



Fire & Emergency Services

2019-2022 Business Plan
& 2019 Budget

Foreword

Our Vision for the Future

Mississauga will inspire the world as a dynamic and beautiful global city for creativity and innovation, with vibrant, safe and connected communities; where we celebrate the rich diversity of our cultures, historic villages, Lake Ontario and the Credit River Valley. A place where people choose to be.

Mississauga City Council approved **Our Future Mississauga**; a Strategic Plan to achieve this vision over a forty year timeframe. The City engaged over 100,000 people to develop this Vision Statement. To achieve this vision the City has identified five Strategic Pillars for Change: **move**, **belong**, **connect**, **prosper** and **green**. Each year the City proposes various initiatives that are aligned with the Strategic Pillars and are intended to bring us closer to fulfilling our vision for the future. The City has over 300 lines of business which are consolidated into the 17 Services Areas (including the Stormwater Program) that are outlined in this Plan. The 2019-2022 Business Plan and 2019 Budget detail how and where the City plans to allocate resources to deliver programs and services.

The City is committed to providing programs and services cost-effectively. In this Plan we have outlined measures that will help us assess the quality, efficiency and customer satisfaction that our services achieve. The results help inform decisions on resource allocation and direct program offerings, and improve service delivery to ensure our vision is efficiently realized.

Table of Contents

Executive Summary of Fire & Emergency Services	3
Core Services	4
Vision, Mission, Goals of Service and Service Delivery Model	4
Current Service Levels and Trends.....	5
Performance Measures and Results	8
Balanced Scorecard	10
Awards and Achievements.....	11
The 2019-2022 Business Plan Outlook	12
Planning for the Future	12
Finding Efficiencies	16
Transforming our Business with Technology	19
Maintaining Our Infrastructure.....	20
Managing Our Human Resources.....	21
Proposed Operating Budget	25
Operating Budget Details	26
Proposed Budget by Program.....	26
Summary of Proposed Budget	27
Proposed Cost Increase Required to Maintain Current Service Levels.....	28
Proposed New Initiatives and New Revenues	29
Proposed Capital Budget	52
Proposed 2019-2028 Capital Budget by Program	52
Proposed 2019-2028 Capital Budget by Funding Source	53
Proposed 2019 Capital Budget Detail	54
Proposed 2020-2022 Capital Budget by Sub-Program	55



Executive Summary of Fire & Emergency Services

Mission: To protect life, property, and the environment in Mississauga from all perils guided by the three lines of defense: public education, prevention, and emergency response.

Services we provide:

- Public Education
- Code Enforcement
- Fire Plans Examination
- Emergency Dispatch
- Emergency Response
- Fire Cause Determination

Interesting facts about this service:

- Responds to an average of 29,000 incidents each year
- Call volume is highest between 5 p.m. and 7 p.m.
- Call volume has increased an average of nearly 1,200 calls annually over the past five years
- Asphyxia, respiratory conditions, chest pains or suspected heart attack account for 81 per cent of all medical calls
- Vehicle collisions represent 91 per cent of all rescue type calls

Highlights of the Business Plan include:

- Introduction of Public Safety Fire Program Reserve Fund to support short- and long-term community safety initiatives and service delivery changes
- Targeted public education based on identified key risks
- Proactive fire and life safety inspection program
- New fire station infrastructure including two new stations within this business cycle to address risk
- Development of fleet and inventory management processes
- Development and delivery of staff certification based on National Fire Protection Association (NFPA) standards

Net Investment (\$000's)	2019	2020	2021	2022
Operating	114,005	121,762	129,521	136,344
Capital	14,586	18,922	10,760	11,302
Full Time Equivalents	752.0	769.0	802.0	808.0

Core Services

Vision, Mission, Goals of Service and Service Delivery Model

Vision

To be a global leader in Fire Service & Life Safety excellence.

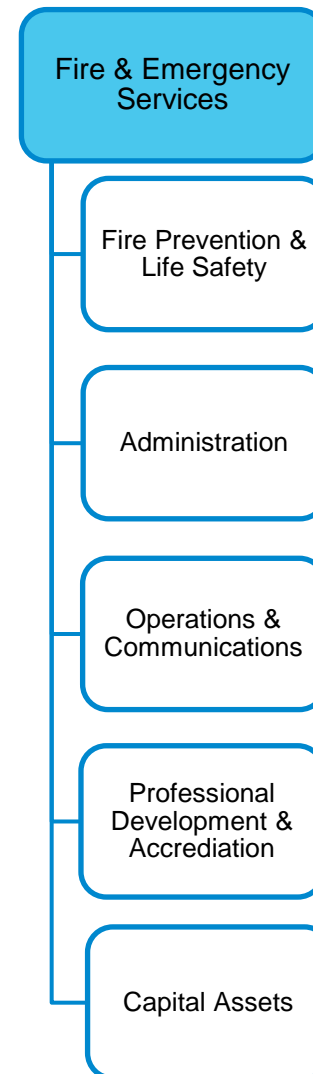
Mission

To protect life, property, and the environment in Mississauga from all perils guided by the three lines of defense: public education, prevention, and emergency response.

Goals of Service

- Achieve community safety guided by the three lines of defense: public fire safety education, fire safety standards and enforcement, and emergency response
- Balance resources to identified risk through effective risk-based planning
- Continue to use and develop practices that provide financial and business sustainability
- Foster a healthy, safe, inclusive, and respectful culture
- Build leadership capability and create opportunity

Service Delivery Model

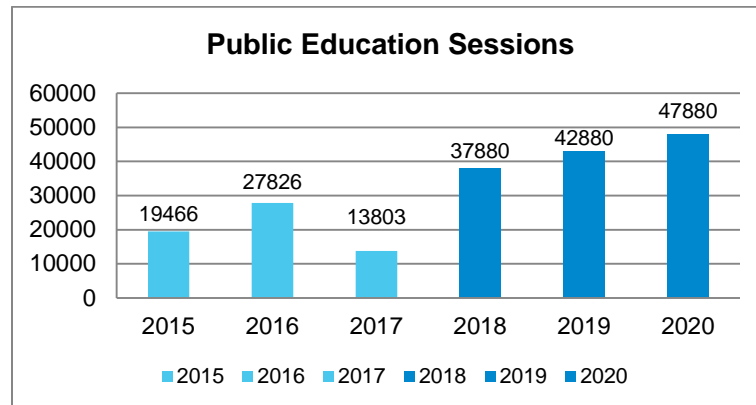


Current Service Levels and Trends

Public education

The overall objective of public education is to educate the public on fire safety and fire prevention as well as emphasize the importance of smoke alarms. In the event a fire does occur, the goal is to ensure every citizen is equipped with the tools to ensure safe evacuation. Mississauga Fire & Emergency Services (MFES) currently delivers a variety of public education programs. Prioritization of the development and delivery of fire safety education will be based on risk.

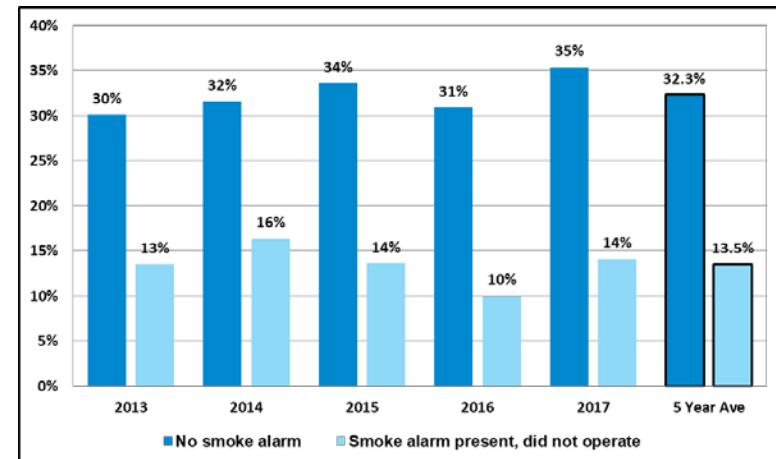
In 2017 MFES Public Education staff reached 13,803 residents with valuable fire safety information. This is fewer than previous years as a result of staffing changes and program realignment. In future years as we make changes to the implementation strategy, the number of people receiving public education is expected to increase. One of those key changes is to formally engage fire suppression staff (firefighters) to assist in program delivery. This will help reach more people and get the message out quickly and effectively.



Smoke alarms are required by law in the Province of Ontario in every dwelling and on every storey. As a result, smoke alarm programs and compliance are key components of public

education and fire prevention activities provided by fire departments across the province.

Over the past 10 years, 100 per cent of fire fatalities in the city of Mississauga occurred in residential occupancies. The smoke alarm compliance data collected over the past five years indicates that 46 per cent of fire calls do not have a working smoke alarm on the fire floor. In order to address this MFES will enhance public education related to smoke alarm compliance. The intent is to ensure that the smoke alarm program reflects the risk identified in the Comprehensive Risk Assessment (CRA) that was completed in 2017.



Fire Plans Examination

Building permit applications must comply with the fire and life safety requirements in the Ontario Building Code. These requirements include smoke and fire alarm systems, automatic fire sprinkler systems, emergency power systems, emergency lighting systems, hose and standpipe systems, hazardous processes/operations and protection, smoke control systems and high-rise safety measures. MFES Plans Examiners review each building permit application submitted to the City to ensure compliance. Depending on the complexity of the submission, plans must be reviewed within 10, 15 or 20 days.

Completed Applications by Fire Plans Examiners			
Year	# of Complete Applications Submitted	# Completed within Deadline	% of Time Legislated Deadline Met
2015	1,269	1,145	90.2
2016	1,245	1,226	98.5
2017	1,298	1,272	98.0

Fire Inspectors conduct fire safety inspections to ensure buildings are safe and comply with the Ontario Fire Code. The frequency of inspections directly impacts the level of fire safety and code compliance of properties. Of particular concern are vulnerable occupancies (retirement homes and care and treatment facilities) which are required to be inspected annually under the *Fire Protection and Prevention Act*. In 2017 all vulnerable occupancies within Mississauga were fully inspected and mock fire drills were conducted to ensure compliance.

In 2017 MFES completed a total of 8,212 fire safety inspections city wide.

Fire Inspectors are also responsible for fire cause investigations. Investigations are conducted after a fire to determine the area of origin and cause. This information is used to determine trends and assists MFES in the prevention of similar incidents as well as in developing fire safety education programming. In 2017 Fire Prevention and Life Safety conducted 82 major fire investigations, 33 of which resulted in prosecutions.

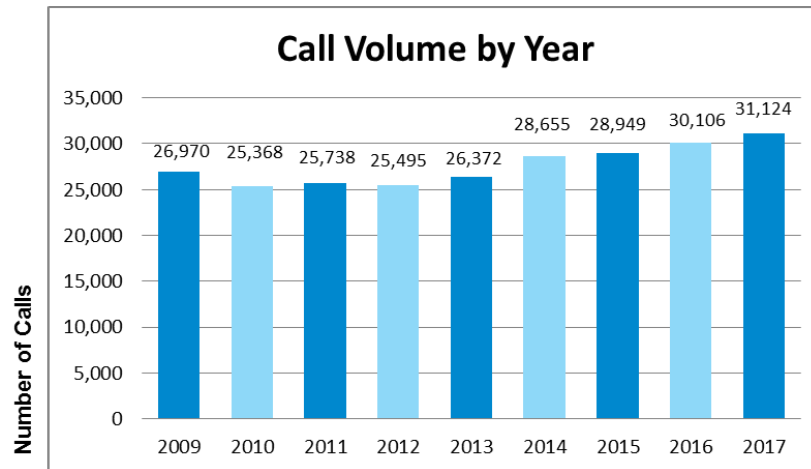


Public Education Event at South Common Community Centre

Emergency Operations Personnel respond to an average of 29,000 incidents annually. The provision of emergency services relies heavily on the ability of front-line operations staff to respond quickly. The National Fire Protection Association (NFPA) 1710 is the standard for the organizing and deployment of fire suppression, emergency medical and special operations for career fire services, like Mississauga Fire & Emergency Services. It is an internationally recognized standard and the principles are used by most fire services as a service delivery benchmark.

Response	NFPA Standard
First Arriving Vehicle	4 FF in <=240 seconds (4 minutes) 90% of the time to a fire suppression incident
Subsequent Vehicles (balance of a first alarm)	15 FF to 26FF <=480 seconds (8 minutes) 90% of the time to a fire suppression incident (based on risk)
High-Rise Occupancy	39 FF <=610 seconds (10 min & 10 sec) 90% of the time to a fire suppression incident

Facility placement is a significant factor in the ability to meet the NFPA travel time standard. Within current conditions and existing infrastructure, **MFES meets the standard 60 per cent of the time** (as of December 2017).



9-1-1 Communications Operators and call takers answer emergency calls and dispatch fire emergency vehicles 24 hours per day 365 days per year. Communications staff provide radio support to crews throughout the course of an incident and are responsible for the timely dispatch of additional vehicles or resources as required.

The staff that provide resources and support to the front-line service are critical to the delivery of excellent customer service.

Fleet and Building Mechanics are responsible for the repair and maintenance of front-line apparatus and fire stations across the city. The MFES fleet consists of 80 vehicles, 30 front-line emergency response apparatus, nine reserve apparatus and seven unstaffed emergency specialty vehicles equipped for specialty rescue operations. MFES has 20 fire stations located across the City to provide service to the community. Front-line equipment for 700 personnel (such as personal protective gear,

Self-Contained Breathing Apparatus (SCBA) as well as hose and other tools required for emergency operations) is the responsibility of an equipment officer.



Pumper 101

Training Officers provide operational training to front-line staff to ensure staff are properly trained in all disciplines. This includes emergency response, inspection and code enforcement, and public education. The requirement is to meet Ministry of Labour guidelines and ensure the service meets Council expectations.

In 2017 MFES conducted a review of training and certifications required for staff in order to meet obligations under the City's approved Establishing and Regulating By-Law. This review recommended additional program development and training to maintain competencies and integrate new requirements.

It will include the certification of all firefighters, fire prevention and communications (dispatch) personnel to the NFPA standard in each discipline.

Performance Measures and Results

The City of Mississauga is committed to delivering services economically and efficiently. The City's performance measures are used to help assess how well we are doing at achieving our goals and where we need to improve operations. The results also inform decision making and strengthen accountability.

Balanced Scorecard

A Balanced Scorecard groups measures in four key areas of an organization's performance: Financial, Customer, Employee, and Business Process. By paying attention to all four areas, an organization can retain balance in its performance and ensure that it is moving toward the attainment of its goals.

Below are descriptions of the measures this service area's Balanced Scorecard takes into account. The Balanced Scorecard that follows shows trends since 2015 and expected outcomes up to 2022.

Financial Measures

Total Operating Cost Per Capita is a measure that indicates how efficiently we are using our resources and is a particularly useful measure when comparing with other similar municipalities to gauge effectiveness. The goal is to balance operational effectiveness, community safety and fiscal responsibility.

Dollar Loss related to Structure Fires is a measure that indicates the estimated dollar loss related to fire damage. The goal is to decrease the dollar loss annually.



National Public Works Day

Customer Measures

Incidence of no Working Smoke Alarm on Fire Floor – This measure helps illustrate how effective MFES public education programming is with respect to fire safety. Based on data collected over the past five years, 46 per cent of fire calls do not have a working smoke alarm on the fire floor or the presence could not be determined. The goal is to improve public fire safety education and decrease this measure to zero.

Number of People Attending Public Fire Safety Education Programs – This measure captures the number of people that have attended a public fire safety education event or have had a visit from MFES staff delivering a program or message. This indicator helps to assess the effectiveness of our education programming when compared to trends in fire injuries and fatalities. The goal is to increase the number of people reached annually through targeted public fire safety education based on risk as identified in the Comprehensive Risk Assessment and thereby reduce fire-related injuries and fatalities.

Employee Measures

Strategic Leadership – This measurement identifies how MFES employees rate and/or are satisfied with the strategic leadership of the department. It is measured via a corporate employee survey administered every three years. The goal is to increase the percentage over time through employee engagement.

Innovation – Also measured via the corporate employee survey, this measurement identifies how satisfied employees feel about being empowered to try new business processes and their perception of management's acceptance of change. The goal is to increase the percentage satisfaction over time.



House Fire

Internal Business Process Measures

First Unit Travel Time (90th Percentile) captures how many seconds it takes from the time the truck leaves the station until it arrives on the scene. MFES has reported publicly on travel time for several years as it is the largest component of total response and is the most difficult to control in a growing municipality. New provincial legislation will require all Municipal Fire Departments to publicly report various response time metrics starting in 2021.

The National Fire Protection Association (NFPA) travel time target is 240 seconds 90 per cent of the time for first arriving vehicle on scene.



Fire Safety Trailer

Number of Inspection Orders Issued – this measure is a way of determining how effective the fire safety inspection program is and how well Fire Code compliance issues are understood and addressed. An inspection order can be issued when a fire safety inspector deems there is a compliance issue where a property has not been maintained to an acceptable fire safety level. If the property owner does not comply with the order, charges will be levied.

In 2014 MFES changed the process used to track and record this information. The goal is to educate the public on the importance of compliance and consequently reduce the number of inspection orders issued annually.

Balanced Scorecard

Measures for Fire & Emergency Services	2015 (Actual)	2016 (Actual)	2017 (Actual)	2018 (Plan)	2019 (Plan)	2020 (Plan)	2021 (Plan)	2022 (Plan)
Financial:								
Cost per Capita for Emergency Services (\$)	127.15	132.87	129.68	137.28	142.18	149.05	155.06	159.51
Dollar Loss Related to Structure Fires (\$Millions)	19.8	101.3	38.7	15.0	10.0	5.0	5.0	5.0
Customer:								
% of fire incidents where there was no working smoke alarm on fire floor or presence could not be determined	66%	56%	68%	65%	60%	55%	30%	25%
Number of Fire Safety Inspections Completed	10,713	9,757	8,212	9,033	9,485	9,959	10,457	10,980
Employees:								
Employee Engagement Scores: Strategic Leadership (%)	59.3	N/A	N/A	74.6	N/A	N/A	80.0	N/A
Employee Engagement Scores: Innovation (%)	62.3	N/A	N/A	70.6	N/A	N/A	75.0	N/A
Internal Business Processes:								
First Unit Travel Time (sec at the 90 th percentile)	346	348	350	352	350	350	346	346
Number of Fire Safety Inspection Orders Issued	182	218	283	311	327	311	296	282
Number of Fire Code Decisions resulting in Prosecutions	N/A*	4	33	35	40	35	30	25

*data was not being tracked in 2015

Awards and Achievements



FF Justin Quaidoo: Mississauga Real Estate Board **Fire Fighter of the Year**



Camp Ignite Program - Young Women learning about a career in firefighting



Mississauga Firefighters Benevolent Fund Donation to **Big Brothers and Sisters**



Collected nearly 180,000 pounds of food for the **Mississauga Food Bank** at all Fire Station Locations over the past three years



FF Nelson Anastacio - Organized a Fundraiser for **Sick Kids/CVH Pediatric Oncology Unit** that raised \$18,125

The 2019-2022 Business Plan Outlook

Planning for the Future

Priorities for 2019-2022

- Introduction of a Public Safety Fire Program Reserve Fund to support short and long term community safety initiatives
- Targeted Public Education based on risk
- Proactive Fire Inspection Program based on risk
- Additional Fire Station Infrastructure to address increasing response times
- Alignment to Professional Standards

Public Safety & Community Risk Reduction

The **Public Safety Fire Program Reserve Fund** is intended to allow for the funding of initiatives that are customer-focused and directly impact community fire safety. For this business planning cycle, the following initiatives will be funded through this reserve fund:

Fire Public Education Programming (BR# 5370) –

Establishment of a dedicated public education section to develop and implement community public fire safety education based on risk.

Proactive Fire Inspection Program (BR# 5371) – To expand the current request and complaint inspection program to a proactive program based on established inspection cycles.

Fire Station 120 – Hurontario and Eglinton (BR# 5421) – This station opens in 2019 and is the first station priority in the 12-year, seven station model. This budget request reflects the staffing required to operate this station.

Fire Station 124 – Cawthra and Dundas Area (BR# 5508) –

This station is the second station priority in the 12-year, seven station model. This budget request reflects both the construction and staffing costs associated with this station.

These priorities are supported by a risk-based study called the Comprehensive Risk Assessment (CRA). This was completed in 2017 using the following industry standards and guidelines:

- **NFPA 1730** (Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation and Public Education Operations)
- **NFPA 1300** (Standard on Community Risk Assessment and Community Risk Reduction Plan Development)
- Vision 20/20 (National Strategies for Fire Loss Prevention)

The CRA informs this Business Plan as well as the Fire & Emergency Services Future Directions Master Plan. The budget requests and recommendations are reflective of the community risk reduction strategies identified in the assessment.

The data collected to inform the CRA will be reviewed annually to reflect new data and the changing needs and circumstances of the community. The effectiveness of the mitigation strategies outlined in these documents will be measured and adjusted where required.

Targeted Public Education Based on Risk

Mississauga Fire & Emergency Services is working towards the establishment of a dedicated fire and life safety education section. The mandate of this section will be to develop, implement and measure fire and life safety education programming based on identified key risks outlined in the CRA.

Public fire safety education is a legislated requirement under the *Fire Protection and Prevention Act (FPPA)*. Public education programs are designed for everyone, from young children to seniors. The overall objective of these programs is to educate the public on the dangers of fire and provide information to prevent fires. In the unfortunate instance a fire does occur, the

intention is provide the information tools to ensure a safe evacuation. Prioritization of program and program delivery will be based on risk.

Public Education Risk Drivers:

- The proportion of structure fires occurring in Residential occupancies (Group C) has increased
- 83.3 per cent of injuries and 100 per cent of fire fatalities occurred in residential occupancies
- 46 per cent of fire calls in the city of Mississauga do not have a working smoke alarm on the fire floor (average over the past five years)
- Residential occupancies represent 95.8 per cent of the city's property stock and 65.9 per cent of the city's fire loss
- Teaching fire safe behaviour is most effective particularly for residential occupancies

Proactive Fire Inspection Program Based on Risk

A proactive fire and life safety inspection program will establish an appropriate inspection cycle for all occupancy types based on risks identified in the CRA. A more aggressive application of penalties for non-compliance will also be a priority.

The inspection frequency will be based on the risk identified in the CRA and the application of NFPA 1730, which defines minimum inspection frequency for fire safety inspections based on occupancy risk. The table below identifies the proposed frequency of inspections by occupancy type for the City of Mississauga. In order to encourage compliance, inspection cycles will be commensurate with the level of fire safety risk. In view of the significant growth and sheer number of inspections that will be required to fill the mandate, the intention is to expand the program to include on-duty fire operations staff. The implication of this change will be that a greater number of properties can be inspected and a higher number of properties will be Fire Code compliant.

Fire Safety Inspection Risk Drivers:

- Industrial (Group F) occupancies represent 1.9 per cent of the city's property stock and 11.6 per cent of the city's fire loss (2003-2015)
- There are 260 schools and 66 occupancies with seniors/individuals who have a disability
- 14.4 per cent of fires were caused by mechanical/electrical failure (2003-2015)

Occupancy Type	Inspection Frequency
Assembly occupancy	Biennial
Institutional occupancy (currently legislated to conduct proactive inspections annually)	Annual
Midrise residential occupancy (midrise is 6-12 storeys)	Annual
Residential building over 12 storeys	Annual
Business and personal services occupancy	Biennial
Industrial occupancy - high hazard	Annual
Factory industrial uses - moderate hazard	Biennial
Warehousing and storage facilities - moderate to low hazard	Biennial

There is no honour in fighting a fire that could have been prevented. – Garry W. Morden

Additional Fire Station Infrastructure

The approach that is being taken by MFES with regards to resource deployment is based on the MFES Infrastructure Renewal Strategy, which is a study that considers deployment, resourcing and infrastructure options to optimize front-line service delivery and mitigate risk.

National Fire Protection Association (NFPA) standard 1710 recommends having stations located so that the response time for the first arriving vehicle from a station to the location of an incident can occur in four minutes or less, 90 per cent of the time. Other considerations in an effective deployment model are:

- **Intensification/Growth:** The city is also undergoing rapid intensification and future growth predictions indicate that there are areas, including the City Centre, that will see significant vertical growth
- **Risk:** Community risk factors such as high-risk occupancies, high-risk behaviour and a combination of the two are factors in station location and deployment
- **Geography:** Rivers, bridges, arterial roadways and rail lines are natural barriers that can impede travel time
- **Traffic congestion:** Historically, response time has increased by one per cent per year as a result of increased traffic congestion

Based on results of the Comprehensive Risk Assessment and the Infrastructure Renewal Strategy, the 2019 Future Directions Master Plan recommends a station location model that includes seven additional stations, six of which are identified in the 10-year capital planning cycle.

Priority areas across the city were identified where some or all of the following conditions existed:

- High volume of calls
- Historically deficient response time

- Future growth implications
- Higher risk occupancies/population

New Infrastructure Risk Drivers:

- **Response time** is increasing by approximately one per cent per year – in 2017 MFES met the NFPA travel time target 60 per cent of the time
- **High-Risk Occupancies** – There are over 1,200 high-risk occupancies (high-rise, vulnerable occupancies and industrial buildings) within the city of Mississauga
- **Vertical Response** – there are 347 buildings with a height in excess of 18 metres

Front-Line Emergency Equipment

The Infrastructure Renewal Strategy also addresses equipment required to effectively implement the deployment model. Each fire station and truck must be appropriately equipped to meet the needs of the communities they serve. MFES operations section responds to various types of emergencies that include fires, medical emergencies, motor vehicle accidents, public hazard situations, hazardous material (hazmat), and technical rescues. All of these disciplines use specialized equipment and require highly trained staff to respond to various emergencies.

Alignment to Professional Standards

In 2016, Mississauga City Council approved an Establishing and Regulating by-law (0269–2016), which clearly establishes the services provided by MFES. Based on a 2017 internal review of Professional Development and Accreditation, MFES has committed to the development and training of all operations and fire prevention staff to NFPA standards which satisfies the service delivery standards identified in the Establishing and Regulating (E&R) By-law.

The program will ensure that:

- All firefighters performing fire protection services will be certified to the corresponding NFPA certification standard for all disciplines
- All Public Educators, Inspectors and Fire Plans Examiners will be certified to the corresponding NFPA standard
- All Communications (Dispatch) staff will be certified to the corresponding NFPA standard for Public Safety Telecommunications Personnel

Professional Standard Risk Drivers:

- Establishing and Regulating By-law which outlines services to be provided by MFES
- Industry best practice for large urban fire departments
- Collective Agreement identifies various NFPA standards and certification requirements for advancement



Hazmat Training

Finding Efficiencies

Lean Program

The City's Lean Program focuses on strengthening the organization's culture of continuous improvement and instills Lean concepts and principles as a way of work in every Service Area. The program focuses on maximizing customer value and minimizing waste along with empowering staff at all levels to problem-solve on a daily basis.

Since becoming permanent in 2016, the Lean program has delivered significant results. Over the past four years 113 staff have received introductory White Belt Training; three staff have received intermediate Yellow Belt Training, and four staff have received advanced Green Belt Training. Four completed lean projects and 32 small improvements have improved customer experience, decreased processing times, increased quality and reduced costs.

Some highlights of the many projects and small improvements completed include:

- Standardizing the tasks, workflows and business processes related to the Fire component of Building Plans Review and improve customer and stakeholder experience
- Improving the ordering/delivery of the fire station inventory and personal protective equipment
- Optimizing the Fire Ministry of Transportation (MTO) Fleet Mandatory Inspection process
- Improving the turnaround time for Fire Safety Inspections
- Creating tools to improve the transparency of procurements and the quality of front-line equipment purchased

Completed Initiatives					Total Benefits	
Improvement Type	2014-2016	2017	September 2018	Total	Type	Total
Small Improvement	-	29	3	32	Cost Savings and Avoidance	\$174,252
Project	3	1	Ongoing	4	Customer Service Improvements	15
Total	3	30	3	36	Safety Improvements	17
In-Progress Initiative	Goals of the Initiative					
Assembly Time for Fire Operations Emergency Response (2018)	Reduce turnout time in order to improve overall response time.					
Notice to Building Owner (2018)	Improve the communication between Operations staff and Fire prevention and Life Safety staff to ensure non-compliance issues can be addressed quickly.					

MFES has completed three major Lean process reviews.

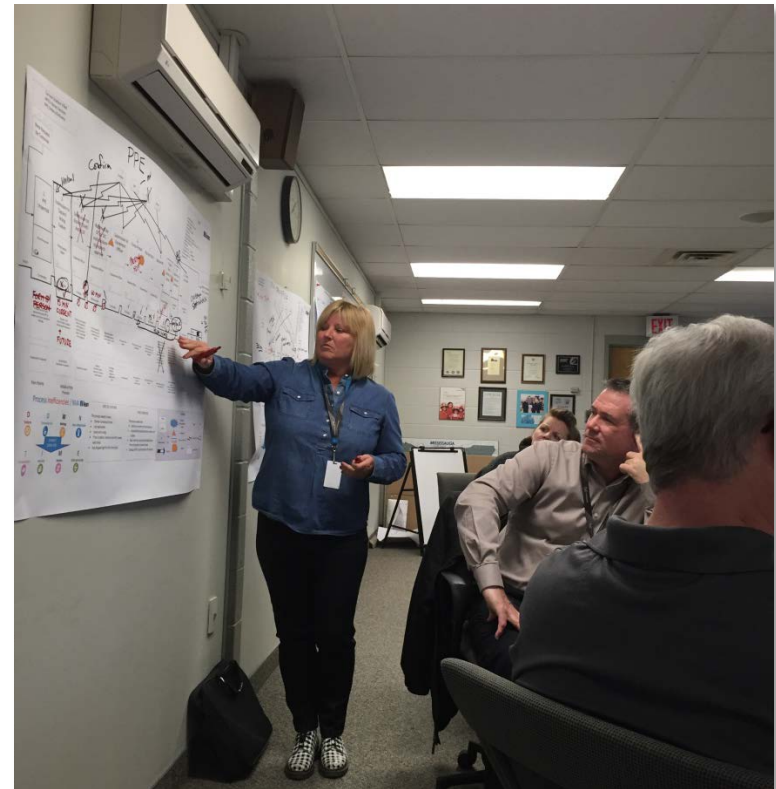
The reviews looked critically at the processes for fire plans examination, supplies inventory and front-line vehicle repairs. These three reviews resulted in significant savings and improvement opportunities.

Implications

Fire Plans Examination Review – increased the number of complete submissions that met legislated deadlines by 23 per cent and improved overall customer experience.

Station Supply and Inventory Review – increased staff capacity by reducing the time it takes to deliver station equipment and supplies to 20 stations across the City by 50 per cent and order processing by 40 per cent.

Ministry of Transportation (MTO) Certification Process Review – Mandatory front-line vehicle repair turnaround time was reduced by up to 80 per cent for pumpers and squad vehicles and 90 per cent for aerial apparatus.



Lean Kaizen Event

Advancing the City's Strategic Plan

belong – ensuring youth, older adults and new immigrants thrive

- Developing targeted fire safety education programming based on risks identified in the Comprehensive Risk Assessment to meet the needs of the community

connect - completing our neighbourhoods

- Expanding the Proactive Fire Safety Inspection Program and identifying appropriate inspection cycles to ensure compliance with the Ontario Fire Code
- Expanding public education programming to target higher risk demographics based on results of the Comprehensive Risk Assessment

prosper - cultivating creative and innovative businesses

- Combining both operations and fire prevention staff to conduct fire safety inspections on all mercantile, commercial and industrial occupancies on an appropriate inspection cycle that will ensure safety systems are in place and operate as intended

green - living green

- Considering LEED principles when building new and retrofitting existing buildings

Transforming our Business with Technology

Computer Aided Dispatch (CAD) Replacement

CAD is an incident management software system which includes call handling and dispatching, intelligent mapping, field communications, data reporting and analysis and application integration. The current system is dated and an upgrade of the system will be completed to ensure continued reliability of routing, dispatching and data information capture. This platform is shared with both Brampton and Caledon Fire & Emergency Services.

Mobile Field Technology

The goal of this initiative is to implement field automation technology for fire inspection staff to improve the delivery of inspection and enforcement services. Inspection staff will be provided with mobile technology that will allow them to access and update files, maps and building data remotely. It is expected to reduce the amount of office space required by 41 per cent as the inspectors will be mobile and community-based. It will also allow each inspector to process more inspections annually.

Automated Staffing and Records Management

The goal of this initiative is to more effectively manage staffing across 23 facilities (including 20 fire stations) and four shifts. This technology will be dependent on the implementation of the corporate SAP program.

Remote Training and Information Displays

Information displays centrally located within the fire stations will facilitate information dissemination across 23 fire facilities. This will include online training modules and public education information. This initiative will reduce travel time associated with

training, allow crews to complete the training modules as a team in their own station and provide timely updates to staff.

Back-Up Communications Technology Upgrade

All calls are dispatched from the Joint Fire Communications Centre (JFCC). Fire call dispatching is shared with both Brampton and Caledon Fire & Emergency Services. The goal of this initiative is to ensure that there is a fully functioning back-up facility available in the event that the primary facility becomes inoperable. It is critical that the back-up Communications Centre is equipped with up-to-date technology including radios, consoles and computers that can provide uninterrupted service in the event of failure at the JFCC. The backup facility is located at Mississauga Fire Station 101.



Joint Fire Communications Centre

Maintaining Our Infrastructure

Maintenance of Existing Infrastructure

Fire stations are operational 24 hours per day, 365 days per year. For this reason they are subject to more wear and tear issues than traditional facilities. The maintenance of fire station infrastructure is essential to ensure that staff can operate effectively, and to meet health, safety and accessibility standards.

There are seven fire stations that were built prior to 1980. Of these seven fire stations, only station 105 in Malton has had a significant renovation to maintain its lifecycle.

MFES will be conducting a fire station facility audit to be able to accurately gauge each station's condition and rehabilitation requirements.



Fire Station 116

Equipment Lifecycle

A complete lifecycle review of all major equipment will assist in the development of a more rigorous lifecycle replacement plan and improve equipment reliability. This replacement plan will inform the 10-year capital budget. Forecasted development and growth will add to the total inventory pressures. A formal lifecycle replacement model will provide a predictable and reliable funding model and subsequently effective service delivery. A consistent and ongoing investment is critical to maintain equipment within its recommended lifecycle.

Front-Line Vehicles

MFES has implemented a lifecycle model of 12 years front-line and three years in reserve for a total lifecycle replacement of 15 years for front-line vehicles. MFES Capital Assets section is in the process of replacing the fleet based on the new lifecycle program.

A fleet preventative maintenance program has been executed which will include scheduled maintenance for all front-line vehicles. This is expected to reduce the time a vehicle is out of service for demand maintenance.

Major Equipment Testing, Evaluation and Replacement

Annual testing and evaluation is to be completed on all front-line apparatus and equipment. It is critical for the safety of staff, as well as to ensure operational reliability, that legislative requirements and manufacturer recommendations are met. This includes the testing of such things as ground and aerial ladders, pumps, generators, hose and equipment used for auto extrication.



Pumper 114 getting a new set of tires

Managing Our Human Resources

Workforce Analytics

Of the total staff complement in MFES, 97 per cent are unionized. This includes all front-line operations staff, Fire and Life Safety inspectors, public educators and plans examiners, training, mechanical and the majority of the administration staff. Of the 718 staff there are 614 suppression (front-line firefighting) staff. Suppression staff are hired in spring or fall recruit classes each year to fill vacancies resulting from retirements.

Succession planning will be critical as nearly 20 per cent of staff are eligible for retirement in the next four years.

Our Structure



Our Talent

Operations Recruitment

MFES uses the Ontario Fire Administration Inc. (OFAI) Candidate Testing Services to test potential recruits. Through the OFAI, potential candidates complete a three-stage testing program that includes written testing, psychological profiling, medical and physical testing, and a skills evaluation. The skills evaluation tests candidates to ensure they have the basic skill set required to be a firefighter.

In **Emergency Operations and Fire Prevention and Life Safety**, there are over 650 staff at various levels that require ongoing skills development and upgrade. The Professional Development and Accreditation section, in conjunction with 'on shift' training instructors, develop and deliver training programs that ensure the development of new skills along with the maintenance of existing skills.

These include such programs as:

- Fire Ground Operations
- Medical
- Auto Extrication
- Specialty Rescue (Confined Space/Trench/Hazmat)
- Apparatus Operation
- IT and Communications

Fire Prevention and Life Safety staff consists of public educators, plans examiners and fire safety inspectors. Specialty training consists of:

- Fire Inspector (levels 1-3)
- Public Educator (levels 1 and 2)
- Building Code and Fire Protection
- Fire Investigator

Staff are encouraged to apply for other related courses to improve their skills in each area as well as upgrade to react to changing codes, building stock and new technologies.

Fleet mechanics for emergency vehicles require ongoing training to ensure they maintain their existing skills and upgrade to adapt to emerging technologies. All mechanics are required to have a heavy vehicle mechanic licence, and lift truck and sky jack training. Within this business cycle, MFES fire fleet mechanics will be focussing on completing specialty Emergency Vehicle Technician (EVT) training and specialty manufacturer training.



Testing new Equipment at Station 101

Critical Roles/Functions to Achieve Business Goals

Critical Function	Requirements of Function
Business Analytics	• Development, implementation and maintenance of key performance indicators (KPIs) and other sectional data
Curriculum Development	• Officer development, alignment to professional standards and certifications
Inventory Management & Logistics	• Fleet and equipment purchasing, inventory and lifecycle replacement
Education and Code Enforcement	• Fire Safety Inspections, public education programming

Emergency Operations staff are hired through a recruiting process once or twice a year depending on the number of existing vacancies. These new recruits are to fill vacancies resulting from retirements and/or long term absences. There is a high demand for these jobs: therefore, there is no difficulty attracting qualified candidates. Firefighters and Captains are promoted based on an internal competitive examination process.

In 2019 MFES is requesting 20 new firefighters to staff the new fire station 120 at Hurontario and Eglinton.

Professional Development and Accreditation (PD&A) will play a key role in fulfilling the commitment to building leadership capacity and providing learning opportunities for staff. Beginning in 2019, MFES will begin training to certify operations and fire prevention to staff for recognized programs and disciplines. PD&A staff will be critical in ensuring staff training to NFPA standards is completed.



Spring 2018 Recruit Class

Talent Needs

- Four Public Education Officers (BR# 5370) to deliver targeted public education programming based on risk as identified in the Comprehensive Risk Assessment
- Five Fire Safety Inspectors (BR# 5371) to support a proactive fire safety inspection program. Focus in 2019 will be on high and midrise occupancies
- 20 Firefighters (BR# 5421) for the operation of new fire station 120 at Hurontario and Eglinton which is currently under construction (BR# 2883) and expected to be operational in fall 2019
- Two Section Supervisors (BR# 5454) in Professional Development and Accreditation to support the ongoing development and delivery of specialized training programs
- Two staff in Capital Assets. One to support mandated, safety certifications and operational requirements through annual scheduling (BR# 5523) and one to support inventory control (BR# 5524)

Proposed Full Time Equivalent Staffing Distribution by Program

Program	2018	2019	2020	2021	2022
Fire Building Maintenance	3.0	3.0	3.0	3.0	3.0
Fire Support Services	44.5	49.0	53.0	55.0	55.0
Fire Vehicle Maintenance	10.0	11.0	12.0	13.0	13.0
Prevention	47.0	55.0	67.0	77.0	83.0
Suppression	614.0	634.0	634.0	654.0	654.0
Total Service Distribution	718.5	752.0	769.0	802.0	808.0

Note: Numbers may not balance due to rounding.

Proposed Operating Budget

This part of the Business Plan sets out the financial resources required to deliver the proposed 2019-2022 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 Fire & Emergency Services budget for 2018 was \$106 million. Included in this amount is \$603,000 related to the operation of the Office of Emergency Management (OEM). The proposed budget for 2019 is \$114 million.

Total Changes to Maintain Current Service Levels

The impact of maintaining current service levels for Fire & Emergency Services reflects an increase of \$2.56 million. Highlights of the proposed changes to the budget include:

- Labour costs of \$2.23 million
- \$132,000 for station wear contract renewal
- \$100,000 related to materials, supplies, and training equipment

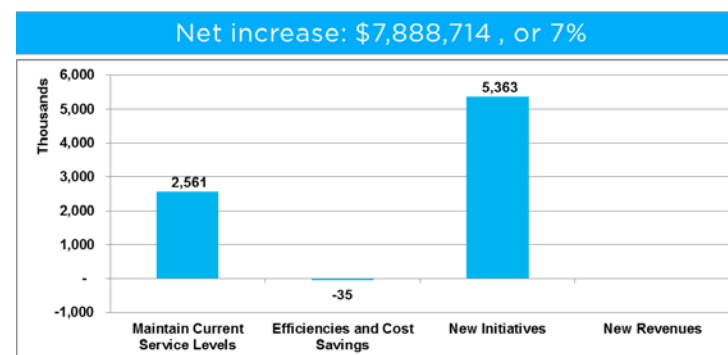
Efficiencies and Cost Savings

- \$35,000 related to a decrease in the cost of utilities

New Initiatives

- Public Education Programming based on risk
- Proactive Fire Safety Inspection Program based on risk
- Resourcing to meet mandatory Provincial certification standards
- Capital assets resourcing to establish appropriate front-line vehicle repair and preventative maintenance schedules and coordinate warranty work
- Firefighters to staff new fire stations

Proposed Changes to 2019 Net Operating Budget by Category (\$000's)



Operating Budget Details

The following table identifies the budgeted and forecasted operating expenditures and revenues for 2019-2022, as well as the 2018 Budget and 2017 Actuals by major program within the Service Area.

Proposed Budget by Program

Description	2017 Actuals (\$000's)	2018 Budget (\$000's)	2019 Proposed Budget (\$000's)	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)
Expenditures to Deliver Current Services						
Fire Building Maintenance	1,199	1,271	1,283	1,326	1,344	1,363
Fire Support Services	7,254	8,063	8,677	8,798	8,932	9,056
Fire Vehicle Maintenance	3,462	3,480	3,537	3,554	3,570	3,586
Prevention	5,148	6,739	6,689	6,863	6,996	7,080
Suppression	84,484	88,515	90,414	92,063	93,400	94,538
Total Expenditures	101,546	108,069	110,599	112,605	114,242	115,623
Revenues	(2,075)	(1,952)	(1,957)	(1,957)	(1,957)	(1,957)
Transfers From Reserves and Reserve Funds	0	0	0	0	0	(645)
New Initiatives and New Revenues			5,363	11,114	17,235	23,322
Proposed Net Budget Including New Initiatives & New Revenues	99,471	106,117	114,005	121,762	129,521	136,344
Expenditures Budget - Changes by Year			2%	2%	1%	1%
Proposed Net Budget - Changes by Year			7%	7%	6%	5%

Note: Numbers may not balance due to rounding.

Summary of Proposed Budget

The following table shows the proposed budget changes by description and category. Costs (labour; operational costs; and facility, IT and support) and revenues are shown by category with the approved 2018 budget for comparison. The three columns to the far right of the table show the totals proposed for 2019 and their dollar and percentage changes over 2018.

Summary of Proposed 2019 Budget

Description	2018 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	2019 Proposed Budget (\$000's)	\$ Change Over 2018	% Change Over 2018
Labour and Benefits	102,707	2,210	0	24	0	1,679	0	106,620	3,913	4%
Operational Costs	4,347	295	(35)	0	0	5,002	0	9,609	5,261	121%
Facility, IT and Support Costs	1,015	37	0	0	0	0	0	1,052	37	4%
Total Gross Expenditures	108,069	2,541	(35)	24	0	6,681	0	117,280	9,211	9%
Total Revenues	(1,952)	(4)	0	0	0	(1,318)	0	(3,275)	(1,323)	68%
Total Net Expenditure	106,117	2,537	(35)	24	0	5,363	0	114,005	7,889	7%

Summary of Proposed 2019 Budget and 2020-2022 Forecast

Description	2017 Actuals (\$000's)	2018 Approved Budget (\$000's)	2019 Proposed Budget (\$000's)	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)
Labour and Benefits	96,023	102,707	106,620	111,802	117,600	120,862
Operational Costs	4,553	4,347	9,609	14,765	20,293	26,162
Facility, IT and Support Costs	970	1,015	1,052	1,068	1,096	1,125
Total Gross Expenditures	101,546	108,069	117,280	127,635	138,989	148,149
Total Revenues	(2,075)	(1,952)	(3,275)	(5,873)	(9,468)	(11,804)
Total Net Expenditure	99,471	106,117	114,005	121,762	129,521	136,344

Note: Numbers may not balance due to rounding.

Proposed Cost Increase Required to Maintain Current Service Levels

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, taking into account efficiencies, cost savings, and cost increases arising from prior year decisions.

Description	2018 Budget (\$000's)	2019 Proposed Budget (\$000's)	Change (\$000's)	Details (\$000's)
Labour and Benefits	102,707	104,940	2,233	Increase reflects labour adjustments, new on-call pay for fire inspectors, and other fringe benefit changes
Administration and Support Costs	1,015	1,052	37	\$20 IT allocation \$15 CMS allocations \$2 Minimum wage impact on cleaning contracts
Advertising & Promotions	45	45	0	
Communication Costs	443	450	7	Increased cost of Vcom licensing and software
Contractor & Professional Services	35	35	0	
Equipment Costs & Maintenance Agreements	427	437	10	Maintenance of medical training props
Finance Other	0	5	5	\$5 Costs associated with the collection of revenues through the use of payment cards are allocated to respective business areas from Financial Transactions
Materials, Supplies & Other Services	862	1,037	175	\$30 live fire training consumables and fire ground maintenance \$13 DLAN IT allocation \$132 station wear contract renewal
Occupancy & City Costs	857	920	63	\$60 Narcon Symptom Assistance Kits, Pet Therapy Kits, Epi Pens, Medical Bag, Narcon Medical Supplies, station supplies \$38 Fire station generator inspections (\$35) Utility decrease
Staff Development	292	292	0	
Transfers To Reserves and Reserve Funds	50	50	0	
Transportation Costs	1,336	1,336	0	
Subtotal - Other Operating	5,362	5,659	297	
Total Revenues	-1,952	-1,957	-4	
Subtotal - Revenues	-1,952	-1,957	-4	
Total	106,117	108,642	2,526	

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. Each BR is numbered. Detailed descriptions of each Request can be found in the pages following the table.

Description	BR #	2019 FTE Impact	2019 Proposed Budget (\$000's)	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)	2019 to 2022 FTE Impact	2019 to 2022 Capital (\$000's)
New Initiative								
Fire Public Education Programming*	5370	4.0	0	0	0	0	8.0	75
Proactive Fire Inspection Program*	5371	5.0	0	0	0	0	28.0	140
Fire Station 120- Hurontario and Eglinton*	5421	20.0	0	0	0	0	21.0	0
Fire Professional Standards and Evaluation	5454	2.0	352	731	1,110	1,257	6.0	0
New Fire Station 124*	5508	0.0	0	0	0	0	20.0	13,721
Fire Safety Engineer	5519	0.0	0	0	96	145	1.0	0
Fire Fleet Service Advisor	5523	1.0	84	133	141	143	1.0	0
Fire Inventory Control Clerk	5524	1.0	76	114	120	133	1.0	0
Fire Small Fleet Mechanic	5527	0.0	0	71	185	236	2.0	0
Fire Emergency Management Specialist	5554	0.0	0	97	130	132	1.0	0
Contribution to Public Safety Fire Reserve Fund	5736	0.0	4,852	9,968	15,452	21,277	0.0	0
Total New Initiatives		33.0	5,363	11,114	17,235	23,322	89.0	13,936
Total New Initiatives and New Revenues		33.0	5,363	11,114	17,235	23,322	89.0	13,936

Note: Numbers may not balance due to rounding.

*Funded by new Public Safety Fire Program Reserve Fund

Proposed Initiative

Fire Public Education
Programming

Department

Community Services Department

Service Area

Fire & Emergency Services

Description of Budget Request

The establishment of a dedicated fire and life safety education section within Fire Prevention and Life Safety with a mandate to develop, implement and measure fire and life safety education programming based on identified key risks outlined in the Comprehensive Risk Assessment (CRA).

Required Annual Operating Investment

Impacts (\$000s)	2019	2020	2021	2022
Gross Expenditures	335.8	702.0	1,010.8	1,138.8
Reserves & Reserve Funds	335.8	702.0	1,010.8	1,138.8
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	0.0	0.0	0.0	0.0
* Net Change in \$		0.0	0.0	0.0
FTEs	4.0	6.0	8.0	8.0

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

Required Capital Investment

Total Capital (\$000s)	2018 & Prior	2019	2020	2021	2022 & Beyond
Expenditures	0.0	50.0	25.0	0.0	0.0

Why Staff Recommend this Initiative

Data over the past eight years indicates that 46 per cent of fire calls in the City of Mississauga do not have a working smoke alarm on the fire floor. By law, smoke alarms are required on every storey of a dwelling in the province of Ontario. Smoke alarm programs are also one of the required services to be provided by a fire department as per the *Fire Protection and Prevention Act (FPPA)*, 1997.

Details of Service Change

Based on programming required to meet both the requirements of the *FPPA* as well as the needs and circumstances of a large, growing city, eight public education officers will be required over a three year period. Four required in 2019 to assess and develop additional educational programming geared to high and midrise occupancies. Two in 2020 to work proactively with the fire safety inspectors and front-line fire crews on midrise fire safety. Two in 2021 to develop educational programming directed at Industrial High-Hazard occupancies. In order to maintain a balance between public safety and fiscal responsibility, this initiative will be funded through the Public Safety Fire Program Reserve Fund.

Service Impact

A comprehensive smoke alarm program will reach a substantial number of residents and result in a higher rate of voluntary compliance and subsequently, improved fire safety and will reduce the fire risk in residential occupancies. Teaching people to be the stewards of their own fire safety has proven to have a positive impact on the number and severity of fire-related injuries and deaths. It is critical that homeowners understand the law requires that all residential occupancies must have a working smoke alarm on every floor and that there are consequences for non-compliance.

Proposed Initiative

Proactive Fire Inspection Program

Department

Community Services Department

Service Area

Fire & Emergency Services

Description of Budget Request

Develop, implement and measure a proactive fire and life safety inspection program that establishes appropriate inspection cycles for all occupancy types based on key risks identified in the CRA.

Required Annual Operating Investment

Impacts (\$000s)	2019	2020	2021	2022
Gross Expenditures	328.0	1,173.1	2,128.5	3,110.3
Reserves & Reserve Funds	328.0	1,173.1	2,128.5	3,110.3
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	0.0	0.0	0.0	0.0
* Net Change in \$		0.0	0.0	0.0
FTEs	5.0	15.0	22.0	28.0

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

Required Capital Investment

Total Capital (\$000s)	2018 & Prior	2019	2020	2021	2022 & Beyond
Expenditures	0.0	70.0	70.0	0.0	0.0

Why Staff Recommend this Initiative

The minimum inspection frequency for high-risk occupancies is annual. Currently the City of Mississauga has over 1,200 occupancies that are classified as high risk including vulnerable occupancies (nursing and long-term care facilities), high-hazard industrial properties and high-rise buildings. Future growth plans consider additional high-rise occupancies.

Details of Service Change

A total of 34 Fire Safety Inspectors will be required over a five year period to meet the minimum requirements relating to the organization and deployment of fire prevention inspection outlined in NFPA 1730, 2016. Five required in 2019 to address high-rise and begin to address midrise occupancies. Ten required in 2020 to complete midrise occupancies and continue annual inspections. Seven in 2021 to address high-hazard industrial occupancies. Six in 2022 to complete medium-hazard factory industrial, assembly and business occupancies which are classified as moderate risk and will require inspections on a biennial frequency. Six required in 2023 to complete the factory industrial occupancies. In order to maintain a balance between public safety and fiscal responsibility, this initiative will be funded through the Public Safety Fire Program Reserve Fund.

Service Impact

Reduce risk inherent in various occupancy types by ensuring compliance with the Ontario Fire Code. This proactive fire safety inspection program will help to reduce the impact on front-line operations.

Proposed Initiative

Fire Station 120 – Hurontario and Eglinton

Department

Community Services Department

Service Area

Fire & Emergency Services

Description of Budget Request

Improve response time in this area by continuing to complete the construction of Fire Station 120 at Fairwind and Eglinton and improve depth of response in the direct response area as well as in adjacent response areas.

Required Annual Operating Investment

Impacts (\$000s)	2019	2020	2021	2022
Gross Expenditures	654.4	2,041.4	2,429.6	2,769.0
Reserves & Reserve Funds	654.4	2,041.4	2,429.6	2,769.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	0.0	0.0	0.0	0.0
* Net Change in \$		0.0	0.0	0.0
FTEs	20.0	21.0	21.0	21.0

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

Required Capital Investment

Total Capital (\$000s)	2018 & Prior	2019	2020	2021	2022 & Beyond
Expenditures	995.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

This area is highly residential and while the overall number of structure fires has decreased, the proportion of structure fires occurring in residential occupancies has increased. The most recent reporting year (2015) saw the highest proportion of fires occurring in residential structure fires at 74 per cent. This station will position MFES to be able to appropriately service this area now and also considers the impact of future growth.

Details of Service Change

The construction of one double truck fire station. MFES is a 24 hour per day, 365 day per year service and therefore front-line operations has four platoons. Each fire truck has 20 staff assigned, five per platoon therefore 20 front-line operations personnel are required to adequately staff this station. In order to maintain a balance between public safety and fiscal responsibility, this initiative will be funded through the Public Safety Fire Program Reserve Fund.

Service Impact

The construction of a two-truck fire station that will service the immediate response area including 32 high-risk occupancies, improve response to Highway 403 Westbound from Hurontario and augment service in other response areas when required.

Proposed Initiative

Fire Professional Standards and Evaluation

Department

Community Services Department

Service Area

Fire & Emergency Services

Description of Budget Request

This budget request is specifically related to the development of a robust professional standards and evaluation program that clearly defines the development, delivery and evaluation of staff certification and testing. Firefighter certification to NFPA standards is an industry best practice and fulfils the service delivery standards identified in the Establishing and Regulating (E&R) By-law.

Required Annual Operating Investment

Impacts (\$000s)	2019	2020	2021	2022
Gross Expenditures	351.5	730.9	1,110.3	1,257.2
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	351.5	730.9	1,110.3	1,257.2
* Net Change in \$		379.3	379.4	146.9
FTEs	2.0	4.0	6.0	6.0

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

Required Capital Investment

Total Capital (\$000s)	2018 & Prior	2019	2020	2021	2022 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

Currently the Professional Development and Accreditation section consists of a group of training officers assigned to the training of all staff in various prevention and response disciplines. In order to ensure staff are trained to NFPA standards and reflect the service delivery standards prescribed in the E&R By-law additional resources will be required. The Province of Ontario supports firefighter certification and evaluation requirements to ensure safety and consistency across the Province.

Details of Service Change

The Professional Development and Accreditation section of MFES will be divided into two distinct areas. One area will focus on the development and delivery of training and the other will focus on evaluation and testing. In order to execute this plan in its entirety, six new FTEs are requested. This will include two section supervisors (one for delivery and one for evaluation) and four additional training officers. The new and existing training officers will total 13 which will be divided appropriately between each new section.

Service Impact

The approval of this request will allow MFES to meet the requirements pertaining to the certification and evaluation of municipal fire and emergency services staff as related to the service standards prescribed in the Municipal Establishing and Regulating bylaw. (0269-2016). It will also meet industry expectations for a large urban municipality.

Proposed Initiative

New Fire Station 124

Department

Community Services Department

Service Area

Fire & Emergency Services

Description of Budget Request

This budget request is related to the introduction of a new fire station in the Cawthra and Dundas Area as part of a 10-year plan to improve emergency response times City-wide.

Required Annual Operating Investment

Impacts (\$000s)	2019	2020	2021	2022
Gross Expenditures	0.0	0.0	1,942.4	2,185.3
Reserves & Reserve Funds	0.0	0.0	1,942.4	2,185.3
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	0.0	0.0	0.0	0.0
* Net Change in \$		0.0	0.0	0.0
FTEs	0.0	0.0	20.0	20.0

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

Required Capital Investment

Total Capital (\$000s)	2018 & Prior	2019	2020	2021	2022 & Beyond
Expenditures	0.0	5,024.0	8,697.0	0.0	0.0

Why Staff Recommend this Initiative

MFES meets the NFPA travel time standard 61 per cent of the time under current conditions. MFES target is to reach 75 per cent within the next 10 years. Response time across the city has increased by one per cent per year as a result of growth related variables such as density and traffic congestion. Seventy-four percent of structure fires are occurring in residential structures and the ability to affect a positive outcome is directly related to fast, efficient response.

Details of Service Change

In 2017, MFES conducted both a Comprehensive Risk Assessment and associated Infrastructure Renewal Strategy. These studies were completed in order to inform decisions regarding the optimal location of fire stations across the city to best support a more risk-based deployment model. This station in the Cawthra and Dundas area will improve response by two to three per cent city wide as well as have a significant impact on response in the immediate response area. It is anticipated that this will be a leased facility as there is a scarcity of available land in this area. In order to maintain a balance between public safety and fiscal responsibility, this initiative will be funded through the Public Safety Fire Program Reserve Fund.

Operating cost is related to staffing required to adequately staff this station 24 hours per day 365 days per year. Front-line operations have four platoons. Each fire truck has 20 staff assigned, five per platoon therefore 20 frontline operations personnel are required in 2021 to adequately staff this station. There will be a continued effort to explore all opportunities for alternative station types and models as suggested in the 2019 Future Directions Fire Master Plan.

Service Impact

This station is a critical part of the 10-year plan to improve response time across the city. It has been identified in the Future Directions Fire Master Plan as a critical piece of the necessary infrastructure required to increase the percentage of time MFES meets the NFPA standard of four minutes travel time. This station would service the Mississauga Valleys, Applewood and Cooksville (East) neighbourhoods as well as the Dixie Employment Area.

Proposed Initiative

Fire Safety Engineer

Department

Community Services Department

Service Area

Fire & Emergency Services

Description of Budget Request

This budget request is in response to building permit applications that are significant in scope and complexity or require alternative solutions to those prescribed in the Ontario Fire Code with specific emphasis on key risks identified in the Comprehensive Risk Assessment.

Required Annual Operating Investment

Impacts (\$000s)	2019	2020	2021	2022
Gross Expenditures	0.0	0.0	96.4	145.2
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	96.4	145.2
* Net Change in \$		0.0	96.4	48.8
FTEs	0.0	0.0	1.0	1.0

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

Required Capital Investment

Total Capital (\$000s)	2018 & Prior	2019	2020	2021	2022 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

Of all of the fires in Mississauga from 2003 to 2015, 14.4 per cent were caused by mechanical/electrical failure. There are 347 buildings with a height in excess of 18 metres, which are defined as high-rise buildings and are classified as high risk. The City and provincial planning policies have identified intensification as a primary objective of community growth, which will result in a significant number of additional high-rise buildings in the future.

Details of Service Change

Plans examiners are required to ensure that all assigned fire and life safety requirements of the Ontario Building Code and the Ontario Fire Code are addressed prior to the issuance of a building permit. Items under MFES jurisdiction in the plans review process include (but are not limited to) fire alarm systems, automatic fire sprinkler systems, emergency power systems, emergency lighting systems, hose and standpipe systems, hazardous processes/operations and protection, smoke control systems and high-rise fire safety measures. This position will be added to the existing plans examination complement with a focus on the application of building code requirements based on key risks identified in the Comprehensive Risk Assessment. The expertise of a fire engineer will improve the turnaround time for those applications that require alternative solutions.

Service Impact

The results of the Comprehensive Risk Assessment identified industrial occupancies as a significant risk as they represent 1.9 per cent of the City's property stock and 11.6 per cent of the City's fire loss over a 12 year period. Additionally the City and provincial planning policies have identified intensification as a primary objective of community growth, which will result in a significant number of additional high-rise buildings in the future. The construction of these types of structures and other complex applications can take a significant amount of time. In order to complete these and other complex permit requests, a resource specializing in fire engineering is needed and would improve turnaround time.

Proposed Initiative

Fire Fleet Service Advisor

Department

Community Services Department

Service Area

Fire & Emergency Services

Description of Budget Request

This position is in response to the requirement to ensure appropriate segregation of duties and timely processing of warranty work related to new fleet vehicles within the mechanical section of Fire & Emergency Services.

Required Annual Operating Investment

Impacts (\$000s)	2019	2020	2021	2022
Gross Expenditures	83.9	132.7	141.1	142.8
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	83.9	132.7	141.1	142.8
* Net Change in \$		48.7	8.5	1.7
FTEs	1.0	1.0	1.0	1.0

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

Required Capital Investment

Total Capital (\$000s)	2018 & Prior	2019	2020	2021	2022 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

The Ministry of Transportation mandates MTO inspections on all front-line vehicles annually. This must be scheduled to accommodate legislative requirements as well as front-line operational commitments. Currently the task of scheduling MTO as well as preventative maintenance for each of the 30 front-line vehicles is being managed by the head mechanic. This impacts the ability of the head mechanic to complete supervisory duties.

Details of Service Change

The internal audit recommended that Standard Operating Procedures and business processes should be documented for both the fleet and facility maintenance areas. These include ordering, receiving, payment and approval processes, fleet maintenance business processes related to time and labour, inventory tracking and reporting, warranty work and reporting requirements. In order to complete and maintain these tasks on an ongoing basis, an additional resource is required. There is currently not a sufficient number of resources available to maintain an appropriate segregation of duties related to the ordering, receiving, validating and approving of parts for 30 front-line vehicles, five reserve vehicles and more than 40 small fleet and specialty vehicles.

Service Impact

This request will improve the tracking, reporting, payment and approval processes within the mechanical section. It will help to ensure all MTO annual inspections are completed within legislated deadlines and all warranty work is billed, tracked and reconciled according to industry standards. It is expected that the addition of this position will reduce the number of demand maintenance requests and therefore costs associated to those repairs.

Proposed Initiative

Fire Inventory Control Clerk

Department

Community Services Department

Service Area

Fire & Emergency Services

Description of Budget Request

This position is in response to organizational changes required in Capital Assets to support the increased value and expansion of responsibility related to contract management, purchasing, inventory and deployment of equipment for front-line fire and emergency services.

Required Annual Operating Investment

Impacts (\$000s)	2019	2020	2021	2022
Gross Expenditures	75.7	114.2	120.2	132.6
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	75.7	114.2	120.2	132.6
* Net Change in \$		38.4	6.0	12.5
FTEs	1.0	1.0	1.0	1.0

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

Required Capital Investment

Total Capital (\$000s)	2018 & Prior	2019	2020	2021	2022 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

An internal audit in the fleet and facilities units of Capital Assets identified some challenges regarding the segregation of duties related to the purchasing, invoicing and receiving of goods. In order to comply with corporate policy 04-04-02 this position would be critical to support the reorganization of this section.

Details of Service Change

MFES stores section is currently staffed by one FTE who is responsible for the purchasing, inventory and deployment of approximately \$20 million dollars of equipment across 20 fire stations and over 700 staff. This position will be part of an organizational change that will segregate the purchasing of equipment from the inventory and delivery responsibilities.

Service Impact

Comply with segregation of duties policy 04-04-02.

Proposed Initiative

Fire Small Fleet Mechanic

Department

Community Services Department

Service Area

Fire & Emergency Services

Description of Budget Request

This request is in response to the requirements of demand and preventative maintenance on over 40 small fire fleet vehicles. These positions do not require the same skill set as a heavy truck mechanic and therefore are classified at a lower rate than the existing front-line vehicle mechanics.

Required Annual Operating Investment

Impacts (\$000s)	2019	2020	2021	2022
Gross Expenditures	0.0	71.2	185.5	235.9
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	71.2	185.5	235.9
* Net Change in \$		71.2	114.3	50.4
FTEs	0.0	1.0	2.0	2.0

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

Required Capital Investment

Total Capital (\$000s)	2018 & Prior	2019	2020	2021	2022 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

The Ministry of Transportation mandates MTO inspections on all front-line vehicles annually. Currently the six heavy fleet mechanics are tasked with completing the MTO inspections on all front-line vehicles to meet legislative deadlines as well as performing demand maintenance on emergency vehicles. This impacts the timeliness of preventative and demand maintenance on the smaller vehicles.

Details of Service Change

Operating cost is related to two small fleet mechanics that would be licensed to work on all small vehicles and specialty equipment. These FTEs do not require the same skill set as a heavy truck mechanic and therefore are classified at a lower rate than the existing front-line vehicle mechanics.

Service Impact

This request will improve the ability of the heavy vehicle mechanics to complete both preventative and demand maintenance requirements to keep the front-line emergency vehicles in service. It will also improve the timeliness of small vehicle and equipment repairs.

Proposed Initiative

Fire Emergency Management
Specialist

Department

Community Services Department

Service Area

Fire & Emergency Services

Description of Budget Request

This request is for a resource to provide more robust community preparedness programming to improve community readiness for a major disaster.

Required Annual Operating Investment

Impacts (\$000s)	2019	2020	2021	2022
Gross Expenditures	0.0	97.2	129.9	131.9
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	97.2	129.9	131.9
* Net Change in \$		97.2	32.7	2.1
FTEs	0.0	1.0	1.0	1.0

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

Required Capital Investment

Total Capital (\$000s)	2018 & Prior	2019	2020	2021	2022 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

Resources are in place to provide training and preparedness for internal staff: however, levels of external community preparedness are at very low levels. Based on the 2017 survey and observations from previous emergency and disaster situations the following information has been gathered: eleven per cent are unaware of what a 72-hour kit is; 63 per cent are unaware of what goes into one; 37 per cent discussed emergency preparedness with their families; and only 15 per cent discussed a family contact plan.

Details of Service Change

This resource will increase emergency preparedness and provide public education to external groups including residents with specific emphasis on vulnerable populations, businesses and non-government organizations.

Service Impact

This position will support community preparedness. It will strengthen the City's resiliency to incidents, emergencies and disasters through effective public information and educational opportunities. The focus of this opportunity includes community-wide planning with schools, colleges and university, non-profit organizations, faith-based organizations, businesses and workplaces, and hospitals. The social investment proposition is an extremely high return (reduce loss of life, personal injuries and damage).

Proposed Initiative

Contribution to Public Safety Fire Reserve Fund

Department

Community Services Department

Service Area

Fire & Emergency Services

Description of Budget Request

The contribution to the Public Safety Fire Program will be used for three main purposes: provide funding for six additional fire stations in Mississauga over the next twelve years; enhance Fire's public education programming to communities; and, enhance the development of the proactive fire inspection program. The Public Safety Fire Program Reserve Fund (PSFPRF) will be established to administer the program.

Required Annual Operating Investment

Impacts (\$000s)	2019	2020	2021	2022
Gross Expenditures	4,851.8	9,968.0	15,451.6	21,276.8
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	4,851.8	9,968.0	15,451.6	21,276.8
* Net Change in \$		5,116.1	5,483.7	5,825.2
FTEs	0.0	0.0	0.0	0.0

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

Required Capital Investment

Total Capital (\$000s)	2018 & Prior	2019	2020	2021	2022 & Beyond
Expenditures	0.0	0.0	0.0	0.0	0.0

Why Staff Recommend this Initiative

The contribution to the Public Safety Fire Program is recommended to ensure there are sufficient funds for capital expenditures and to ensure that the impact on the operating budget is smoothed and not extended over the twelve years. Without this contribution, the opening of the six fire stations over the next twelve years would result in noticeable swings in the tax increase. Furthermore, the growth to the Fire Program is presented to Council in a comprehensive and transparent manner.

Details of Service Change

This program will be funded by a contribution to the PSFPRF in the operating budget increasing by one per cent (of the previous year's net levy) annually from 2019 to 2022. It will be used:

- To manage the capital and long-term operating costs of new fire stations with approximately 20 FTE for each station over the next twelve years. Based on response time data, Fire & Emergency Services has identified priority areas where new infrastructure is required to augment service delivery (See BR# 5421 and BR# 5508 for details on the first two stations)
- To support the enhanced public education program with the addition of eight FTE by 2021. This staff will assess and develop additional educational programming geared to high and midrise occupancies. The program will also work proactively with the fire safety inspectors and front-line fire crews on midrise fire safety and develop educational programming directed at Industrial High-Hazard occupancies (See BR# 5370 for details)
- To fund the Proactive Fire Inspection Program consisting of up to 28 FTEs by 2022. This program will develop, implement and measure a proactive fire and life safety inspection program that establishes appropriate inspection cycles for all occupancy types based on key risks identified in the CRA (See BR# 5371 for details)

Service Impact

New service levels are identified through the above individual Budget Requests (BR) in order to address fire response service delivery requirements, legislated requirements under the Fire Protection and Prevention Act (FPPA) for targeted public education, legislated deadlines for inspection and aligning to professional standards. For more information, see the individual Budget Requests (BR) listed above.

Proposed Capital Budget

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 for the capital forecast.

Proposed 2019-2028 Capital Budget by Program

Program Expenditures	2019 Proposed Budget (\$000's)	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)	2023-2028 Forecast (\$000's)	Total 2019-2028 (\$000's)
Stations & Auxiliary Buildings	5,024	7,504	7,227	7,866	52,489	80,110
Vehicles & Equipment	9,562	11,418	3,533	3,436	35,938	63,887
Total	14,586	18,922	10,760	11,302	88,427	143,997

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

Proposed 2019-2028 Capital Forecast Highlights

- New Fire Station Infrastructure
- Renovation of existing fire station infrastructure
- New front-line vehicles associated with new stations
- Replacement of front-line and personal protective equipment

Proposed 2019-2028 Capital Budget by Funding Source

The following table provides the funding sources proposed to fund the capital portion of the proposed 2019-2022 Business Plan and 2019 Budget and the consolidated forecast for 2023-2028.

Funding	2019 Proposed Budget (\$000's)	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)	2023-2028 Forecast (\$000's)	Total 2019-2028 (\$000's)
Tax Capital	14,586	18,922	10,760	11,202	57,235	112,705
Development Charges	0	0	0	0	31,192	31,192
Other Reserves & Reserve Funds	0	0	0	100	0	100
Total	14,586	18,922	10,760	11,302	88,427	143,997

Note: Numbers may not balance due to rounding.

Proposed 2019 Capital Budget Detail

The following tables provide a detailed listing of proposed capital projects for 2019.

Program: Stations & Auxiliary Buildings

Project Number	Project Name	Gross Cost (\$000's)	Recovery (\$000's)	Net Cost (\$000's)	Funding Source
CMFS00045	New Fire Station 124 - Dundas & Cawthra - Land, Design and Construction	5,024	0	5,024	Tax Capital
Total		5,024	0	5,024	

Program: Vehicles & Equipment

Project Number	Project Name	Gross Cost (\$000's)	Recovery (\$000's)	Net Cost (\$000's)	Funding Source
CMFS00067	Personal Protective Equipment Replacement	940	0	940	Tax Capital
CMFS00076	Refurbish Fire Vehicles	150	0	150	Tax Capital
CMFS00083	Replacement of Fire Vehicles	7,195	0	7,195	Tax Capital
CMFS00098	Replacement of Emergency Response Tools and Equipment	1,100	0	1,100	Tax Capital
CMFS00111	VCOM Radio System - Component Upgrade	137	0	137	Tax Capital
CMFS006726	Equipment for new FTE for new station 120	40	0	40	Tax Capital
Total		9,562	0	9,562	

Proposed 2020-2022 Capital Budget by Sub-Program

The following tables provide a listing of capital forecast by sub-program for 2020-2022.

Sub-Program	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)
Stations & Auxiliary Buildings			
FIRE Stations - Renovations	1,000	0	1,000
FIRE Stations New	6,504	7,227	6,766
FIRE Studies	0	0	100
Subtotal	7,504	7,227	7,866

Sub-Program	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)
Library Materials & Equipment			
FIRE Equipment New	0	45	0
FIRE Equipment Replacement	1,237	1,280	1,100
FIRE Safety Clothing Replacement	140	118	131
FIRE Vehicles	10,041	2,090	2,205
Subtotal	11,418	3,533	3,436
Total Expenditures	18,922	10,760	11,302

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