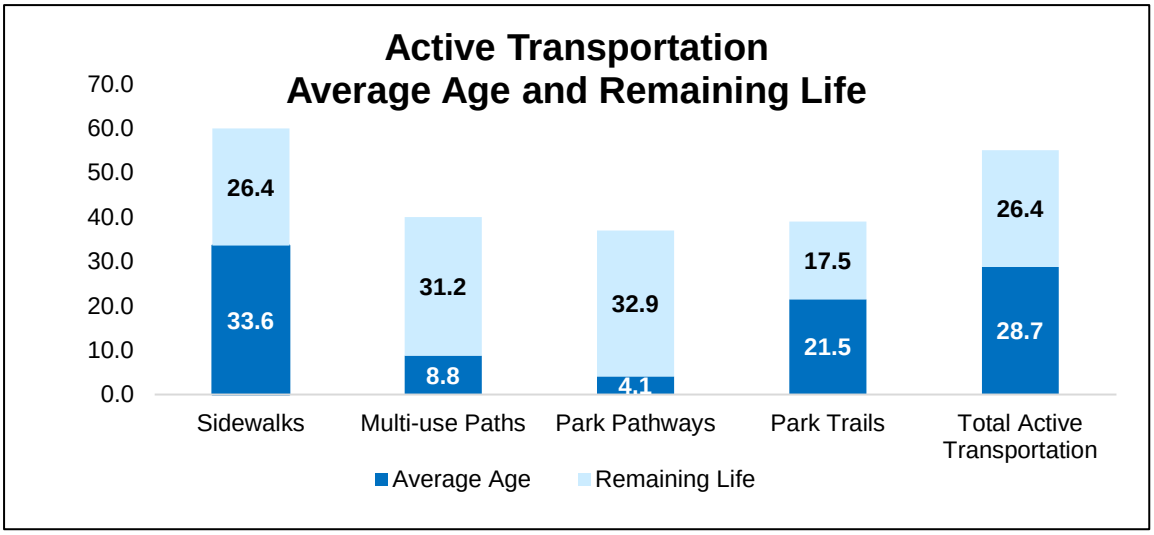
# Active Transportation

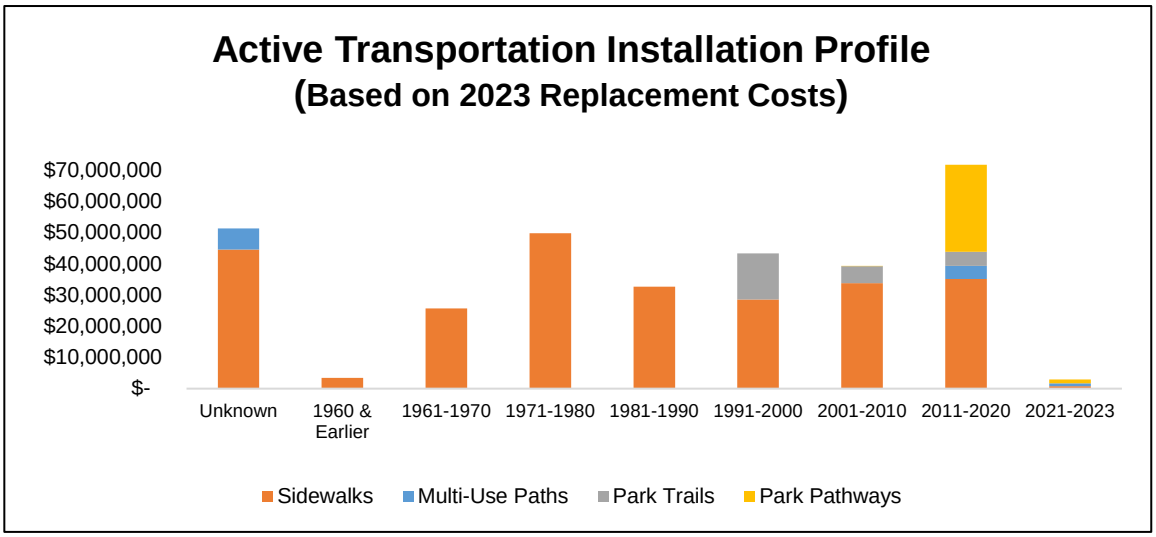
## Average Age and Asset Installation Profile

Age is based on initial construction year or replacement year if applicable. The average age of the City's Active Transportation Network is 28.7 years and further broken down by:

- 33.6 years for Sidewalks
- 8.8 years for Multi-use Path
- 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 data of the adjacent road. This applies to 2% of the sidewalk network value.

Approximately 16% of the network value has been excluded as age data is not available to estimate condition, at this time. These sidewalks and multi-use paths are primarily within Region of Durham Road right-of-ways, and age data is not currently available.

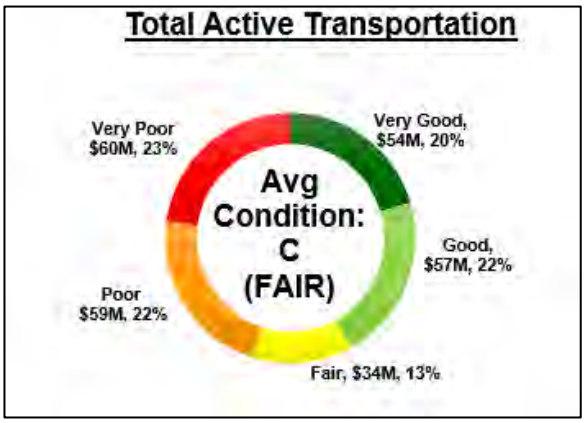
With respect to park trails, full trail audits for condition have not been undertaken, therefore age has been used to estimate condition reported, based on the estimated service life. In using age as a proxy for observed condition, midlife refurbishments, segment replacements and other repair measures may not be reflected in the overall condition rating of the park trails. Future iterations will contain observed condition data as we seek to continuously improve our data quality in all areas.

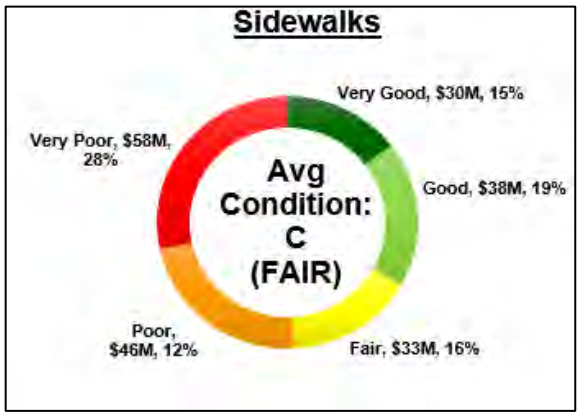
# Active Transportation

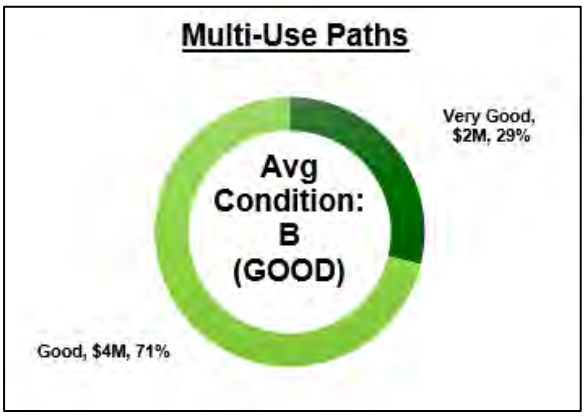
## Condition

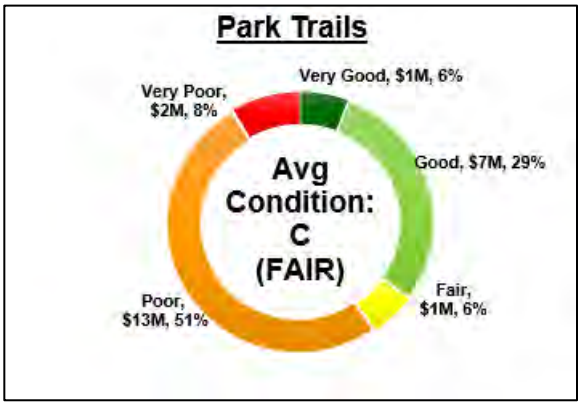
Overall, the City's Active Transportation assets are in FAIR condition (C Grade).

- 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 repair 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

## Current Levels of Service

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

- The Council approved Oshawa Strategic Plan 2020-2023
- Oshawa Financial Strategy 2016-2019
- 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.

# Active Transportation

## Technical Levels of Service and Current Performance

| Service Attribute | | |
|---|---|---|
| Scope | Number of kilometers of sidewalks, multi-use paths, trails and pathways per 1,000 residents | 4.5 |
| Quality | Percentage of sidewalks in fair or better condition | 49% |
| Quality | Percentage of multi-use paths in fair or better condition | 100% |
| Quality | Percentage of trails in fair or better condition | 30% |
| Accessibility | Percentage of sidewalks and multi-use paths that are accessible based on current standards | 23.4%[1] |

Notes:
[1] The minimum sidewalk width required to be AODA compliant is 1.5 meters

# Active Transportation

## Lifecycle Management Strategies

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.

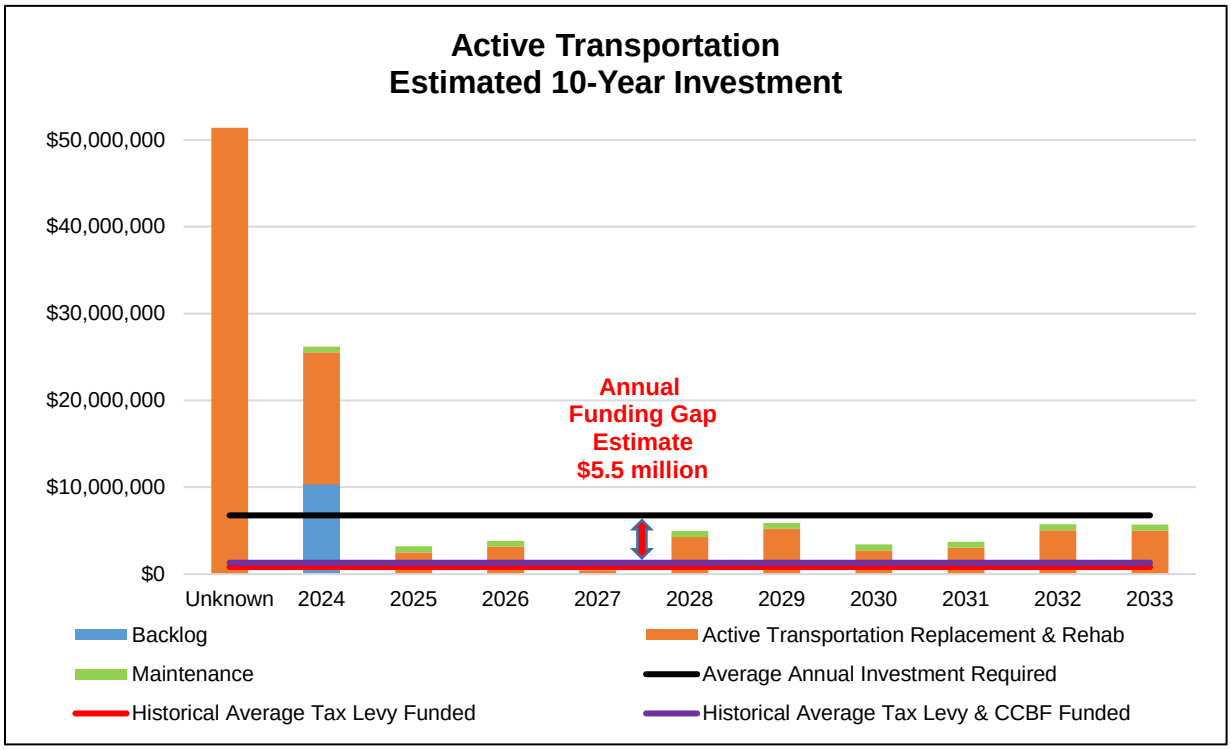
Future iterations will include additional investments in maintenace, as comprehensive proactive maintenance plan will be devoped and incorporated. This will show the impact on the capital replacement expenditures by extending the service life, in order to maximize value from our assets.

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 2023 dollars), based on the full lifecycle costs of the assets, including the $50 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.

Based on the past nine years of approved budget, the annual investment in Active Transportation from tax levy and Canada Community Benefit Fund (previously Federal Gas Tax Funding) is $1.3 million. This results in an estimated annual funding gap of $5.5 million.

# Active Transportation

## Lifecycle Management Strategies



# 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 2023 Durham Regional Official Plan (Draft)

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. However, the future maintenance and capital costs will borne by the municipality.

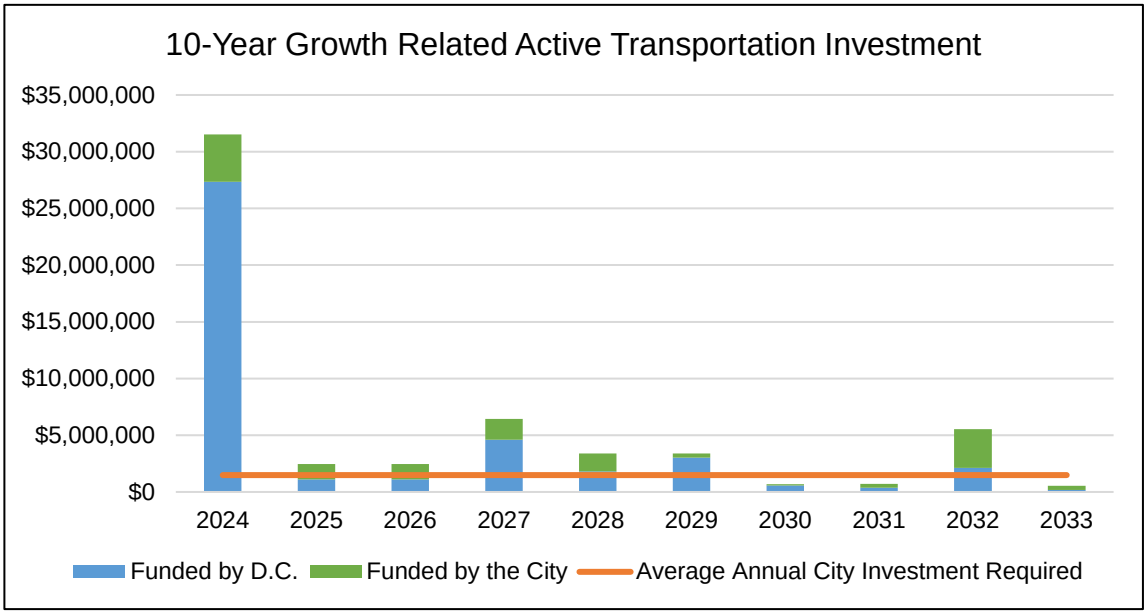
There will be maintenance costs in the next 10 years related to growth-related infrastructure service expansion or assets acquired through subdivision assumptions. As the average service life of Active Transportation are 20-60 years, the eventual replacement cost of the growth assets are not included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

# Active Transportation

## Managing Growth – Capital and Operating Expenditure Forecast

The 10-year forecast includes $57.1 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 $42.2 million. Over the 10-year forecast, there total Active Transportation anticipated to be built requires a total contribution from the City in the amount of $14.9 million (or an average annual amount of $1,486,000). 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

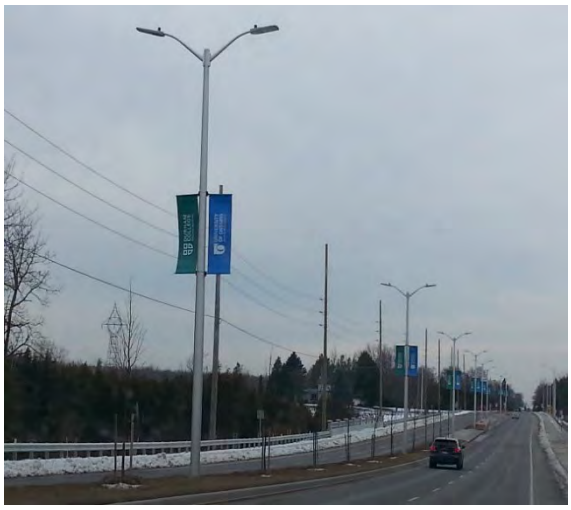
# Non-Core Transportation


May 2024

# 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.).

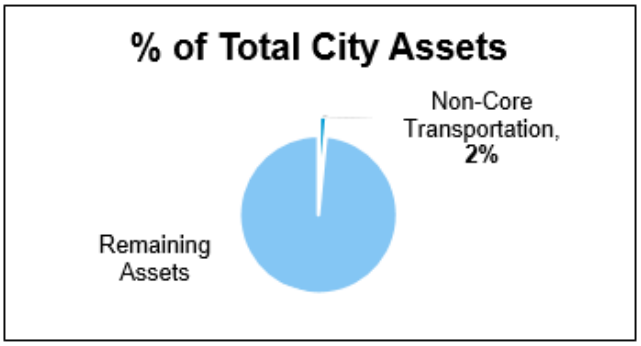
Traffic signals show the right-of-way in conflicting movement. Although the City owns the traffic signals on municipal roads, these assets are maintained by the Region of Durham. The Region also manages the inventory data for these assets.

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 | $17,500,000 |
| **Standard LED Street Lights** | 10,900 | $10,900,000 |
| **Decorative Street Light Poles** | 3,450 | $15,525,000 |
| **Decorative LED Street Lights** | 3,450 | $5,175,000 |
| **Traffic Signals** | 40 | $10,000,000 |
| **Total Non-Core Transportation** | **22,840** | **$59,100,000** |




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

The City owns a total of 22,480 Non-Core Transportation assets, which consists of approximately 14,350 street light luminaires, 10,900 street light poles and 40 traffic signals.

The total estimated replacement cost of these Non-Core Transportation assets are $59,100,000 based on 2023 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 the O.P.U.C. 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

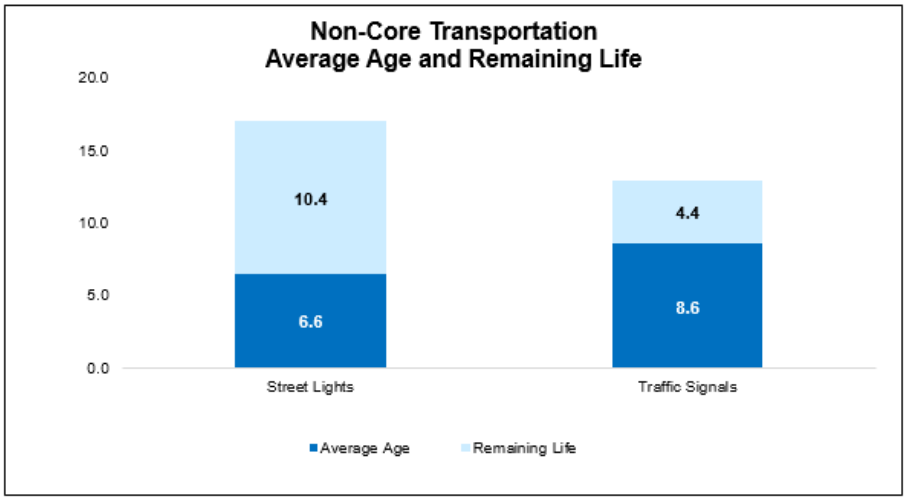
## Average Age and Asset Installation Profile

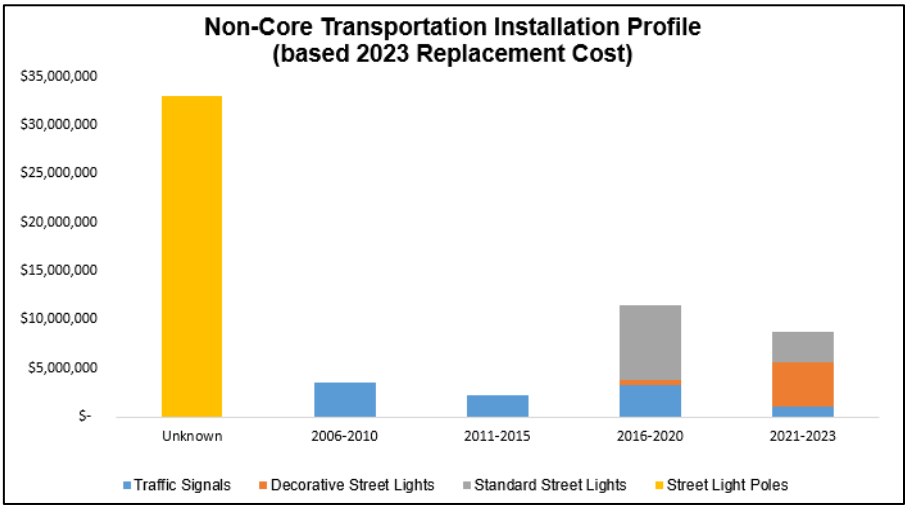
Age is based on installation year and tracked separately for each asset. The average age of the City's non-core transportation is 7.3 years and is broken down by:

- 6.6 years - Street Light Luminaries
- 8.6 years - Traffic Signals

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

The age and condition of street light poles is unknown, therefore not included in the average age.



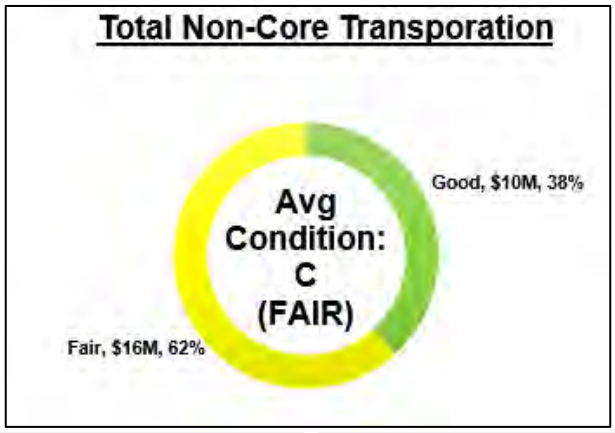
# Non-Core Transportation

## 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)

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





# Non-Core Transportation

| Condition Rating | Grade | Category | Description |
|---|---|---|---|
| 80-100 | A | Very Good | Equipment 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 requiring 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 requiring 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 bellow grade, deteriorating cracked bases. |
| 0-20 | E | Very Poor | Equipment requiring major maintenance and beyond useful service life. Related items that require extensive repairs beyond emergency maintenance (i.e. Cable hydro valuts, damaged or exposed wiring). |

# Non-Core Transportation

## Current Levels of Service

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

- The Council approved Oshawa Strategic Plan 2020-2023
- Oshawa Financial Strategy 2016-2019
- 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.

| Service Attribute | Technical Levels of Service | Current Performance |
|---|---|---|
| Quality & Safety | Percentage of Non-Core Transportation assets in Fair or better condition | 100% |
| Environmental Stewardship | Percentage of Street lights that are LED | 95% |

# Non-Core Transportation

## Lifecycle Management Strategies

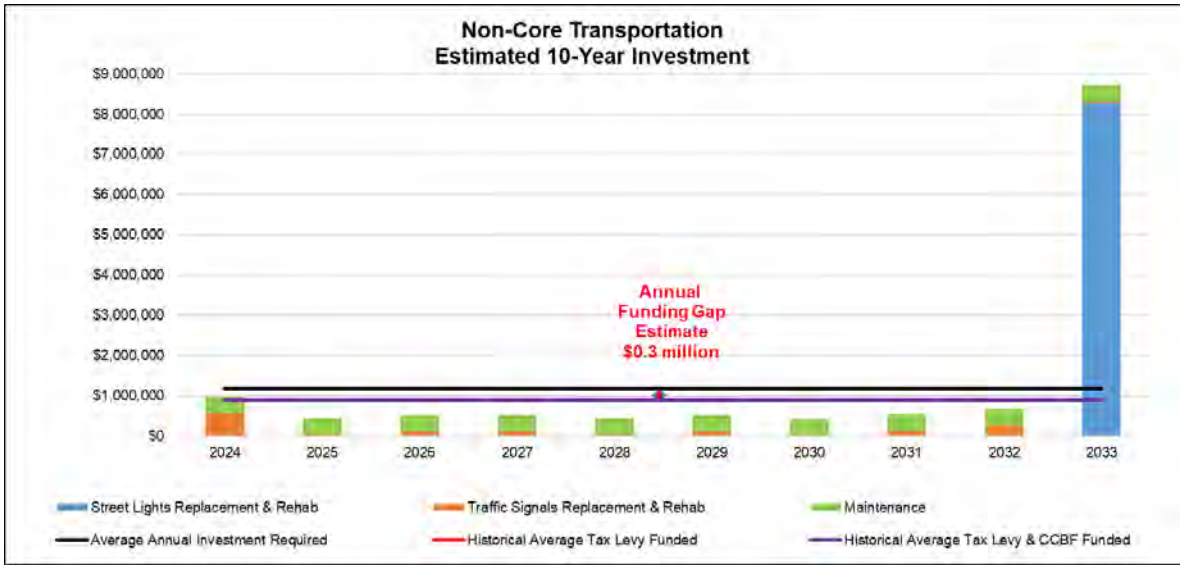
The capital expenditure for street lights occurs when poles are replaced and the City is then charged by O.P.U.C. to move the pole arms and fixtures to the new poles. Other street light repairs or replacements are based on regular inspections, night patrol or by resident notification. There are occasional 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 is estimated at $1.2 million (in 2023 $).

Based on the past nine years of approved budget, the annual investment in Non-Core Transportation from tax levy and Canada Community Benefit Fund (previously Federal Gas Tax Funding) is $0.9 million. This results in an estimated annual funding gap of $0.3 million.



# Non-Core Transportation

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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 $47.4 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 majority of the cost. 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 $6.4 million (or an average annual amount of $ 641,000). 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.