



Roads

2017-2020 Business Plan
& 2017 Budget

Foreword

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 City continues to engage with stakeholders about its 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.

The 2017-2020 Business Plan and 2017 Budget detail how and where the City plans to allocate resources to the programs and services that people rely on every day, while providing good value for taxpayers and supporting the Strategic Plan.

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Executive Summary of Roads

Mission: To plan, develop, construct and maintain a multi-modal transportation system which efficiently and safely moves people and goods, respects the environment and supports the development of Mississauga as a 21st Century city, while serving the municipality's social, economic and physical needs.

Services we provide:

The Roads Service Area is delivered the following three divisions; Transportation and Infrastructure Planning (TIP), Engineering and Construction (E&C), Works, Operation and Maintenance (WOM) divisions. These areas are responsible for the planning, construction, maintenance and overall management of Mississauga's roadways, bridges, sidewalks and related infrastructure. Additional infrastructure that is managed as part of this Service Area includes traffic signals, street lighting, municipal parking, noise barriers, the cycling network, and the City's fleet of vehicles (with the exception of transit and fire vehicles).

Through the optimization of technology, and forward thinking initiatives, the Roads Service Area is poised to continue to provide responsible infrastructure maintenance and enhancements.

Interesting facts about this service:

- At a 2017 replacement value of \$4.2 billion, our road and bridge infrastructure is the largest asset owned and operated by the City.
- The City has over 5,200 lane kilometres of road network. If laid out end to end this infrastructure would connect the City of Mississauga to Dublin, Ireland.
- The City's cycling network includes approximately 500 kilometres of on-road bike lanes, boulevard multi-use trails, off-road trails, and "bicycle friendly" signed roadway. Through the Cycling Master Plan, the City plans to develop more than

900 kilometres of on and off-road cycling routes in the next 20 years.

Highlights of the Business Plan include:

Leveraging technological advances and improving efficiency

- Continued implementation of an Advanced Transportation Management System (ATMS)
- Modernizing field operations through the acquisition of a mobile technology solution for field operators
- Upgrading the T&W Customer Service Counter to an electronic cash handling system

Maintaining and prioritizing our infrastructure

- Sidewalk maintenance enhancements to eliminate the City's repair backlog
- Cycling Master Plan to improve our multi-modal transportation system through cycling network development
- Increased operational support for Parking Operations
- Creation of the Loreland Works Yard to meet and improve service levels

Net Investment (000's)	2017	2018	2019	2020
Operating	66,938	66,739	67,532	67,307
Capital	74,318	73,607	71,432	71,872
Full Time Equivalent	473.1	473.1	485.1	485.1

Core Services

Vision, Mission, Goals of Service and Service Delivery Model

Vision

To be a leader in delivering and managing safe, functional municipal transportation infrastructure.

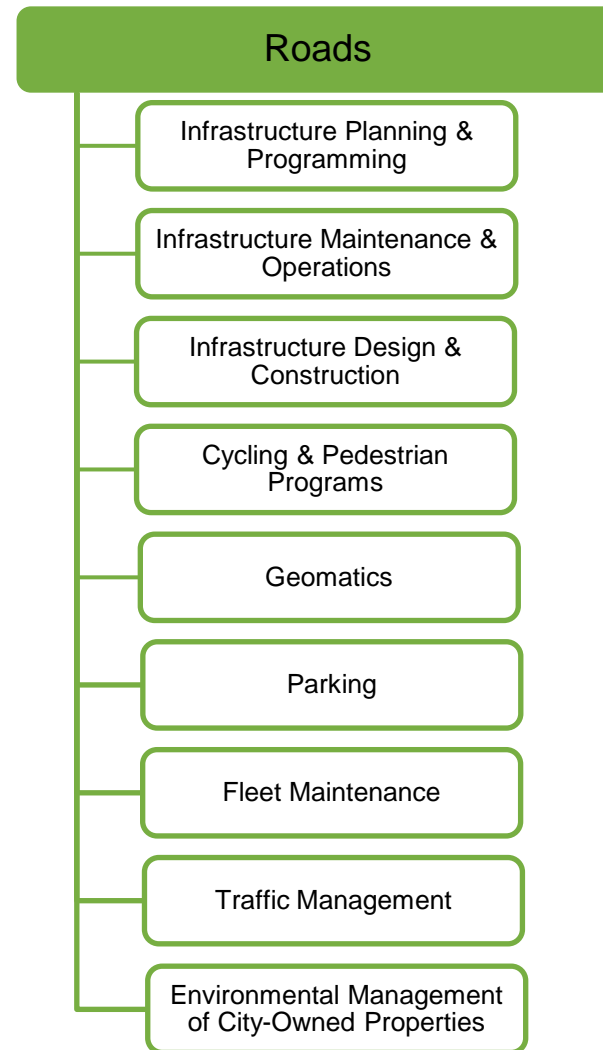
Mission

To plan, develop, construct and maintain a multi-modal transportation system which efficiently and safely moves people and goods, respects the environment, supports the development of Mississauga as a 21st Century city and serves the municipality's social, economic and physical needs.

Goals of Service

- To maintain our infrastructure in a state of good repair and operate a safe and efficient transportation system
- To plan and design roads and corridors that can accommodate all users
- To apply best asset management practices and technologies to demonstrate cost containment and value for money
- To recognize and develop employees and create and empowered employee culture to meet current and future challenges
- To achieve financial and operational targets in a responsible way

Service Delivery Model



Achieving our Goals

The following infrastructure improvements and accomplishments have been achieved over the past year:

- Rehabilitated 67 streets (29 lane kilometres) and four bridge structures at a cost of \$22.9 million



Asphalt Recycling on Central Parkway

- Installed 1,300 metres of new noise barriers
- A roundabout was installed at the intersection of Skymark Avenue and Explorer Drive
- Installed seven new traffic signals
- Completed four Environmental Assessments
- Development Engineering reviewed over 600 development applications
- Development Construction serviced over 1,450 active building permit files and 85 servicing agreements

- Completed the Light Emitting Diodes (LED) Street Lighting Conversion Project (approximately 48,000 Luminaires converted to LED)
- Parking revenues have increased by 11 per cent
- Introduced Paid Parking on Cherokee Drive
- Installed over 19.3 kilometres of new sidewalks, six kilometres of multi-use trail facilities, and one kilometre of on-road cycling facilities



Newly Constructed Sidewalk on Ridgeway Drive

Awards and Recognition

The City of Mississauga has received recognition and has been the recipient of the following awards recently:

- “*Smart Commute Gold Workplace Designation*” for 2016 from Metrolinx and the Smart Commute Program



Source: Smart Commute

- Received the “*Bruce Brunton Award*” from the Ontario Public Works Association (OPWA) and the Large/Metro Centre Category from the Canadian Public Works Association (CPWA) in 2015 for our Public Works Week program
- All four works yards were awarded the “*Safe and Sustainable Snowfighting Award*” in 2015 from the Salt Institute for recognizing environmental consciousness and effective management in the storage of winter road salt
- City's Geomatics division awarded “*Innovative Management Practices Award*” in the Management Practices Category for 2015, from Ontario Good Roads Association (OGRA) and Ontario Research Coalition (ORC) for the development and implementation of an innovative idea, in asset and maintenance management
- Awarded the “*Co-op Employer of the Year (National)*” award for 2015 by the University of Guelph



Representatives from the City's Environmental Services Section, accept their award for Co-op Employer of the Year

Source: recruitguelph.ca

Existing Service Levels, Trends and Efficiencies

The management of infrastructure assets is accomplished through a number of operational activities; the existing service levels for these activities are summarized below.

Infrastructure Programming: Develop an appropriate 10-year Capital Budget in accordance with lifecycle asset management practices and meet budget preparation and construction timelines.

Long-range Planning and Policy Development: Develop and implement appropriate plans and strategies to guide decision making.

Geomatics: Collect and maintain core assets to support service expectations and critical business decision systems.

Traffic Control Signals: Repair and replaced all traffic control signals within the times specified in the Minimum Maintenance Standards.

Pavement Marking Maintenance: Undertake all white pavement lines on streets twice per year and all yellow pavement lines on streets once per year.

Roadway Sign Maintenance: Replace all stop signs that are broken, damaged, illegible, improperly oriented or missing within three hours of being notified.

Active Transportation: Plan annual sidewalk and cycling network programs in accordance with the Cycling Master Plan and transit accessibility priorities. Develop and implement transportation demand management initiatives to encourage and foster sustainable transportation.

Winter Maintenance: Clear all major arterial and collector roads within 12 hours, residential roads within 24 hours, and priority sidewalks and bus stops within 24 hours of an average storm.

Customer Service: Respond to all emergency related service requests as soon as practical and investigate all non-emergency service requests within three days and respond to within 10 days.

Bridges and Culverts: Inspect all bridges and culverts every two years (by a qualified engineer), and maintain in a safe condition.

Average Road Network Condition: Maintain the road network at a “Good to Fair” rating.

Minimum Maintenance Standards: Meet Provincial Minimum Maintenance Standards for road infrastructure.

Traffic Management: Manage traffic operations in accordance with provincial regulations and design standards.

Street Lighting: Maintain and operate the street light network in accordance with established service response times. Respond to malfunctioning lamps within the range of 24 hours to 10 business days based on the location and quantity.

Fleet Services: Ensure that vehicles and equipment are ready when required. Maintain an excellent compliance rating with our Ministry of Transportation (MTO) fleet inspections and Commercial Vehicle Operator’s Registration (CVOR).



Mavis Works Yard

Service Level Trends

Mississauga continues to mature as a city. Aging infrastructure and the need to balance service levels with affordability pose significant pressures and challenges for this Service Area. Through comprehensive condition assessments and asset management plans, the City continues to mitigate potential risks.

Traffic congestion remains high on the public agenda. Growth in surrounding municipalities continues to put additional pressure on Mississauga's road infrastructure.



Increasing traffic congestion will be a pressure moving forward

Implementation of an Advanced Transportation Management System (ATMS) continues, as well as the development and implementation of strategies to encourage the use of transit, walking, and cycling as alternate modes of transportation. The City is working on a comprehensive Transportation Master Plan (TMP) to address all aspects of Transportation in the City of Mississauga over the next 25 years. The TMP aims to develop a consolidated vision for the future of mobility in Mississauga, as well as establish an overarching policy framework to guide and prioritize investments in transportation infrastructure and services. As the demand for multi-modal and higher order transportation systems continues, the City looks towards enhancing or retooling existing infrastructure to maximize effectiveness of what we already have in place.

There is a growing need for the City to provide municipal parking to meet increasing demand and as a tool in city building. To assist with this, the City is undertaking a Parking Master Plan which includes a review of the needs and opportunities for parking.

With the trend towards changing workforce demographics, it is integral for the City to proactively implement talent management and succession planning strategies. There are a number of initiatives underway to attract, develop and retain staff within the Roads Service Area.

Over-arching themes for this Service Area continue to be public safety and the responsible delivery and maintenance of infrastructure, ensuring infrastructure is in a state of good repair.

Efficiencies

The Service Area Divisions (E&C, TIP, and WOM) are focused implementing continuous improvement initiatives to manage assets and resources more efficiently, effectively and economically.

Projected decreases due to operational savings and efficiencies in various programs, and budget reductions identified by staff, account for a savings of \$1.1 million in 2017. This cost savings has increased by \$0.2 million from 2016. Through continuous improvement within the Roads service area, these savings and efficiencies will continue to grow.

Since the implementation of Lean in 2014, the Divisions have had an overall cost savings of \$239,524 and freed capacity of 746 hours as a result of Lean initiatives. The continued implementation of small to large Lean improvements allows the City to capitalize on many business process improvements, saving both time and money for our citizens.

The 2017-2020 Business Plan Outlook

Planning for the Future

The City landscape is changing; future transit and infrastructure demands on the Roads Service Area require planning, creation and implementation of forward thinking Master Plans (i.e. Transportation Master Plan, and the Cycling and Pedestrian Master Plans) to position ourselves as a progressive Service Area and municipality. Regional transit planning with a focus on multi-modal transportation is a key focus in our Master Plans.

The Roads Service Area is actively preparing for the coming changes in our workplace demographics. With a significant portion of our workforce being eligible to retire in the next five years, effective succession planning, and talent management strategies are essential. These strategies will also be an integral part of fostering a culture of employee innovation and satisfaction going forward.

Planning for evolving external environmental factors, such as climate change, is becoming a priority as we look towards the future. The City is in the early stages of a Climate Change Review process, in order to define the impact of climate change on City resources and services. Defining the impact will allow the City to be in an acceptable state of readiness for future climate change related events. As this review process advances, we will be able to define what climate change means for the Roads Service Area, and identify how we can adapt and prepare for these dynamic pressures on our existing service levels.

Optimizing the Use of Technology

Our Technology Road Map encompasses the following strategic directions:

1. **Modernize Mobile Work Force:** The organization is well positioned to advance the current mobile strategy, which will increase productivity and easily connect staff in the field.
2. **Real-Time GIS Mapping Tools:** The City has invested heavily in location based data and GIS capabilities. Through a Geospatial Master Plan initiative, the City will provide recommendations for making cost effective and efficient use of this investment moving forward. Using GIS and Geospatial resources more effectively, will allow the organization to make more informed planning and operational decisions that will impact many facets of City operations from policy, construction, repair, emergency operation, maintenance, collaboration with external organizations and overall delivery of services.
3. **Automation & Asset Management:** In order to meet demands for the City's growth and aging infrastructure, it is essential to have appropriate asset management systems.
4. **Customer Self-Service:** Providing online services, open data and information through social media channels to the public will allow the City to provide services 24/7.
5. **Business Intelligence (BI) for Ease of Use:** The primary goal of BI is to enable the Corporation to react to changing business conditions more quickly by enabling decisions through research and analytics. For example, the creation of data dashboards as an efficient reporting tool for key Service Area analytics.

These strategic directions are being addressed through the following progressive technological solutions implemented by the City.

Advanced Transportation Management System (ATMS): The continued implementation of a pro-active ATMS will allow the City to actively monitor travel conditions, influence the operation of traffic signals, disseminate information and interact with other transportation modes and agencies with an overall view of lessening congestion and its effects on the road network. The ATMS is currently underway and includes improved projects relating to traffic signal control system replacement, traffic signal communication upgrade, a new Traffic Management Centre (TMC), and implementation of Intelligent Transportation System (ITS) initiatives. This system will position Mississauga to be a leader in Transportation Management.



New Traffic Management Centre

Electronic Cash Handling System: Upgrading the current, manual cash handling system at the Transportation and Works Customer Service Counter, will allow for the consolidation of all cash handling activities and the filtering of all transaction data into a single data source. We will be able to generate receipts for fees and deposits which will replace Excel spreadsheets currently being used. This initiative will allow for future online payment integration. It will provide efficiencies for staff processing transactions, better data on cash handling to generate management reports, and overall better customer service.

Mobile Technology Solution for Field Operations: The modernization of field operations through the introduction of mobile connectivity within our field staff, and a partnership with IT, will allow us to improve workflow and overall productivity in the field. Through the purchasing of field tablets, there will be increased efficiency through the elimination of duplicate data entry and improved productivity of employees in the field.



Staff member utilizing mobile technology to enhance productivity and coordination in the field

Maintaining Our Infrastructure

To ensure our infrastructure is responsibly maintained, it is key to both define a reasonable state of good repair, and set priorities to maintain this state of good repair. This involves addressing growth concerns, developing an economic lens for infrastructure.

There are a number of initiatives planned in order to both maintain and support Mississauga's dynamic infrastructure needs.

Sidewalk Repairs: The Sidewalk inspection and inventory program has identified a maintenance and repair backlog that cannot be addressed under the current funding program. To expedite repairs, WOM is proposing to prepare a separate Sidewalk Replacement Contract in 2017 to supplement the existing three contracts. It is expected that this new Service Enhancement, along with existing maintenance contracts, will serve to reduce the increasing backlog as identified by the Maintenance Standards and Permit Section Inspectors.



Sidewalk Repairs on Forestwood Drive

Loreland Works Yard Development: In order to meet operational service levels, the construction of a new works yard in the South East quadrant of the City has been identified and previously approved as a cash-flowed project in the capital budget. The boundaries of the existing yards will be re-established to continue to meet and improve services levels.

Cycling Master Plan: The Roads Service Area supports the Cycling Master Plan through expansion and maintenance of the cycling network, including on-road bike lanes, and "bicycle friendly" signed roadways. The Active Transportation Office has expanded its scope to include sidewalk development and pedestrian movement. As we are at the five year mark since the inception of the Cycling Master Plan, 2016 has served as a year to review and update the plan. This ensures the Plan will meet the changing mobility objectives of the City's Strategic and Official Plans, providing a variety of transportation choices and healthy ways to travel.

Managing Our Human Resources

The Roads Service Area is made up of a mix of highly skilled technical staff with various professional backgrounds, complimented by highly dedicated front-line service delivery staff. In order to adequately manage this team, there are plans in place to manage turnover, obtain the best candidates for future positions, and engage our current workforce.

Develop and Retain Employees: The following is being done to foster a culture of motivated career development and employee innovation:

- WOM has introduced in-house training programs to address the new professional development requirements from the Ontario Association of Certified Engineering Technicians and Technologists (OACETT)
- An Engineer-in-Training (EIT) internship program has been introduced to attract and retain civil engineering skill sets across the Roads Service Area

-
- Roads Service Area staff are trained on continuous improvement and project management best practices i.e., Lean, Project Management Support Office (PMSO)
 - The Roads Service Area continues to leverage co-op student opportunities and build relationships with local technical school communities
 - Our talent management and succession planning programs are targeted at addressing the significant turnover of staff in key areas

New Employees for ATMS: The Traffic Management Section has recently restructured and redeployed staff resources to meet existing and future service levels. The two additional FTE's required in 2017 will oversee the day-to-day operations of the Traffic Signals and Traffic Systems and Intelligent Transportation Systems (ITS) sections. These two full-time positions are critical to the successful and timely completion of the ATMS project and in ensuring that all capabilities of the new traffic control system will be fully utilized.

New Parking Technician: The addition of a parking technician will allow the Municipal Parking section to efficiently operate and maintain the expanding paid parking program. The additional resource will monitor and maintain parking infrastructure assets. There is no tax impact as this position will be funded from Parking Revenues.

Future Employee for Active Transportation Office: In order to adequately encourage active transportation in the City and continue the phased implementation of the Cycling Master Plan, the Active Transportation Office requires a new FTE in 2019 to continue to expand and grow the program.

Linkages to the City's Strategic Plan

move - developing a transit oriented city

The Advanced Transportation Management System (ATMS) will allow us to better respond to changing traffic conditions, and adjust traffic signals at busier times to keep our City moving.

Actively developing and supporting master plans and programs to encourage transit usage, including the Transportation Master Plan and the Transportation Demand Management Master Plan.

belong - ensuring youth, older adults and new immigrants thrive

Provide the Driveway Windrow Snow Clearing Program for seniors and the physically disabled.

Continue to meet and exceed Accessibility for Ontarians with Disabilities Act (AODA) requirements as part of the Multi-Year Accessibility Plan (2012-2017).

connect - completing our neighbourhoods

Environmental assessments are underway to complete our road network.

Sidewalk improvement initiatives keep our existing network in a state of good repair.

Proactive implementation of Accessible Pedestrian Crossings will keep our residents connected in a safe environment for everyone.

The Active Transportation Office is encouraging multi-modal transportation in the City of Mississauga.

prosper - cultivating creative and innovative businesses

Providing a road and transit network that supports our corporate centres to ensure fast and efficient access to these employment nodes.

green - living green

Cycling and walking is embedded in our Strategic Plan. Cycling and pedestrian facilities translates into a healthier, more environmentally friendly, multi-modal city. The phased implementation of the Cycling Master Plan, development of a Pedestrian Master Plan, and sidewalk improvements ensure more green infrastructure and transportation options to come.

Engaging Our Customers

Citizens and stakeholders are engaged in a number of ways:

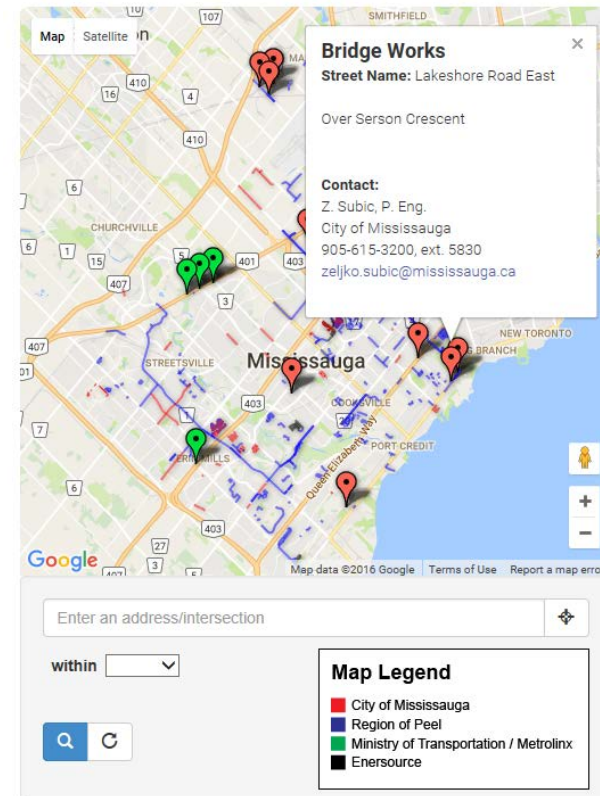
- Public meetings, project websites, and on-line surveys are some of the ways by which we engage stakeholders with respect to projects affecting their community
- Multiple digital communication channels are available for information regarding public works operations, such as the status of snow clearing, capital projects, and road construction activities
- The Mississauga Roads Mobile Application aids residents with route planning, monitoring winter maintenance and staying connected



The Mississauga Roads App is a free download at both the iTunes and Google Play stores

- Web-based plow tracker to monitor the state of snow clearing in the City from any device, not just a smartphone or tablet
- Be a Good Neighbour Campaign to encourage able bodied residents to assist seniors or those with disabilities with snow clearing in the winter months
- Flyers are circulated to inform residents of maintenance and construction works in their immediate area

- Annual National Public Works Week celebration inviting residents and school children to participate in a number of events, including facility tours, equipment displays and a family fun day in the downtown
- Taxpayers are encouraged to contact the City about any concerns they have with respect to the City's services or the condition of infrastructure by calling 311



Mississauga's Road Construction Map – interactive map that allows residents to pinpoint road construction sites at any point of interest within the City

Proposed Operating & Capital Budgets

This part of the Business Plan sets out the financial resources required to deliver the proposed 2017-2020 Business Plan. Information is provided by major expenditure and revenue category as well as by program. The costs to maintain existing service levels and operationalize prior decisions are identified separately from proposed changes. The prior year budget for 2016 was \$66.6 million and the proposed budget for 2017 is \$67.0 million.

Total Changes to Maintain Current Service Levels

Highlights of the changes to maintain current service levels are:

- Increase of \$729,000 reflecting labour adjustments and other fringe benefit increases
- Increase in Contract for Traffic Signal Maintenance of \$450,000 to represent actual billings
- Additional transfer to Parking Reserve fund of \$167,000 reflects the net revenue expected for the implementation of additional parking machines in Streetsville and Port Credit
- Decrease in fuel costs of \$97,000 to reflect lower fuel rates
- Increase in recovery revenue from the Region of Peel of \$450,000 to reflect chargebacks associated with the Traffic Signal Services Agreement
- Additional revenues of \$85,000 have been identified by staff

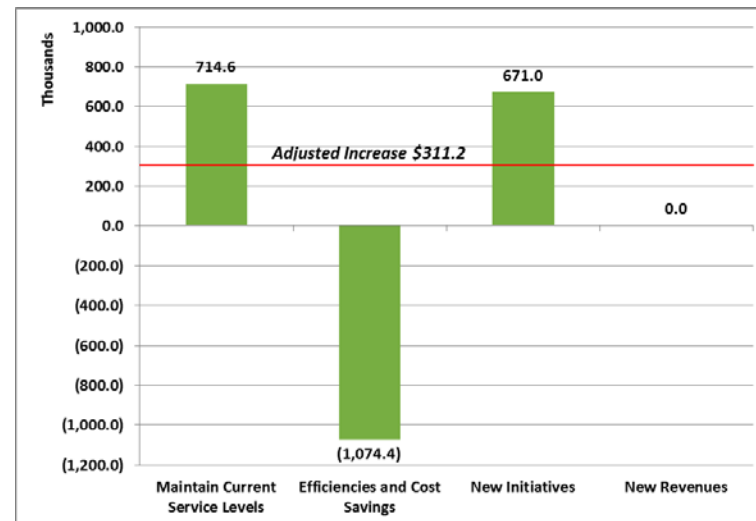
Efficiencies and Cost Savings

- The completed conversion of the City’s street lights to Light Emitting Diode (LED) continue to yield hydro savings with a further \$270,000 estimated in 2017
- Savings in transportation costs of \$278,000 to reflect vehicle rental and lease costs
- Contractor costs savings of \$300,000 for Traffic Line Marking
- An additional \$226,000 in other budget reductions were identified by staff

New Initiatives

Seven new initiatives impact the 2017 operating budget. Details on each initiative can be found later on in this business plan.

Proposed Changes to 2017 Net Operating Budget by Category (000’s)



Operating

The following table identifies the budgeted and forecasted operating expenditures and revenues for 2017-2020, the 2016 Budget as well as 2015 Actuals by program within the Service Area.

Proposed Budget by Program

Description	2015 Actuals (\$000's) ¹	2016 Budget (\$000's)	2017 Proposed Budget (\$000's)	2018 Forecast (\$000's)	2019 Forecast (\$000's)	2020 Forecast (\$000's)
Expenditures to Deliver Current Services						
Bridges & Watercourses	1,863	237	242	242	242	242
Cleaning and Litter Pick-up	4,020	3,772	3,741	3,747	3,752	3,758
Corporate Fleet Maintenance	1,279	1,676	1,514	1,552	1,590	1,629
Crossing Guards	2,838	3,108	3,156	3,199	3,244	3,288
Engineering and Construction	3,013	4,022	3,990	4,084	4,180	4,277
Maintenance Control	9,080	6,741	6,842	6,230	5,601	4,990
Municipal Parking	1,488	1,312	1,525	1,533	1,541	1,550
Road Sidewalk Maintenance	9,789	8,950	9,030	9,030	9,030	9,030
Streetlighting	6,756	5,740	5,484	5,487	5,491	5,494
Survey & Inspection	944	2,352	2,471	2,550	2,617	2,686
Traffic Management	11,539	11,394	11,460	11,547	11,633	11,723
Transportation & Infrastructure Planning	5,338	4,736	5,033	5,103	5,174	5,177
Winter Maintenance	19,496	23,237	23,254	23,256	23,259	23,261
Total Expenditures	77,443	77,276	77,741	77,561	77,355	77,103
Revenues	(14,183)	(10,499)	(11,324)	(11,324)	(11,324)	(11,324)
Transfers From Reserves and Reserve Funds	(150)	(150)	(150)	(150)	(150)	(150)
New Initiatives and New Revenues			671	652	1,650	1,677
Proposed Net Budget Including New Initiatives & New Revenues	63,110	66,627	66,938	66,739	67,532	67,307
Expenditures Budget - Changes by Year			1%	(0%)	(0%)	(0%)
Proposed Net Budget - Changes by Year			0%	(0%)	1%	(0%)

Note: Numbers may not balance due to rounding.

Note ¹: Includes Stormwater, which was removed from the Roads Service Area for 2016.

Summary of Proposed Budget

The following table provides proposed budget changes further defined into more specific separated categories. It identifies changes in labour, operating costs and revenues to maintain existing service levels, efficiencies and cost savings, the cost increases arising from prior year decisions, special levies and new initiatives.

Summary of Proposed 2017 Budget

Description	2016 Approved Budget (\$000's)	Maintain Current Service Levels	Efficiencies and Cost Savings	Annualized Prior Years Budget Decisions	Operating Impact of New Capital Projects	Proposed New Initiatives And Revenues	Special Purpose Levies	2017 Proposed Budget (\$000's)	\$ Change Over 2016	% Change Over 2016
Labour and Benefits	32,124	578	(36)	151	0	279	0	33,096	972	3%
Operational Costs	44,999	806	(1,038)	0	0	529	0	45,296	296	1%
Facility, IT and Support	152	5	0	0	0	0	0	157	5	3%
Total Gross	77,276	1,389	(1,074)	151	0	808	0	78,549	1,273	2%
Total Revenues	(10,649)	(825)	0	0	0	(137)	0	(11,610)	(962)	9%
Total Net Expenditure	66,627	564	(1,074)	151	0	671	0	66,938	311	0%

Summary of Proposed 2017 Budget and 2018-2020 Forecast

Description	2016 Approved Budget (\$000's)	2017 Proposed Budget (\$000's)	2018 Forecast (\$000's)	2019 Forecast (\$000's)	2020 Forecast (\$000's)
Labour and Benefits	32,124	33,096	33,702	35,293	35,813
Operational Costs	44,999	45,296	44,504	43,707	42,966
Facility, IT and Support	152	157	157	157	157
Total Gross	77,276	78,549	78,363	79,158	78,935
Total Revenues	(10,649)	(11,610)	(11,624)	(11,626)	(11,628)
Total Net Expenditure	66,627	66,938	66,739	67,532	67,307

Note: Numbers may not balance due to rounding.

Proposed Budget Changes Excluding New Initiatives and New Revenues

The following table provides detailed highlights of budget changes by major cost and revenue category. It identifies the net changes to maintain existing service levels, efficiencies and cost savings, and cost increases arising from prior year decisions.

Description	2016 Budget (\$000's)	2017 Proposed Budget (\$000's)	Change (\$000's)	Details (\$000's)
Labour and Benefits	32,124	32,818	694	Increase Reflects Labour Adjustments and Other Fringe Benefit Changes
Administration and Support Costs	152	157	5	
Advertising & Promotions	110	108	(2)	
Communication Costs	720	901	181	\$150 - Increase in Traffic Signal Communication to reflect actuals, offset with an increase in revenue. \$23 - Increase in Communication Costs to reflect additional Parking Machines in Streetsville and Port Credit
Contractor & Professional Services	29,624	29,626	2	
Equipment Costs & Maintenance Agreements	545	617	72	\$50 - Increase in Maintenance Agreement to reflect additional Parking Machines in Streetsville and Port Credit \$22 - Implementation of Customer Management System for Parking
Finance Other	66	93	27	\$25 - Increase in Registry Searches for Survey and Inspection to reflect actual \$2 - Increase in Bank charges for additional Parking Machines in Streetsville and Port Credit
Materials, Supplies & Other Services	9,923	9,681	(242)	(\$175) - Savings realized in Fleet Maintenance to reflect lower fuel rates (\$20) - Decrease in Asphalt repairs to reflect actual historical spends (\$50) - Decrease in Sign Shop area to reflect actual historical spends
Occupancy & City Costs	6,805	6,572	(233)	(\$270) - Savings realized in Hydro for Street Lighting LED conversion \$51 - Increase in utilities (Water, Hydro, and Gas) for various facilities
Staff Development	167	161	(6)	
Transfers To Reserves and Reserve Funds	328	495	167	\$167 - Transfer to Parking reserve fund, as a result of the net revenue expected from the implementation of additional parking machines in Streetsville and Port Credit.
Transportation Costs	(3,288)	(3,488)	(200)	(\$200) - Net Savings realized in Vehicle Rental and Lease to reflect historical trends
Subtotal - Other Operating	45,152	44,923	(228)	
Total Revenues	(10,499)	(11,324)	(825)	(\$450) - Increase in Recovery from the Region of Peel to reflect Traffic Signal Services Agreement (\$140) - Increase in Net Revenue due to Streetsville and Port Credit additional Parking Machines (\$235) - Increase in revenues to reflect actual, offset with various expenses above
Transfers To/From Reserves and Reserve Funds	(150)	(150)	0	
Subtotal - Revenues	(10,649)	(11,474)	(825)	
Total	66,627	66,268	(359)	

Note: Numbers may not balance due to rounding.

Proposed New Initiatives and New Revenues

This table presents the costs by budget request (BR#) for proposed new initiatives. Detailed descriptions of each budget request can be found on the pages following the table.

Description	BR #	2017 FTE Impact	2017 Proposed Budget (\$000's)	2018 Forecast (\$000's)	2019 Forecast (\$000's)	2020 Forecast (\$000's)	2017 to 2020 FTE Impact	2017 to 2020 Capital (\$000's)
New Initiative								
Continued Advanced Transportation Management System (ATMS) Implementation	2473	2.0	142	118	70	73	2.0	700
Cycling Master Plan Phased Implementation	2503	0.0	0	0	104	106	1.0	0
Sidewalk Improvements	2504	0.0	500	500	500	500	0.0	0
Electronic Cash Handling System	2509	0.0	5	10	15	20	0.0	60
Mobile Technology Solution for Field Operations	2513	0.0	24	24	24	24	0.0	265
Loreland Works Yard	2514	0.0	0	0	937	955	11.0	16,200
Parking Technician	2516	1.0	0	0	0	0	1.0	0
Total New Initiative		3.0	671	652	1,650	1,677	15.0	17,225
New Revenues								
		0	0.0	0	0	0	0	0.0
Total New Revenues		0	0.0	0	0	0	0	0.0
Total New Initiatives and New Revenues		3.0	671	652	1,650	1,677	15.0	17,225

Note: Numbers may not balance due to rounding.

Proposed Initiative	Department	Service Area
Continued Advanced Transportation Management System (ATMS) Implementation	Transportation & Works Department	Roads

Required Annual Operating Investment

Impacts (\$000s)	2017	2018	2019	2020
Gross Expenditures	203.0	191.6	145.1	148.6
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	61.2	73.4	74.7	76.0
Tax Levy Requirements	141.8	118.2	70.4	72.6
* Net Change in \$		(23.6)	(47.8)	2.2
FTEs	2.0	2.0	2.0	2.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital (\$000s)	2016 & Prior	2017	2018	2019	2020 & Beyond
Expenditures	4,000.0	1,000.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

The existing traffic control system is at the end of its life and the opportunity exists to replace it with modern technologies and approaches in the form of an Advanced Transportation Management System (ATMS). It is no longer sufficient for the City to simply operate and maintain traffic signals. The system as a whole requires improved integration and active management to mitigate congestion and to provide users with what they require to make appropriate trip and mode choices.

Details of Service Change

The ATMS project is a "cash-flowed" project with a phased implementation scheduled. Previous Budget Requests (BR # 46, 222, 562, 1393 and 1905) have outlined the capital and operating budgets requirements involved with the various project components.

Implementation of the ATMS project continues and the following previously identified capital and operating funds are proposed for 2017 and 2018:

1. Capital - For 2017, a "cash-flow" of \$1 million (gross) in capital funding is required to continue with the replacement of traffic signal controllers in the field.
2. Operating - As part of the staff resource planning to support the Traffic Management Centre, a total of eight full-time positions over four years (2014-2017) were identified, and six full-time positions have been previously approved. For 2017, the Traffic Management Centre requires two additional full-time traffic signal/system positions to support operations. In addition, cost saving projections involving the upgrades in traffic signal communication need to be adjusted for 2017 and 2018 to reflect the gradual migration to the new communication system.

Both the Region of Peel and the Ministry of Transportation Ontario are to cost share in the applicable capital and operating costs.

Service Impact

The ATMS will effectively change the City's control of traffic from a programmed passive control to an active and dynamic control. Decisions and actions can be made ongoing and timely. Without this initiative, the service levels for traffic operations will decrease significantly as higher traffic demands, transit priority and conflicting interests erode available road network capacity. Traffic delays and queuing will tend to be longer and complaints will increase.

The two full-time positions proposed for 2017 have been previously identified as part of the staff resource planning for the Traffic Management Centre. Currently, six out of the eight planned full-time positions have been approved over the previous three years (2014-2016). These positions include technical staff to support the overall traffic control system, including traffic signals, intelligent transportation systems, and the Traffic Management Centre. Failure to deploy the remaining compliment of two full-time positions will delay the ATMS project schedule and will lessen the ability of staff to fully utilize the capabilities of the new traffic control system.

Budget Request #: 2503

Proposed Initiative	Department	Service Area
Cycling Master Plan Phased Implementation	Transportation & Works Department	Roads

Required Annual Operating Investment

Impacts (\$000s)	2017	2018	2019	2020
Gross Expenditures	0.0	0.0	104.0	105.8
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	0.0	0.0	104.0	105.8
* Net Change in \$		0.0	104.0	1.8
FTEs	0.0	0.0	1.0	1.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital (\$000s)	2016 & Prior	2017	2018	2019	2020 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

The Cycling Office has expanded its scope to include sidewalk development and pedestrian movement. Additional staff is required to fulfill the new mandate of the Active Transportation (AT) Office. The goal of the AT Office is to implement the mobility objectives of the City's Strategic and Official Plans, providing transportation choices and healthy ways to travel.

Details of Service Change

Cities across Canada are developing programs that encourage cycling and walking as every day activities, increasing their livability and providing transportation choices to their residents. While Mississauga has had success to date in encouraging cycling, with 51 of the 79 recommended actions in the Cycling Master Plan (CMP) underway, more efforts to encourage walking and cycling are necessary. The key limitation to encouraging active transportation is the lack of staff resources. A new staff member in 2019 is therefore considered necessary.

Service Impact

Cycling culture in Mississauga is growing rapidly, as demonstrated by increased participation in community ward rides, the Tour de Mississauga, and Bike to Work/School Day events. There are growing expectations from residents regarding the City's commitment to implement the CMP and to establish more sidewalks and trails. While the Region has some resources for Active Transportation, the City will need to take the lead on programs with our residents. In addition, the Cycling Committee has adopted the goal of achieving a Silver designation for Mississauga as part of the Bicycle Friendly Community award program.

Without new staff, the Active Transportation Office will be unable to adequately support public requests for new sidewalks and cycling facilities and to lead in the development of Active Transportation facilities. Without new staff, the Active Transportation Office will be unable to provide the service identified in the City's Strategic and Official Plans. These areas are all important in achieving "Silver" status which measures achievements in Engineering (network facilities), Education, Encouragement, Enforcement and Evaluation and Planning.

Budget Request #: 2504

Proposed Initiative	Department	Service Area
Sidewalk Improvements	Transportation & Works Department	Roads

Required Annual Operating Investment

Impacts (\$000s)	2017	2018	2019	2020
Gross Expenditures	500.0	500.0	500.0	500.0
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	500.0	500.0	500.0	500.0
* Net Change in \$		0.0	0.0	0.0
FTEs	0.0	0.0	0.0	0.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital (\$000s)	2016 & Prior	2017	2018	2019	2020 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

Through the current administration of three annual contracts (Sidewalk Jacking - \$200,000, Emergency and Roadway Maintenance - \$400,000, and City Repair - \$1.1 million), Works Maintenance has a 2016 budget of - \$1.7 million to capture the ever increasing demand for sidewalk repairs City-wide. This budget has been increased from \$1.13 million in 2015. However, this is not sufficient to complete the sidewalk repairs that are deficient City-wide.

Details of Service Change

The last three-year average has identified approximately 21,000 bays (63,000 square metres) of sidewalk that are not being completed/caught-up, representing approximately a \$6.3 million deficit to bring the sidewalk to a state of good repair and the quantity keeps increasing as the City ages. To expedite the repairs, Works Maintenance is proposing to prepare a separate Sidewalk Replacement Contract in 2017 to supplement the existing three contracts but focus efforts on repairing deficiencies in higher volume with the end goal of reducing the 21,000 bays of sidewalk identified as issues over the next 10 years.

The existing three contracts will remain as avenues to deal with service requests, emergency repairs and keep up with the growing demand as infrastructure ages and/or more trips hazards are created.

Service Impact

Additional funding of \$500,000/year for a period of 10 years is being sought to help with the backlog and to be caught-up. It is expected that this new funding, along with existing funding, will serve to eliminate the increasing backlog as identified by the Maintenance Standards and Permit Section Inspectors. This will also be considered to be a service enhancement that will help make our City more walkable, while reducing the insurance liability through claims currently being received.

Budget Request #: 2509

Proposed Initiative	Department	Service Area
Electronic Cash Handling System	Transportation & Works Department	Roads

Required Annual Operating Investment

Impacts (\$000s)	2017	2018	2019	2020
Gross Expenditures	5.0	10.0	15.0	20.0
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	5.0	10.0	15.0	20.0
* Net Change in \$		5.0	5.0	5.0
FTEs	0.0	0.0	0.0	0.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital (\$000s)	2016 & Prior	2017	2018	2019	2020 & Beyond
Expenditures	0.0	60.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

An electronic cash handing system which is integrated with the Infor permit system as well as processing transactions on a stand-alone basis. It will reduce staff time for writing manual receipts, double data entry, balance, reconcile, upload to SAP and report on payments, provide better control of monies and audit trails and generate management reports and other reports requested by internal customers.

Details of Service Change

To replace a manual cash handling system, issue electronic receipts, integrate with existing systems (Infor and SAP), collect payment information in one data base and generate custom reports.

Service Impact

Consolidate all cash handling activities at the TW Customer Service Counter into one data source by recording all payment transactions into one system. We will be able to generate receipts for fees and deposits which will replace the various Excel spreadsheets currently being used. With the new system in place, we will be able to increase data accessibility and generate management reports while increasing our analytical ability. The new system will create efficiencies by allowing staff to access historical and current information upon request. The new system will increase our data sharing and data export capability to other business units within the corporation while providing audit trails to facilitate internal and external reviews. This initiative will allow us to prepare for future online payments integration and one stop shopping for payments in other areas within the City, such as development application fees.

Budget Request #: 2513

Proposed Initiative	Department	Service Area
Mobile Technology Solution for Field Operations	Transportation & Works Department	Roads

Required Annual Operating Investment

Impacts (\$000s)	2017	2018	2019	2020
Gross Expenditures	24.0	24.0	24.0	24.0
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	24.0	24.0	24.0	24.0
* Net Change in \$		0.0	0.0	0.0
FTEs	0.0	0.0	0.0	0.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital (\$000s)	2016 & Prior	2017	2018	2019	2020 & Beyond
Expenditures	0.0	265.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

This initiative will modernize our field operations through the introduction of mobile technology. We will gain efficiency through the elimination of duplicate data entry and increase productivity of employee in the field.

Details of Service Change

This initiative includes capital funding for the purchase of tablets. In addition, an ongoing operating budget will also be required to sustain this proposed mobile solution.

The following phases outline the approach required to implement this project in Works Operations and Maintenance:

Phase 1 – Yard Supervisors and Assistant Supervisors.

Phase 2 – Inspectors to Maintenance Contracts.

Phase 3 – Technical Services (Road Technicians, Administration, Sidewalk Inspection).

Phase 4 – Front Line Staff.

Service Impact

The proposed mobile technology solution will realize a profound improvement to our field operations. In particular, mobile connectivity will allow us to improve workflow effectiveness and productivity in the field. Thus, allowing us to provide more efficient and effective service to our citizens. Further to providing improved service, this technology will also allow Works Operations to provide more accurate metrics and performance measures for our business practices.

Proposed Initiative	Department	Service Area
Loreland Works Yard	Transportation & Works Department	Roads

Required Annual Operating Investment

Impacts (\$000s)	2017	2018	2019	2020
Gross Expenditures	0.0	0.0	936.9	954.8
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	0.0	0.0	936.9	954.8
* Net Change in \$		0.0	936.9	17.9
FTEs	0.0	0.0	11.0	11.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital (\$000s)	2016 & Prior	2017	2018	2019	2020 & Beyond
Expenditures	0.0	1,500.0	7,950.0	6,750.0	0.0

Why Staff Recommend this Initiative

The City has grown substantially over the last 20 years; this new yard is required to meet operational service levels. The yard will include material and equipment storage, administrative space and possible snow storage capacity.

Details of Service Change

The Loreland works yard has been identified and previously approved as a cash flowed project in the capital budget. The boundaries of the existing yards will be re-established to continue to meet and improve services levels and also disperse equipment and staff for best practices purposes and customer service.

For 2019, three additional full time staff positions are required to support the operations of the yard. This would include one Area Supervisor, one Assistant Area Supervisor and one Administrative Assistant. One Loader Operator (WP II), one Driver (WP III) and six Labourers (WP IV) to carry out the day to day operations of the yard are required.

This yard will include a mechanics bay, and three mechanics – one Lead hand (Service Centre) and two mechanics (Service Centre).

New equipment will be required for day to day operations. This will include two five- tonne trucks, two crew cabs, one loader, one backhoe, one belt loader and two vehicles. New equipment and tools will be needed for the service centre as well.

Service Impact

The new Loreland Works yard will help service levels for maintenance operations especially in the winter months. Having the Loreland yard will also help alleviate pressures in the existing four yards with congestion as a result of the winter equipment and lack of storage. The realignment of the boundaries of each yard will also have a positive impact on our service levels with this new yard.

Proposed Initiative	Department	Service Area
Parking Technician	Transportation & Works Department	Roads

Required Annual Operating Investment

Impacts (\$000s)	2017	2018	2019	2020
Gross Expenditures	75.7	76.8	77.8	78.9
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	75.7	76.8	77.9	78.9
Tax Levy Requirements	0.0	0.0	0.0	0.0
* Net Change in \$		0.0	0.0	0.0
FTEs	1.0	1.0	1.0	1.0

**In each year, all values are cumulative, not incremental.*

Required Capital Investment

Total Capital (\$000s)	2016 & Prior	2017	2018	2019	2020 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

The City's paid parking program has grown to the size where the current level of operational support is no longer adequate and requires additional staff support. It is anticipated that over the next two years alone over 100 new parking pay and display machines will be added to the existing inventory of approximately 200 machines. In order to perform preventative maintenance and respond to breakdowns in a timely fashion additional dedicated staff support is required.

Details of Service Change

Currently, the Paid Parking Program is supported by 1.5 FTE Parking Meter Technician positions that are deployed from the Signs & Pavement Markings Unit. Of this complement, the 0.5 FTE is a full-time staff person who splits duties between Municipal Parking and the Signs & Markings Unit.

The current 0.5 FTE that services the Municipal Parking program will be returned to the Signs and Markings Unit for future deployment and 1 FTE, fully dedicated to the Municipal Parking section, will be created.

This position will utilize the operating budget associated with the existing 0.5 FTE and the balance of funding that will be required for the new FTE will be netted from parking revenues and will not impact the tax base.

Service Impact

The increase of 1.5 FTE dedicated staff to the Municipal Parking program to 2 FTE staff dedicated to the Municipal Parking program will allow the Municipal Parking section to more efficiently operate and maintain the expanding paid parking program. The additional resource will monitor and maintain parking infrastructure assets.

Human Resources

Proposed Full Time Equivalent Staffing Distribution by Program

Program	2016	2017	2018	2019	2020
Corporate Fleet Maintenance	27.7	27.7	27.7	27.7	27.7
Crossing Guards	77.1	77.1	77.1	77.1	77.1
Engineering and Construction	57.0	57.0	57.0	57.0	57.0
Maintenance Control *	136.2	137.2	137.2	148.2	148.2
Municipal Parking	5.0	6.0	6.0	6.0	6.0
Streetlighting	2.0	2.0	2.0	2.0	2.0
Survey & Inspection	57.5	57.5	57.5	57.5	57.5
Traffic Management	62.3	64.3	64.3	64.3	64.3
Transportation & Infrastructure Planning	44.3	44.3	44.3	45.3	45.3
Total Service Distribution	469.1	473.1	473.1	485.1	485.1

Note: Numbers may not balance due to rounding.

*Cleaning and Litter Pick-up and Winter Maintenance Programs are included within Maintenance Control.

Staffing changes in 2017 include:

An increase of three FTEs representing two Traffic Control Centre Operators for the continued Advanced Transportation Management System (ATMS) implementation, one Parking Technician to support the Municipal Parking Program and one transfer of an Operations Information Coordinator from Regulatory Service.

Capital

This section summarizes the forecast 10 year capital requirements for this service. The following table presents the forecast by major program. The next table summarizes the sources of financing or the capital forecast.

Proposed 2017-2026 Capital Budget by Program

Program Expenditures	2017 Proposed Budget (\$000's)	2018 Forecast (\$000's)	2019 Forecast (\$000's)	2020 Forecast (\$000's)	2021-2026 Forecast (\$000's)	Total 2017-2026 (\$000's)
Bridge & Structure Rehabilitation	8,500	8,700	6,550	6,500	41,000	71,250
Major Roads	15,511	16,505	26,714	23,057	85,867	167,654
Other Engineering	29,167	26,003	17,968	13,165	71,912	158,214
Roadway Rehabilitation	21,141	22,400	20,200	29,150	159,350	252,241
Total	74,318	73,607	71,432	71,872	358,129	649,359

Note: Numbers may not balance due to rounding. Numbers are gross.

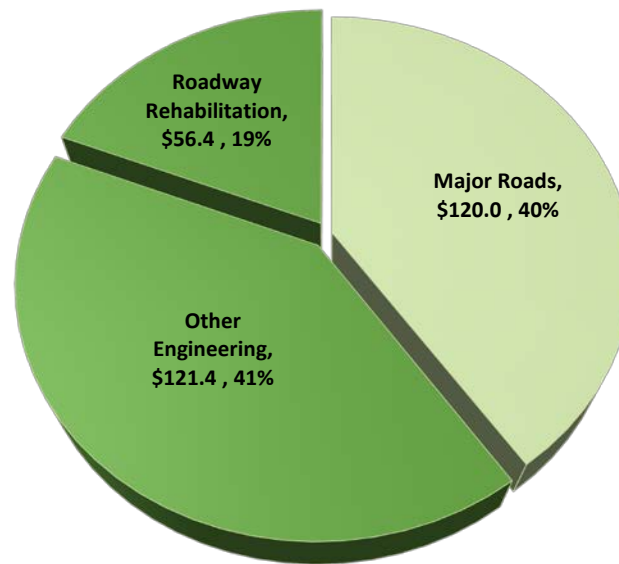
2017-2026 Capital Forecast Highlights include the following:

Priority 2017 Projects Are Funded \$74.3 Million

- Three bridge/culvert structures are scheduled for rehabilitation/repair including both the east and west bound structures along Dundas Street West over the Credit River, Matheson Boulevard East over the Etobicoke Creek and Kingsbridge Garden Circle over Cooksville Creek
- Major road improvement projects include continued funding for the Torbram Road Grade Separation (cash-flow), funding for Argentinia Road between Tenth Line West and Ninth Line and the Creditview Road Bridge over the Credit River
- Road rehabilitation projects include the renewal of 36 kilometres of roads (79 Streets)
- Other engineering projects include limited funding for sidewalks, cycling, noise barriers, parking, traffic, streetlighting and City fleet

10-Year Capital Forecast is \$649.4 Million

- Bridge rehabilitation projects fully funded and road rehabilitation is partially funded using federal gas tax funding
- Unfunded pressure for road rehabilitation of \$56.4 million over 10 years
- Major road improvement projects have been rescheduled to align with forecasted development charges revenue
- Limited funding available for Major Road Improvement and Other Engineering projects
- 10-year unfunded pressure totalling \$298 million, an increase of \$43 million over last year



Proposed 2017-2026 Capital Budget by Funding Source

The following table provides the funding sources used to fund the capital portion for each year of the proposed 2017-2020 Business Plan and the 2017 Budget and the consolidated forecast for 2021-2026.

Funding	2017 Proposed Budget (\$000's)	2018 Forecast (\$000's)	2019 Forecast (\$000's)	2020 Forecast (\$000's)	2021-2026 Forecast (\$000's)	Total 2017-2026 (\$000's)
Cash In Lieu	1,330	645	0	0	0	1,975
Development Charges	18,161	13,264	21,306	21,494	92,240	166,463
Development Contributions	743	470	470	470	2,820	4,973
Federal Funding	17,110	25,551	13,624	12,800	68,600	137,685
Provincial Funding	0	2,200	0	0	0	2,200
Other	7,900	3,019	0	0	0	10,919
Subsidies and Senior Govt. Level Grants	300	0	0	0	8,109	8,409
Tax	7,910	5,109	9,195	7,079	17,398	46,691
Debt	20,864	23,350	26,838	30,030	168,963	270,045
Total	74,318	73,607	71,432	71,872	358,129	649,359

Note: Numbers may not balance due to rounding. □

Proposed 2017 Capital Budget Detail

The following tables provide a detailed listing of proposed capital projects for 2017.

Program: Bridge and Structure Rehabilitation

Project Number	Project Name	Gross Cost (\$000's)	Recovery (\$000's)	Net Cost (\$000's)	Funding Source
TWBR00027	Bridge Repairs	4,850	0	4,850	Gas Tax -Federal Gas Tax-City Allocation
		2,000	0	2,000	Gas Tax -Federal Gas Tax-City Allocation
TWBR00028	Bridge/Culvert Structure Appraisal and Improvement Priority	150	0	150	Gas Tax -Federal Gas Tax-City Allocation
TWBR00029	Bridge Structure Detail Inspections & Design at various locations	500	0	500	Gas Tax -Federal Gas Tax-City Allocation
TWBR00070	Bridge & Structure Renewal - Various Locations	1,000	0	1,000	Gas Tax -Federal Gas Tax-City Allocation
Total		8,500	0	8,500	

Program: Roadway Rehabilitation

Project Number	Project Name	Gross Cost (\$000's)	Recovery (\$000's)	Net Cost (\$000's)	Funding Source
TWRR00026	Roadway Infrastructure Review (CASH FLOW)	200	0	200	Gas Tax -Federal Gas Tax-City Allocation
TWRR00031	Crack Sealing	100	0	100	Tax -Capital Reserve Fund
TWRR00032	Roadways Rehabilitation - Major Roads and Industrial Roads	12,000	0	12,000	Tax -Debt-Other, Gas Tax -Federal Gas Tax-Regional Allocation
TWRR00099	Roadways Rehabilitation - Residential Roads	8,841	0	8,841	Tax -Debt-Other, Gas Tax -Federal Gas Tax-City Allocation
Total		21,141	0	21,141	

Note: Numbers may not balance due to rounding.

Proposed 2017 Capital Budget Detail (Cont'd)

Program: Major Roads

Project Number	Project Name	Gross Cost (\$000's)	Recovery (\$000's)	Net Cost (\$000's)	Funding Source
TWBR00003	Creditview Road over The Credit River Bridge Improvement (Cash Flow)	2,355	0	2,355	Tax -Debt-Other,DCA -City Wide Engineering Reserve Fund
TWMR00004	Torbram Road Grade Separation North	5,000	0	5,000	DCA -City Wide Engineering Reserve Fund
TWMR00034	Dundas Street West/Ninth Line West - Phase 1	550	0	550	DCA -City Wide Engineering Reserve Fund
TWMR00054	Transportation Master Plan Study	259	130	130	DCA -City Wide Engineering Reserve Fund
TWMR00064	Intersection Capital Program	495	0	495	DCA -City Wide Engineering Reserve Fund
TWMR00066	Preliminary Engineering Studies	100	0	100	DCA -City Wide Engineering Reserve Fund
TWMR00068	Development Charges Update (Major Roads)	400	0	400	DCA -City Wide Engineering Reserve Fund
TWMR00112	Lakeshore Road Movement Study	259	130	130	DCA -City Wide Engineering Reserve Fund
TWMR00113	Downtown Roads	500	0	500	Tax -Debt-Other
TWMR00117	Burnhamthorpe Road West - Living Arts Drive to Mavis Road	500	0	500	Tax -Debt-Other
TWMR00119	Square One Drive - Confederation Parkway to Rathburn Road West	100	0	100	DCA -City Wide Engineering Reserve Fund
TWMR00142	Downtown Master Plan	500	0	500	DCA -City Wide Engineering Reserve Fund
TWMR00150	Argentia Road - Tenth Line to Ninth Line	4,493	3,969	523	DCA -City Wide Engineering Reserve Fund
Total		15,511	4,228	11,282	

Note: Numbers may not balance due to rounding.

Proposed 2017 Capital Budget Detail (Cont'd)

Program: Other Engineering

Project Number	Project Name	Gross Cost (\$000's)	Recovery (\$000's)	Net Cost (\$000's)	Funding Source
TWEC005957	Pedestrian & Cyclist Access to Transitway & GoTransit	4,017	1,840	2,177	DCA -City Wide Engineering Reserve Fund,DCA -City Wide Engineering Reserve Fund,Tax - Capital Reserve Fund
TWEC005958	Airport Corporate Centre Pedestrian Sidewalk to Transitway	310	155	155	Tax -Capital Reserve Fund
TWOE00040	Traffic Management Centre (Cash Flow)	1,000	300	700	DCA -City Wide Engineering Reserve Fund,Developer Contributions -Capital and Maintenance Reserve Fund
TWOE00087	Multi-Use Trails along Hanlan Routes	643	322	322	DCA -City Wide Engineering Reserve Fund
TWOE00111	Electronic Cash Handling System	60	0	60	Tax -Capital Reserve Fund
TWOE00112	Mobile Technology Solution for Field Operations	265	0	265	Tax -Capital Reserve Fund
TWOE00126	Field Equipment Replacement - Traffic Controllers	197	99	99	Tax -Capital Reserve Fund
TWOE00134	Noise Wall Program	815	0	815	Gas Tax -Federal Gas Tax-City Allocation
TWOE00137	Salt Management Program	50	0	50	Tax -Capital Reserve Fund
TWOE00138	Sidewalks	450	0	450	DCA -City Wide Engineering Reserve Fund,Developer Contributions -Sidewalks Reserve Fund
TWOE00139	Streetlighting	600	0	600	Tax -Debt-Other
TWOE00140	Survey and Control Network	65	0	65	Tax -Capital Reserve Fund
TWOE00141	Topographical Updating	27	0	27	Tax -Capital Reserve Fund
TWOE00143	Traffic Signal Equipment Enhancements	155	78	78	DCA -City Wide Engineering Reserve Fund

Proposed 2017 Capital Budget Detail (Cont'd)

Program: Other Engineering (cont'd)

Project Number	Project Name	Gross Cost (\$000's)	Recovery (\$000's)	Net Cost (\$000's)	Funding Source
TWOE00145	Traffic Signals - New	710	0	710	DCA -City Wide Engineering Reserve Fund,Developer
TWOE00146	Traffic Signals - Rebuild	390	0	390	Tax -Debt-Other
TWOE00147	Traffic System and ITS	78	39	39	DCA -City Wide Engineering Reserve Fund
TWOE00233	Specialized Equipment	70	0	70	Tax -Capital Reserve Fund
TWOE00235	New Vehicles & Equipment	275	0	275	Tax -Capital Reserve Fund,Tax -Capital Reserve Fund,Tax -Capital Reserve Fund,DCA- Public Works Buildings & Fleet Reserve Fund
TWOE00286	Site Assessments and Data Management	370	0	370	Gas Tax -Federal Gas Tax-City Allocation
TWOE00326	Loreland Works Yard	1,500	0	1,500	Tax -Debt-Other
TWOE00328	Streetlighting	700	0	700	Tax -Debt-Other
TWOE00331	Vehicle & Equipment Replacement	2,684	0	2,684	Tax -Capital Reserve Fund
TWOE00334	Parking Master Plan and Implementation Strategy	325	0	325	CIL City Centre Off Street Parking Reserve Fund,CIL City Centre Off Street Parking Reserve Fund
TWOE00355	Property Acquisition	6,100	0	6,100	Tax -Capital Reserve Fund
TWOE00364	Cycling Program	200	0	200	Gas Tax -Federal Gas Tax-City Allocation
TWOE00381	Municipal Parking Development Study	150	0	150	CIL City Centre Off Street Parking Reserve Fund
TWOE00401	Pay&Display Parking Meters-Streetsville	130	0	130	CIL Cash In Lieu Of Parking-Streetsville Reserve Fund
TWOE00404	Traffic Calming Program	200	0	200	Gas Tax -Federal Gas Tax-City Allocation

Proposed 2017 Capital Budget Detail (Cont'd)

Program: Other Engineering (cont'd)

Project Number	Project Name	Gross Cost (\$000's)	Recovery (\$000's)	Net Cost (\$000's)	Funding Source
TWOE00432	Pay & Display - Port Credit	400	0	400	CIL Cash In Lieu Of Parking-Port Credit Reserve Fund
TWOE00433	Pay & Display - Streetville	225	0	225	CIL Cash In Lieu Of Parking-Streetville Reserve Fund
TWOE00434	Feasibility Study-Port Credit Library Parking Lot	100	0	100	CIL Cash In Lieu Of Parking-Port Credit Reserve Fund
TWOE00435	At Grade Railway Crossing-Detailed Safety Assessment	104	52	52	Tax -Capital Reserve Fund
TWOE00437	BIA Waste Equipment	100	0	100	Tax -Capital Reserve Fund
TWOE00442	Noise Wall Program	80	0	80	Gas Tax -Federal Gas Tax-City Allocation
TWOE00462	Sidewalks - Accessible Pedestrian Crossings (AODA)	2,073	1,036	1,036	Tax -Capital Reserve Fund
TWOE00465	Burnhamthorpe Multi-Use Trail Bridge - #3	1,500	0	1,500	DCA -City Wide Engineering Reserve Fund
TWOE00470	Cycling Master Plan	104	52	52	Tax -Capital Reserve Fund
TWOE00471	Noise Wall Program	45	0	45	Gas Tax -Federal Gas Tax-City Allocation
TWRR00056	Parking Lot Rehabilitation	100	0	100	Tax -Capital Reserve Fund
TWRR00108	Parking Lot Retaning Wall - Streetville	800	0	800	Tax -Debt-Other
TWTI005970	Sidewalks	1,000	0	1,000	Gas Tax -Federal Gas Tax-City Allocation
Total		29,167	3,972	25,195	

Note: Numbers may not balance due to rounding.

Proposed 2018 - 2020 Capital Budget by Sub-Program

The following tables provide a listing of capital forecast by sub-program for 2018 -2020.

Sub-Program	2018 Forecast (\$000's)	2019 Forecast (\$000's)	2020 Forecast (\$000's)
Bridge & Structure Rehabilitation			
Bridge & Structure Appraisal	0	150	0
Bridge & Structure Evaluation & Design	400	400	400
Bridge & Structure Renewal	8,300	6,000	6,100
Subtotal	8,700	6,550	6,500

Sub-Program	2018 Forecast (\$000's)	2019 Forecast (\$000's)	2020 Forecast (\$000's)
Major Roads			
Grade Separation	1,300	4,000	4,000
Intersection Improvements	495	495	495
Road Improvements	14,710	22,219	18,562
Subtotal	16,505	26,714	23,057

Sub-Program	2018 Forecast (\$000's)	2019 Forecast (\$000's)	2020 Forecast (\$000's)
Roadway Rehabilitation			
Crack Sealing	100	100	100
Road Rehabilitation	22,100	19,900	28,850
Roadways Infrastructure Review	200	200	200
Subtotal	22,400	20,200	29,150

Note: Numbers may not balance due to rounding.
Numbers are net.

Proposed 2018 - 2020 Capital Budget by Sub-Program (Cont'd)

Sub-Program	2018 Forecast (\$000's)	2019 Forecast (\$000's)	2020 Forecast (\$000's)
Other Engineering			
Cycling Program	2,028	1,725	4,525
Environmental Mmgt-City Owned Properties	361	386	414
New Vehicles & Equipment	195	195	195
Parking - Municipal	745	100	100
Property Acquisition	2,190	770	0
Salt Management Program	50	50	50
Sidewalks	2,641	1,450	1,227
Specialized Equipment	75	75	75
Streetlighting	900	900	900
Streetscape	0	0	0
Survey Equipment and Control	65	25	25
Topographical Updating	55	45	45
Traffic Calming	200	200	200
Traffic Signals	2,255	3,355	3,355
Vehicle & Equipment Replacement	2,174	1,942	2,054
Works Yards Space (South East Works Yard)	7,950	6,750	0
Subtotal	22,984	17,968	13,165
Total Expenditures	70,589	71,432	71,872

Note: Numbers may not balance due to rounding.
Numbers are net.

Performance Measures

A Balanced Scorecard identifies and measures four key areas of an organization's performances; Financial, Customers, Employees, and Business processes. By paying attention to all four areas, an organization can retain balance in its performance and ensure that it is moving towards the attainment of its goals.

Financial Measures

The *average road and bridge operating cost* is a measure that indicates the City's ability to manage cost pressures associated with aging infrastructure. Without compromising public safety, this Service Area will continue to apply best practices and find efficiencies in day to day operations while providing consistent service levels.

The *average winter maintenance operating cost* is a measure of the City's ability to balance winter maintenance operating costs with defined service levels. Without compromising public safety, this Service Area will continue to apply best practices and find operating efficiencies throughout all winter maintenance activities.

The *annual gross revenue for parking* is a measure of the City's ability to introduce new parking management initiatives and adjust parking rates. The City's objective is to implement improvements to parking management in strategic areas which is expected to maintain parking revenues over the term of this business plan.

Customer Measures

The *percentage of customer requests* for service tracked in the Infor system meeting target response dates is a measure that indicates the Service Area's ability to respond to resident and Council service requests in accordance with established response times and service levels.

Citizen satisfaction is a measure that indicates how satisfied residents are with road maintenance, traffic flow and environmental planning.

Employee Measures

Employee engagement survey participation is a measure indicating the percentage of employees participating in the Employee Engagement Survey. This statistic is measured every three years. It is important to the City that employees continue to participate in this survey and express how they feel about working at the City.

Overall job engagement is a measure which indicates the extent to which employees feel engaged in decision making at the City.

Employee satisfaction is a measure which indicates the extent to which employee's value, enjoy and believe in what they do.

Business Process Measures

The *percentage of roads in "good" condition or better* is a measure that indicates the City's ability to manage lifecycle asset management programs for roads. Pavement condition surveys are conducted, whereby a condition rating is applied to every City-owned road in Mississauga. The targets for this measure are in line with the minimum service level target of 70 per cent.

The *percentage of bridges and culverts in "good" condition or better* is a measure that indicates the City's ability to manage lifecycle asset management programs for bridges and culverts. Mandatory bridge and culvert condition surveys are performed whereby a condition rating is applied to every City-owned bridge and culvert in Mississauga. The targets for this measure are in line with the minimum service level target of 85 per cent.

The *percentage of City-owned intersections that function at or below planned capacity* is a measure that indicates the efficiency with which traffic moves through intersections within the City. While the percentage of intersections operating at or below capacity has not changed in recent years, the delay experienced by vehicles at these intersections has increased. The *number of collisions per thousand people* is a measure that indicates the City's ability to provide safe traffic management programs. We are currently meeting our target and aim to continue to do so.

Balanced Scorecard

Measures for Roads	2013 (Actual)	2014 (Actual)	2015 (Actual)	2016 (Plan)	2017 (Plan)	2018 (Plan)	2019 (Plan)	2020 (Plan)
Financial:								
Average road operating cost Per lane Km ¹	\$1,694	\$1,827	\$2,212	\$1,890	\$1,940	\$1,940	\$1,940	\$1,940
Average bridge/culvert maintenance cost per m ² of surface area ¹	\$2.62	\$3.31	\$4.73	\$4.00	\$4.50	\$5.00	\$5.50	\$6.00
Average winter maintenance operating cost per lane Km ¹	\$4,605	\$4,828	\$3,672	\$4,800	\$4,800	\$4,800	\$4,800	\$4,800
Annual gross parking revenues	\$1,327,000	\$1,542,000	\$1,716,000	\$1,432,000	\$1,571,000	\$1,571,000	\$1,571,000	\$1,571,000
Customer:								
Percentage of customer requests meeting target response date	90%	90%	90%	90%	90%	90%	90%	90%
Average citizen satisfaction rating for roads	81%	81%	81%	75%	75%	75%	75%	75%
Employees/Innovation:								
Overall Employee Engagement Survey participation ²	N/A	N/A	83%	N/A	N/A	78%	N/A	N/A
Overall job engagement ²	N/A	N/A	72%	N/A	N/A	74%	N/A	N/A
Employee Satisfaction ²	N/A	N/A	75%	N/A	N/A	77%	N/A	N/A

Balanced Scorecard (Cont'd)

Measures for Roads	2013	2014	2015	2016	2017	2018	2019	2020
	(Actual)	(Actual)	(Actual)	(Plan)	(Plan)	(Plan)	(Plan)	(Plan)
Internal Business Process:								
Percentage of roads in good condition or better ¹	77%	77%	77%	74%	73%	72%	71%	70%
Percentage of bridges in good condition or better ¹	96%	98%	89%	85%	85%	85%	85%	85%
Percentage of City-owned intersections that function at or below planned capacity	87%	86%	86%	85%	85%	85%	85%	85%
Number of collisions per 1000 population	8	8	8	8	8	8	8	8
Percentage of time that winter response times were met ¹	100%	100%	100%	100%	100%	100%	100%	100%

¹ Municipal Performance Measurement Program (MPMP) definitions were used.

² The Employee Engagement Survey is completed once every three years (2015, 2018).