2016

City of Mississauga
MiWay Asset Management Plan

Prepared By: Finance and MiWay Division

City of Mississauga

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Table of Contents

Section 1
Introduction

1.1 MiWay Asset Management Plan Overview

The 2014 Corporate Asset Management Plan was the first corporate-wide asset management plan for the City of Mississauga. This Transit (MiWay) asset management plan is an extension to the Corporate Asset Management Plan. The MiWay Plan speaks to the assets used to deliver MiWay services and discusses the levels of service, asset management strategies and the funding strategies needed to plan sustainable delivery of transit service over the course of the next ten years. The Transit plan will mainly focus on **Buses and Vehicles**.

The plan will move MiWay closer to City's standards and be consistent on asset management. It will help ensure that infrastructure investments are made for the right amount at the right time. The Plan follows the provincial guideline "**Building Together: Guide for Municipal Asset Management Plans"** and meets the federal gas tax requirements. As such, the following are included:

1. Introduction
2. State of the Current Infrastructure
3. Desired Levels of Service
4. Asset Management Strategy
5. Financial Strategy

The plan will improve the balance of: Strategy, Assets, People and Business Processes to deliver established levels of service, to ensure sound stewardship of MiWay's assets and support the City's compliance with regulations for asset management plans.

1.2 Importance of Infrastructure – Supporting the City of Mississauga MiWay Goals

MiWay is the third largest municipal transit service in Ontario and operates a fully accessible, conventional, fixed route transit service within the boundaries of the City of Mississauga and neighboring municipalities. As part of the Greater Toronto and Hamilton Area (GTHA), MiWay connects to commuter rail and regional bus service provided by GO Transit, and integrates service with neighbouring municipalities. The system connects with Brampton Transit to the north, Oakville Transit to the west, and the Toronto Transit Commission (TTC) to the east, with direct connections to the TTC's Bloor-Danforth subway line.

Infrastructure plays an important role to enable MiWay to provide transit services and to achieve our future goals.

The following are MiWay's service goals:

- Build and maintain a network that meets the needs of residents and supports a transit oriented city
- Integrate higher-order transit services and interregional connections
- Grow ridership
- Continued focus on customer service through the Customer Experience Program and the Customer Service strategy
- Develop and improve online self-serve options and technology to operate efficiently and better serve our customers

Mississauga City Council approved **Our Future Mississauga,** the Strategic Plan to achieve our vision over the next 40 years. The strategic vision identified five pillars for change: Move, Belong, Connect, Prosper and Green. The City consulted extensively with residents, staff and stakeholders in developing the Strategic Plan.

The following are MiWay's strategic goals:

Move - Developing a transit oriented city

Develop Environmental Responsibility – Viable alternative to automobile.

Connect our city – Express routes that link neighbourhoods and businesses.

Build a Reliable and Convenient System – PRESTO, access to real-time next bus information.

Increase Transportation Capacity – Family of services: local, core, express, accessible buses and routes.

Direct Growth – To direct growth by supporting transit-oriented development policies

Belong - Ensuring youth, older adults and new immigrants thrive

Ensure Affordability and Accessibility – Network for seniors, youth and immigrants, remain conscious of fare impacts.

Connect - Completing our neighbourhoods

Provide mobility choices – Connect neighbourhoods, regions and provide convenient transit to link people to jobs, schools, shopping, and recreation through the MiWay 5 service plan.

Prosper - Cultivating creative and innovative businesses

Meet Employment Needs – Provide transit network infrastructure that allows workers and customers to get to their places of business. Emphasis on working with business parks including Airport Corporate Centre to improve service and awareness.

Green - Living green

Lead and Encourage Environmentally Responsible Approaches – use hybrid supervisor vehicles and buses, use renewable fuels (bio-diesel) and energy efficient facilities and practices. 33 million less car trips due to the availability of public transit.

The City continues to engage with stakeholders about its MiWay programs and services through the City's website, social media, satisfaction surveys and more. This helps ensure citizens have input on the decisions that affect them. This Plan is intended to support these strategic goals.

1.3 Relationship to Other Municipal Plans and Finance Documents

An Asset Management Plan (AMP) is a key component of the municipality's planning process, linking with multiple other corporate plans and documents, including:

- **The Official Plan** – The AMP will utilize the land use policy directions for long-term growth and development as provided through the Official Plan;
- **Long Term Financial Plan** – The AMP will both utilize and influence the financial forecasts within the long-term financial plan;
- **Capital Budget and Forecast** – The decision framework and infrastructure needs identified in the AMP form the basis on which capital budgets are prepared;
- **Master Plans** – The AMP will utilize goals and projections from infrastructure master plans and in turn will influence future master plan recommendations;
- **By-Laws, Standard Operating Procedures and Policies** – The AMP will influence and utilize policies and by-laws related to infrastructure management practices and standards.
- **Regulations** – The AMP must recognize and abide by industry and senior government regulations.
- **Business Plans** – The service levels, policies, processes, and budgets defined in the AMP reflect business plans.

1.4 Purpose of the Asset Management Plan

This Plan will improve MiWay's asset management program and support decisions regarding the service levels, management of risk, operating, maintaining, replacing and disposing of infrastructure assets. This will strengthen MiWay's assets management framework and ensure that the City complies with provincial regulations defined within the Ministry of Infrastructure's Guide for Municipal Asset Management Plans.

1.5 Assets Covered by the Plan

The MiWay asset inventory identified in the asset management plan is detailed in table below and consists of asset types that relate to Fleet and associated Equipment. This plan does not cover assets managed by IT Services and Facilities and Property Management Division such as building, IT equipment and applications, major operating equipment that are fixed to the building structure, land and land improvement (e.g., Signs, lighting and landscaping). The 2014 Corporate Asset Management includes the building assets used for MiWay.

Service Area	Asset Category	Asset
Transit	Vehicles	Buses Trucks, Vans, Light Vehicles & Cars
	Equipment	Farebox Equipment Maintenance Garage Equipment Mobile - Hydraulic Lift Presto Equipment Various Transit Equipment - Intelligent Tansportation Systems, AODA Compliance, Safety and Radio

1.6 Timeframe

This Plan is designed to cover a 10 year period consistent with the City's capital budget practices. The table below shows the proposed update frequencies of the AMP and associated documents.

Document	Frequency
AM Policy	Every 10 years after Implementation
Corporate AMP	Every 5 years
Service Area Asset Management Plan	Every 5 years
Capital and Operating Budgets	Annual

1.7 Developing the Plan

This section of the plan describes how the asset management plan was developed including who was involved, what resources were used and Plan limitations.

Work on this initial plan primarily involved compiling information on current strategies, practices and tools, and aligning it to the Provincial reporting framework. The basis for much of the information within this Plan is from the City's Tangible Capital Asset (TCA) database. In addition, the Plan has leveraged asset data from MiWay's Fleet Management Database, which is used to manage and maintain maintenance data for MiWay Fleet.

This plan was produced using staff resources from MiWay and the Finance division. Improvements to all AMPs, including this one, are anticipated once a City-wide, coordinated and comprehensive asset management program and system are in place.

1.8 Plan Monitoring and Review

Development of this first version of the MiWay's AMP has provided a better understanding of the requirements for future AMPs, and has helped to identify data/knowledge gaps. The future MiWay AMP is anticipated to be incorporated with the corporate asset plan in 2018 and will follow anticipated new provincial guidelines.

Section 2
State of Local Infrastructure

2.1 Asset Inventory

The MiWay asset inventory covered in the AMP is detailed in the Table below:

Service Area	Asset Category	Asset Sub-Category	Inventory
MiWay	Vehicles	Major Licensed Vehicles (Buses)	467
		Medium Licensed Vehicles	60
	Equipment	Major Operating Equipment	Various
		Medium Operating Equipment	Various

2.2 Asset Financial and Replacement Cost Valuation

The financial and replacement valuation is based on the City's Tangible Capital Asset inventory database as of December 31, 2015, which uses the following assumptions:

- Financial Accounting Valuation: based on historical costs and straight line amortization assumptions over the expected service life of the asset; and
- Replacement cost valuation: based on adjusted historical costs using the Ontario Consumer Price Index (CPI) and estimated useful life. No growth, technology change, or enhancement assumptions have been made for the replacement cost valuation.

The table below provides the historical costs, net book value and remaining useful life:

Asset Category	Asset Sub-Category	Historical Cost ($000's)	Net Book Value ($000's)	Remaining Useful Life
Vehicles	Major Licensed Vehicles (Buses)	221,682	75,265	34%
	Medium Licensed Vehicles	2,029	719	35%
Equipment	Major Operating Equipment	1,165	768	66%
	Medium Operating Equipment	10,277	5,711	56%
Total Assets		**235,154**	**82,463**	**35%**

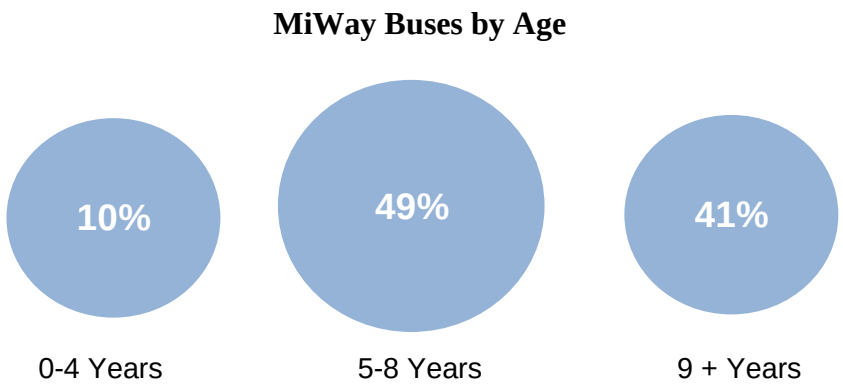
The table below provides the estimated replacement cost:

Asset Type	Asset	Replacement Value ($000's)	Total ($000's)
Vehicles	Major Licensed Vehicles (Buses)	246,791	248,461
	Medium Licensed Vehicles	1,670	
Equipment	Major Operating Equipment	1,276	12,307
	Medium Operating Equipment	11,031	
Total Assets			**260,768**

2.3 Asset Age Distribution

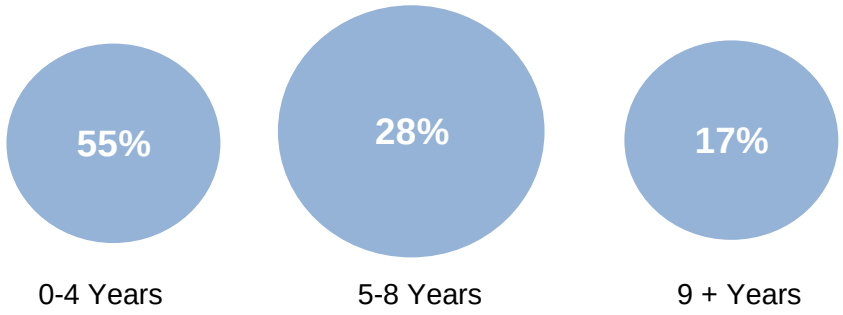
For many asset types the estimated remaining service life of a physical asset is considered a good starting point to estimate the overall well-being of the asset.

The age distribution of MiWay's Buses is detailed below. As of December 31, 2015 there are 467 buses in MiWay's Fleet with a replacement cost of $247M, which account for 95% total assets under MiWay's accountability. The buses have an expected useful life of 12 years, and the majority of the fleet (228 buses) is between 5 to 8 years.



The age distribution of MiWay's non-revenue vehicles is detailed below. As of December 31, 2015 there are 60 vehicles in MiWay's non-revenue Fleet with a replacement cost of $1.67M. The majority of the fleet is less than 8 years which accounts for 50 vehicles.

MiWay Medium Licensed Vehicles by Age



2.4 Asset Condition

In some cases, the percentage of service life remaining is not the most suitable indicator of current asset condition. In many cases, asset service life information needs to be augmented with other information such as actual asset condition assessments, history of maintenance activities/replacements, and expert judgment. Buses in particular undergo a continual preventative maintenance program that follows the Ministry of Transportation (MTO) regulations in order to maintain their intended purpose. For these reasons, the age of the fleet is not used to determine condition of the assets.

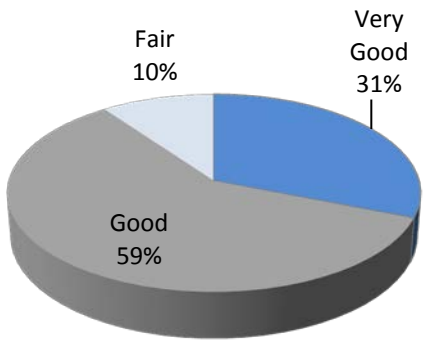
MiWay Fleet inspections are regularly conducted based on MTO guidelines, and maintenance is done as required. The condition of each bus and vehicle has been evaluated in order to gain an overall perspective on the current health of MiWay Fleet Management Infrastructure, and has been used to establish a condition rating. Asset condition ratings have been set as Very Good, Good and Fair and are based on the amount of time and number of repairs required for a bus to be ready for service; a bus that constantly requires repairs or that is consistently pulled out of service after a MTO inspection longer than the average number of days per bus for repairs start to move from very good to fair. A bus is considered very good when after an inspection no or minor repairs are required, in good condition when a bus requires repairs that are below or average number of days for the sub-fleet and it is deemed in fair condition when after an inspection the bus remains in repairs longer than the average days for a particular sub-fleet.

The following chart provides asset condition definitions:

	Summary	Definition
1	Very Good	The infrastructure in the system or network is generally in very good condition, typically new or recently rehabilitated. A few elements show general signs of deterioration that require attention
2	Good	The infrastructure in the system or network is in good condition; some elements show general signs of deterioration that require attention. A few elements exhibit significant deficiencies
3	Fair	The infrastructure in the system or network is in fair condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies.

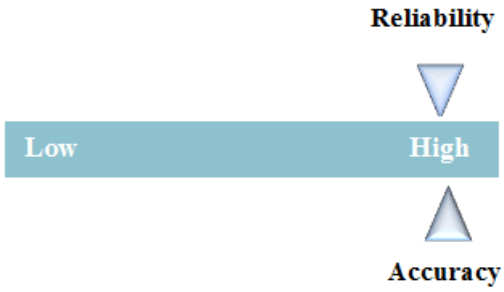
Since all buses are certified for operation, the condition of the asset is based on the length of repair time and cost of repairs after bi-annual inspection required for a bus to be fit for service; larger efforts and time will move the condition assessment from very good to good or fair.

MiWay Fleet Management	Replacement Value:248.5M
Overall, the majority of MiWay Fleet assets are in Good condition.	



Data Confidence:

Data reliability and accuracy for MiWay Fleet Management is rated as high. Detailed asset information is maintained in the Faster Fleet Management System, including replacement and maintenance costs. Preventative maintenance strategies are in place to sustain the life of these assets and monitor their overall condition. There are extensive policies and procedures which govern the MiWay fleet process, including 10 year forecasts for fleet replacement.



Section 3
Desired Levels of Service

One of the objectives of asset management planning is to ensure that the performance and service provided by the infrastructure meets the needs and expectations of the users. Level of Service also supports the organization's strategic goals, Council objectives, City polices, legislative and regulatory requirements, standards, along with the financial capacity of the municipality to deliver those levels of service.

3.1 Level of Service

Service Delivery Model

Delivering effective and efficient transit services that meet the needs of customers is a multifaceted business that, due to the nature of the operational environment, faces continuous change and complexity.

Effective delivery of service is interdependent on involvement and participation from each section within MiWay and their service responsibilities. MiWay's service delivery model aims to achieve a balance between customer expectations and the cost of delivering attractive service that has value. Good employee engagement and sound financial management play an equally important role in the effective delivery of service.

At the centre of our service are our existing and potential customers of MiWay. Our goal is to deliver excellent customer service through safe, reliable and integrated transit services that meet the needs of an increasingly diverse community. Our goals are achieved through our established level of service.

Service Levels

The bus fleet is categorized by type of service, which can be distinguished by the colour of the bus. Blue buses run express service and Orange buses run regular/local service, i.e. more stops and slower moving routes. Lengths of the bus are 30, 40 and 60 feet in length and are deployed based on route and time of day seating requirements. The buses are used to deliver annually 1.46 million service hours of public transit with the objective of providing a viable transportation alternative that will decrease car dependence.

All buses are inspected twice a year and are certified according to MTO guidelines. The MTO inspection addresses all aspects related to safe operation of a bus. For a bus to be in service it must pass the certification process. Once the bus meets the certification requirements, the City is provided with a sticker that is placed on the bus and a ticket that is kept on an MTO-issued book for each bus. The City is subject to semi-annual no notice inspections by the MTO to ensure compliance with inspections and safety requirements. The information is also recorded on the main file.

Preventative maintenance is conducted for fleet using a kilometre-based maintenance schedule per manufacturer recommendations. Bus condition information is assessed on an ongoing basis as scheduled maintenance activities.

The non-revenue vehicles are also categorized by type of service it provides MiWay operations. This category includes:

- **Change off Vehicles:** used by bus operators to travel from their bus depot to meet their bus and bring the relieved operator back to the depot;
- **Route Supervisor Vehicles:** used by on call supervisors for their daily duties
- **Revenue Vehicle:** used by transit revenue staff to service third party agents (sellers of transit fare media);
- **Building and Route Vehicles**: used by staff on their daily duties as they service transit stops, shelters, Mississauga Transitway and terminals;
- **Transit Enforcement Vehicles:** for their patrol activities; and
- **Maintenance Support Vehicles**: used by Maintenance staff to address on-street breakdowns and service Transit facilities and stops.

Vehicles are also cycled through a preventative maintenance program based on MTO guidelines. Regular service is performed in house (oil changes, tires, cleaning and fueling) and all major repairs are outsourced.

3.2 Trends

Internal and external trends and issues have the potential to impact the MiWay's ability to deliver established levels of service over the plan period. Monitoring these impacts is essential to MiWay and our ability to carry out our strategic goals and to meet community expectations.

Internal factors/trends included:

- Budget Constraints and Operating Changes – Increasing annual service growth and additional infrastructure such as Transitway and Light Right Transit (LRT) will put pressure on our operating and capital budgets. Provincial and Federal funding help us fund our capital and operating program. If funding was reduced it would affect our ability to maintain current service levels; and
- Knowledge Retention – The City has an aging workforce and there is a risk that their knowledge will be lost to the organization when staff retires.

External factors/trends include:

- Legislation and Regulatory Changes – New legislation (e.g., tighter standards on vehicle emissions or improved accessibility for transit riders) has been common over the past decade and all indications are these will continue to occur. Any changes to legislation could have an impact on our budget and staff resources;

- Social Changes (E.g. Demographic) – Demographic changes have the potential to impact on level of service delivered. For example, in 2015 MiWay completed a demographic profile based on the customer satisfaction survey. The survey indicated that 60% of transit users are between the ages of 18 and 34, 44% are men and 56% are women, 1/3 are students, 77% live in Mississauga and 40% are residents that have lived in Mississauga less than 5 years. MiWay recognizes the opportunities and challenges presented by the changing demographics in Mississauga and are working towards providing a level of service to meet our customers' expectations;
- Technology Changes - There are increasing opportunities to utilize technologies, new materials/products and energy efficient equipment; and
- Environmental Changes – The impact of climate change could potentially impact the level of service, as the City adopts new approaches to utilizing alternative operational and maintenance practices and asset types that may not have been in use previously at the City (for example; replacing our fleet with electric buses in the future or increasing the number of Hybrid buses).

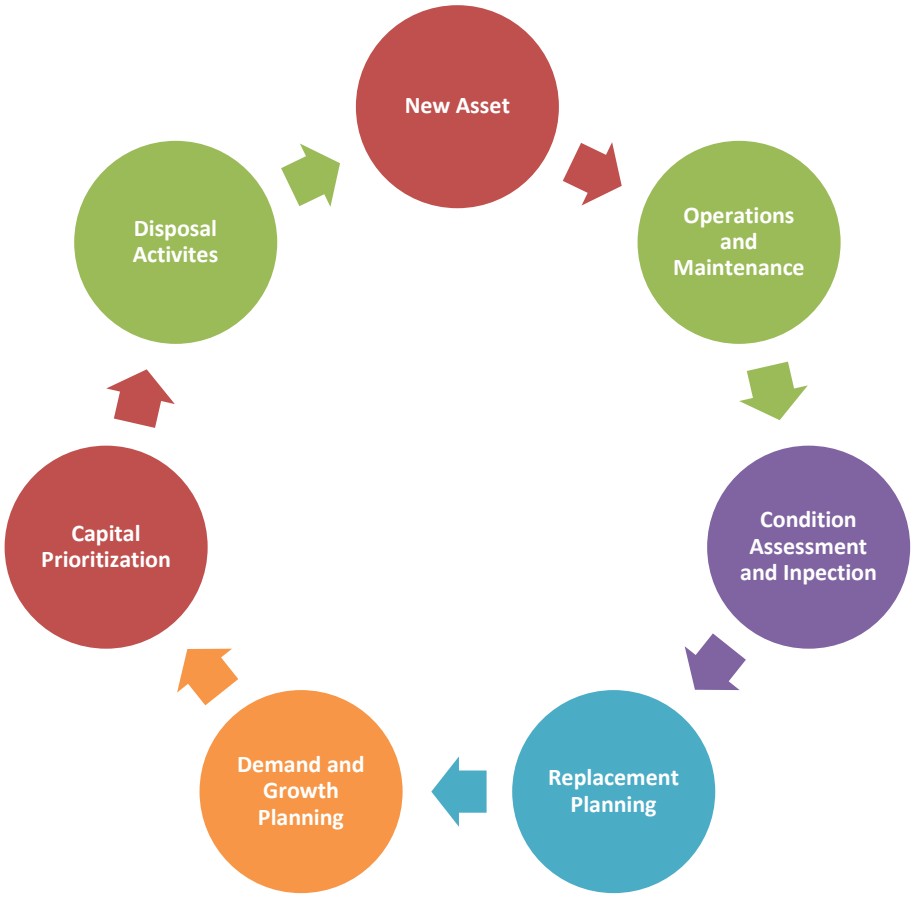
Section 4
Asset Management Strategy

4.1 Objective

An asset management strategy is a set of actions that ensure assets are available to provide the desired level of service in a sustainable way, while managing risk, at the lowest lifecycle cost. An Asset Management Strategy identifies and prioritizes asset renewal activities and results in the production of an asset renewal plan that ensures the best overall health and performance of the City's infrastructure given current funding constraints.

Figure 4.1 shows the components of the asset management strategy and asset lifecycle activities.

Figure 4.1



4.2 Asset Management Strategies

MiWay provides fleet management services covering the acquisition, maintenance, repair, disposal and management of the MiWay fleet. As part of MiWay Fleet's asset management strategy, a comprehensive condition assessment and life cycle renewal program has been developed. This strategy is based on a combination of expert opinion and an assessment of condition. The City's life cycle management program including fleet replacement planning, preparation of vehicle specifications, acquisition, new vehicles capitalization, maintenance, repair and disposal services are based on the established life cycle variables found in Table 4-3.

Table 4-3 MiWay established useful lifecycle

Buses	12 years
Vehicles	10 years or 200,000 kilometers

These replacement lifecycles are based on MiWay implementing a comprehensive preventative maintenance program, the aim of which is to provide efficient and cost effective maintenance and repair services. Through a combination of manufacturer's and the City's knowledge of operating these assets, the City has in place a preventative maintenance schedule that sets down the service interval (based on either time, usage and MTO guidelines) for buses and each vehicle type, that has resulted in assets reaching, or exceeding, their useful life.

4.3 Operational and Maintenance Strategies

Operational and maintenance activities fall into the following categories, each having distinct objectives and triggering mechanisms:

1. Operations: Activities designed to ensure sufficient utilization of the asset. These are the regular tasks that are undertaken to ensure the assets achieve their service potential. Operations strategies include adjusting service levels (span, frequency, routes) to reduce wear and tear on assets and/or by adjustments to bus seating capacity (30, 40, 60 feet) based on demand.

   The use of change-off vehicles to relief drivers on the road keeps the asset in revenue mode and reduces non-productive trips back and forth to storage facilities;

2. Maintenance: Maintenance strategies are designed to enable existing assets to operate to their service potential over their useful life. There are two types of maintenance:
   a. Planned Maintenance: Work carried out to a pre-determined schedule or programmed as a result needs identified during inspection
   b. Unplanned Maintenance: Work carried out in response to reported problems

The overall operations and maintenance strategy is intended to maintain the current levels of service and mitigate risk while minimizing cost.

4.4 Existing Operational and Maintenance Activities

On average buses are expected to have a useful service life of 12 years. To maintain buses and non-revenue vehicles in good working order a stringent preventative maintenance program is followed based on MTO guidelines and original equipment manufacturer (OEM) guidelines. The following are the major maintenance actives performed by MiWay:

- Daily safety inspections coordinated by Transit Operations in compliance with MTO regulations;
- Major bus components (engines and transmissions) receive major overhauls through the useful life of a bus, which could mean a major repair and/ rebuild or a full replacement as per OEM specifications, all are outsourced;
- All safety-related equipment (e.g. brakes) is inspected every six months. Other maintenance items are inspected and replaced and/or repaired (if necessary) based on number of kilometres;
- All bus operators and vehicle users are required to issue a vehicle condition report (VCR) to notify maintenance on any substandard condition on a bus or vehicle that occurs between inspections. VCRs are given priority and dealt with every day to ensure service is not interrupted;
- Buses are cleaned, fueled and receive a basic check to ensure fluid levels are adequate on a daily basis. Full detailed cleanings (including a full seat steam clean and in depth stain removals) are scheduled on a regular basis. Graffiti and body damage (like scratches to windows) are dealt with immediately as they are detected;
- Body corrosion issues are part of safety inspections and are mostly dealt with in-house;
- Regular service is performed in house for non-revenue vehicles (oil changes, tires, cleaning and fueling), and all major repairs are outsourced; and
- MiWay buses are equipped with radios and distress buttons. These systems are inspected at least once a year. The main confirmation that they are operational is based on the systems self- diagnosis capability that issues a notification every time the system self-checks and detects a discrepancy. The same applies for all revenue collection equipment and CCTV cameras on the buses.

The expectation is that all buses will be available for service between preventative inspections. In reality, however, buses experience road accidents and minor issues that require them to be pulled out of service. On average up to 65 buses are held daily for maintenance; in some cases repairs can be performed quickly; in others a number of weeks are required.

Operating maintenance costs are reviewed on a regular basis to determine the cost benefit of repairing or replacing components or the entire asset. The capital replacement program aims to minimize the ongoing maintenance costs and maximize the return on capital investment.

Data and Information Managements

All bus information from commissioning to decommissioning from service is recorded on Transit's fleet management system Faster.

Every maintenance interaction with the bus is entered into the fleet management system; every inspection, warranty request, work order, and incident is recorded for the life of the bus and for up to seven years after decommissioning.

Disposal Activities

Buses have an expected useful life of 12 years. Once a bus has reached its useful life, it is usually sold as metal scrap; occasionally, a small transit agency may buy some buses. Non-Revenue Vehicles are kept in service for 10 years or 200,000 kilometers; whatever happens first. Once the vehicle has reached its useful life the vehicle is used as a trade-in towards the purchase of a new vehicle or the vehicle is sent to auction or sold as metal scrap.

4.5 Procurement Methodologies

The fleet replacement program is managed through a 10 year capital plan that maps the inventory of buses and vehicles by arrival year and forecasts the time of replacement to initiate the procurement process and coordinate cash flow requirements.

All City departments are required to follow the City of Mississauga Purchasing By-Law 374-06 when purchasing assets or disposition of assets. The purchasing by-law addresses the acquisition of an asset in greater detail and can be found on the City's website.

4.6 Future Demand

This section of the Asset Management Plan analyzes future initiatives with potential variables affecting resource demands. MiWay has assessed the impact of the growth plans and trends and has developed a number of strategies to meet future demands without compromising the end-user. Service characteristics are reviewed to address growth requirements with the right mix of buses, i.e. 30, 40, 60 ft.

MiWay Service Growth

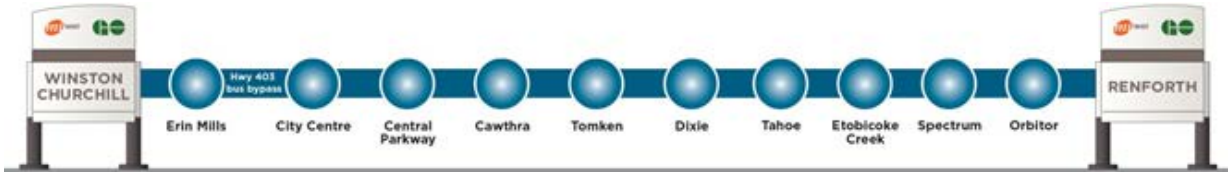
All indicators point to a sustained surge in public demand for transit service within our city. The requested 41,000 service hours in 2015 allowed MiWay to address instances of customer overcrowding as a result of higher ridership levels. Revenue ridership is currently up almost 4 per cent in 2016 and MiWay service growth will provide an increase of 45,000 service hours in 2017.

Higher Order Transit – Mississauga Transitway

Mississauga Transitway is the first step to introducing higher order transit in Mississauga. Higher-order transit improves both speed and reliability of transit as bus service is moved outside the flow of regular vehicular traffic.

When fully operational in 2017, the Mississauga Transitway will provide east-west service supporting tens of thousands of customers per day, making it faster and easier for commuters to travel to, from and through Mississauga and across the region. The 18 kilometre Transitway will have 12 stations beginning at Winston Churchill Boulevard in the west and ending at Renforth Drive in the east. The Transitway will be serviced by both MiWay and GO Transit.

The most recent stations added are the Tahoe and Etobicoke Creek stations (added in February 2016). There are only four more stations left to go until the Transitway is fully completed. The final stations that are set to open throughout 2017 are: Winston Churchill, Spectrum, Orbitor and Renforth Gateway.

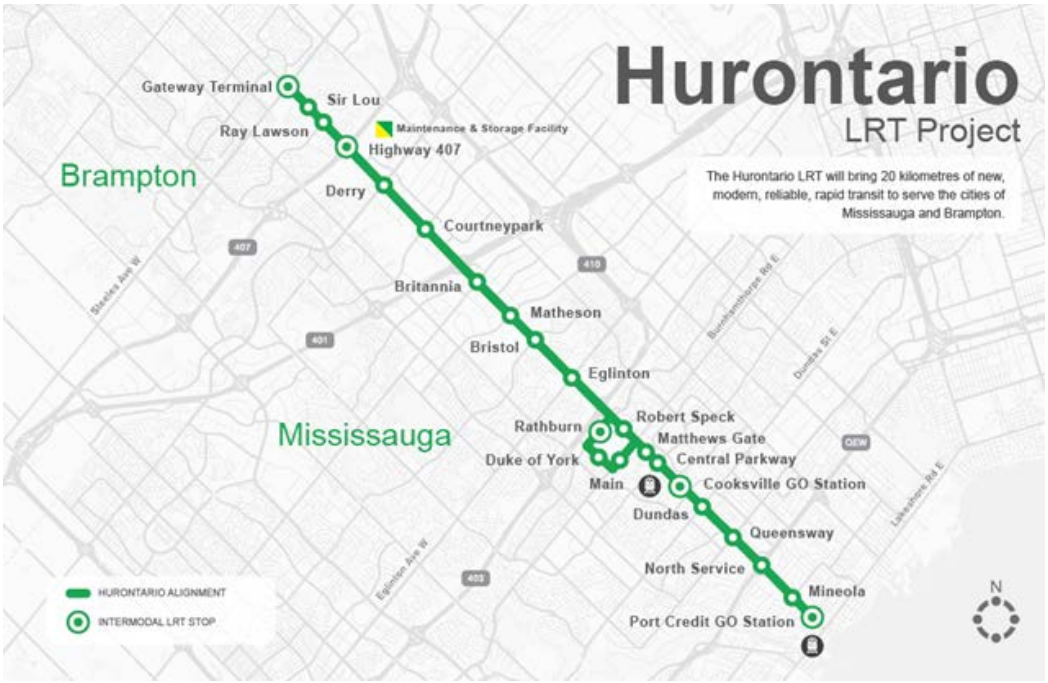


Overall ridership on the Transitway routes (Route 107, 109 and 21) has increased by 70 per cent (November 2016) since November 2014.

Hurontario Light Rail Transit (LRT) Project

The cities of Mississauga and Brampton, together with Metrolinx, are working on the Hurontario Light Rail Transit (LRT) Project – the largest infrastructure project in the City's history. The LRT is a provincially planned light rail system which will be owned and operated by Metrolinx, with operating contribution from the cities of Mississauga and Brampton. Construction is expected to begin in 2018, and be completed by 2022.

The system will have 20 kilometres of fast, reliable, rapid transit to the cities of Mississauga and Brampton along the Hurontario Street corridor with 22 stops with connections to various east-west transit linkages such as the Mississauga Transitway and the Lakeshore and Milton GO Transit lines.



Mississauga Transitway, Light Rail Transit services and transit priority corridors are necessary to encourage changes in travel behaviour and attract new riders, but will place future demands on our asset management process.

4.7 Risks to the Asset Management Strategy

Failure to deliver the Plan will ultimately impact the ability of MiWay to deliver established levels of services. The table below is a high-level overview of ways the plan could fail to generate the expected service levels and actions that can be taken in response

Identified Risk	Potential Impacts	Mitigation
Public pressure to improve service levels	• Failure to deliver service expectations • Increased pressure on operating and capital budgets	• Future Demand Strategies in place • Long-term financial planning
Failed infrastructure	• Failure to deliver planned service • Damage to MiWay fleet • Reduced reliability	• Repair/replace • Regular Inspections • Increase investment
Inadequate Funding	• Service reduction • Asset retirements • Increased risk of failure	• Reduce transit service • Request additional funding from other levels of government • Scale back growth plan
Legislation Changes	• Disruption to planning efforts • Additional operating costs • Mandatory capital investments	• Lobby against additional costs • Request additional funding from other levels of government • Reduce service levels
Economic Changes	• Reduced/increased public demand for MiWay services	• Change, increase or stop certain services
Reduction in Federal and Provincial Gas Tax Funding	• Service reduction • Increased pressure on operating and capital budgets	• Reduce service levels • Long-term financial planning (increase reserve funds) • Reduce capital program
Climate Change	• Additional unplanned costs • Unpredicted future impacts	• Long-term financial planning (increase reserve funds)

Section 5
Financing Strategy

5.1 Background

This section contains the financial requirements associated with the management of the MiWay's assets over the Plan period. The financial projections presented in this section are based on the 2017-2020 business plans and 2017 budget. This version of the AMP is primarily focused on Buses and Vehicles and its lifecycle needs, specifically the expenditure required to maintain the current and future level of services.

Replacement buses are purchased to replace existing buses once they complete their life cycle (usually 12 years) and to increase the level of service based on MiWay's service plan. Replacement buses are funded mainly from Federal gas tax and growth buses are funded from Development Charges (DC). Non-revenue vehicles are mainly funded from federal gas tax.

It is anticipated that a portion of the 2016-2019 MiWay capital program will be funded from Public Transit Investment Fund (PTIF). PTIF will provide one-time funding to help accelerate municipal investments to support the rehabilitation of transit systems, new capital projects, and planning and studies for future transit expansion to foster long-term transit plans.

PTIF project approval will not be available until March 2017 at the earliest. The table below represents MiWay's submission to the PTIF program:

Capital Projects	Funding Amount ($000's)
Bus Acquisitions Replacement/Growth	63,301
Bus Maintenance-Major Component Replacement	10,659
Transit Vehicles	555
Facilities and ITS Infrastructure	13,452
Total	**87,968**

5.2 Financial Management

5.2.1 Operating Revenues & Expenditures

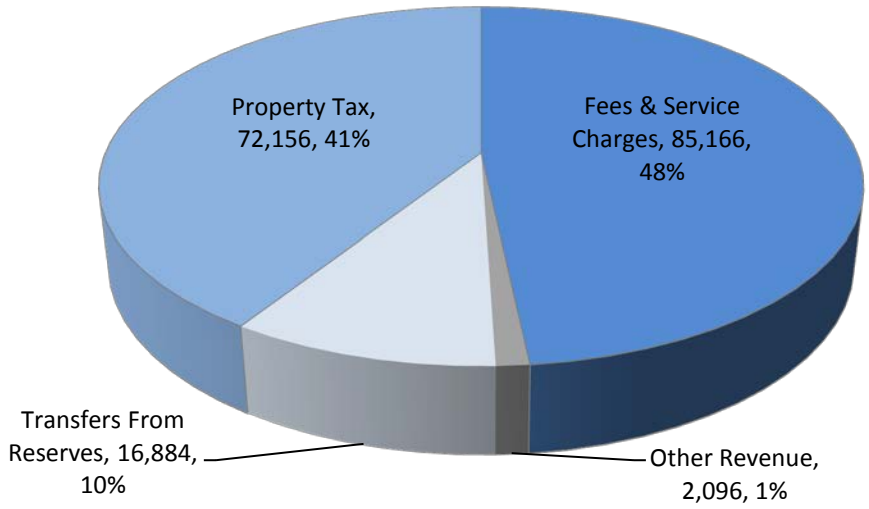
The following table highlights the budgeted and forecasted operating expenditures and revenues for 2015-2017 and provides actual expenditures and revenues for 2015:

MiWay

Description	2015 Actuals $	2015 Budget $	2016 Budget $	2017 Budget $
Expenditures				
Labour Costs	**121,960,605**	**124,455,359**	**128,516,742**	**135,108,445**
Staff Development Costs	107,411	158,200	158,400	148,400
Communication Costs	94,154	73,750	98,500	98,500
Transportation Costs	25,112,440	27,834,800	26,962,200	26,884,100
Occupancy & City Costs	3,696,053	3,979,797	4,307,684	4,631,914
Equipment Costs & Maintenance Agreements	1,546,813	1,703,300	1,767,187	1,827,187
Contractor & Professional Services	825,803	1,183,772	1,298,772	2,642,572
Advertising & Promotions	421,357	526,350	1,642,000	1,802,000
Materials, Supplies & Other Services	2,142,200	2,429,400	2,549,400	2,372,400
Finance Other	505,936	558,800	785,210	785,210
Transfers	0	0	0	0
Debt	0	0	0	0
Other Operating Expenses	**34,452,167**	**38,448,169**	**39,569,353**	**41,192,283**
Total Expenditures	**156,412,772**	**162,903,528**	**168,086,096**	**176,300,728**
Revenues				
Fees & Service Charges	(80,033,177)	(82,099,720)	(82,525,520)	(85,165,520)
Rents, Concessions & Franchise	(12,849)	(17,600)	(17,600)	(17,600)
Other Revenue	(1,008,821)	(2,328,009)	(2,078,009)	(2,078,009)
Transfers From	(14,549,135)	(17,649,600)	(16,534,300)	(16,884,000)
Total Revenues	**(95,603,983)**	**(102,094,929)**	**(101,155,429)**	**(104,145,129)**
Allocations	927,400	927,400	975,965	1,144,665
Net Expenditures	**61,736,189**	**61,735,999**	**67,906,632**	**73,300,264**

In preparing the operating budget the capital budget forecast is taken into consideration. This ensures that sufficient funding is available to operate, repair and maintain any new assets.

The pie chart below shows the main revenues sources used to fund the operating budget for 2017:



5.2.2 Capital Budgets and Funding

This section summarizes the forecast 10 year capital requirements for MiWay. Asset renewal needs are fully funded in the 10 year capital plan. The following table presents the forecast by major program.

Program Expenditures	2017 Approved Budget ($000's)	2018 Forecast ($000's)	2019 Forecast ($000's)	2020-2026 Forecast ($000's)	Total 2017-2026 ($000's)
Buses	13,876	60,231	8,073	277,466	359,646
Higher Order Transit	0	0	0	0	0
On-Street Facilities	2,926	3,426	290	2,030	8,672
Other Transit	2,400	500	650	1,150	4,700
Transit Buildings	6,180	4,160	60	2,420	12,820
Transit Vehicles and Equipment	4,150	1,305	1,455	2,570	9,480
Total	**29,532**	**69,622**	**10,528**	**285,636**	**395,318**

Proposed 2017-2026 Capital Budget by Funding Source

The following table provides the funding sources used to fund the capital portion of the proposed 2017-2020 Business Plan and 2017 Budget (includes possible PTIF funding).

Funding	2017 Approved Budget ($000's)	2018 Forecast ($000's)	2019 Forecast ($000's)	2020-2026 Forecast ($000's)	Total 2017-2026 ($000's)
Development Charges	1,128	1,560	-	11,238	13,926
Federal Gas Tax	11,978	4,820	6,755	272,792	296,345
Provincial Gas Tax	-	2,700	-	-	2,700
Other	8,552	29,751	-	-	38,303
Subsidies and Senior Govt. Level Grants	-	-	-	-	-
Tax	6,625	30,791	3,773	1,606	42,795
Debt	1,250	-	-	-	1,250
Total	**29,532**	**69,622**	**10,528**	**285,636**	**395,318**

The following tables provide a detailed capital project listing for the Bus and Transit Vehicles and Equipment program and the funding sources used to fund the capital projects:

Program Details: Buses					
Project Name	**2017 Approved Budget ($000's)**	**2018 Forecast ($000's)**	**2019 Forecast ($000's)**	**2020-2026 Forecast ($000's)**	**Total 2017-2026 ($000's)**
Transit Bus Acquisitions - Growth	1,168	3,504	-	11,096	15,768
Transit Bus Acquisitions - Replacement	-	52,527	3,773	223,825	280,125
Transit Bus Acquisitions - Service Growth	7,908	-	-	-	7,908
Transit Capital Bus Maintenance - Major Component Rehabilitation/Replacement	4,800	4,200	4,300	32,900	46,200
Transit Capital Equipment Acquisition - Maintenance Section	-	-	-	145	145
Transit Fareboxes - Refurbishment	-	-	-	2,000	2,000
Transit Presto Equipment Replacement	-	-	-	7,500	7,500
Total	**13,876**	**60,231**	**8,073**	**277,466**	**359,646**

Funding - Bus Program	2017 Approved Budget ($000's)	2018 Forecast ($000's)	2019 Forecast ($000's)	2020-2026 Forecast ($000's)	Total 2017-2026 ($000's)
Development Charges	495	1,490	-	9,420	11,405
Tax -Capital Reserve Fund	2,489	29,676	3,773	356	36,293
Federal Gas Tax	7,908	-	4,300	267,690	279,898
Other	2,984	29,066	-	-	32,050
Total	**13,876**	**60,231**	**8,073**	**277,466**	**359,646**

Program Details: Vehicles and Equipment					
Project Name	**2017 Approved Budget ($000's)**	**2018 Forecast ($000's)**	**2019 Forecast ($000's)**	**2020-2026 Forecast ($000's)**	**Total 2017-2026 ($000's)**
Bus Communication Gateway Replacement	3,000	-	-	-	3,000
Presto Self Service Kiosk	-	1,000	1,000	-	2,000
Transit Hastus Module	570				570
Transit Capital Equipment Acquisition - Maintenance Section	145	145	145	870	1,305
Transit Change Off Vehicles	20	-	-	220	240
Transit Change-Off Vehicle Acquisitions - Growth	270	20	-	20	310
Transit Change-Off Vehicle Acquisitions - Replacement	-	60	220	460	740
Transit Other Vehicles (Vans/Cars/Trucks) Acquisitions - Replacement	85	25	30	215	355
Transit Revenue Equipment - Replacement	20	20	20	140	200
Transit Route Supervisor Vehicle Acquisitions - Replacement	-	35	-	525	560
Transit Security Vehicles & Equipment - Replacement	40	-	40	120	200
Total	**4,150**	**1,305**	**1,455**	**2,570**	**9,480**

Funding: Vehicles and Equipment Program	**2017 Approved Budget ($000's)**	**2018 Forecast ($000's)**	**2019 Forecast ($000's)**	**2020-2026 Forecast ($000's)**	**Total 2017-2026 ($000's)**
Development Charges	122	9	-	18	149
Tax -Capital Reserve Fund	1,944	134	-	1,250	3,327
Federal Gas Tax	20	1,020	1,455	1,302	3,797
Other	2,065	143	-	-	2,208
Total	**4,150**	**1,305**	**1,455**	**2,570**	**9,480**

5.3 Financing Strategies

Several financing strategies are available for the funding of capital projects which are utilized on a project by project basis. The typical financing strategies utilized by the City are as follows:

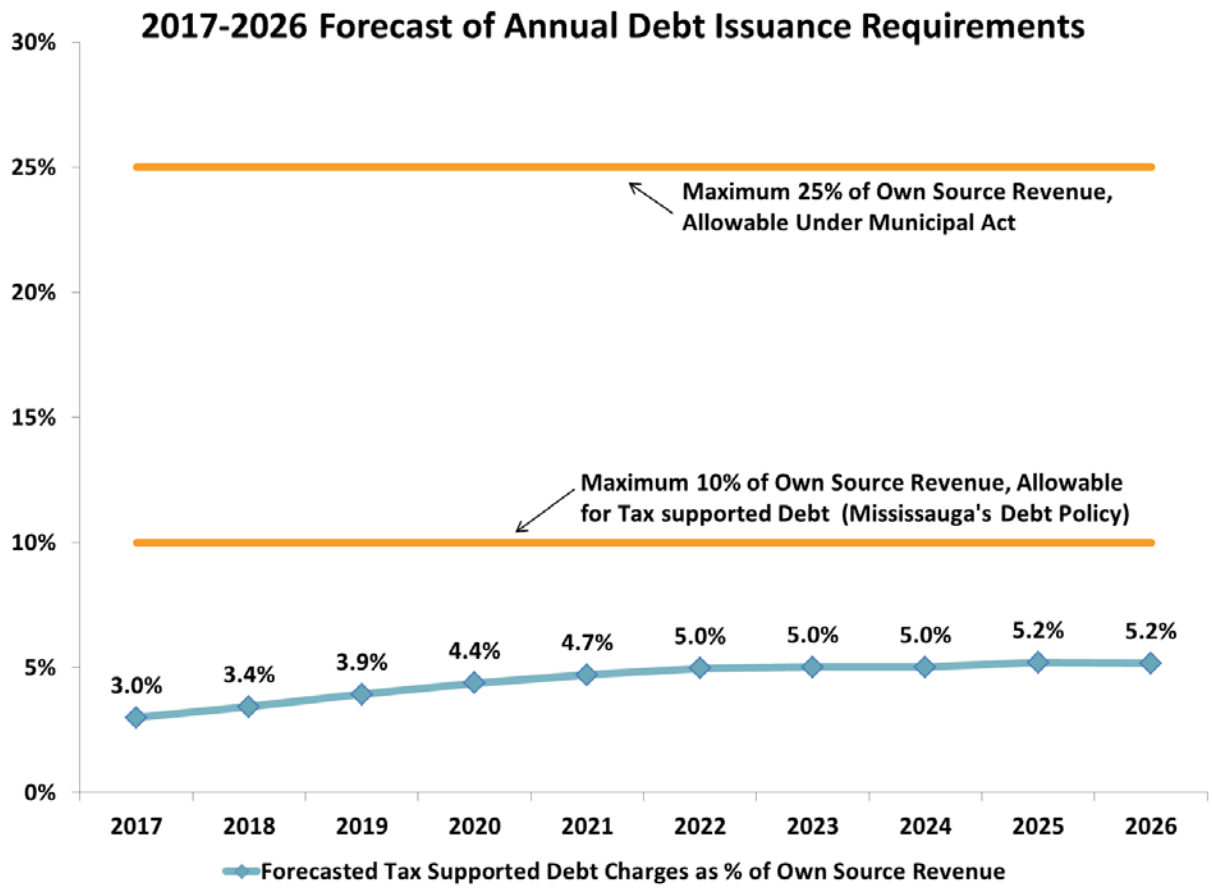
Capital Infrastructure and Debt Repayment Levy

The 2017-2020 Business Plan and 2017 Budget recommends continuation of a Special Purpose Levy of two per cent on the City tax levy requirements for Capital Infrastructure and Debt Repayment. Out of the two per cent, about one per cent is allocated to increase the transfer from Operating to Capital to increase pay as you go capital funding. The remaining approximately one per cent is dedicated to debt repayment for principal and interest payments.

Debt Management

Long-term financing is a critical component in financing future infrastructure for the City of Mississauga. Debt is required to assist in funding new construction, and to replace and upgrade capital assets. The City's debt policy includes a total annual debt repayment limit of 15 per cent of own-source revenues; out of which the tax-supported debt repayment is capped at 10 per cent and non-tax supported debt repayment is capped at 5 per cent. The City is well within the total annual debt repayment limit of 15 per cent of own-source revenues. The City's debt policy is more conservative than the provincial requirement which permits debt repayment costs to be within 25 per cent of own source revenues. Careful and conservative spending in the short run ensures that funds are available for longer term capital initiatives while keeping tax rates manageable.

The following graph demonstrates the City's current, approved borrowing per the 2017 capital budget in relation to the various debt capacity limits in place. Our debt increases through to 2022 and then stabilizes. This is because the debt to date has been on a ten year repayment schedule, and the City begins to retire debt in 2022.



Reserves

Reserves are an allocation of accumulated net revenue. They are not associated with any specific asset. A reserve is generally used to mitigate the impact of fluctuations in operating costs and revenue. The general contingency reserve is an example of reserve currently used in MiWay to mitigate budgetary fluctuations related to diesel fuel prices.

Reserve Funds

The City has corporate reserve funds that are used to fund the City's capital program. Funding for these reserve funds is obtained from various sources. MiWay primarily uses the following reserve funds for its capital program:

- **Capital Reserve Fund** retains monies set aside for the repair, replacement and major maintenance costs of capital infrastructure and for large capital expenditures;
- **Development Charges (DCs)** are collected by the City from developers under the City's DC Bylaw. DCs are used to finance the development (growth) share of the capital program and are stored in designated DC reserve funds until they can be used to pay for growth-related infrastructure as prescribed in the City's DC Bylaw. Projections relating to DC revenues are based on results of the regularly updated Development Charges Study, its ongoing recommendation of rates and the anticipated infrastructure requirement to facilitate growth of the City; and
- **Grants and Transfers** from the Provincial and Federal government are financial sources used to fund capital projects at the City. Ongoing funding agreements include Federal Gas Tax transfers. These funds are maintained in gas tax reserves.

5.4 Financial Summary

The business plans and budget presented in this AMP addresses those assets in poorer condition and provides a long term approach to sustain the assets. The majority of spending is focused on replacement of assets, enabling growth and maintenance of the assets. The financing strategy section of AMP summarizes the financial basics and meet the Ministry of Infrastructure guideline through describing Mississauga's financing strategies. The infrastructure gap and the strategies for addressing the funding shortfall are discussed in the City's Corporate Asset Management Plan.