Future Directions

Fire and Emergency Services Plan

2024 Draft Report

MISSISSAUGA

We acknowledge the lands which constitute the present-day City of Mississauga as being part of the Treaty and Traditional Territory of the Mississaugas of the Credit First Nation, The Haudenosaunee Confederacy, the Huron-Wendat and Wyandot Nations. We recognize these peoples and their ancestors as peoples who inhabited these lands since time immemorial. The City of Mississauga is home to many global Indigenous Peoples.

As a municipality, the City of Mississauga is actively working towards Reconciliation by confronting our past and our present, providing space for Indigenous Peoples within their territory, to recognize and uphold their Treaty Rights and to support Indigenous Peoples. We formally recognize the Anishinaabe origins of our name and continue to make Mississauga a safe space for all Indigenous Peoples.

Acknowledgements

Mississauga City Council

- Bonnie Crombie, Mayor
- Stephen Dasko, Ward 1
- Alvin Tedjo, Ward 2
- Chris Fonseca, Ward 3
- John Kovac, Ward 4
- Carolyn Parrish, Ward 5
- Joe Horneck, Ward 6
- Dipika Damerla, Ward 7
- Matt Mahoney, Ward 8
- Martin Reid, Ward 9
- Sue McFadden, Ward 10
- Brad Butt, Ward, 11

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We would like to thank all residents, visitors, partners, community groups and organizations that participated by providing input through our surveys and various engagement events. We truly appreciate your time and input. We would also like to thank City of Mississauga staff who contributed directly and indirectly to the completion of this plan. This plan would not have been possible without your assistance.

Fire Chief's Message

As the Fire Chief of one of Canada's largest cities, I am proud to present our 2024 Future Directions Plan. We believe this plan successfully balances public safety and fiscal responsibility. It is intended to guide the delivery of our programs and services over the next five to 10 years.

The recommendations in this plan are informed by our 2023 Community Risk Assessment. The risk assessment analyzes and identifies community risk related to Fire and Emergency Services delivery city-wide. We are committed to mitigating these risks through education and enforcement and, when we can't prevent an emergency, our highly trained staff will respond with professionalism and compassion. We will achieve our goals through evidence-based strategies, effective internal and external stakeholder engagement and a willingness to positively embrace change.

I encourage you to read through our plan to understand the value of our existing programming and the innovative ways we are improving our service. If you take away one thing from this plan, it should be that we strongly believe in the power of fire safety education and teaching people how to be the stewards of their own fire safety. The most important message that I would like every resident to know is simple – please ensure you have working smoke alarms on every floor of your home. They save lives.

I would like to thank Mayor Crombie, Members of Council and our Commissioner, Jodi Robillos, for their ongoing support. Without their commitment to public safety, we could not do what we do.

Each day, our dedicated staff provides exceptional fire protection services in the challenging urban and increasingly vertical environment. I would like to thank all the members of Mississauga Fire and Emergency Services for the vital role they play in keeping our community safe. I am truly humbled to be part of this incredible team of dedicated professionals.

We will continue to rise to the challenges of our dynamic and growing City.

Sincerely,

Deryn Rizzi

Fire Chief

Table of Contents

Executive Summary

This 2024 Future Directions Plan for Mississauga's Fire and Emergency Services guides the delivery of programs and services to the year 2033. Future Directions is a plan that provides a balanced approach between public safety and fiscal responsibility. It meets the needs and circumstances of the City of Mississauga by responding to changes in population, industry trends and current operating conditions.

The Fire Chief is responsible to Council under Part 2, Section 3 of the Fire Protection and Prevention Act (FPPA) for the delivery of fire protection services.

The 2024 Future Directions Plan recommendations are grouped into four areas of focus which reinforce industry best practice and reflect information contained in the Fire and Emergency Services Comprehensive Risk Assessment. These priority areas are as follows:

1. Community risk reduction
2. Asset management
3. People and culture
4. Operational performance and continuous improvement

Purpose

The 2024 Future Directions Plan will provide Mississauga Fire and Emergency Services (MFES) with a strategic direction regarding facilities, programs and services in both the short and long term. Future Direction Plans are city-wide in scope and are updated every five years to reflect rapidly changing trends, infrastructure and the service delivery needs of those who live, work and play in Mississauga. The previous Fire and Emergency Services Master Plan was approved in 2019.

The Fire Chief is responsible to Council under Part 2, Section 3 of the Fire Protection and Prevention Act (FPPA) for the delivery of fire protection services. This means that it is the responsibility of the Fire Chief to inform Council of the needs and circumstances of the City in delivering fire services. This Future Directions Plan is intended to provide Council with information on the existing conditions, key areas of focus and recommendations for future service delivery so that they may set the level of service.

The 2024 Future Directions Plan is informed by key background studies. This includes the 2023 Comprehensive Risk Assessment (CRA) that identifies and assesses all of the existing risks within the community, as well as how they impact future emergency service delivery. The 2024

Asset Management Plan and 2019 Infrastructure Renewal Strategy are important documents used to inform the capital planning needs of MFES. The recommendations in this Future Directions Plan respond to the identified risks and key findings of these background documents.

Overview of Objectives/Methodology

The primary objective of the 2024 Future Directions Plan is to provide MFES stakeholders with a document that contains achievable and measurable recommendations that will improve customer service and be the basis on which future policies and decisions will be made. The Plan considers policies and recommendations set out by other municipal documents such as the City's Official Plan, Asset Management Plan, Climate Change Action Plan, and other planning and community growth strategies (such as Downtown 21, Inspiration Port Credit, Inspiration Lakeview, and the Light Rail Transit (LRT) initiatives.)

In Ontario, there is a legislated requirement (Ontario Regulation 378/18) to develop a Community Risk Assessment (CRA) to inform decisions about the provision of fire protection services. Mississauga developed a Community Risk Assessment in 2023 that complies with the Ontario regulation and technical guideline. The 2024 Future Directions Plan applies the findings of the risk assessment to inform the recommendations in this document with the aim of community risk reduction and inform the City's decisions about the delivery of fire protection services. The plan relies heavily on the information gathered and compiled in the Community Risk Assessment. The plan considers demographics, geography of the City, types of occupancies, current and historic emergency data, and fire loss statistics.

The 2024 Future Directions Plan

- Incorporates data, analysis and findings from the 2023 Community Risk Assessment.
- Provides guidance for the direction of Fire and Emergency Services facilities, programs and services.
- Considers trends, challenges, pressures and issues influencing the community needs, and fire and emergency service delivery.
- Reviews and assesses the existing internal structure, programming and staff development of MFES.
- Recommends actions to address the current and future needs of those who live, work and play in Mississauga.
- Recommends an integrated and prioritized implementation strategy that informs future budget processes, capital planning and the City's development charges process.

Ajax joins MFES

Divisional Strategic Priorities

- Decrease emergency response times by investing in new fire station infrastructure.
- Develop and execute a more rigorous lifecycle replacement plan for fire fleet and equipment.
- Invest in training emergency services staff to fulfil provincial mandatory certification requirements.
- Increase smoke and carbon monoxide alarm compliance.
- Collaborate with our City partners to prioritize equity, diversity and inclusion.

Recommendations

1. Develop and deliver public education programming that targets residents ages 65 and above, school-aged children ages 6-14, and unregistered daycare and community group homes.
2. Support the creation of the City's Reconciliation Plan and actively explore the creation of a Community Circle with our Indigenous partners which will inform and guide programming as well as relevant initiatives across the City.
3. Assess infrastructure, equipment and deployment needs in community development nodes including Port Credit and Lakeview to ensure future population growth and provincial accelerated growth targets are addressed.
4. Monitor development and trends along transit corridors and adjust operational programming to meet needs and circumstances.
5. Deliver and maintain technical rescue certification for all staff required to perform technical rescue services.
6. Develop strategies in conjunction with City programming that support equity, diversity and inclusion and meet the needs of a growing, diverse city.
7. Update overall programming and strategies in all sections of Fire and Emergency Services to reflect results from the 2023 Community Risk Assessment.
8. Deliver Fire & Life Safety Educator training to all new recruit operations staff based on industry standards.
9. Leverage provincial residential fire safety strategies to target neighbourhoods with low smoke alarm compliance.
10. Complete an annual evaluation of City building stock and update proactive inspection records to ensure inspection frequency aligns with the assigned risk.
11. Reinforce and consistently apply all available enforcement strategies to ensure compliance with the Ontario Building Code, Fire Code and other legislative requirements.

12 Develop and deliver a risk reduction strategy for high-rise and high-risk building stock.

13 Use the 2024 Asset Management Plan to develop an improved lifecycle replacement plan that will inform the 10-year capital budget process.

14 Leverage technology to support performance analysis, reporting and overall continuous improvement.

15 Apply the principles of the Corporate Green Building Standard in the construction of new, permanent fire infrastructure.

16 Study the use of electric vehicle technology for front-line fire vehicles and machinery.

17 Complete the Fire Station Infrastructure Plan including the construction of new fire stations and renovation of existing stations.

18 Target a travel time standard for first arriving vehicle of 240 seconds 75 per cent of the time.

19 Deliver a pre-incident planning program based on the National Fire Protection Association (NFPA) 1620 standard.

Introduction

Section 1: Introduction

Vision and Mission

To protect life, property and the environment in Mississauga from all risks through education, enforcement, engineering, emergency response and economic incentive.

Overview of Mississauga Fire and Emergency Services

Mississauga Fire and Emergency Services (MFES) is an all-hazards urban fire department that operates 24 hours a day, 365 days a year. MFES is recognized as a leading department and one of the largest fire and emergency services in Ontario.

MFES provides service to over 717,000 residents and is responsible for protecting and providing service to more than 254,000 properties. These properties range from individual residential dwellings to higher-risk industrial buildings and a growing number of high-rise communities.

MFES's programming and resource strategy is designed to reduce, prevent and/or eliminate community risk and is always evolving to meet new challenges. MFES has prioritized public education, proactive fire safety inspections and code enforcement to help prevent fire emergencies. A team of highly trained emergency firefighters are positioned to respond quickly to all types of emergencies when required. These emergencies include fires, medical emergencies, hazardous materials, gas leaks, water hazards, ice and high-angle rescue, public assistance, carbon monoxide incidents, motor vehicle collisions and other high-risk operations.

Water rescue training

Mississauga's Commitment

Indigenous Communities

In 2015, The Truth and Reconciliation Commission of Canada published 94 Calls to Action to forward Reconciliation between Indigenous and Non-Indigenous peoples in Canada. The City of Mississauga has committed to take action on 13 of those that are actionable by municipal governments and, in addition, has taken several notable actions over the past several years in its efforts to renew and strengthen relationships with Indigenous communities and residents. In addition to commemorating the history and legacy of residential schools with the rest of Canada on National Truth and Reconciliation Day, the City celebrates Indigenous Peoples Day and regularly collaborates on Indigenous policy matters, and City programming and operations with Indigenous communities. Our Indigenous partners include the Mississaugas of the Credit First Nation, the Six Nations of the Grand River First Nation, the Huron-Wendat First Nation and the Haudenosaunee Confederacy.

The City is deeply committed to the ongoing work of reversing the erasure of Indigenous peoples, their history and culture. Reconciliation efforts have been made in every area of the Community Services Department and will continue to take place. The City will also continue to ensure that Indigenous perspectives, considerations and comments are included into its collective work as a municipality. This plan is just one part of the pathway forward to improving our shared future.

Equity, Diversity and Inclusion

The City's commitment to Equity, Diversity and Inclusion (EDI) is grounded in two fundamental goals:

1. Creating a respectful and supportive workplace that attracts, retains and develops a talented workforce reflective of our communities and citizens
2. Embedding EDI considerations in a meaningful manner into all City policies, programs and services to produce equity of outcomes for the communities we serve

To support these goals, the City has undertaken key steps:

- Developed a Workforce Diversity and Inclusion Strategy to assess the diversity and inclusion of the City's workforce and make adjustments to ensure the workforce continues to provide excellent quality service and trust.
- Developed its first Workplace Psychological Health and Safety Strategy to promote the mental health of employees.
- Hired dedicated Subject Matter Experts (SMEs) in HR and the City Manager's Office to further its EDI goals.
- Produced EDI-based learning and development curriculum/training for the City including all leaders.
- Produced tools and resources to help all staff incorporate EDI considerations in their practices.
- Instituted an annual reporting mechanism to Council on EDI progress across the City.

This plan, along with other developed strategies and programs, in addition to the ongoing education and training of employees, helps to support the City's goals and its commitment to equity, diversity and inclusion.

Environmental Sustainability and Climate Change

Mississauga is committed to securing a better future as a low-carbon, sustainable and resilient City. For more than a decade, the City has embraced this transformation through the City's Strategic Plan, plus dozens of additional plans, supporting strategies, standards and policies. More recently, the City declared a climate emergency and passed the Climate Change Action Plan (CCAP). The City also has a 10-year roadmap that outlines the actions needed to support a greener, smarter, more sustainable and prosperous City.

As part of our journey to reach these ambitious goals, the City has taken a more deliberate approach of applying a climate and sustainability lens in the development of this Plan and its supporting recommendations.

Fire is committed to waste diversion by collaborating with internal and external partners, leading by example and implementing a circular economy approach to reduce and rethink waste.

COVID - 19 Pandemic Impact

As an essential service, Fire and Emergency Services continued to provide full services throughout the course of the COVID - 19 pandemic. The way front-line staff worked throughout the pandemic changed, but the 670+ front-line firefighters and communications (dispatch) staff continued to provide uninterrupted service. Many safety protocols had to be updated to reflect changes to emergency response.

During the summer of 2021, MFES partnered with Trillium Health Partners at the University of Toronto Mississauga COVID - 19 mass vaccination site. This joint project included 50 MFES frontline staff providing support within the community during the initial vaccination efforts in Ontario.

This opportunity was unique not only for MFES firefighters, but in the province of Ontario as new and innovative solutions were being developed to help the healthcare sector battle against the pandemic. Firefighters played various roles in the vaccination process, enhancing their skills and scope of practice while learning from fellow emergency professionals. After the initial training program was complete, MFES filled critical staffing roles in the clinic as doctors and nurses were re-deployed back to the hospitals to care for those impacted by COVID - 19.

This collaboration significantly improved service to the community by allowing the vaccination clinics to maintain staffing, as well as demonstrate the ability to utilize firefighters to provide intra-muscular (IM) injection, which is unique in Ontario. As MFES was the first fire service to successfully use professional firefighters to provide vaccinations, the fire leadership team represented the City of Mississauga during meetings with the Ministry of Health – Long Term Care Branch, along with IAFF Local 1212 and the Ontario Professional Firefighter Associations. This opportunity to work collaboratively with various levels of the government and provincial stakeholders demonstrated the level of service provided within Mississauga, and the leadership that supports such progressive measures.

Notable Achievements

- Firefighters joined in the fight against COVID - 19 by helping to provide vaccinations to members of the public.
- Trillium Health awarded MFES with the Patti Cochrane Award, an acknowledgement that recognizes the significant contributions of individuals and teams who have engaged in a partnership where the outcome has demonstrated benefits to our patients, families, staff, volunteers, community and/or partners.
- Opened Fire Station 120 in November 2019.
- Construction of new Fire Station 125 underway.
- Mississauga Fire Fighters Pink Truck Tour has raised over $215,000 over the past three years for Trillium Hospital Cancer Research
- In 2022, a Vulnerable Persons Registry was launched. This service is designed to provide special help to residents with mobility limitations, visual and hearing impairment, oxygen use and/or other requirements when an emergency occurs. Submitting information through the Vulnerable Persons Registry provides relevant information that may help responding crews in the event of an emergency.

Plan Foundation

Section 2: Plan Foundation

Developing the Plan

Every five years, the City of Mississauga updates the Future Directions Fire and Emergency Services Plan with new research, updated population forecasts, engagement feedback and other valuable inputs.

The graphic below illustrates the process for updating the Plan:

A key aspect of research was in assessments of population forecasts. There may be upcoming changes to legislation, provincial policies (e.g., the Provincial Policy Statement) and Minister's Zoning Orders that may impact the population forecasts assumed within the horizon of this plan.

An example of a recent change to legislation is Bill 112, or the Hazel McCallion Act, which was passed by the Ontario Government in June 2023. The legislation will effectively dissolve the Region of Peel by January 1, 2025, and convert Mississauga, Brampton and Caledon into independent, single-tier municipalities. The 2024 Future Directions Fire and Emergency Services Plan was developed under the context that Mississauga is part of the Region of Peel.

Any required changes to recommendations affected by updated population growth forecasts, the dissolution of regional governance or other legislation will be assessed, and the City will remain flexible and respond accordingly to provide high-quality facilities and services.

The 2024 Future Directions Fire and Emergency Services Plan was also developed with a number of key inputs such as background studies and needs assessments. These studies are summarized later in this section.

The public was introduced to the Future Directions project via a comprehensive public engagement strategy, which informed the draft plan. A second phase focused on gathering feedback from the public on the draft plan. The engagement is examined in more detail in Section 4: Engagement.

Alignment with City Plans and Policies

To ensure consistent planning, the Future Directions Fire and Emergency Services Plan considers policies and recommendations set out by other City plans including the City's Official Plan, plus other City strategic and growth plans along with other municipal documents.

Mississauga Strategic Plan

The City's Strategic Plan establishes the vision and broad corporate priorities that define what the City wants to be. This vision is supported by five Strategic Pillars: Move, Belong, Connect, Prosper and Green. These pillars represent the main objectives that drive all City actions and initiatives (including the preparation of policies and plans such as Future Directions). The strategic pillars reflect a common purpose: a collective desire for success in leadership, quality of life, and civic pride – all of which are relevant to the Future Directions Fire and Emergency Services Plan.

In order to realize our strategic goals, the City needs to regularly adapt and plan for change. To that end, in 2023 the City of Mississauga is conducting a review and update of the Strategic Plan to ensure its priorities remain relevant and that actions are being taken to realize its goals and objectives. The updated Strategic Plan is scheduled to be launched in 2024 to honour the City's 50th anniversary. The Future Directions initiatives have taken steps to ensure consistency between both the current and future versions of the City's Strategic Plan.

Mississauga Official Plan

Mississauga Official Plan guides how the City will grow and develop, as required by the Ontario Planning Act, and provides policies to manage and direct land use in line with the City's Strategic Plan. Its policies address important parts of city-building that affect everyone who lives and works in Mississauga including housing, transportation, cultural heritage, the natural environment and the economy. The 2024 Future Directions Fire and Emergency Services Plan was developed in consideration of these policies and in alignment with its objectives.

City's Budget

The City works hard to achieve value for money and sound financial management when developing the annual Business Plan and Budget. The City prepares the Business Plan and Budget using a rolling four-year planning horizon for the operating budget and a 10-year horizon for capital budget planning. This multi-year approach allows the City to respond to political, economic, social and environmental circumstances.

Management of the City's services is organized into 14 administrative service areas. Each service area prepares an individual business plan and budget in line with City priorities that are established and communicated by the City's Leadership Team. This annual process starts in May and concludes in December (in a non-election year) when Council approves the budget for the upcoming year. Council reviews estimates and forecasts for the full four-year period;

however, when Council votes each year to authorize spending and taxation, it is for the first year of the new cycle only.

When Future Directions Plans are endorsed by Council, the funding required to implement actions identified within the plans is not approved at the same time. Instead, service areas with Future Directions Plans bring items forward for consideration during a future business planning and budget cycle. Only once these items have been approved in the budget can they move forward for implementation.

Background Studies

A number of documents and provincial policies affect Mississauga's growth and must be taken into consideration when preparing this Future Directions Plan. MFES has also conducted numerous studies and analyses to understand the needs of the community. The Future Directions Plan will be used to guide planning and decision-making. To be effective, this plan must align with City objectives, as well as specific plans within City divisions. Provincial legislation has also been reviewed as part of the planning process.

Provincial Legislation

- Ontario Planning Act
- Ontario Building Code
- Growth Plan for the Greater Golden Horseshoe
- Fire Protection and Prevention Act:
  - Ontario Fire Code
  - Ontario Regulation 378/18: Community Risk Assessments
  - Ontario Regulation 343/22: Firefighter Certification
  - Ontario Regulation 364/14: Mandatory Inspection – Fire Drill in Vulnerable Occupancy
- Occupational Health and Safety Act

Industry Guidelines

- National Fire Protection Association (NFPA) Standards
- Office of the Fire Marshal (OFM) guidelines, directives and communiqués
- Municipal best practices for fire and emergency services

Strategic Policy Documents

- City of Mississauga Strategic Plan
- Peel Region Official Plan
- Mississauga Official Plan

Other City Documents

- Downtown 21 Master Plan
- Vision Cooksville Plan
- Inspiration Lakeview Plan
- Dundas Master Plan
- Hurontario-Main Street Master Plan
- Port Credit GO Station Area Master Plan
- 1 Port Street East Master Plan
- Accessibility Plan
- Affordable Housing Strategy
- Climate Change Action Plan
- Green Development Strategy
- Workplace Diversity and Inclusion Strategy

MFES Background Studies

- 2024 Asset Management Plan
- 2023 Community Risk Assessment
- 2023 to 2026 Business Plan and Budget
- 2019 Fire and Emergency Services Master Plan
- 2019 Infrastructure Renewal Strategy
- 2018 Community Risk Reduction Strategy
- 2017 Comprehensive Risk Assessment (including the Community Risk Reduction Strategy)

Strategic Priorities

- Decrease emergency response times by investing in new fire station infrastructure.
- Develop and execute a more rigorous lifecycle replacement plan for fire fleet and equipment.
- Invest in the training of emergency services staff to fulfil provincial certification requirements.
- Increase use of smoke and carbon monoxide alarms.
- Collaborate with City partners to prioritize equity, diversity and inclusion.

Community Profile

Section 3: Community Profile

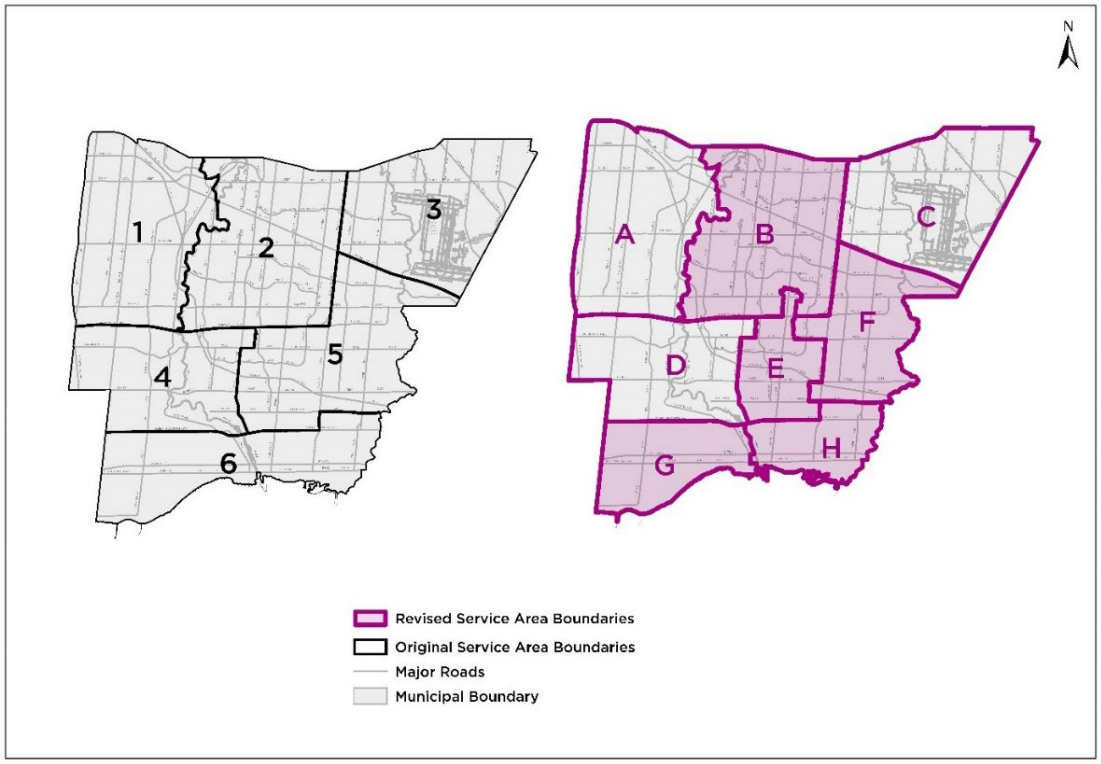
To support the City of Mississauga Future Directions Plan, a Population, Socio-Demographic Profile and Service Area Report was prepared by Monteith Brown Planning Consultants Ltd. in February 2023. The following information is based on that report.

Future Directions Service Areas

By employing geographic-based service areas, planning studies can organize large areas into smaller units to better understand or differentiate service levels and needs in relation to land use/urban structure, population, and political or other unique characteristics associated with the smaller areas.

Mississauga has applied the current service area methodology since the 2004 Future Directions and is now investigating whether the City should revise these service areas as recommended by the 2019 Parks and Forestry Future Directions Master Plan. The proposed modifications recognize changes in how the City has developed over the past 20 years. The original and proposed service area boundaries are presented in **Figure 1** below.

Figure 1: Future Directions Service Area Boundaries, Original and Proposed



Historical and Current Population

Between the 2001 and 2021 census periods, the City of Mississauga's recorded population grew from 612,925 to 717,961[1] persons, resulting in 105,000 more people or an increase of 17 per cent. Between 2016 and 2021, however, the City's population declined by 3,638 persons which may be a result of multiple factors. The COVID - 19 pandemic likely contributed to this decline due to construction delays, online learning decreased the number of post-secondary students, and there were restrictions limiting immigration.

Table 1: Historical Population and Growth Rates

Year	5-Year Population Growth (persons)	5-Year Growth Rate (%)	Average Annualized Growth Rate (%)
2001	68,543	12.6%	2.5%
2006	55,624	9.1%	1.8%
2011	44,894	6.7%	1.3%
2016	8,156	1.1%	0.2%
2021	-3,638	-0.5%	-0.1%
2001 to 2021	108,674	17.7%	0.9%

Note: Unadjusted for net census undercoverage
Source: Statistics Canada Census, 2001 to 2021

As shown in **Table 1** above, the annualized rate of growth has been declining since 2001 which could be a result of an aging population and aging-in-place trends, and/or financial barriers to home ownership. The Planning and Building Division is now expecting the City's population to grow again and catch up to the approved short-term forecast based on submitted planning applications and building permit activity.

The census population totals listed above do not necessarily equal the actual population due to 'undercoverage' (the term Statistics Canada uses to account for missing information and margin of error when compiling census data). Statistics Canada issues an 'undercount' figure or 'undercoverage rate' specific to a geographic area, usually the census metropolitan area level. Statistics Canada will be releasing the undercoverage rate for the most recent census period in September 2023. Applying an undercoverage rate of 4.25 per cent to Mississauga's 2021 census population per the advice of the Planning and Building Division results in approximately 750,000 persons living in the City.

The City's current growth forecasts estimate a 2021 population of 795,040 persons. **For the purposes of Future Directions – and to ensure consistency with forecasts employed by other City documents – the updated service area population forecast of 795,040 is used as the current year (i.e. 2023) baseline figure for Future Directions.**

[1] Statistics Canada Census 2001 to 2021, (unadjusted for net census undercoverage)

Table 2 illustrates the distribution of Mississauga's population by the original Future Directions Service Areas as well as the service areas proposed by the Parks, Forestry and Environment Division (described earlier in Section 2.1). As a reminder, there is no change to the boundaries of the original service areas 1, 3 and 4 and, as a result, there is no difference in the population figures shown. Using the City's approved estimate for 2021 – which differs from the 2021 census population figure – all service areas were projected to attain positive growth rates between 2016 and 2021.

Table 2: Population by Original and Proposed Service Area

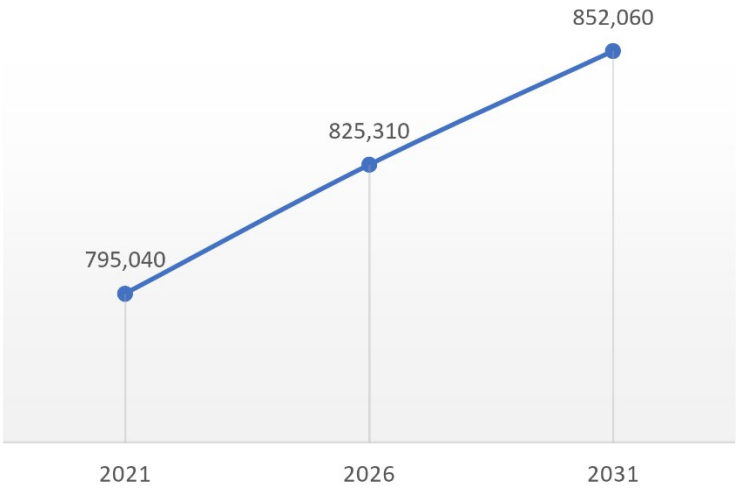
Original Service Area	2021 Population Estimate	Growth Rate (2016 to 2021)
1	187,410	6.3%
2	171,660	4.9%
3	39,430	4.6%
4	102,440	4.6%
5	202,750	8.3%
6	91,350	6.6%
Total	795,040	6.2%
Proposed Service Area	**2021 Population Estimate**	**Growth Rate (2016 to 2021)**
A	187,410	6.3%
B	159,570	4.2%
C	39,430	4.6%
D	102,440	4.6%
E	140,000	10.9%
F	74,840	4.8%
G	47,330	6.1%
H	44,020	7.3%
Total	795,040	6.2%

Note: positive growth rates are associated with the City's 2021 population forecast and thus differ from the overall population decline recorded between 2016 and 2021 census periods.
Source: City of Mississauga, Service Areas. 2021. Revised Growth Forecast Population Summary.

Projected Population Growth

Approved growth forecasts provided by the City's Planning and Building Division show that Mississauga's population will grow from the current year estimate of 795,040 to reach 852,060 by the year 2031, shown in **Figure 2** below. Beyond the current Future Directions planning period, Mississauga's population is projected to reach 995,040 by the year 2051.

Figure 2: City of Mississauga Approved Growth Forecast, 2021 to 2031



Bill 23 requires the City to build more homes. The Planning & Building Division indicates that Mississauga will still use the growth forecasts to support their infrastructure planning; however, Bill 23 indicates that the province will prepare a new Growth Plan for the Greater Golden Horseshoe. The City of Mississauga would have to consider how any new provincial growth plan will affect population and approved growth forecasts through future planning initiatives.

The projected distribution of Mississauga's population has been analyzed based on the original and proposed Future Directions Service Areas. The following trends are noted of importance to the Fire and Emergency Services 2024 Future Directions Plan:

Service Area 5 has historically been the largest by population as it contains Downtown Mississauga and a number of mature neighbourhoods. The current estimate of 202,750 persons is expected to grow by 14 per cent to 230,460 by 2031, adding more people (27,700) than any other service area over the next eight years and accounting for half of all growth in Mississauga over this timeframe. Due to the diverse forms of housing and planned intensification activities in the Downtown, Service Area 5 was a particular point of consideration for the Parks, Forestry and Environment Division when it revisited Future Directions Service Area boundaries. By isolating higher-density lands along and adjacent to the **Hurontario LRT corridor** along with the inclusion of the **Uptown Major Node** (contained in the original Service Area 2), a logical grouping has been created as Proposed Service Area E. This will be home to virtually all 2021 to 2031 growth in the original Service Area 5 boundary. Proposed Service Area E is projected to increase by nearly 32,500 to reach a population of 172,500 by 2031. The population of the mature neighbourhoods east of Proposed Service Area F is projected to remain relatively unchanged, increasing 700 persons between 2021 and 2031.

Service Area 6 (Proposed Service Areas G and H) have a current population estimate of 91,350 and are collectively forecasted to grow substantially over the next 30 years. Forecasted population will total 106,500 persons by 2031 and over 150,000 persons living south of the QEW in Mississauga by 2051. By 2031, the original Service Area 6 population will be equally divided among the Proposed Service Areas G and H, both of which are projected to have approximately 53,000 persons. Beyond 2031, the majority of population share will be directed east of the Credit River to Proposed Service Area H whose 2051 population is forecasted at

84,500 persons compared to 66,500 persons in Proposed Service Area G. Looking at the entire area (i.e. the original Service Area 6), land development activity is primarily directed to the **Port Credit Neighbourhood West**, **Port Credit Major Node**, **Lakeview Waterfront Major Node** and **Lakeview Neighbourhood**.

Population and Age

One of the nine mandatory profiles in the 2023 Community Risk Assessment is the demographic profile. The following sections summarize key demographic information relating to the City of Mississauga's community needs and risks. The population, socio-demographic profile and service area report prepared by Monteith Brown Planning Consultants Ltd. was used as a supporting document for the following sections.

The 2021 Census recorded the median age in the City of Mississauga at 40.8 years, which is slightly younger than the Ontario median age of 41.6 years. Notwithstanding a younger age profile relative to the province, Mississauga's median age is 2.3 years older than its 2011 census median age of 38.5, indicating that the population is aging as a whole. Between the 2011 and 2021 census periods, there were approximately 28,500 fewer children and teens under the age of 20 while the number of persons 55 years of age and older grew by over 57,000 persons. The 55+ age group now represents 31 per cent of the City's population whereas the figure was 24 per cent in 2011.[2]

Population and age are key fire-risk factors. Specific age groups are at a higher risk from fire-related incidents. (e.g. seniors and children). Canada's aging population has been recognized as one of the most significant demographic trends in the nation. According to Statistics Canada, from 2016 to 2021 Canada experienced the largest increase in the proportion of seniors since Confederation due to the baby boomer generation reaching the age of 65. There are more Canadians over the age of 65 (19.0 per cent of the population) than there are children aged 14 years and younger (16.3 per cent).

Seniors Population

The senior population (those aged 65 years and older) represents one of the highest fire-risk groups across the province and the nation. Based on data from across Canada (2005 to 2014), seniors are 2.5 times more likely to have died at all fires than the adult population and 2.8 times more likely to have died at structure fires than the general population (statistics from Ontario 2012 to 2021).

16.6 per cent of the population is aged 65 and over and is at an increased risk of experiencing a fatality in a residential fire, while 14.4 per cent of the population is aged 55 to 64, representing a future risk.

[2] Source: Population, Socio-Demographic Profile and Service Area Report prepared by Monteith Brown Planning Consultants Ltd., February 2023

Based on the residential fire death rate (fire deaths per million of population) in Ontario from 2011 to 2020, as shown in **Figure 3** below, seniors are at an increased risk of fire fatality in residential occupancies when compared to other age groups. Seniors account for a much higher percentage of fire fatalities than their proportion of the population as summarized in **Table 3**, showing the percentage of fire fatalities based on age groups (seniors, adults and children/youth). In Mississauga,

Figure 3: Residential Fire Death Rate by Age of Victim (2011-2020)

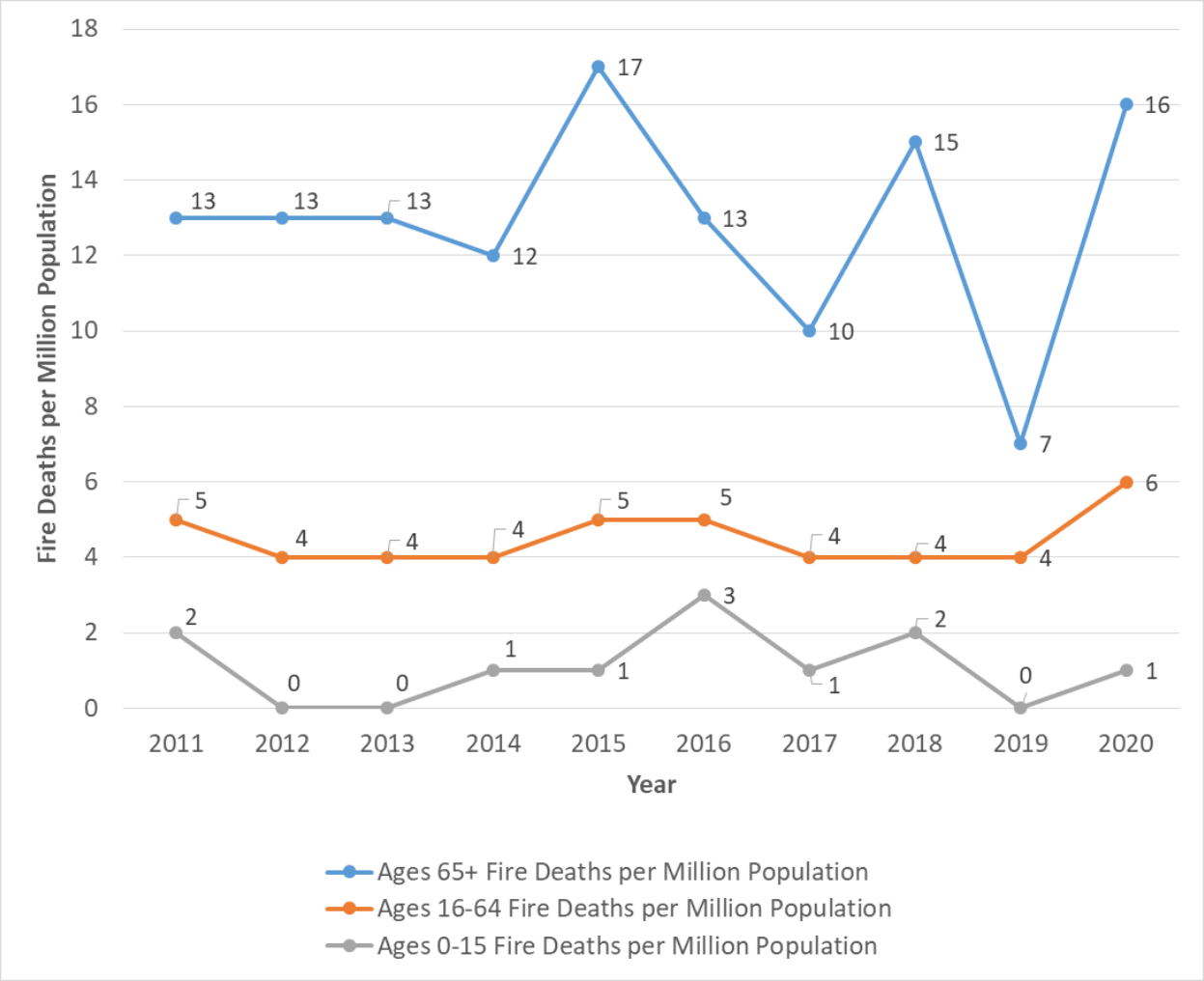


Table 3: Fire Fatalities by Age Group (Ontario)

Category	Age	% of Provincial Population	% of Fire Fatalities
Children/Youth	<=14	15.2%	4%
Adults	15–64	68.2%	57%
Seniors	>=65	16.6%	39%

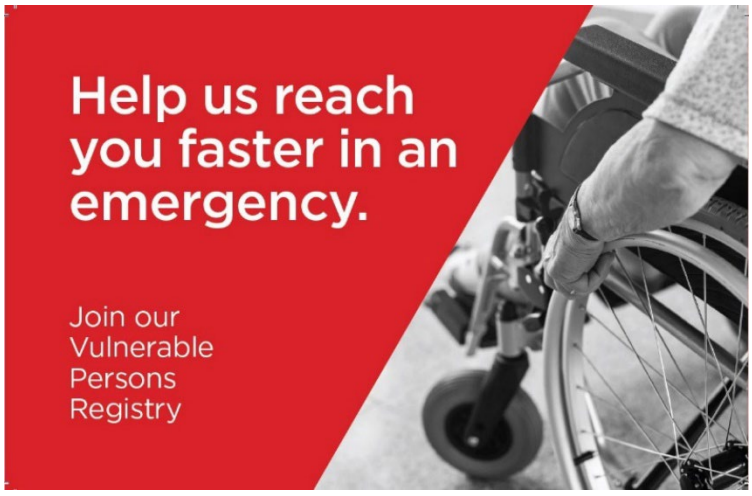
Source: Office of the Fire Marshal (OFM) Fire Statistics for 2012 to 2021 and 2021 census data.
Notes: Excludes fire deaths on First Nations and federal properties. Fire deaths also include arson, homicides and suicides and do not include fire deaths in vehicle accidents.

Vulnerable Population

Persons registered to the Vulnerable Person Registry can receive special help from MFES firefighters during an emergency.

Fire and Emergency Services must assess community fire risk in order to prioritize service, as accomplished through the Community Risk Assessment. One of the high-priority groups identified in the risk assessment is vulnerable individuals who are at an increased risk of fire injury or fatality. These people can have mobility limitations, cognitive limitations or can be persons with developmental disabilities.

Vulnerable individuals and/or occupancies require particular focus from a fire and emergency service provider, as often these individuals are unable to help themselves in the event of a fire. From an occupancy perspective, vulnerable occupancies fall into Care or Detention (Group B) occupancies, including group homes. **It is important to note that a vulnerable occupancy is always occupied by vulnerable individuals; however, not all vulnerable individuals reside in a vulnerable occupancy.** With the aging population, there is a growing trend of seniors and vulnerable persons living at home or with extended family. To support this need and related risk in the community, MFES offers a Vulnerable Persons Registry. The service is designed to provide special help to residents with mobility limitations, visual/hearing impairment, oxygen use and/or other requirements in the event that an emergency occurs. The registration process requires submitting pertinent information which is then placed on file at the City's joint Fire Communications Centre dispatch system (from where emergency calls are dispatched). When an emergency occurs at the vulnerable person's address, the relevant information is available to the responding crews.



Children and Youth Population

Research conducted in Canada identifies children under the age of 6 as one of the primary groups with an elevated fire risk. This is the age of children most likely to attend daycare. The City's youngest demographic (those 14 years of age and under) represents 15.2 per cent of the City's total population. This includes both daycare-aged and school-aged children. While this group has historically been at a lower risk of fatality in residential occupancies overall (when compared to seniors or adults), youth represent an important demographic for the purposes of public education. As a result, there is value in targeted public education and prevention programs to this demographic. Structured education programs for children and youth can promote fire and life safety awareness for future generations which helps mitigate fire-related risks.

Recommendation

1. Develop and deliver public education programming that targets residents ages 65 and above, school-aged children ages 6-14, and unregistered daycare and community group homes.

Public education event

Ethnic/Cultural Considerations

Language and Immigration

According to the 2021 Census, 44 per cent of Mississauga residents list English as the language most often spoken at home, which is 16 per cent less than the previous census in 2016. This rate is consistent with the regional rate (47 per cent), although significantly below the provincial rate (68 per cent). More than one out of four residents (26 per cent) list a non-official language (i.e. other than English and French). Ten per cent reported that one or both official languages and a non-official language were most spoken at home, a two per cent decrease compared to 2016. The top five non-official languages spoken at home across Mississauga in 2021 were Urdu (5.0 per cent), Arabic (4.6 per cent), Mandarin (3.2 per cent), Polish (3.1 per cent) and Punjabi (2.9 per cent). Over the past 10 years, the top five non-official languages spoken at home have remained similar although each has grown by approximately 2 per cent.

Similar to previous census periods, 53 per cent of Mississauga's population was made up of immigrants in 2021 which is comparable to that of Peel Region (52 per cent) but significantly higher than the provincial rate (30 per cent). Recent immigrants arriving in the five-year period between 2016 and 2021 represented 14 per cent of the total foreign-born population, which is similar in proportion to that recorded between the previous 2011 to 2016 census periods.

Socio-economic Circumstances

The socio-economic circumstances of a community are known to have a significant impact on fire risk. Socio-economic status is reflected in an individual's economic and social standing, and is measured in a variety of ways. These factors can be reflected in the analysis of socio-economic indicators such as labour force status, educational level and income as well as household tenure, occupancy, suitability and cost.

Socio-economic factors can combine in a number of ways and have direct and indirect impacts on fire risk. One such example outlined in the OFM's Fire Risk Sub-Model notes that households with less disposable income may be less likely to purchase fire safety products such as smoke alarms and fire extinguishers. Another consideration is that households living below the poverty line may have a higher number of persons per bedroom in a household and/or children who are more likely to be at home alone. These circumstances would impact both the probability and consequence of a fire.

The factors reviewed at a high level have been selected based on the data available from Statistics Canada. Socio-economic factors such as income decile group and median household income have been highlighted throughout this section.

Factors that are highlighted in this section include:

- Labour force status
- Immigrant status
- Educational attainment
- Household tenure, occupancy, suitability and cost

According to the 2021 Census

- The City of Mississauga has a higher proportion of residents in the labour force than the province of Ontario (66.4 per cent versus 64.7 per cent).
- The City has a much higher proportion of newcomers (53.2 per cent) when compared to Ontario (30.0 per cent).
- 61.5 per cent of residents in Mississauga have a post-secondary certificate, diploma or degree, which is approximately 4 per cent higher than the province. This level of education could be linked to the median household incomes found in the City.
- The median total income of households for Mississauga in 2020 was $102,000.00, higher than the provincial median total income per household of $91,000.00.

Indigenous Population

Research indicates that Indigenous peoples are at an increased fire risk. Death rates due to fire are higher among Indigenous people of all age groups compared to non-Indigenous people. The Indigenous Fire Marshal Service estimates that people in First Nations are 10 times more likely to die in a fire incident than people from other communities. Although there are no reserves within the City of Mississauga, consideration should also be given to local Indigenous populations. The proportion of the Indigenous population of the City (0.49 per cent) is substantially lower than Ontario as a whole (2.89 per cent). The population of Indigenous people should continue to be monitored as new census data becomes available for consideration when planning public education programs and materials.

Recommendation

2 Support the creation of the City's Reconciliation Plan and actively explore the creation of a Community Circle with our Indigenous partners which will inform and guide programming as well as relevant initiatives across the City.

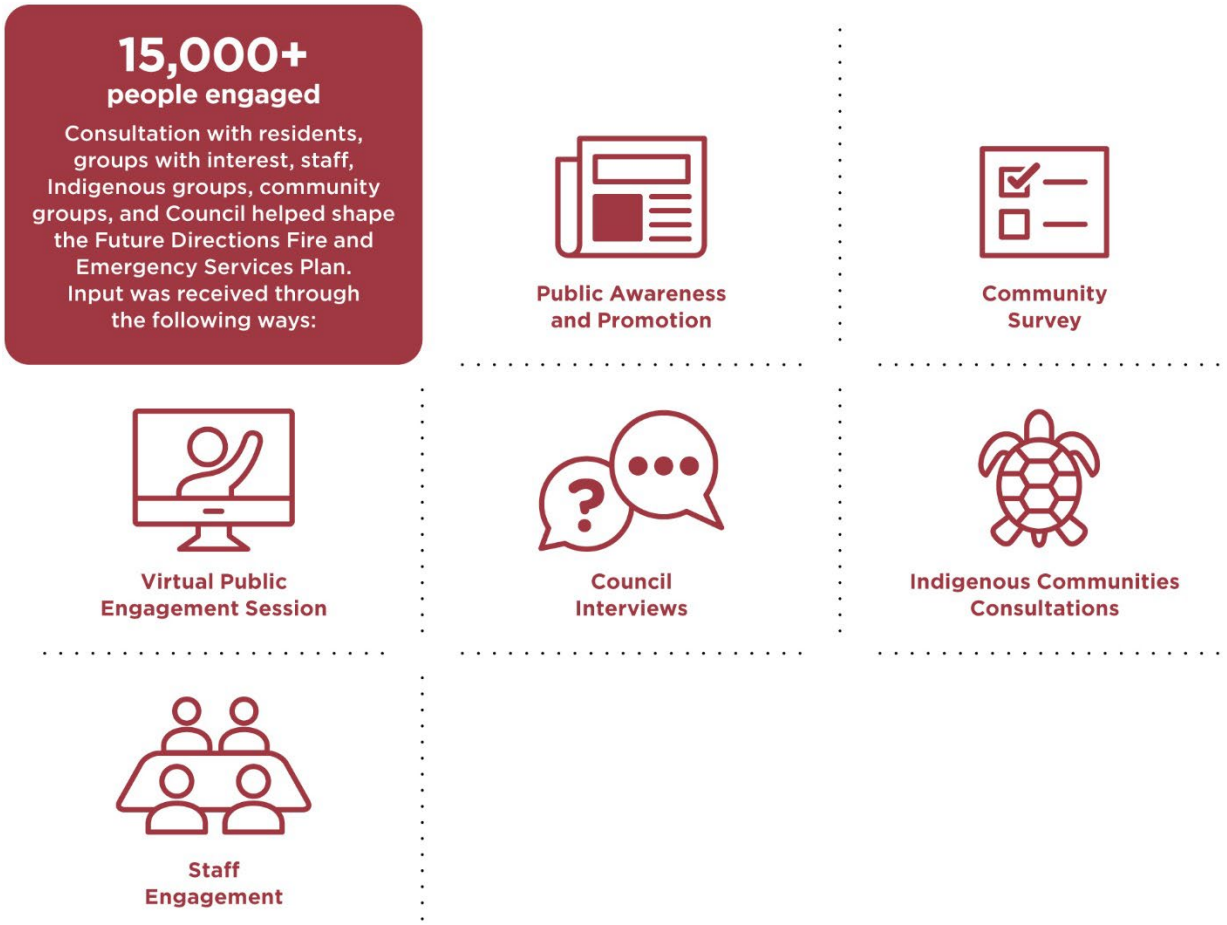
Engagement

Section 4: Engagement

Purposeful Engagement

The 2024 Future Directions Fire and Emergency Services Plan was developed in consideration with the vision for community engagement at the City of Mississauga: Meaningful engagement every time. This process provides for open, two-way dialogue, offers an inclusive approach to seek diverse opinions and ensures that decision-making is well informed. To accomplish this, multiple forums were promoted to the community including focus groups, online surveys and face-to-face meetings. In addition to the range of methods used to consult residents and groups with interest, the Future Directions 'Have Your Say' engagement page was made available for translation to allow for non-English speaking members of the community to engage in the public consultation process. Regular, purposeful engagement was conducted throughout each phase of the project and outcomes have been incorporated into this plan. The open, transparent, accessible, inclusive and participatory manner with which engagement for the Future Directions Fire and Emergency Services Plan was conducted strongly upholds the City's vision of meaningful engagement every time.

Consultation Initiatives



An effective and strategic public consultation program was essential in drafting the Future Directions Plan. Methods and tools for engagement were carefully selected to ensure effective, accessible and efficient communication on topics related to Mississauga Fire and Emergency Services. This section summarizes the findings of community engagement activities specifically for the 2024 Future Directions Plan for Fire and Emergency Services.

The 2024 Future Directions Plan provided a multifaceted and inclusive opportunity for stakeholders, residents and City Council/Staff to provide feedback on the current and future services relating to Mississauga's Fire and Emergency Services. The main consultation approaches included the following:

- Online public survey
- Virtual public engagement session
- Targeted staff and stakeholder interviews
- Interviews with City councillors
- Indigenous consultation

Key Findings/Themes

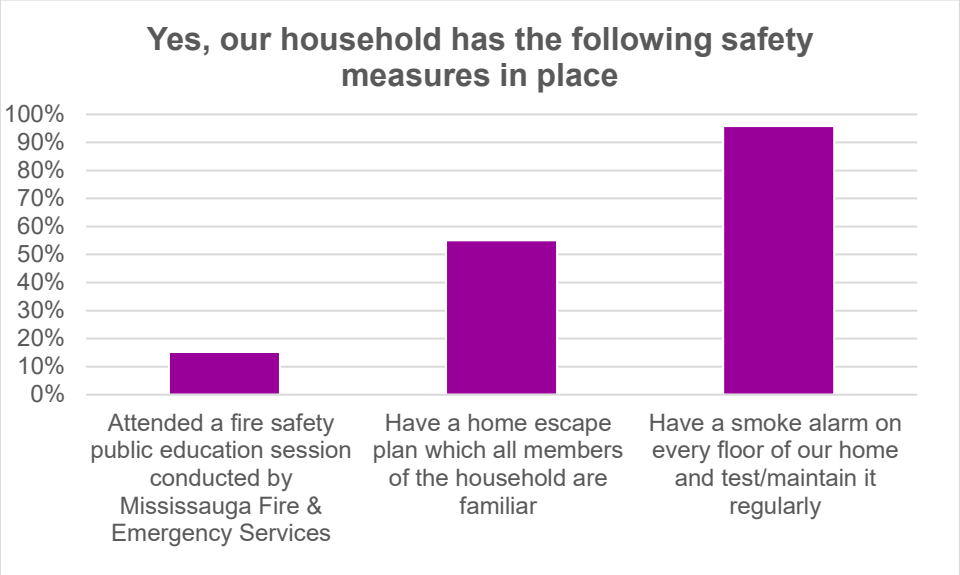
Public Survey Findings

The goal of the public survey was to better understand Mississauga residents' thoughts and perceptions on three main aspects of the fire and emergency services within the City:

- Fire safety awareness
- Utilization of current fire safety measures
- Interest in additional fire safety programs/education

The survey received 7,020 responses. A summary of the survey responses to MFES questions is as follows:

Figure 4: Example Question from the Public Survey



78 per cent of respondents stated that they, along with other members of their household, were aware of fire safety precautions within their homes. Among the participants who indicated their awareness of fire safety precautions, more than 90 per cent confirmed having smoke alarms installed on every floor of their residence and testing them regularly. Additionally, over half of the respondents reported having an established escape plan that all members of their household were familiar with. However, only 15 per cent reported attending fire safety public education sessions, indicating this is a much less utilized service. Among the participants who indicated their lack of awareness regarding fire safety in their homes, the majority (70.8 per cent) expressed a preference for enhancing their knowledge through home escape planning.

Other frequently chosen alternatives included acquiring additional information about general fire safety tips (63.4 per cent of responses) and electrical safety (57.9 per cent of responses). Conversely, the option to learn about the Vulnerable Persons Registry was the least popular, selected by only 25 per cent of individuals. If there were to be a fire within the home, 54 per cent of respondents stated that they have attended a fire safety education session, have an escape plan and are fully prepared if they have an emergency; 45.9 per cent stated they did not have a plan in place. For those who did not have a plan, the majority of them were open to learning more about fire safety, with "home escape planning" and "awareness of common fire causes within the home" being the most commonly answered ways of doing so.

Finally, the survey aimed to assess residents' preferred means of receiving fire safety information. It was found that approximately half of the respondents (50.4 per cent) favoured receiving updates through the City Website, while social media was a close second (43.1 per cent). Notably, "school programs" received the third highest number of responses (41.2 per cent), suggesting a demand for increased of fire safety education within schools.

Recommendation #1 will support MFES in addressing the community's need and desire for public education programming, especially a desire for more fire safety information to be distributed in schools.

Virtual Public Engagement

The virtual public engagement session yielded several key findings and themes based on community participation. City residents showed a high level of awareness regarding the responsibilities of MFES. They acknowledged MFES's role in responding to fires and other emergency incidents, providing public fire safety education, conducting fire code inspections, and performing origin and fire cause investigations. However, community participants displayed less familiarity with certain MFES services such as checking smoke alarms and carbon monoxide alarms, and the Vulnerable Persons Registry, indicating a need for increased awareness on these important MFES services. The community also expressed a strong interest in receiving enhanced public education on home escape planning.

When discussing anticipated challenges MFES will face in the next 5 to 10 years, the key concerns identified revolved around the City's growth such as increasing density, high-rise buildings and traffic congestion. These factors highlight the potential implication for MFES's operations and ability to effectively respond to emergencies in a rapidly changing urban landscape.

Overall, the findings from the virtual public engagement sessions underscore the importance of community awareness, education and preparedness, as well as the need for MFES to adapt to the challenges posed by the City's growth and changing infrastructure.

Council and City Staff Consultation

The general theme identified through interviews with Council was an overall support for MFES, hearing that Council is generally satisfied with Fire Services and a clear understanding that additional fire stations are needed in the long term. Support for additional public education initiatives was also identified.

Interviews with MFES staff identified and supported the following key themes to be addressed within the 2024 Future Directions Plan:

- Opportunities to improve public safety and reduce community risk based on the findings of the 2023 Community Risk Assessment.
- Ensure the recommendations of the plan are clear, concise and actionable, with appropriate timelines for delivery.
- Importance of preparing MFES to deliver services to the City in the future by addressing the long-term growth considerations.

- Focus on the densification of the City with specific consideration given to the Port Credit/Waterfront development, including the potential for both land- and water-based rescue needs.
- Assess the requirements needed to address high-rise development, particularly within the City centre where there is no height limit. Include consideration of vertical response impact on response time.
- Importance of staff training and development services to align MFES with the requirements of the new Ontario Regulation 343/22: Firefighter Certification, including consideration of the following:
    - Opportunities to improve training records management technology and programs.
    - Training requirements and programs for staff in all sections of MFES including fire prevention, capital assets and administration.
    - Training for front-line personnel to address growing trends in call types and response needs.
- Importance of delivering on the completed Asset Management Plan to provide MFES with the necessary capital resources to respond to the City's emergency response needs.
- Challenges with supply chain cost increases and schedule increases as they relate to the capital planning process.
- Opportunities to improve recruitment initiatives to attract more diversity within MFES personnel to better reflect the local community.

Indigenous Focus Groups

City of Mississauga staff conducted interviews with First Nations representatives for the Future Directions planning process. Comments and suggestions were provided by MFES for discussion, including:

- **Fire Safety Education**: Provide support/training through the City's Emergency Management Office to build out the existing plan.
- **Equipment/Infrastructure**: Provide help/training to build specifications for new vehicles/tanker operations and share MFES station programming successes.
- **Ceremonial Fire Pits**: Introduce fire pits along the trails at Riverwood and J.C. Saddington Park to be used for ceremonial and educational purposes, and work with the City Heritage Planning and Indigenous Relations Team to provide training to fire staff for this purpose.
- **Cultural Awareness**: Consider more initiatives like the public art mural on the bay doors at fire station 104 (Port Credit) and the moccasin identifier projects to continue collaborative partnerships through Indigenous public art.

Existing and Future Conditions

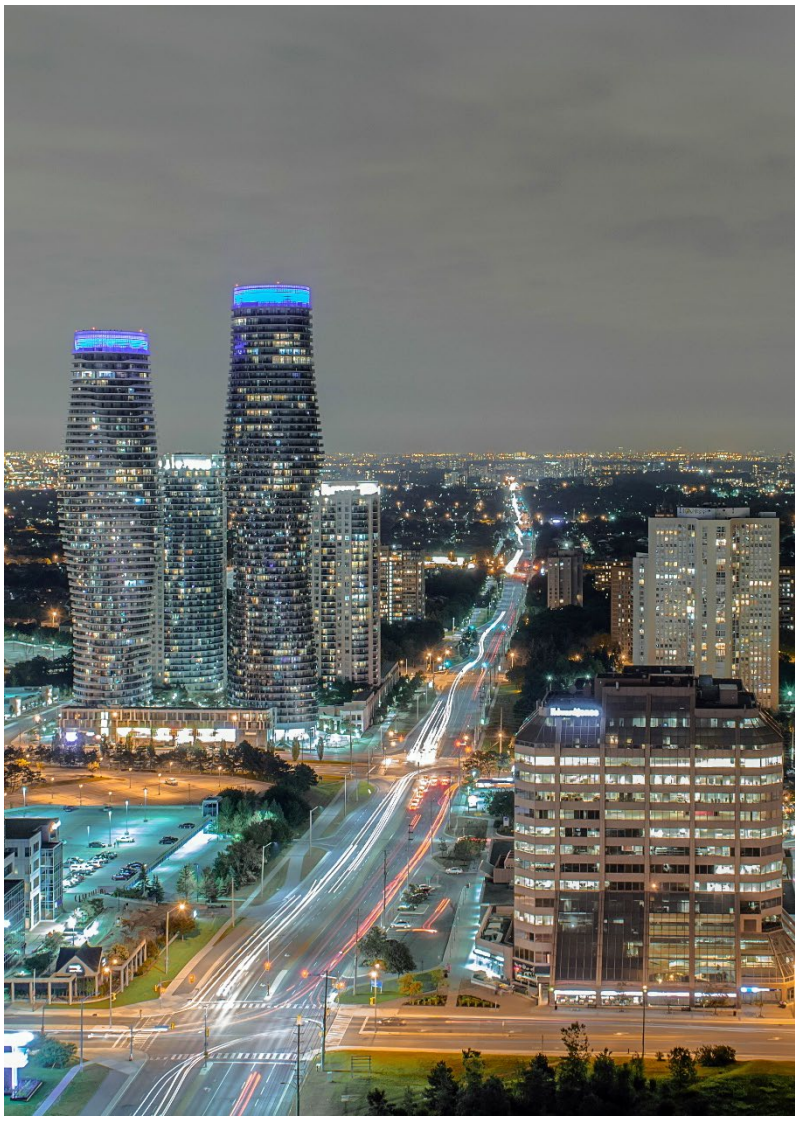
Section 5: Existing and Future Conditions

Pressures/Challenges

Provincial Fire Services Initiatives

Since the completion of the 2019 Fire and Emergency Services Master Plan, a number of new provincial regulations and initiatives have been introduced that impact municipal fire services. These changes include new regulations that require MFES to prepare a community risk assessment for use in the planning and delivery of fire protection services that align with the City's local needs and circumstances. Among the most recent regulations is a mandatory certification program for municipal firefighters.

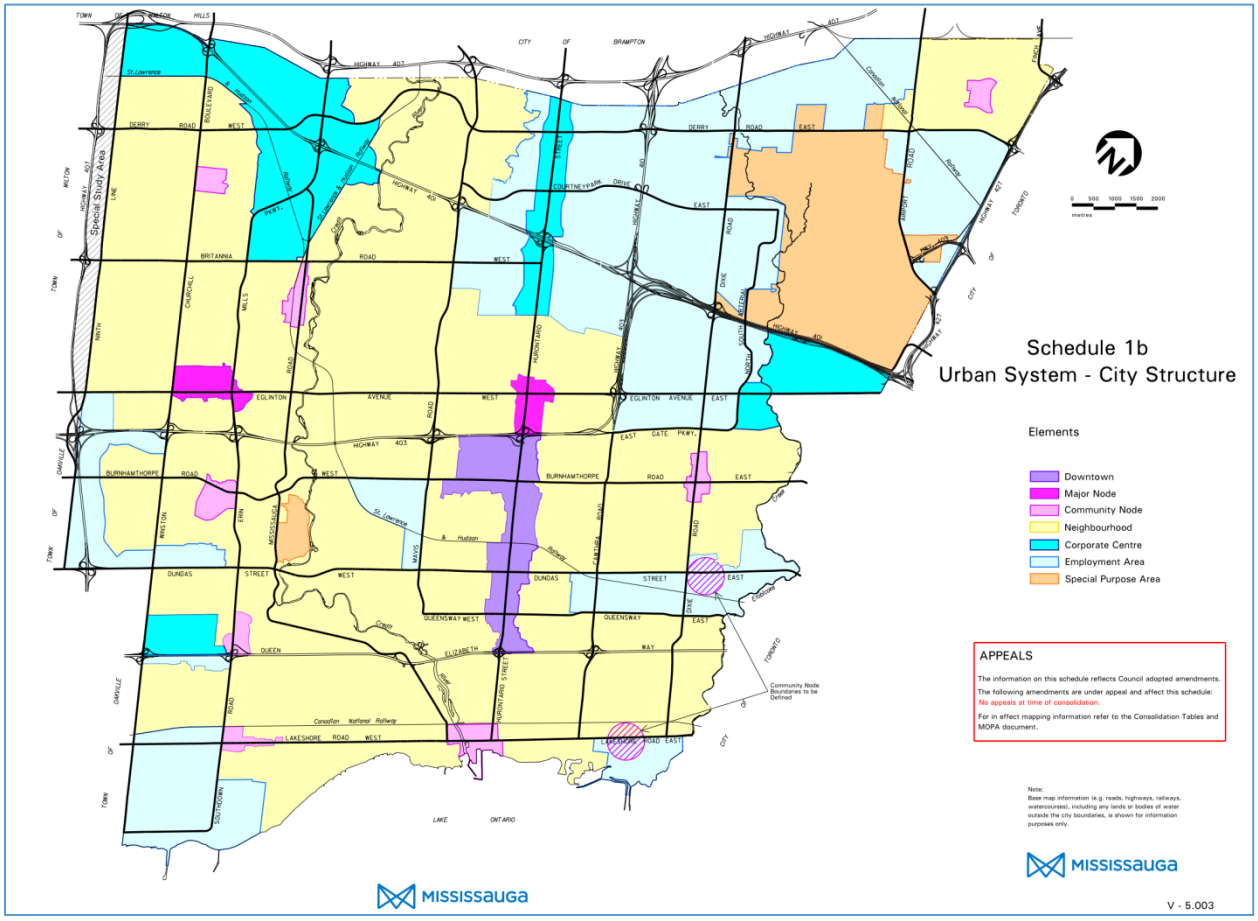
The Office of the Fire Marshal continues to support the optimization of municipal fire services by applying the 'Three Lines of Defence' model. An increase in fire fatalities in the province in recent years has motivated new initiatives and a focus on growing home smoke alarm compliance.



Growth and Intensification

The City of Mississauga is constantly changing as neighbourhoods move through the cycles of urban core, intensification areas, mature neighbourhoods and new development/growth. Schedule 1b of the Official Plan (**Figure 5**) highlights the areas of the City planned for these differing levels of growth, development and intensification.

Figure 5: Urban System - City of Mississauga - Building Density (Official Plan Schedule 1b)



Mississauga is projected to experience population and employment growth which will be targeted to key areas and directed through a range of policy studies and reports. The key areas planned for growth are summarized in **Table 4**.

Table 4: Planned Future Growth and Intensification Areas

Plan Name / Purpose	Future Planning Considerations for MFES
VisionCooksville (2016): A community vision, guiding principles and community recommendations.	Downtown Cooksville to add 7,000 people in 2,700 new housing units and 1,000 jobs over the next 20 years. The intent is to provide a range of housing options including new low-rise, mid-rise and high-rise residential, plus mixed-use buildings.
MyMalton (2016): A community vision, principles and eight key moves for revitalization.	Malton is a fully established residential suburban community whose growth and revitalization will be achieved through redevelopment and reinvestment.
Inspiration Lakeview (2016): Land use plan for the redevelopment of 99 hectares of land including former OPG lands and the Lakeview business employment area on the waterfront.	Forecast to accommodate 15,000 to 20,000 residents through 8,000 housing units as well as 7,000 to 9,000 jobs. Residential developments will include a range of townhouses (up to four storeys) including traditional, stacked and back-to-back stacked; mid-rise (five to eight storeys); and taller building elements up to 15 storeys. Taller buildings may be considered in one district to create landmarks and establish community character.
Port Credit West Village Draft Master Plan (Inspiration Port Credit, 2017): Plan includes land use for the former refinery site consisting of 29 hectares.	Forecast to provide 2,500 housing units through a range of housing forms including townhouses and condominiums. Also forecasted to provide retail and commercial space.
Port Credit GO Station Area Master Plan: 2.04 hectares of land located near the Port Credit GO Station.	Located around the Port Credit GO Station and west of the future Hurontario-Main Light Rapid Transit stop. Some areas contain vacant or under-utilized properties which could accommodate more intensive, transit-supportive uses.
Shaping Ninth Line Secondary Plan: Secondary plan for the 350 hectares of land east of Ninth Line south of Highway 401.	Only remaining undeveloped land in the City. Proposed land use includes residential with a range of options including townhouse and low-rise development, employment and mixed use.
Downtown 21 Master Plan (2010): A master plan for the Downtown City Centre.	Downtown Mississauga is a provincially identified Urban Growth Centre slated for high-density population and employment. Proposed land use includes residential with a range of options including townhouse and low-rise development, employment and mixed use.
Dundas Connects: A master plan for the extent of Dundas Street.	Over the next 35 to 40 years, the number of people who live, work, learn and travel along the Dundas corridor is expected to increase. Along the corridor, mixed-use, transit-supportive development will be encouraged with seven focus areas (key intersections) identified for a greater level of intensification.
Hurontario Main LRT Project: A Plan for the 20-km LRT along Hurontario.	The Hurontario LRT will bring rapid transit to the Hurontario corridor with 22 stops. Project remains on track to be completed by fall 2024. City staff working with City of Brampton to create branding for the LRT.

Recommendations

3 Assess infrastructure, equipment and deployment needs in community development nodes including Port Credit and Lakeview to ensure future population growth and provincial accelerated growth targets are addressed.

4 Monitor development and trends along transit corridors and adjust operational programming to meet needs and circumstances.

Costing and Acting on the Asset Management Plan

The City of Mississauga and each of the individual departments, including MFES, will have to address the issue of how to deliver a long-range financial plan that will ensure a continued improvement of assets while reducing service disruption risks. The needs of critical assets have been identified based on condition and associated service delivery risks. The results will likely require significant capital investment over the long term. This Future Directions Plan recommends that MFES develop a long-term lifecycle plan that will ensure capital funding is budgeted to replace mission-critical equipment and other infrastructure. The reliability of front-line firefighting equipment is crucial to the safety of both the community and staff. This will also include the need for appropriate, potentially life-saving preventative maintenance to limit the failure of front-line equipment.

Climate Change

The City's Climate Change Action Plan includes recommendations that relate to MFES facilities, fleet and critical infrastructure from a capital planning/asset management view. There are also actions relating to MFES supporting vulnerable populations, climate change training programs and emergency preparedness initiatives. This plan considers the opportunities for sustainable design and sustainable practices relating to capital planning and service delivery.

Areas of Focus

The 2024 Future Directions Plan leverages four key areas of focus aimed at addressing the pressures and challenges facing the City and its fire and emergency services.

1. **People and Culture:** Provide programs that contribute to the overall well-being of MFES staff through initiatives that promote equity, diversity, respect, accountability, inclusiveness and trust. Commitment to prioritize the training and development of staff to ensure the required mandatory training and certifications, and support the development and maintenance of new skill sets including EDI.
2. **Community Risk Reduction**: Apply the findings of the City's community risk assessment to address community safety through risk-reduction strategies including education, enforcement, engineering, emergency response and economic incentives.
3. **Asset Management:** An ongoing and long-term process that allows MFES to make the best possible investment decisions for fire infrastructure assets including fleet, facilities and equipment.
4. **Operational Performance and Continuous Improvement**: Identify and develop both technological and process improvements that build internal capacity and support overall performance and service delivery.

The analysis, findings and recommendations of the Future Directions Plan are strategically connected to these focus area topics.

People and Culture

MFES Staffing and Organization

- MFES is a modern, urban, career fire department that provides fire and life safety education, fire prevention, investigation, risk mitigation, training, rescue, emergency response and fire suppression services to the City of Mississauga. The department currently includes 778 full-time positions organized into five sections:
- Operations
- Communications (dispatch)
- Fire prevention and risk reduction
- Professional development and accreditation
- Capital assets

A Deputy Chief is assigned responsibility to each section, all of which are overseen by the Fire Chief. The Fire Chief and administration operate from MFES Headquarters located within Fire Station 101. The Professional Development and Accreditation Section operates from the Garry W. Morden Centre. Capital Assets operates from Headquarters (Stores and Facilities) and Garry W. Morden Centre (Mechanical and Equipment). Fire Prevention and Risk Reduction personnel are located at either City Hall or Station 109. The Operations Section serves the City from 21 existing fire stations which are strategically located across the City. Communications operates from the Joint Fire Communications Centre located in Brampton.

Firefighter Certification

On April 14, 2022, the province adopted **Ontario Regulation 343/22 – Firefighter Certification** under the Fire Protection and Prevention Act (FPPA), which requires all municipalities in Ontario to ensure that their staff are certified to the applicable National Fire Protection Association (NFPA) Pro-Qual standards identified within the regulation. This new regulation comes into effect in two stages beginning on July 1, 2026, and July 1, 2028. Technical Rescue Certifications to certify to NFPA 1006 (the Standard for Technical Rescue Professional) are due by July 1, 2028. The seven technical rescue services outlined in the regulation include:

1. Surface water rescue
2. Swift water rescue
3. Ice rescue
4. Rope rescue
5. Trench rescue
6. Confined space rescue
7. Structural collapse rescue

Ice water training

It is important for municipal fire services to note the distinction between qualifications and certifications. The NFPA training standards and related qualifications do not consider or require certification. Instead, NFPA standards are intended to identify the required training for an individual to attain a recognized qualification related to specific positions, roles and responsibilities within the fire service. Conversely, certification is completed by third-party organizations such as the International Fire Service Accreditation Congress (IFSAC) or the Fire Service Professional Qualifications System (Pro-Board) which provide independent evaluation to measure individual performance as set by the standards. Therefore, it is possible for fire departments to have members trained to a relevant NFPA standard without being certified with the necessary credentials.

Regardless of the department's existing training and qualifications, Ontario's new firefighter certification legislation will require departments to have their firefighters certified to the prescribed NFPA standards, ensuring that such certification is issued by the OFM, IFSAC or a Pro-Board seal. To comply with this new regulation, departments must follow a simple two-step process:

- Step 1: Ensure existing staff are certified to the necessary NFPA Pro-Qual Standards.
- Step 2: Create a process to deliver the ongoing certification courses to new staff.

The Professional Development and Accreditation Section of MFES will be responsible for overseeing certification efforts that meet the requirements of this new legislation and manage the challenges of delivery.

Recommendation
5 Deliver and maintain technical rescue certification for all staff required to perform technical rescue services.

Equity, Diversity and Inclusion (EDI)

Historically, the fire service has struggled to attract and retain individuals who reflect the diverse makeup of the communities they serve. Various factors have contributed to this issue over the years. However, in the present-day context, fire service leaders have acknowledged the imperative for change and are actively progressing towards that goal.

Equity, Diversity and Inclusion (EDI) is essential for urban fire services. It should be incorporated into all aspects of MFES including department policies, recruitment practices, training and operations.

MFES has established EDI program objectives and potential opportunities (identified in **Table 5**) to ensure all ranks and classifications in MFES include representation of diverse individuals.

Table 5: EDI Potential Program Objectives and Opportunities

Objectives	Potential Opportunities
Accountability	Develop and strengthen leadership capacity and competencies
	Embed shared responsibility and accountability
Respect	Celebrate the value of equity and diversity in the workplace
	Champion personal growth and development
	Inspire pride and belonging
	Foster growth and development
Access	Identify and remove systematic barriers
	Promote effective workplace communication
Partnerships	Seek partnerships for long-term sustainability
	Work with external partners for knowledge sharing and innovation

With the support of the City, MFES is showing progress towards incorporating potential improvements to recruitment processes and programs, facility renovations and designs, and EDI training.

Recommendation

6 Develop strategies in conjunction with City programming that support equity, diversity and inclusion and meet the needs of a growing, diverse city.

Community Risk Reduction

Assessing Community Risk

Community fire risk assessment has become a fundamental component of fire protection services planning, based on "needs and circumstances" as defined by the Fire Protection and Prevention Act, 1997 (FPPA).

Assessing community risk builds an understanding of the local needs and circumstances which can then be applied to align the service levels provided by MFES. The use of community risk assessment reflects a shift within the fire service towards avoiding fire-related risks through proactive public education programs, fire inspections and enforcement programs.

A Community Risk Assessment (CRA) was prepared for the City of Mississauga in 2023 to comply with **Ontario Regulation 378/18: Community Risk Assessments** (O. Reg. 378/18). Consistent with the regulation, the City's CRA should be reviewed annually and updated every five years or as needed.

O. Reg. 378/18 requires all municipalities in Ontario to develop a CRA (prior to July 1, 2024) and use the CRA to "inform decisions about the provision of fire protection services." The findings of

the 2023 CRA will directly inform the 2024 Future Directions Plan for MFES, with particular connections to fire prevention, public education, training, and emergency response.

As required by O. Reg. 378/18, Mississauga's CRA includes an analysis of nine mandatory profiles:

1. Geographic profile
2. Building stock profile
3. Critical infrastructure profile
4. Demographic profile
5. Public safety and response profile
6. Community services profile
7. Hazard profile
8. Economic profile
9. Past loss and event history profile

Risk Mitigation and Reduction

The 2024 Future Directions Plan for Fire and Emergency Services has been directly informed by the 2023 Community Risk Assessment.

Future Directions continues to support community risk and risk-reduction planning by identifying potential solutions, services and programs. This approach integrates risk-reduction considerations into the planning and delivery of fire protection services including fire prevention, public education and emergency response services (fire suppression).

The recommendations of the Future Directions Plan have been developed in response to the identified risks and key findings of the Community Risk Assessment.

Recommendation	
7	Update overall programming and strategies in all sections of Fire and Emergency Services to reflect results from the 2023 Community Risk Assessment.

Addressing Community Risk through the Three Lines of Defence

Driven by mandates and initiatives from the OFM, the fire service in Ontario has adopted a proactive approach to fire safety. The most recent phase of this approach is legislation requiring municipalities to develop a community risk assessment. The findings of the risk assessment are then applied using a fire-protection planning strategy known as the **Three Lines of Defence**. This approach emphasizes public fire safety education and prevention as the first line of defence, combined with the enforcement of fire safety standards and applicable codes as the second line of defence. Where these fire prevention measures cannot mitigate risk appropriately to meet the needs and circumstances of the community, emergency response becomes the third and final line of defence.

Public Fire Safety Education

Proactive public fire safety education is the primary strategy used to improve community safety. By providing fire safety education and information, residents can prevent fires and respond appropriately to save lives, minimize injuries and mitigate the impact of fires. There is a role for all positions within MFES to deliver fire and life safety education to the community and enhance opportunities for risk reduction.

Recommendation

8 Deliver Fire & Life Safety Educator training to all new recruit operations staff based on industry standards.

Since the development of the 2017 Comprehensive Risk Assessment, MFES has been tailoring its public education programs to address the risks within the community. MFES delivers a variety of public education programs for everyone from young children to seniors. These programs are delivered by both public education officers who specialize in developing and delivering fire safety programs, as well as fire suppression crews who interact with the community on a daily basis. The objective of these programs is to educate the public on the dangers of fire, provide information on how to prevent fires and, in the unfortunate event a fire does occur, provide the tools to ensure safe evacuation (see recommendation #1).

Smoke alarms are required on every storey of a dwelling and outside all sleeping areas in the province of Ontario. As per the Fire Protection and Prevention Act (1997), fire departments are required to deliver a home smoke alarm program to

their communities. As a result, smoke alarm programs and compliance are key components of public education and fire prevention activities provided by municipal fire departments across the province. Enhancing the local smoke alarm program with a targeted and risk-based approach is a proven effective strategy for reducing the local risks of fire injuries and fatalities.

The goal is to reach 100 percent smoke alarm compliance.

Data from 2012 to 2020 indicates that 26 per cent of fire calls in Mississauga did not have a working smoke alarm on the fire floor. This is higher than the provincial average of 18 per cent (2012 to 2021). Over that same period, 41 per cent of the fires in Mississauga had a smoke alarm present that operated, slightly lower than the provincial average of 44 per cent (2012 to 2021). Looking at the most recent five years of data from 2016 to 2020, only 17 per cent of fire calls in Mississauga did not have a working smoke alarm on the fire floor and 51 per cent had a smoke alarm present that operated. This trend shows a growing awareness of smoke alarm use, supporting the effectiveness of MFES's public education efforts.

Smoke Alarms for Every Residence (SAFER) and Test Your Smoke Alarm Day

Ontario experienced 133 fire-related fatalities in 2022, which was the worst annual fire loss in decades. The OFM identified that messages about the importance of working smoke alarms are **not** reaching all Ontario residents. The province has been working to provide municipal fire services with tools and resources to improve behaviour and heighten awareness among Ontarians about the vital role working smoke alarms play in reducing fire deaths and injuries. The OFM also announced a province-wide **Test Your Smoke Alarm Day to be held on September 28 starting in 2023.**

Recommendation

9 Leverage provincial residential fire safety strategies to target neighbourhoods with low smoke alarm compliance.

Fire Safety Standards and Enforcement

The enforcement of both the Ontario Fire Code and the Ontario Building Code is taken very seriously. It is the responsibility of a property owner to ensure they comply with appropriate regulations and statutes. Property owners who fail to ensure that their properties meet the minimum standards of fire and life safety will be charged under the Provincial Offences Act and are subject to penalties as outlined in the Fire Protection and Prevention Act, 1997. MFES has fire inspectors who conduct fire safety inspections to ensure buildings are safe and comply with the Ontario Fire Code.

At a minimum, MFES is legally responsible for conducting fire safety inspections and to respond to complaints or requests. In addition, MFES has proactively adopted routine inspections conducted at a frequency based on risk. This practice includes the legislated requirement to inspect all vulnerable occupancies within Mississauga annually and conduct mock fire drills to ensure compliance. The minimum inspection frequency for fire safety inspections, based on occupancy risk, is guided by the inspection frequency outlined in **Table 6**.

Table 6: MFES Routine Inspection Frequency by Occupancy Type

Occupancy Type	Inspection Frequency
Assembly occupancy	Biennial
Institutional occupancy (legislated to conduct annual inspections)	Annual
Residential occupancy: midrise (6-12 storeys)	Annual
Residential occupancy: high-rise (over 12 storeys)	Annual
Business and personal services	Biennial
Industrial: high hazard	Annual
Factory Industrial: moderate hazard	Biennial
Warehouse and storage facilities: moderate to low hazard	Biennial

Recommendation

10 Complete an annual evaluation of City building stock and update proactive inspection records to ensure inspection frequency aligns with the assigned risk.

Building permit applications must comply with the fire and life safety requirements in the Ontario Building Code and the Ontario Fire 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. This program will continue to be a priority to serve the City's growth and development needs.

Fire Plans Examiners review all building permit applications to ensure that the fire and life safety requirements comply with the Ontario Building Code and the Ontario Fire Code.

Recommendation

11 Reinforce and consistently apply all available enforcement strategies to ensure compliance with the Ontario Building Code, Fire Code and other legislative requirements.

It is the legislated responsibility of a municipal fire service to investigate the origin and cause of a fire. MFES Fire Safety Inspectors are responsible for conducting these post-fire investigations. The origin and cause information is used to inform the Community Risk Assessment and reduce future community risk through the development of prevention and public education initiatives.

Emergency Response

The first two lines of defence are risk prevention and mitigation through (1) education and (2) enforcement. Emergency response is the third. The time it takes for crews to arrive is critical in the event a fire or incident occurs.

MFES provides the City of Mississauga with an all-hazards response to an average of 30,000 incidents annually. These incidents include fires, medical emergencies, hazardous materials, gas leaks, water-related issues, ice and high angle rescue, trench rescue, confined space rescue, public assistance, carbon monoxide incidents and motor vehicle collisions.

The City has unique risks and characteristics, including the urban densification that has occurred and is anticipated to continue into the future. Mississauga features higher-risk structures such as large residential high-rise buildings, and this trend is expected to continue as outlined in this Future Directions Plan. These buildings typically experience longer response times because firefighters must travel from the ground level up to the floor of the fire or incident, otherwise known as vertical response.

Vertical Response

Vertical response time is the amount of time required to transition from the curbside of an affected high-rise property to the location of the actual emergency in a high-rise building. Vertical response time is calculated in addition to total response time.

Even in the best conditions, climbing stairs takes time. The average time it takes for a firefighter to climb stairs is shown in **Table 7**. To climb to the tenth floor, it takes a firefighter an average of three minutes and seven seconds. This time is in addition to the response time from the station to the curbside.

Table 7: Vertical Response per Floor Travel Time

Floors	Average Time per Floor in Seconds	Calculated Total Vertical Response Travel Time
1 to 10	20.8	To 10th floor: 3 minutes 7 seconds
11 to 20	27.8	To 20th floor: 7 minutes 17 seconds
21 to 30	33.6	To 30th floor: 12 minutes 20 seconds
31 to 40	45.9	To 40th floor: 19 minutes 13 seconds
41 to 48	59.0	To 48th floor: 26 minutes 6 seconds

Source: Structural Firefighting: Strategy and Tactics.

Vertical response poses significant challenges for MFES. The increasing development of high-rise buildings and population density in Mississauga demands enhanced emergency response provisions and response considerations. Fires in high-rise buildings require significantly more firefighters in order for operations to be conducted in a safe and effective manner compared to low-rise structures.

Recommendation

12 Develop and deliver a risk reduction strategy for high-rise and high-risk building stock.

Asset Management Planning

Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure requires municipalities to have an approved Asset Management Plan for all municipal infrastructure assets that identifies current levels of service and the cost of maintaining those levels of service by July 1, 2024. Once completed, MFES will deliver on the 2024 Asset Management Plan that will include the following assets:

Asset	Description
Firefighting Equipment	Specialty Rescue: Supports auto rescue, rope and high angle rescue, confined space, water/ice rescue and hazardous material response. Medical: Supports medical response in conjunction with Peel Regional Paramedic Services (PRPS). Front Line Equipment: Equipment that is carried with the fire truck for suppression (e.g. hose)
Personal Protective Equipment (PPE)	Life Safety/PPE: Includes equipment required to keep front line firefighters safe such as self-contained breathing apparatus, bunker gear, helmets and boots.
Fire Fleet	Front line (responding) fire trucks, specialty and support vehicles. Truck maintenance tools for mechanical repairs.
Facility Furniture and Equipment	Communications (dispatch equipment) to support 911 calls and truck dispatch. Appliances and other station equipment.
Fire Stations	21 stations (with 6 more planned).

These assets support an ongoing and long-term process that will allow MFES to make the best possible investment decisions for fire infrastructure assets including fleet, facilities and equipment. This will incorporate building, operating, maintaining, renewal, replacement and disposal of assets.

Recommendation

13 Use the 2024 Asset Management Plan to develop an improved lifecycle replacement plan that will inform the 10-year capital budget process.

Operational Performance and Continuous Improvement

Industry best practices require fire departments to carry out continuous improvement initiatives to support the community effectively, today and tomorrow.

In Mississauga, this process includes performing department statistical analysis, performance assessments and reporting on evolving fire industry trends that may require a change in services or programs. This approach relies on data, research and analysis to identify opportunities for continuous improvement, service optimization and innovation.

Data and Technology

Technology is a tool that can be leveraged to enhance existing program capabilities as well as introduce new ways to capture and use data to reduce risk. MFES's use of technology is rapidly evolving. Opportunities for MFES to leverage new innovations and the latest advancements such as drone technology, artificial intelligence and predictive analytics have the potential to continuously improve the department's efficiency and effectiveness.

MFES has successfully transitioned to a new Computer Aided Dispatch (CAD) incident management software system that includes call handling and dispatching, intelligent mapping, field communications, data reporting and analysis, and application integration. An effective CAD system supports the ability to collect and monitor data to assess performance and strategically plan improvements. This could include, for example, such improvements as creating a process to track MFES vertical response times to measure vertical response for any building above six storeys in height.

Recommendation	
14	Leverage technology to support performance analysis, reporting and overall continuous improvement.

Next Generation NG911

Ontario's transition to the Next Generation (NG) 911 is an important initiative that will modernize and enhance the emergency 911 system. The proposed date for the existing system to be decommissioned is March 30, 2024. MFES is working with its partner organizations, such as Peel Regional Police, to make the successful transition.

911 connects residents with first responders in the event of an emergency. The existing system was built for traditional landlines. NG911 will seamlessly integrate with smartphones and mobile devices. This transition will mitigate the reliance on aging infrastructure and take advantage of new and innovative technologies including the sharing of digital information such as text, photos and videos with 911 centre communicators. The new system will identify the location of callers with greater accuracy. It will also provide valuable information to responding crews while on their

way to a scene, allowing for more time to plan and prepare. These changes will help MFES keep pace with technology and ensure the greater continued safety of the community.

Incorporating Green Standards

The City's Climate Change Action Plan identified several actions to be considered by MFES regarding future facilities and fleet/equipment needs such as the following:

- Build all new municipally owned buildings to be more energy efficient and near net-zero.
- Develop a **green fleet policy** to (1) prioritize electrification opportunities for fleet and equipment and (2) continue to identify opportunities for proper vehicle allocation, route optimization and right sizing.
- Work with partners to provide input to the industry on low-carbon technologies for specific applications to deliver City services
- Research changes and innovation in the transportation and energy sectors to identify low-carbon opportunities for the MFES fleet

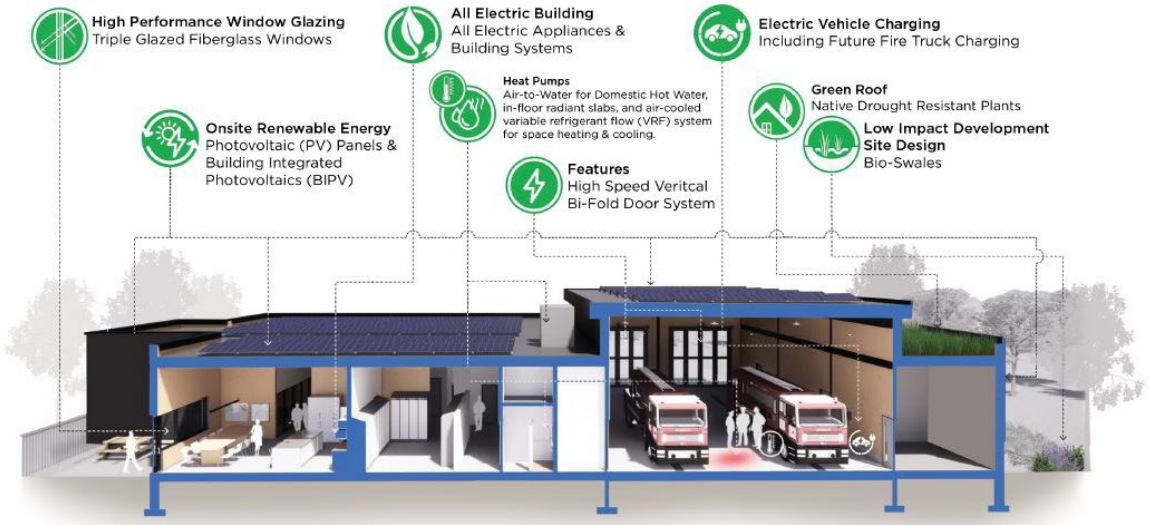
The City of Mississauga's Corporate Green Building Standard was completed in December 2019 as a more ambitious approach to environmental performance in City buildings and facilities.

Recommendation

15 Apply the principles of the Corporate Green Building Standard in the construction of new, permanent fire infrastructure.

16 Study the use of electric vehicle technology for front-line fire vehicles and machinery.

Fire Station 125
Net-Zero Energy Building



Fleet, Equipment and Facilities

Section 6: Fleet, Equipment and Facilities

Fleet

MFES currently operates different types of front-line fire suppression vehicles. A pumper and a squad utilize the same vehicle design and construction, however they differ in the type of equipment that each type of vehicle carries. A pumper carries smaller firefighting equipment such as ventilation fans, saws and smaller hand tools whereas a squad carries smaller equipment related to vehicle extrication and rescue. MFES staffs all front-line pumpers with a minimum of four firefighters. It is imperative that the front-line vehicles are maintained and remain in good operating condition. MFES has 31 front-line vehicles (17 pumpers, 6 squads, 8 aerials) and 12 reserve or spare vehicles that have to be available to respond 24 hours per day, 365 days per year.

The current lifecycle of an MFES fire vehicle is 15 years. There are a number of factors that can impact lifecycle including use frequency (how many trips each truck makes), preventative maintenance performed and type of vehicle. In 2016, a lifecycle review of the fire fleet was conducted and a replacement schedule was drafted that called for 12 years for front-line vehicles and 3 years in reserve. In 2017, Council approved $22.4 million over five years to support the replacement of aging front line fire vehicles. Since that time, MFES has replaced 19 of its 31 front-line vehicles.

Supply chain challenges have impacted both the cost and the build lead time for front-line vehicles which, in some cases, can be as high as 48 months.

Equipment

MFES's equipment is valued at more than $10 million. MFES maintains a capital budget that allows for new equipment purchases and the replacement and refurbishment of existing equipment. As part of the City-wide Asset Management Program, MFES will be developing an equipment lifecycle program that will help inform the business planning and budgeting process. Recommendation 13 supports the use of the 2024 Asset Management Plan for lifecycle planning.

Each fire station and truck must be appropriately equipped to meet the needs of the community. MFES responds to various types of emergencies including fires, medical emergencies, motor vehicle accidents, public hazard situations, hazardous material (HAZMAT) and technical rescues. All of these emergencies use specialized equipment and require highly trained staff. This equipment must be tested and evaluated regularly to ensure reliability, and meet legislative and manufacturer requirements. This includes testing ground and aerial ladders, pumps, generators, hose and other equipment used for auto extrication and other rescues. A consistent and ongoing investment is critical to maintain equipment within its recommended lifecycle. Forecasted development and growth will add to inventory pressures. A formal lifecycle replacement model will provide a predictable and reliable funding model to support effective service delivery.

Facilities

There are currently 21 fire stations in Mississauga. Fire Station 125, located at 6627 10th Line, is under construction and is expected to open in mid-2024.

Fire Station Renovation Program

Fire stations operate 24 hours per day, 365 days per year. For this reason, they are subject to accelerated wear and tear and require more day-to-day maintenance than traditional buildings. Firefighters in Mississauga work 24-hour shifts, and maintaining fire station infrastructure is essential to support their health, safety and performance.

There are 17 stations that require interior renovations and structural additions to support efficient operations, and accommodate health, safety and accessibility requirements. Thirteen of these stations were constructed more than 30 years ago and have had no significant renovations since the time of construction.

Fire station 120.

The following table illustrates existing stations, locations and year built.

Station	Station Area	Year Built	Last Year Renovated
101	Cooksville	1974	1987
102	Lakeview	1979	None
103	Clarkson	1985	2001
104	Port Credit	1950	Minor Maintenance
105	Malton	1980	2011
106	Dixie	2012	None
107	Erindale	1970	1979
108	Streetsville	1980	None
109	Britannia W	1976	1988
110	Queensway	1982	2006
111	Meadowvale	1983	2004
112	Creditview	1984	2017
114	Heartland	1989	None
115	Erin Mills	1990	None
116	West Malton	2011	None
117	North Dixie	1999	None
118	East Credit	1996	None
119	Airport	2016	None
120	Uptown	2019	None
121	Meadowvale Village	2002	None
122	Churchill Meadows	2003	None

In addition to the age and condition of the stations, lifecycle upgrades also take into consideration changes in industry best practice and updated standards. These include health and safety, accessibility, staff composition (equity, diversity and inclusion) and risk. It should also be noted that each of the fire station renovations will include infrastructure to support electric vehicles.

Health and Safety

One of the most significant health and safety issues facing Fire and Emergency Services today is increased cancer rates among firefighters, both active and retired. Studies show that cancer rates of firefighters are much higher than in the general public. In response to this research, the **Workplace Safety and Insurance Act, 1997 Ontario Regulation 253/07: Firefighters,** firefighters' presumptive legislation came into effect in 2018. **O. Reg. 253/07 – Firefighters** identifies 19 prescribed diseases that have been directly linked to firefighting. The list of prescribed diseases has recently been added to, and may increase further as research continues.

Front-line staff are at a higher risk of exposure to contaminants, carcinogens and other hazardous substances. As a result, fire stations now include provisions to contain and help avoid cross-contamination as well as proper storage for personal protective equipment. Since the introduction of this legislation fire departments across Ontario have experienced the challenge of firefighters being absent from duty for extended periods of time as a result of WSIB claims related to this legislation.

Staffing Composition

Prior to the construction of Fire Station 120 (125 Eglinton Ave. W), the last fire station was built in 2003. At that time, MFES had only eight female firefighters. As of December 2022, there are 41 female firefighters. There are currently eight stations that do not have female washrooms and change room facilities. As the staffing composition continues to change, stations must be modified to accommodate all employees. This is a priority within our 10-year capital infrastructure plan.

Accessibility

Section 4.5.11 of the 2015 City of Mississauga Facility Accessibility Design Standards defines the specifications for accessible/barrier-free design for fire stations. Areas of fire stations that are likely to be used by the public, including the vehicle bay, must be accessible. Only areas that are intended for the exclusive use of firefighters (such as fitness rooms and dormitories) are exempt. All 17 of the identified stations require work in order to be compliant.

Community Changes/Risk

MFES must position itself for the future. The City is undergoing rapid intensification and future growth predictions indicate considerable vertical growth, particularly in the downtown core. Inspiration Port Credit, Inspiration Lakeview, Dundas Connects and the Downtown Master Plan will change the landscape of Mississauga. As communities and demographics change, the call volume, type and complexity will change. Population density impacts travel time. Consideration must be given to the optimal locations, number of vehicles, staffing and programming required to match resources to risk. One of the key priorities of the fire station renovation program is to convert one-truck fire stations to accommodate two trucks and associated staffing.

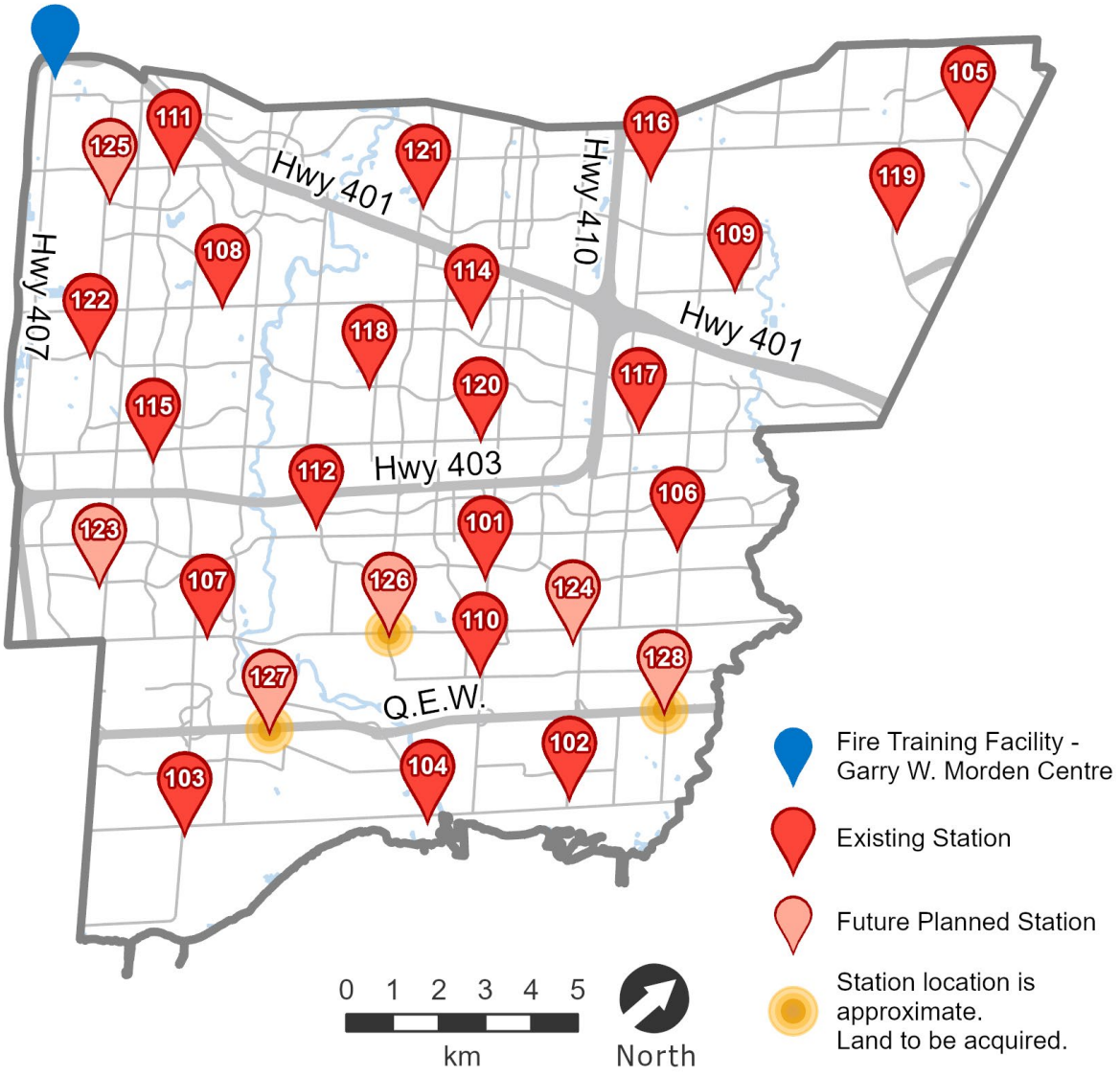
The fire station renovation program will ensure MFES has the flexibility to expand and/or change programming to address future risk.

Future Fire Stations

MFES has identified the need for six new fire stations over the next 12 years, based on the findings of the Mississauga Fire and Emergency Services Infrastructure Renewal Strategy. The goal is to have stations located so that the response time for the first arriving vehicle from a

station to an incident will occur in four minutes or less 75 per cent of the time. The locations of the existing and planned future fire stations are mapped below in **Figure 6**.

Figure 6: Existing and Planned Future Fire Stations



There are several factors considered when identifying the number and location of fire stations.

Priority areas across the City are not identified based on call volume alone. Fire station priority areas are identified where some or all the following conditions exist:

- **High-risk Occupancies/Population:** Community risk factors such as high-risk occupancies, high-risk behaviour and a combination of the two.
- **Historically Poor Response Times:** Areas across the City where response time has been poorer than industry standards.
- **High Volume of Calls:** Areas where call volume is high and/or there is likelihood of simultaneous calls.

- **Future Growth Implications:** Areas where the City has identified future growth/density.
- **Geography:** Rivers, bridges, arterial roadways and rail lines are natural barriers that can impede travel time.

Fire department response capabilities can change over time due to factors such as community growth or intensification that result in greater traffic congestion, and are reassessed on an ongoing basis.

The following geographic areas have been identified as a priority for new fire stations:

- **Station 123 (Collegeway and Winston Churchill):** This area is identified as a priority based on existing response times, current population and community risk. Construction is set to begin in 2024 with the station opening in 2026.
- **Station 124 (2524 Cawthra Rd):** This area has been identified as a priority because it has high call volumes, a significant number of high- and moderate-risk occupancies and historically has a high number of calls that do not meet the travel time standards. Construction is set to begin in 2024 with the station opening in 2026/2027.

Fire station 120.

- **Station 125 (6627 Tenth Line):** This area has been identified as a priority based on existing response times and future growth related to the Shaping Ninth Line project. The area has a number of high- and moderate-risk occupancies. Construction is underway with the station opening in mid- to late-2024.
- **Station 126 (Mavis and Dundas area)**: This area has been identified as a priority as there are a significant number of calls that do not meet the travel time standards. There is also a substantial number of high-rise/high-risk occupancies that are either directly in this response area or would be serviced by this station in a neighbouring response area. Construction is set to begin in 2027 with the station opening in 2029/2030.
- **Station 127 (Lorne Park Area):** This area has been identified as a priority based largely on existing response times. Lorne Park is a large geographic area and access can often be challenging for emergency response vehicles. Construction is set to begin in 2029 with the station opening in 2031/2032.
- **Station 128 (Dixie and QEW Area):** This area has been identified as a priority based on existing response time deficiencies, current population and community risk. Adjacent stations cannot reach the target travel time into this response area. Construction is set to begin in 2031 with the station opening in 2033/2034.

Recommendation

17 Complete the Fire Station Infrastructure Plan including the construction of new fire stations and renovation of existing stations.

Emergency Response Service Delivery

Section 7: Emergency Response Service Delivery

Delivering the Service

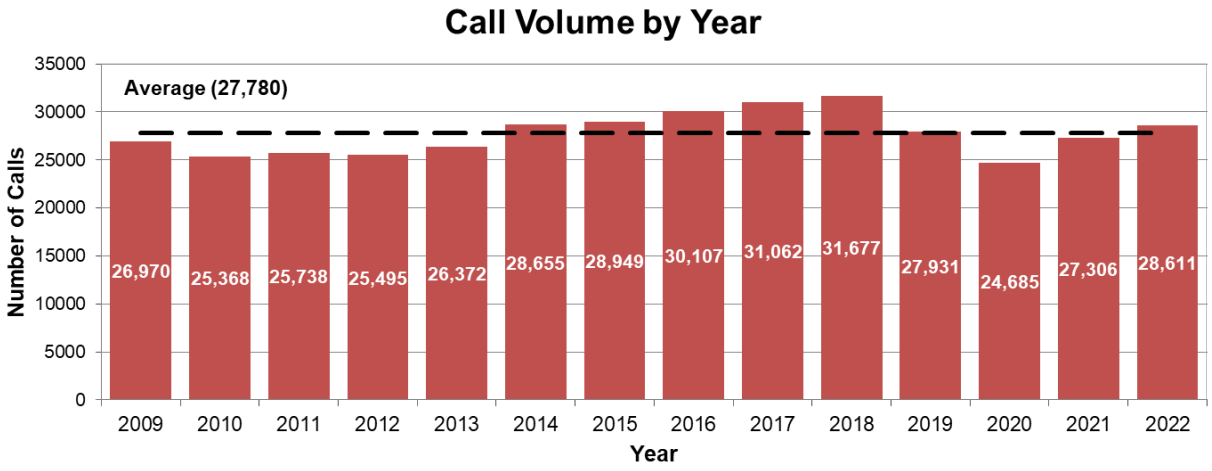
Current Service Delivery

Emergency operations personnel respond to emergency and non-emergency calls. Assessing the historical volume of calls provides a high-level understanding of the emergency response workload of MFES and the probability of future emergencies. A summary of the total number of calls within the City from 2009 to 2022 is shown in **Figure 7.** Typically, call volume increases as the population increases. Proactive prevention and education programs can reduce call volumes. Operational changes, such as dispatching protocols, can impact call volumes. Significant emergencies can also influence call volumes.

From 2009 to 2022, the following factors influenced the MFES call volumes:

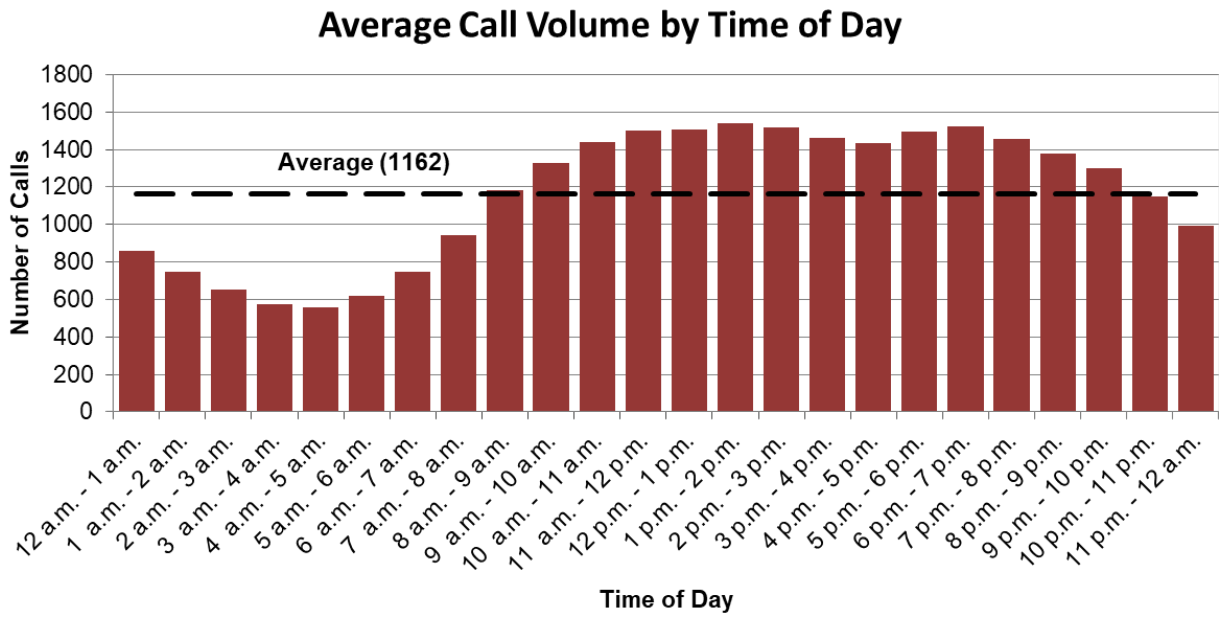
- In 2009, MFES modified the tiered response agreement with the Peel Regional Paramedic Service. This agreement outlines the types of emergency responses to which each agency must respond. These changes resulted in MFES attending over 1000 fewer medical calls per year.
- A change to the EMS dispatch protocol called Emergency Medical Service Technology Interoperability Framework (EMSTIF) occurred in 2014, which accounts for the most dramatic increases in call volume from 2013 to 2014 (nine per cent), and from 2015 to 2016 (four per cent).
- Call volume grew steadily from 2014 to 2018 with a 10.5 per cent increase in volume.
- The total number of incidents decreased in 2019, mainly as a result of a decrease in the number of medical calls.
- The decrease in call volume in 2020 and 2021 is related to the response protocols put in place during the COVID - 19 pandemic, and the reduction in commuter traffic accidents during lockdown due to people working from home.
- From 2009 to 2022, the lowest annual call volume was 25,368 calls in 2010. The highest annual call volume was 31,677 calls in 2018. From 2010 to 2018, the annual call volume increased by 24.9 per cent.

Figure 7: Call Volume by Year



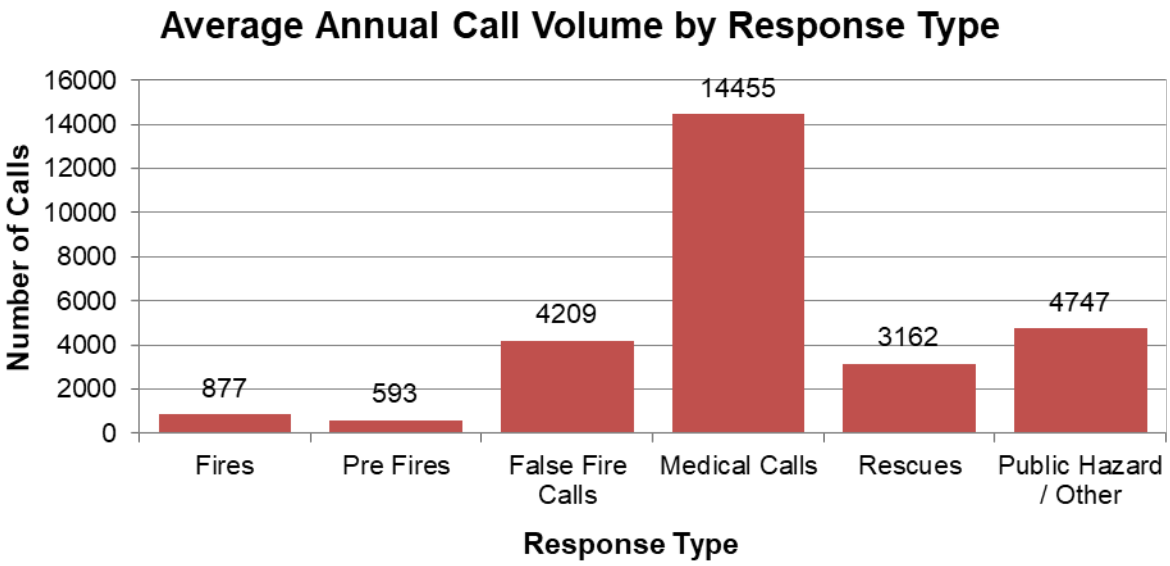
MFES firefighters are on duty 24 hours per day seven days a week. Within each day there are fluctuations in typical call volumes. As shown in **Figure 8,** the MFES emergency call volume increases above the daily average between 8 a.m. and 10 p.m. The combination of higher-than-average call volume and peak traffic cycles has a negative impact on response time. There are two peaks where call volumes exceed an average of 1,500 calls. The first occurs from 11 a.m. to 3 p.m. and the second from 5 p.m. to 7 p.m. These peaks align with the mid-day and evening periods when traffic volumes and congestion are highest.

Figure 8: Average Call Volume by Time of Day



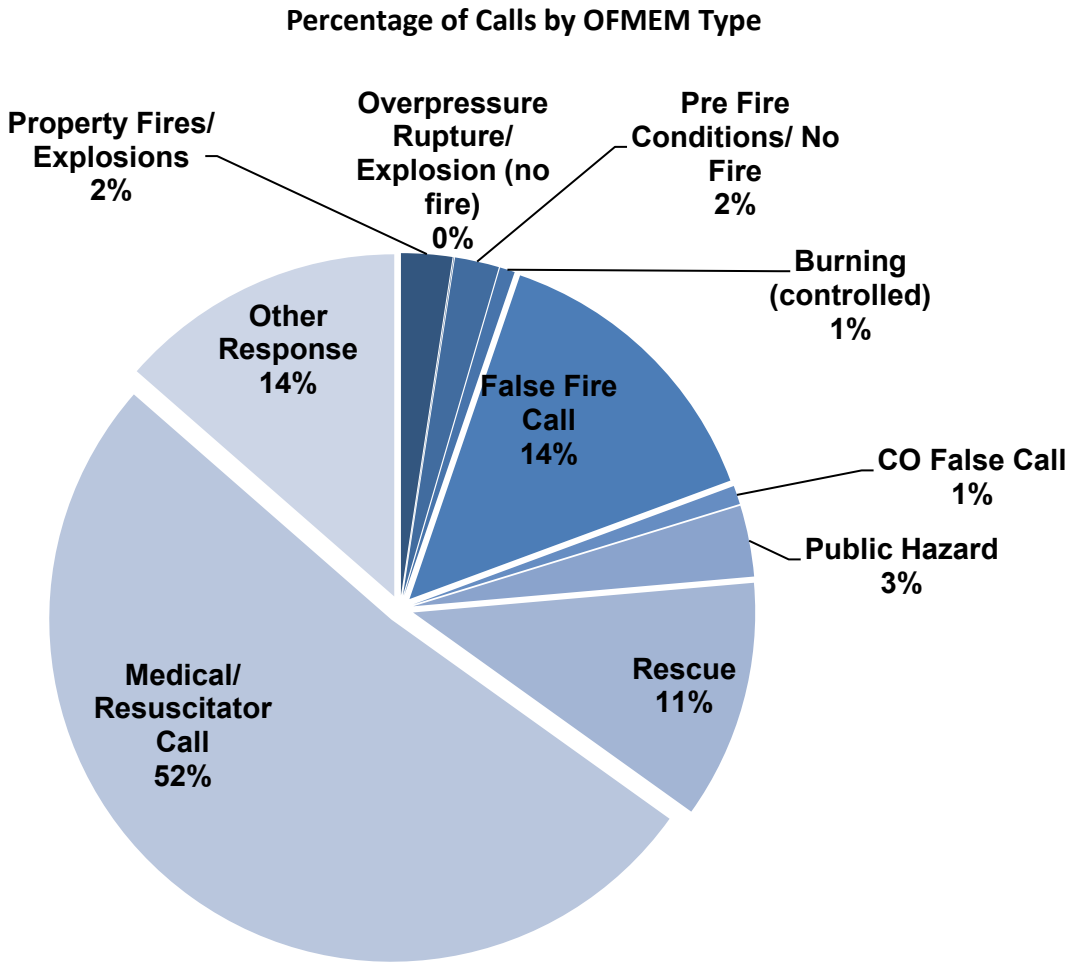
Assessing the types of calls within the historical call volumes provides insight into the community needs and risks, and supports fire and emergency service planning. The average annual call volume by response type is shown in **Figure 9.** This chart depicts an average based on a five-year period (2018 to 2022).

Figure 9: Average Annual Call Volume by Response Type



The breakdown of the percentage of call types from 2018 to 2022 is presented in **Figure 10.**

Figure 10: Percentage of Calls by Call Type



Medical calls make up 52 per cent of MFES call volume. MFES medical response is provided by the closest available unit. Calls to 911 are evaluated by dispatchers and, if warranted (based on the tiered response agreement), MFES responds in support of Peel Regional Paramedic Service (PRPS). In a vast majority of situations, MFES can provide quicker initial contact with the patient as a result of the geographical availability of fire stations across the City. All MFES firefighters are trained to a minimum standard of Emergency Medical Responder. The training program is developed and administered in conjunction with a base hospital doctor from Sunnybrook Centre for Prehospital Care.

A rapid, efficient and effective response to life-threatening 911 calls is critical. Patient outcomes depend on the speed with which trained personnel can arrive at the scene. In many cases, patients not only require immediate lifesaving treatment, but they may also require physical rescue, protection from the elements and scene safety. The fire service is structured to address all of the above simultaneously and is positioned to complement and enhance the EMS delivery system across Ontario, thus significantly improving patient outcomes.

Fire-related calls, including fires, pre-fire conditions, controlled burning and false-fire calls make up a combined 19 per cent of calls. Other responses, totalling 14 per cent of calls, include illegal drug operations, helping other fire departments/police/other agencies, and public service calls. Public hazard calls total three per cent of MFES call volume; reasons include carbon monoxide incidents, gas leaks, spills, radioactive materials, downed power lines, suspicious substances, bomb/explosive removal and other hazard-related incidents. Rescue calls total 11 per cent of the MFES call volume and include vehicle collisions/extrications, building collapses, persons trapped in elevators, water and ice rescues, trench rescues, and high- and low-angle rope rescues. Responding to many of these unique rescue incidents requires specific equipment and training.

Response Time

In the fire service, response time has three main components: dispatch time, turnout time and travel time.

Dispatch time measures the time it takes for the communications operator to answer an emergency call, process the call and advise the closest station(s) of the call (alarm sounding in the fire station).

Turnout time measures from the alarm sounding at the fire station to departure.

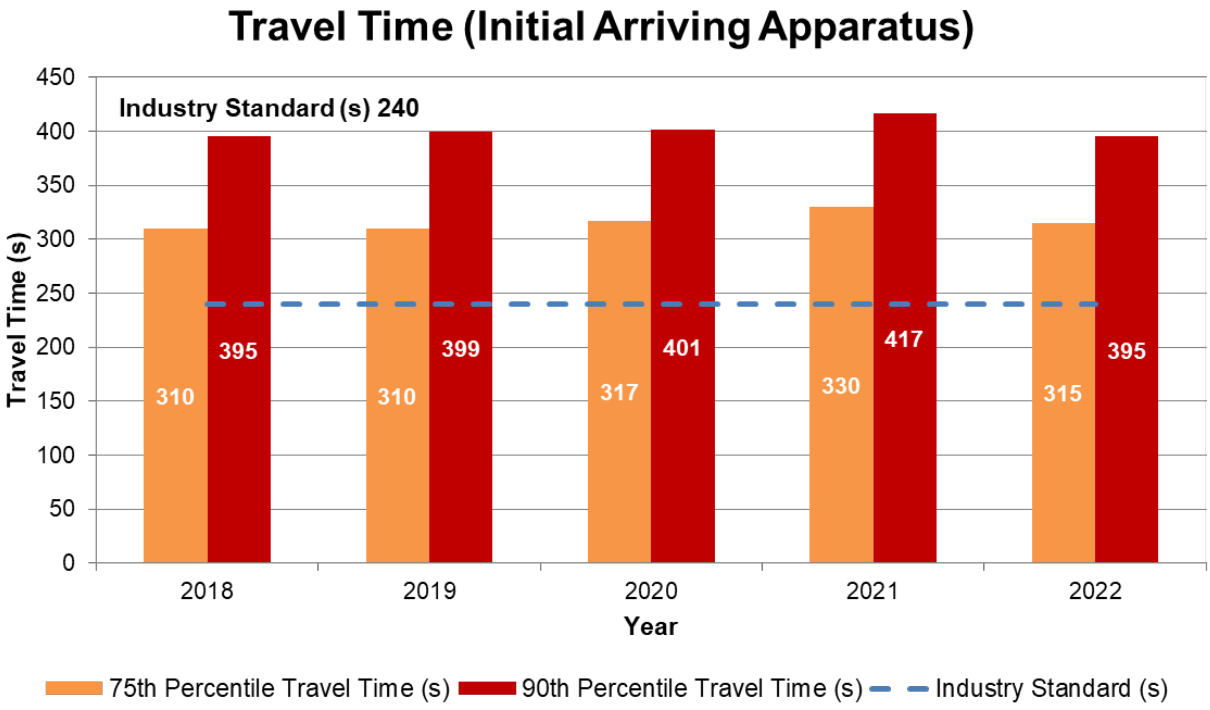
Travel time refers to how long it takes the responding fire truck to drive from the doors of the station to the scene of the emergency.

Travel time is the longest component of total response and is the most difficult to control in a growing municipality with significant urban intensification. An increase in travel time can delay the response for time-critical emergency situations such as medical, fire and rescue incidents.

Travel Time of the Initial Arriving Apparatus

The National Fire Protection Association (NFPA) identifies a target of 240 seconds of travel time for the initial arriving apparatus, staffed with a minimum of four firefighters, with a goal to achieve this target 90 per cent of the time. MFES has recently targeted a 75th percentile travel time of 240 seconds for the initial arriving apparatus, typically staffed with four firefighters. **Figure 11** illustrates MFES's city-wide 90th percentile and 75th percentile travel time from 2018 to 2022.

Figure 11: MFES Travel Time Performance, Initial Arriving Vehicle



(Travel time calculation uses fire and fire-related calls and removed all calls where travel time was < 10 seconds)

Recommendation

19 Target a travel time standard for first arriving vehicle of 240 seconds 75 per cent of the time.

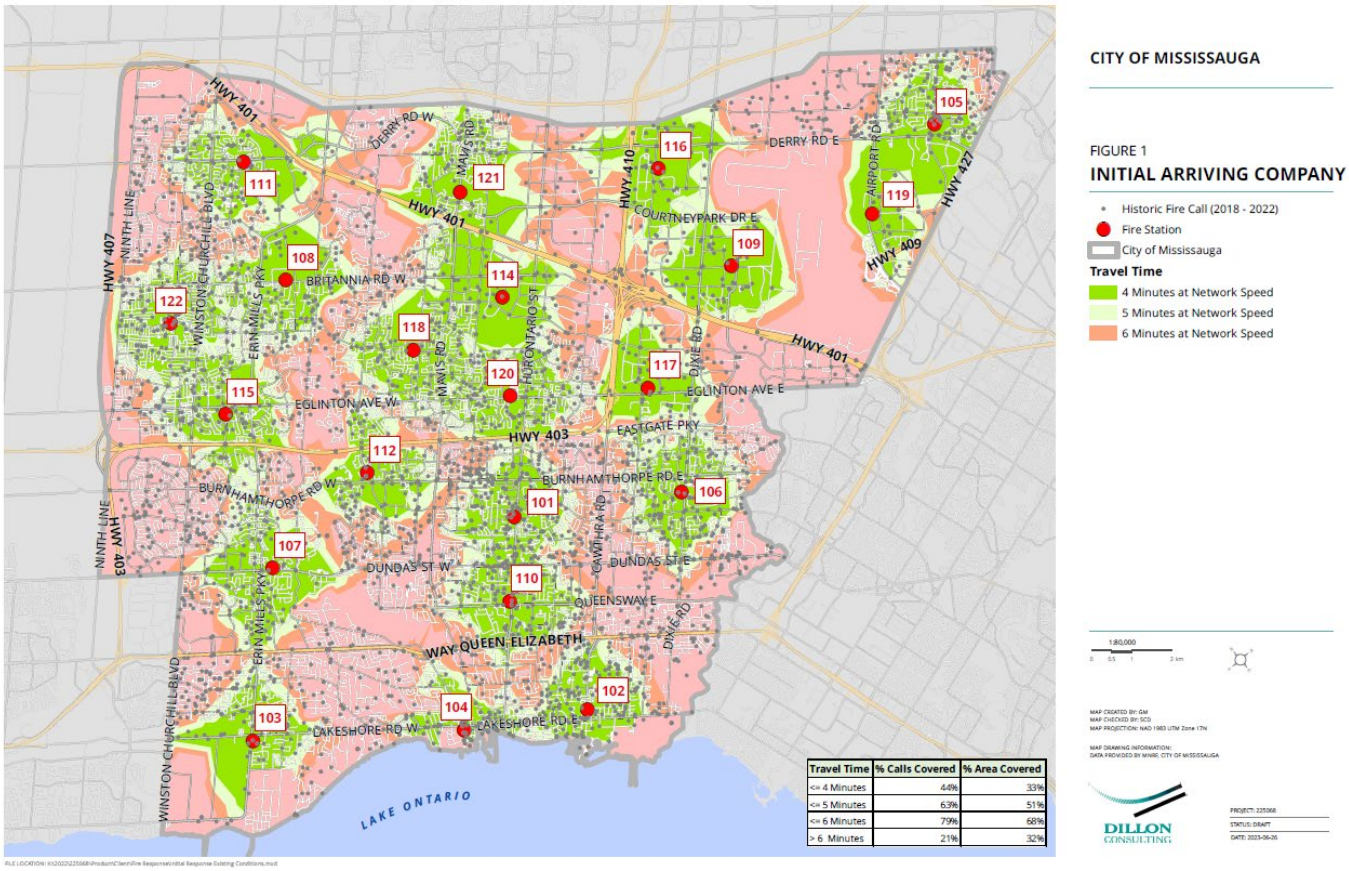
MFES continues to act on the recommendations of the 2019 Infrastructure Renewal Strategy which considered deployment, resourcing and infrastructure options to best mitigate increasing travel times. In the areas where significant changes in response and deployment are identified, additional mitigation factors such as public fire safety education and fire safety inspections will be considered.

Providing emergency services relies heavily on the ability of front-line operations staff to respond quickly. Station location greatly influences the travel time of emergency responders. The appropriate distribution of fire stations across the City is the best way to address travel time.

Figure 12 below illustrates the coverage of the initial arriving fire vehicle from each station within four minutes of travel time, modelled to represent 2022 conditions and the existing 21 stations.

Response times across the City have increased by one per cent per year due to growth-related variables such as density and traffic congestion.

Figure 12: 2022 Existing Initial Arriving Travel Time Coverage



Fire Suppression Deployment

Fire suppression deployment considers the number of firefighters responding to an emergency scene. The 2019 MFES Infrastructure Renewal Strategy supported the introduction of a dynamic risk-based deployment model. The analysis within the Infrastructure Renewal Strategy was founded upon the 2016 edition of **NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Medical Operations and Special Operations to the Public by Career Fire Departments**. A new version of 1710 was released in 2020. The fire suppression deployment models, based on the type of building occupancy and potential fire risks present, outlined in the 2020 Edition of NFPA 1710 are summarized in Table 8.

The most significant difference in the NFPA 1710 performance measures from 2016 to 2020 was the addition of the Second Arriving Apparatus component and the increase in the number of firefighters deployed to a single-family dwelling (increased from 14 firefighters (15 if an aerial device is used) to 16 firefighters (17 if an aerial device is used).

In April 2019 the NFPA Standards Council voted to support a consolidation plan to combine the Emergency Response and Responder Safety (ERRS) standards, best practices and guides, by topic, into consolidated standards. The consolidation process began in January 2020 and is expected to be completed by 2025. NFPA has identified the new draft standards that will consolidate the existing single standard. For example, a new NFPA 1750 standard will

consolidate existing NFPA 1201, NFPA 1710, NFPA 1720 and NFPA 1730. The release of the consolidated standard in 2025 will provide an opportunity for MFES to revisit internal policies and procedures.

Table 8: Summary of Deployment Performance Measures (NFPA 1710, 2020 Edition)

Component of NFPA 1710 Standard, 2020 Edition	Minimum Staffing Target	Travel Time Target (seconds)	Performance Target (% of fire suppression incidents)
Initial Arriving Company	4 firefighters	240	90%
Second Arriving Company	4 firefighters	360	90%
Single-Family Dwelling Initial Full Alarm Assignment	16 firefighters (17 if an aerial device is used)	480	90%
Open-Air Strip Shopping Center Initial Full Alarm Assignment	25 firefighters (26 if an aerial device is used)	480	90%
Apartment Initial Full Alarm Assignment	25 firefighters (26 if an aerial device is used)	480	90%
High-Rise Full Alarm Assignment	38 firefighters (39 firefighters if the building is equipped with a fire pump)	610	90%

Fire Loss Trends

One of the tasks in a Community Risk Assessment is to focus on past fire loss statistics and review trends within the department's emergency response data. Reviewing these sets of data will provide insight into future planning.

Trends by Occupancy Classification

To assess the fire loss by occupancy classification, data accessed through the OFM's Standard Incident Reporting (SIR) was analyzed from 2003 to 2020. Based on this analysis, **Table 9** summarizes the number of total structure fires by property type within Mississauga and Ontario from 2003 through 2020. During the 18-year period, the City and the province exhibit comparable distributions of structure fires across property types. Approximately 67 per cent of the fire loss in Mississauga occurred within residential (Group C) occupancies (comparable with the province at 68 per cent).

The largest discrepancy between the City and the province was within industrial (Group F) occupancies. Industrial fires account for 11.6 per cent of fire loss in Mississauga, whereas the provincial average is 7.3 per cent. The City also has a lower percentage of fires (7.8 per cent vs. 13 per cent) in the other (Not Classified or Farm Buildings) category vs. the province. This aligns with the building type profile within Mississauga.

As identified in Recommendation #10, MFES will complete an annual evaluation of building stock over the next five years and align fire code inspection frequency to building risk.

Table 9: Proportion of Structure Fires by Major Occupancy Classification (2003 to 2020)

Occupancy Classification	# Structure Fires (Mississauga)	% Structure Fires (Mississauga)	# Structure Fires (Ontario)	% Structure Fires (Ontario)
Group A (Assembly)	251	4.6%	6,856	4.6%
Group B (Care and Detention)	59	1.1%	1,999	1.3%
Group C (Residential)	3,629	66.9%	100,918	68.0%
Group D (Business and Personal Services)	208	3.8%	3,567	2.4%
Group E (Mercantile)	225	4.1%	4,988	3.4%
Group F (Industrial)	631	11.6%	10,894	7.3%
Other (Not Classified/ Farm)	423	7.8%	19,290	13.0%
TOTAL	**5,426**	**100.0%**	**148,502**	**100.0%**

Source: OFM SIR Data 2003 to 2020

Fires by Occupancy Classification

From 2003 to 2020, there was a 56 per cent decrease in the number of structure fires (454 to 200) in the City. The province experienced a similar trend with a 39 per cent decrease in structure fires from 2003 to 2020. **Figures 13** and **14** illustrate the year-to-year changes in the number of structure fires by occupancy classifications in the City and province respectively from 2003 to 2020. The downward trend in structure fires over time, especially evident in residential occupancies in Mississauga, is due to greater fire prevention and public education practices, plus the updated legislative standards. This downward trend in fires, both in the City and the province, occurred despite population growth over the time period.

Figure 13: Number of Structure Fires by Occupancy and Year, Mississauga

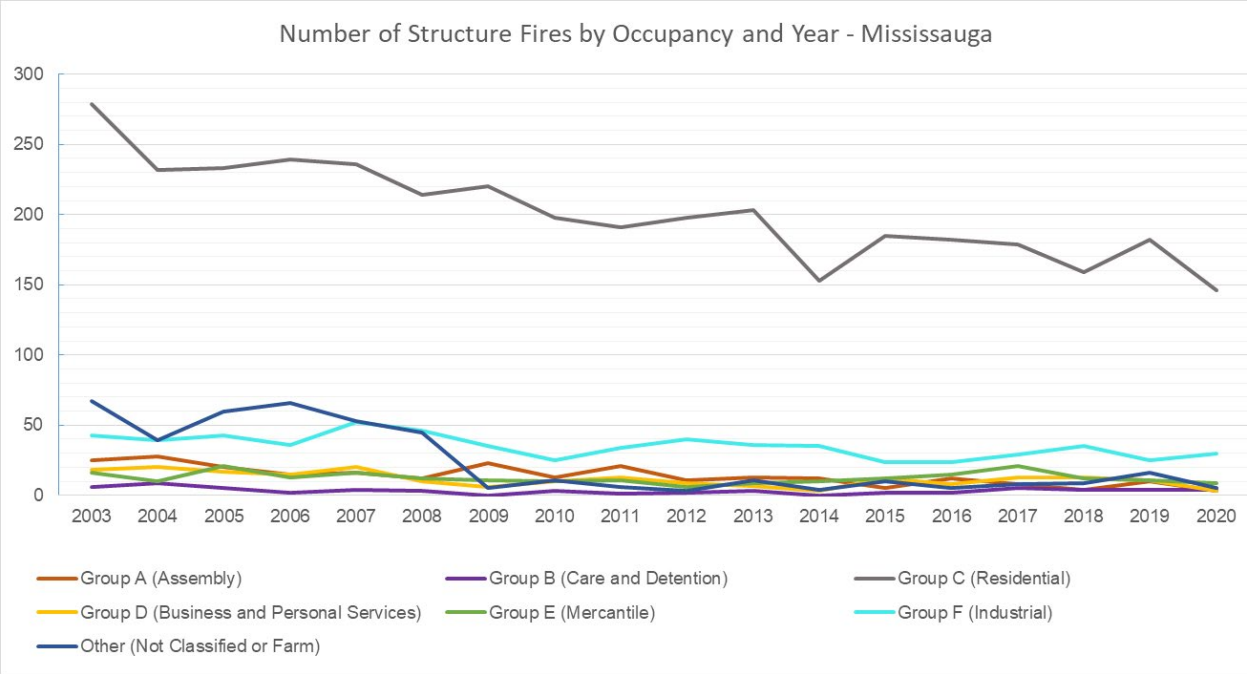
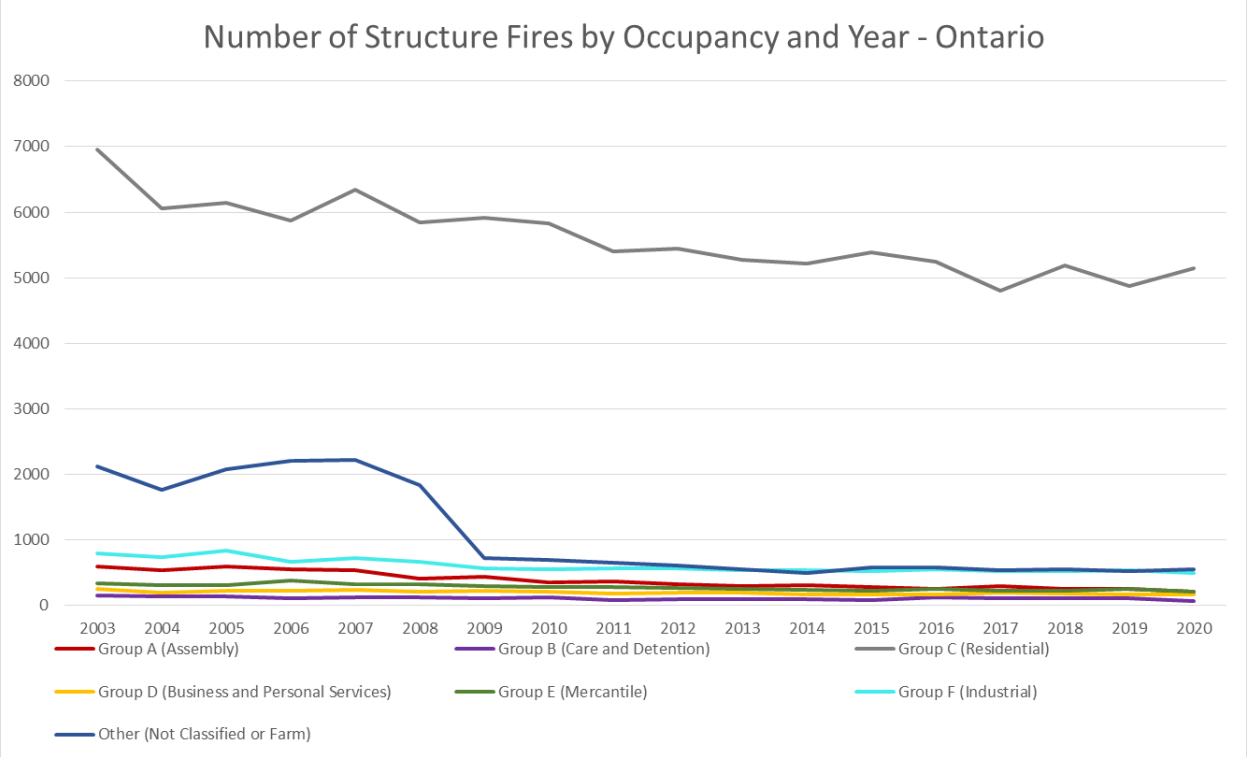


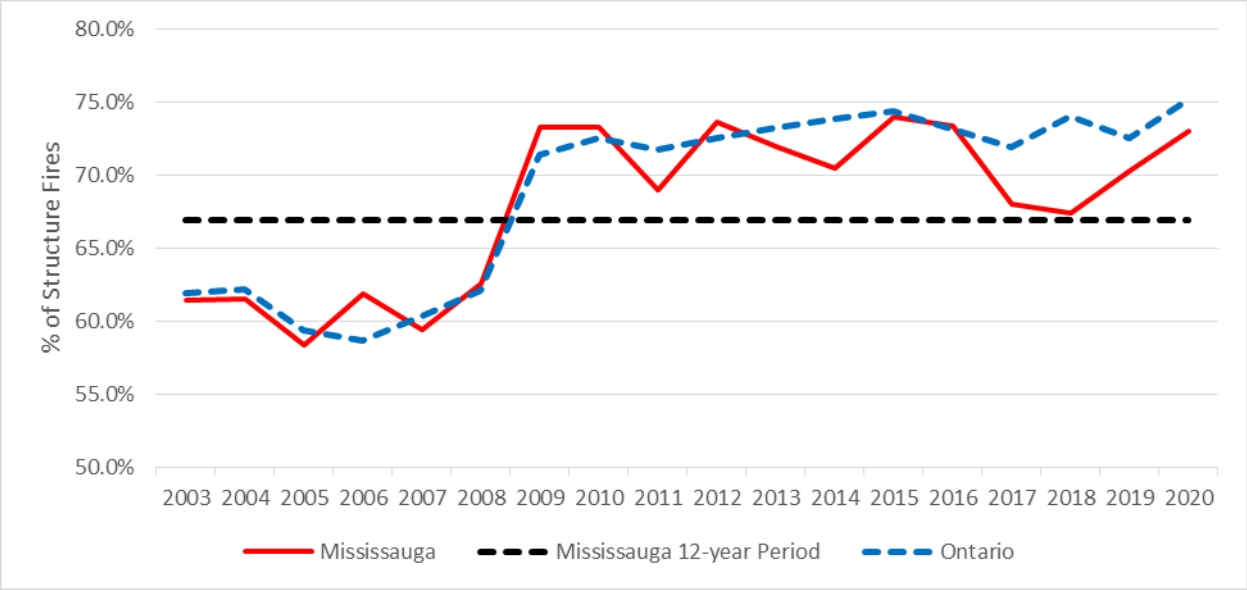
Figure 14: Number of Structure Fires by Occupancy and Year, Ontario



Within the analysis of structure fires by occupancy type, a second key observation is illustrated in **Figure 15** which presents the proportion of structure fires in residential (Group C) occupancies. This further supports the theme identified in the Community Risk Assessment that residential (Group C) occupancies are a key risk within the City and the province.

From 2003 to 2015, while the overall number of structure fires (and even those in residential occupancies) has decreased, the proportion of structure fires occurring in residential (Group C) occupancies has increased both within the City and the province

Figure 15: Proportion of Structure Fires in Residential Occupancies (Mississauga and Ontario)



Civilian Fire Deaths and Injuries

Reviewing historic fire deaths and injuries by age and gender of victims can provide insight for the purposes of targeted community risk-reduction programs. As discussed above, seniors represent the highest proportion of fire fatalities in Ontario. Historical fire loss data also shows that males are more likely to be injured from a fire or lose their life in a fire.

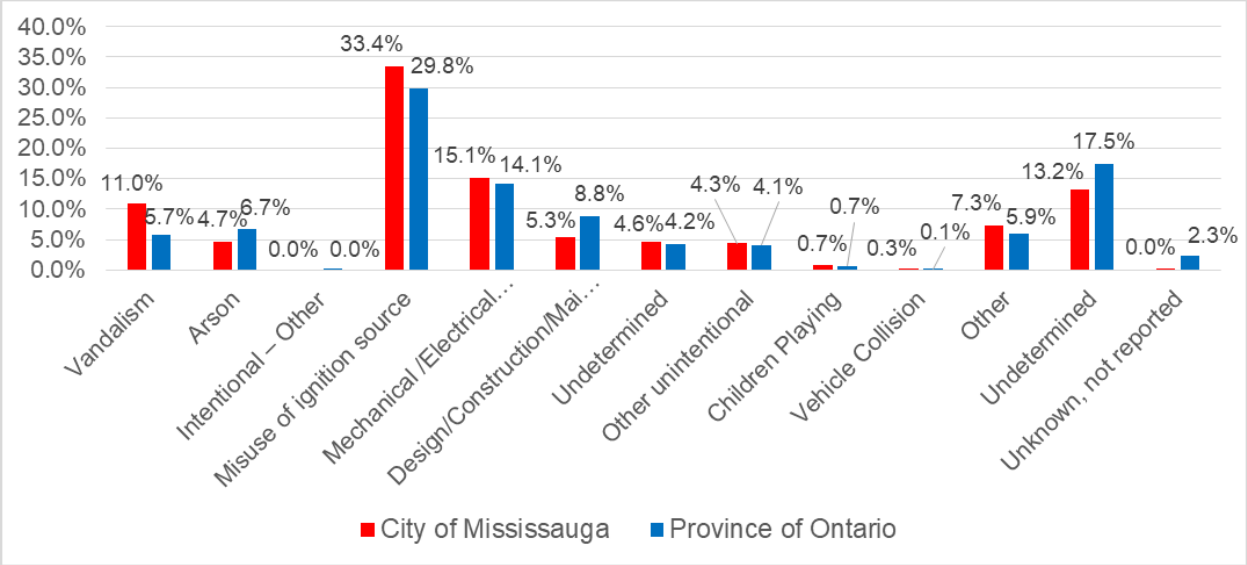
Between 2003 and 2020, there have been 166 fire-related injuries and 35 fire-related fatalities in Mississauga. Within both the City and the province, the overwhelming majority of injuries and fatalities occurred in residential (Group C) occupancies. In the City, 78.3 per cent or 130 injuries and 97.1 per cent or 34 fatalities occurred in Group C occupancies. In the province, 87.9 per cent of injuries and 93.9 per cent of fatalities occurred in Group C occupancies.

Fire Cause

The NFPA defines fire cause as "the circumstances, conditions, or agencies that bring together a fuel, ignition source, and oxidizer (such as air or oxygen) resulting in a fire or a combustion explosion" (NFPA Glossary of Terms 2013). Standard incident reporting data, prepared for submission to the province, is organized into four categories of fire cause: intentional, unintentional, other and undetermined. The intentional category recognizes the cause of a fire to be started for a specific reason. These are typically classified as arson fires, acts of vandalism, or other intentional reasons (such as to achieve personal gain through insurance). As illustrated in **Figure 16,** these intentional fire causes equal 15.7 per cent of fire causes reported from 2003 to 20120 within the City (compared to 12.4 per cent in the province). Of the fires occurring within Mississauga from 2003 to 2020, the City has a higher proportion of fires overall that were caused by vandalism compared to the province (11.0 per cent to 5.7 percent).

The unintentional category recognizes a number of common causes that represent both human behavioural causes (e.g. playing with matches) and equipment failures (e.g. mechanical failure). As illustrated in **Figure 16,** unintentional misuse of ignition source accounts for the majority of all fire causes in the City and the province at 33.4 per cent and 29.8 per cent respectively. This suggests a need for targeted education programs about fire causes and prevention.

Figure 16: Fire Cause in Mississauga and Ontario

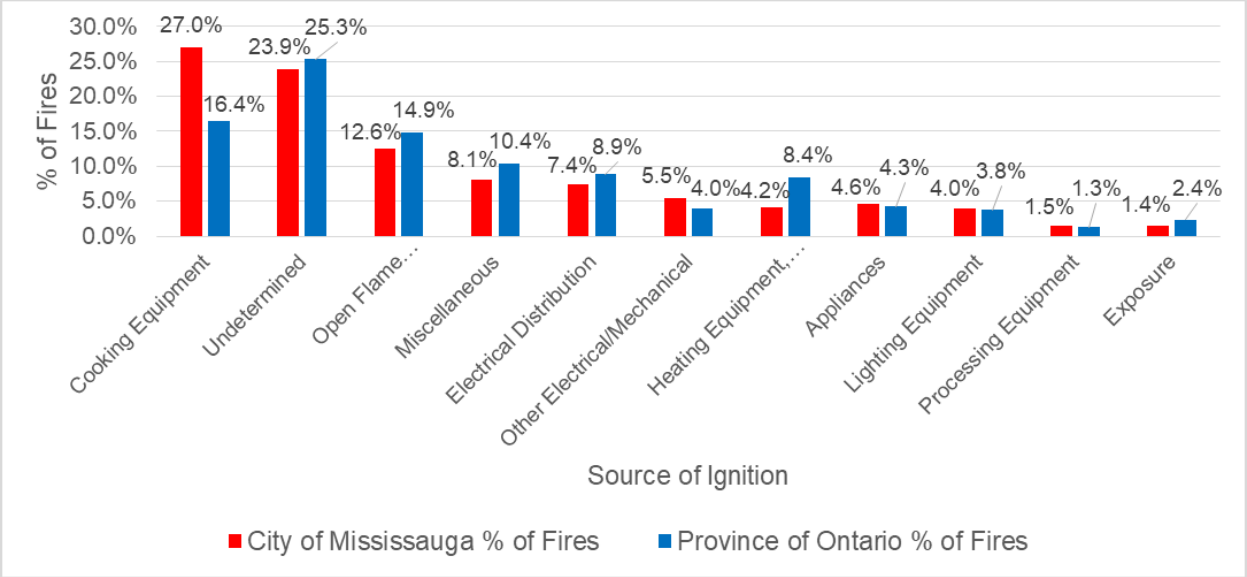


Ignition Source

Figure 17 illustrates the fire loss by source of ignition based on an analysis of the data provided by the OFM for the City and the province. Of the fires occurring within Mississauga from 2003 to 2020, 27.0 per cent had cooking equipment as the reported ignition source, which is significantly higher than the province at 16.4 per cent. Undetermined ignition sources related to 23.9 per cent of calls in the City and 25.3 per cent of calls in the province. This reporting is a result of how and when the data on ignition source is collected as often there is no information available at the time to confirm ignition source. Open flame as an ignition source remains significant at 12.6 per cent in the City and 14.9 per cent in the province. These trends on ignition source can inform the development of public education programs tailored to address local fire risks.

In 27.0 per cent of fires, the ignition source was cooking equipment which is almost two times higher than the provincial average.

Figure 17: Reported Source of Ignition



(Source: OFM SIR Data 2003 to 2020) Note: 2021 data was not included because the provincial 2021 SIR information for the province was not available for comparison.

Fire Safety

Smoke Alarms

Data is publicly available at the provincial level for the smoke alarm status in residential occupancies in the event of a fire. Locally, MFES provides some reporting on smoke alarm status and fire alarm system presence and activation with the fire call data. **Table 10** highlights whether a smoke alarm was present and operating on the floor or in the suite of a fire from 2016 to 2020. During this period, 49 per cent of the calls **did not have a working smoke alarm** on the fire floor. This means that in nearly half of the analyzed calls, the smoke alarm was either not present or not working. As discussed in Section 5, home smoke alarms are the most important factor in reducing fire fatalities in residential occupancies. Statistics on home smoke alarm status need to be considered when developing targeted and enhanced home smoke alarm programs for the community.

Table 10: Smoke Alarm on Floor or Suite of Fire Origin

Smoke Alarm Status on Floor of Origin	2016	2017	2018	2019	2020	Total	% in Mississauga
No smoke alarm or smoke alarm did not operate	36	28	31	32	15	142	32.6%
Smoke alarm present and operated	98	66	90	97	73	424	51.0%
Smoke alarm present, operation undetermined	5	5	5	4	2	21	2.5%
Smoke alarm presence undetermined	16	43	17	19	20	115	13.8%

Building Stock

The Ontario Building Code (OBC) categorizes buildings by their major occupancy classifications. Each classification has definitions that distinguish it from other occupancy classifications. The OBC major occupancy classifications are divided into six major building occupancy groupings. Within each group, the occupancies are further defined by division. The OBC major classification groups and divisions are presented in **Table 11**.

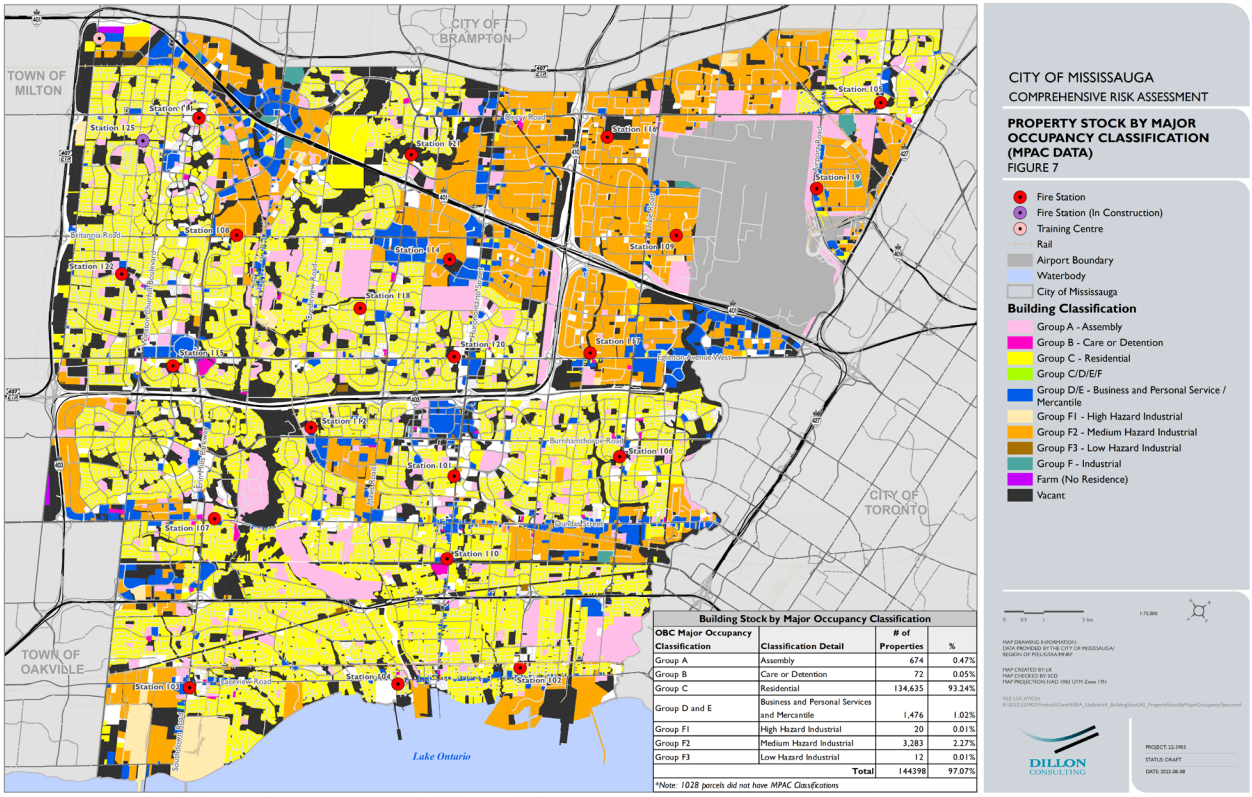
Table 11: OBC Major Occupancy Classifications

OBC Occupancy Classification	OBC Definition
Group A: Assembly	The occupancy or use of a building or part of a building by a gathering of persons for civic, political, travel, religious, social, educational, recreational or similar purposes or for the consumption of food or drink.
Group B: Care or Detention	The occupancy or use of a building or part thereof by persons who are dependent on others to release security devices to permit exit; receive special care and treatment; or receive supervisory care.
Group C: Residential	An occupancy that is used by persons for whom sleeping accommodation is provided but who are not harboured or detained to receive medical care or treatment or who are not involuntarily detained there.
Group D: Business/Personal Services	An occupancy that is used for the transaction of business or the provision of professional or personal services.
Group E: Mercantile	An occupancy that is used for the displaying or selling of retail goods, wares or merchandise.
Group F: Industrial	An occupancy that is used for the assembly, fabrication, manufacturing, processing, repairing or storing of goods and materials. This category is divided into low hazard (F3), medium hazard (F2) and high hazard (F1) based on its combustible content and the potential for rapid fire growth.

Over a 12-year period, residential fires in Mississauga accounted for 66.9 per cent of all fires, 93.9 per cent of fire injuries and 97.1 per cent of all fire fatalities.

An analysis of the property stock within the City of Mississauga indicates that the majority of buildings (93.2%) are residential (Group C) occupancies. This includes single-family homes, multi-unit residential, and hotels/motels. Information provided by the OFM indicates that for the period from 2003 to 2020, residential fires in the City accounted for 66.9 per cent of all fires, 93.9 per cent of fire injuries and 97.1 per cent of all fire fatalities**. Figure 18** maps the distribution of property stock by major occupancy classification across the City.

Figure 18: Distribution of Property Stock by Major Occupancy Classification



Building Stock by Major Occupancy Classification

OBC Major Occupancy Classification	Classification Detail	# of Properties	%
Group A	Assembly	674	0.47%
Group B	Care or Detention	72	0.05%
Group C	Residential	134,635	93.24%
Group D and E	Business and Personal Services and Mercantile	1,476	1.02%
Group F1	High Hazard Industrial	20	0.01%
Group F2	Medium Hazard Industrial	3,283	2.27%
Group F3	Low Hazard Industrial	12	0.01%
	Total	144398	97.07%

Note: 1028 parcels did not have MPAC Classifications

Building Age and Construction

The National Building Code of Canada (NBCC) was developed in 1941 as a foundational model for jurisdictions across the country. Depending on the provincial jurisdiction, the National Building Code was either adopted outright and legislated, or alternatively used as the basis for developing provincial legislation.

In Ontario, the Ontario Building Code (OBC) was adopted in 1975 and the Ontario Fire Code (OFC) was adopted in 1981. Prior to adopting the OBC, municipalities had their own building codes. This resulted in inconsistent construction standards and regulations across the province. In Mississauga, approximately 29 per cent of the occupancies were constructed when there were no provincial codes in effect.

Together, the OBC and OFC have provided the foundation for eliminating many of the inconsistencies in building construction and maintenance that previously existed.

In 1983, the OFC was further expanded to include retrofit requirements for many of the buildings constructed prior to adopting the code. Retrofit requirements were established to ensure a minimum acceptable level of safety. A number of occupancy types are included within the retrofit requirements including assembly, boarding, lodging and rooming houses, health care facilities, multi-unit residential, two-unit residential and hotels.

More recent amendments to the OFC include Ontario Regulation 150/13 came into effect in January 1, 2014. This regulation is intended to enhance fire safety in care or detention (Group B) occupancies by including requirements for mandatory sprinklers, staff training and fire inspections. MFES has completed fire inspections on all Group B occupancies in Mississauga.

Table 12 illustrates the building age and existing building/fire code legislation that existed for that period and the percentage of Mississauga's dwellings within that category.

Table 12: Building Age and Period of Construction Overview

Building Age (Years)	Period of Construction	Applicable Codes	Percentage of Mississauga Buildings
1 to 41 years	1982 to present	Ontario Fire Code and Building Code in effect	59%
42 to 49 years	1975 to 1981	Ontario Building Code in effect	12%
50 to 82 years	1942 to 1974	National Building Code available for potential use by individual jurisdictions	28%
83 years or older	Prior to 1941	No codes or legislated guidelines in effect	1%

Lightweight Construction

As of February 25, 2022, the OFM provided direction that requires documenting the presence and location of truss and lightweight construction systems for pre-planning activities by fire departments. Buildings with lightweight construction are considered a safety risk to responding firefighters as they are known to be susceptible to premature failure and rapid collapse under fire conditions. Pre-plans provide responding fire departments with awareness of the presence of lightweight construction, providing an opportunity for proactive fire response strategies to protect the safety of responding firefighters.

Building Height and Area

The Ontario Building Code (OBC) has regulations specific to high-rise buildings that consider the unique characteristics and safety considerations of the occupancy type.

Functioning fire and life safety systems are a priority for these occupancies. Taller buildings can experience extended rescue/fire suppression response times due to the time it takes firefighters to climb to the upper levels, which is commonly referred to as "vertical response." Strategies such as "shelter-in-place" that require occupants to stay within their units can be an effective safety strategy. However, ensuring internal building communications systems are in place and functioning is critical. Targeted public education campaigns addressing strategies like shelter-in-place are also critical to educating building occupants.

Industry best practices and standards have also identified that fires in high-rise buildings can place significantly higher demands on fire suppression activities, which require more resources.

Analysis within the Community Risk Assessment identified 2,343 buildings in Mississauga with a height of 18 metres or more. Many of the City's high-rise buildings are distributed throughout the urban area of the City, primarily along Hurontario Street. There are notable clusters of high-rise buildings located near Station 101 at Hurontario Street and Burnhamthorpe Road, and Station 110 at Hurontario Street and Queensway East.

Building area can cause comparable challenges. Horizontal travel distances can also mean extended response times by firefighters. Large buildings such as industrial plants and warehouses, department stores and big box stores can contain large volumes of combustible materials.

In many of these occupancies, high-rack storage is also present. Fires within this type of storage system can be difficult to access and cause additional risk to firefighter safety due to collapse risks. **Table 13** provides a summary of the City's building stock organized by building area.

Table 13: Summary of Building Area in Mississauga

Building Size (Square Feet)	# of Buildings	% of all Buildings
0 to 2,500	215,092	91%
2,500 to 5,000	11,735	5%
5,000 to 10,000	3,753	2%
10,000 to 20,000	2,244	1%
20,000 to 50,000	2,067	1%
>50,000	1,292	1%
Total	**236,183**	**100%**

Building Contents

Building contents is typically referred to as "fuel load" and refers to the amount and nature of combustible content and materials within a building. This can include combustible contents, interior finishes as well as structural materials. Higher fuel loads result in an increased risk of fire loss due to increased opportunity for ignition and fire severity.

As mentioned above, the age and construction of a building can also have an impact on fuel load. Older buildings typically have a larger volume of combustible materials such as wood framing versus newer buildings that have more concrete and steel in the construction.

Consideration should be given to select industrial properties with potential fuel load concerns. There are a number of warehousing units in the City to support the economic hub around the airport and the local goods movement network.

Other top common industries with potential fuel load concerns include heavy manufacturing (non-automotive), truck terminals, mini-warehousing, distribution centres, petro-chemical plants and food processing plants.

Regular fire prevention inspection cycles and strategies to enforce continued compliance with the Ontario Fire Code are considered best practices for addressing fuel load risks.

Recommendation

19 Deliver a pre-incident planning program based on the National Fire Protection Association (NFPA) 1620 standard.

Historic or Culturally Important Buildings

Buildings/sites of historic or cultural importance are included in the Community Risk Assessment. These historic buildings/sites are often key features within a community, providing a sense of heritage, place and pride. Many also act as tourism destinations. Historic areas can also present a high fire risk due to the materials used in construction, the exposure to other buildings, and their importance to the local economy and community.

Municipalities commonly have registered heritage buildings/sites and/or designated heritage conservation districts. Mississauga has two heritage conservation districts: Meadowvale Village and Old Port Credit Village. The City has 153 properties designated under the Ontario Heritage Act and over 3,500 properties that are identified as heritage resources in the community.

Road Networks and Highways

Mississauga is 292 square kilometres, with a population density of approximately 2,452 persons per square kilometre. It is bordered to the west by the Town of Oakville, the Town of Milton, and the Town of Halton Hills, to the north by the City of Brampton, to the east by the City of Toronto, and to the south by Lake Ontario.

Road networks and transportation systems provide fire services with access throughout the community. Mississauga is served by a network of highways/freeways, arterial roads, collector roads and local roads. MFES responds to incidents on several provincial highways including Highway 401, Highway 403, Highway 407, Highway 409, Highway 410, Highway 427 and the Queen Elizabeth Way (QEW). The primary road network is a grid of arterial roads. The majority of intersections with traffic lights within the City are connected to the central computerized traffic control system. These signals operate with “semi-actuated control” and have pre-determined timing plans to reduce overall system delay.

Most major intersections have traffic signal pre-emption for fire vehicles (pre-emption is provided in the direction of major traffic flow or in both directions if there is significant traffic in both directions). Traffic signal pre-emption is an intelligent transportation system used to change traffic signals to give emergency vehicles priority when travelling through intersections. Such systems can allow emergency vehicles to pass through intersections more efficiently and safely, reducing emergency response times.

The 2019 Mississauga Transportation Master Plan (TMP) indicates that the City's residents experience congestion on highways and major roads due to the overdependence on cars. This presents a challenge to the City that will not be eliminated through roadway expansion alone. The TMP suggests that as congestion increases, the City should improve transportation options such as public transit (including the LRT) to reduce the number of vehicles on the road at any given time.

The City's road network is a significant contributor to emergency call volume due to motor vehicle collisions. MFES responds to an annual volume of more than 3,200 calls related to vehicle collisions and extrications. These types of calls equal over 91 per cent of the rescue calls responded to by the fire and emergency services. The road network also impacts emergency response times. For example, increased traffic congestion will increase emergency response travel times. Congestion has been and continues to be a significant issue within the City, and is anticipated to increase as development intensification continues.

Toronto Pearson International Airport

Toronto Pearson International Airport is located in the northeast corner of Mississauga. Fire and Emergency Services for the Airport are provided jointly through a Fire Protection Agreement by the Greater Toronto Airport Authority Fire and Emergency Services (GTAAFES) and MFES.

Though the airport has dedicated emergency response services, MFES responds to certain airport emergency calls, as well as to emergencies extending beyond the airport lands. MFES responds to approximately 200 airport-related calls annually.

Hazard and Emergency Management

Under the Emergency Management and Civil Protection Act (EMCPA), municipalities are required to complete a Hazard Identification and Risk Assessment (HIRA) to outline all hazards and risks present in the municipality. The HIRA responds to the following questions:

- What hazards exist in the City of Mississauga?
- How likely is an emergency as a result of the hazard?
- How severe can the hazard's impact be on the community, infrastructure, property, economy and the environment?
- Which hazards pose the greatest threat to the community?

This process helps municipalities prepare for, respond to and recover from emergencies. It is important to note that municipally prepared HIRAs inform community emergency preparedness through the development of emergency management programs. The Community Risk Assessment and 2024 Future Directions Plan considers and incorporates risks arising from hazards only to inform fire and emergency service planning, prevention and management.

Hazards are important to consider from a fire risk, emergency response and overall public safety perspective. As part of legislated municipal emergency planning, municipalities including the City of Mississauga have completed an HIRA.

The City of Mississauga's HIRA considers three general categories of hazards:

1. **Natural Hazards:** Caused by forces of nature (sometimes referred to as "Acts of God"). Human activity may trigger or worsen the hazard (e.g. deforestation may increase the risk of a landslide), but the hazard is ultimately viewed as a force of nature.
2. **Technological Hazards:** Arise "from the manufacture, transportation and use of substances such as radioactive materials, chemicals, explosives, flammables, modern technology and critical infrastructure."
3. **Human-caused Hazards:** Result from direct human action or inaction, either intentional or unintentional. This includes hazards that arise from problems within the organizational structure of a company, government, etc.

The high-risk hazards identified for the City in the 2022 HIRA are winter weather (freezing rain/ice storm, etc.), cyber-attack, infectious disease, flood, high wind and electrical energy. Some of these hazards can occur as major or minor events.

MFES is an all-hazards service and is prepared to respond to all types of emergencies in collaboration with the City's Office of Emergency Management (OEM) and other City staff. One of the many responsibilities of the OEM is to train staff in various levels of incident management to ensure all divisions within the City are prepared to respond to the needs of the community in any disaster situation.

Implementation Plan

Section 8: Implementation Plan

The Implementation Plan is a planning tool to be used in conjunction with the capital recommendations contained within the 2024 Future Directions Plan. City staff should review this Implementation Plan annually to monitor progress on each item and ensure that recommendations are being incorporated into work plans. Key components of the Implementation Plan include:

- **Recommendations:** The following table summarizes the recommendations contained within the 2024 Future Directions Plan in the order that they appear in this report.
- **Reason for Implementation:** Highlights a brief summary of the purpose of the recommendations and what it will achieve.
- **Timeframe:** Implementation timing of a recommendation should only be considered as a guide. Three timeframes are used: short-term (1 to 4 years), medium-term (5 to 9 years) and long-term (10+ years).
- **Section(s) Most Responsible:** Identifies sections of the City responsible for implementing the recommendation.
- **Capital/Operating Costs:** Recommendations with capital costs will be subjected to the annual planning and budget processes. Recommendations that are anticipated to have an operating impact will also be reviewed through the annual planning and budget process.

Category	Recommendation	Reason for Implementation	Timeframe	Section(s) Most Responsible	Capital/ Operating
1. Community Risk Reduction	Develop and implement public education programming that targets residents age 65 and above, school aged children ages 6-14 and unregistered daycare and community group homes.	Community Safety Identified in Community Risk Assessment	Short Term	Fire Prevention & Risk Reduction	Operating
2. People & Culture	Support the creation of the City's Reconciliation Plan and actively explore the creation of a Community Circle with our Indigenous partners which will inform and guide programming as well as relevant initiatives across the City.	Commitment to reconciliation Partnership opportunities	Medium Term	All Sections	N/A

Category	Recommendation	Reason for Implementation	Timeframe	Section(s) Most Responsible	Capital/ Operating
3. Community Risk Reduction	Assess infrastructure, equipment and deployment needs in community development nodes including Port Credit and Lakeview to ensure future population growth and Provincial accelerated growth targets are addressed.	Growth	Long Term	Operations & Capital Assets	Capital
4. Community Risk Reduction	Monitor development and trends along transit corridors and adjust operational programming to meet needs and circumstances.	Growth	Long Term	Operations & Capital Assets	Capital
5. People & Culture	Deliver and maintain technical rescue certification for all staff required to perform technical rescue services.	Legislative Compliance Community Safety	Medium Term	Professional Development & Accreditation	Operating
6. People & Culture	Develop strategies in conjunction with City programming that support equity, diversity and inclusion and meet the needs of a growing, diverse city.	Community Diversity	Medium Term	All Sections	Operating
7. Community Risk Reduction	Update overall programming and strategies in all sections of Fire & Emergency Services to reflect results from the 2023 Community Risk Assessment.	Community Safety Legislative Compliance	Medium Term	All Sections	Capital Operating
8. Community Risk Reduction	Deliver Fire & Life Safety Educator training to all new recruit operations staff based on industry standards.	Community Safety Commitment to public education	Medium Term	Professional Development & Accreditation	N/A
9. Community Risk Reduction	Leverage provincial residential fire safety strategies to target neighbourhoods with low smoke alarm compliance.	Legislative Community Safety	Short Term	Fire Prevention & Risk Reduction	Operating

Category	Recommendation	Reason for Implementation	Timeframe	Section(s) Most Responsible	Capital/ Operating
10. Community Risk Reduction	Complete an annual evaluation of city building stock and update proactive inspection records to ensure inspection frequency aligns with the assigned risk.	Legislative Community Risk	Medium Term	Fire Prevention & Risk Reduction	N/A
11. Community Risk Reduction	Reinforce and consistently apply all available enforcement strategies to ensure compliance to Ontario Building Code, Fire Code and other legislative requirements.	Legislative	Short Term	Fire Prevention & Risk Reduction & Operations	N/A
12. Community Risk Reduction	Develop and implement a risk reduction strategy for high rise & high risk building stock	Growth	Medium Term	Operations	Capital
13. Asset Management	Use the 2024 Asset Management Plan to develop a more rigorous lifecycle replacement plan that will inform the 10-year capital budget process.	Community Safety Legislative Compliance Maintaining critical equipment & infrastructure	Short Term	Capital Assets	Capital Operating
14. Operational Performance & Continuous Improvement	Leverage technology to support performance analysis, reporting and overall continuous improvement.	Continuous improvement Optimize operational performance	Mid Term	All Sections	Operating
15. Operational Performance & Continuous Improvement	Apply the principles of the Corporate Green Building Standard in the construction of new, permanent fire infrastructure.	Commitment to green initiatives	Long Term	Capital Assets	Capital
16. Operational Performance & Continuous Improvement	Investigate the feasibility of electric vehicle technology for front line fire apparatus	Commitment to green initiatives	Long Term	Capital Assets	Capital
17. Community Risk Reduction	Complete the Fire Station Infrastructure plan including the construction of new fire stations and renovation of existing stations.	Growth	Long Term	Capital Assets	Capital
18. Community Risk Reduction	Target a travel time standard for first arriving vehicle of 240 seconds, 75 per cent of the time.	Community Safety	Long Term	Operations	Capital

Category	Recommendation	Reason for Implementation	Timeframe	Section(s) Most Responsible	Capital/ Operating
19. Community Risk Reduction	Implement a pre-incident planning program based on the National Fire Protection Association (NFPA) 1620 standard.	Community Safety	Medium Term	Operations & Fire Prevention & Risk Reduction	Capital

Funding the Plan

Recommendations in the Future Directions Plan do not always require financial support; sometimes improvements can be accomplished through changes in approach or in policy. Most projects, however, require funding to proceed. Many projects are funded in the City's current business plan and budget, with many still requiring funding sources to be identified. The City must balance service provision with affordability and will thoughtfully seek funding for projects as opportunities present themselves. Capital initiatives are typically funded through a combination of sources. Existing and new sources are evaluated annually to determine the best approach for funding the City's projects. The following provides detail on currently available funding sources:

- Partnerships
- Federal and provincial grants
- Development charges
- Cash-in-lieu of parkland
- Community benefits charges
- Capital reserves
- Debt financing

Partnerships

The City cannot fund all of its Future Directions Plan projects alone. Partnerships with external agencies can provide welcome funding and resources. Other opportunities can be found in the sharing of resources, such as the co-location of different services in a single facility. This can help to reduce the costs of any one agency. Similarly, there may be partnership opportunities with Mississauga's community organizations and corporations that can benefit both parties.

Federal and Provincial Grants

The City receives funding from both federal and provincial levels of government. Much of this funding is targeted to specific programs by the granting authorities, and every effort is made to use these funds for priority projects. Where City contributions are required, the City will determine affordability and impacts on its financial position prior to applying for grants.

Development Charges

Funds collected under the Development Charges (DC) Act are collected and used to help offset the cost of funding growth-related capital costs. Historically, DCs were structured so that "growth pays for growth" but revenues collected through DCs are insufficient to fully address all the City's growth initiatives.

Cash-in-lieu of Parkland

Sections 42 and 51.1 of the Ontario Planning Act enable a municipality to require land for public recreational purposes as a condition of development. The Act allows a municipality to collect cash-in-lieu of parkland as a condition of development in instances where a land dedication may not be appropriate. The City collects cash-in-lieu of parkland on most new land development. This revenue is used for the "acquisition of land to be used for park or other public recreation purposes, including the erection, improvement or repair of buildings and the acquisition of machinery for park or other public recreational purposes," per the Act, and in accordance with approved capital plans and land acquisition strategies.

Community Benefits Charges

Section 37 of the Ontario Planning Act allows the City to collect community benefits charges for high-density residential developments. This revenue tool has replaced the former Section 37 bonus zoning fee. The revenue collected is used to help fund the growth-related costs involved in servicing residential developments that are five or more storeys.

Capital Reserves

Reserves and reserve funds are created to help with long-term financial stability and financial planning. The City has a long history of managing its reserves and reserve funds wisely. One of the reasons the City maintains strong reserve funds is to sustain existing infrastructure and to plan for future growth. The City has implemented an annual Capital Infrastructure and Debt Repayment Levy since 2013. The rate is reviewed annually as part of the business plan and budget approval process.

Debt Financing

Long-term financing is a critical component in funding new construction, and replacing and upgrading capital assets for the City of Mississauga. Taking on long-term debt allows the City to spread out the cost of capital projects over the useful lives of the assets. The amount of debt the City issues each year is determined by how much funding will be yielded by a portion of the capital infrastructure and debt

Debt impacts property tax; the larger the debt that a city holds, the larger the percentage of property tax that must be allocated to repay that debt.

With all of the City's competing priorities, choices must be made. The 2023-2026 business plan and budget provides details on which Future Directions projects are currently proposed for funding. Projects identified in the Future Directions Plan that do not have funding sources identified will be brought forward in future budget cycles for approval as realistic funding sources become available. Each year, Council will direct which projects can be funded based on business cases and project plans through the annual business planning process.

Appendix

Section 9: Appendix

Appendix 1: Community Engagement Summary

Overview of Consultation Initiatives:

Fundamental to the success of *Future Directions* is an effective and strategic public consultation strategy. Methods and tools for engagement were carefully selected to ensure effective, accessible and efficient communication on topics related to Mississauga Fire & Emergency Services. This section summarizes the findings of community engagement activities specifically for the *Future Directions for Fire & Emergency Services.*

Future Directions provided an exciting opportunity for stakeholders, residents and City Council/Staff to provide feedback on the current, and future services, relating to Mississauga's Fire and Emergency Services. The main forms of consultation took place through:

- Online Public Survey
- Virtual Public Engagement Session
- Targeted staff and stakeholder interviews
- Interviews with City Councillors
- Indigenous Consultation

Please note that the information summarized within this section should not be construed as recommendations, nor has public input been altered even in instances where comments may not reflect the City's actual policies, practices, or level of provision. Consultation on other areas of programming/service have also been conducted to inform the next steps of Future Directions. The information summarized below focuses solely on servicing related to Fire & Emergency Services.

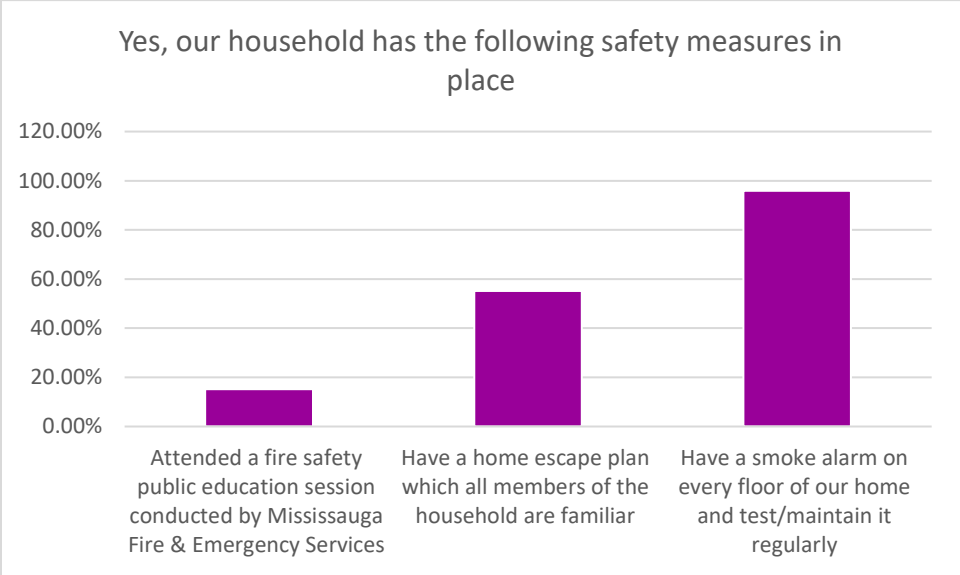
Public Survey

A survey was launched on November 15th, 2022 to help determine what public perceptions are regarding the current services of Mississauga's Fire & Emergency Services. The focus of the survey was to gauge the public understanding of fire safety and what additional information was required to help encourage fire safety in the home. The survey received 4,932 responses. The survey was disseminated to residents and members of the public online to maximize the number of residents reached, and allow for effective tracking of answers. The goal of the survey was to better understand Mississauga residents' thoughts and perceptions on three main aspects of the fire and emergency services within the City:

- Fire Safety Awareness
- Utilization of current fire safety measures
- Interest in additional fire safety programs/education

A summary of responses can be seen below.

Figure 1: Example question from public survey.



78% of respondents stated that they, along with other members of their household, were aware of fire safety precautions within their homes. For those that answered that they were aware of fire safety precautions, over 90% of the respondents had a smoke alarm on every floor of their home and tested it regularly, while over half of respondents had an escape plan which all family members were aware of. However, when it came to more complex safety measures such as attending fire safety public education sessions the number of responses dropped to about 15%, indicating this is a much less utilized service. For the respondents who answered that they weren't aware of fire safety within their homes, the most commonly answered option of how to increase knowledge about fire safety was home escape planning, with 70.8% of respondents selecting this option. Other common answers were learning more about general fire safety tips (63.4% of responses) and electrical safety (57.9% of responses). Learning about the "Vulnerable Persons Registry" was the least common option, with only 25% of people selecting this answer.

If there were to be a fire within the home, 54% of respondents stated that they have attended a fire safety education session, have an escape plan and are fully prepared if they have an emergency. 45.9% (equaling 2,179 people) stated they did not have a plan in place. For those who did not have a plan in place, a majority of them were open to learning more about fire safety, with "home escape planning" and "awareness of common fire causes within the home" being the most commonly answered ways of doing so.

Lastly, the survey tried to gauge what method of communication residents would like to receive fire safety from. Approximately half of the respondents (50.4%) answered the preferred method of receiving updates would be through the City website, with social media being a close second earning 43.1% of selections. Interestingly, "School Programs" was the selection with the third highest number of responses (41.2%) indicating a desire for there to be more information about fire safety distributed in schools.

Survey Demographics

The following is a high-level summary of the demographic profile of responding households.

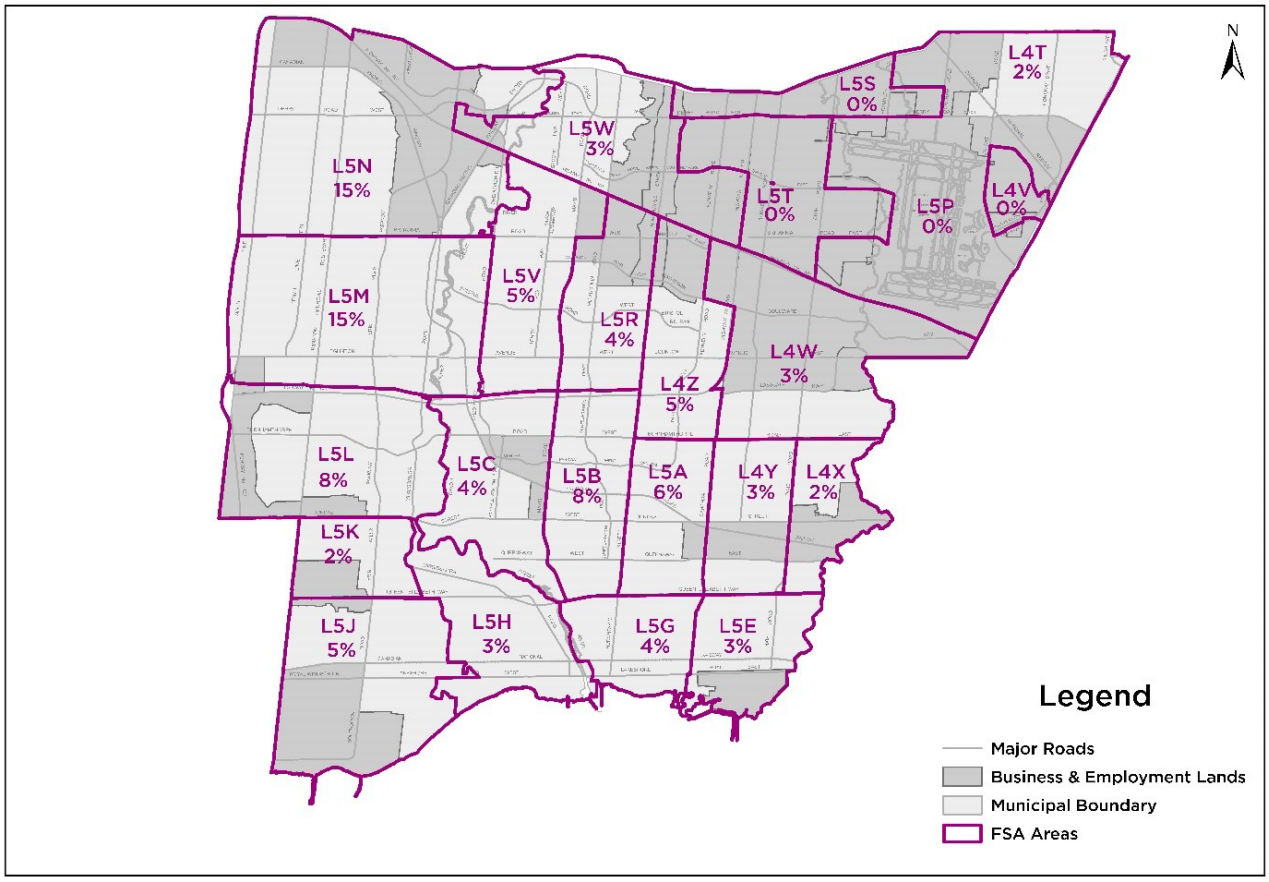
- There were a total of 15,424 people living in responding households, representing approximately 2% of Mississauga's population.
- Compared to the 2021 Census, responding households were over-represented in infants and toddlers (under 4 years), children and youth (ages 5 to 13 years), teenagers and young adults (ages 14 to 25 years), and mature adults (36 to 50 years). Conversely, responding households were under-represented in adults (26 to 35 years), older adults (51 to 69 years) and seniors (70+ years). This is common as family households are more likely to complete a survey of this type.

Age Group*	Survey Sample Number of Persons	%	2021 Census	Difference (+/-)
Under 4 Years	917	6%	4%	2%
5 to 13 Years	2,201	14%	11%	3%
14 to 25 Years	2,364	15%	13%	2%
26 to 35 Years	2,002	13%	14%	-1%
36 to 50 Years	3,441	22%	19%	3%
51 to 69 Years	3,295	21%	27%	-6%
70+ Years	1,204	8%	13%	-5%
Total	15,424	100%	100%	

** Note: Age categories used in the public survey are not consistent with the age categories used in the Statistics Canada 2021 Census; however, for high-level comparative purposes they are acceptable for the purposes of this analysis.*

- 43% of survey respondents were between the ages of 30 and 49 years.
- More than one-quarter (26%) of survey respondents have lived in Mississauga for more than 30 years. One-in-five (22%) survey respondents have lived in the City for 11 to 20 years. 17% of survey respondents are generally considered to be new residents, who have lived in Mississauga for less than five years.
- English is the most common language spoken at home, which was identified by nine-in-ten (91%) survey respondents. Other common languages included Urdu (6%), Hindi (6%), French (5%) Arabic (4%), and Cantonese (3%). This is generally consistent with the 2021 Census as the most common languages spoken at home are English, Chinese (e.g., Cantonese, Mandarin, etc.), Urdu, Arabic, Punjabi, Polish, and Tagalog (Filipino).
- Nearly two-thirds (61%) of survey respondents identified as a woman and one-third (33%) identified as a man. Approximately one percent of survey respondents identified as gender non-confirming/non-binary or genderqueer and 5% preferred not to answer.
- More than one-quarter (26%) of survey respondents had a household income of $110,000 or more. By comparison, the median household income in 2020 was $102,000 or $89,000 after tax.

Figure 2: Geographic Distribution of Responding Households by Postal Code



Geographic Distribution of Responding Households by FSA

- Four-in-five (80%) survey respondents use a personal vehicle as their primary mode of transport, either as a driver or a passenger. Other common modes of transport included MiWay public transit (9%) and walking. (6%).
- More than one-third (38%) of survey respondents identified as a Racialized Person, which included people who are non-Caucasian in race or non-white in colour and do not include Indigenous Peoples of Turtle Island/North America. Less than one percent of survey respondents identified as an Indigenous Person of Turtle Island/North America, half (54%) of whom were a First Nations Indigenous Person and nearly one-third was Metis (31%).
- Nearly one-tenth (9%) of survey respondents identified as a person with a disability. Among this sub-group, 43% had a mobility/dexterity limitation such as a physical disability. 35% had a mental/emotional health disability and 34% had a chronic health condition. Other disabilities that were identified included, but were not limited to, hearing, learning or behavioural, neurological, vision, developmental, and speech/language.

Open House

To gain a better understanding of thoughts and attitudes from the general public on the Fire and Emergency Services Department a virtual Open House session was held on November 30th, 2022. The main objective of the session was to encourage the public to share feedback on current services available, relating to the fire/emergency department and the biggest issues to prioritize pertaining to fire safety for the next 5 to 10 years.

Attendees were presented with several options for each question, asked to provide their feedback through a vote and then had the opportunity to ask questions.

The results of the open house feedback are summarized below.

- "Response to Fire and Emergency incidents" was the most commonly known available service to attendees
- Public Fire Safety Education, Building Fire Code Inspections and Fire Cause Investigations were also commonly known services
- Home smoke alarm/CO checks and vulnerable persons registry were the least commonly known services available
- Increasing density/higher rise buildings and traffic congestion were the biggest challenges attendees identified for the next 5 to 10 years
- There was interest indicated in an Escape Plan workshop, a public fire safety education topic mentioned in the survey

City Councillor Interviews

As part of the internal stakeholder engagement process, one-on-one Interviews were held with the Mayor and Councillors of Mississauga to identify three main objectives:

- Infrastructure and Service Shortfalls
- Challenges and Opportunities
- General Observations

This method of consultation was conducted by the Commissioner of Community Services and the Manager of Business Planning. Key questions that were asked included:

- What are the greatest priorities in your ward related to Community Services?
- What are the greatest challenges/issues in your ward related to Community Services?
- What important initiatives or big-picture ideas would you like to see related to Community Services?
- What do you think are the key priorities to advance equity, diversion and inclusion in the City of Mississauga?

Overall Themes:

The general overall theme was that Council is generally satisfied with Fire Services. Council communicated a clear understanding that additional fire stations are needed in the long -term. Support for additional public education initiatives was identified.

Staff Stakeholder Interviews

Internal staff interviews were conducted with key City and Fire and Emergency Services staff. This included interviews with:

- Commissioner of Community Services
- Fire Chief
- Deputy Chief's representing each section within of Mississauga Fire and Emergency Services including Fire Prevention & Risk Reduction, Profession Development & Accreditation, Capital Assets
  & Operations
- City's Environmental Team

These interviews were conducted by the City's Project Lead and Consultant Team Project Manager for the Future Directions – Fire and Emergency Services Project. The interviews were framed around the following questions:

- Do you make reference to the 2019 Fire Future Directions Plan in your work routine? If so, how?
- If you do not reference the2019 Plan in your work routine, was there anything missing or that you would like to see addressed in the 2024 Master Plan that would benefit your work?
- What do you view as the most critical issues facing your area in the next five years that you feel would be important for this plan to address?
- The team identified the key focus areas that are critical for the fire service in the next five years. Is there anything to add?
  - Community Risk Reduction
  - Asset Management
  - People and Culture
  - Operational Performance & Continuous Improvement
  - Indigenous Areas of Focus

Outlined below are the general themes that arose during the interviews.

Format/Content:

Public Consumption - Ensure the format and content of the plan are presented in a way that can be easily absorbed and understood by the public. Keep the focus around public safety. Tie back to the risk assessment but present in a simplistic way. Ensure that the recommendations are clear and concise are actionable and have appropriate timelines

Internal Use – Ensure the format enables ease of use for staff as a primary reference document.

Long-Term Growth Considerations:

Waterfront – Focus on the densification of the City with specific consideration to be given to Port Credit/Waterfront development. This should include the potential for both land and water-based rescue.

High-rise – Assess the requirements to address high-rise development – particularly within the city centre where there is no height cap. Speak to vertical response impact on response time.

Staff Training & Development:

Record management System – ensure processes are in place for proper training records – these will be required for provincial certification as well as ongoing training requirements.

Non Suppression Training – consideration to be given to training requirements/development for Fire Prevention, Capital Assets and Administration staff.

New Training – active shooter training being considered by surrounding municipalities – consideration for suppression staff.

Potential Budget Pressures:

Asset Management Plan – Discussion regarding the potential for significant budget pressures related to the completed Asset Management Plan. Expectations around equipment, vehicle and infrastructure lifecycle replacement.

Supply Chain cost increases – Discussion related to the increasing cost of materials and supplies and how that will impact 10-year capital plan

Firefighter Recruitment:

Discussion related to outreach & education with a goal towards encouraging firefighting as a career in racialized communities.

Indigenous Focus Groups:

City of Mississauga Parks and Culture staff conducted interviews with First Nations representatives (noting that the Consulting Team staff were not in attendance as per the City's preference).

There was no indication that follow-up was required from Fire and Emergency Services. Comments supplied by MFES included:

Focus Area	Issue/Challenge	Objectives	MFES Master Plan Support Area
Fire Safety Education	**Six Nations Community Plan** Reactive rather than proactive to major emergencies and Emergency Preparedness measures are not widely communicated/understood Private businesses do not share information with emergency services such as layout, staffing, etc.	**Six Nations Community Plan** Functional Emergency Plan for organizations and members	Provide support/training through the City's Emergency Management office to build-out existing plan
Equipment/ Infrastructure	**Six Nations Community Plan** Lack of water supply/pressure Existing infrastructure does not meet current needs **Credit Valley Trail Indigenous Implementation Plan** Create and express the indigenous experience narrative to celebrate and educate – Five key sites were identified to be the focus of the Indigenous Experience Plan	Acquire tanker capacity New stations and upgrades to existing Plan to implement fire pits along trail at two key sites: Riverwood and J.C. Saddington park. To be used for ceremonial and educational purposes	Provide assistance/ training to build specifications for new vehicles/tanker operations Share MFES station programming successes Work with the City Heritage Planning & Indigenous Relations Team to provide training to fire staff
Culture Awareness	**Mississauga's of the Credit First Nation meeting notes** Visual/regular reminders More opportunities for acknowledgement Need to educate people who are in front-line positions or points of contact with the public so that they are informed about this history and the peoples	Provide the opportunity for collaborative partnerships through Indigenous public art	Work with the City Heritage Planning & Indigenous Relations Team to complete moccasin identifier initiative and Indigenous Public Art (Mural) on the Bay doors at fire station 104 (Port Credit) Provide training for front line staff.

Appendix 2: Stakeholder and Public Engagement Report - March 2023

Future Directions Plan – Mississauga Fire & Emergency Services

The purpose of the Future Directions Plan - Fire and Emergency Services is to guide the strategic direction of the emergency services department every five years.

The previous Future Directions Plan for Fire & Emergency Services was approved in 2019. A review is completed every five years to reflect rapidly changing trends, infrastructure, and service delivery needs to those who live, work and play in Mississauga. The updated Future Directions Plan - Fire and Emergency Services will:

- Reflect content and scope of the Comprehensive Risk Assessment
- Include items that may be outside of the scope of the Comprehensive Risk Assessment, such as issues that may not directly impact the community service delivery
- Be the public-facing document that highlights key findings of the Comprehensive Risk Assessment
- Provide guidance to the Development Charges Study. Follow the template and guidelines provided by the City as to format the final product
- Recommend an integrated and prioritized implementation and funding strategy

The primary goals of the project are to:

- Articulate the findings of the Comprehensive Risk Assessment in such a way that the community can clearly understand the future direction of Fire & Emergency Services Facilities, programs and services
- To review and evaluate the existing internal structure, programming and staff development
- Recommend actions to address the current and future needs of those who live, work and play in Mississauga

The Future Directions Plan will guide the strategic planning and Management of the City's Fire and Emergency Services service delivery. Within the framework of capital and service delivery requirements, the primary objectives of the Future Directions Plan are to:

- Develop a proactive, innovative and synergistic strategy to planning and managing of services, programs amenities and infrastructure in a quickly urbanizing City
- Validate existing provision standards and methodology and layer with other Municipalities/industry trends while ensuring amenities factor in public demand
- Provide an understanding of the COVID-19 pandemic's impact on service delivery with actionable recommendations to address the impact
- Identify a financially sustainable approach to the delivery of each service area, programs, amenities, services and facility provisions

- Provide an understanding of each service area, programs, services, facility assets and identify opportunities for future needs and related funding sources
- Test the City's future service area needs and sustainability against current national and international best practices
- Set short, medium and long term actions and funding priorities
- Foster engagement with staff, Mayor and Members of Council and the public on future service area programs, infrastructure and service delivery
- Apply an Equity, Diversity and Inclusion lens throughout the development of the Future Directions Plan with actionable recommendations that includes, but is not limited to, the design of new facilities, service delivery and hiring of staff
- Apply a climate change and environmental sustainability lens throughout the development of the Future Directions Plan with actionable recommendations in regards to capital planning and service delivery
- Provide actionable recommendations with strong business rationale and funding strategies to the Areas of Focus