The Corporation of the City of Sault Ste. Marie
Regular Meeting of City Council
Revised Agenda

Monday, March 19, 2018
4:30 pm
Council Chambers
Civic Centre

Pages

1. Adoption of Minutes 18 - 33

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the Minutes of the Regular Council Meeting of 2018 03 05 be approved.

2. Questions and Information Arising Out of the Minutes and not Otherwise on the Agenda

3. Declaration of Pecuniary Interest

3.1 Councillor R. Niro - Comprehensive Risk Assessment and Fire Master Plan

Brother is employed by Sault Ste. Marie Fire Services

3.2 Councillor O. Grandinetti - Ratification of Local 2251 – Memorandum of Settlement

Member of Local 2251

3.3 Councillor O. Grandinetti - By-law 2018-51 (Memorandum of Settlement) Steelworkers Local 2251

Member of Local 2251

3.4 Councillor J. Krmpotich - Ratification of Local 2251 – Memorandum of Settlement

Member of Local 2251

3.5 *Councillor J. Krmpotich - By-law 2018-51 (Memorandum of Settlement) Steelworkers Local 2251*

Member of Local 2251

3.6 *Councillor M. Shoemaker - Funding for Sault Ste. Marie Economic Development Corporation Restructuring Costs*

EDC is a client of law firm

3.7 *Councillor L. Turco - Municipal Law Enforcement Officers and Municipal By-law Enforcement Officers*

Spouse is employed by Sault Ste. Marie Police Service

3.8 *Councillor L. Turco - By-law 2018-56 (Parking) Appointment Municipal Law Enforcement Officers*

Spouse is employed by Sault Ste. Marie Police Service

3.9 *Councillor L. Turco - Crossing Guard – St. George's Avenue and McNabb Street*

Spouse is employed by Sault Ste. Marie Police Service

4. Approve Agenda as Presented

Mover Councillor M. Shoemaker
Seconder Councillor R. Niro

Resolved that the Agenda for 2018 03 19 City Council Meeting as presented be approved.

5. Proclamations/Delegations

5.1 Zonta Club of Sault Ste. Marie Area 40th Anniversary

Heather Edwards, President, Zonta Club of Sault Ste. Marie Area

5.2 International Day for the Elimination of Racial Discrimination

Danny Krmpotich, Coordinator, Sault Ste. Marie and Area Local Immigration Partnership

5.3 World Lymphedema Day

Steve Kelland, Advocate for Lymphedema

5.4 CNIB 100th Anniversary

Dorothy Macnaughton, Chair, CNIB Northern Regional Board and Larry Knapp

5.5 Long Term Tax Policy Review

Rory Ring, CEO, Sault Ste. Marie Chamber of Commerce

Robert Heil, Municipal Tax Advisory Group (MTAG)

5.6 Comprehensive Risk Assessment and Fire Master Plan 34 - 70

Steve Thurlow, Dillon Consulting Limited

5.7 Soo Blasters – Request for Municiaply Significant Event

Erik Nielson, Soo Blasters

6. Communications and Routine Reports of City Departments, Boards and Committees – Consent Agenda

Mover Councillor S. Hollingsworth
Seconder Councillor L. Turco

Resolved that all the items listed under date 2018 03 19 – Agenda item 6 – Consent Agenda save and except Agenda item 6.3 be approved as recommended.

6.1 Council Travel

Mover Councillor M. Shoemaker
Seconder Councillor P. Christian

Resolved that Councillor L. Turco be authorized to travel to Toronto for two days in March to attend an AMO Board meeting at an estimated cost to the City of $300.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that Councillor S. Hollingsworth be authorized to travel to Montreal for three days in May for the Great Lakes Economic Forum at an estimated cost to the City of $1,950.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that Mayor C. Provenzano and Councillor S. Butland be authorized to travel to Halifax for one day in May and two days in June for the FCM Annual Conference and Trade Show at an estimated cost to the City of $2,625 per person.

6.2 Correspondence 71 - 86

Correspondence from the Sault Ste. Marie Public Library Board concerning Provincial funding for libraries is attached for the consideration of Council.

Mover Councillor M. Shoemaker

Seconder Councillor L. Turco

Whereas public libraries provide safe, inclusive and vibrant community spaces where everyone is welcome to learn, work, connect and have fun; and

Whereas the Sault Ste. Marie Public Library continues to evolve its services to meet the changing needs of our community, including a new generation of residents who think, learn, read and collaborate in new ways; and

Whereas the Sault Ste. Marie Public Library continues to seek funding opportunities through donor development and sponsorships to increase services and expand programming outside of their core funding; and

Whereas in 2017 the Sault Ste. Marie Public Library continues to have a limited resource budget despite issuing 18,102 library cards, having 862,273 website visits and establishing a Digital Creator Lab for youth; and

Whereas the Sault Ste. Marie Public Library continues to manage public resources with the utmost care and are committed to the sustainability of their services;

Now Therefore Be It Resolved that the City of Sault Ste. Marie urges the Province of Ontario to recognize the contribution of local libraries within their communities and to cease the 20 year budget freeze to local libraries in an acknowledgement to the services they offer all residents; and

Be It Further Resolved that the City of Sault Ste. Marie urges the Province of Ontario to reinstate adequate and appropriate funding for local libraries, increasing each year going forward in line with the consumer price index; and

Be It Finally Resolved that a copy of this resolution be sent to the Minister of Tourism, Culture and Sport, to the Ontario Minister of Municipal Affairs, to the local MPP, to the Ontario Library Association and to the Federation of Public Libraries.

6.3 2018 Discretionary Spending List 87 - 95

A report of the Chief Administrative Officer is attached for the information of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Chief Administrative Officer dated 2018 03 19 concerning 2018 Discretionary Spending List be received as information.

Mover Councillor P. Christian
Seconder Councillor M. Shoemaker

Resolved that Agenda item 6.3 Discretionary Spending List be postponed to a future meeting.

6.4 Funding for Sault Ste. Marie Economic Development Corporation Restructuring Costs 96 - 97

A report of the Chief Administrative Officer is attached for the consideration of Council.

Mover Councillor L. Turco
Seconder Councillor S. Hollingsworth

Resolved that the report of the Chief Administrative Officer dated 2018 03 19 be received and staff be directed to provide one-time funding of $123,775 to Sault Ste. Marie Economic Development Corporation as funded from the City's Contingency Reserve.

6.5 Cold Weather Response Plan for Vulnerable Populations 98 - 99

A report of the Emergency Management Coordinator is attached for the information of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Emergency Management Coordinator dated 2018 03 19 concerning the Cold Weather Response Plan for Vulnerable Populations be received as information.

6.6 2017 Honoraria and Expenses – Mayor & Council and Board & Committee Members 100 - 104

A report of the Chief Financial Officer and Treasurer is attached for the information of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Chief Financial Officer and Treasurer dated 2018 03 19 concerning 2017 Honoraria and Expenses (Mayor, Council, Board and Committee Members) be received as information.

6.7 Property Tax Appeals 105 - 107

A report of the Manager of Accounting and City Tax Collector is attached for the consideration of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Manager of Accounting and City Tax Collector dated 2018 03 19 concerning Property Tax Appeals be received and that the tax records be amended pursuant to section 357 of the *Municipal Act*.

6.8 Queenstown Board of Management 2017 Audit Report and 2018 Budget 108 - 122

A report of the Chief Financial Officer and Treasurer is attached for the consideration of Council.

Mover Councillor M. Shoemaker

Seconder Councillor L. Turco

Resolved that the report of the Chief Financial Officer and Treasurer dated 2018 03 19 concerning the Queenstown Board of Management (O/A The Downtown Association) Audited Financial Statements for the year 2017 be received and that the Downtown Association 2018 Budget be approved.

6.9 RFP – Armoured Car Service 123 - 124

A report of the Manager of Purchasing is attached for the consideration of Council.

The relevant By-law 2018-54 is listed under item 11 of the Agenda and will be read with all by-laws under that item.

6.10 Tender for Selected Granular Materials 125 - 127

A report of the Manager of Purchasing is attached for the consideration of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Manager of Purchasing dated 2018 03 19 be received and that the tender for the supply of selected granular materials for the 2018 and 2019 seasons be awarded on an as-required basis;

Further that the City's requirements for blast furnace slag be awarded to Inter-Ontario Equipment Rental & Repair Ltd. for a period of one (1) year at their tendered prices of $7.00 per tonne plus HST for 7/8" minus granular, and $6.85 per tonne plus HST for nut slag.

6.11 RFP – Design, Supply and Install a Splash Pad – Bellevue Park 128 - 129

A report of the Manager of Purchasing is attached for the consideration of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Manager of Purchasing dated 2018 03 19 be received and that the proposal submitted by CRCS Recreation for the design, supply and installation of a splash pad for Bellevue Park be approved.

6.12 Splash Pad Development and Design Update 130 - 134

A report of the Manager of Recreation and Culture is attached for the information of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Manager of Recreation and Culture dated 2018 03 19 concerning Splash Pad Development and Design Update be received

as information.

6.13 Donations – Kiwanis Club of Lakeshore and Kiwanis Club of Lakeshore Foundation 135 - 136

A report of the Manager of Recreation and Culture is attached for the consideration of Council.

The relevant By-laws 2018-52 and 2018-53 are listed under item 11 of the Agenda and will be read with all by-laws listed under that item.

6.14 Ratification of Local 2251 – Memorandum of Settlement 137 - 153

A report of the Labour Relations Coordinator is attached for the consideration of Council.

The relevant By-law 2018-51 is listed under item 11 of the Agenda and will be read with all by-laws under that item.

6.15 FutureSSM Project Update II 154 - 157

A report of the Deputy CAO, Community Development and Enterprise Services is attached for the information of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Deputy CAO, Community Development and Enterprise Services dated 2018 03 19 concerning FutureSSM project be received as information.

6.16 Ice Capacity/Expansion Study 158 - 161

A report of the Deputy CAO, Community Development and Enterprise Services is attached for the consideration of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Deputy CAO, Community Development and Enterprise Services dated 2018 03 19 concerning ice capacity expansion be received and that the allocation of up to $15,000 from the Facilities Maintenance Reserve fund be approved;

Further that single-sourcing this contract by engaging LeisurePlan International Inc. and STEM Engineering Group Inc. to assist with planning and cost estimation for expanding ice capacity and examining the cost/benefit of collaborating with Sault College to locate one ice pad on their campus.

6.17 2018 Cultural Financial Assistance Grants 162 - 165

A report of the Manager of Recreation and Culture is attached for the consideration of Council.

Mover Councillor M. Shoemaker

Seconder Councillor L. Turco

Resolved that the report of the Manager of Recreation and Culture dated 2018 03 19 be received and that the recommendation of the Cultural Advisory Board to endorse the following grants be approved.

- Algoma Arts Festival Association – $5,000
- Algoma Conservatory of Music – $5,000
- Algoma Festival Choir – $5,500
- Arts Council of Sault Ste. Marie and District – $8,500
- Living History of Algoma / Oral History of Sault Ste. Marie Project –$4,400
- Over the Rainbow Children's Entertainment Series – $2,000
- Sault Blues Society – $2,000
- Kiwanis Community Theatre Centre – $3,500
- Sault Symphony – $5,000
- Sault Theatre Workshop – $3,000
- Shadows of the Mind Film Festival – $5,000
- Soo Pipe Band – $3,500
- Centre Francophone SSM – $1,500

6.18 Purchase of Twenty Pay and Display Units 166 - 167

A report of the Manager of Transit and Parking is attached for the consideration of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Manager of Transit and Parking dated 2018 03 19 be received and that single-sourcing supply for and delivery of twenty pay and display units, as required by the Parking Division from J.J. MacKay Canada Limited at their proposed price of $151,278.66 plus HST be approved.

6.19 Municipal Law Enforcement Officers and Municipal By-law Enforcement Officers 168 - 174

A report of the Manager of Transit and Parking is attached for the consideration of Council.

The relevant By-laws 2018-48 and 2018-56 56 are listed under item 11 of the Agenda and will be read with all by-laws listed under that item.

6.20 Delegation of Signing Authority – Acquisitions and Transfers of Property 175 - 176

A report of the City Solicitor is attached for the consideration of Council.

The relevant By-law 2018-55 is listed under item 11 of the Agenda and will be read with all by-laws under that item.

6.21 Deeming By-law – Harris and Buckley Subdivision 177 - 179

A report of the City Solicitor is attached for the consideration of Council.

The relevant By-law 2018-45 is listed under item 11 of the Agenda and will be read with all by-laws under that item.

6.22 PR1.89(6) Project – McNabb Gladstone – Canadian Motor Hotel 180 - 181

A report of the City Solicitor is attached for the consideration of Council.

The relevant By-law 2018-46 is listed under item 11 of the Agenda and will be read with all by-laws listed under that item.

6.23 Declare Surplus – Part Lot 1 Plan H518 – Greenfield Drive 182 - 184

A report of the City Solicitor is attached for the consideration of Council.

The relevant By-law 2018-59 is listed under item 11 of the Agenda and will be read with all by-laws under that item.

6.24 Licence to Occupy 166 Plaintree Drive 185 - 188

A report of the City Solicitor is attached for the consideration of Council.

The relevant By-law 2018-50 is listed under item 11 of the Agenda and will be read with all by-laws under that item.

6.25 Crossing Guard – St. George's Avenue and McNabb Street 189 - 192

A report of the Design and Construction Engineer is attached for the information of Council.

Mover Councillor M. Shoemaker
Seconder Councillor S. Hollingsworth

Resolved that the report of the Design and Construction Engineer dated 2018 03 19 concerning the crossing guard at the McNabb Street and St. George's Avenue intersection be received as information.

7. Reports of City Departments, Boards and Committees

7.1 Administration

7.1.1 Suspend Rules of Procedure By-law 2013-100

Mover Councillor S. Myers
Seconder Councillor M. Shoemaker

Resolved that the provisions of procedure by-law 2013-100 be suspended to allow this meeting to proceed past five hours (9:30 p.m.)

7.2 Corporate Services

7.2.1 2018 Tax Rates and Tax Policy 193 - 200

A report of the Chief Financial Officer and Treasurer is attached for the consideration of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Chief Financial Officer and Treasurer dated 2018 03 19 concerning 2018 Tax Policy be received and that Alternate Ratios be approved as follows:

- Starting ratios adjusted to reflect 1.10000 for the Multi-residential class and 3.0500 for the Office-Occupied class

7.2.2 Long Term Tax Policy Review 201 - 256

A report of the Chief Financial Officer and Treasurer is attached for the information of Council.

Mover Councillor M. Shoemaker
Seconder Councillor R. Niro

Resolved that the report of the Chief Financial Officer and Treasurer dated 2018 03 19 concerning Long Term Tax Policy be received as information.

7.2.3 Soo Blasters – Request for Municipally Significant Event *257 - 265*

Mover Councillor M. Shoemaker
Seconder Councillor R. Niro

Resolved that the report of the Deputy CAO / City Clerk dated 2018 03 19 concerning Soo Blasters – Request for Municipally Significant Event be received and that Council has no objection to the Soo Blasters Nelly Concert Event, being held Tuesday, March 20, 2018 from 8:00 p.m. to 2:00 a.m. (concert 9:00 p.m. to 12 midnight) being declared a municipally significant event.

7.3 Community Development and Enterprise Services

7.4 Public Works and Engineering Services

7.5 Fire Services

7.5.1 Comprehensive Risk Assessment and Fire Master Plan 266 - 956

A report of the Fire Chief is attached for the consideration of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the Fire Chief dated 2018 03 19 concerning

Comprehensive Risk Assessment and Fire Master Plan be received and that:

1. The Fire Master Plan be approved as the strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie for the next 10-year planning horizon; and
2. Council direct the Fire Chief to implement Option 1 contained within the Fire Master Plan including a minimum on duty staffing of fifteen (15) firefighters at all times as the interim Fire Station and firefighter deployment model; and
3. Council approve Option 3 contained within the Fire Master Plan as the preferred Fire Station location and firefighter deployment model and direct the Fire Chief to develop an implementation plan for Option 3 for Council's consideration and approval; and
4. Council direct the Fire Chief to report further on the implementation of recommendations presented in the Fire Master Plan in accordance with the financial resources available through the annual budget process of the City of Sault Ste. Marie.

7.6 Legal

7.6.1 Closing and Conveyance of Peer Street *957 - 959*

A report of the City Solicitor is attached for the consideration of Council.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that the report of the City Solicitor dated 2018 03 19 concerning Closing and Conveyance of Peer Street be received and that the consideration of By-law 2018-18 be postponed.

7.7 Planning

7.8 Boards and Committees

8. Unfinished Business, Notice of Motions and Resolutions Placed on Agenda by Members of Council

8.1 Notice of Motion – Animal Care and Control By-law

Mover Councillor J. Hupponen
Seconder Councillor M. Shoemaker

Whereas on February 20, 2018, City Council passed a motion exempting Spruce Haven Zoo from a prohibition on zoos within the City of Sault Ste. Marie in a new Animal Control By-Law; and

Whereas said motion went beyond simply exempting Spruce Haven Zoo from the provision of the By-Law that prohibited zoos, and in fact, exempted them "from complying with any sections of the proposed new by-law"; and

Whereas such a sweeping exemption would allow Spruce Haven Zoo to exist

without any regulation or method of ensuring City oversight of the zoo and without a method of protecting the residents of Sault Ste. Marie or the animals from mistreatment;

Now Therefore Be It Resolved that staff be directed to include an exemption for Spruce Haven from complying with the zoo Prohibition in the proposed new Animal Control By-Law, but that Spruce Haven be required to comply with the proposed new Animal Control By-Law in all other respects.

9. Committee of the Whole for the Purpose of Such Matters as are Referred to it by the Council by Resolution

10. Adoption of Report of the Committee of the Whole

11. Consideration and Passing of By-laws

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that all by-laws under item 11 of the Agenda under date 2018 03 19 be approved save and except By-laws 2018-56 and 2018-18.

11.1 By-laws before Council to be passed which do not require more than a simple majority

11.1.1 By-law 2018-45 (Subdivision Control) Deeming Lots 282 and 283 Plan M30 (Douglas Street) 960 - 962

A report from the City Solicitor is on the Agenda.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-45 being a by-law to deem not registered for purposes of subdivision control certain lots in the Harris and Buckley Subdivision, pursuant to section 50(4) of the *Planning Act* be passed in open Council this 19th day of March, 2018.

11.1.2 By-law 2018-46 (Agreement) Canadian Motor Hotel Inc. McNabb Street to Pim Street Drainage Improvements 963 - 966

A report from the City Solicitor is on the Agenda.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-46 being a by-law to permit the City access to the property in order to complete certain drainage improvements and storm water management works pursuant to the Revised McNabb Street to Pim Street Drainage Improvements be passed in open Council this 19th day of March, 2018.

11.1.3 By-law 2018-48 (Parking) By-law Enforcement Officers 967 - 968

A report from the Manager of Transit and Parking is on the Agenda.

Mover Councillor M. Shoemaker
Seconder Councillor S. Hollingsworth

Resolved that By-law 2018-48 being a by-law to appoint by-law enforcement officers to enforce the by-laws of The Corporation of the City of Sault Ste. Marie be passed in open Council this 19th day of March, 2018.

11.1.4 By-law 2018-50 (Agreement) 166 Plaintree Drive 969 - 975

A report from the City Solicitor is on the Agenda.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-50 being a by-law to authorize the execution of a Licence of Occupation Agreement between the City and Maria A. Rossi to permit a monument to be placed on a portion of Plaintree Drive boulevard in front of 166 Plaintree Drive and to repeal By-law 2014-35 be passed in open Council this 19th day of March, 2018.

11.1.5 By-law 2018-51 (Memorandum of Settlement) Steelworkers Local 2251 976 - 991

A report from the Labour Relations Coordinator is on the Agenda.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-51 being a by-law to authorize the approval of the Memorandum of Settlement between the City and Steelworkers Local 2251 be passed in open Council this 19th day of March, 2018.

11.1.6 By-law 2018-52 (Agreement) Kiwanis Club of Lakeshore Donation 992 - 996

A report from the Manager of Recreation and Culture is on the Agenda.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-52 being a by-law to authorize the execution of the Agreement between the City and The Kiwanis Club of Lakeshore for the donation of Forty-Two Thousand Five Hundred ($42,500.00) Dollars for the purchase and construction of a shelter adjacent to the splash pad at Bellevue Park be passed in open Council this 19th day of March, 2018.

11.1.7 By-law 2018-53 (Agreement) Kiwanis Club of Lakeshore Foundation Donation 997 - 1000

A report from the Manager of Recreation and Culture is on the Agenda.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-53 being a by-law to authorize the execution of the Agreement between the City and The Kiwanis Club of Lakeshore Foundation for the donation of Forty-Two Thousand Five Hundred ($42,500.00) Dollars for the purchase and construction of a shelter adjacent to the splash pad at Bellevue Park be passed in open Council this 19th day of March, 2018.

11.1.8 By-law 2018-54 (Agreement) Brink's Canada Limited 1001 - 1003

A report from the Manager of Purchasing is on the Agenda.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-54 being a by-law to authorize the execution of the Agreement between the City and Brink's Canada Limited/Brink's Canada Limitée for Armoured Car Service for the secure transportation of cash receipts to the City's bank be passed in open Council this 19th day of March, 2018.

11.1.9 By-law 2018-55 (Delegation of Signing Authority) Documents Required to Complete Acquisitions and Transfers of Property 1004 - 1004

A report from the City Solicitor is on the Agenda.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-55 being a by-law to authorize the City Solicitor, in the name of the Corporation to execute and affix the seal of the Corporation to all documents required to complete acquisitions and transfers of property, including Teraview (electronic documentation) once the transaction has been authorized by City Council by Council Report and/or By-law be passed in open Council this 19th day of March, 2018.

11.1.10 By-law 2018-56 (Parking) Appointment Municipal Law Enforcement Officers 1005 - 1007

A report from the Manager of Transit and Parking is on the Agenda.

Mover Councillor M. Shoemaker
Seconder Councillor S. Hollingsworth

Resolved that By-law 2018-56 being a by-law to appoint Municipal Law Enforcement Officers to enforce the by-laws on various private properties and to amend Schedule "A" to By-law 90-305 be passed in open Council this 19th day of March, 2018.

11.1.11 By-law 2018-57 (Zoning) 145 McNabb Street (Infrastructure Ontario) 1008 - 1009

Council Report was passed by Council resolution on March 5, 2018.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-57 being a by-law to amend Sault Ste. Marie Zoning By-law 2005-150 and 2005-151 concerning lands located at 145 McNabb Street (Infrastructure Ontario) be passed in open Council this 19th day of March, 2018.

11.1.12 By-law 2018-58 (Zoning) 531 and 535 Trunk Road (Your Neighbourhood Credit Union (LTD)) 1010 - 1012

Council Report was passed by Council resolution on March 5, 2018.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-58 being a by-law to amend Sault Ste. Marie Zoning By-laws 2005-150 and 2005-151 concerning lands located at 531 and 535 Trunk Road (Your Neighbourhood Credit Union (LTD) be passed in open Council this 19th day of March, 2018.

11.1.13 By-law 2018-59 (Property) Greenfield Drive Property Declared Surplus 1013 - 1014

A report from the City Solicitor is on the Agenda.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-59 being a by-law to declare the City owned property legally described as PIN 31566-0037 (LT) PT LT 1 PL H518 KORAH AS IN T164389; SAULT STE. MARIE as surplus to the City's needs and to authorize the disposition of the said property be passed in open Council this 19th day of March, 2018.

11.2 By-laws before Council for FIRST and SECOND reading which do not require more than a simple majority

11.3 By-laws before Council for THIRD reading which do not require more than a simple majority

11.3.1 By-law 2018-14 (Local Improvement) Bruce Street 1015 - 1020

Council Report was passed by Council resolution on January 22, 2018.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-14 being a by-law to authorize the construction of sanitary sewer, private drain connection and Class "A" pavement on Bruce Street from Queen Street East to Wellington Street East under Section 3 of the *Municipal Act, 2001*, Ontario Regulation 586/06 and to repeal By-law

2017-219 be read a THIRD time in open Council and passed this 19th day of March, 2018.

11.3.2 By-law 2018-16 (Local Improvement) Simpson Street 1021 - 1026

Council Report was passed by Council resolution on January 22, 2018.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-16 being a by-law to authorize the construction of sanitary sewer, private drain connection and Class "A" pavement on Simpson Street from Wellington Street East to Queen Street East under Section 3 of the *Municipal Act, 2001*, Ontario Regulation 586/06 and to repeal By-law 2017-220 be read a THIRD time and passed in open Council this 19th day of March, 2018.

11.3.3 By-law 2018-18 (Street Closing & Conveyance) Peer Street 1027 - 1030

Council Report was passed by Council Resolution on January 22, 2018.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-18 being a by-law to stop up, close and authorize the conveyance of Peer Street and a 0.30m Reserve on the Easterly limit of Peer Street in the Peer Subdivision, Plan 1M448 be read a THIRD time and passed in open Council this 19th day of March, 2018.

12. Questions By, New Business From, or Addresses by Members of Council Concerning Matters Not Otherwise on the Agenda

13. Closed Session

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that this Council proceed into closed session to discuss:

- two labour relations / employee negotiations items;
- educational session – opioid issues (March 21, 2018)

Further Be It Resolved that should the said closed session be adjourned, the Council may reconvene in closed session to continue to discuss the same matter without the need for a further authorizing resolution.

Municipal Act R.S.O. 2002 – section 239 (2) (d) labour relations / employee negotiations; section 239(3.1) educational sessions.

14. Adjournment

Mover Councillor M. Shoemaker

Seconder Councillor L. Turco

Resolved that this Council now adjourn.

REGULAR MEETING OF CITY COUNCIL

MINUTES

Monday, March 5, 2018
4:30 pm
Council Chambers
Civic Centre

Present:	Councillor S. Butland, Councillor P. Christian, Councillor S. Myers, Councillor S. Hollingsworth, Councillor J. Hupponen, Councillor L. Turco, Councillor M. Shoemaker, Councillor R. Niro, Councillor M. Bruni, Councillor F. Fata, Councillor J. Krmpotich, Councillor O. Grandinetti
Absent:	Mayor C. Provenzano
Officials:	A. Horsman, M. White, T. Vair, N. Kenny, S. Schell, P. Johnson, S. Hamilton Beach, D. Elliott, C. Taddo, C. Rumiel, B. Lamming

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1. Adoption of Minutes

Moved by: Councillor M. Shoemaker
Seconded by: Councillor L. Turco

Resolved that the Minutes of the Regular Council Meeting of 2018 02 20 be approved.

Carried

2. Questions and Information Arising Out of the Minutes and not Otherwise on the Agenda

3. Declaration of Pecuniary Interest

3.1 Councillor M. Bruni – OLG Community Recognition Program

Employed by OLG

3.2 Councillor R. Niro – OLG Community Recognition Program

Family member employed by OLG.

3.3 Councillor P. Christian – OLG Community Recognition Program

Spouse employed by OLG.

3.4 Councillor M. Shoemaker – Mar-Li Investments Inc – Insurance & Tax Provision

Proponent is a client of law firm.

3.5 Councillor M. Shoemaker – By-law 2018-41 (Agreement) Mar-Li Investments Inc. Amendment

Proponent is a client of law firm.

3.6 Councillor L. Turco – Municipal Law Enforcement Officers

Spouse is employed by Police Services.

3.7 Councillor L. Turco – By-law 2018-39 (Parking) Municipal Law Enforcement Officers

Spouse is employed by Police Services.

4. Approve Agenda as Presented

Moved by: Councillor M. Shoemaker
Seconded by: Councillor L. Turco

Resolved that the Agenda and Addendum for the 2018 03 05 City Council Meeting as presented be approved.

Carried

5. Proclamations/Delegations

5.1 OLG Community Recognition Program

Councillor M. Bruni declared a conflict on this item. (Employed by OLG)

Councillor R. Niro declared a conflict on this item. (Family member employed by OLG.)

Councillor P. Christian declared a conflict on this item. (Spouse employed by OLG.)

Darcy Romanin, Gateway's Regional Director, Northern Ontario, Jim Love, General Manager, Gateway Casinos Sault Ste. Marie, Jake Pastore, Director of Municipal and Community Relations, OLG, were in attendance.

5.2 Retired Teachers of Ontario 50th Anniversary

Rich Prophet, President, Retired Teachers of Ontario, District 3 Algoma was in attendance.

5.3 Stormwater Financing Study

Rick Talvitie, Mike Gregory, Pippy Warburton, AECOM Canada Limited were in attendance.

5.4 International Women's Day

Rory Ring, CEO, Sault Ste. Marie Chamber of Commerce was in attendance.

5.5 7.7.2. A-4-18-Z – 145 McNabb Street – Infrastructure Ontario

Michael Coakley, Infrastructure Ontario was in attendance.

6. Communications and Routine Reports of City Departments, Boards and Committees – Consent Agenda

Moved by: Councillor J. Hupponen
Seconded by: Councillor L. Turco

Resolved that all the items listed under date 2018 03 05 – Agenda item 6 – Consent Agenda be approved as recommended, save and except items 6.6, 6.7, 6.9 and 6.11.

Carried

6.1 Council Travel

Moved by: Councillor M. Shoemaker
Seconded by: Councillor L. Turco

Resolved that Mayor C. Provenzano be authorized to travel to Toronto for 2 days in February for the Empowering Smart Cities Conference at an estimated cost to the City of $1,020.

Carried

Moved by: Councillor M. Shoemaker
Seconded by: Councillor L. Turco

Resolved that Mayor C. Provenzano be authorized to travel to Toronto for three days in April to attend the Sault Summit at an estimated cost to the City of $1,100.

Carried

Moved by: Councillor M. Shoemaker
Seconded by: Councillor J. Hupponen

Resolved that Mayor C. Provenzano and Councillor L. Turco be authorized to travel to Ottawa for four days in August to attend the AMO Conference at an estimated cost to the City of $2,500.

Carried

6.2 Algoma University Board Appointment

The report of the Deputy CAO/City Clerk was received by Council.

Moved by: Councillor J. Hupponen
Seconded by: Councillor L. Turco

Resolved that the report of the Deputy CAO/ City Clerk dated 2018 03 05 concerning Algoma University Board Appointment be received and that Council nominate Mayor Provenzano to the Algoma University Board of Directors for the term 2018 03 05 to 2018 12 31.

Carried

6.3 2018 Municipal Election Administration – Sault Locality

The report of Deputy CAO/City Clerk was received by Council.

Moved by: Councillor M. Shoemaker
Seconded by: Councillor L. Turco

Resolved that the report of the Deputy CAO / City Clerk dated 2018 03 05 concerning 2018 Municipal Election Administration – Sault Locality be received and that Council authorize staff to negotiate an agreement with the Algoma District School Board to provide municipal election administration services for the Sault Locality.

Carried

6.4 2018 Capital Road Works – Adjustment

The report of the Director of Engineering was received by Council.

Moved by: Councillor J. Hupponen
Seconded by: Councillor L. Turco

Resolved that the report of the Director of Engineering dated 2018 03 05 be received and the recommendation to defer the Bay Street project and reinstate the Simpson Street project into the 2018 Capital Road Works program be approved.

Carried

6.5 Black Road EA – Engineering Fees

The report of the Director of Engineering was received by Council.

Moved by: Councillor M. Shoemaker
Seconded by: Councillor L. Turco

Resolved that the report of the Director of Engineering dated 2018 03 05 be received and that the fee limit for the Black Road Environmental Assessment be increased by $10,200 for a total of $119,500 with funds from the 2018 miscellaneous construction budget.

Carried

6.8 Municipal Law Enforcement Officers

Councillor L. Turco declared a conflict on this item. (Spouse is employed by Police Services.)

The report of the Manager of Transit and Parking was received by Council.

The relevant By-law 2018-39 is listed under item 11 of the Minutes.

6.10 Zoning – 267 Cathcart Street – OMB

The report of the Solicitor / Prosecutor was received by Council.

Moved by: Councillor J. Hupponen
Seconded by: Councillor L. Turco

Resolved that the report of the Solicitor / Prosecutor concerning Zoning – 267 Cathcart Street – OMB dated 2018 03 05 be received as information.

Carried

6.6 Gore/Albert and Andrew/Albert Streets – Intersection Safety

The report of the Design and Construction Engineer was received by Council.

Moved by: Councillor J. Hupponen
Seconded by: Councillor L. Turco

Resolved that the report of the Design and Construction Engineer dated 2018 03 05 be received and that the City continue to monitor the intersections of Gore Street/Albert Street and Andrew Street/Albert Street; and further that the City adds Intersection Safety Studies conducted by IBI Group to the Downtown Traffic Study already underway increasing the fee limit to $107,410.

Defeated

6.7 Mar-Li Investments Inc – Insurance & Tax Provision

Councillor M. Shoemaker declared a conflict on this item. (Proponent is a client of law firm.)

The report of the Solicitor / Prosecutor was received by Council.

The relevant By-law 2018-41 is listed under item 11 of the Minutes.

6.9 Stormwater Financing Study

The report of the Land Development and Environmental Engineer was received by Council.

Moved by: Councillor M. Shoemaker
Seconded by: Councillor L. Turco

Resolved that the report of the Land Development and Environmental Engineer dated 2018 03 05 concerning the stormwater financing study be received as information.

Officially Read and Not Dealt With

Moved by: Councillor M. Shoemaker
Seconded by: Councillor M. Bruni

Resolved that the report of the Land Development and Environmental Engineer dated 2018 03 05 concerning Stormwater Financing Study be received and that staff be directed to continue to explore all possible ways to finance the City's Stormwater Management Plan save and except for Development Charges.

Recorded	**For**	**Against**	**Absent**
Mayor C. Provenzano			X
Councillor S. Butland		X	
Councillor P. Christian	X		
Councillor S. Myers		X	
Councillor S. Hollingsworth	X		
Councillor J. Hupponen	X		
Councillor L. Turco		X	
Councillor M. Shoemaker	X		
Councillor R. Niro	X		
Councillor M. Bruni	X		
Councillor F. Fata	X		
Councillor J. Krmpotich	X		
Councillor O. Grandinetti	X		
Results	**9**	**3**	**1**

Carried

6.11 Study Related to Expansion of Ice Capacity and Related Facilities

The report of the Deputy CAO, Community Development and Enterprise Services was received by Council.

Moved by: Councillor J. Hupponen
Seconded by: Councillor L. Turco

Resolved that the report of the Deputy CAO Community Development and Enterprise Services dated 2018 03 05 concerning a third party project scoping cost analysis study be received and that $25,000 be allocated from the Facilities Maintenance Reserve fund to conduct an RFP and select a third party to undertake a project scoping and cost analysis study.

Officially Read and Not Dealt With

7. Reports of City Departments, Boards and Committees

7.1 Administration

7.2 Corporate Services

7.3 Community Development and Enterprise Services

7.4 Public Works and Engineering Services

7.5 Fire Services

7.6 Legal

7.7 Planning

7.7.1 A-11-17-Z.OP and 57T-17-502 – 418 Fourth Line West – Deferral No. 2

The report of the Senior Planner was received by Council.

Moved by: Councillor M. Shoemaker
Seconded by: Councillor L. Turco

Resolved that the report of the Senior Planner dated 2018 03 05 concerning Rezoning/Official Plan Amendment Application A-11-17-Z.OP and Draft Plan of Condominium Application 57T-17-502 be received and that this application be postponed indefinitely.

Carried

7.7.2 A-4-18-Z – 145 McNabb Street – Infrastructure Ontario

The report of the Senior Planner was received by Council.

Moved by: Councillor M. Shoemaker
Seconded by: Councillor L. Turco

Resolved that the report of Senior Planner dated 2018 03 05 concerning Rezoning Application A-4-18-Z be received and that Council approve the application of a ‘Holding Provision’ to the subject property.

Pursuant to Section 36 of the *Planning Act*, no site grading, excavation or building demolition may occur upon the subject property without further archaeological assessment, prepared by a qualified Archaeologist, which either identifies the burial sites or determines that the area is clear of archaeological concern.

And that the Legal Department be directed to prepare the necessary by-law to effect this approval.

Carried

Moved by: Councillor J. Krmpotich
Seconded by: Councillor S. Butland

Resolved that staff investigate to determine who was accountable to record the history and burial of the two inmates buried in 1948 and 1958 at 145 McNabb Street.

Recorded	**For**	**Against**	**Absent**
Mayor C. Provenzano			X
Councillor S. Butland	X		
Councillor P. Christian		X	
Councillor S. Myers		X	
Councillor S. Hollingsworth		X	
Councillor J. Hupponen		X	
Councillor L. Turco	X		
Councillor M. Shoemaker		X	
Councillor R. Niro		X	
Councillor M. Bruni	X		
Councillor F. Fata		X	
Councillor J. Krmpotich	X		
Councillor O. Grandinetti		X	
Results	**4**	**8**	**1**

Defeated

7.7.3 A-5-18-Z – 531 and 535 Trunk Road – Your Neighbourhood Credit Union (LTD)

The report of the Senior Planner was received by Council.

Moved by: Councillor J. Hupponen
Seconded by: Councillor L. Turco

Resolved that the Report of the Senior Planner dated 2018 03 05 concerning Rezoning Application A-5-18-Z be received and that Council rezone the southern 33m (108') of the subject properties from General Commercial (C4) Zone to Medium Density

Residential Zone (R4.S144) with Special Exception 144; further that Council amend Special Exception 144 by adding the following provision:

That the subject property may be developed with semi-detached, multiple attached and apartment dwellings, or any combination thereof.

and that the Legal Department be directed to prepare the necessary by-law to effect this approval.

Carried

7.8 Boards and Committees

8. Unfinished Business, Notice of Motions and Resolutions Placed on Agenda by Members of Council

8.1 Driveway Snow Removal

Moved by: Councillor S. Myers
Seconded by: Councillor P. Christian

Whereas for a number of years City Council has provided $50,000 in funding to a service provider (Red Cross) to support residential snow removal for seniors; and

Whereas there are a number of seniors and individuals with medical needs who are able to remain living at home because of this support; and

Whereas there is an increasing number of members of our community who require additional affordable snow removal services at their residence during exceptional snow events to address matters such as extra heavy snowfall or road cutting that goes beyond what a domestic snowblower can remove and beyond what they can afford; and

Whereas it is the will of City Council to look at options for providing further snow management assistance to qualifying residents through our current or new homemaker service provider;

Now Therefore Be It Resolved that appropriate City staff be requested to review the current program for assistance provided through the Red Cross and report back to Council as follows:

1. How is the current City funding being used; what is the process for an individual to receive assistance and for what service?
2. Red Cross has advised effective March 2018 they will no longer be the service provider so what will happen to the City's $50,000 funding?
3. Provide options from the third party homemaker services provider as to how much it would cost to expand the current program to offer windrow removal considering the Brantford model or any other approach deemed optional.

Carried

8.2 Use a Realtor for Property Sales

Moved by: Councillor M. Shoemaker
Seconded by: Councillor S. Butland

Whereas the City of Sault Ste. Marie has a process in place to dispose of surplus land; and

Whereas the City's policy on the disposition of surplus land does not take into consideration whether the property is a small parcel of land, or a developable parcel of land in determining how to market the surplus land; and

Whereas developable parcels of land can draw greater interest if advertised through professional realtors; and

Whereas any parcel of land in excess of 400 m² should be considered developable;

Now Therefore Be It Resolved that City staff, with input from the Sault Ste. Marie Real Estate Board be requested to develop a policy whereby surplus City land is advertised for sale with local realtors in order to maximize the value for taxpayers in the sale of said land; and

Further that the surplus property by-law be reviewed as part of this process and reported to Council.

Carried

8.3 James Street and Surrounding Area Revitalization Plan

Moved by: Councillor M. Shoemaker
Seconded by: Councillor O. Grandinetti

Whereas the CTV W5 program "Steel Town Down" focused on the opioid crisis across Canada, and how it is affecting mid-sized cities like Sault Ste. Marie; and

Whereas the program featured Sault Ste. Marie's Jamestown neighbourhood as one of the areas in Sault Ste. Marie where the use of opioids and other substances is prominent; and

Whereas the Sault Ste. Marie Innovation Centre's GIS department has been presenting data to stakeholders in the community for a number of years on the lack of park services and outdoor recreation activities in the Jamestown area and throughout the downtown core; and

Whereas the lack of activities in Sault Ste. Marie was cited as one of a wide number of factors that results in individuals turning to substance use, and ultimately substance abuse, in Sault Ste. Marie; and

Whereas the provision of park services and outdoor recreational activities is an area of direct municipal responsibility and an area where the City can play a leading role in combating part of this issue;

Now Therefore Be It Resolved that Community Development and Enterprise Services staff, in consultation with the Innovation Centre's GIS department, be requested to bring forward to City Council forthwith a James Street and surrounding area revitalization plan, including, but not limited to:

- possible expansion of Anna Marinelli Park;
- conversion of unused green space in the area for recreational use; and
- an examination and assessment of James Street and a recommendation on how best to use James Street as a public space; and
- recommendations on the creation of a park or green space in the Downtown core.

Recorded	**For**	**Against**	**Absent**
Mayor C. Provenzano			X
Councillor S. Butland	X		
Councillor P. Christian		X	
Councillor S. Myers	X		
Councillor S. Hollingsworth		X	
Councillor J. Hupponen		X	
Councillor L. Turco	X		
Councillor M. Shoemaker	X		
Councillor R. Niro	X		
Councillor M. Bruni		X	
Councillor F. Fata	X		
Councillor J. Krmpotich	X		
Councillor O. Grandinetti	X		
Results	**8**	**4**	**1**

Carried

8.4 2018 Allocation of Economic Development Fund

Moved by: Councillor M. Shoemaker
Seconded by: Councillor P. Christian

Whereas the City has faced economic anxiety over the last two or more years because of Algoma's CCAA proceedings; and

Whereas Algoma has set out its desire to emerge from creditor protection in early 2018; and

Whereas Algoma's emergence from creditor protection will lift the economic cloud that has been hanging over the City since 2018; and

Whereas Council wishes to capitalize on the improved economic outlook for the City when Algoma emerges from creditor protection; and

Whereas the Economic Development Fund is one of few tools the City has at its disposal to spur economic activity within the municipality;

Now Therefore Be It Resolved that Council encourage applications to the Economic Development Fund from facilities seeking to establish advanced manufacturing facilities in the Sault, and that both the Economic Development Corporation and the City's Community Development and Enterprise Services Department at be directed to seek out and encourage applications to the Economic Development Fund from companies in the advanced manufacturing business.

Recorded	**For**	**Against**	**Absent**
Mayor C. Provenzano			X
Councillor S. Butland	X		
Councillor P. Christian	X		
Councillor S. Myers	X		
Councillor S. Hollingsworth		X	
Councillor J. Hupponen	X		
Councillor L. Turco	X		
Councillor M. Shoemaker	X		
Councillor R. Niro	X		
Councillor M. Bruni	X		
Councillor F. Fata		X	
Councillor J. Krmpotich	X		
Councillor O. Grandinetti	X		
Results	**10**	**2**	**1**

Carried

8.5 Mac Marcoux

Moved by: Councillor S. Myers
Seconded by: Councillor S. Hollingsworth

Whereas Sault Ste. Marie's 21-year-old Mac Marcoux is representing Canada in the PyeongChang 2018 Paralympic Winter Games; and

Whereas Mac is considered the international favorite in all the para alpine skiing events for men with a visual impairment; and

Whereas Mac is an accomplished Canadian paralympic alpine skier and has won three titles at the IPC Alpine Skiing World Cup at the age of 15; and

Whereas in 2016, Alpine Canada named Mac Marcoux male para alpine skier of the year; and

Whereas Marcoux won three medals in alpine skiing at the 2014 Winter Paralympics in Sochi including gold in men's visually impaired giant slalom, bronze in men's visually impaired downhill and bronze in super G; and

Whereas Mac has been inducted into the Sault Ste Marie Sports Hall of Fame and the Sault Ste. Marie Walk of Fame;

Now Therefore Be It Resolved that Mayor Christian Provenzano sends a message of best wishes and support to Mac on behalf of City Council and the community for his upcoming participation in the 2018 Winter Paralympics commencing on March 9 in PyeongChang; and

Further be it resolved that City Council urges Saultites to use social media to cheer Mac on to the medal platform.

Carried

8.6 Great Lakes Cleanup

Moved by: Councillor S. Butland
Seconded by: Councillor P. Christian

Whereas US President Trump has indicated his intent to reduce the Great Lakes funding for cleanup by 90% (present allocation $300 million); and

Whereas this decision would negatively impact tourism, the environment, agriculture, drinking water, jobs, animal habitat and would halt the considerable progress made in anti-pollution initiatives;

Now Therefore Be It Resolved that Mayor Provenzano be authorized to send a letter of grave concern to the appropriate Canadian and American politicians expressing City Council's vehement disapproval of such a decision.

Carried

9. Committee of the Whole for the Purpose of Such Matters as are Referred to it by the Council by Resolution

10. Adoption of Report of the Committee of the Whole

11. Consideration and Passing of By-laws

Moved by: Councillor J. Hupponen
Seconded by: Councillor L. Turco

Resolved that all By-laws under item 11 of the Agenda under date 2018 03 05 be approved, save and except 2018-39 and 2018-41.

Carried

11.1 By-laws before Council to be passed which do not require more than a simple majority

11.1.1 By-law 2018-39 (Parking) Municipal Law Enforcement Officers

Councillor L. Turco declared a conflict on this item. (Spouse is employed by Police Services.)

Moved by: Councillor M. Shoemaker
Seconded by: Councillor J. Hupponen

Resolved that By-law 2018-39 being a by-law to appoint Municipal Law Enforcement Officers to enforce the by-laws on various private properties and to amend Schedule "A" to By-law 90-305 be passed in open Council this 5th day of March, 2018.

Carried

11.1.2 By-law 2018-41 (Agreement) Mar-Li Investments Inc. Amendment

Councillor M. Shoemaker declared a conflict on this item. (Proponent is a client of law firm.)

Moved by: Councillor J. Hupponen
Seconded by: Councillor L. Turco

Resolved that By-law 2018-41 being a by-law to authorize the execution of the Agreement between the City and Mar-Li Investments Inc. to incorporate insurance and payment of tax provisions into the existing Licence to Occupy Agreement be passed in open Council this 5th day of March, 2018.

Carried

11.1.3 By-Law 2018-42 (Official Plan) 435, 439, 449, 459 Great Northern Road and 41 Industrial Park Crescent (Pino)

Council Report was passed by Council resolution on February 20, 2018.

Mover Councillor M. Shoemaker

Seconder Councillor L. Turco

Resolved that By-law 2018-42 being a by-law to adopt Amendment No. 220 to the Official Plan for the City of Sault Ste. Marie (Ben Pino Investments Inc. – 435, 439, 449, 459 Great Northern Road and 41 Industrial Park Crescent) be passed in open Council this 5th day of March, 2018.

Carried

11.1.4 By-Law 2018-43 (Zoning) 435, 439, 449, 459 Great Northern Road and 41 Industrial Park Crescent (Pino)

Council Report was passed by Council resolution on February 20, 2018.

Mover Councillor M. Shoemaker
Seconder Councillor L. Turco

Resolved that By-law 2018-43 being a by-law to amend Sault Ste. Marie Zoning By-laws 2005-150 and 2005-151 concerning lands located at 435, 439, 449, 459 Great Northern Road and 41 Industrial Park Crescent (Ben Pino Investments Inc.) be passed in open Council this 5th day of March, 2018.

Carried

11.1.5 By-Law 2018-44 (Development Control) 435, 439, 449, 459 Great Northern Road and 41 Industrial Park Crescent (Pino)

Council Report was passed by Council resolution on February 20, 2018.

Mover Councillor M. Shoemaker

Seconder Councillor L. Turco

Resolved that By-law 2018-44 being a by-law to designate the lands located at 435, 439, 449, 459 Great Northern Road and 41 Industrial Park Crescent (Ben Pino Investments Inc.) be passed in open Council this 5th day of March, 2018.

Carried

11.2 By-laws before Council for FIRST and SECOND reading which do not require more than a simple majority

11.3 By-laws before Council for THIRD reading which do not require more than a simple majority

12. Questions By, New Business From, or Addresses by Members of Council Concerning Matters Not Otherwise on the Agenda

13. Closed Session

Moved by: Councillor J. Hupponen
Seconded by: Councillor L. Turco

Resolved that this Council proceed into closed session to discuss two labour relations / employee negotiations items and one item concerning a potential acquisition of propoerty;

Further Be It Resolved that should the said closed session be adjourned, the Council may reconvene in closed session to continue to discuss the same matter without the need for a further authorizing resolution.

Municipal Act R.S.O. 2002 – section 239 (2) (c) a proposed or pending acquisition or disposition of land by the municipality and (d) labour relations / employee negotiations.

Carried

14. Adjournment

Moved by: Councillor J. Hupponen
Seconded by: Councillor L. Turco

Resolved that this Council now adjourn.

Carried

_____

Mayor

_____

City Clerk

City of Sault Ste. Marie
Comprehensive Risk Assessment & Fire Master Plan

Council Presentation

Steve Thurlow
Dillon Consulting Limited

March 5, 2018

Presentation Outline

- Municipal Responsibilities
- Community Responsibilities
- Ontario Fire Protection Model
- Comprehensive Risk Assessment
- Fire Master Plan







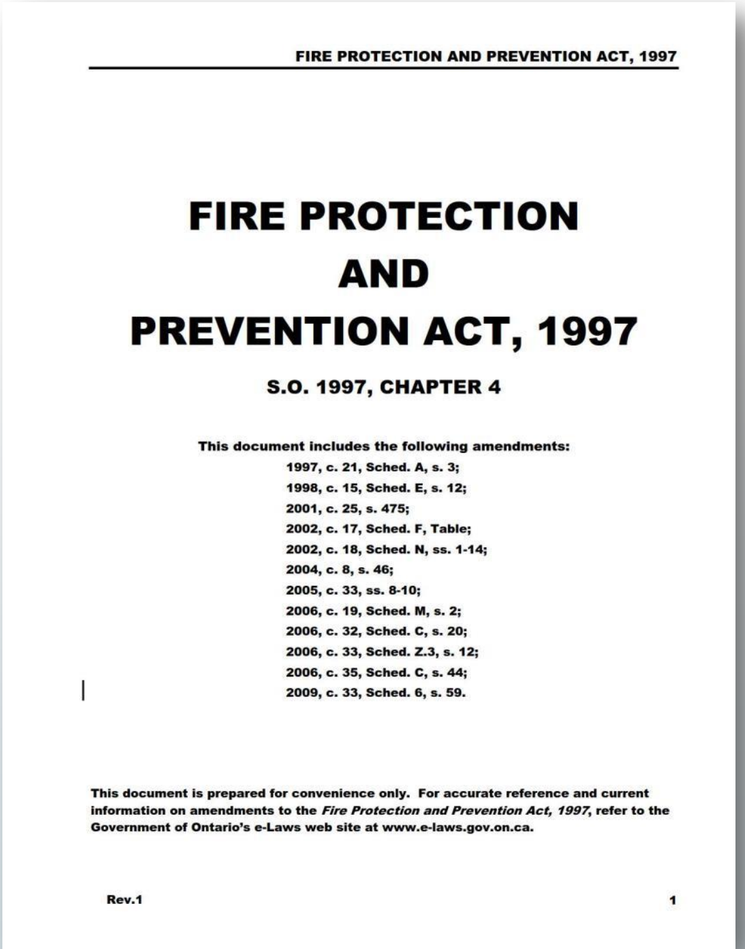
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Municipal Responsibilities

***Fire Protection and Prevention Act* 1997** (FPPA) **states that every municipality shall:**

(a) Establish a **program for public education** with respect to fire safety and certain components of fire prevention; and

(b) **Provide other fire protection services** as it determines may be necessary in accordance with its **needs and circumstances**.



FIRE PROTECTION AND PREVENTION ACT, 1997

FIRE PROTECTION
AND
PREVENTION ACT, 1997

S.O. 1997, CHAPTER 4

This document includes the following amendments:
1997, c. 21, Sched. A, s. 3;
1998, c. 15, Sched. E, s. 12;
2001, c. 25, s. 475;
2002, c. 17, Sched. F, Table;
2002, c. 18, Sched. N, ss. 1-14;
2004, c. 8, s. 46;
2005, c. 33, ss. 8-10;
2006, c. 19, Sched. M, s. 2;
2006, c. 32, Sched. C, s. 20;
2006, c. 33, Sched. Z.3, s. 12;
2006, c. 35, Sched. C, s. 44;
2009, c. 33, Sched. 6, s. 59.

This document is prepared for convenience only. For accurate reference and current information on amendments to the *Fire Protection and Prevention Act, 1997*, refer to the Government of Ontario's e-Laws web site at www.e-laws.gov.on.ca.

Rev.1 1

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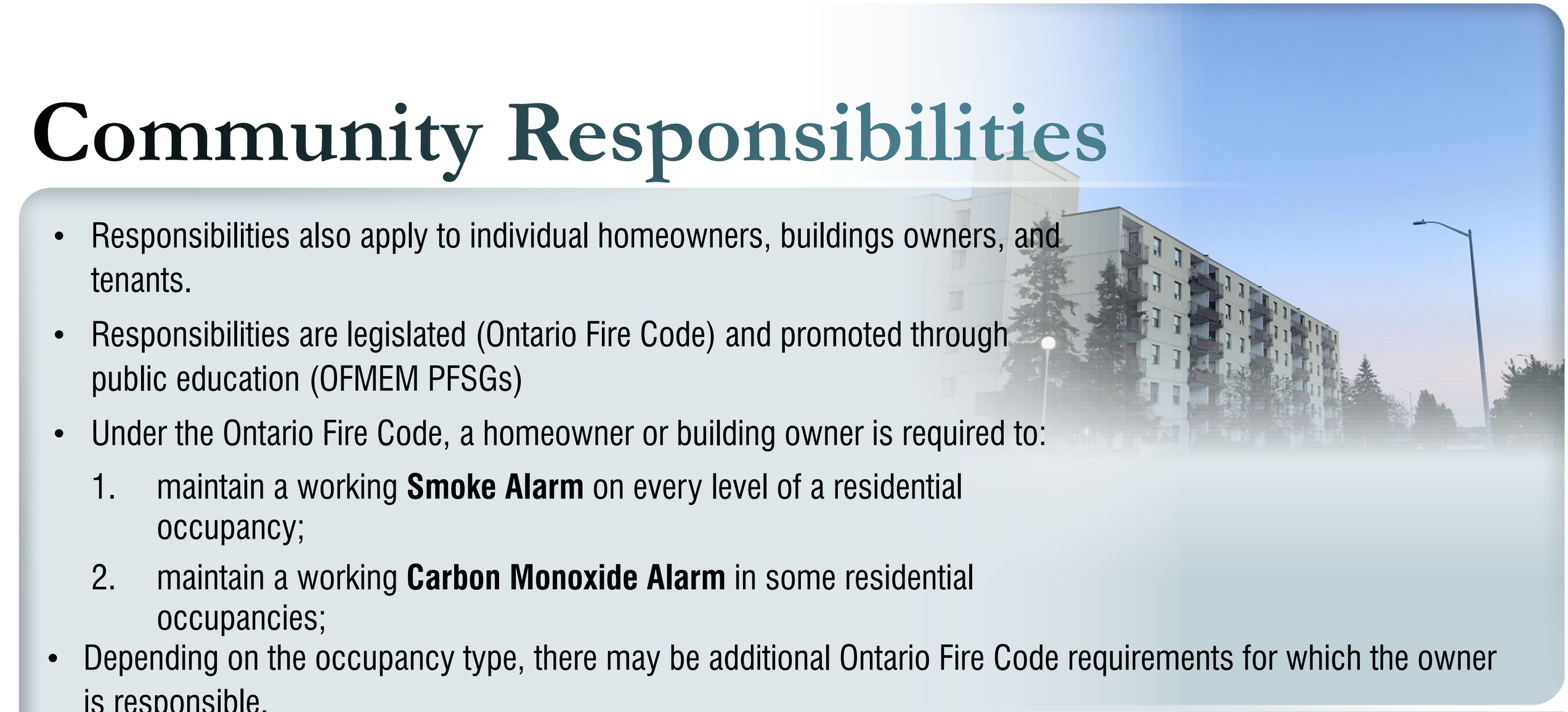
OFMEM
Public Fire Safety Guidelines

"Please be advised that Office of the Fire Marshal and Emergency Management ***Public Fire Safety Guidelines*** *are* ***currently under review*** *but continue to be made available for* ***reference purposes****."*

Source: Ministry of Community Safety and Correctional Services website; last modified May 5, 2017.

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Community Responsibilities



- Responsibilities also apply to individual homeowners, buildings owners, and tenants.
- Responsibilities are legislated (Ontario Fire Code) and promoted through public education (OFMEM PFSGs)
- Under the Ontario Fire Code, a homeowner or building owner is required to:
  1. maintain a working **Smoke Alarm** on every level of a residential occupancy;
  2. maintain a working **Carbon Monoxide Alarm** in some residential occupancies;
- Depending on the occupancy type, there may be additional Ontario Fire Code requirements for which the owner is responsible.
- Homeowners are strongly suggested to develop and practice a **Home Escape Plan** that includes two exits from every room (OFMEM PFSGs).

Ontario Fire Protection Model: Three Lines of Defence

1 Public Education and Prevention

- Smoke alarm program, learn not to burn education, hom escape planning;
- Identified vulnerable groups such as seniors and children



2 Fire Safety Standards and Enforcement

- Fire safety inspection program and regular inspection cycles based on type of occupancy;
- Licensing, and violation enforcement including prosecution



3 Emergency Response

- Public Fire Safety Guidelines (OFMEM); National Fire Protection Association Standards (NFPA); Ministry of Labour (Section 21 Guidance Notes); Industry best practices;



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Stakeholder Consultation

Developing the proposed Comprehensive Risk Assessment and Fire Master Plan included **stakeholder consultation and site visits**:

- **Council Educational Workshop**;
- **Interviews** with:
  - City staff including CAO and Risk Manager;
  - Fire Chief, Deputy Chiefs, Assistant Chief Support Services and Platoon Chiefs;
  - Firefighters Association Executive;
- **Site visits** to all of the current Fire Stations



What is a Comprehensive Risk Assessment (CRA)

Within the **fire service** a CRA is **recognized as the first step** towards the **management of risk** based on **local "needs and circumstances"**.

The **methodology** to develop the CRA for the City of Sault Ste. Marie will be **guided by industry best practices** including:

- ***Office of the Fire Marshal & Emergency Management*** *(OFMEM) – Comprehensive Fire Safety Effectiveness Model;* and
- ***National Fire Protection Association*** *(NFPA) – Related Standards*

Comprehensive Risk Assessment (CRA) Overview

Profile Analysis

7 Profile Assessments

- Building Stock
- Demographics
- Geographic
- Fire Loss
- Response
- Hazard
- Economic

Identify

Risk Outcomes

Key Risks

&

Key Findings

Assess

Prioritization of Key Risks

Identified based on assessment of

Risk =

Probability x Consequence

- Low Risk
- Moderate Risk
- High Risk

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CRA Key Risks Summary



Residential Occupancies:

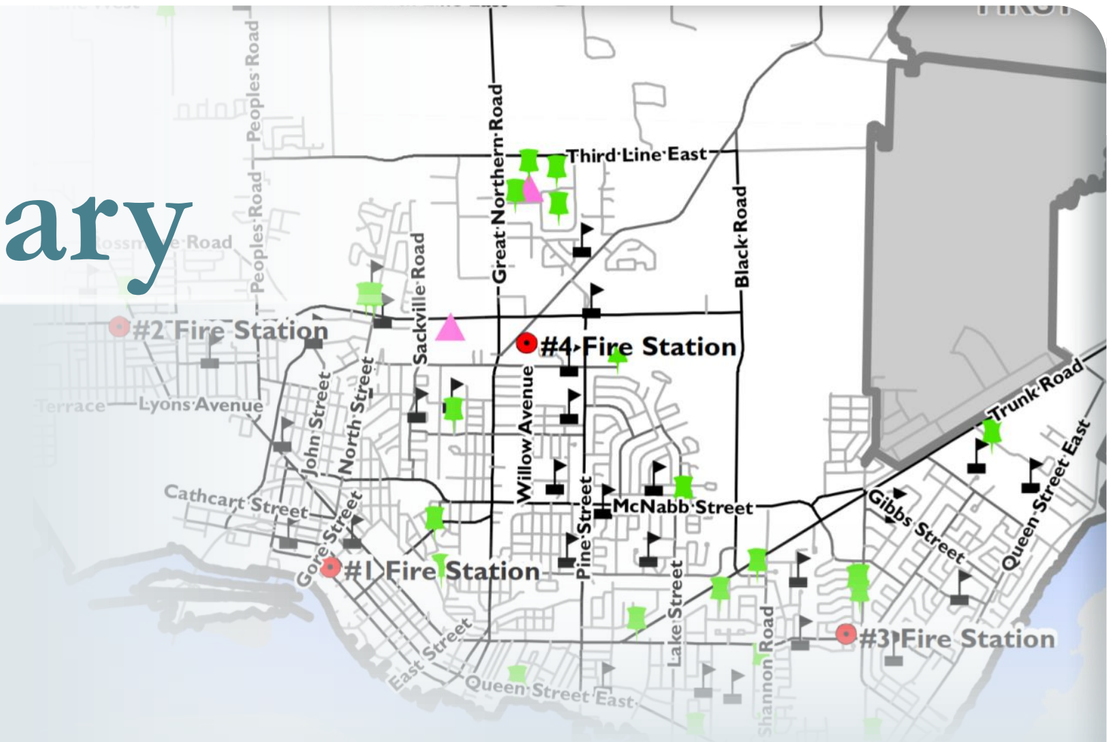
- Represent 95.4% of the City's occupied property stock;
- 57.4% were built prior to 1975 (pre-current Building and Fire Codes);
- For the period from 2012 to 2016:
  - Of 271 structure fires, Group C – Residential accounted for 80.4% (compared to 73.4% Province);
  - Responsible for 95% of civilian injuries and fatalities;
  - In 36% of the incidents, there was no smoke alarm present.

Moderate Risk Level

CRA Key Risks Summary

Vulnerable Occupancies:

- 25 registered vulnerable occupancies within the City;
- Seniors, those 65+ represent one of the highest fire risk groups (22% compared to 17% Province);
- 30% of current population is between 45 and 64 aging towards the seniors demographic.

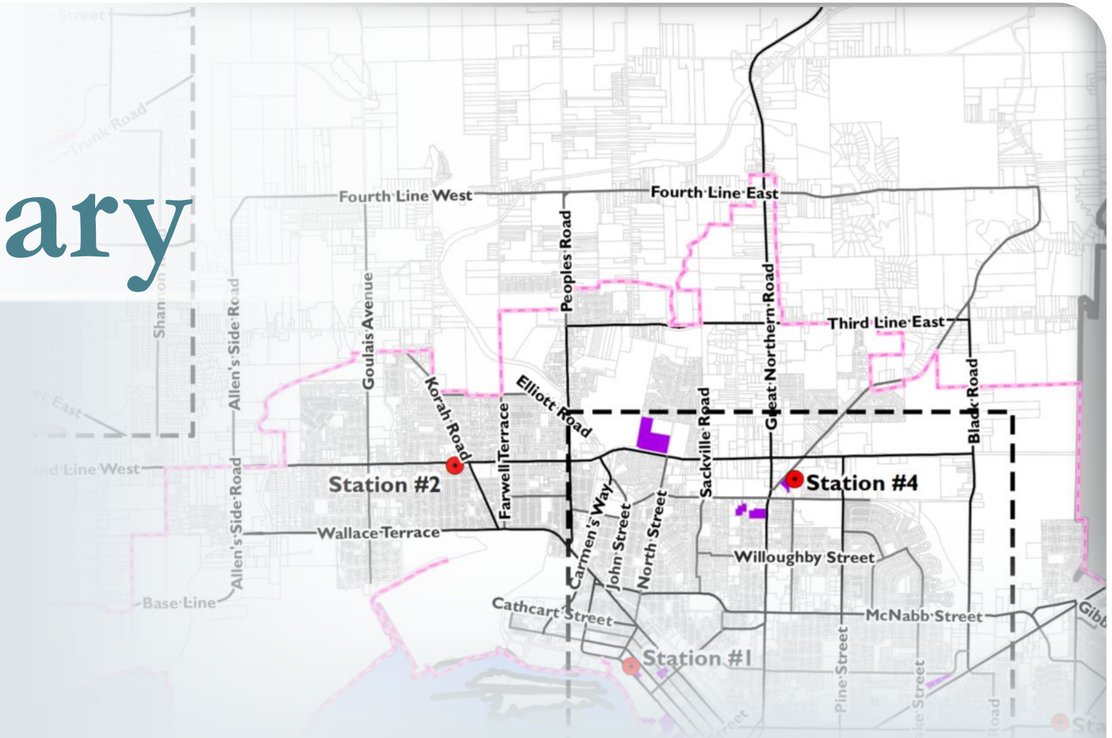


High Risk Level
(VO and high life safety risk occupancies)

CRA Key Risks Summary

High Rise Occupancies:

- 24 current buildings within the City would be deemed as high-rise in excess of 18 metres;
- Most located within the Downtown core area;
- Several identified as residential occupancies.

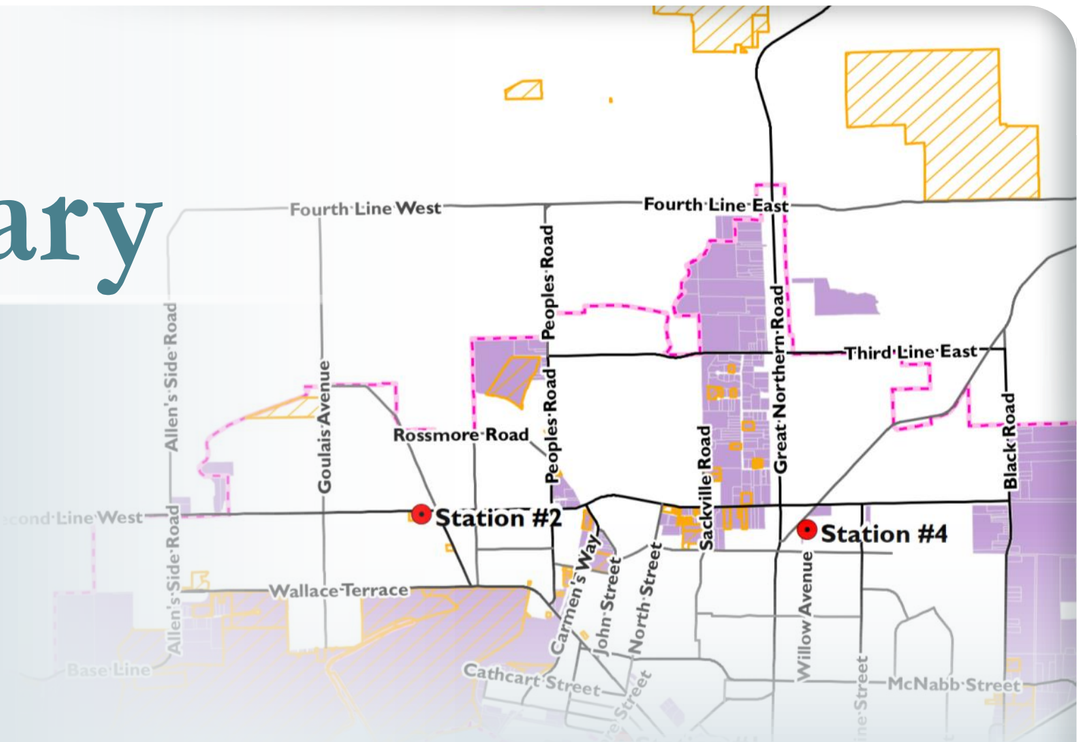


High Risk Level

CRA Key Risks Summary

Industrial Occupancies:

- From 2012 to 2016 these occupancies accounted for 19.2% of the property loss (5.2% of all structure fires compared to 7.5% Province)
- From 2012 to 2016 there were only 14 fires.



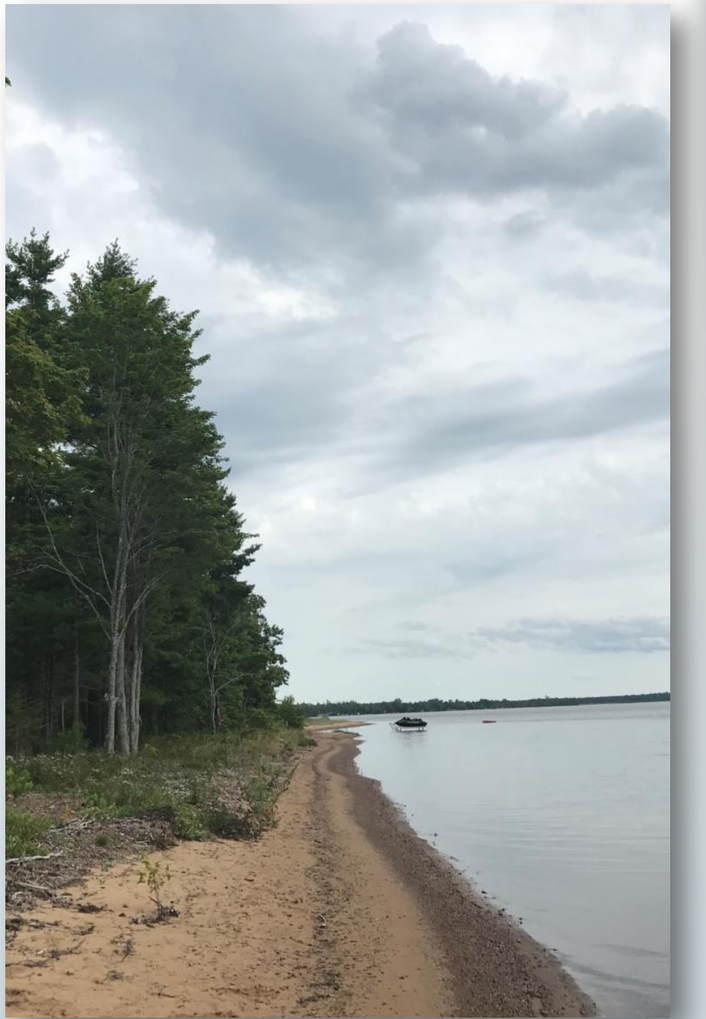
F1 - High Risk Level
F2 / F3 – Moderate Risk Level

What is a Fire Master Plan (FMP)

Comprehensive evaluation of a fire department's current operations, staffing and service delivery.

Assessment of current services in relation to legislated standards and municipal best practices.

Creation of a strategic, multi-year plan to deliver services based on the "**needs and circumstances**" of the community.



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Benefits of Fire Master Plan

- ✓ **Assess** a community's **compliance** with current **legislative** requirements.
- ✓ Inform **Council and the community** with respect to the programs and services provided.
- ✓ **Provide** Council and staff with an **evidence-based strategic framework** for delivering fire protection services in response to identified community fire risks.
- ✓ Opportunity for **stakeholder input** in developing performance goals and objectives.





Summary of Fire Master Planning Process

Comprehensive Risk Assessment

- Analyses of 7 risk profiles;
- Identification of low, moderate and high risk occupancies and key risks;
- GIS Risk Model

Informs

Fire Master Plan

- 10-Year Strategic Planning Document for the delivery of all fire protection services
- Address findings of the 2017 OFMEM Review
- Identify proposed service levels for:
  - Fire Prevention/Public Education
  - Fire Suppression
- Provide options for Council's consideration/approval

FMP Strategic Priorities



1. The utilization of a **Comprehensive Risk Assessment** in **determining** the level of **existing fire safety risks** within the municipality **as the basis** for developing **clear goals and objectives** for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services;

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FMP Strategic Priorities

2. The **optimization of the first two lines of defence**, including public education and fire prevention, and the utilization of fire safety standards and fire code enforcement **to provide a comprehensive fire protection program** within the City based on the results of the Comprehensive Risk Assessment; and,
3. **Emphasis** on **strategies that support the sustainability of fire and emergency services** that provide the most **effective and efficient level of fire protection services** resulting in the best value for the community.


Source: Sault Ste. Marie website

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Fire Suppression Performance Measures

Informed by:

- National Fire Protection Association (NFPA)
- Public Fire Safety Guidelines (OFMEM)
- Industry Best Practices
  - Ontario Association of Fire Chiefs (OAFC)
  - Canadian Association of Fire Chiefs (CAFC)

Fire Suppression Performance Measures

TOTAL RESPONSE TIME =

Dispatch Time + **Turnout Time** + **Travel Time**

Time to receive and dispatch the call.



Time required for firefighters to react and prepare to respond.



Actual travel time from the fire station to the incident.



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Fire Suppression Performance Measures

Initial Response	The number of firefighters initially deployed on the 1st apparatus.
Depth of Response	The total number of firefighters initially deployed to an incident.

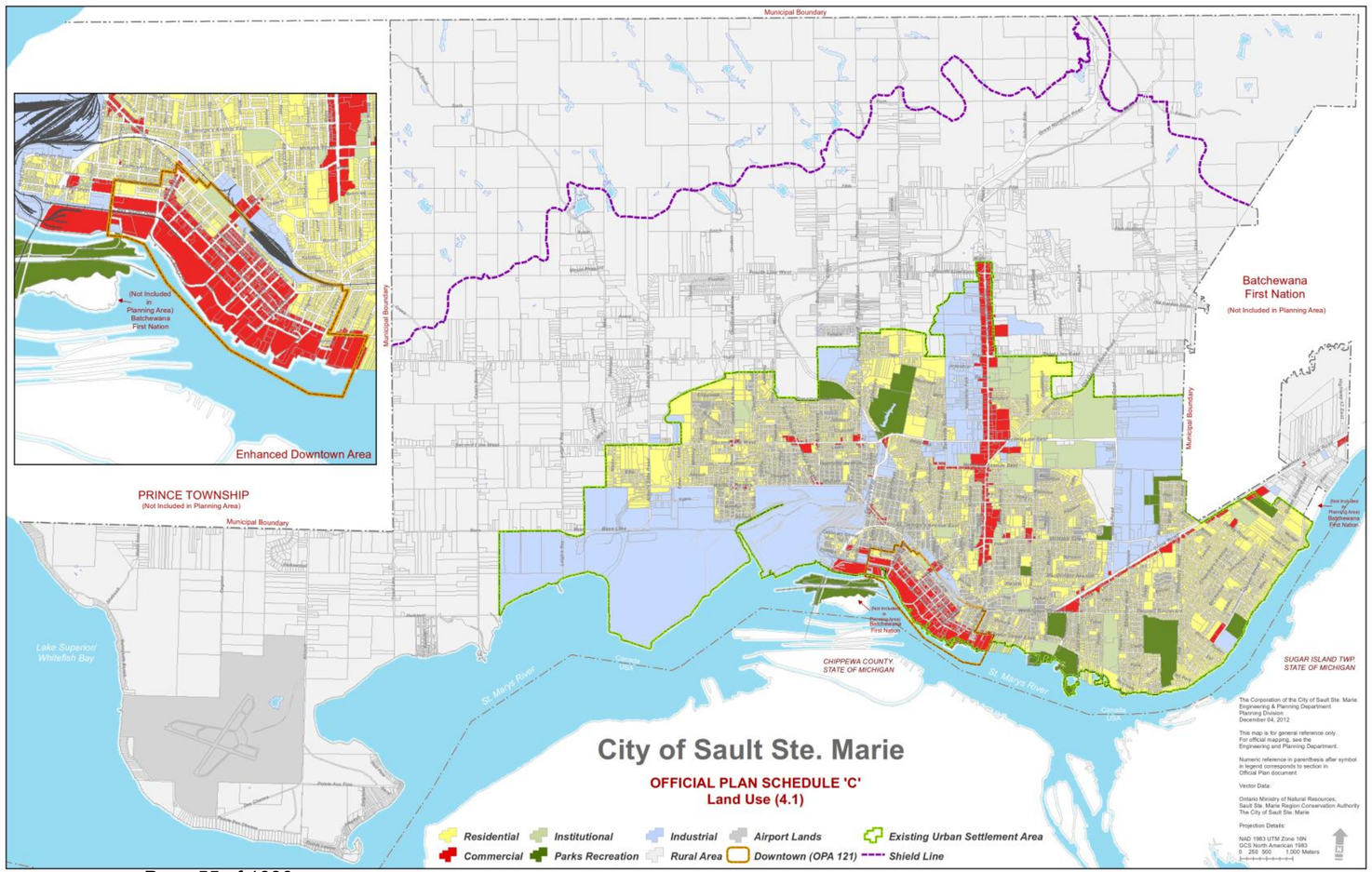
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Applicable Fire Suppression Performance Measures

City's current Official Plan identifies the ***"Existing Urban Settlement Area".***

The performance measures that have been applied include:

- **NFPA 1710** within the designated urban settlement area; and
- **NFPA 1720** "Rural Demand Zone" for the remainder of the City.



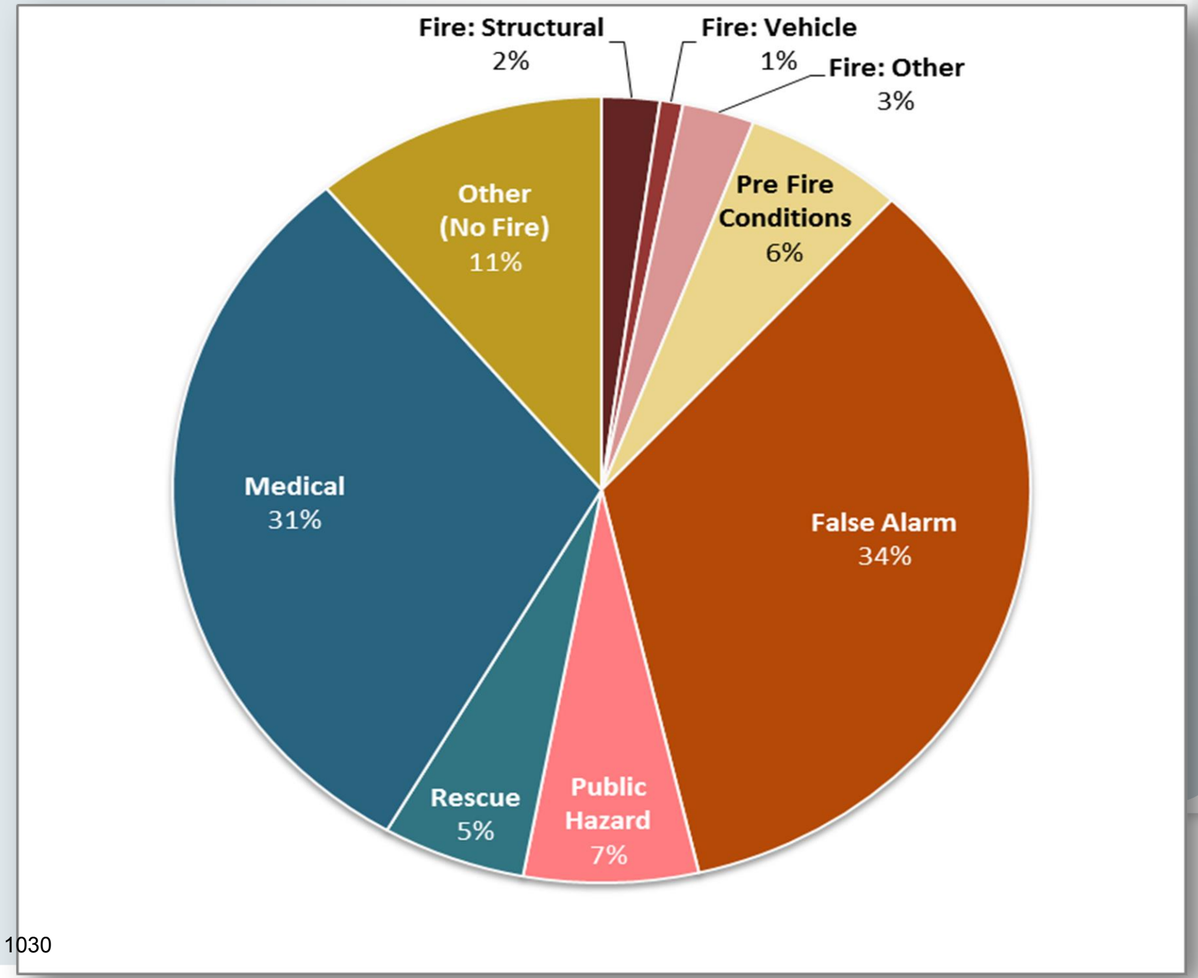
Applicable Fire Suppression Performance Measurers

Response Type	Applicable Fire Suppression Performance Benchmarks
Rural Area Response	Six firefighters arriving on scene within a 14 minute travel time to 80% of the incidents. (NFPA 1720)
Initial Response **Defined Urban Area**	Four firefighters arriving on scene within a four minute travel time to 90% of fire suppression incidents. (NFPA 1710)
Depth of Response **Defined Urban Area – Moderate Risk**	Fourteen firefighters arriving on scene within an eight minute travel time to 90% of the moderate risk fire suppression incidents. (NFPA 1710)
Depth of Response **Defined Urban Area – High Risk**	Twenty six firefighters arriving on scene within an eight minute travel time to 90% of fire high risk suppression incidents. (NFPA 1710)
Depth of Response **Defined Urban Area – High-Rise High Risk**	Thirty nine firefighters arriving on scene within a 10 minute and 10 second travel time to 90% of the high-rise high risk fire suppression incidents.

Historical Emergency Response Call Volume

Emergency call volume for the period from January 1st 2012 to October 30th 2017;

- Structure fires represented 2% of all calls;
- 34% of all calls were false alarms;
- 31% of all calls were medical calls;
- Rescue related calls represented 5% of all calls.



Existing Tactical Limitations

1. **Initial Response:** minimum staffing of less than 3 firefighters assigned to an initial response apparatus (Rescue/Pumper) results in an extended period before interior attack and/or rescue can commence;
2. **Depth of Response:** total minimum staffing deployment model of 13 firefighters is less than applicable performance benchmarks for moderate, high and high-rise risk occupancies; and
3. **Simultaneous Responses:** Simultaneous responses further reduce the depth of response capabilities of the SSMFS.

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Risk/Response Mitigation Strategies



Source: Sault Ste. Marie Fire Department Facebook Page

1. Initial Response Tactical Limitation:

- Revised fire station location deployment model including minimum staffing of 4 firefighters on the primary responding apparatus (Rescue/Pumper) from each station;
- Transition from current 4 station model to 3 station model.

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Risk/Response Mitigation Strategies

2. Depth of Response Tactical Limitation:

- Increase minimum number of firefighters on duty at all times to 15 able to achieve applicable performance benchmark for moderate risk occupancies (Residential 95.4% of the City's occupied property stock);
- Prioritize revisions to firefighter “call back” process for off duty firefighters to respond to reported “high risk” and “high-rise high risk” structural fires;
- Optimization of first two lines of defence for all “high risk” and “high-rise high risk” occupancies.



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Risk/Response Mitigation Strategies

3. Simultaneous Responses Tactical Limitation:

- Recommendation to target reduction of false alarm calls including additional public education, routine fire inspections and enhanced user fees;
- Recommendation to review “Tiered Response Agreement” where applicable to reduce the response of firefighters to medical calls;
- Increase the minimum on duty staffing to 15 firefighters and review off duty call back process.



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Preferred Station Location/Deployment Model

- Increase the minimum number of firefighters on duty to 15 at all times;
- Utilize the proposed “Option 1” as the transition model towards implementing the preferred three fire station model;
- Approve the proposed “Option 3” as the preferred three fire station model;
- Prioritize enhancing the efficiency and reliability of the current off duty firefighter call back process or alternatively consider a “Composite Fire Department Model”.

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2017 OFMEM Review of Fire Protection Services

- Fire Master Plan includes an implementation schedule for the 18 recommendations contained in the 2017 Office of the Fire Marshal and Emergency Management report;
- 5 of the 18 recommendations will be completed subject to Council receiving the Comprehensive Risk Assessment and Fire Master Plan;
- Recommendations are included to address the remaining 13 recommendations by the end of 2018.

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Questions?

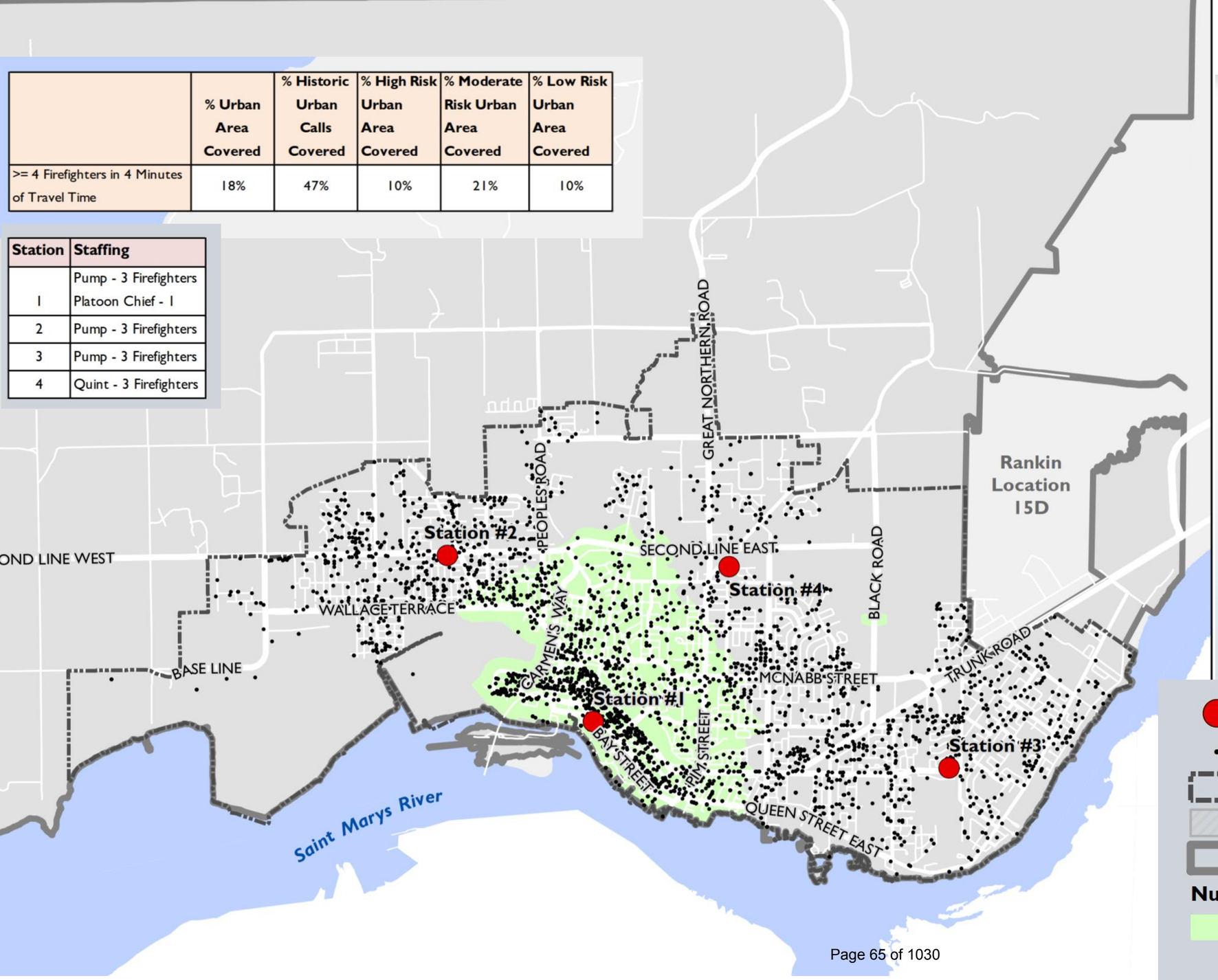
Existing Conditions

Post October 26, 2015 NFPA 1710 Initial Response

Response Type	Performance Benchmark
Initial Response Defined Urban Area	Four firefighters arriving on scene within a four minute travel time to 90% of fire suppression incidents.

	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
>= 4 Firefighters in 4 Minutes of Travel Time	18%	47%	10%	21%	10%

Station	Staffing
1	Pump - 3 Firefighters Platoon Chief - 1
2	Pump - 3 Firefighters
3	Pump - 3 Firefighters
4	Quint - 3 Firefighters



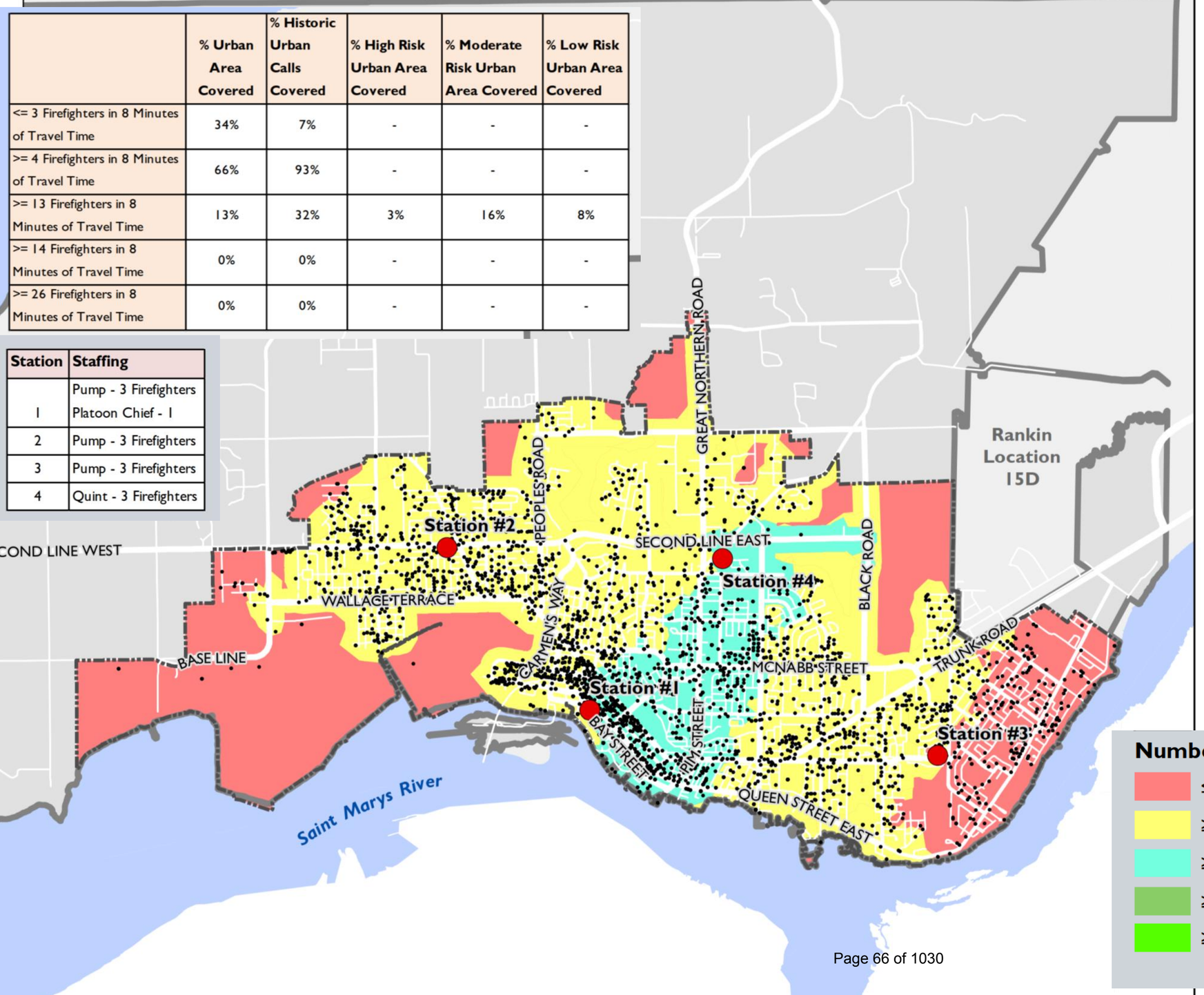
Existing Conditions

Post October 26, 2015 NFPA 1710 Depth of Response

	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
<= 3 Firefighters in 8 Minutes of Travel Time	34%	7%	-	-	-
>= 4 Firefighters in 8 Minutes of Travel Time	66%	93%	-	-	-
>= 13 Firefighters in 8 Minutes of Travel Time	13%	32%	3%	16%	8%
>= 14 Firefighters in 8 Minutes of Travel Time	0%	0%	-	-	-
>= 26 Firefighters in 8 Minutes of Travel Time	0%	0%	-	-	-

Station	Staffing
1	Pump - 3 Firefighters Platoon Chief - 1
2	Pump - 3 Firefighters
3	Pump - 3 Firefighters
4	Quint - 3 Firefighters

Response Type	Performance Benchmark
Depth of Response Defined Urban Area – Moderate Risk	Fourteen firefighters arriving on scene within an eight minute travel time to 90% of the moderate risk fire suppression incidents.



Number of Staff on Scene within 8 Minutes of Travel Time

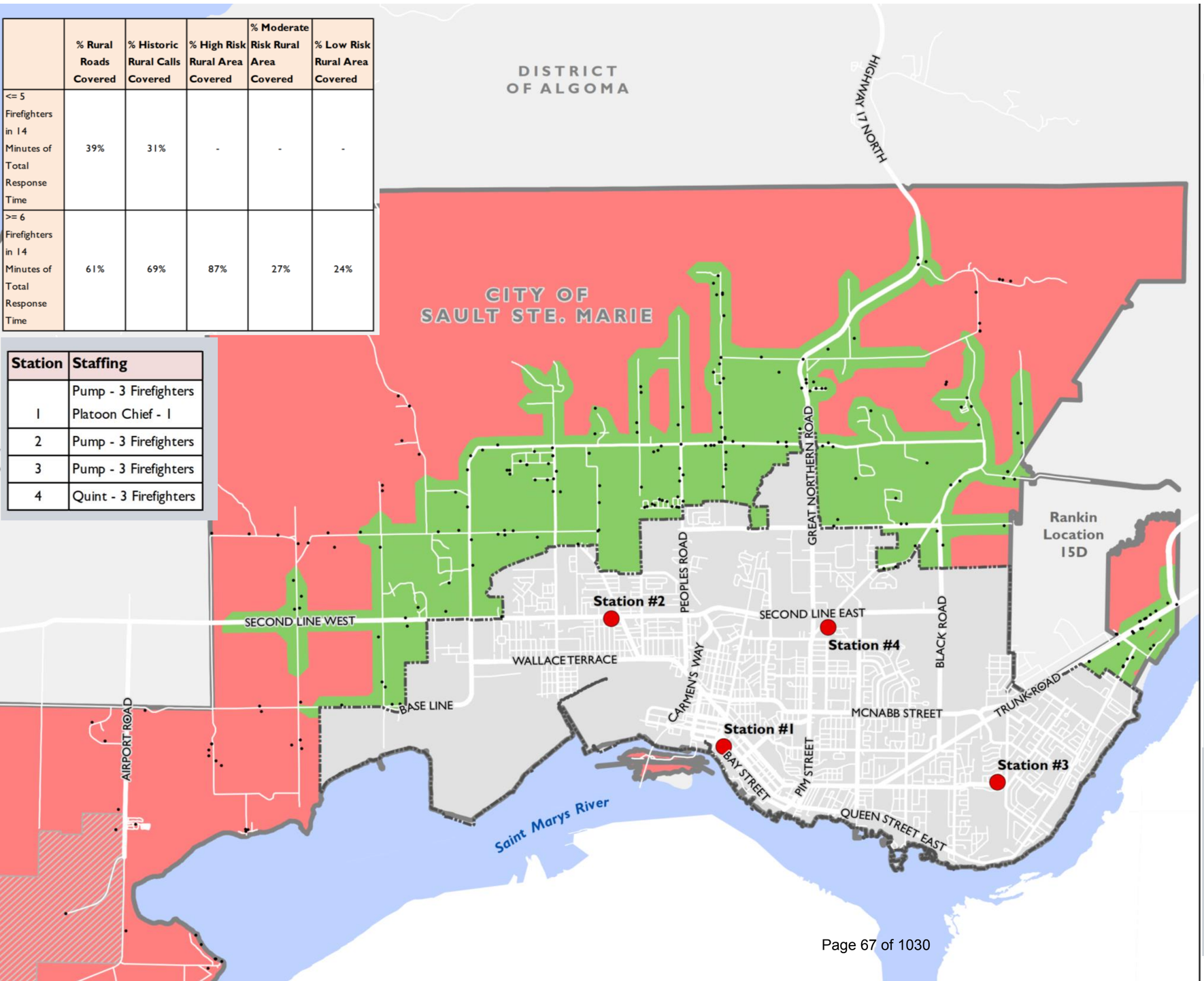
- ≤ 3 Firefighters
- ≥ 4 Firefighters
- ≥ 13 Firefighters
- ≥ 14 Firefighters (not achievable due to staffing levels)
- ≥ 26 Firefighters (not achievable due to staffing levels)

Existing Conditions

Post October 26, 2015 NFPA 1720 Rural Demand Zone

	% Rural Roads Covered	% Historic Rural Calls Covered	% High Risk Rural Area Covered	% Moderate Risk Rural Area Covered	% Low Risk Rural Area Covered
<= 5 Firefighters in 14 Minutes of Total Response Time	39%	31%	-	-	-
>= 6 Firefighters in 14 Minutes of Total Response Time	61%	69%	87%	27%	24%

Station	Staffing
1	Pump - 3 Firefighters Platoon Chief - 1
2	Pump - 3 Firefighters
3	Pump - 3 Firefighters
4	Quint - 3 Firefighters



Response Type	Performance Benchmark
Rural Area Response	Six firefighters arriving on scene within a 14 minute travel time to 80% of the incidents.

Number of Staff on Scene within 14 Minutes of Total Response Time

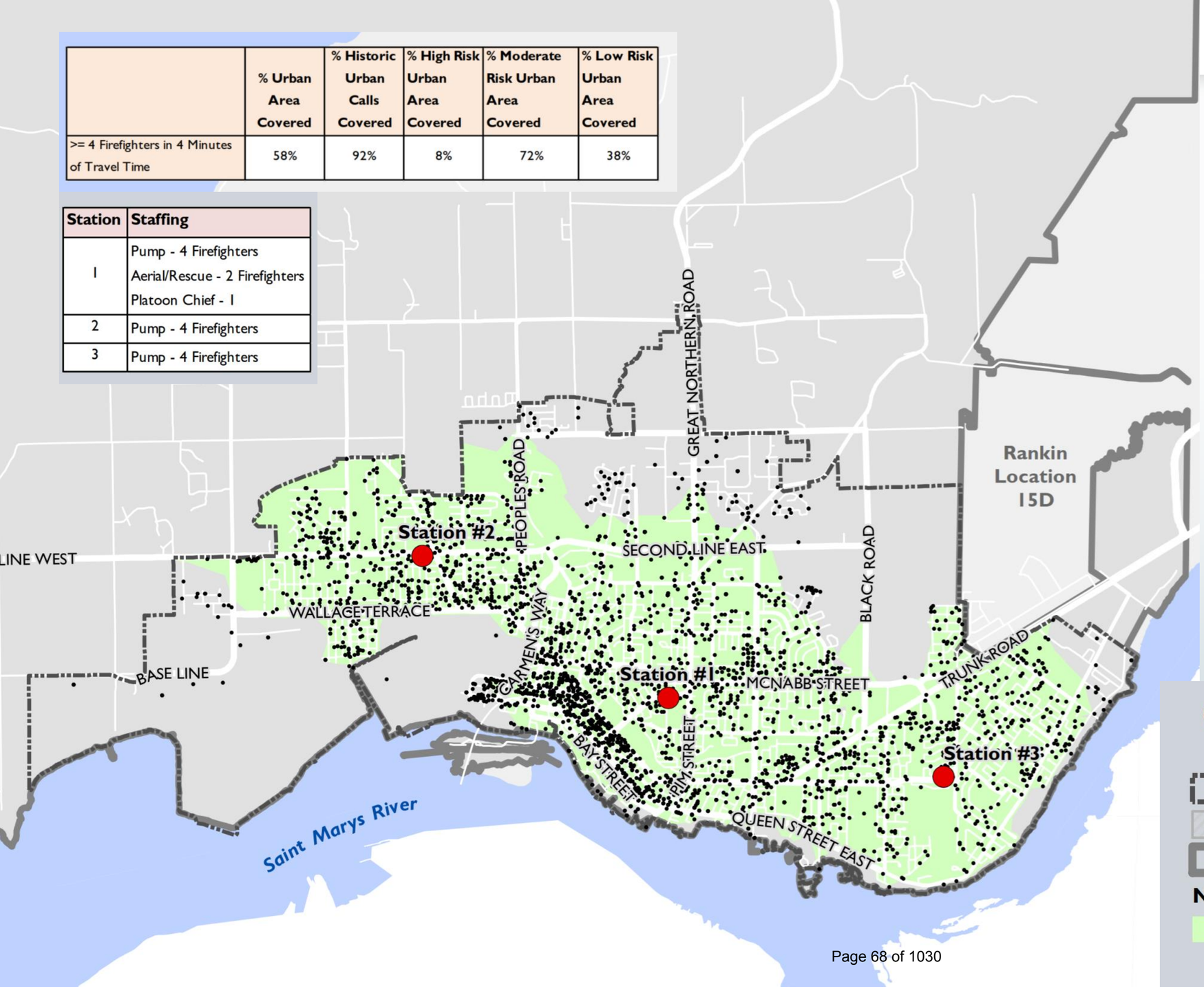
- ≤ 5 Firefighters
- ≥ 6 Firefighters

Option 3
3 Stn Model, Min. Staffing 15
NFPA 1710
Initial Response

	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
>= 4 Firefighters in 4 Minutes of Travel Time	58%	92%	8%	72%	38%

Station	Staffing
1	Pump - 4 Firefighters Aerial/Rescue - 2 Firefighters Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters

Response Type	Performance Benchmark
Initial Response Defined Urban Area	Four firefighters arriving on scene within a four minute travel time to 90% of fire suppression incidents.



Fire Station

Historic Call 2012-2017*

Urban Settlement Area

Airport

Municipal Boundary

Number of Staff on Scene within 4 Minutes of Travel Time

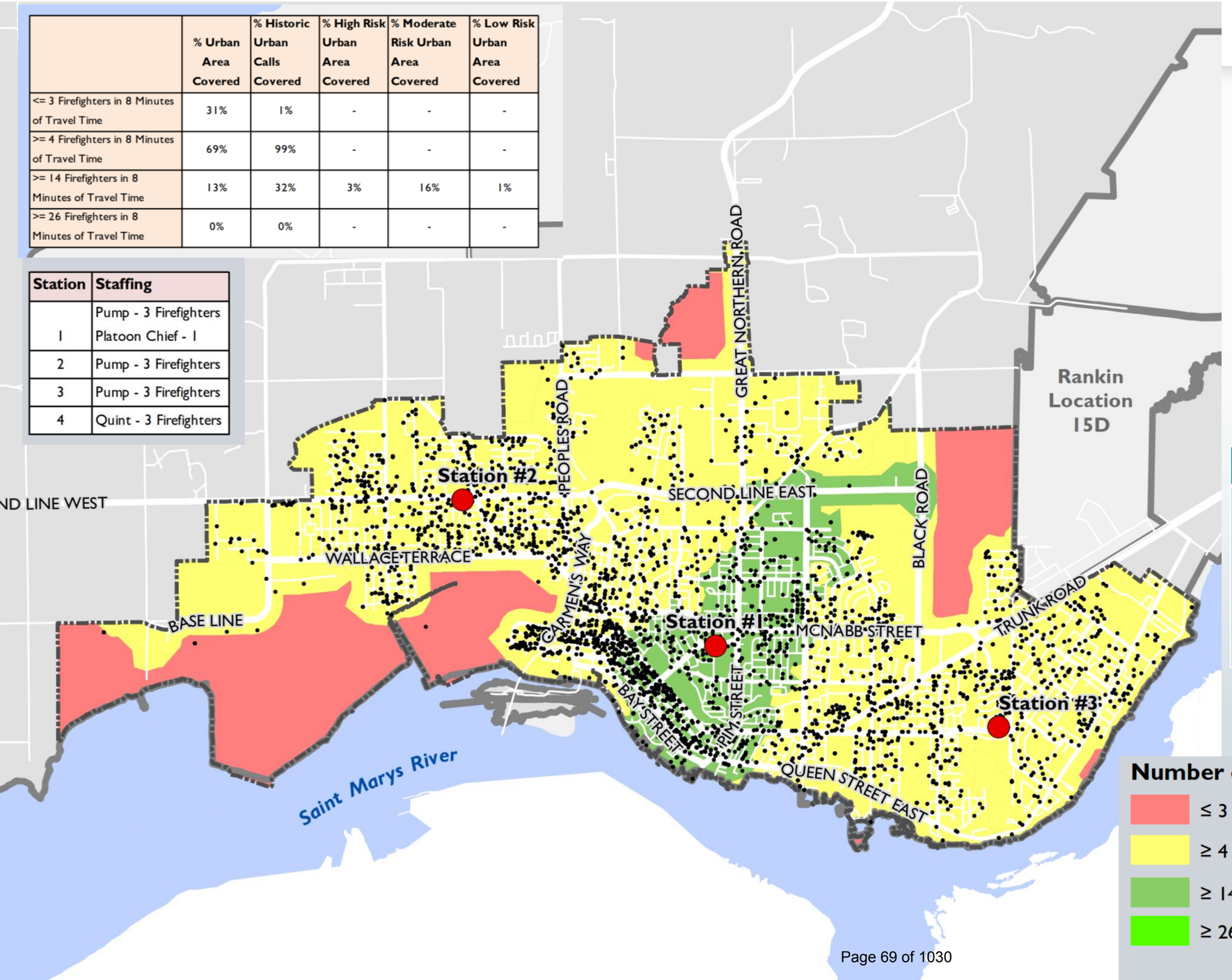
≥ 4 Firefighters in 4 Minutes of Travel Time

Option 3
3 Stn Model, Min. Staffing 15
NFPA 1710
Depth of Response

Response Type	Performance Benchmark
Depth of Response Defined Urban Area – Moderate Risk	Fourteen firefighters arriving on scene within an eight minute travel time to 90% of the moderate risk fire suppression incidents.

	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
<= 3 Firefighters in 8 Minutes of Travel Time	31%	1%	-	-	-
>= 4 Firefighters in 8 Minutes of Travel Time	69%	99%	-	-	-
>= 14 Firefighters in 8 Minutes of Travel Time	13%	32%	3%	16%	1%
>= 26 Firefighters in 8 Minutes of Travel Time	0%	0%	-	-	-

Station	Staffing
1	Pump - 3 Firefighters Platoon Chief - 1
2	Pump - 3 Firefighters
3	Pump - 3 Firefighters
4	Quint - 3 Firefighters



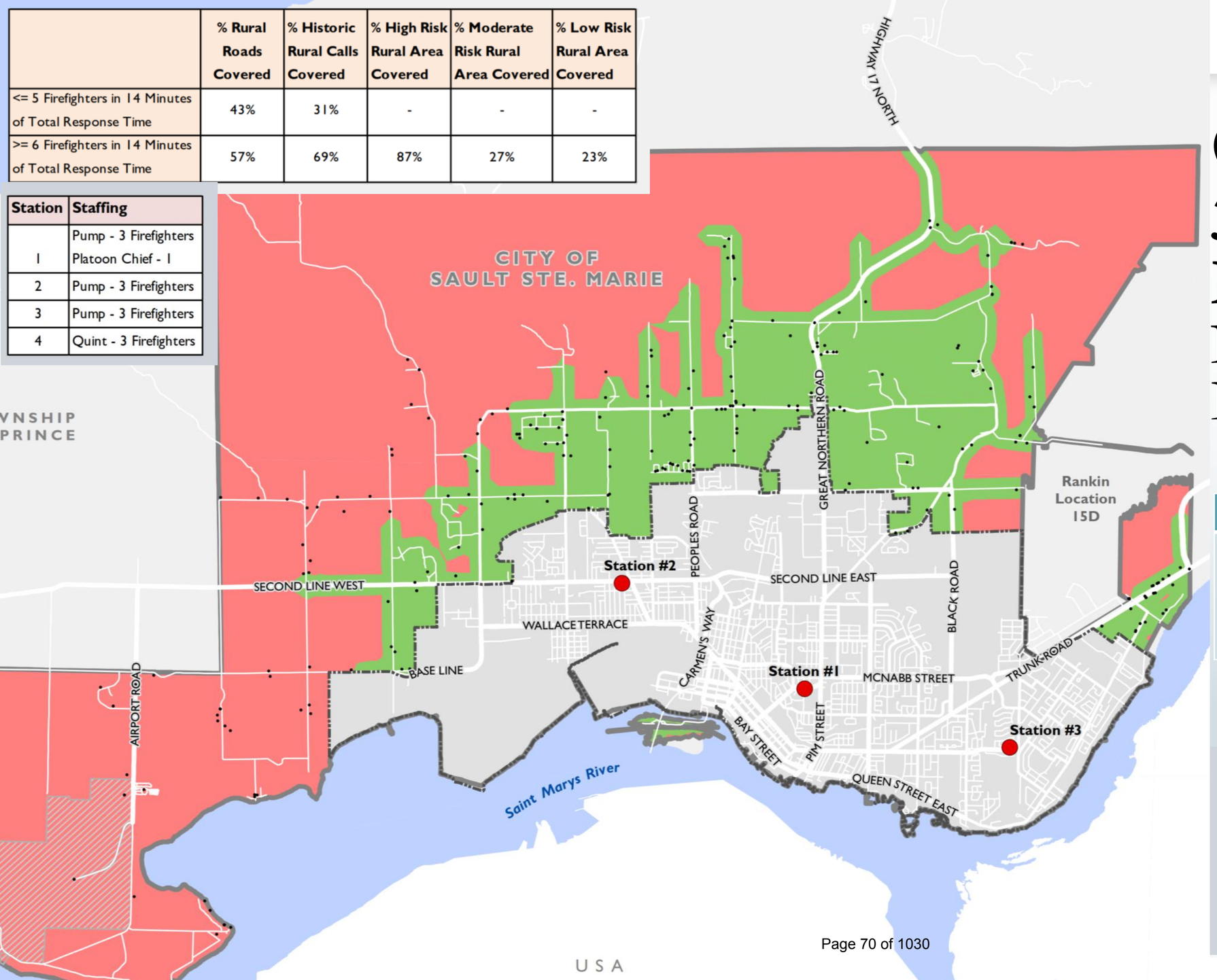
Number of Staff on Scene within 8 Minutes of Travel Time

- ≤ 3 Firefighters
- ≥ 4 Firefighters
- ≥ 14 Firefighters
- ≥ 26 Firefighters (not achievable due to staffing levels)

Option 3
3 Stn Model, Min. Staffing 15
NFPA 1720
Rural Demand Zone

	% Rural Roads Covered	% Historic Rural Calls Covered	% High Risk Rural Area Covered	% Moderate Risk Rural Area Covered	% Low Risk Rural Area Covered
<= 5 Firefighters in 14 Minutes of Total Response Time	43%	31%	-	-	-
>= 6 Firefighters in 14 Minutes of Total Response Time	57%	69%	87%	27%	23%

Station	Staffing
1	Pump - 3 Firefighters Platoon Chief - 1
2	Pump - 3 Firefighters
3	Pump - 3 Firefighters
4	Quint - 3 Firefighters



Response Type	Performance Benchmark
Rural Area Response	Six firefighters arriving on scene within a 14 minute travel time to 80% of the incidents.

Number of Staff on Scene within 14 Minutes of Total Response Time

- ≤ 5 Firefighters
- ≥ 6 Firefighters

Sault Ste. Marie
Public Library

2018 03 07

Malcolm White
Deputy CAO/City Clerk, Corporate Services
99 Foster Drive
Sault Ste. Marie, ON P6A 5X6

Dear Malcolm White,

The Sault Ste. Marie Public Library (SSMPL) Board is seeking City Council's consideration of the attached motion. Also attached, is background information on the provincial funding "ask" from the Ontario Library Association (OLA) and the Federation of Ontario Public Libraries (FOPL), and endorsed by all of the major public library associations in Ontario. This "ask" has been supported by other Ontario municipal governments.

The Sault Ste. Marie Public Library is a key asset in our community and the twenty (20) year provincial funding freeze must end. Over 800 items per day are checked out at the SSMPL and on average, 293 people use the Centennial Library wi-fi every day; these are just two of examples of the many resources provided to our citizens, free of charge.

Thank you for consideration of this motion.

Toni Nanne-Little
Chairperson
Sault Ste. Marie Public Library Board

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MAR 07 2018
NO.: 53436
DIST: Malcolm

Cc Mayor C. Provenzano
SSMPL Board Members

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Federation of ONTARIO PUBLIC LIBRARIES

2018 ONTARIO PRE-BUDGET SUBMISSION

A Modern, Sustainable Approach for Ontario's Libraries

Ontario's libraries play a critical role in communities and schools across Ontario

Ontario's libraries and library staff are helping millions of Ontarians improve their well-being, reach their potential, and gain meaningful social connections and learning experiences. Whether in their schools or in their communities, libraries reach millions of Ontarians through a wide range of impactful resources and programs.

Did You Know?

- ✓ *Every year, **4.2 million Ontarians** of all ages access 242,000 programs through their local public library.*[1]
- ✓ *Every dollar invested in libraries generates over $6 in local economic impact benefitting regular Ontarians.*[2]

That's why libraries and librarians in communities, schools, universities and colleges throughout Ontario are an essential resource for helping residents and students succeed.

OUR RECOMMENDATIONS

The Ontario Library Association (OLA) and Federation of Ontario Public Libraries (FOPL) recommend **three funding priorities** that are essential for ensuring a modern, sustainable library sector in Ontario.

A. Provide sustainable, predictable funding for all public and First Nations libraries across Ontario by increasing annual base funding from $33 million to $50 million - **an increase of $17 million in annual funding**.

B. Dedicate **$25 million in new, annual funding** for the development and implementation of **Ontario's Digital Library**.

C. Mandate the use of **funding allocated by the Ministry of Education for school libraries and teacher-librarians** for its intended purpose. This will inject **an estimated $100 million in annual funding** to school libraries across Ontario **without requiring any new provincial funding**, while ensuring that school libraries get their fair share.

Ontario's libraries need a new, modern, comprehensive funding model

The current provincial funding approach is threatening the long-term sustainability of libraries across Ontario. Insufficient funding and an ineffective, patchwork approach means that many libraries are struggling to keep up, leaving many communities and schools at risk of falling further behind.

Funding for libraries has fallen far below what is needed to maintain a modern and innovative library system across Ontario. A sharp and steady decline in provincial support over the past 20 years is at the root of this growing crisis.

This dramatic decline in library resources and staff is eroding the impact of the province's major investments in education, children and youth services, and newcomer and employment supports made during the same period. Libraries across the province are having to make tough decisions about how they can continue to serve the needs of their community.

It is time for the Ontario Government to return to its historic leadership role in supporting Ontario's public and school libraries with a modernized, sustainable funding model to respond to the changing needs of residents, students & local communities.

ola
:. ontario library association

Federation of ONTARIO PUBLIC LIBRARIES

THE IMPACT OF A NEW FUNDING MODEL FOR ONTARIO'S LIBRARIES

These proposed recommendations **will address the needs of a modern and innovative library system** that is responsive to the diverse and evolving role of libraries as local change agents.

Libraries are Ontario's **farthest-reaching, most cost-effective resource** for empowering positive change on provincial priorities by:

- **Supporting high-quality education**, in providing students with the guidance of dedicated teacher and academic librarians, assistance in developing literacy skills, and access to cutting-edge digital resources for lifelong learning;
- **Reducing the impacts of poverty**, through access to community resources and supports, as well as giving all children and youth the chance to participate in rich and accessible programming delivered by passionate librarians and library staff; and,
- **Fostering community economic development,** by providing business development and job skills programming for adults and youth, as well as providing space and resources to help entrepreneurs, newcomers and rural Ontarians.

Mustafa (London, Ontario)



When Mustafa was new to Canada, he spent every day learning English so he could work and support his family. He says: "You have to be fluent in the language or you can't make it, you can't get a job. My goal was to be able to listen, to understand and communicate with people. Even for a taxi driver, I had to pass an English test."

After attending English classes in the morning, Mustafa would come to the library to use Rosetta Stone, and borrow books and CDs from the ESL collection to take home. Remembering the first time he came to the library, Mustafa says: "I knew just a few words and I think they hardly understood what I was asking for, but they helped me. Now I encourage every newcomer to go to the library. I know they will get help for sure."

While provincial priorities may be similar, local implementation and needs are diverse. **Predictable and flexible funding will let libraries make sustainable decisions that best respond to the needs of their local communities and users,** while delivering positive impacts consistent with the province's priorities.

Implementing a modernized, sustainable and predictable funding model for Ontario's libraries will **protect Ontario's investments** in education and poverty reduction by:

- Ensuring that all Ontarians benefit from ***equitable, world-class resources*** in their local community or school, regardless of where they live;
- Maximizing the impact of the provincial government's ***landmark investments in elementary, secondary and post-secondary education***;
- Supporting the collaborative ***development of world-class digital resources*** available to all Ontario libraries, residents and students;
- Empowering ***impactful, long-term*** planning and program development responsive to ***local community and school needs, as well as provincial priorities***;
- Facilitating ***ongoing, multi-ministerial collaboration*** with Ontario's library systems to maximize impact and identify emerging needs and opportunities.

Ontario can provide every resident and student with comprehensive and diverse library resources - regardless of where they live. Leveraging trust in and the reach of Ontario's libraries with help level the playing field and increase equity for hundreds of thousands of Ontarians and their families - in education, economic development and poverty reduction.

Jon & Tomio (Brantford, Ontario)

Jon is a Grade 10 student at Brantford Collegiate and an avid reader of adventure fiction. He has been a regular patron of the library since his first day of Grade 9. He enjoys reading and hanging out on the comfortable couches. According to Jon, "I come here because it is a welcoming space. It is calm and relaxing...most of the time." In a high school with a population of over 1300 teens, it's important to provide a safe haven.



Tomio is a Grade 10 student who can be found in the Library before and after school and on his lunch hour, working, reading e-books on his Kobo and solving the many puzzles we have out for student use. He loves the library because, "I come here to do a LOT of homework. I have a laptop at home, but it's old ...so the library computers are much faster."

Ontario Library Association / Federation of Ontario Public Libraries

The **Ontario Library Association (OLA)** is the oldest continually-operating non-profit library association in Canada, with over 5,000 members comprised of library staff and supporters from public, school, academic, and special libraries.

The **Federation of Ontario Public Libraries (FOPL)** represents 246 public library systems in Ontario, including 45 First Nations public libraries, in communities throughout the Province.

Together, OLA & FOPL are committed to ensuring that libraries are able to continue to play a critical role in the social, education, cultural and economic success of our communities and schools.

ola
:. ontario library association

Federation of ONTARIO PUBLIC LIBRARIES

APPENDIX A - Budget Details

Recommendation A

Provide sustainable, predictable funding for all public and First Nations libraries across Ontario by increasing annual base funding from $33 million to $50 million – ***an increase of $17 million in annual funding****.*

Context for Recommendation

Public and First Nations libraries are important cultural institutions and essential community hubs for all Ontario residents. It's no surprise that **libraries are consistently among Ontario's most trusted institutions**.[3] Libraries are local and can adapt to the unique needs of a community. **Public libraries reach over 98% of Ontario residents, and 3 out 4 Ontarians access their local public library.**[4]

However, funding for these libraries has fallen far below what is needed to maintain a modern and innovative library system across Ontario. A sharp decline in provincial support is at the root of this growing crisis: the net present value (NPV) of **Ontario's investment in public libraries has decreased by over 60%** over the past 20 years.

Municipal governments are responsible for the largest share of public library base funding - typically comprising about 96% of public library budgets. The Ontario government provides smaller but important support for public libraries through the Public Library Operating Grant (PLOG) which averages 4% of public library funding. It is apportioned based on population and involves accountability through several annual reports, as well as reporting on any special short-term grants. Prior to 1996, the PLOG was set at $64 million per year, apportioned by population, thereby providing libraries across Ontario with effective provincial support. In 1996, it was suddenly reduced by 50% to $32,000,000. Despite inflation, changes in technology and the increasing importance of libraries in contributing to local community well-being**, there has been no increase to the PLOG in the past 20 years.** Occasional, one-time grants over the past decade do not make up the difference, as libraries are forced to make short-term, "use it or lose it" decisions rather than long-term, strategic investments.

Despite these significant funding decreases, libraries have made meaningful efforts to use innovation and technology to make library resources more accessible and responsive to changing community needs.

Supporting Provincial Priorities

Public and First Nation Libraries are critical to the achievement of many of the Ontario government's priorities and policies. As one of the largest cultural institutions in the province; libraries are essential hubs for hundreds of communities across Ontario; they

support newcomers and refugees; provide frontline employment, economic and social engagement services; are key to achieving Ontario's ambitious early and middle years, youth, digital, school and college readiness goals. For more than 1 in 4 Ontarians, libraries are a key access point for the internet and participation in the digital economy and e-government resources[5].

Investment Outcomes

Increasing annual base funding for public and First Nations libraries will empower libraries across Ontario to address immediate issues, as well as support long-term planning to address the evolving needs of our communities, including:

- Access to the growing suite of digital government resources and quality, proprietary digital information resources supporting Science, Technology, Engineering, the Arts and Mathematics (STEAM) initiatives for students.
- Access to health information in partnership with local health agencies and avoidance of emergency visits.
- Support for re-training and online education, employment support, and small business support.
- Increasing social and educational equity for small, rural and First Nation communities.
- Equitable, reliable access to the internet at all libraries across the province (25% of Ontarians do not have access at home)

Recommendation B

*Dedicate **$25 million in new, annual funding** for the development and implementation of **Ontario's Digital Library**.*

Context for Recommendation

Currently being studied by the Ministry of Tourism, Culture and Sport, the creation Ontario's Digital Library will **provide all Ontarians with equitable and seamless access to a suite of high quality databases and learning resources, no matter where they live in Ontario**. Unlike Alberta, British Columbia, and Saskatchewan, Ontario does not currently have a centralized digital resource foundation or province-wide strategy for leveraging costs and licensing databases and e-learning resources across all school boards and public libraries.

Stable, ongoing funding is necessary to ensure that Ontario's Digital Library is professionally managed and responsive to new technology and emerging resources. Rather than starting from a blank slate, it will utilize the relationships and professional licensing expertise of existing partners (for example, Southern Ontario Library Services (SOLS) and OLS-North, Our Ontario and the Ontario Heritage Society) for ongoing management and oversight, working in collaboration with the Ministry of Education and the Ministry of Tourism, Culture & Sport to ensure a comprehensive suite of digital resources.

Supporting Provincial Priorities

The issue of equitable access to broadband services is a long-term fix for our province's residents. All public libraries in the province provide access to Internet resources and services and serve to level the playing field. Libraries are a key component for equitable access for all in the digital and knowledge economy, and ensuring that in an era of digital misinformation, all Ontarians have access to verifiable, academically-rigorous information resources.

Investing in the establishment and operation of Ontario's Digital Library will provide fair access for northern, small, rural and First Nations communities and school boards that struggle with funding these costly resources on their own.

Investment Outcomes

Establishing Ontario's Digital Library will ensure that all Ontario residents and students throughout the province will have access to leading, in-depth and world-class digital resources. These would include:

- Cost-effective, lower cost per resident, efficiently delivered;
    - e-learning resources that support digital literacy, business learning and personal development, and

- research resources that support student homework, study and adult lifelong learning.

- Heritage resources and multimedia such as provincial and local history, archives, maps, photographs, genealogy, and more.
- Cultural resources such as archives, video, audio, music, dance, etc. reflecting diverse communities and First Nations.
- Partnerships with cultural and local history societies and museum collections.
- High-quality, evidence-based databases that support good decision-making by community organizations and businesses.

Recommendation C

*Mandate the allocation of **adequate funding for school libraries** as recommended by the Ministry of Education. This represents the equivalent of a critical injection of **an estimated $100 million in annual funding** to school libraries across Ontario **without requiring any new provincial funding**.*

Context for Recommendation

Ontario students are losing access to libraries and library-based resources. For example, **only 52% of elementary schools have a teacher-librarian – either full- or part-time – down from 80% only 20 years ago**. The situation in **Northern Ontario is especially dire: only 11% of elementary schools have these specialized staff**.[6] Because resources allocation is determined at a board-level, some boards, including the Ottawa Catholic District School Board, have made board-wide decision to go so far as to no longer hire Teacher-Librarians in their elementary schools, in direct contradiction of Ministry of Education recommendations. Students are rapidly losing access to a critical learning resource previously available for generations.

The Ministry of Education has an established funding formula that recommends a ratio of 1 elementary teacher-librarian per 763 Elementary pupils, and 1 teacher-librarian per 909 secondary pupils. This falls short of the Canadian School Library Association recommended ratio of one teacher-librarian to 567 students[7]. However, because the funding is not currently mandated by the Ontario Government, school boards are not even allocating the recommended funding to teacher-librarians.[8] As noted in the Auditor General's annual report, school boards are frequently failing to report to the Ministry of Education how these allocated funds are being spent.[9] Across the province, we estimate that approximately 50% of funds that are recommended for teacher-librarians are being otherwise allocated by school boards.

It is important to recognize the critical role school libraries play in supporting Ontario's student achievement goals by requiring, rather than recommending, that annual funds currently allocated by the Ministry of Education to school boards for school libraries and teacher-librarians are spent on these prescribed priorities.

Supporting Provincial Priorities

Access to libraries and teacher-librarians has a demonstrable impact on the learning outcomes of students across Ontario. Schools with trained library staff are more likely to see better reading outcomes on the Grade 3 and 6 EQAO assessments.[10] Conversely, the steep decline in the percentage of Ontario children who report that they enjoy reading – from 76% in 1997 to 47% in 2018 – closely aligns with the declining presence of teacher-librarians in Ontario schools over the same period.[11]

The existing shortfall in funding for libraries and teacher-librarians is having far-reaching impacts on student performance and outcomes, including post-secondary readiness. College and university librarians are increasingly reporting significant differences in information literacy skills between students graduating from secondary schools with resourced school libraries and teacher-librarians, and those without.

Mandating the allocation of adequate funding for school libraries will provide students across the province with the library resources they need to collectively achieve the outcomes envisioned in Ontario's extensive education and post-secondary education investments.

Investment Outcomes

Equitable access to a properly staffed school library is an essential component of student success. Teacher-librarians have specialized skills to support the implementation of new curriculum and teaching strategies by co-planning, co-teaching and, co-assessing with teaching partners.

Teacher-librarians and access to properly resourced school libraries:

- Promotes critical information literacy and research skills;
- Fosters students' love of reading, which research has shown has a positive impact on:
    - literacy scores,
    - success in science and math, and
    - students social and civic engagement;[12]
- As leaders on digital content, promotes digital literacy and digital citizenship by acting as a technology mentor and coach for all staff and students;
- Creates a welcoming and safe space within schools; and
- Curates balanced library collections in diverse formats to serve all learners.

APPENDIX B - Further Resources

Canadian Library Association. *Leading Learning*. Ottawa: Canadian Library Association, 2014

http://llsop.canadianschoollibraries.ca/

Ontario Library Association. *Access to Information for Ontarians: Leveraging and Providing E-Resources for All Ontario Students*. Toronto: Ontario Library Association, 2016.

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Ontario Library Association. *First Nations Public libraries in Ontario*. Toronto, Ontario Library Association, 2017.

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Ontario Library Association. *Information Brief: E-Resources in Ontario's Public, School and Academic Libraries*. Toronto, Ontario Library Association, 2017.

http://www.accessola.org/web/Documents/OLA/issues/Information%20Briefs/Information-Brief_e_resources[1].pdf

Ontario School Library Association. *Together for Learning: School Libraries and the Emergence of the Learning Commons*. Toronto: Ontario Library Association, 2010

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People for Education. *Libraries*. People for Education, 2017

https://peopleforeducation.ca/wp-content/uploads/2017/06/P4E-Libraries-2017.pdf

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[1] Molyneux, Robert E., and Stephen Abram. Ontario Public Library Operating Data 2006-2015 Overview, Primer on Library Statistics and Collected Tables. Toronto: Federation of Ontario Public Libraries, 2017.

[2] Stolarick, Kevin and Kimberly Silk. So Much More: The Economic Impact of the Toronto Public Library on the City of Toronto. Toronto: Martin Prosperity Institute, 2013.

[3] Ministry of Tourism, Culture & Sport. Sector Profile: Public Libraries. Toronto: Government of Ontario, 24 Mar. 2016. Accessed 30 Oct. 2017.

[4] Ministry of Tourism, Culture & Sport. Ontario Public Library Statistics. Toronto: Government of Ontario, 1999-2015. Ontario's Data Catalogue. Accessed 30 Oct. 2017.

[5] Federation of Ontario Public Libraries Research. Presentation on the Market Probe Public Opinion Poll 2015 Survey. Toronto: 2016.

[6] People for Education. Competing Priorities (Annual Report on Ontario's Publicly Funded Schools 2017). Toronto: People for Education, 2017.

[7] Canadian Association for School Libraries, Achieving Information Literacy – Standards for School Library Programs in Canada. Ottawa: Canadian Association for School Libraries, 2003.

[8] People for Education. Competing Priorities (Annual Report on Ontario's Publicly Funded Schools 2017). Toronto: People for Education, 2017.

[9] Office of the Auditor General of Ontario. Annual Report 2017. Toronto: Government of Ontario, 2017.

[10] People for Education & Queen's University Faculty of Education. School Libraries and Student Achievement in Ontario. Toronto: Ontario Library Association, 2006.

[11] Ministry of Children & Youth Services. Gearing Up: A Strategic Framework to Help Ontario Middle Years Children Thrive. Toronto: Government of Ontario, 2017.

[12] People for Education, Reading for Joy, 2011. Toronto: People for Education, 2011.

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Ministry of Finance
Ministry of Finance
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The Honourable Bill Mauro
Minister of Municipal Affairs
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The Honorable Indira Naidoo-Harris
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The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Al Horsman**

DEPARTMENT: **Chief Administrative Officer**

RE: **2018 Discretionary Spending List**

PURPOSE

The purpose of this report is to respond to the following Council resolution passed at the 2018 01 08 meeting.

Whereas a May 8, 2017 motion at City Council requested a list from City staff on options to achieve a 0% budget increase and a 1% budget reduction in 2018; and

Whereas such a list was not provided by staff despite a clear Council directive;

Now Therefore Be It Resolved that the five City Departments being: Public Works and Engineering, Fire Services, Legal Department, Corporate Services and Community Development and Enterprise Services be directed to present to City Council in the first quarter of 2018 a specific list of all discretionary spending for Council to consider possible savings options during budget deliberations.

BACKGROUND

Attached are lists by service area and functional area requested by Council breaking out all departmental discretionary spending for Council's consideration. As Fire Services is almost entirely mandatory and will be reviewed over the next year relative to the Fire Master Plan found elsewhere on the March 19, 2018 agenda, it is not found in the list.

ANALYSIS

It is intended that staff will co-ordinate a Special Council meeting in late April to provide an in-depth view of how the annual operating budget is prepared at the staff level. It is staff's expectation that the material provided at that meeting as well as the discretionary spending lists attached to this report will provide Council with information necessary to meet the needs of the above resolution.

FINANCIAL IMPLICATIONS
The 2018 Budget was approved by Council at its meeting of December 4, 2017 and included total departmental spending of $ 62.8 million representing 1.03% of the 2018 levy increase of 2.08%.

STRATEGIC PLAN / POLICY IMPACT
This report is linked to the Service Delivery focus area of the corporate Strategic plan.

RECOMMENDATION
It is therefore recommended that Council take the following action:

Resolved that the report of the Chief Administrative Officer dated 2018 03 19 concerning 2018 Discretionary Spending List be received as information.

Respectfully submitted,



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CITY OF SAULT STE MARIE
COMMUNITY SERVICES AND ECONOMIC DEVELOPMENT

	Revenues	Expenditures	Total Costs
Parking:	**$ 438,695**	**$ 510,697**	**$ 72,002**
Administration	$ 82,865	$ 125,335	$ 42,470
Meters	$ 212,100	$ 125,466	$ (86,634)
Lots	$ 143,730	$ 259,896	$ 116,166
Cemetery Operations:	**$ 958,526**	**$ 1,072,671**	**$ 114,145**
Transit:	**$ 3,610,012**	**$ 9,497,372**	**$ 5,887,360**
Administration	$ 3,529,537	$ 716,749	$ (2,812,788)
Parabus	$ 77,000	$ 1,489,558	$ 1,412,558
Community bus	$ 3,475	$ 159,891	$ 156,416
Regular transit and operations	$ -	$ 7,131,174	$ 7,131,174
School Guards	**$ -**	**$ 299,290**	$ 299,290
			$ -
Recreation & Culture	**$ 1,519,879**	**$ 3,810,386**	**$ 2,290,507**
Healthy Kids	$ 175,000	$ 225,000	$ 50,000
Canada Day	$ 10,000	$ 20,000	$ 10,000
Mayor's Youth Advisory Committee	$ -	$ 27,500	$ 27,500
Administration	$ 64,584	$ 558,191	$ 493,607
Miscellaneous Programs	$ -	$ 21,162	$ 21,162
Sports Administration	$ -	$ 14,944	$ 14,944
Parks & Recreation Advisory Committee	$ -	$ 2,465	$ 2,465
			$ -
Roberta Bondar Park	**$ 34,777**	**$ 185,265**	**$ 150,488**
			$ -
Marinas	**$ 263,814**	**$ 283,129**	$ 19,315
Bellevue Marina	$ 174,902	$ 162,502	$ (12,400)
Bondar Marina	$ 88,912	$ 120,627	$ 31,715
			$ -
Senior Facilities and Programming	**$ 170,070**	**$ 620,103**	$ 450,033
Seniors Drop In Centre	$ 106,370	$ 424,858	$ 318,488
Steelton Senior Centre	$ 63,700	$ 195,245	$ 131,545
			$ -
Heritage Property and Services (includes Northern	**$ 95,656**	**$ 400,549**	$ 304,893
John Rhodes Pool	$ 465,978	$ 1,177,038	$ 711,060
			$ -
Outdoor Pools	**$ -**	**$ 83,180**	**$ 83,180**
Greco Pool	$ -	$ 56,216	$ 56,216
Manzo Pool	$ -	$ 26,964	$ 26,964
Northern Community Centre	$ 240,000	$ 191,861	$ (48,139)

Community Centres	**$ 1,294,910**		**$ 2,932,450**		**$ 1,637,540**
John Rhodes Arena	$ 741,899		$ 1,485,084		$ 743,185
McMeeken	$ 143,566		$ 284,212		$ 140,646
Miscellaneous Concessions	$ 145,445		$ 145,001		$ (444)
Facility Administration	$ 24,000		$ 975,558		$ 951,558
Facilities - Summer Students	$ -		$ 34,035		$ 34,035
					$ -
Lock Operations	**$ -**		**$ 44,050**		**$ 44,050**
Accessibility	**$ -**		**$ 218,771**		$ 218,771
Essar Centre	**$ 1,739,457**		**$ 2,351,815**		**$ 612,358**
					$ -
Community Services Administration	**$ -**		**$ 636,373**		**$ 636,373**
Community Adjustment Committee					

THE CORPORATION OF THE CITY OF SAULT STE MARIE
DISCRETIONARY SERVICES
(BASED UPON 2018 OPERATING BUDGET)

SERVICE DESCRIPTION		OPERATING BUDGET	RAMIFICATIONS OF SERVICE DECREASE
FINANCE DEPARTMENT			
Information technology			**All areas of service are dependent upon computers and software**
Software Licenses and Support Agreements	$	572,860	**Decreases in this area will inhibit mandatory services from meeting**
Hardware Maintenance Agreements	$	64,000	**their required service levels**
Operating Capital Expenditures	$	111,850	Level of support required will depend on level of corporate service
City Wide Are Network Communication Infrastructure Support	$	69,150	delivery
I.T. Salaries and Benefits and other operating	$	1,090,485	
Innovation Center - GIS Service Contract	$	253,000	
	$	2,161,345	All aspects of IT services will be reviewed in 2018 by third party IT Service Delivery Review

Financial Reporting (Quarterly Reports)

The Municipal Act does not specifically reference Information Technology as a mandated service.
Information Technology is the keeper/overseer of critical information whether it be in the form of database information and unstructured data. IT ensures that the information is

- Secure User access control rights
- Secure from Cyber Attacks (Ramsomware, malware, viruses, spam)
- Secure from physical damage (Data Backup)
- Data integrity
- Put policies, procedures, and technical measures in place to prevent unauthorized access, alteration, theft, or physical damage to information systems

CLERK'S DEPARTMENT

Office Services - includes Print shop (copying, printing, collating, binding, folding/inserting, laminating and combo-punching, mail processing	$188,302	More costly to produce documents on floor machines than on print shop machines. In-house printing is more cost effective and timely for many City uses. Impacts efficiency of having centralized mail delivery. Staff resources in this area were reduced in 2016
Corporate Communications - includes implementation of corporate communications plan; including policy development and implementation (visual identity, media relations, social media, corporate website) as well as communications and website/social media content management	$187,690	Impacts customer service, co-ordination of departmental efforts; corporate image and media relations. The services in this area have been added over a 15 year period at no additional cost to the levy

Quality Improvement - includes staff training (in association with Excellence Canada), quality improvement initiatives, corporate strategic plan administration		$23,250	Impacts staff training, improvement and strategic planning initiatives
Council Meetings (meals)		$8,350	Impacts councillors and staff who have no break between work and Council meetings. Also provided for Shaw Cable volunteers and media.
Walk of Fame		$2,000	Impact ability to fund program. Downtown Association also provides funding.
Receptions		$25,650	Impact level of service for protocol and civic receptions. Spending in this area has decreased during this Council term compared to previous terms.
Co-ordination of retirement events	$	27,000	Impacts employee morale, appreciation – currently under review.
		$462,242	

HUMAN RESOURCES DEPARTMENT

Claims management, non-occupational sick leave claims management, WSIB claims appeal consultant	$	110,700	Impacts ability to mitigate increased costs to corporation in management of absenteeism, sick leave and WSIB.
Employee Assistance Plan	$	37,200	Impacts provision of EAP services which assist in maintaining employee wellness and mitigating absenteeism and sick leave costs.
Corporate Recruitment and Training	$	17,850	Impacts skill development and recuitment of staff
	$	165,750	

PARKS

Athletic Parks

113-01	Football	$44,058
113-02	Soccer	$116,894
113-03	Slow-Pitch	$88,635
113-04	Track and Field	$6,751
113-05	Complexes	$24,000
	Total:	$280,338

* Any reduction in this area would have an impact on our Outdoor City run Sportsfield League Programs.

PassiveParks

114-05	Ground Maintenance	$314,823
114-06	Grass Cutting	$308,499
114-07	Playground Maintenance	$175,048
114-08	Structure Maintenance	$90,121
114-09	Passive Parks	$236,518
114-19	Hub Trail	$47,896
115-03	Waterfront Walkway(Boardwalk)	$66,178
116-02	Skateboard Park	$6,296
	Total:	$1,245,379

* Any reduction in this area would have an impact in our City Parks, Sports Fields, Playgrounds, Hub Trail, and the Waterfront Boardwalk.

Greenhouses

117-01	Greenhouse Structure Maintenance	$66,073
117-05	Shrub Bed Maintenance	$29,602
117-06	Showhouse Floral Maintenance	$38,281
117-07	Floral Production Outside	$70,332
117-08	Floral Bed Maintenance	$141,736
117-09	Weed Control	$25,061
	Total:	$371,084

* Any reduction in this area would have an impact on our City floral displays, shrub beds and showhouses.

Forestry

118-01	Residential-Works	$164,665
118-02	Forestry Services	$6,637
118-04	Tree Planting	$47,154
118-06	Elm Program	$23,000
118-11	Emerald Ash Program	$9,300
	Total:	$368,697

* Any reduction in this area would impact our City tree trimming, removals, treatment and tree planting.

Winter

119-08	Rinks-Flood/Plow	$120,634
119-09	Rinks-Bldg/Maintenance	$27,450
119-10	Rinks-Security	$44,760
119-11	General Winter Maintenance	$115,871
	Total:	$308,715

* Any reduction in this area would have an impact on Outdoor Rinks, Skating Oval and Toboggan Hills.

Overhead

	Parks Overhead	$ 633,483

Total Parks Budget: $3,207,696

WINTER CONTROL

Snow Removal

107-02	Snow Removal	$	1,290,444

*Snow removal can be reduced but it should be noted that we were over approx. $60,000 in 2017.

Sidewalk Maintenance

107-08	Sidewalk Plowing	$	294,589
107-09	Sidewalk Sanding	$	245,164
107-16	Sidewalk Sweeping	$	110,379
	Total:	$	650,132

* Any reduction in this area would have a reduced service area contrary to the policy recently approved by Council.

CARPENTRY

Carpentry Division

	Carpentry Division	$	616,490

* Any reduction here would prevent this Division from completing inter-Departmental carpentry work and require outside Contractors signatory to the Unions to bid.

WASTE MANAGEMENT

Multi-family Waste Collection

153-06	Collection - Multi-Family Contract	$	116,680

* Any reduction here would require all multi-family building owners to contract their own waste collection

HHW Depot

152-02	Hazardous Waste		
	City Operation	$	99,200
	HHW Contractor	$	90,830
	Total:	$	190,030

* Any reduction here would impact hours/days/season of operation of the HHW Depot

Environmental Initiatives/Green Committee

154-01	Environmental Initiatives		
	Project and disbursement costs	$	92,070
	Total:	$	92,070

* Any reduction here would impact the ability to complete small energy retrofits (ie. lighting projects) not included in the Asset Mgmt Plan, Public Education campaigns and energy audits.

SANITARY SEWERS

Wood Chipping Contract

152-05	Wood Chipping Contract (at landfill)	$	99,560

* Any reduction here would prevent this material from being chipped. It is currently being used to blend with the biosolids (absorbing some of the water and allow it to be more workable).

CITY OF SAULT STE MARIE
LEGAL

			MANDATORY SERVICES		DISCRETIONARY SERVICES
SERVICE DESCRIPTION	**OPERATING BUDGET**		**LEGISLATIVE AUTHORITY**	**CURRENT LEVEL OF SERVICE**	**RAMIFICATIONS OF SERVICE DECREASE**
Corporate Insurance	$	1,321,955			Exposure to litigation
Vehicle Insurance	$	430,000	Insurance Act	Minimum	
Legal: advisory, representation at courts and tribunals, prepartion of agreements, purchase and sale of land	$	291,155			Exposure to litigation, unsuccessful at courts & tribunals, lack of formal agreements
POA Court-Prosecution & Administration	$	958,725			Function will go to another municipality, lost revenue
FOI Processing	$	350,000.00	MFIPPA	Minimum	
By Law Preparation	$	350,000.00	Municipal Act	Minimum	
Total Mandatory	$	1,130,000			
Total Discretionary	$	2,571,835			
Total 2018 Preliminary Operating Budget	$	3,701,835			

The Corporation of the
City of Sault Ste. Marie

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Al Horsman**

DEPARTMENT: **Chief Administrative Officer**

RE: **Funding for Sault Ste. Marie Economic Development Corporation Restructuring Costs**

PURPOSE

The purpose of this report is to provide Council with an update with respect to the Sault Ste. Marie Economic Development Corporation (SSMEDC) restructuring costs and a recommendation for funding.

BACKGROUND

City staff undertook an assessment of the City's economic development and reported to Council on July 31, 2017 its recommendations. These recommendations included a revised role and efficiencies within SSMEDC resulting in a reduction of City funding to the organization of $444,656. A new Memorandum of Understanding has been drafted based upon the new funding level of $1,204,166 for SSMEDC and was approved by Council at its meeting of February 20, 2018.

ANALYSIS

The change in funding to SSMEDC resulted in an employee complement decrease. Costs incurred in 2017 for restructuring were covered within the 2017 SSMEDC budget as the salaries for a full complement were reflected. Additional costs will be incurred in the 2018 fiscal year for those positions directly affected by the new organization in 2017 plus legal costs of $11,715.

The restructuring costs for 2018 cannot be accommodated by SSMEDC within the new reduced funding level from the City. These costs are extraordinary and do not fall within the normal scope of operations. SSMEDC has advised that they have available internally restricted reserve funds of $148,775, which require their Board approval to utilize, and unrestricted reserve funds of $25,840 assuming full SSMEDC funding of the remaining restructuring costs. Utilizing SSMEDC reserves for the 2018 termination costs would deplete the reserves to

the level that SSMEDC would not be able to leverage other opportunities or mitigate additional unforeseen items.

Staff is therefore recommending that the City provide SSMEDC with a total of $123,775 towards 2018 restructuring costs directly related to the reorganization in 2017 to meet the changed funding level. The City's share can be accommodated within the Contingency Reserve.

FINANCIAL IMPLICATIONS
The Contingency Reserve has available uncommitted funds to cover the City's share of the SSMEDC restructuring costs described in this report.

STRATEGIC PLAN / POLICY IMPACT
This is an operational matter not articulated in the strategic plan.

RECOMMENDATION
It is therefore recommended that Council take the following action:

Resolved that the report of the Chief Administrative Officer dated 2018 03 19 be received and staff be directed to provide one-time funding of $123,775 to Sault Ste. Marie Economic Development Corporation as funded from the City's Contingency Reserve.

Respectfully submitted,



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The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO:	**Mayor Christian Provenzano and Members of City Council**
AUTHOR:	**Lauren Perry, Emergency Management Coordinator**
DEPARTMENT:	**Chief Administrative Officer**
RE:	**Cold Weather Response Plan for Vulnerable Populations**

PURPOSE

The purpose of this report is in response to resolution 8.1 Warming Shelter Plan from the January 22, 2018 Council Meeting.

BACKGROUND

Extreme cold warnings are issued by Environment Canada when very cold temperatures or wind chill creates an elevated risk to health such as frost bite and hypothermia; criteria for Sault Ste. Marie is a temperature of - 40°C or a wind chill of - 40°C.

Information provided by Environment Canada indicates that the Sault Ste. Marie area has experienced 8 days of extreme cold over the last 10 years.

ANALYSIS

Research into municipal cold weather plans/procedures throughout Ontario generally highlight existing programs and services already available in the municipality. These plans/procedures focus on ensuring that all partner agencies, specifically front line staff who would be encountering vulnerable persons are aware of the shelters and outreach programs all ready operating.

There is not a response plan in place, however a response procedure for sheltering vulnerable populations does exist with the not-for-profit Emergency Shelters of Pauline's Place and St. Vincent's Place. Discussions with Social Services reinforce that current infrastructure does and will continue to meet the needs of the City's vulnerable populations. Shelter is available at all times including during extreme cold weather however it is the individual's decision whether to utilize these resources.

One area for improvement identified was increasing awareness; for community members needing shelter and for front line staff and directly impacted agencies

of these cold weather events. Increased awareness would assist in ensuring all populations are made aware of risky weather and hopefully encourage community members to seek appropriate support.

Moving forward the Office of the CAO will compile a list of partners who will be notified when Sault Ste. Marie receives an Extreme Cold Weather alert as issued by Environment Canada. The list of community partners who will be made aware of alerts will include but is not limited to:

- Social Services
- Pauline's Place
- St. Vincent's Place
- Soup Kitchen Community Centre
- Canadian Mental Health Association
- SSM Police Service
- SSM Fire Services
- Central Ambulance Communications Centre
- Media

The intent of these notifications is for front line staff to have information about cold-related health effects and recommend preventive and protective measures for the public, this information can then be shared by staff with the public.

FINANCIAL IMPLICATIONS
There is no financial impact.

STRATEGIC PLAN / POLICY IMPACT
This is an operational matter not articulated in the Strategic Plan.

RECOMMENDATION
It is therefore recommended that Council take the following action:

Resolved that the report of Cold Weather Response Plan for Vulnerable Populations dated 2018 03 19 concerning resolution 8.1 Warming Shelter Plan be received as information.

Respectfully submitted,



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The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Shelley J. Schell CPA, CA Chief Financial Officer & Treasurer**

DEPARTMENT: **Corporate Services**

RE: **2017 Honoraria and Expenses-Mayor & Council and Board & Committee Members**

PURPOSE

The purpose of this report is to provide a summary of Honoraria and Expenses paid during 2017 in accordance with Section 284(1) of The Municipal Act for:

- Mayor and Council, and
- Board and Committee Members

BACKGROUND

Under the current Income Tax Act, section 81(3) the portion of the honorarium that is considered an allowance in the taxation year for expenses incident to the discharge of the person's duties as a Municipal Officer was not included in computing the person's income for the year unless it exceeded 1/2 of the amount that was paid to the person. The 2017 Federal Budget has removed this exemption. The Notice of Ways and Means Motion to Amend the Income Tax Act and Other Legislation section 20, repeals section 81(3) of the Income Tax Act effective January 1, 2019.

ANALYSIS

Not applicable.

FINANCIAL IMPLICATIONS

Honoraria and expenses are within the approved budget.

Honorarium paid to Council will no longer have an exemption effective January 1, 2019 and will be fully taxable at that time.

STRATEGIC PLAN / POLICY IMPACT

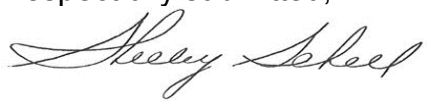
This is an operational matter not articulated in the Corporate Strategic Plan.

RECOMMENDATION

It is therefore recommended that Council take the following action:

Resolved that the report of the Chief Financial Officer & Treasurer dated 2018 03 19 concerning 2017 Honoraria and Expenses (Mayor, Council, Board and Committee Members) be received as information.

Respectfully submitted,



Shelley J. Schell, CPA, CA
Chief Financial Officer/Treasurer

The Corporation of the City of Sault Ste. Marie
Finance Department

Summary of Honoraria and Expenses paid during 2017
for Mayor & Council, Board and Committee Members

Mayor

C. Provenzano	- Honorarium	70,756.14	
	- Car Allowance	4,640.76	
	- Travel - Meeting with Premier's Office and Cabinet Ministers	1,203.73	
	- Poverty Reduction Summit	1,175.74	
	- CANSEC Tradeshow	600.24	
	- NOLUM	496.38	
	- AMO Conference	1,701.88	80,574.87

Councillors

M. Bruni	- Honorarium	22,738.30	
	- Car Allowance	2,577.24	25,315.54
S. Butland	- Honorarium	22,738.30	
	- Car Allowance	2,577.24	
	- Travel - Energy Summit	422.31	
	- AMO Conference	1,948.65	27,686.50
P. Christian	- Honorarium	22,738.30	
	- Car Allowance	2,577.24	25,315.54
F. Fata	- Honorarium	22,738.30	
	- Car Allowance	2,577.24	25,315.54
O. Grandinetti	- Honorarium	7,870.95	
	- Car Allowance	859.08	8,730.03
S. Hollingsworth	- Honorarium	22,738.30	
	- Car Allowance	2,577.24	
	- Travel - Great Lakes Economic Forum	1,838.51	
	- Community Heritage Ontario Conference	988.81	
			28,142.86
J. Hupponen	- Honorarium	22,738.30	
	- Car Allowance	2,577.24	25,315.54
J. Krmpotich	- Honorarium	20,864.25	
	- Car Allowance	2,362.47	23,226.72
S. Myers	- Honorarium	22,738.30	
	- Car Allowance	2,577.24	
	- Travel - AMO Conference	2,012.03	27,327.57

**Summary of Honoraria and Expenses paid during 2017
for Mayor & Council, Board and Committee Members**

R. Niro	- Honorarium	22,738.30	
	- Car Allowance	2,577.24	25,315.54
R. Romano	- Honorarium	8,495.62	
	- Car Allowance	859.08	9,354.70
M. Shoemaker	- Honorarium	22,738.30	
	- Car Allowance	2,577.24	25,315.54
L. Turco	- Honorarium	22,738.30	
	- Car Allowance	2,577.24	
	- Travel - AMO Board Meetings	1,670.14	
	- AMO Conference	2,819.36	29,805.04

Committee of Adjustment

S. Farrell	- Honorarium	494.52
A. Gualazzi	- Honorarium	1,074.18
S. Meades	- Honorarium	532.56
J. Moore	- Honorarium	1,149.86
A. Rossi	- Honorarium	989.04

Committee of Revision

N. Bailey	- Honorarium	0.00
E. Filice	- Honorarium	0.00
L.Robibaro	- Honorarium	0.00
G. Lebel	- Honorarium	0.00

Fence Viewers Committee

E. Filice	- Honorarium	0.00
R. O'Neill	- Honorarium	0.00
L. Robibaro	- Honorarium	0.00

Police Services Board

J.A. Bruno	- Honorarium	1,815.83

D. Hilsinger	- Honorarium	2,027.23
R. Webb	- Honorarium	1,646.88

Residential Standards Committee

N. Bailey	- Honorarium	41.20
C. O'Brien	- Honorarium	75.34
L. Robibaro	- Honorarium	41.20

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Christine Pascall, CPA, CA Manager of Accounting & City Tax Collector**

DEPARTMENT: **Corporate Services**

RE: **Property Tax Appeals**

PURPOSE
Staff is seeking Council approval of property tax appeals as required pursuant to Section 357 of the *Municipal Act.*

BACKGROUND
A listing of applications received for adjustment of realty taxes pursuant to Section 357 of the *Municipal Act* is attached to this report

ANALYSIS
The Municipal Property Assessment Corporation has recommended the amount of the assessment to be adjusted.

FINANCIAL IMPLICATIONS
There is an annual budget allocation for tax write-offs. The decreased revenue of $11,982.53 can be accommodated within the existing budget allocation.

STRATEGIC PLAN / POLICY IMPACT
Not applicable

RECOMMENDATION
It is therefore recommended that Council take the following action:

Resolved that the report of the Manager of Accounting & City Tax Collector dated 2018 03 19 concerning Property Tax Appeals be received and the recommendation that the tax records be amended pursuant to Section 357 of the Municipal Act be approved.

Respectfully submitted,



Christine Pascall, CPA, CA
Manager of Accounting and City Tax Collector
705.759.5276
c.pascall@cityssm.on.ca

APPLICATION TO COUNCIL TO CANCEL
OR REFUND PROPERTY TAXES PURSUANT TO SECTION 357
OF THE MUNICIPAL ACT, 2001

THE CORPORATION OF THE CITY OF SAULT STE. MARIE
PROPERTY TAX APPEALS

DATE: 2018 03 19

	PROPERTY ADDRESS	PERSON ASSESSED		TAX CLAS	REASON	APPEAL NO.	TAXES	INTEREST	TOTAL
					2017				
010-003-026	00122 Lake Street	Montgomery Cheryl Roberta		RT	C	17-036	2,355.18		2,355.18
010-052-011-07	00383 Chambers Avenue	Porter Jewel Ann	Porter Brian M.	RT	D	17-037	Confirmed		
020-017-083	00934 Queen Street East	Colter Technical Services Inc.		CT/RT	A	17-038	1,107.77		1,107.77
020-042-064	00518 Queen Street East	Peter Stone Holdings Ltd.		CT	A	17-039	711.93	31.20	743.13
020-042-065	00514 Queen Street East	Peter Stone Holdings Ltd.		CT	A	17-040	3,387.62	148.27	3,535.89
020-042-157	00523 Queen Street East	Peter Stone Holdings Ltd.		CT	A	17-041	1,170.70	51.59	1,222.29
020-042-172	00659 Queen Street East	1704768 Ontario Limited		CT/RT	F	17-042	329.62	10.29	339.91
020-042-200	00079 Brock Street	Stone Peter George		CT/IT	A	17-043	932.19	41.28	973.47
030-082-006-02	00816 Black Road	2529469 Ontario Inc.		CT/RT	A	17-044	1,241.71	18.04	1,259.75
050-025-074-01	00000 Bitonti Crescent	Thrive Child Development Centre		RT	A	17-045	89.73	11.19	100.92
050-070-028	01460 Peoples Road	Guitard Daniel Claude	Ritchie Treena Marie	RT	D	17-046	344.22		344.22
						REPORT TOTAL	**11,670.67**	**311.86**	**11,982.53**

A. REALTY TAX CLASS CONVERSION
B. BECAME EXEMPT AFTER RETURN OF ROLL
C. RAZED BY FIRE AFTER RETURN OF ROLL
D. DEMOLISHED AFTER RETURN OF ROLL
E. OVERCHARGED BY REASON OF GROSS OR MANIFEST CLERICAL ERROR
F. REAL PROPERTY THAT COULD NOT BE USED FOR A PERIOD OF AT LEAST 3 MONTHS DUE TO REPAIRS OR RENOVATIONS

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Shelley J. Schell, CPA, CA Chief Financial Officer & Treasurer**

DEPARTMENT: **Corporate Services**

RE: **Queenstown Board of Management (O/A The Downtown Association) 2017 Audit Report and 2018 Budget**

PURPOSE

The Queenstown Board of Management (O/A The Downtown Association) Budget for 2018 is included for the approval of Council. The Audited Financial Statements for 2017 of the Queenstown Board of Management (O/A The Downtown Association) are provided for information.

BACKGROUND

The Downtown Association Board of Directors approved their 2018 operating budget on February 27, 2018. As per the Municipal Act, Section 205(2), the budget is to be submitted to the municipality who may approve it in whole or in part but may not add expenditures to it.

ANALYSIS

Not applicable.

FINANCIAL IMPLICATIONS

The 2018 budget estimates of the Downtown Association are not part of the City budget estimates and are only added to the tax bills as a special levy to properties within the Downtown Association's boundaries for collection purposes.

STRATEGIC PLAN / POLICY IMPACT

This is an operational matter not articulated in the Corporate Strategic Plan.

RECOMMENDATION
It is therefore recommended that Council take the following action:

Resolved that the report of the Chief Financial Officer and Treasurer dated 2018 03 19 concerning the Queenstown Board of Management (O/A The Downtown Association) Audited Financial Statements for the year 2017 be received and the recommendation that the Downtown Association Budget for the year 2018 be approved.

Respectfully submitted,



Shelley J. Schell, CPA, CA
Chief Financial Officer/Treasurer
705.759.5355
s.schell@cityssm.on.ca

The Downtown Association
2018 Budget

	2016 Budget	2017 Budget	YTD to December 31	2018 Budget
Income				
Assessments	$ 185,000	$ 185,000	$ 165,526.85	$ 185,000
Assessment Write-offs and rebates	$ (20,000)	$ (20,000)		$ (20,000)
Total Assessments Total	**$ 165,000**	**$ 165,000**	**$ 165,526.85**	**$ 165,000**
Other Income				
Associate Membership	$ 150			
Moonlight Magic Sponsorship			$ 2,093.00	$ 1,975.00
Banner Program			$ -	
Billboard/Promotional Signage			$ 1,800.00	
Street Party Sponsorship			$ 4,313.58	$ 3,000.00
Rental Income			$ 1,850.00	$ 1,500.00
Miscellaneous Income			$ 466.93	
Interest Income			$ 289.93	
Total Other Income	$ 150	**$ -**	**$ 10,813.44**	**$ 6,575.00**
Total Income	$ 185,150	**$ 165,000**	**$ 176,340.29**	**$ 171,575.00**
Expenses				
Salaries & Benefits				
Payroll	$ 80,631.19	$ 87,500	$ 76,153.53	$ 79,785.71
Subsidized Salaries			$ 13,004.19	
NOHFC Intern				$ 19,600.00
Vehicle Costs			$ 120.00	$ 240.00
Employer Share of CPP		$ 4,331	$ 5,814.23	$ 6,821.34
Employer share of EI		$ 1,997	(unknown CPP/EI break)	$ 2,639.92
WSIB	$ 617.80	$ 681	$ 702.77	$ 800.00
Payroll Subsidy		$ (4,500)	$ (18,874.80)	
Grants and Other				$ (17,640.00)
Total Salaries & Benefits	$ 81,248.99	$ 90,009	$ 76,919.92	**$ 92,246.97**
Office Expenses				
Rent	$ 19,049.52	$ 19,050	$ 19,050.00	$ 19,050.00
Office Cleaning	$ 1,000.00	$ 300	$ 90.94	$ 200.00
Supplies	$ 1,000.00	$ 800	$ 1,304.95	$ 1,300.00
Equipment Repairs & Maintenance	$ 1,050.00	$ 1,000	$ 39.52	$ 200.00
Telephone/Internet	$ 3,110.99	$ 2,250	$ 1,779.75	$ 2,000.00
Insurance	$ 2,340.00	$ 3,340	$ 2,461.00	$ 2,750.00
Postage & Courier	$ 300.00	$ 250	$ 35.82	$ 50.00
Photocopies	$ 307.09	$ 275	$ 657.77	$ 700.00
Recruiting	$ -	$ 200	$ -	$ 400.00
Total Office Expenses	$ 28,157.60	**$ 27,465**	**$ 25,419.75**	**$ 26,650.00**
Office Furniture & Equipt			$ 249.20	
Memberships/Publications	$ 800.00	**$ 375**	$ 550.80	$ 560.00
Marketing & Communication				
Advertising				
Radio	$ 1,250.00	$ 1,198	$ 1,198.00	$ 1,198.00
Billoard	$ -	$ 1,700	$ 3,942.39	$ 1,700.00
On-Line	$ -	$ 1,405	$ 1,375.80	$ 1,405.00
Social Media	$ 600.00	$ 298	$ 209.04	$ 500.00
Television				$ 500.00
Misc (Bus ads./Tshirts , etc)				$ 326.00
Print	$ 1,250.00	$ 2,268	$ 2,064.78	$ 2,268.00
Total Advertising	$ 3,100.00	**$ 6,869**	**$ 8,790.01**	**$ 7,897.00**
Downtown Newletters/Member publication	$ 900.00	$ 1,000	$ 7.42	$ 500.00
Outreach/Promotions	$ 300.00		$ 56.97	$ 100.00
Greyhound Promotions	$ -			
Board Elections	$ 300.00			$ 300.00
Total Communications		**$ 1,000**	**$ 64.39**	$ 900.00
Total Marketing & Communications	$ 4,600.00	**$ 7,869**	**$ 8,854.40**	**$ 8,797.00**
Events & Activities				
Downtown Street Party		$ 9,350	$ 14,051.19	$ 9,350
Shadows of the Mind Film Festival				
Moonlight Magic		$ 4,120	$ 3,963.88	$ 4,120
Greyhounds Season Opener				
Greyhounds Playoff Party				
New Initiatives		$ 500	$ 243.20	$ 1,500
Queen Street Cruise		$ 1,000	$ 1,000.00	
Promotions				
Maintenance and Beautification			$ 2,080.72	

The Downtown Association
2018 Budget

	2016 Budget	2017 Budget	YTD to December 31	2018 Budget
Total Events & Activities	$ 19,958.46	**$ 14,970**	**$ 19,258.27**	**$ 14,970.00**
Meetings & Seminars				
Board Meetings	$ 1,200.00	$ 500	$ -	$ 500
Other		$ 450	$ 157.20	$ 450.00
Conferences and Training		$ 2,000	$ 1,081.66	$ 1,450.53
AGM	$ 572.74	$ 600	$ 450.80	$ 600.00
Total Meetings & Seminars	$ 1,772.74	**$ 3,550.00**	**$ 1,689.66**	**$ 3,000.53**
Professional Fess				
Accounting/Audit	$ 3,765.12	$ 4,250	$ 3,459.84	$ 4,250.00
Bookkeeping	$ 1,780.79	$ 2,000	$ 3,405.31	$ 3,625.50
Total Professional Fees	$ 5,545.91	**$ 6,250**	**$ 6,865.15**	**$ 7,875.50**
Streetscaping & Beautification				
Security		$ 1,045	$ 1,063.18	$ 1,100.00
Lights/PUC	$ 1,780.79	$ 1,800	$ 1,280.75	$ 1,800.00
Street Unity Beautification		$ 8,000	$ 1,272.96	$ 8,000.00
Iniatiatives	$ 21,862.09	$ 2,500		$ 3,000.00
Total Streetscaping & Beautification	$ 22,883.44	**$ 13,345**	**$ 3,616.89**	**$ 13,900.00**
Miscellaneous				
Downtown Development Initiative	$ -			
Amortization	$ -			
Grant/Consultant Leverage				$ 2,500.00
Software and Licencing		992	$ 794.42	$ 800.00
Miscellaneous			$ 90.44	$ 100.00
Bank Service Charge		$ 175	$ 160.47	$ 175.00
Total Miscellaneous		**$ 1,167**	**$ 1,045.33**	**$ 3,575.00**
Total Expenses		**$ 165,000**	**$ 156,354.32**	**$ 171,575.00**
Net income/loss prior to capital				**$ -**
Capital Improvements DTA		**$ 7,694**	$ 3,541.88	$ 3,500.00
Speaker Replacement Estimate		**$ 30,000**	$ 8,343.07	
Destination/Tourism Assessment				$ 15,000.00
City Collaboration				$ 10,000.00
Total Capital expenses				$ 28,500.00
Net Income/(Loss)		**$ (37,694)**	**$ 8,101.02**	**$ (28,500.00)**

Financial Statements of

BOARD OF MANAGEMENT OF QUEENSTOWN, THE SAULT STE. MARIE CENTRAL BUSINESS DISTRICT IMPROVEMENT AREA

Year ended December 31, 2017

KPMG LLP
111 Elgin Street, Suite 200
Sault Ste. Marie ON P6A 6L6
Canada
Telephone (705) 949-5811
Fax (705) 949-0911

INDEPENDENT AUDITORS' REPORT

To the Members of the Board of Management of Queenstown, The Sault Ste. Marie Central Business District Improvement Area and Members of Council, Inhabitants and Ratepayers of The Corporation of the City of Sault Ste. Marie

We have audited the accompanying financial statements of the Board of Management of Queenstown, The Sault Ste. Marie Central Business District Improvement Area, which comprise the statement of financial position as at December 31, 2017, and the statements of operations and accumulated surplus, changes in net financial assets and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

KPMG LLP is a Canadian limited liability partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity.
KPMG Canada provides services to KPMG LLP.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Board of Management of Queenstown, The Sault Ste. Marie Central Business District Improvement Area as at December 31, 2017, and its results of operations, its changes in net financial assets and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

Sault Ste. Marie, Canada
February 13, 2018

BOARD OF MANAGEMENT OF QUEENSTOWN, THE SAULT STE. MARIE CENTRAL BUSINESS DISTRICT IMPROVEMENT AREA

Statement of Financial Position

December 31, 2017, with comparative information for 2016

	2017	2016
Financial assets		
Cash	$ 90,907	$ 73,346
Term deposit	27,282	27,139
Accounts receivable	13,152	5,931
Total financial assets	131,341	106,416
Financial liabilities		
Accounts payable and accrued liabilities	17,002	9,085
Due to the City of Sault Ste. Marie	724	691
Total financial liabilities	17,726	9,776
Net financial assets	113,615	96,640
Non-financial assets		
Tangible capital assets (note 2)	22,550	14,280
Prepaid expenses	2,016	1,386
Total financial assets	24,566	15,666
Commitment (note 5)		
Accumulated surplus (note 4)	$ 138,181	$ 112,306

The accompanying notes are an integral part of the financial statements.

On behalf of the Board:

_____ Director

_____ Director

BOARD OF MANAGEMENT OF QUEENSTOWN, THE SAULT STE. MARIE CENTRAL BUSINESS DISTRICT IMPROVEMENT AREA

Statement of Operations and Accumulated Surplus

Year ended December 31, 2017, with comparative information for 2016

	Budget (note 3)	2017	2016
Revenue:			
Assessments	$ 185,000	$ 184,986	$ 184,998
Grants and other	4,500	18,875	6,572
Events	–	9,074	1,073
Rental Income	–	1,850	–
Interest	–	143	279
Total revenue	189,500	214,928	192,922
Expenses:			
Wages and benefits	94,509	96,405	75,860
Downtown development initiative	–	–	35,000
Rent	19,050	19,050	19,050
Assessments written-off and rebates	20,000	19,892	18,994
Events and activities	14,970	15,482	13,545
On street costs	12,300	8,411	9,573
Professional fees	7,295	6,865	9,379
Promotion and marketing	7,869	8,854	8,964
Office	4,192	4,997	5,479
Telephone and internet	2,250	1,780	2,645
Insurance	3,340	1,830	1,885
Meetings and seminars	3,550	1,690	1,300
Amortization of tangible capital assets	3,616	3,616	1,758
Miscellaneous	175	181	159
Total expenses	193,116	189,053	203,591
Annual surplus (deficit)	(3,616)	25,875	(10,669)
Accumulated surplus, beginning of year	112,306	112,306	122,975
Accumulated surplus, end of year	$ 108,690	$ 138,181	$ 112,306

The accompanying notes are an integral part of the financial statements.

BOARD OF MANAGEMENT OF QUEENSTOWN, THE SAULT STE. MARIE CENTRAL BUSINESS DISTRICT IMPROVEMENT AREA

Statement of Changes in Net Financial Assets

Year ended December 31, 2017, with comparative information for 2016

	Budget (note 3)	2017	2016
Annual surplus (deficit)	$ (3,616)	$ 25,875	$ (10,669)
Acquisition of tangible capital assets	(37,964)	(11,886)	(14,788)
Amortization of tangible capital assets	3,616	3,616	1,758
	(37,964)	17,605	(23,699)
Change in prepaid expenses	–	(630)	(1,386)
Change in net financial assets	(37,964)	16,975	(25,085)
Net financial assets, beginning of year	96,640	96,640	121,725
Net financial assets, end of year	$ 58,676	$ 113,615	$ 96,640

The accompanying notes are an integral part of the financial statements.

BOARD OF MANAGEMENT OF QUEENSTOWN, THE SAULT STE. MARIE CENTRAL BUSINESS DISTRICT IMPROVEMENT AREA

Statement of Cash Flows

Year ended December 31, 2017, with comparative information for 2016

	2017	2016
Cash provided by (used in):		
Operating activities:		
Annual surplus (deficit)	$ 25,875	$ (10,669)
Item not involving cash:		
Amortization of tangible capital assets	3,616	1,758
	29,491	(8,911)
Change in non-cash assets and liabilities:		
Increase (decrease) in accounts receivable	(7,221)	16,475
Increase in prepaid expenses	(630)	(1,386)
Increase in accounts payable and accrued liabilities	7,917	1,464
Increase in due to the City of Sault Ste. Marie	33	691
	29,590	8,333
Capital activities:		
Cash used to acquire tangible capital assets	(11,886)	(14,788)
Investing activities:		
Increase in term deposit	(143)	(279)
Net change in cash	17,561	(6,734)
Cash, beginning of year	73,346	80,080
Cash, end of year	$ 90,907	$ 73,346

The accompanying notes are an integral part of the financial statements.

The Board of Management of Queenstown, The Sault Ste. Marie Central Business District Improvement Area (the "Board") was established on September 28, 1976 to foster and enhance commercial interests in the downtown business improvement area of Sault Ste. Marie, Ontario.

1. Significant accounting policies:

The financial statements of the Board are the representation of management prepared in accordance with Canadian generally accepted accounting principles for government organizations, as recommended by the Public Sector Accounting Board of the Chartered Professional Accountants of Canada. Significant aspects of the accounting policies adopted by the Board are as follows:

(a) Non-financial assets:

Non-financial assets are not available to discharge existing liabilities and are held for use in the provision of services. They have useful lives extending beyond the current year and are not intended for sale in the ordinary course of operations.

(b) Tangible capital assets:

Tangible capital assets are recorded at cost which includes amounts that are directly attributable to acquisition, construction, development or betterment of the asset. The cost, less residual value of the tangible capital assets is amortized on the following annual rates and methods:

Asset	Method used	Rate
Furniture and equipment	Declining-balance	20%
Computer equipment	Declining-balance	30%
Signage	Straight-line	5 years
Leasehold improvements	Straight-line	10 years

(c) Use of estimates:

The preparation of the financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenue and expenses during the reporting periods. Actual results could differ from those estimates.

1. Significant accounting policies (continued):

(d) Revenue recognition:

Government transfers are recognized in the financial statements as revenues in the period in which events giving rise to the transfer occur providing the transfers are authorized, any eligibility criteria have been met, and reasonable estimates of the amounts can be made.

Assessments are recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

Events and rent revenues are recognized when the services are performed, collection of the relevant receivable is probable, persuasive evidence of an arrangement exists and fees are fixed or determinable. Amounts received for future services are deferred until the service is provided.

2. Tangible capital assets:

Cost	Balance at December 31, 2016	Additions	Disposals	Balance at December 31, 2017
Furniture and equipment	$ 3,505	$ 1,747	$ –	$ 5,252
Computer equipment	7,728	1,795	–	9,523
Signage	14,788	–	–	14,788
Leasehold improvements	12,581	–	–	12,581
Work in process	–	8,344	–	8,344
Total	$ 38,602	$ 11,886	$ –	$ 50,488

Accumulated amortization	Balance at December 31, 2016	Disposals	Amortization expense	Balance at December 31, 2017
Furniture and equipment	$ 2,738	$ –	$ 328	$ 3,066
Computer equipment	7,525	–	331	7,856
Signage	1,478	–	2,957	4,435
Leasehold improvements	12,581	–	–	12,581
Total	$ 24,322	$ –	$ 3,616	$ 27,938
Net book value	$ 14,280			$ 22,550

3. Budget figures:

The operating budget approved by the Board for 2017 was prepared for the purpose of establishing the estimated revenues and expenses for fiscal 2017. The budget established does not include a budget for the amortization of tangible capital assets. The Board also does not budget activity within reserves.

The budget figures presented in the Statement of Operations and the Statement of Changes in Net Financial Assets have been restated to be comparable with the Public Sector Accounting Standards. A reconciliation of the Board approved budget and the budget presented in these financial statements is presented below:

Adopted budget:	
Budgeted deficit for the year	$ (37,964)
Adjustments to adopted budget:	
Acquisition of tangible capital assets	37,964
Amortization of tangible capital assets	(3,616)
Restated budgeted annual deficit	$ (3,616)

4. Accumulated surplus:

Accumulated surplus is comprised of:

	2017	2016
Invested in tangible capital assets	$ 22,550	$ 14,280
Operating fund surplus	115,631	98,026
	$ 138,181	$ 112,306

5. Commitment:

The Board leases its premises with a minimum annual lease payment of $18,720 plus applicable taxes. The lease expires January 31, 2020.

6. Segmented reporting:

The Chartered Professional Accountants of Canada Public Sector Accounting Handbook Section PS2700 – Segmented Disclosures establishes standards on defining and disclosing segments in a government's financial statements. Government organizations that apply these standards are encouraged to provide the disclosures established by this section when their operations are diverse enough to warrant such disclosures. The Board has only one identifiable segment, considered to be fostering and enhancing commercial interests in the downtown business improvement area of Sault Ste. Marie, Ontario as presented in these financial statements.

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Tim Gowans, Manager of Purchasing**

DEPARTMENT: **Finance Department**

RE: **RFP – Armoured Car Service**

PURPOSE

The existing Contract for Armoured Car Service as required by various City Departments for the secure transportation of cash receipts to the City's Bank has expired. A Proposal with five (5) year pricing commencing April 1, 2018 has been obtained. Staff is seeking Council approval of the recommendation contained in this report.

BACKGROUND

Finance has researched the availability of suppliers performing this service locally on a five (5) day per week basis. It has been determined that Brinks Canada Limited is the sole local provider with this capability. Approval of sole sourcing of this Contract is requested on this basis in accordance with the Purchasing By-law when the service can only be supplied by a particular supplier. Brinks Canada Limited is the incumbent and has been successfully and efficiently providing this service to the City for many years.

ANALYSIS

Brinks Canada Limited has provided firm pricing for the five (5) years of the Contract for each of the four (4) locations where it is required. Pricing for each location varies based on the weekly frequency of pickups required. The base pricing will apply for years 1 and 2, with increases in years 3, 4 and 5.

FINANCIAL IMPLICATIONS

The cost of services for the five (5) year period commencing April 1, 2018 will be approximately $151,000 plus HST. This is an approximate $7,000 plus HST decrease from the present pricing over the duration of the Contract.

STRATEGIC PLAN / POLICY IMPACT

This is an operational matter not articulated in the Corporate Strategic Plan.

RECOMMENDATION

Resolved that the report of the Manager of Purchasing dated 2018 03 19 be received and the recommendation that the Proposal submitted by Brinks Canada Limited for Armoured Car Service for five (5) years, commencing April 1, 2018, be approved, on a sole source basis.

By-law 2018-54 authorizing signature of the Contract with Brinks Canada Limited for Armoured Car Service appears elsewhere on the Council Agenda.

Respectfully submitted,



Tim Gowans
Manager of Purchasing
705.759.5298
t.gowans@cityssm.on.ca

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Tim Gowans, Manager of Purchasing**

DEPARTMENT: **Finance Department**

RE: **Tender for Selected Granular Materials**

PURPOSE

Attached hereto for your information and consideration is a summary of the tenders received for the supply of Selected Granular Materials as required by the City Corporation for the 2018 and 2019 Seasons. Staff is seeking Council approval of the tender recommendation.

BACKGROUND

The tender was publicly advertised and tender documents forwarded to all firms on our bidders list. A public opening of the tenders was held February 21, 2018 with the Deputy City Clerk in attendance.

ANALYSIS

The tenders received have been thoroughly evaluated and reviewed, taking into consideration pit locations, job requirement locations and prices, with the Superintendent, and Director of Public Works. We have determined that issuing a Standing Order to each firm, and using the different pit locations with reference to the job site location, along with the lowest tendered price, will best suit the construction needs of the Works Centre.

Also included on the summary is the pricing submitted by the sole supplier, for alternative granular products, for which there is a need in certain construction applications.

FINANCIAL IMPLICATIONS

Funding for the purchase of various Granular Materials as required will be drawn from various Construction accounts.

STRATEGIC PLAN / POLICY IMPACT

This is an operational matter not articulated in the Corporate Strategic Plan.

RECOMMENDATION

Resolved that the report of the Manager of Purchasing dated 2018 03 19 be received and the recommendation that the tender for the supply of Selected Granular Materials for the 2018 and 2019 Seasons be awarded on an as required basis, be approved. Staff will use all pricing supplied, along with the City job site location and availability determined by the Superintendent of Public Works and his staff for the lowest cost rating for each job as they arise, based on the submitted pricing.

Further that the recommendation that the City's requirements for Blast Furnace Slag be awarded to Inter-Ontario Equipment Rental & Repair Ltd. for a period of one (1) year at their tendered prices of $7.00 per tonne plus HST for 7/8" Minus Granular, and $6.85 per tonne plus HST for Nut Slag, be approved.

Respectfully submitted,



Tim Gowans
Manager of Purchasing
705.759.5298
t.gowans@cityssm.on.ca

FINANCE DEPARTMENT
PURCHASING DIVISION
BUDGET: DRAWN FROM VARIOUS CONSTRUCTION ACCOUNTS

RECEIVED: February 21, 2018
FILE: #2018PWE-PWT-21-T

SUMMARY OF TENDERS
GRANULAR MATERIALS (PRICES AT PITS)

	BRANDES AGGREGATES SAULT STE. MARIE, ON		PIONNER CONSTRUCTION INC. SAULT STE. MARIE, ON		POSSAMAI CONSTRUCTION SAULT STE. MARIE, ON		INTER-ONTARIO EQUIP. SAULT STE MARIE, ON
Description	**First Year Firm** Pricing per Tonne	**Second Year Firm** Pricing per Tonne	**First Year Firm** Pricing per Tonne	**Second Year Firm** Pricing per Tonne	**First Year Firm** Pricing per Tonne	**Second Year Firm** Pricing per Tonne	One Year Firm Pricing Per Tonne (Alternate-Slag Products)
Granular "B"	$4.55	$4.69	$3.59	$3.66	$4.85	$4.95	
22.4 mm Granular "A"	$8.30	$8.55	$8.51	$8.68	$8.75	$8.95	Granular "A" 7/8" Minus $7.00
Sewer Bedding and Cover Material	$7.20	$7.42	$6.83	$6.97	$5.25	$5.35	
37.5 mm Clear Stone	$21.65	$22.30	$25.05	$25.55	$24.00	$24.95	Nut Slag (7/8" x 2-1/2") $6.85
Pit Location:	2125 Great Northern Road		845 Old Goulais Bay Road		Maki Road Pit Rupert Acres Pit (Clear Stone)		

Note: Applicable taxes are extra. Transportation of material at additional cost by the City's forces.
Orders will be issued to the Bidder only after the lowest cost rating is determined by using their tendered prices plus transportation costs to each City job site as required
It is my recommendation that Standing Orders be issued to all Vendors, with no guarantee to any one firm.

Tim Gowans
Manager of Purchasing

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Tim Gowans, Manager of Purchasing**

DEPARTMENT: **Finance Department**

RE: **RFP – Design, Supply & Install a Splash Pad – Bellevue Park (2018CDE-CS-PK-01-P)**

PURPOSE

This report has been prepared for your information and consideration, on behalf of the Evaluation Committee, concerning proposals received for the Design, Supply and Installation of a Splash Pad for Bellevue Park. Staff is seeking Council approval of the Evaluation Committee's recommendation.

BACKGROUND

The Request for Proposal was publicly advertised and RFP documents forwarded to all firms on our bidders list. Proposals were required to be submitted for consideration no later than 4:00 p.m. on February 28, 2018.

ANALYSIS

Proposals from four (4) proponents were received prior to the closing date:

A.B.C. Recreation Ltd., Paris, ON
Acapulco Pools Limited, Kitchener, ON
CRCS Recreation, Sudbury, ON
Diamond Head Sprinklers Inc., Elmvale, ON

The proposals received have been evaluated by a committee comprised of staff from Community Development & Enterprise Services, Public Works & Engineering Services, and Corporate Services.

It is the consensus of the Evaluation Committee that the proponent scoring the highest in the evaluation process is CRCS Recreation of Sudbury, ON.

A report of the Manager of Culture & Recreation further detailing the project appears elsewhere on the Council Agenda.

FINANCIAL IMPLICATIONS
CRCS has proposed a cost of $267,250.00 plus HST for a Flow Through Splash Pad to be installed at Bellevue Park. Total approved funding to date amounts to $394,000. The proposed cost can be accommodated within this allocation.

STRATEGIC PLAN / POLICY IMPACT
This Request for Proposal is linked to Delivery of New Infrastructure as listed in the Infrastructure Focus area of the Corporate Strategic Plan.

RECOMMENDATION
Resolved that the report of the Manager of Purchasing dated 2018 03 19 be received and the recommendation that the proposal submitted by CRCS Recreation for the Design, Supply & Installation of a Splash Pad for Bellevue Park, be approved.

Respectfully submitted,



Tim Gowans
Manager of Purchasing
705.759.5298
t.gowans@cityssm.on.ca

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Virginia McLeod, Manager of Recreation and Culture**

DEPARTMENT: **Community Development and Enterprise Services**

RE: **Splash Pad Development and Design Update**

PURPOSE

The purpose of this report is to provide Council with additional information regarding the splash pad development and design not included in the report from the Manager of Purchasing regarding RFP – Design, Supply & Install a Splash Pad – Bellevue Park.

BACKGROUND

The Splash Pad Sub-Committee along with City staff have been working on the various aspects of the development of the splash pad to be located at Bellevue Park. Request for proposals (RFP) for the design, delivery, and installation of the splash pad portion of the project closed on February 28th, 2018.

A number of factors were taken into consideration when reviewing and evaluating the proposals:

1. The design and layout of the Splash Pad area must incorporate the principle of “inclusive” or “play for all”. All disabilities, as defined in the Ontario Human Rights Code, were considered to ensure the play space will satisfy the requirements of the Accessibility for Ontarians with Disabilities (AODA).
2. Play zones including, but not limited to, a high action area, intermediate play area and a toddler area. High action water play features shall be incorporated in a manner which does not compromise the play facility use by very young children.
3. Components should be colorful and the design should exhibit a smooth play transition from one play component to the next; exhibiting overall continuity, high quality, variety of play for users of varied abilities.
4. The community survey results were used to develop the RFP and as reference point when evaluating the components included in the designs.
5. Maintenance, warranty, and materials were also taken into consideration.

ANALYSIS
As indicated in the report from the Manager of Purchasing, CRCS Recreation is recommended by the evaluating committee for the award for design, supply and installation of the splash pad at Bellevue Park.

Attached to this report are two 3-D drawings which illustrate the components that are included in the design that has been selected. Features included in the design address the principle of “inclusive” or “play for all”. A number of the features are interactive allowing the user to activate the spray by jumping on the feature, change the direction of the spray or control the flow of water.

The Discovery Stream is designed to encourage engaging and mindful play for all ages and abilities as users interact and explore cause and effect.

Ground sprays provide a variety of experiences; creating tunnels, jets that change heights as user interact and cover the nozzles.

High action features incorporated include the Aqua Drop which is a translucent bucket that fills and dumps water and the Sneaky Soaker which secretly fills with water and then tips over, dousing unsuspecting water players.

Placement of the features allowed for smooth transitions and separation between high action areas and features designed for toddlers.

FINANCIAL IMPLICATIONS
The estimated total project cost for the development of the splash pad and supporting infrastructure is $550,000. To date the project has secured total approved funding of $394,000. The report from the Manager of Purchasing recommends that the proposal from CRCS at a cost of $267,250.00 plus HST for a Flow Through Splash Pad be approved and can be accommodated within the current allocation.

STRATEGIC PLAN / POLICY IMPACT
This project supports the Corporate Strategic Plans Focus Area: Quality of Life.

RECOMMENDATION
It is therefore recommended that Council take the following action:

“That the report of the Manager of Recreation and Culture dated 2018 03 19 concerning Splash Pad Development and Design Update be received as information. “

Respectfully submitted,



Virginia McLeod
Manager Recreation & Culture
705.759.5311
v.mcleod@cityssm.on.ca


waterplay
BELLEVUE PARK, SAULT STE. MARIE, ON_Option_1
COPYRIGHT 2018 WATERPLAY SOLUTIONS CORP.
All graphics and visual representations are the artist's impressions of the design and cannot be regarded as representation of fact. Local regulations may require the use of impact attenuating surfaces for some installations—check local codes prior to final design and installation. Waterplay does not recommend seating in the overspray zone due to incidental water.


waterplay
BELLEVUE PARK, SAULT STE. MARIE, ON_Option_1
COPYRIGHT 2018 WATERPLAY SOLUTIONS CORP.
All graphics and visual representations are the artist's impressions of the design and cannot be regarded as representation of fact. Local regulations may require the use of impact attenuating surfaces for some installations—check local codes prior to final design and installation. Waterplay does not recommend seating in the overspray zone due to incidental water.

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO:	**Mayor Christian Provenzano and Members of City Council**
AUTHOR:	**Virginia McLeod, Manager Recreation & Culture**
DEPARTMENT:	**Community Services Department**
RE:	**Donations – Kiwanis Club of Lakeshore & Kiwanis Club of Lakeshore Foundation**

PURPOSE

The purpose of this report is to inform Council of the generous matching donations by Kiwanis Club of Lakeshore in the amount of $42,500 and the Kiwanis Club of Lakeshore Foundation in the amount of $42,500 for the purchase and construction of a shelter adjacent to the splash pad at Bellevue Park. Staff recommends that Council accept the donations and authorize staff to enter into agreements which outline both entities responsibilities.

BACKGROUND

In 2017 The Kiwanis Club of Lakeshore generously supported the development of the Disc Golf course at Penhorwood Park.

The Kiwanis Club of Lakeshore along with the The Kiwanis Club of Lakeshore Foundation are donating funds for the development of a shelter which will be located next to the new Splash Pad at Bellevue Park.

ANALYSIS

The Kiwanis Club of Lakeshore is donating $42,500 and The Kiwanis Club of Lakeshore Foundation is also donating $42,500 for a combined donation of $85,000. The donation will be used for the development of a shelter which will be adjacent to the splash pad located at Bellevue Park.

The City's Donation Policy was followed. Staff's recommendation is that Council authorize staff to enter into an agreements with the Kiwanis Club of Lakeshore and the The Kiwanis Club of Lakeshore Foundation with regards to ownership and maintenance of the shelter.

Appropriate signage would be placed at the shelter acknowledging the donation.

FINANCIAL IMPLICATIONS
The estimated total project cost for the splash pad development including the shelter and surrounding ammenties is $550,000. The project has secured previously approved funding of $300,000. The combined donation of $85,000 will cover the costs associated with the development of the shelter. The total funds received to date including this donation is $394,000.

STRATEGIC PLAN/POLICY IMPACT
This project supports the Focus Area: Quality of Life.

RECOMMENDATION
It is therefore recommended that Council take the following action:

That the report of the Manager of Recreation and Culture dated 2018 03 19 concerning the generous matching donations by the Kiwanis Club of Lakeshore in the amount of $42,500 and the Kiwanis Club of Lakeshore Foundation also in the amount of $42,500 for the purchase and construction of a shelter adjacent to the splash pad at Bellevue Park be received.

Staff recommends that Council accept the donations and authorize staff to enter into agreements which outline the responsibilities of both entities.

The relevant By-laws 2018-52 and 2018-53 appear elsewhere on the agenda and are recommended for approval."

Respectfully submitted,



Virginia McLeod,
Manager, Recreation & Culture
705.759.5311
v.mcleod@cityssm.on.ca

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Ida Bruno, Labour Relations Coordinator**

DEPARTMENT: **Corporate Services**

RE: **Ratification of Local 2251 – Memorandum of Settlement**

PURPOSE

The purpose of this report is to recommend the approval/ratification of the attached Memorandum of Settlement with Steelworkers Local 2251- Transit Mechanics.

BACKGROUND

The City and Local 2251 Transit Mechanics came to a resolution on January 15, 2018 which the membership did not accept. We later met with a conciliator where we reached an accepted agreement on February 23, 2018.

ANALYSIS

A survey of Northern comparators was conducted and this general wage increase is consistent with the comparators. Notably, most other properties have Transit Mechanics as part of a larger bargaining group. Transit mechanic wage rates are lower than most comparators.

FINANCIAL IMPLICATIONS

A one year deal was reached inclusive of a 1.75% wage increase for 2018. Other minor benefit enhancements are offset Mechanic position that has sat vacant since October 2017. The vacant position will be replaced at a lower wage rate as a Mechanic Apprentice.

STRATEGIC PLAN / POLICY IMPACT

This action ties into the Corporate Value of respecting, engaging and valuing employees. A fairly negotiated Collective Agreement is imperative toward retaining employees as our most valued resource (Focus Area: Service Delivery).

RECOMMENDATION

It is therefore recommended that Council take the following action:

The relevant By-law 2018-51 is listed elsewhere on the Agenda and is recommended for approval.

Respectfully submitted,



Ida Bruno
Labour Relations Coordinator
705.759.5449
i.bruno@cityssm.on.ca

MEMORANDUM OF SETTLEMENT

THE CORPORATION OF THE CITY OF SAULT STE. MARIE
&
STEELWORKERS LOCAL 2251

1. **The parties herein agree to the terms of the memorandum as constituting full and final settlement of all matters in dispute.**

2. **The undersigned representatives of the parties do hereby agree to recommend complete acceptance of all the terms of this memorandum to their respective principals.**

3. **The parties herein agree that the term of the collective agreement shall be from February 1, 2018 to January 31, 2019.**

4. **The parties herein agree that the said collective agreement shall include the terms of the previous collective agreement which expired on January 31, 2018 provided, however, that the following amendments are incorporated in Appendix 1.**

Signed this 23RD day of February, 2018.

For the Union	**For the Employer**
Dan Cooper	**Ida Bruno**
Don Byham	**Tom Vair**
Mike Vanderloo	**Sam Piraino**
	Bob Camirand

APPENDIX 1

Collective Bargaining

City of Sault Ste. Marie

&

Local 2251 Steelworkers
Transit Mechanics

Agreed to Articles – Sign-off sheet #1

Housekeeping

1. Replace 5:02, 5:03, 5:04, and 5:05 with;

5:02 All dues, initiation fees and assessments shall be remitted to the Union forthwith and in any event no later than fifteen days following the last day of the month in which the remittance was deducted. The remittance shall be sent to the International Secretary Treasurer of the United Steelworkers AFL-CIO-CLC, P.O. Box ~~13083~~ 9083 Commerce Court Postal Station ~~`A`,~~ Toronto Ontario M5W 1V7 in such form as shall be directed by the Union to the Company along with a completed Dues Remittance Form R-115 will also be sent to the Union office at 209 - 68 Dennis Street, Sault St. Marie, Ontario, P6A 2W9. The remittance and the R-115 form shall be accompanied by a statement containing the following information:

a. A list of names of all employees from whom dues were deducted and the amount of dues deducted;

b. A list of all bargaining unit employees from whom no deductions have been made and reasons;

c. This information shall be sent to both Union addresses identified in article 5.02 in such form as shall be directed by the Union to the Company.

The Union shall indemnify and save the Company harmless against all claims or other forms of liability that may arise out of any actions taken by the Company in compliance with this article.

The Company, when preparing T-4 slips for the employees, will enter the amount of union dues paid by the employee during the previous year.

ARTICLE 6:02 – GRIEVANCE PROCEDURE

6:02 In the settlement of any dispute, or grievance, the following procedure shall apply:

(1) The employee shall first take the grievance up with his Supervisor within forty-eight (48) hours of his knowledge of the event, and the employee shall have the right to be accompanied by a representative of the Union. The Supervisor shall give a decision within forty-eight (48) hours.

STEP 1 Failing a satisfactory answer, the employee shall put his grievance in writing to the Grievance Committee who may within 5 working days of the reply from the Supervisor, request a hearing by the Manager of Transit & Parking.

The Manager of Transit & Parking shall render a decision within 5 working days of the hearing.

STEP 2 ***If the Union considers that a satisfactory settlement was not reached at Step 1, it may within 5 working days of the receipt of the Step 1 reply, request a hearing by the Director of Human Resources. The Director of Human Resources shall render a decision within 5 working days of the hearing.***

STEP 3 ***If the Union considers that a satisfactory settlement was not reached at Step 2, it may within 5 working days of the receipt of the Step 2 reply, request a hearing by the Deputy Chief Administrative Officer Community Development & Enterprise Services (CDES). The Deputy Chief Administrative Officer CDES shall render a decision within 5 working days of the hearing.***

STEP 4 If the Union considers that a satisfactory settlement was not reached at Step 3, it may within 5 working days of the Step 3 reply, refer the matter to arbitration in accordance with the provisions of the Labour Relations Act.

Balance of article remains unchanged

ARTICLE 11:00

11:06 The City agrees to supply employees in the Mechanics classification with access to *eight (8)* coveralls in every two (2) week period.

15:13 New

Employees that are required to work on statutory holidays may choose to take a substitute day off with pay in lieu of being paid the statutory holiday pay for the actual day of stat. Requests for lieu time off will be made to the Maintenance supervisor and will be considered on an individual basis at the time of request, and granted based on operational requirements, they must be taken within 12 months from the statutory holiday.

ARTICLE 15:00
MENTAL HEALTH IN THE WORKPLACE

Training;

15:01The Employer *will consider to* provide employees with training as it becomes available on dealing with Mental Illnesses in the Workplace.

Recognition, Awareness & Return To Work;

15:02The parties recognize that mental *and physical* health issues can be cause of disability.

Where *and when* possible without incurring undue hardship, the Employer will facilitate the return to work of such persons, where medically indicated/*substantiated.*

Re-number articles beyond Article 15, current article 15 will be 16 and so on.

CITY PROPOSAL:

17:02 (3) Senior Lead Hand premium to be paid to an employee for hours worked when assigned to the Senior Lead Hand function. The premium shall be:

Effective the 1st of the month following ratification of the Memorandum of Settlement by the parties $1.35 per hour.

Note: This change means that the current practice of paying one (1) hour per week at overtime rate plus the Lead Hand rate to one individual ceases.

Change to:

(3) Senior Lead Hand premium to be paid to an employee for hours worked when assigned to the Senior Lead Hand function. The premium shall be $1.35 per hour.

Balance of article remains unchanged

Article 17:04

$14.00 flat rate for all students.

CITY PROPOSAL:

Article 18:02

18:02 Green Shield Extended Health Care Plan, including Drug Plan Card System - $6.00 deductible (increase to $7.00 Drug Card effective February 1, 2013) and Vision Care (increase to $375.00 every two years effective the first of the month following ratification of the Memorandum of Settlement by the parties). (Note: This amount can be used for laser eye surgery.)

- Pharmacy dispensing fees capped at $10.00 and increase to $11.00 effective February 1, 2013 per prescription.
- No O.T.C. drug coverage with the exception of those deemed by the insurer to be "life sustaining".
- Eye Examination – One (1) eye examination by a licensed ophthalmologist or optometrist every twenty four (24) consecutive months.
- Reimbursement will be made for standard hearing aids, repairs or replacement parts up to a lifetime maximum of $500. Batteries are not eligible.

Change to

18:02 ***Green Shield Extended Health Care Plan, including Drug Plan Card System - $8.00 deductible first of the following month of ratification and Vision Care (increase to $400.00 every two years effective the first of the month following ratification of the Memorandum of Settlement by the parties). (Note: This amount can be used for laser eye surgery.)***

- ***Pharmacy dispensing fees capped at $12.00.***
- No O.T.C. drug coverage with the exception of those deemed by the insurer to be "life sustaining".
- Eye Examination – One (1) eye examination by a licensed ophthalmologist or optometrist every twenty four (24) consecutive months.
- Reimbursement will be made for standard hearing aids, repairs or replacement parts up to a lifetime maximum of $500. Batteries are not eligible.

Balance of article remains unchanged

LETTER #1

LETTER OF UNDERSTANDING

BETWEEN

THE CITY OF SAULT STE. MARIE

AND

UNITED STEELWORKERS LOCAL 2251 (TRANSIT)

INTERPRETATION OF ARTICLE 9:00 - SENIORITY

The parties recognize and agree that the provisions of clauses 9:01 (second paragraph), 9:03 (4) (iii) and 9:03 (5) (iii) must be interpreted and applied in a manner consistent with the provisions of the Ontario Human Rights Code.

Signed this 10th day of January, 2018

FOR THE UNION

Dan Cooper

Don Byham

Mike Vanderloo

FOR THE CITY

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Renew Letter #2

LETTER #2

LETTER OF UNDERSTANDING

BETWEEN

THE CITY OF SAULT STE. MARIE

AND

UNITED STEELWORKERS LOCAL 2251 (TRANSIT)

WELFARE BENEFITS

The parties agree to meet during the term of the collective agreement to discuss the cost of welfare benefits and methods by which to contain the escalating cost of these benefits.

Signed this 10th day of January, 2018

FOR THE UNION

Dan Cooper

Don Byham

Mike Vanderloo

FOR THE CITY

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Signed this 10th day of January, 2018 at Sault Ste. Marie

For the Union

Dan Cooper

Don Byham

Mike Vanderloo

For the City

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Collective Bargaining

City of Sault Ste. Marie

&

Local 2251 Steelworkers
Transit Mechanics

Agreed to Articles – Sign-off sheet #2

11:07 The City agrees to provide all permanent employees with an annual allowance of *one hundred and ninety ($190)* for the life of the agreement effective for payment the second pay in February per Article 17:01 for the purchase of one (1) pair of C.S.A. approved safety boots.

17:01 ***Mechanics Tool Allowance - Mechanics I and II shall receive a tool allowance of two hundred dollars ($275.00) effective the 1st of the month following ratification of the memorandum of settlement by the parties.***

The City agrees to process the payment of Boot and Tool Allowance by the first pay in March pending the parties have reached a settlement, if not then the first pay following ratification

NEW

2:02

One Union Representative will be provided with the opportunity to provide a two (2) hour Union introduction/orientation program on paid time to new employees who are hired, *at a time mutually agreed to by Maintenance Supervisor.*

Signed this 10th day of January, 2018 at Sault Ste. Marie

For the Union

Dan Cooper

Don Byham

Mike Vanderloo

For the City

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Collective Bargaining

City of Sault Ste. Marie

&

Local 2251 Steelworkers
Transit Mechanics

Agreed to Articles – Sign-off sheet #3

CITY PROPOSAL:

17:03 Apprentice

(a) Apprentices shall advance on the following basis to the Automotive Mechanics Rate.

Starting rate shall be the Handyman - Labour rate as specified in the collective agreement.

Apprentices shall advance every 1040 hours as certified by the Ministry of Colleges and Universities, until 9,000 hours are completed.

Example:

0 to 1040 hours - Base Rate
1041 to 2080 hours - 84% of Mechanic Rate
2081 to 3120 hours - 86% of Mechanic Rate
3121 to 4160 hours - 88% of Mechanic Rate
4161 to 5200 hours - 90% of Mechanic Rate
5201 to 6240 hours - 92% of Mechanic Rate
6241 to 7280 hours - 94% of Mechanic Rate
7281 to 8320 hours - 96% of Mechanic Rate
8321 to 9000 hours - 98% of Mechanic Rate
9000 - 100% of Mechanic Rate

Change to

17:03 Apprentices

Starting rate shall be at Base Rate $19.00 per hour.

Level 1 – $19.00 until 240 hours of in class is completed.
Level 2 – $21.00 until an additional 240 hours of in class is completed.
Level 3 – $23.00 until a further 240 hours of in class is completed.

An apprentice mechanic will stay at $23.00 until which time they successfully challenge the required Ministry testing to become a Truck and Coach Mechanic at which time they will go to Mechanic I Rate.

In extenuating circumstance and on a case by case basis the City and the Union will consider moving someone to next level without completing the in class portion and within a certain time-frame upon agreement from the union and the City

Signed this 10th day of January, 2018 at Sault Ste. Marie

For the Union

Dan Cooper

Don Byham

Mike Vanderloo

For the City

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Collective Bargaining

City of Sault Ste. Marie

&

Local 2251 Steelworkers
Transit Mechanics

Agreed to Articles – Sign-off sheet #4

Article 17:00 WAGE RATES

1.50% as of February 1, 2018 until expiration of contract at January 31, 2019.

Signed this 15th day of January, 2018 at Sault Ste. Marie

For the Union

Dan Cooper

Don Byham

Mike Vanderloo

For the City

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Collective Bargaining

City of Sault Ste. Marie

&

Local 2251 Steelworkers
Transit Mechanics

Agreed to Articles – Sign-off sheet #4

Article 17:00 WAGE RATES

1.75% as of February 1, 2018 until expiration of contract at January 31, 2019.

Signed this 23rd day of February, 2018 at Sault Ste. Marie (After Conciliation)

For the Union

Dan Cooper

Don Byham

Mike Vanderloo

For the City

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Tom Vair, Deputy CAO, Community Development and Enterprise Services**

DEPARTMENT: **Community Development and Enterprise Services**

RE: **FutureSSM Project Update II**

PURPOSE

The purpose of this report is to provide Council with an update on the FutureSSM project.

BACKGROUND

On June 26th, 2017 City Council passed a resolution that the Final Recommendations of the Community Adjustment Committee be received as information and that City Council:

1. Endorse the plan as a key stakeholder;
2. Assign responsibility for coordinating implementation to Community Development and Enterprise Services;
3. Request a report outlining the specific steps and required resources to implement the recommendations of the Committee; and
4. Thank the Community Adjustment Committee members, Chair, Project Coordinator and all those involved for the preparation of this report.

On August 21, 2017 an implementation report was presented to City Council and a resolution was passed that the report be received as information and:

- Further, that Council authorize staff to invest $444,656 in the implementation plan in 2018 using funds recently reallocated from SSMEDC.
- Further, that Council authorize staff to develop funding applications to seek support for the implementation plan and leverage the City investment into this project.

An update report was provided January 22, 2018 to City Council and it has been requested ongoing updates be provided as the project progresses. This report

outlines the latest developments of the FutureSSM project and the status of funding support from other levels of government.

ANALYSIS
The activities underway within the FutureSSM project include:

1) Community Engagement

As previously reported to Council, the foundation of the FutureSSM project is based on the fact that it is a community plan. That is to say it was developed by community members and the success of the plan will hinge on the ongoing involvement and commitment of time and resources by community organizations and citizens.

Outreach with the "Common Cause and New Direction" presentation continues with presentations made to Community Development Corporation Board, Library staff and at the recent Local Immigration Partnership (LIP) Forum. The positive community support and feedback continues for this initiative.

The first meeting of the Community Development Roundtable (CDR) took place on March 8th, 2018. At the first CDR meeting, members were provided background information and materials that helped form a common understanding of the goals, objectives and activities to be undertaken by the CDR and its related sub-committees. Draft terms of reference for the sub-committees were provided and discussed and the goals for membership for each of the sub-committees were reviewed. Work is now underway to invite and finalize the membership of each of the sub-committees. Councillors Hollingsworth, Shoemaker and Myers have requested participation and will sit on the Downtown Development, Economic Growth and Diversity and Arts & Culture sub-committees respectively.

The first CDR meeting also provided an opportunity for the members to provide their feedback on the Adjustment Committee report, discuss ideas for advancing the recommendations and put forward their ideas for building a more prosperous, resilient Sault Ste. Marie.

2) Funding Applications

The City has submitted the Stage II applications to both NOHFC and FedNor and significant work has been undertaken to answer questions, provide more detailed information and refine the applications to meet funding criteria. We anticipate response from NOHFC in mid-April with a FedNor decision to follow.

3) Project Activities

a. Community Promotion – As previously indicated to Council, an external firm has been selected to provide guidance on a strategic framework for community promotion. The public survey has been completed with

over 350 submissions. This feedback is now being compiled and will help inform the final report and recommendations from the consultants which will be presented to Council.

b. Sault Summit – As approved at the Dec. 11, 2017 Council meeting, work is being completed for the launch of the Sault Network website and an inaugural Sault Summit to be held in Toronto on April 21st, 2018. A VIP speaker has been confirmed, invitations sent out and logistics for the event finalized with our hosts at Branksome Hall. City Councillors Paul Christian and Sandra Hollingsworth, City staff, representatives from the EDC and SSMIC and members of the former SooBoys/SooConnected group are actively engaged in organizing the event.
c. Project Implementation - Coordinating the Community Roundtable and implementation of community development activities will require dedicated human resources. There is a sense of urgency to continue the momentum of the project and provide support resources for the CDR and sub-committees. As such, utilizing the resources allocated by City Council, Staff is planning to proceed in hiring of a subset of the project team to enable the continued progress of the project.

The roles that will be hired initially include:

- Project Manager
- Arts and Culture Coordinator
- Social Equity Coordinator (cost shared 50-50 with Algoma Leadership Table members)
- Labour Force Development Coordinator

Proceeding with these hires will not negatively impact funding requests. Further, regardless of funding approval, it is felt these roles are critical to the advancement of the project and the funding approved by City Council to implement the project will cover the costs of these project resources. The positions will be three-year, contract positions to align with the funding applications.

These roles are imperative to continue the momentum of the project and provide a base of staff resources to undertake required project tasks. Should the funding requests from FedNor and NOHFC be approved, additional staff resources will be hired and further budgetary resources will be available to implement the recommendations of the AC.

FINANCIAL IMPLICATIONS

The City's contribution towards this implementation will come from funds approved by City Council to be reallocated to community development at the July 31st, 2017 special Council meeting.

STRATEGIC PLAN / POLICY IMPACT

This item directly aligns with the Corporate Strategic Plan in multiple focus areas. The implementation mirrors exactly the focus area of “Quality of Life” and the priorities identified which included Promote Quality of Life Advantages, Promote and Support Arts & Culture, Welcome and Seek Out Immigration and Create Vibrant Downtown Areas.

The implementation plan will also address the focus area of “Community Development and Partnerships” and its priorities including Create Social and Economic Activity, Develop Partnerships with Key Stakeholders and Maximize Economic Development and Investments.

RECOMMENDATION

It is therefore recommended that Council take the following action:

Resolved that the report of the Deputy CAO, Community Development and Enterprise Services dated 2018 03 19 regarding FutureSSM project be received as information.

Respectfully submitted,



Tom Vair
Deputy CAO, Community Development and Enterprise Services
705.759.5264
t.vair@cityssm.on.ca

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Tom Vair, Deputy CAO - Community Development and Enterprise Services**

DEPARTMENT: **Community Development and Enterprise Services**

RE: **Study related to expansion of ice capacity and related facilities**

PURPOSE

The purpose of this report is to seek Council's approval to proceed in engaging a consultant to assist in determining criteria for design, scope and costs associated with developing new ice capacity in Sault Ste. Marie and analyze options related to soccer pitch expansion at the Northern Community Centre.

BACKGROUND

On January 22, 2018 LeisurePlan International Inc provided a comprehensive review and evaluation of indoor ice utilization at the City's arenas. This concluded that there is demand for the replacement of the W.J. McMeeken Centre and further recommended that two new ice pads be constructed. The study also included the following details:

- The proposed two, new indoor ice pads based on the NHL rink dimensions
- Spectator seating for 300-500 spectators associated with each ice pad
- Plan and design the new facility in a manner to allow for the potential for expansion in the future

City Council resolved that the report of the Deputy CAO, Community Development and Enterprise Services concerning a third party ice time utilization study be received. Council further requested staff to complete a report outlining facility options, the cost associated with these and financing sources (including external funding) to add ice capacity to the City's current stock of ice rinks.

Further, the Council report referenced the potential expansion of the soccer facility to enable a full indoor soccer pitch and other events to be held within a larger

facility. It needs to be confirmed if completing this work while constructing a twin pad arena would yield cost savings.

It was also requested that Staff investigate if there was any potential to invest in the McMeeken to refurbish the arena which would result in a reduced cost to the City. Since the media coverage of the ice utilization study, the City has also had interest expressed from some user groups as to whether the McMeeken could be converted into other uses (e.g. indoor courts).

Finally, the City has also received a letter from Sault College (Attachment A) to be considered as an alternate location for one of the additional ice surfaces (i.e., construct one ice pad at the McMeeken site and one ice pad on the Sault College campus). Sault College has outlined a number of benefits in their letter should an arena be constructed on their campus. City staff would like to explore this possibility by analyzing the benefits for the community and incremental costs associated with having two separate locations.

Approval of single sourcing this contract is requested on the basis in accordance with the Purchasing by-law when the service can only be supplied by a particular supplier based on specialized previous experience.

ANALYSIS

To assist in properly planning the future development of ice arenas in the community it is requested a third party firm be engaged to:

- Assess the costs of expanding the soccer pitch
- Evaluate the condition of the McMeeken arena for future potential investment
- Complete a cost/benefit analysis for the Sault College option
- Examine other facility options for the replacement McMeeken facility and associated costs

There was initial design work conducted when the Northern Community Centre was being developed and City staff will utilize this past work to obtain an updated cost estimate for the construction of the twin pad arena based on today's cost. Further analysis needs to take into account the recommendations from the ice utilization study and any additional considerations that result from the project activities. While previous reports were done, Staff feels that additional analysis is required based on changes in scope of the project (e.g., smaller seating requirements from past design), investigating the potential Sault College site and a review of facility options.

This analysis would be managed by CDES engaging LeisurePlan International Inc. and STEM Engineering Group Inc. to undertake this work and it is anticipated the work would not exceed $15,000 for the entire analysis.

Staff has already reached out to the Provincial government to inquire about the Build ON program. The Province is currently negotiating a bi-lateral agreement for all four federally determined streams (e.g., public transit, green infrastructure, community, culture and recreation, and rural and northern funding). It is anticipated it will be two-four weeks before additional details are released on the timing and criteria for the $407 million in funding for community, culture and recreational funding.

FINANCIAL IMPLICATIONS

It is estimated that the consultant engagements will cost up to $15,000. It is recommended the funds available in the Facilities Maintenance Reserve account be utilized to cover the cost of this study.

STRATEGIC PLAN / POLICY IMPACT

The consultant report most closely links to the infrastructure strategic focus area of the Corporate Strategic Plan. The information collected and recommendations made will assist council in making future decisions with respect to planning for new infrastructure to replace a deteriorating indoor ice arena asset and address community demand documented in the ice utilization study.

RECOMMENDATION

It is therefore recommended that Council take the following action:

"Resolved that the report of the Deputy CAO Community Development and Enterprise Services dated 2018 03 19 concerning ice capacity expansion be received.

Further that Council approve the allocation of up to $15,000 from the Facilities Maintenance Reserve fund to approve single sourcing this contract by Community Development and Enterprise Services engaging LeisurePlan International Inc. and STEM Engineering Group Inc. to assist with planning and cost estimation for expanding ice capacity and examine the cost/benefit of collaborating with Sault College to locate one ice pad on their campus."

Respectfully submitted,



Tom Vair

Deputy CAO, Community Development & Enterprise Services

(705)759-5264
t.vair@cityssm.on.ca

March 5, 2018

SAULT COLLEGE

Tom Vair, Deputy Chief Administrative Officer
City of Sault Ste. Marie
99 Foster Drive

Dear Mr. Vair:

We understand that a 3rd party ice-time utilization study indicates that that there would be enough demand in the community to warrant an additional ice surface. Our understanding is that the study suggested that the McMeeken Arena be replaced by a twin pad arena linked to the Northern Community Centre.

We would like to request that the Sault College campus be considered as an alternative location for the additional ice surface.

We are confident that creating a competitive advantage for the College by adding an arena on campus will be of benefit to the community. Direct and indirect spending growth, human capital development and expansion of intellectual property are expected positive economic impacts associated with enhancing Sault College.

A "home" arena on campus will be unique to Sault College amongst Ontario Colleges creating a competitive advantage that can be leveraged to attract students. A home arena is very desirable from a student life perspective and would appeal not only to hockey players but also to students who enjoy the atmosphere found at varsity level sports competitions. Sault College is currently the only College in Ontario with a varsity hockey program for men and women. A home arena will also enable the College to offer unique intramural sports and specialized courses that require an ice surface. In addition, the close proximity of the Sault College campus to two of the largest local high schools facilitates partnership opportunities with the school boards. When combined with College usage these partnerships may contribute to improved ice surface utilization during day time hours.

An arena on the College campus may improve the ability of the community to attract high performance hockey selection and training camps that are currently being held in other northern communities. An arena on the Sault College campus will provide convenient access to amenities such as a fitness center that includes an 800 seat gymnasium, a state-of –the-art training room, human performance testing labs, classrooms, a cafeteria and a residence that can be used during off-peak periods. As an example, these amenities can be important considerations to Hockey Canada when selecting sites for their various selection and training camps.

We are looking forward to discussions pertaining to our expression of interest.

Kind Regards,

RW Common

Dr. Ron Common
President

443 Northern Ave., Sault Ste. Marie, ON P6B 4J3 Canada
tel 705.759.2554 | fax 705.759.1319 | www.saultcollege.ca

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Virginia McLeod, Manager of Recreation and Culture**

DEPARTMENT: **Community Services Department**

RE: **2018 Cultural Financial Assistance Grants**

PURPOSE

This report provides recommendations to City Council from the Cultural Advisory Board for the distribution of the Cultural Financial Assistance Grants for 2018.

BACKGROUND

Each year City Council allots $53,900 for financial assistance grants to the cultural community. The Cultural Advisory Board on behalf of City Council evaluates the applications against the criteria in the City's Cultural Financial Assistance Policy and makes a recommendation to City Council for the distribution of the grant funds.

ANALYSIS

There were fifteen (15) applications submitted for 2018 with requests totalling $105,521. In 2017 the Cultural Advisory Board received 11 applications totaling $81,700. The members of the Cultural Advisory Board met on Thursday, January 18th, 2018 and again on February 28th, 2018 and reviewed the 2018 applications for the Cultural Financial Assistance Grants. The Cultural Advisory Board passed the following resolution:

Moved by: W. Greco
Seconded by: E. Belair

"Resolved that the Cultural Advisory Board endorse the organizations for grants under the Cultural Financial Assistance Program as recommended in the attached list and that a report be submitted to City Council for consideration and approval."

CARRIED

Appended to the report is the list of applicants and the recommended grants for 2018.

Furthermore, the requests for financial assistance received are greater than the funds available for distribution. The Cultural Advisory Board has requested that staff submit an operating increase in the grant allocation for the 2019 fiscal year. The Cultural Advisory Board is recommending that the amount be increased from $53,900 to $75,000 in 2019.

Moved by: W. Greco
Seconded by: E. Belair
"Resolved that the Cultural Advisory Board request that the funding for Cultural Financial Assistance grants be increased in 2019 to $75,000 from $53,900 and that staff prepare the necessary paperwork be approved."

CARRIED

FINANCIAL IMPLICATIONS
An amount of $53,900 is included in the City's core budget for the purpose of financial assistance as per the City's Cultural Policy on providing arms-length funding of culture. The request to increase the budget from $53,900 to $75,000 will be referred to the 2019 budget deliberations.

STRATEGIC PLAN / POLICY IMPACT
This item supports the Corporate Strategic Plans Focus Area: Quality of Life – Promote and Support Arts and Culture.

RECOMMENDATION
It is therefore recommended that Council take the following action:

Resolved that the report of the Manager of Recreation and Culture dated 2018 03 19 concerning the 2018 Cultural Financial Assistance Grants be received and that the recommendation of the Cultural Advisory Board to endorse the following grants:
• Algoma Arts Festival Association – $5,000
• Algoma Conservatory of Music – $5,000
• Algoma Festival Choir – $5,500
•Arts Council of Sault Ste. Marie and District – $8,500
•Living History of Algoma / Oral History of Sault Ste. Marie Project –$4,400
•Over the Rainbow Children's Entertainment Series – $2,000
•Sault Blues Society - $2,000
•Kiwanis Community Theatre Centre – $3,500
• Sault Symphony - $5,000
•Sault Theatre Workshop – $3,000
•Shadows of the Mind Film Festival – $5,000
•Soo Pipe Band – $3,500
•Centre Francophone SSM – $1,500
be approved."

Respectfully submitted,



Virginia McLeod
Manager of Recreation and Culture
705.759.5311
v.mcleod@cityssm.on.ca

2018 Cultural Financial Assistance Grants

Organization	2017 Award	2018 Request	2018 Recommended
Algoma Arts Festival Association	$ 7,000	$ 7,500	$ 5,000.00
Algoma Conservatory of Music	$ 7,500	$ 14,500	$ 5,000.00
Algoma Festival Choir	$ 4,400	$ 7,805	$ 5,500.00
Arts Council of SSM & District	$ 10,000	$ 20,000	$ 8,500.00
In Your Eyes Projects Performance Arts	$ 2,000		
Living History of Algoma / Oral Historyof SSM Project	$ 5,000	$ 5,000	$ 4,400.00
Over the Rainbow Children's Entertainment Series	$ 2,000	$ 3,000	$ 2,000.00
Rotary Club		$ 3,000	$ -
Sault Blues Society		$ 2,000	$ 2,000.00
Sault Community Theatre Centre Kiwanis Community Theatre Centre	$ 4,500	$ 4,500	$ 3,500.00
Sault Symphony		$ 5,000	$ 5,000.00
Sault Theatre Workshop	$ 4,500	$ 5,000	$ 3,000.00
Shadows of the Mind Film Festival	$ 5,000	$ 5,000	$ 5,000.00
Soo Pipe Band	$ 2,000	$ 6,102	$ 3,500.00
Centre Francophone SSM		$ 2,500	$ 1,500.00
180 Projects		$ 14,614	$ -
Total	**$ 53,900**	**$ 105,521**	**$ 53,900.00**

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Sam Piraino, Manager of Transit & Parking**

DEPARTMENT: **Community Development and Enterprise Services**

RE: **Purchase of Twenty (20) Pay and Display Units**

PURPOSE

Staff is seeking Councils approval for the purchase of Twenty (20) Pay and Display Parking Machines from J.J. MacKay Canada Limited.

BACKGROUND

In March of 2017, Transforward Consulting Group completed a report on Downtown Parking. In that report, it was recommended that pay and display machines combined with a pay by smartphone application should be implemented in downtown parking lots. During budget deliberations Council approved the purchase of twenty (20) pay and display units.

ANALYSIS

J.J. Mackey Meters is the current supplier of pay and display units for the City's Parking Section. Parking manages the existing nineteen units using Sentinel Meter Management System. All parts are supplied by Mackey Meters including spare CPU, which helps reduce the downtime of the units.

Currently, Parking Services has nineteen pay and display units. Finance reconciles all credit card transactions using current system and therefore we are recommending the single sourcing of the purchase with existing equipment and services with J.J. MacKay Canada Limited for standardization and compatibility.

Staff is also investigating the potential to offer mobile phone payments to provide another option to customers. The costs for these solutions are typically covered by a service charge and would not require additional investment.

FINANCIAL IMPLICATIONS
For council's consideration in this decision is the impact to the budget, the cost of purchasing the twenty units from J.J. Mackey is $151,278.66 plus HST, council approved $200,000 for the purchase of the units during their 2018 budget deliberations.

STRATEGIC PLAN / POLICY IMPACT
The topic of this report is linked to the Strategic Direction 2: Delivering Excellent Customer Services. The citizens of Sault Ste. Marie are the focus of our work and our existence. Providing outstanding service to citizens benefits the resilience of our community and our collective future as a society. Dynamic citizen engagement is critical to our success.

RECOMMENDATION
It is therefore recommended that Council take the following action:

Resolved that the report of the Manager of Transit and Parking dated 2018 03 19 be received, and the recommendation that the City proceed with the single sourcing supply and delivery of Twenty (20) Pay and Display Units, as required by the Parking Division be awarded to J.J. MacKay Canada Limited at their proposed price of $151,278.66 plus HST, be approved.

Respectfully submitted,



Sam Piraino
Manager of Transit & Parking
705.759.5434
s.piraino@cityssm.on.ca

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Sam Piraino, Manager of Transit & Parking**

DEPARTMENT: **Community Development and Enterprise Services**

RE: **Municipal Law Enforcement Officers and By-law Enforcement Officers**

PURPOSE
The purpose of this report is to update By-law 90-305, which appoints municipal law enforcement officers and By-law 93-165, which appoints municipal by-law enforcement officers.

BACKGROUND
By-laws 90-305 and By-law 93-165 are by-laws appointing municipal law enforcement officers and municipal by-law enforcement officers respectively and are amended from time to time.

ANALYSIS
Not applicable.

FINANCIAL IMPLICATIONS
There is no budgetary impact.

STRATEGIC PLAN / POLICY IMPACT
This is an operational activity not articulated in the strategic plan.

RECOMMENDATION
It is therefore recommended that Council take the following action:

By-laws 2018-48 and 2018-56 appear elsewhere on the Agenda and are recommended for approval.

Respectfully submitted,



Sam Piraino
Manager of Transit and Parking
705.759.5848
s.piraino@cityssm.on.ca

The Corporation of the
City of Sault Ste. Marie

Community Development and
Enterprise Services
Sam Piraino
Manager of
Transit & Parking

2018 03 19

Nuala Kenny, City Solicitor
Legal Department
Civic Centre

RE: MUNICIPAL -LAW ENFORCEMENT OFFICERS

In November 1990 City Council approved By-law 90-305.Please amended Schedule "A" to By-law 90-305, being a by-law to appoint Municipal Law Enforcement officers for the issuing of parking infractions on private property.

Schedule "A" of this by-law lists all officers that are eligible to issue tickets. The following individuals have applied to be a Municipal Law Enforcement Officers in regards to parking and have been approved by the Police Services and the Parking Section for this position.

We request that Schedule "A" be amended to include:

NO.	NAME	EMPLOYER	PROP. LOCATION
733	Gregorchuk, Catherine	The Real Estate Stop	2 Queen Street West

And that the following be deleted:

NO.	NAME	EMPLOYER	PROP. LOCATION
335	Grosso, Donald	Northeast Security	
400	Johnson, Michael	Northeast Security	
522	McNama, Steven	Northeast Security	
580	Charette, Robert	Northeast Security	
604	Wagner, Matthew	Northeast Security	

Would you please amend By-law 90-305 with the new attached Schedule "A."

Thank you.

Yours truly,

Sam Piraino
Manager of Transit and Parking

BADGE	SPECIAL CONSTABLE	EMPLOYER	PROPERTY LOCATION
SCHEDULE "A"			
26	MCLEOD,ROD	FLEMING & SMITH	378 QUEEN ST E & APARTMENTS & 27 KING ST
30	RENDELL,VERN	ALGOMA CENTRAL PROP	STATION MALL/STATION 49/STATION TOWER
151	PARR,DEREK	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
153	TASSONE,VITO	TASSONE CHIROPRATIC	673 QUEEN ST E
163	BUMBACCO,PHILIP	ALGOMA CENTRAL PROP	STATION MALL/STATION 49/STATION TOWER
196	MCGRAYNE,LAURA LEE	ALGOMA CENTRAL PROP	STATION MALL/STATION 49/STATION TOWER
241	COGHILL,ROBIN	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
253	TRAVSON,TERRANCE	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
267	CORBIERE,JOHN(TED)	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
276	SMITH,DENNIS,ROBERT	G4S SECURE SOLUTIONS	SAULT HOSPITAL
321	LORENZO,COREY	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
334	MILLER,BRADLEY	CITY OF SAULT STE MARIE	TRANSIT SERVICE AREA
344	HARPE,KEN	HOLIDAY INN	320 BAY ST
346	HAZLETON,MARGARET	CITY OF SAULT STE MARIE	BELLUVUE MARINA &PARK/ BONDAR MARINE & PARK/STRATHCLAIR DOG PARK&SPORTS COMPLEX/QE SPORTS COMPLEX
366	TROINOW,VICTORIA	G4S SECURE SOLUTIONS	SAULT HOSPITAL
370	HANSEN,LOUIS	ONT FINNISH HOME ASS	725 NORTH ST
372	BENOIT,ALAIN	ONT FINNISH HOME ASS	725 NORTH ST
374	TAAVEL,ANDRE	CITY OF SAULT STE MARIE	TRANSIT SERVICE AREA
391	MCLEOD,HEATHER	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
397	LAFRAMBOISE,YVON	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
410	POYNER,HAROLD	G4S SECURE SOLUTIONS	SAULT HOSPITAL
411	MOORE,ROBERT	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
420	FABIANO,ANTONIO	G4S SECURE SOLUTIONS	SAULT HOSPITAL
435	TRAMBLE,GEORGE	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
441	WILSON,DAVID	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
442	MACCLENNAN,MATTHEW	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
443	MARCIL,MARK	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
446	HALLIDAY,DANA	SAULT COLLEGE	443 NORTHERN AVE
456	CONEYBEARE,KEVIN	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
459	SLEEMAN,RAY	G4S SECURE SOLUTIONS	SAULT HOSPITAL
460	BOUGIE,DAN	G4S SECURE SOLUTIONS	SAULT HOSPITAL
463	MORIN,ALEX	CORPS OF COMM	
464	DITOMMASO,RYAN	2220917 ONT INC	489 BAY ST/535 QUEEN ST E
465	DELAVALLE,DON	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
484	MCLEOD,VIRIGINIA	CITY OF SAULT STE MARIE	BELLUVUE MARINA &PARK/ BONDAR MARINE & PARK/STRATHCLAIR DOG PARK&SPORTS COMPLEX/QE SPORTS COMPLEX
486	LONGO,NADIA	GT NORTH RETIREMENT	760 NORTHERN RD
487	ROUGEAU,MARISA	GT NORTH RETIREMENT	760 NORTHERN RD
488	LEFLEUR,MARILYN	GT NORTH RETIREMENT	760 NORTHERN RD
489	MCQUEEN, WANDA	GT NORTH RETIREMENT	760 NORTHERN RD
490	LUXTON,JEFF	GT NORTH RETIREMENT	760 NORTHERN RD
493	BROWN,FRASER	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
516	GAY,JAMES	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
517	ROY,BRENDA	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
523	MCBRIDE,GUY	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
526	JOHNSTON,CORY	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
537	GRAWBARGER,KYLE	G4S SECURE SOLUTIONS	SAULT HOSPITAL
541	DIMMA,WILLIAM	ALGOMA CENTRAL PROP	STATION MALL/STATION 49/STATION TOWER
547	LIEPA,MATTHEW	ALGOMA CENTRAL PROP	STATION MALL/STATION 49/STATION TOWER
548	CARON,ROGER	CITY OF SAULT STE MARIE	99 FOSTER DR (CIVC CENTRE)
556	ARCAND,SCOTT	G4S SECURE SOLUTIONS	SAULT HOSPITAL
565	LISCUMB,GERALD	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
566	SWEET,WILLARD	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
568	PICK,DENNY	CORPS OF COMM	SAULT AIRPORT
574	BOUCHARD,DARYL	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
587	GIULETTI,MATTHEW	G4S SECURE SOLUTIONS	SAULT AIRPORT / HOSPITAL
599	BUMBACCO,CARL	CB HOME INSTALLTIONS	321 JOHN ST /342,346 ST GEORGE'S AVE
601	HART,JASON	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
602	GREENWOOD,LESLIE	GREENWOOD HARDWARD	41 ALBERT ST W
603	LAMMING,DAVE	CITY OF SAULT STE MARIE	TRANSIT SERVICE AREA
607	FROST,CHRISTIAN	CITY OF SAULT STE MARIE	TRANSIT SERVICE AREA
608	ALISAT,THOMAS	ALISATS RUST PROOFING	24 QUEEN ST W
609	ROBINSON,SHAWN	ALISATS RUST PROOFING	24 QUEEN ST W
611	MIZZI,PRESTON	WENDY'S	1 QUEEN ST W
617	SAVAGE,SAMUEL	G4S SECURITY	SAULT HOSPITAL
619	BERTO,DEBORAH	GATEVIEW REALTY INC	304-310 ALBERT ST/420A&B MCNABB/715 DOUGLAS/67 ELGIN/47 PRINCESS/18 FERGUSON
622	PROULX,PATRICK	CITY OF SAULT STE MARIE	JOHN RHODES/ESSAR CENTREMCMEKKEN CENTRE/NORTHERN COMMUNITY CENTRE
623	AYTON,BENJAMIN	CITY OF SAULT STE MARIE	JOHN RHODES/ESSAR CENTREMCMEKKEN CENTRE/NORTHERN COMMUNITY CENTRE
624	MIHAILIUK,JASON	CITY OF SAULT STE MARIE	JOHN RHODES/ESSAR CENTREMCMEKKEN CENTRE/NORTHERN COMMUNITY CENTRE
626	CHARRON,ROBERT	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
627	BAKER,WILLIAM	STANDARD PARKING	ONTARIO REALITY CORP/ROBERTA BONDAR PLACE/426 QUEEN ST E/BREWERY BLOCK
632	SAVAGE,MATT	G4S SECURITY	SAULT HOSPITAL
633	HILL,MICHAEL	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
634	TIBBLES,COLLEEN	STANDARD PARKING	ONTARIO REALITY CORP/ROBERTA BONDAR PLACE/426 QUEEN ST E/BREWERY BLOCK
637	TOMASONE,LUIGI	LOU'S AUTOMOTIVE	317 ALBERT ST E

638	SICOLY,TERESA	AIRPORT	1-475 AIRPORT RD
639	PANITTILA,KIM	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
643	SHAW,KEVIN	CITY OF SAULT STE MARIE	BELLUVUE MARINA &PARK/ BONDAR MARINE & PARK/STRATHCLAIR DOG PARK&SPORTS COMPLEX/QE SPORTS COMPLEX
644	SANTA MARIE,ROBERT	CITY OF SAULT STE MARIE	JOHN RHODES/ESSAR CENTREMCMEKKEN CENTRE/NORTHERN COMMUNITY CENTRE
646	BOOTH,ABBY	CITY OF SAULT STE MARIE	JOHN RHODES/ESSAR CENTREMCMEKKEN CENTRE/NORTHERN COMMUNITY CENTRE
647	DAFOE,TRUDY	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
648	ELWGREN,STEPHEN	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
649	GRAHAM,STEVEN	FENGATE PROPERTY	248 NORTHERN AVE
650	LANG,RICHARD	G4S SECURITY	SAULT HOSPITAL
651	HUTCHINSON, HILLARY	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
653	BIOCCHI,CHRISTOPHER	AIRPORT	1-475 AIRPORT RD
659	MARCIL,BONNIE	STRICTLY CONFIDENTIAL INC	RJ'S MARKET
664	HAMMERSTEDT,ERIC	STRICTLY CONFIDENTIAL INC	RJ'S MARKET
665	MATTHEWS,SUANNE	NORTHLAND ANIMAL HOSP	695 TRUNK RD
666	AITKEN,ANDREW	G4S SECURITY	SAULT HOSPITAL
667	MCLAUGHIN,RYAN	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
669	BOREAN,RICK	CITY OF SAULT STE MARIE	BELLUVUE MARINA &PARK/ BONDAR MARINE & PARK/STRATHCLAIR DOG PARK&SPORTS COMPLEX/QE SPORTS COMPLEX
670	MCGUIRE,STEVE	REGENT PROPERTY	402/302 BAY ST/390 BAY/RIVERSEDGE CONDOS
671	MCGUIRE,PATRICK	REGENT PROPERTY	402/302 BAY ST/390 BAY/RIVERSEDGE CONDOS
672	LEWIS,RYAN	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
674	DERASP,RICHARD	CORPS OF COMM	SAULT AIRPORT
675	KELLY,MATTHEW	G4S SECURITY	SAULT HOSPITAL
676	THOMPSON,JOHN	CORPS OF COMM	SAULT AIRPORT
677	MACMILLAN,TYLER	CORPS OF COMM	SAULT AIRPORT
678	PERRON,JENNIFER	CORPS OF COMM	SAULT AIRPORT
679	CHATEAUNEUF,YVON	CORPS OF COMM	SAULT AIRPORT
680	MACGREGOR,CHRIS	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
681	SCHMIDT,KEATON	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
682	HALFORD,KEVIN	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
683	SEMENYEI, ADAM	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
684	RICKARD,EVAN	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
685	HORNBY,BRANDON	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
686	ASH,KEITH	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
687	POSSAMAI,MIKE	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
688	KING,MICHAEL	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
689	SUBRAMANIAM,DASA	DAYS INN	332 BAY ST
690	VANDERKLIFT, RENE	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
691	ADDISON, ERIN	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
692	RHEAUME, DANIEL	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
693	O'SHAUGHNESSY, CONOF	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
694	LIPPE, ANDREW	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
695	LAURICELLA, DIEGO	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
696	CLARIDA, JEFF	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
697	OLAR, GREG	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
698	DEPLONTY, HERBERT	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
699	QUARELL, ROBERT	SKYLINE LIVING	621, 627, 631 MACDONALD AVE
700	FORD, BRIAN	G4S SECURITY	SAULT HOSPITAL
701	CHIMFWEMBE, CHILUFYA	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
702	CARRICATO, CHELSEA	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
703	DIAS, CODY	G4S SECURITY	SAULT HOSPITAL
704	GLOVER, LAURA	G4S SECURITY	SAULT HOSPITAL
705	DEGILIO, JOEY	G4S SECURITY	SAULT HOSPITAL
706	GAGNON, JACQUES	G4S SECURITY	SAULT HOSPITAL
708	POWLEY, CHAD	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
709	SCHMIDT, ALEX	CITY OF SAULT STE MARIE	BELLUVUE MARINA &PARK/ BONDAR MARINE & PARK/STRATHCLAIR DOG PARK&SPORTS COMPLEX/QE SPORTS COMPLEX
710	HOTCHKISS, ROBERT	Riversedge Developments	503 BAY ST
711	MASON, STEPHEN	Riversedge Developments	503 BAY ST
712	KOOSTACHIN, ANDREW	Ontario Finnish Resthome	725 North St
713	Cho, Linda	Jennex Cho Enterprises	129 Second Line West
714	DESANDO, ALEXANDER	G4S SECURITY	SAULT HOSPITAL
715	MITCHELL, SPENCER	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
716	MALLINGER, FRANCES	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
717	GUY, AMY	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
718	SCOTLAND, KEVIN	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
719	JENKINSON, MICHAEL	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
720	LORENZO, COREY	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
721	MACNEIL, ALICIA	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
722	MACTYRE, ANDREW	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
723	ROCCA, ANTHONY	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
724	ROULEAU, MICHEAL	CORPS OF COMM	SAULT AIRPORT
725	PAAT, EMMA LEE	AIRPORT	SAULT AIRPORT
726	DIVECHA, HARRISON	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
727	CLARK, DYLAN	G4S SECURITY	SAULT AREA HOSPITAL
728	BRANDOW, TRACY	NORTH 44 PROPERTY MGM	844 QUEEN ST E/ 524-536A GOULAIS AVE
729	DOUCHAMIE, CHELSEY	G4S SECURITY	SAULT AREA HOSPITAL
730	THOMPSON, JOSIAH	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
731	NOTT, REGINALD	CORPS OF COMM	SAULT AIRPORT
732	MAKI, BRANDON	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
733	GREGORCHUK, CATHERIN	REAL ESTATE STOP INC	2 QUEEN STREET WEST

The Corporation of the
City of Sault Ste. Marie

Community Development and
Enterprise Services
Sam Piraino
Manager of
Transit & Parking

2018 03 02

Nuala Kenny, City Solicitor
Legal Department
Civic Centre

RE: MUNICIPAL BY-LAW ENFORCEMENT OFFICERS

Please amend Schedule "A" to by-law 93-165, being a by-law to appoint Municipal By-Law Enforcement officers to enforce the by-laws of The Corporation of the City of Sault Ste. Marie.

Schedule "A" of this by-law lists all officers that are eligible to issue tickets. The following individuals have applied to be a Municipal By-Law Enforcement Officers in regards to parking and have been approved by the Police Services and the Parking Section for this position.

We request that Schedule "A" be amended to include:

NO.	NAME	EMPLOYER	PROP. LOCATION
103	Lanthier, Timothy	Corporation of the City of Sault Ste. Marie	Downtown Parking Lots

And that the following be deleted:

NO.	NAME	EMPLOYER	PROP. LOCATION
100	Scott, Don	Corporation of the City of Sault Ste. Marie	

Would you please amend By-law 93-165 with the new attached Schedule "A."

Thank you.

Yours truly,

Sam Piraino
Manager of Transit and Parking

SCHEDULE "A"

Sam Piraino	**3**
David Etchells	**51**
Frank Jolicoeur	**72**
Alan Smith	**81**
Dave Devoe	**84**
Edward Pigeau	**89**
George Robinson	**94**
Bill Long	**96**
Edmund Badu	**100**
Jason Levesque	**101**
Sylvia Hendriks	**102**
Timothy Lanthier	**103**

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Nuala Kenny, City Solicitor**

DEPARTMENT: **Legal Department**

RE: **Delegation of Signing Authority – Documents Required to Complete Acquisitions and Transfers of Property**

PURPOSE

The purpose of this report is to recommend that City Council pass By-law 2018-55 delegating authority to the City Solicitor to allow her/him to execute all documents required to complete acquisitions and transfers of property, including Teraview (electronic documentation), once the transaction has been authorized by City Council.

BACKGROUND

Currently City Council receives a report and by-law to authorize the acquisition of property, to declare a property surplus, to authorize the sale of surplus property or to authorize the transfer of lanes/streets and requesting that the Mayor and City Clerk be permitted to sign any documents required to complete the transaction on behalf of the City.

The Council of the City of Sault Ste. Marie has the authority under Section 23.1(1) of the *Municipal Act, 2001*, S.O. 2001, c. 25, to delegate its powers to officers of the Corporation it deems fit. Council may delegate its power to enter into and execute certain agreements, and may impose any restrictions on said powers that are considered appropriate.

ANALYSIS

It is prudent and expedient to allow the City Solicitor to sign documents on behalf of the Corporation which are required to complete acquisitions and transfers of property. By delegating these authorities to the City Solicitor, it would be unnecessary for the Mayor and City Clerk to sign these documents for transactions which have previously been approved by Council, thus simplifying the process.

In order to ensure that these matters are dealt with in a timely fashion, and are not limited by the availability of the City Solicitor, all delegated powers should be further delegated to a designate of the City Solicitor in cases where the City Solicitor is unavailable. This is a standard practice when delegating authorities to a specific officer of the Corporation.

FINANCIAL IMPLICATIONS
Not applicable.

STRATEGIC PLAN / POLICY IMPACT
Not applicable.

RECOMMENDATION
It is therefore recommended that Council take the following action:

By-law 2018-55, which appears elsewhere on the agenda, is recommended for approval.

Respectfully submitted,



Nuala Kenny
City Solicitor

NK/da

PR1 LEGAL\STAFF\COUNCIL\REPORTS\2018\DELEGATION OF SIGNING AUTHORITY - DOCUMENTS REQUIRED TO COMPLETE ACQUISITIONS AND TRANSFERS OF PROPERTY.DOCX

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Nuala Kenny, City Solicitor**

DEPARTMENT: **Legal Department**

RE: **Deeming By-law Harris and Buckley Subdivision – Lots 282 and 283 Plan M30 Korah**

PURPOSE
The purpose of this report is to bring to Council a request received from the owners of Lots 282 and 283, Plan M30 Korah, Harris and Buckley Subdivision.

ATTACHMENT
Attached as Schedule “A” is a map of the subject property.

BACKGROUND
The owners of Lots 282 and 283, Plan M30 Korah, Harris and Buckley Subdivision (civics 354 and 360 Douglas Street) have requested that the City pass a deeming by-law under Section 50(4) of the *Planning Act* for Lots 282 and 283, Plan M30 Korah, Harris and Buckley Subdivision. The effect of the Deeming By-law, once it is registered on title, would be that this property would be treated as one block of land and could no longer be sold as individual lots without the by-law being repealed or by a Committee of Adjustment severance approval.

ANALYSIS
The request has been circulated to Don McConnell, Planning Director, Freddie Pozzebon, Chief Building Official, Maggie McAuley, Municipal Engineer and Michelle Kelly, Secretary-Treasurer, Committee of Adjustment, none of whom have an objection to the request that a deeming by-law be passed for Lots 282 and 283, Plan M30 Korah, Harris and Buckley Subdivision.

FINANCIAL IMPLICATIONS
Not applicable.

STRATEGIC PLAN / POLICY IMPACT
Not applicable.

RECOMMENDATION
It is therefore recommended that Council take the following action:

Resolved that By-law 2018-45 which has the effects of deeming Lots 282 and 283, Plan M30 Korah, Harris and Buckley Subdivision as not being part of a plan of subdivision be recommended for approval. By-law 2018-45 appears elsewhere on the agenda.

Respectfully submitted,



Nuala Kenny
City Solicitor

NK/mw
Attachment

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Schedule "A"
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340
338
342
335
334
326
324
320
328
360
364
354
348
316
Douglas Street
SUBJECT PROPERTY
Fifth Avenue
Sixth Avenue
Korah Road
327
331
2
345
379
306
351
349
359
357
302

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO:	**Mayor Christian Provenzano and Members of City Council**
AUTHOR:	**Nuala Kenny, City Solicitor**
DEPARTMENT:	**Legal Department**
RE:	**PR1.89(6) Project – McNabb Gladstone – Canadian Motor Hotel**

PURPOSE

The purpose of this report is to request Council's approval of an Access Agreement (the "Agreement") between the City and the Canadian Motor Hotel. The purpose of the Agreement is to permit the City access to the property in order to complete certain drainage improvements and storm water management works pursuant to the Revised McNabb Street to Pim Street Drainage Improvements.

BACKGROUND

On May 29, 2017 Council approved the Revised McNabb Street to Pim Street Drainage Improvements (the "Project") and awarded Contract 2017-3E to Boyer Construction Limited. This Project requires easements be obtained for several properties and access be granted to the City to complete the work.

ANALYSIS

The Agreement allows the City access to the property in order to complete certain drainage improvements and storm water management work until such time as an easement has been registered. The Agreement also outlines the improvements to the property that the City has agreed to make in order to restore the property to its prior condition.

FINANCIAL IMPLICATIONS

Estimated costs associated with the Project including additional improvements or arrangements are included in the City's total approved capital budget for the Project of $5,538,542.

STRATEGIC PLAN / POLICY IMPACT
This report is linked to the new infrastructure area of the strategic plan.

RECOMMENDATION
It is therefore recommended that Council take the following action:

By-law 2018-46 authorizing the execution of the Access Agreement appears elsewhere on the agenda and is recommended for approval.

Respectfully submitted,



Nuala Kenny
City Solicitor

NK/tj

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The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Nuala Kenny, City Solicitor**

DEPARTMENT: **Legal Department**

RE: **Declare Surplus – Part Lot 1 Plan H518 – Greenfield Drive**

PURPOSE

The purpose of this report is to recommend to Council that the property described as PIN 31566-0037 (LT) PT LT 1 PL H518 KORAH AS IN T164389; SAULT STE. MARIE be declared as surplus and offered for sale by the City in accordance with the City's policy for the disposition of land.

ATTACHMENT

Attached as Schedule "A" is a map of the subject property.

BACKGROUND

The Legal Department requests that a walkway measuring 8.19' x 121.50' located between civic addresses 203 and 205 Greenfield Drive, be declared surplus.

The Planning Department advised that it was likely that this property was intended as a future walkway but given the anticipated development pattern, the Planning Department does not see a need to retain this property.

ANALYSIS

If Council declares the subject property surplus, the property will be advertised once in the Sault Star and also appear on the City's web page.

FINANCIAL IMPLICATIONS

If the City decides to dispose of the subject property, it would be consistent with the City's plan to dispose of surplus property.

STRATEGIC PLAN / POLICY IMPACT

Not applicable.

RECOMMENDATION
It is therefore recommended that Council take the following action:

Authorize the City owned property described as PIN 31566-0037 (LT) PT LT 1 PL H518 KORAH AS IN T164389; SAULT STE. MARIE as surplus to the City's needs and to authorize the disposition of the said property in accordance with the City's policy for the disposition of land.

By-law 2018-59 authorizing same appears elsewhere on the Agenda and is recommended for approval.

Respectfully submitted,

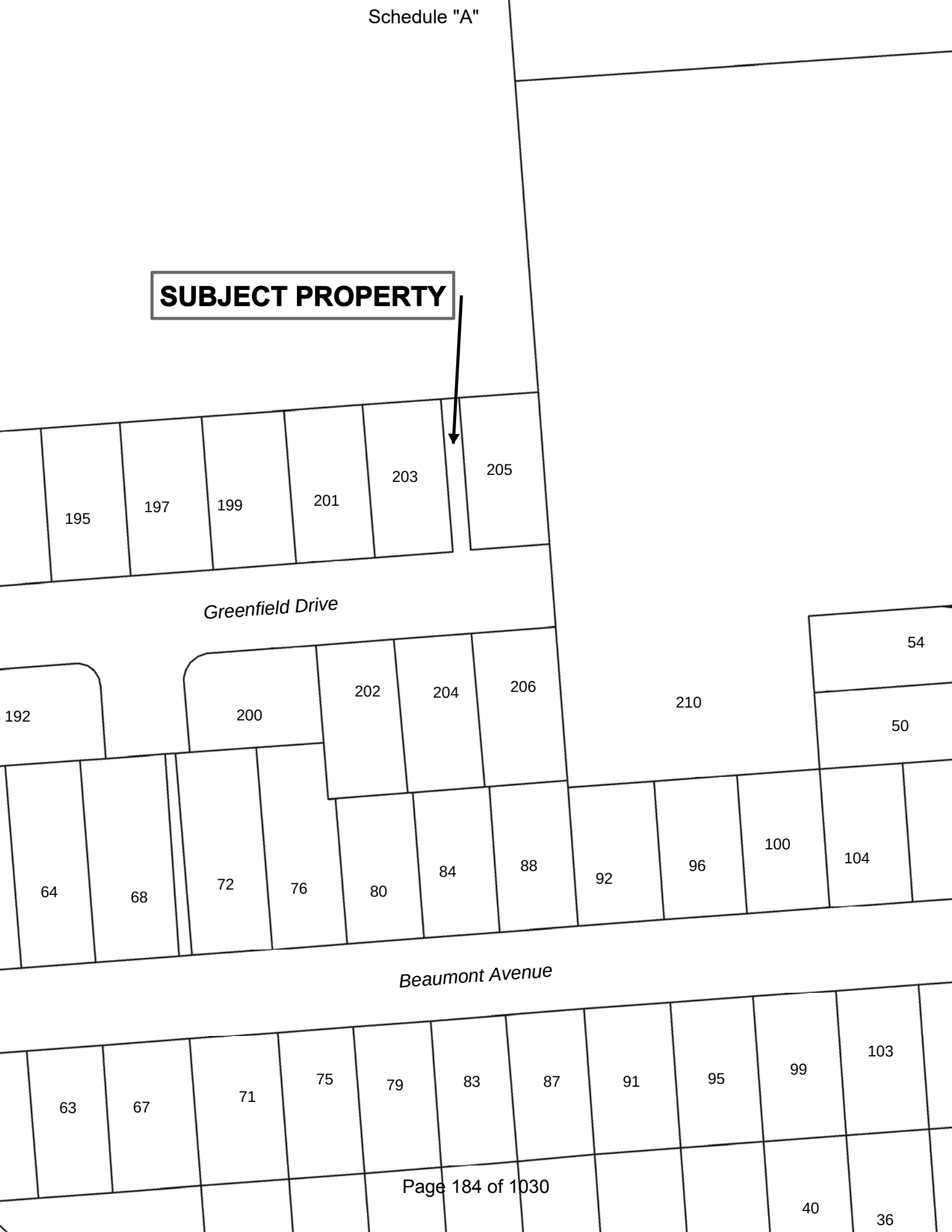


Nuala Kenny
City Solicitor

NK/mw
Attachment

mw \\citydata\LegalDept\Legal\Staff\COUNCIL\REPORTS\2018\Declare Surplus - Part Lot 1 Plan H518 - Greenfield Drive.docx

Schedule "A"


SUBJECT PROPERTY
195
197
199
201
203
205
Greenfield Drive
192
200
202
204
206
210
54
50
64
68
72
76
80
84
88
92
96
100
104
Beaumont Avenue
63
67
71
75
79
83
87
91
95
99
103
40
36

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Nuala Kenny, City Solicitor**

DEPARTMENT: **Legal Department**

RE: **AG122 – Licence to Occupy City Property**

PURPOSE

The purpose of this report is to request Council's approval to renew the Licence to Occupy City Property Agreement (the "Licence Agreement") between the City and Maria A. Rossi (the "Licencee"), which permits a home identification monument to be placed on a portion of the Plaintree Drive boulevard in front of 166 Plaintree Drive.

ATTACHMENT

Attached as Schedule "A" is a sketch of the location of the monument on the City property. Attached as Schedule "B" is a photograph of the monument on the City property.

BACKGROUND

Maria A. Rossi is the registered owner of 166 Plaintree Drive. The Licencee has constructed the monument on the City property. The monument is described as a brick structure, with a granite faceplate indicating the owners and the address of the Rossi property, with a short light post extending from the top.

ANALYSIS

The Licence Agreement is required for insurance purposes and to confirm the terms and conditions related to the use of the property by the Licencee. The term of the Licence Agreement is for one year commencing February 20, 2018 and continues thereafter from year to year until terminated. The Licence Agreement may be terminated by the City or the Licencee by giving three (3) months' notice to the other party. The Licence Agreement requires the Licencee to maintain insurance, while also naming the City as "Additional Insured".

FINANCIAL IMPLICATIONS
Not applicable.

STRATEGIC PLAN / POLICY IMPACT
Not applicable.

RECOMMENDATION
It is therefore recommended that Council take the following action:

By-law 2018-50 authorizing the execution of a Licence to Occupy City Property Agreement between the City and Maria A. Rossi appears elsewhere on the Agenda and is recommended for approval.

Respectfully submitted,



Nuala Kenny
City Solicitor

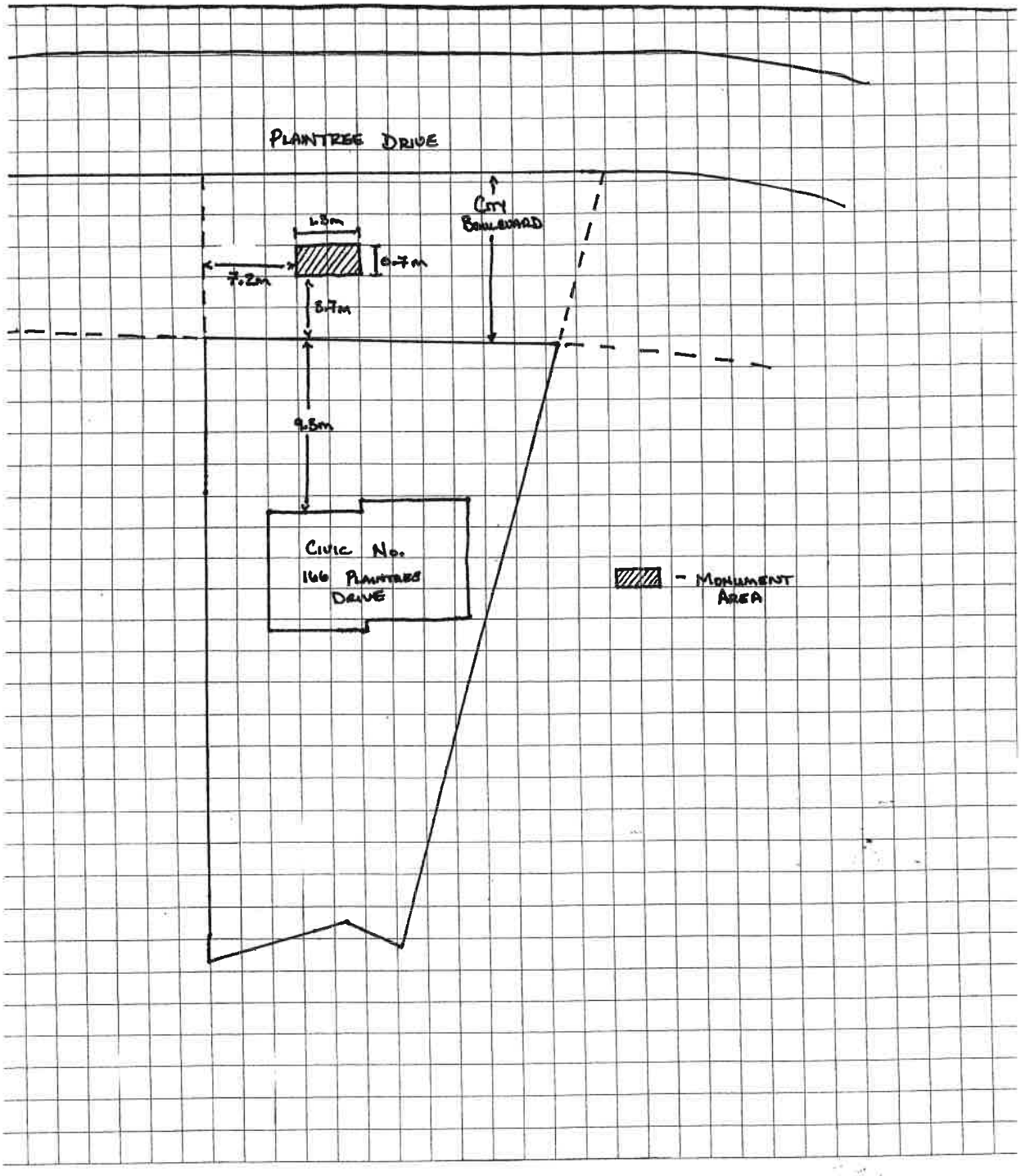
NK/tj

\\citydata\LegalDept\Legal\Staff\COUNCIL\REPORTS\2018\166 PLAINTREE DRIVE.docx

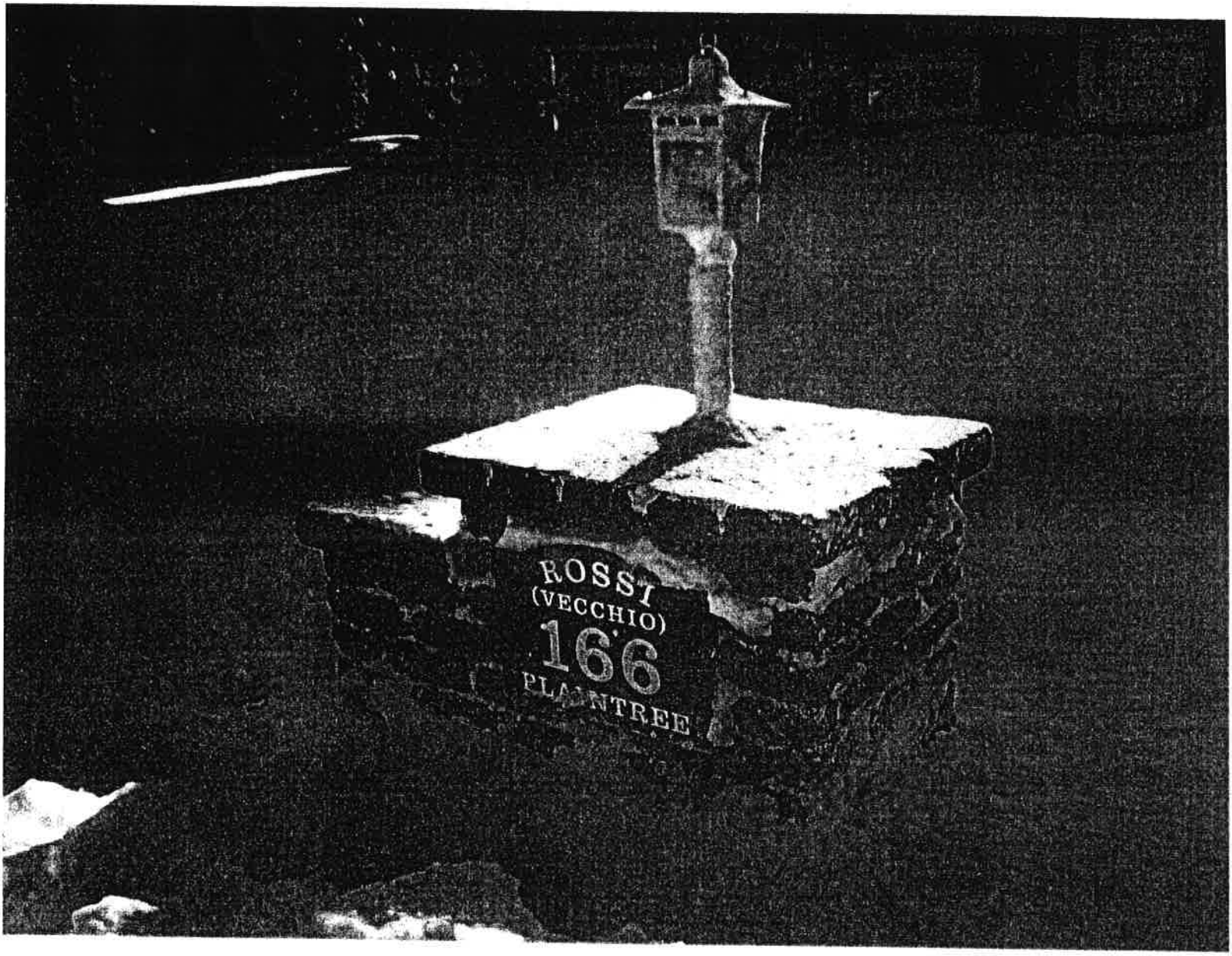
SCHEDULE "A" TO
LICENCE TO OCCUPY CITY PROPERTY

City Property

The City grants the Licencee the right to occupy that portion of the Plaintree Drive Boulevard directly in front of 166 Plaintree Drive in Sault Ste. Marie, Ontario, in the location as indicated on the following map, and subject to the conditions outlined in Schedule "C":



SCHEDULE "B" TO
LICENCE TO OCCUPY CITY PROPERTY



The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO:	**Mayor Christian Provenzano and Members of City Council**
AUTHOR:	**Carl Rumiel, Design and Construction Engineer**
DEPARTMENT:	**Public Works and Engineering Services**
RE:	**Crossing Guard – St. Georges Ave and McNabb St**

PURPOSE

The purpose of this report is to address the Council resolution from February 5, 2018 which reads:

Whereas St. Basil Catholic Elementary School is located on St. Georges Avenue, which is a highly travelled roadway; and

Whereas the parents, students and staff at St. Basil Catholic Elementary School are greatly concerned for the safety of their children who walk to and from school and must cross St. Georges Avenue; and

Whereas the Parents' Council of St. Basil Catholic Elementary School has collected 192 names on a petition requesting a crossing guard at the traffic control lights at St. Georges Avenue and McNabb Street,

Now Therefore Be It Resolved that the Council of the City of Sault Ste. Marie accept the petition from the Parents' Council, and further that the request for a crossing guard be referred to Public Works and Engineering Services for a study and report back to Council.

BACKGROUND

Transit assumed responsibility for the crossing guard program in January of 2017. Prior to that, it was the responsibility of Public Works and Engineering Services. The Engineering Division continues to perform the warrant studies for adult crossing guards and provide traffic engineering guidance to operate the program.

A request was made by the St. Basil Elementary School Principal on September 13, 2017 for the City to perform a crossing guard study to look at the feasibility of placing an adult crossing guard near the school.

The information that the school board has provided the City has always indicated that all students attending St. Basil Elementary School are bussed. Further, the Engineering Division has always maintained that the vertical geometry of St. Georges Avenue at the Grand Boulevard intersection is not safe for a pedestrian crossing of St. Georges with or without an adult crossing guard due to the reduced sight distance caused by the hill. There is a signalized pedestrian crossing 400m to the east at the St. Georges and McNabb intersection.

ANALYSIS

In response to the request of the school, an Adult School Guard Crossing Study at the signalized pedestrian crossing at McNabb Street and St. Georges Avenue was completed on October 10, 2017. The study indicated that there were no issues with the crossing showing adequate time to safely cross the road. The results of this study did not recommend an adult crossing guard and were reported to the school Principal. The position of City is still the same.

In the fall of 2017, the City also completed an environmental assessment (EA) that looked at traffic concerns in the vicinity of McNabb Street and Algoma Avenue. The preferred solution for this EA recommended some improvements to the St. Georges to McNabb Street transition which would enhance traffic safety as well as remove the traffic signals that currently provide the pedestrian crossing. These will be replaced with a pedestrian crossover located further to the west considerably closer to the school. City staff will include this work in a future capital works program, likely to coincide with resurfacing of the street. McNabb Street between St. Georges Avenue and Lake Street is in need of resurfacing within the next few years.

Pedestrian crossovers are currently being considered by Staff at other locations as there have been recent changes to the Ontario Traffic Manual with respect to their use. When the new pedestrian crossing is in place on St. Georges, warrants for an adult crossing guard can be revisited.

FINANCIAL IMPLICATIONS

There are no financial implications at this time.

STRATEGIC PLAN / POLICY IMPACT

Pedestrian safety relates to roads which are addressed in the infrastructure focus area of the strategic plan.

RECOMMENDATION

It is therefore recommended that Council take the following action:

Resolved that the report of the Design and Construction Engineer dated 2018 03 19 concerning the crossing guard at the McNabb and St. Georges intersection be received as information.

Respectfully submitted,



Carl Rumiel, P. Eng.
Design & Construction Engineer
705.759.5379
c.rumiel@cityssm.on.ca

CROSSING GUARD - ST. GEORGE'S AVE AND MCNABB STREET



The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Shelley J. Schell, CPA, CA Chief Financial Officer & Treasurer**

DEPARTMENT: **Corporate Services**

RE: **2018 Tax Rates and Tax Policy**

PURPOSE

The purpose of this report is to provide tax policy options for 2018. Staff is seeking Council approval of the recommended option.

BACKGROUND

The 2018 Operating Budget was deliberated on December 4, 2017. Council approved a levy of $111,064,317 (1.98% increase). The Long Term Tax Policy approved by Council on November 21, 2016 sets out Council's objectives in setting the annual tax policy. In setting the annual tax policy, Council's objective of reducing the Industrial and Commercial tax ratios was also reviewed.

ANALYSIS

Several key measures were reviewed in the evaluation of the 2018 tax policy:

- Assessment Growth
- Property Tax Comparison (Northern municipalities)
- Municipal Tax Burden as a Percentage of Income

Assessment Growth

Appendix A reflects the City's historical assessment growth in terms of assessment and municipal revenue generated. Net additional tax due to growth of $880,000 is available to reduce the 2018 tax levy increase. The levy increase of 1.98% will translate into a tax increase of 0.83% on the taxable assessment base. Looking forward building permit projections do not indicate a change in the current trend for the short term.

The Municipal Property Assessment Corporation (MPAC) conducts a province-wide assessment update every four years. The current year, 2018, is the second year of the four-year reassessment cycle (2017-2020). Although assessment is

relatively stable compared to 2017, overall real net assessment growth in less than 1%. As per the long term tax policy, assessment growth is under the threshold to direct reduction to the Industrial and Commercial classes for 2018 (ie. All growth in excess of 1% would be directed to the Industrial and Commercial classes).

Property Tax Comparison

Property taxes should not be looked at in isolation when determining the competitiveness of a community to attract and retain investment. Other factors such as education levels of workforce, geographic location and links to international trade networks also affect economic conditions and competitiveness.

BMA Management Consulting Inc. prepares an annual survey of Ontario municipalities (105 in 2017) and prepares comparisons on key quantifiable indicators. Their survey and report is used by many municipalities as an independent comparative study. Below is a summary of some of Sault Ste. Marie's rankings for property tax comparisons:

Residential-Detached Bungalow	LOW
Multi-residential Walk-up	LOW
Commercial Neighbourhood Shopping	HIGH
Commercial Office Building	MID
Industrial Standard	HIGH
Large Industrial	MID

Comparison of taxes to other Northern counterparts should be done to ensure that the City is in line with municipalities of similar size and economic status. Appendix B contains data relating to property taxes by various classes and the City's ranking in comparison to its Northern counterparts as well as the survey average.

The City still ranks lowest for residential property class for a detached bungalow as well low in the survey. It is also lowest for a multi-residential class- walk up and also ranks as low in the annual survey. Commercial and Industrial classes rank from Mid to High within the survey and similarly in comparison to the Northern counterparts. The City is relatively competitive on a square footage basis but internal equity for the ratios in these classes is still a challenge.

Municipal Tax Burden on a Typical Household

Tax policy considerations should also include the tax burden on a typical home based upon the average income of the municipality. This comparator ensures that the City is not burdening the residents beyond what they can pay or what is the "norm" in the province.

The BMA Management Consulting Inc. Municipal Study 2017 provides the following statistics:

	Sault Ste. Marie	Survey Average
• 2017 Average Household Income	$ 84,584	$101,143
• 2017 Dwelling Weighted Median	$193,019	$334,505
• 2017 Taxes % of Household Income	3.6%	3.8%

Sault Ste. Marie's municipal tax burden is close to the survey average. The Northern Comparators reflect as follows:

- Greater Sudbury 3.8%
- Thunder Bay 4.0%
- North Bay 4.2%

Sault Ste. Marie is slightly below the survey average and the lowest amongst our Northern comparators. Sault Ste. Marie is ranked as "low" for the survey in comparing property taxes as a % of household income.

Summary

The fundamental purpose of the tax policy is to assist in the achievement of municipal goals and objectives. Council's objectives are defined in the Long Term Tax Policy direction approved November 21, 2016. It must also be kept in mind that property taxes are a "zero sum game"; for every tax reduction there must be an equivalent tax increase. Tax policy also will not change the overall amount of the levy to be collected, it only distributes it.

Tax ratios must be set within the guidelines prescribed by the Province. The Municipal Act provides a range of tax policy tools to municipalities to alter the tax burden both within and between tax classes. Council may choose:

- Adopt the current (starting tax ratio)
- Adopt revenue neutral ratios to mitigate the assessment related tax shifts between classes.
- Establish a new ratio that is closer to or within the Range of Fairness.

Staff's objectives for the 2018 tax policy are:

- Residential class increase equal to or less than the total taxable increase (0.83%)
- Maintain the Taxes as a percentage of household income at or below the BMA survey average
- Reduce tax ratios for Industrial and Commercial classes

A summary of the tax ratio scenarios is shown in Appendix C.

Revenue Neutral Ratios

Revenue Neutral Ratios have been used since 2009 to mitigate tax shifts. Significant tax shifts occurred during this period due to decline in the large industrial class. Council's objective then was to keep the residential tax increase low, which was met by utilizing revenue neutral ratios. The downside to this approach was that the tax ratios for the large industrial class grew to be well in excess of the Provincial Threshold. This issue was recognized in the Long Term Tax Policy approved by Council, but the difficulty in addressing it in the short term was also acknowledged.

As a starting point for the 2018 Tax Policy staff began with the revenue neutral ratios. Although there is a tax ratio decrease for the Industrial and Commercial classes and a decrease in tax for the Large Industrial, the tax increases in some of the other property classes are high. The residential class shows and increase of 1.02%, higher than objective of 0.83%.

Starting Ratios
Starting ratios will reduce the residential class increase to well below the objective of 0.83% as well as provide a larger decrease in tax and reduction in tax ratios for the Industrial class. These objectives are met to the detriment of the multi-residential and office-occupied classes.

The multi-residential class would experience a tax increase of 8.1%. Currently there is a Rental Housing Community Improvement Plan (CIP) in place where the objectives are to attract significant new investment as well as increase the tax base. Applying a significant tax increase to the multi-residential class does not align with the CIP.

The office-occupied class would experience an increase of 5.66%. This is higher than the increase under the revenue neutral ratios. Although the tax ratio has decreased, the tax increase to this commercial class is high.

Alternate Ratios
As both the Revenue Neutral and Starting Ratio scenarios do not provide a balance within the objectives for the 2018 tax policy, alternate ratios were reviewed. The alternate ratio scenario uses starting ratios and adjusts the multi-residential class and the office-occupied class ratios. The multi-residential ratio was reduced to the upper limit of the range of fairness and now complements the CIP objectives. The office occupied ratio was reduced to bring the tax increase to approximately 1%, which is more balanced in relation to the entire base as well provides addition reduction to the broad Commercial class tax ratio.

The Large Industrial Class reflects tax and tax ratios decreases. The Industrial Residual –occupied class will have a 2% tax increase but the tax ratio will be decreasing.

Adjusting any other ratios down will transfer tax burden to the other classes, in particular the Residential class. As noted previously in the report the municipal tax burden for Sault Ste. Marie is close to the survey average. Additional tax burden shifted to the class runs the risk of the tax burden increasing more than the average household income leading to the taxes as a percentage of household income exceeding the survey average.

Staff is recommending the Alternate Ratio Scenario as it provides a more balanced distribution of the taxes between the classes and moves toward reduction of the Industrial and Commercial tax ratios. A quicker reduction to these classes may be achieved If assessment growth improves in future years,. It should be noted, as tax ratios reduced towards the range of fairness cannot be increased in future years.

The above analysis does not include the effect of education taxes, which the City collects on behalf of the Province, or tax capping. Tax capping has in-class implications and does not affect the overall tax ratios of the classes. The tax capping recommendations and by-law will be included at a subsequent Council meeting.

FINANCIAL IMPLICATIONS
The setting of the 2018 tax policy does not affect the levy requirement for 2018. The only implication is the distribution of the levy amongst the tax classes.

STRATEGIC PLAN / POLICY IMPACT
This is an administrative item not articulated in the Corporate Strategic Plan.

RECOMMENDATION
It is therefore recommended that Council take the following action:

The report of the Chief Financial Officer & Treasurer dated March 19, 2018 regarding the 2018 Tax Policy be received and that the Alternate Ratios be approved as follows:

- Starting ratios adjusted to reflect 1.10000 for the Multi-residential class and 3.0500 for the Office-Occupied class

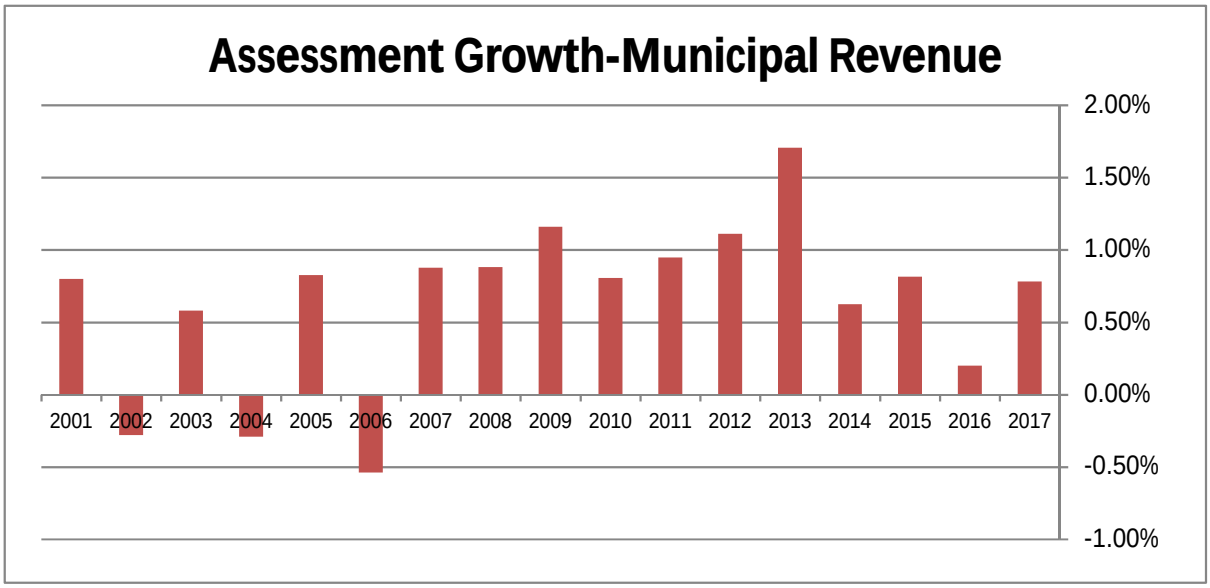
Respectfully submitted,

Shelley J. Schell, CPA, CA
Chief Financial Officer/Treasurer

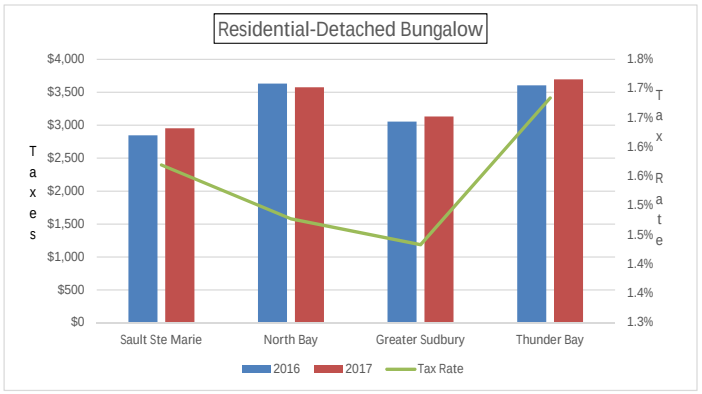
THE CORPORATION OF THE CITY OF SAULT STE MARIE APPENDIX A

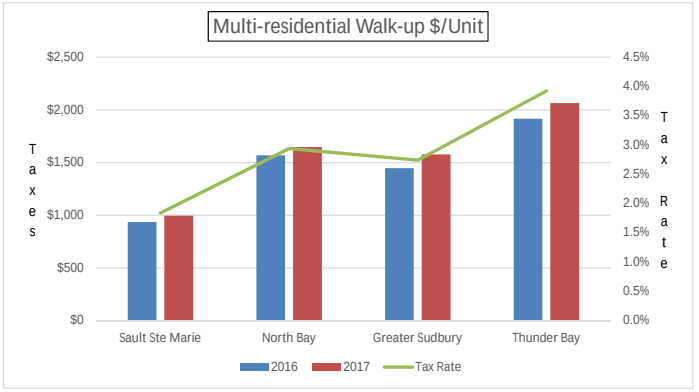
ASSESSMENT GROWTH BY YEAR (TAXABLE ASSESSMENT / NO PILS)

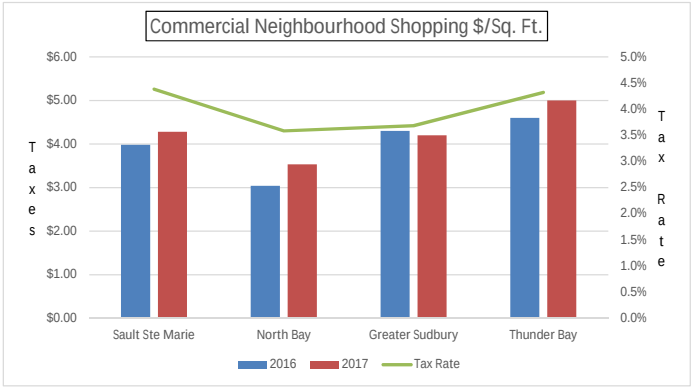
YEAR	GROWTH % Assessment	Municipal Revenue	Municipal $
2017 (note 1)	0.83%	0.78%	883,457
2016	0.14%	0.20%	208,229
2015	0.90%	0.82%	831,383
2014	0.73%	0.62%	622,696
2013	1.36%	1.71%	1,678,582
2012	1.13%	1.11%	1,059,399
2011	1.11%	0.95%	870,846
2010	0.78%	0.81%	705,252
2009	0.93%	1.16%	969,347
2008	0.96%	0.88%	709,320
2007	0.85%	0.88%	686,150
2006	0.03%	-0.54%	-408,855
2005	0.94%	0.83%	590,885
2004		-0.29%	(203,206)
2003		0.58%	379,255
2002		-0.28%	(170,326)
2001		0.80%	480,017

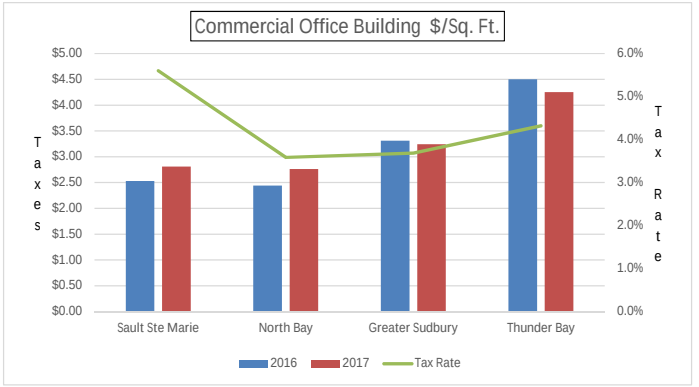


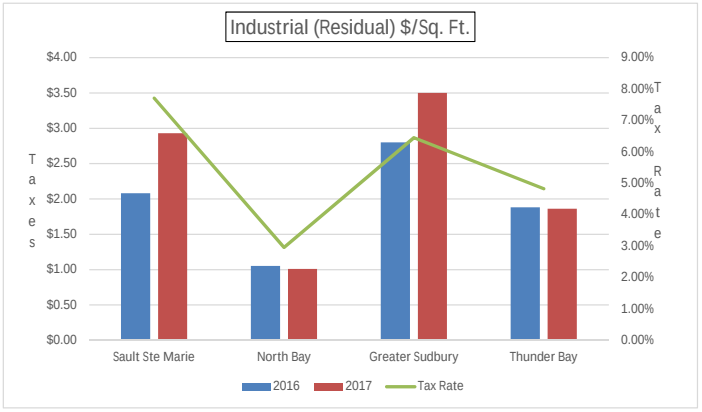
Note 1: Includes Payment In Lieu of Taxes due to Casino property change from PIL to Taxable

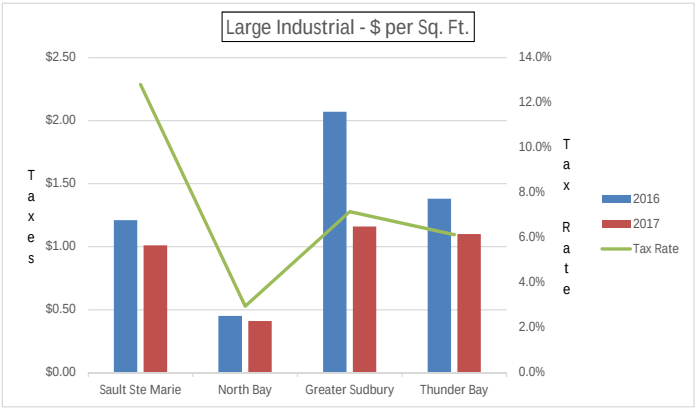

Residential-Detached Bungalow
$4,000
$3,500
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
Taxes
1.8%
1.7%
1.7%
1.6%
1.6%
1.5%
1.5%
1.4%
1.4%
1.3%
Tax Rate
Sault Ste Marie
North Bay
Greater Sudbury
Thunder Bay
2016
2017
Tax Rate


Multi-residential Walk-up $/Unit
$2,500
$2,000
$1,500
$1,000
$500
$0
Taxes
4.5%
4.0%
3.5%
3.0%
2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
Tax Rate
Sault Ste Marie
North Bay
Greater Sudbury
Thunder Bay
2016
2017
Tax Rate


Commercial Neighbourhood Shopping $/Sq. Ft.
$6.00
$5.00
$4.00
$3.00
$2.00
$1.00
$0.00
Taxes
5.0%
4.5%
4.0%
3.5%
3.0%
2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
Tax Rate
Sault Ste Marie
North Bay
Greater Sudbury
Thunder Bay
2016
2017
Tax Rate


Commercial Office Building $/Sq. Ft.
$5.00
$4.50
$4.00
$3.50
$3.00
$2.50
$2.00
$1.50
$1.00
$0.50
$0.00
Taxes
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
Tax Rate
Sault Ste Marie
North Bay
Greater Sudbury
Thunder Bay
2016
2017
Tax Rate


Industrial (Residual) $/Sq. Ft.
$4.00
$3.50
$3.00
$2.50
$2.00
$1.50
$1.00
$0.50
$0.00
Taxes
9.00%
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
Tax Rate
Sault Ste Marie
North Bay
Greater Sudbury
Thunder Bay
2016
2017
Tax Rate


Large Industrial - $ per Sq. Ft.
$2.50
$2.00
$1.50
$1.00
$0.50
$0.00
Taxes
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
Tax Rate
Sault Ste Marie
North Bay
Greater Sudbury
Thunder Bay
2016
2017
Tax Rate

THE CORPORATION OF THE CITY OF SAULT STE. MARIE
2018 TAX POLICY SCENARIOS

Appendix C

Class	2017 Tax Ratios	Starting Ratios: Municipal	Starting Ratios: Chg from 2017 after growth	Starting Ratios: Tax Ratio	Starting Ratios: Change from 2017 ratio	Revenue Neutral: Municipal	Revenue Neutral: Chg from 2017 after growth	Revenue Neutral: Tax Ratio	Revenue Neutral: Change from 2017 ratio	Alternate Ratios-Multi-Residential at Upper Limit and Office Occupied to reflect tax increase @ 1%: Municipal	Alternate Ratios-Multi-Residential at Upper Limit and Office Occupied to reflect tax increase @ 1%: Chg from 2017 after growth	Alternate Ratios-Multi-Residential at Upper Limit and Office Occupied to reflect tax increase @ 1%: Tax Ratio	Alternate Ratios-Multi-Residential at Upper Limit and Office Occupied to reflect tax increase @ 1%: Change from 2017 ratio
Taxable													
Residential	1.000000	69,636,077	0.37%	1.000000	0.000000	70,087,302	1.02%	1.000000	0.000000	69,945,862	0.82%	1.000000	0.000000
Multi-residential	1.194400	5,801,740	8.10%	1.194386	-0.000014	5,421,972	1.02%	1.109024	-0.085376	5,367,073	0.00%	1.100000	-0.094400
Com. Occupied	2.248700	19,165,262	0.75%	2.193976	-0.054724	18,978,059	-0.23%	2.158568	-0.090132	19,250,605	1.20%	2.193976	-0.054724
Com. Exc. Land	1.574090	129,317	2.04%	1.535783	-0.038307	128,054	1.05%	1.510998	-0.063092	129,893	2.50%	1.535783	-0.038307
Shopping Occ.	2.387100	4,961,146	2.95%	2.329048	-0.058052	4,912,690	1.94%	2.291460	-0.095640	4,983,241	3.40%	2.329048	-0.058052
Shopping Exc.	1.670970	0	0.00%	1.630334	-0.040636	0	0.00%	1.604022	-0.066948	0	0.00%	1.630334	-0.040636
Office Occupied	3.284300	697,285	5.66%	3.204407	-0.079893	690,474	4.63%	3.152691	-0.131609	666,641	1.02%	3.050000	-0.234300
Office Exc. Land	2.299010	0	0.00%	2.243085	-0.055925	0	0.00%	2.206884	-0.092126	0	0.00%	2.135000	-0.164010
Parking/Vac. Land	1.662500	491,260	6.13%	1.622072	-0.040428	486,462	5.10%	1.595894	-0.066606	493,448	6.61%	1.622072	-0.040428
Ind. Occupied	4.836300	2,572,582	1.57%	4.718672	-0.117628	2,618,182	3.37%	4.771448	-0.064852	2,584,026	2.02%	4.718672	-0.117628
Ind. Exc. Land	3.143595	30,820	2.88%	3.067137	-0.076458	31,367	4.71%	3.101441	-0.042154	30,957	3.34%	3.067137	-0.076458
Ind. Vac. Land	3.143595	255,221	3.95%	3.067137	-0.076458	259,747	5.80%	3.101441	-0.042154	256,358	4.42%	3.067137	-0.076458
Large Ind. Occ.	8.589400	6,505,965	-2.61%	8.380485	-0.208915	6,621,337	-0.89%	8.474217	-0.115183	6,534,941	-2.18%	8.380485	-0.208915
Large Ind. Exc.	5.583110	127,936	-2.63%	5.447315	-0.135795	130,205	-0.90%	5.508241	-0.074869	128,506	-2.19%	5.447315	-0.135795
Landfills	2.090300	0	0.00%	2.012883	-0.077417	0	0.00%	2.012883	-0.077417	0	0.00%	2.012883	-0.077417
Pipelines	2.093900	676,344	-0.26%	2.093910	0.000010	685,018	1.02%	2.107189	0.013289	679,344	0.18%	2.093910	0.000010
Farm	0.250000	6,108	7.30%	0.250000	0.000000	6,147	7.99%	0.250000	0.000000	6,135	7.77%	0.250000	0.000000
Managed Forests	0.250000	7,255	1.71%	0.250000	0.000000	7,302	2.37%	0.250000	0.000000	7,287	2.16%	0.250000	0.000000
Total Taxable		**111,064,317**	0.83% **A**			**111,064,317**	0.83%			**111,064,317**	0.83%		

2018 Levy Increase	1.98% B
Growth	1.15% B-A
Adjusment for Casino reclass from PIL to Taxable	0.37%
Net real growth	**0.78%**

green	meets objectives
red	objectives not met

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Shelley J. Schell, CPA, CA Chief Financial Officer & Treasurer**

DEPARTMENT: **Corporate Services**

RE: **Long Term Tax Policy Review**

PURPOSE

The purpose of this report is to provide information to Council on the Long Term Tax Policy.

BACKGROUND

The following resolution was passed at the June 26, 2017 Council meeting:

Whereas tax ratios are used to establish the municipal tax rates to be paid annually by multi-residential, commercial, and industrial class properties; and

Whereas the legislated regulations governing the use of tax ratios and associated changes in tax payments from property owners are complex; and

Whereas it is desirable for Council to have as detailed an understanding as possible of how its decisions will impact local ratepayers in all property classes;

Now Therefore Be It Resolved that the Finance and Tax Department staff be directed to set aside one meeting during the 2018 budget schedule to explain the following:

- Current tax policy and how it distributes the tax levy across property classes;
- Provincial thresholds, ranges of fairness and levy restrictions and how these affect the use of tax ratios for different classes;
- The financial impact of hypothetical changes to the tax ratios for commercial and industrial classes and how such changes might affect the taxes levied from other property classes; and

- How capping and clawback regulations and policies affect the taxes owing for individual properties when there are substantial shifts in assessment or tax rate changes within a class.

Staff engaged the Municipal Tax Advisory Group (MTAG) to look at the current cycle reassessment impact, review the City's current Long Term Tax Policy as a baseline and to provide an analysis on the tax impact of changes to the Industrial and Commercial tax ratios. The consultant will be in attendance to present their analysis.

ANALYSIS

Current Tax Policy and Tax Levy Distribution

The current Long Term Tax Policy was approved by Council on November 21, 2016 and stated:

- Directed reduction to the Industrial and Commercial classes would not occur until the assessment base stabilized. A further review would be conducted with the next reassessment in 2021.
- Once the assessment base is stabilized, there will be directed reduction to the Industrial and Commercial classes from overall real net assessment growth in excess of 1% until tax ratios for Industrial and Commercial classes are equal to the Provincial Threshold levels.
- Staff would investigate the feasibility of implementing an Industrial Community Improvement Plan to encourage assessment growth in that property class

The assessment base is very volatile. The four year reassessment cycle, as conducted by the Municipal Property Assessment Corporation (MPAC), and ongoing property tax appeals within the cycle can have a significant impact. If assessment changes the property class proportion in relation to the entire base, a shift in the distribution of the tax burden also occurs between property classes. This type of shift occurred in 2017, the first year of the current reassessment cycle. The Large Industrial class assessment decreased by almost 50% which would have resulted in a tax increase for the Residential class of over 8% for that year if revenue neutral ratios were not adopted to maintain the tax burden between classes.

Historically, revenue neutral ratios have been used to mitigate the shifts caused by significant decreases in the Industrial assessment base over the years. Revenue neutral ratios mitigated the tax shift between the classes but at the same time increased the tax ratio in the Industrial and Commercial broad classes to levels well above the Provincial Threshold. The 2018 tax rates are discussed under a separate report on this agenda and take into consideration the reduction of these ratios.

Planning staff are currently in the process of developing an Industrial Community Improvement Plan to encourage development and assessment growth as was recommended in the Long Term Tax Policy.

Provincial Thresholds, Range of Fairness and Levy Restrictions
In 1998, when the new tax assessment system was put in place, the Province established fair tax ranges for each class of property. The Range of Fairness is where the Province would like to have the tax class ratios for all municipalities and the regulations put in place are meant to move ratios towards the prescribed range. At the time of the change over, the vast majority of ratios in the Province fell above the prescribed range.

In 2001, the Province added additional regulation to restrict municipal levy increases for municipalities that had multi-residential, commercial and industrial tax ratios above specified thresholds. This regulation is referred to as Levy Restriction and the ratios specified are called Provincial Thresholds. The result of this regulation is the transfer of tax burden to property classes that are not restricted and thus reduction of the tax ratio for the restricted class.

The City currently exceeds the Provincial Threshold in both the Commercial and Industrial broad classes. Over time there will be a reduction of tax ratios that exceed Provincial Thresholds systematically as long as there is an annual municipal levy increase.

The chart below summarizes various property classes' lower and upper limits for the Range of Fairness and applicable Provincial Thresholds.

Broad Class	Lower Limit	Upper Limit	Provincial Threshold
Residential	1.0	1.0	
Farm	0	0.25	
Managed Forest	0	0.25	
Multi-Residential	1.0	1.1	2.0
Commercial	0.6	1.1	1.98
Industrial	0.6	1.1	2.63
Pipeline	0.6	0.7	

Impact of Changes to Commercial and Industrial Tax Ratios
The Municipal Tax Advisory Group has provided an analysis on the following three scenarios (Appendix A):

- Reduction of the Industrial ratio to the Provincial Threshold of 2.63
- Reduction of the Commercial ratio to the Provincial Threshold of 1.98
- Reduction of both Industrial and Commercial ratios to Provincial Threshold

Any change to a property class ratio will shift tax burden to the other property classes. Table 3 of each scenario reflects the increase in taxes paid to other property classes due to the reduction.

Council has indicated that reductions to the ratios in the Commercial and Industrial classes are desirable. The results of the first two scenarios show that reducing one class results in an increase to the other. Decreasing both Industrial and Commercial results in increases of 8% to Residential and 16% to Multi-Residential. None of the scenarios are recommended due to the significant impact to other tax classes.

Capping and Clawback
Capping and clawback will be reported separately to Council at a later date. The tax rates are required to be set in order to conduct the analysis.

2018 Tax Policy Study

The 2018 Tax Policy Study conducted by MTAG (Appendix B) provides a detailed analysis of growth, the impact of phased updated market value assessment and options to consider during policy setting. The following is a summary of the results and the staff recommendation regarding the long term tax policy.

Growth
Real assessment growth is generated by supplementary assessments resulting from new buildings/subdivisions, additions, etc. and is reduced by decreases in assessment resulting from assessment appeals. Assessment growth of 0.79% provides additional net tax available for 2018 taxation of approximately $850,000. This means that a levy increase of approximately $850,000 can occur without impacting any other property or tax class.

Market Value Changes
Whereas new assessment provides additional net tax, market changes redistribute the tax burden. The 2017 tax policy used revenue neutral ratios in order to mitigate a significant tax burden shift from a large decrease in Industrial assessment. Table 6 and 7 of the MTAG report shows the four year assessment distribution for 2017 to 2020 as compared to the previous cycle (2012 Value) and the shift.

The tax shift is most apparent in the first year of the four year reassessment cycle (2017) when decreases to assessment are immediately recognized. Increases to assessment are phased in over four years. The next three years of the current cycle appear relatively stable.

Tax ratios must be set within the guidelines prescribed by the Province. The Municipal Act provides a range of tax policy tools to municipalities to alter the tax burden both within and between tax classes. Council may choose:

- Adopt starting ratios, based upon previous years tax ratio (Table 8 and 9)
- Adopt revenue neutral ratios to mitigate the assessment related tax shifts between classes (Table 11 and 12)
- Establish a new ratio that is closer to or within the Range of Fairness

The fundamental purpose of the 2018 tax policy is to assist in the achievement of municipal goals and objectives. Council's objectives are defined in the Long Term Tax Policy direction approved November 21, 2016. It is recognized in the Long Term Tax Policy that it is desirable to decrease the Industrial and Commercial tax ratios as they are high in relation to the city's other tax ratios, even though they are relatively competitive in comparison to other Northern municipalities. It is also recognized that growth in the Industrial sector should be encouraged.

Based upon the review conducted by MTAG, staff is not recommending any changes to the Long Term Tax Policy. The objectives will be reviewed again with the next reassessment cycle and an update provided to Council at that time.

FINANCIAL IMPLICATIONS
The long term tax policy assists in achieving municipal goals and objectives relative to tax distribution. There is no financial impact on the tax levy.

STRATEGIC PLAN / POLICY IMPACT
This is an administrative item not articulated in the Corporate Strategic Plan.

RECOMMENDATION
It is therefore recommended that Council take the following action:

The report of the Chief Financial Officer & Treasurer dated March 19, 2018 regarding the Long Term Tax Policy be received as information.

Respectfully submitted,

Shelley J. Schell, CPA, CA
Chief Financial Officer/Treasurer

MUNICIPAL TAX ADVISORY GROUP

2018 TAX POLICY SCENARIO ANALYSES: Impact of Industrial and Commercial Tax Class Ratio Reductions

The City of Sault Ste. Marie

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DISCLAIMER

The information, views, data, and discussions in this document and related material are provided for general reference purposes only. Any regulatory and statutory references are, in many instances, not directly quoted excerpts and the reader should refer to the relevant provisions of the legislation and regulations for complete information.

The reader is cautioned that decisions should not be made in the sole consideration of or reliance on the information and discussions contained in this report. It is the responsibility of each individual in either of a decision-making or advisory capacity to acquire all relevant and pertinent information required to make an informed and appropriate decision with regards to any matter under consideration concerning municipal finance issues.

No attempt has been made by the Municipal Tax Advisory Group to establish the completeness or accuracy of the data prepared by the Municipal Property Assessment Corporation (MPAC) and the On-line Property Tax Analysis (OPTA) system, which have been relied upon for purposes of preparing this report. As a result, no warrantees or guarantees are provided that the source data is free of error or misstatement.

Finally, the Municipal Tax Advisory Group is not responsible to the municipality, nor to any other party for damages arising based on incorrect data or due to the misuse of the information contained in this study, including without limitation, any related, indirect, special, or consequential damages.

SCENARIO DESCRIPTIONS:

Scenario 1: Reduction of the Industrial Broad Class Ratio To 2.63;
Scenario 2: Reduction of the Commercial Broad Class Ratio To 1.98;
Scenario 3: Reduction of both Broad Class Ratios To 2.63 and 1.98 respectively.

OVERVIEW:

Municipal Tax Advisory Group (MTAG) has modelled ratio reductions and produced five (5) tables to illustrate the results for each scenario. These tables are described:

1. Table 1 of each scenario: Ratio Table for 2018, 2019, and 2020 detailing the ratios employed in the next four tables following.
2. Table 2 of each scenario: Comparison table of 2018 tax rates modelled[1] for each scenario to demonstrate the change in tax rates by class compared to tax rates employing Start Ratios for 2018.
3. Table 3 of each scenario: Displays the change in tax by class as a result of the reduction of the ratio (combination of two ratios in scenario 3).
4. The assessment is known for 2019 and 2020. The municipality can reasonably project the impacts of ratio changes for 2019 and 2020. The Revenue Limit for 2018[2] is employed and the Revenue Neutral Tax Rates are calculated for each year and applied to the 2019 and 2020 assessment. Tables 4 and 5 illustrate the resulting tax by class and the percentage of tax by class to total tax or the class share of the total tax levy.

[1] Ontario Regulation 73/03 prescribes that revenue neutral tax rates are based on the general rate only. Special area rates (urban area special rate for example) are not included in these analyses.

[2] Assumes no growth or loss in assessment so that the measurement of the shifts in taxation due to phase-in plus the impact of ratio reduction can be readily illustrated and measured.

EXECUTIVE SUMMARY

Scenario 1 Observations:

The reduction of the Industrial Tax Class Ratio to the Provincial Threshold proves a significant shift in taxes to all other tax classes. The Industrial and Large Industrial classes would see tax reductions of 58.35% and 60.14% respectively shifting $5.5 million to distribute to all other classes in 2018. All tax classes would see increased share of the total tax levy. For example, the Residential tax class percent share of the total levy would increase from 61.02% to 63.03% of the overall share of City tax by 2020. The greatest increase in share appears to be in the commercial tax classes.

The Industrial tax classes are levy restricted at Start Ratios. The reduction of the ratio to the Provincial Threshold in this scenario removes the levy restriction currently imposed on the Industrial Classes.

Scenario 2 Observations:

The reduction of the Commercial Tax Class Ratio to the Provincial Threshold, similar to Scenario 1, proves a significant shift in taxes to all other tax classes. The four subclasses of Shopping Centre, Office Building, Parking Lot, and default Residual Commercial classes would see tax reductions ranging from 4.69% to 9.52% while all other classes would pick up the $2,149,000 reduction in 2018. All tax classes would see increased share of the total tax levy. Tables 4 and 5 display the change in tax in 2018 and then leveling out over the next two years as market phase in continues to 2020. Residential tax share of the total tax pie will increase to 61.88% by 2020 from current 61.02%.

The Commercial tax classes are levy restricted at Start Ratios. The reduction of the ratio to the Provincial Threshold in this scenario removes the levy restriction currently imposed on the Commercial Classes.

Scenario 3 Observations:

This scenario sees the greatest tax shift to other classes, in particular the Residential and Multi-Residential classes increasing their 2018 tax level by 8.08% and 16.39% respectively. Both the Commercial and Industrial classes share in each other's tax redistribution; hence, the reason

Scenario 1 and Scenario 2 class tax reductions, tax shifts and percentage share of the total levy differ from Scenario 3.

Both commercial and industrial tax classes would be out of levy restriction meaning the other classes would no longer pick up any of their levy changes due to elimination of the Threshold Restrictions.

Over time, the reduction of tax ratios that exceed Provincial Thresholds will systemically occur unless the municipality maintains its levy at Revenue Limit. Reduction of ratios on levy restricted classes occurs where a municipality has an increase in levy (exceeds the Revenue Limit).

Scenario 1

Scenario 1, Table 1:
Tax Ratio Comparison Start Ratio vs Modelled Ratio

Class	2018 Start Ratio	Modelled Ratio's		
		2018	2019	2020
Residential	1.0000	1.0000	1.0000	1.0000
Farm	0.2500	0.2500	0.2500	0.2500
Managed Forest	0.2500	0.2500	0.2500	0.2500
Multi-Residential	1.1944	1.1944	1.1944	1.1944
Broad Commercial	2.2598	2.2598	2.2598	2.2598
Residual Commercial	2.1940	2.1940	2.1940	2.1940
Shopping Centre	2.3290	2.3290	2.3290	2.3290
Office Building	3.2044	3.2044	3.2044	3.2044
Parking Lot	1.6221	1.6221	1.6221	1.6221
Broad Industrial	**6.7518**	**2.6300**	**2.6300**	**2.6300**
Residual Industrial	**4.7187**	**1.8380**	**1.8380**	**1.8380**
Large Industrial	**8.3805**	**3.2644**	**3.2644**	**3.2644**
Pipeline	2.0939	2.0939	2.0939	2.0939
Landfill	2.0903	2.0903	2.0903	2.0903

Scenario 1, Table 2:
Tax Rate Comparison Start Ratio vs Modelled Ratio

Realty Tax Class	2018 Tax Rates		Difference	
	Start Ratio	Model Ratio	Actual	%
Taxable				
Residential	0.01284126	0.01354951	0.00070825	5.52%
Farm	0.00321032	0.00338738	0.00017706	5.52%
Managed Forest	0.00321032	0.00338738	0.00017706	5.52%
Multi-Residential	0.01533742	0.01618334	0.00084592	5.52%
Commercial	0.02817342	0.02972729	0.00155387	5.52%
Shopping Centre	0.02990792	0.03155745	0.00164953	5.52%
Office Building	0.04114863	0.04341813	0.00226950	5.52%
Parking Lot	0.02082945	0.02197827	0.00114882	5.52%
Landfill	0.02684208	0.02832252	0.00148044	5.52%
Industrial	0.06059370	0.02490464	-0.03568906	-58.90%
Large Industrial	0.10761600	0.04423129	-0.06338471	-58.90%
Pipeline	0.02688845	0.02837145	0.00148300	5.52%

Scenario 1, Table 3:
Impacts of Reducing Industrial Broad Class Ratio to 2.63

Realty Tax Class	CVA Tax		Change in Tax	
	2017 Year End (As Revised)	2018 Returned	$	%
Taxable				
Residential	$66,844,652	$70,080,840	$3,236,188	4.84%
Farm	$5,659	$6,342	$684	12.08%
Managed Forest	$7,104	$7,549	$444	6.25%
Multi-Residential	$5,140,956	$5,804,745	$663,788	12.91%
Commercial	$18,346,975	$19,423,272	$1,076,297	5.87%
Shopping Centre	$4,610,998	$4,987,678	$376,679	8.17%
Office Building	$631,433	$701,014	$69,581	11.02%
Parking Lot	$443,402	$494,484	$51,082	11.52%
Industrial	$2,713,725	$1,130,357	-$1,583,368	-58.35%
Large Industrial	$6,517,590	$2,597,899	-$3,919,690	-60.14%
Pipeline	$677,550	$705,882	$28,331	4.18%
Sub-Total Taxable	**$105,940,045**	**$105,940,062**	**$17**	**0.00%**
Payment In Lieu				
Residential	$11,555	$12,140	$585	5.06%
Commercial	$1,902,835	$1,963,988	$61,153	3.21%
Office Building	$1,553,462	$1,688,519	$135,057	8.69%
Parking Lot	$39,056	$43,046	$3,990	10.22%
Landfill	$5,864	$6,384	$520	8.87%
Industrial	$99,052	$41,438	-$57,614	-58.17%
Sub-Total PIL	**$3,611,824**	**$3,755,514**	**$143,691**	**3.98%**
Total Taxable and PIL	**$109,551,869**	**$109,695,576**	**$143,707**	**0.13%**
Exempt	$0	$0	$0	0.00%
Total	**$109,551,869**	**$109,695,576**	**$143,707**	**0.13%**

Scenario 1, Table 4:
Four Year Tax Impact of Reducing Industrial Broad Class Ratio to 2.63

Realty Tax Class	CVA Tax			
	2017 Year End (As Revised)	2018	2019	2020
Taxable				
Residential	$66,844,652	$70,080,840	$69,598,347	$69,148,994
Farm	$5,659	$6,342	$6,682	$6,999
Managed Forest	$7,104	$7,549	$7,591	$7,630
Multi-Residential	$5,140,956	$5,804,745	$6,153,041	$6,477,424
Commercial	$18,346,975	$19,423,272	$19,465,541	$19,504,902
Shopping Centre	$4,610,998	$4,987,678	$5,096,933	$5,198,686
Office Building	$631,433	$701,014	$732,694	$762,199
Parking Lot	$443,402	$494,484	$518,793	$541,434
Industrial	$2,713,725	$1,130,357	$1,143,269	$1,155,294
Large Industrial	$6,517,590	$2,597,899	$2,520,325	$2,448,076
Pipeline	$677,550	$705,882	$696,838	$688,415
Sub-Total Taxable	**$105,940,045**	**$105,940,062**	**$105,940,053**	**$105,940,052**
Payment In Lieu				
Residential	$11,555	$12,140	$12,081	$12,025
Commercial	$1,902,835	$1,963,988	$1,921,486	$1,881,902
Office Building	$1,553,462	$1,688,519	$1,732,901	$1,774,235
Parking Lot	$39,056	$43,046	$44,714	$46,267
Landfill	$5,864	$6,384	$6,561	$6,726
Industrial	$99,052	$41,438	$42,075	$42,669
Sub-Total PIL	**$3,611,824**	**$3,755,514**	**$3,759,818**	**$3,763,824**
Total Taxable and PIL	**$109,551,869**	**$109,695,576**	**$109,699,871**	**$109,703,876**
Exempt	$0	$0	$0	$0
Total	**$109,551,869**	**$109,695,576**	**$109,699,871**	**$109,703,876**

Scenario 1, Table 5:
Four Year Percent of Tax Distribution of Reducing Industrial Broad Class Ratio to 2.63

Realty Tax Class	CVA Tax			
	2017 Year End (As Revised)	2018	2019	2020
Taxable				
Residential	61.02%	63.89%	63.44%	63.03%
Farm	0.01%	0.01%	0.01%	0.01%
Managed Forest	0.01%	0.01%	0.01%	0.01%
Multi-Residential	4.69%	5.29%	5.61%	5.90%
Commercial	16.75%	17.71%	17.74%	17.78%
Shopping Centre	4.21%	4.55%	4.65%	4.74%
Office Building	0.58%	0.64%	0.67%	0.69%
Parking Lot	0.40%	0.45%	0.47%	0.49%
Industrial	2.48%	1.03%	1.04%	1.05%
Large Industrial	5.95%	2.37%	2.30%	2.23%
Pipeline	0.62%	0.64%	0.64%	0.63%
Sub-Total Taxable	**96.70%**	**96.58%**	**96.57%**	**96.57%**
Payment In Lieu				
Residential	0.01%	0.01%	0.01%	0.01%
Commercial	1.74%	1.79%	1.75%	1.72%
Office Building	1.42%	1.54%	1.58%	1.62%
Parking Lot	0.04%	0.04%	0.04%	0.04%
Landfill	0.01%	0.01%	0.01%	0.01%
Industrial	0.09%	0.04%	0.04%	0.04%
Sub-Total PIL	**3.30%**	**3.42%**	**3.43%**	**3.43%**
Total Taxable and PIL	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Exempt	0.00%	0.00%	0.00%	0.00%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Scenario 2

Scenario 2, Table 1:
Tax Ratio Comparison Start Ratio vs Modelled Ratio

Class	2018 Start Ratio	Modelled Ratio's		
		2018	2019	2020
Residential	1.0000	1.0000	1.0000	1.0000
Farm	0.2500	0.2500	0.2500	0.2500
Managed Forest	0.2500	0.2500	0.2500	0.2500
Multi-Residential	1.1944	1.1944	1.1944	1.1944
Broad Commercial	**2.2598**	**1.9800**	**1.9800**	**1.9800**
Residual Commercial	**2.1940**	**1.9223**	**1.9223**	**1.9223**
Shopping Centre	**2.3290**	**2.0407**	**2.0407**	**2.0407**
Office Building	**3.2044**	**2.8077**	**2.8077**	**2.8077**
Parking Lot	**1.6221**	**1.4212**	**1.4212**	**1.4212**
Broad Industrial	6.7518	6.7518	6.7518	6.7518
Residual Industrial	4.7187	4.7187	4.7187	4.7187
Large Industrial	8.3805	8.3805	8.3805	8.3805
Pipeline	2.0939	2.0939	2.0939	2.0939
Landfill	2.0903	2.0903	2.0903	2.0903

Scenario 2, Table 2:
Tax Rate Comparison Start Ratio vs Modelled Ratio

Realty Tax Class	2018 Tax Rates		Difference	
	Start Ratio	Model Ratio	Actual	%
Taxable				
Residential	0.01284126	0.01321608	0.00037482	2.92%
Farm	0.00321032	0.00330402	0.00009370	2.92%
Managed Forest	0.00321032	0.00330402	0.00009370	2.92%
Multi-Residential	0.01533742	0.01578510	0.00044768	2.92%
Commercial	0.02817342	0.02540588	-0.00276754	-9.82%
Shopping Centre	0.02990792	0.02696999	-0.00293793	-9.82%
Office Building	0.04114863	0.03710651	-0.00404212	-9.82%
Parking Lot	0.02082945	0.01878333	-0.00204612	-9.82%
Landfill	0.02684208	0.02762556	0.00078348	2.92%
Industrial	0.06059370	0.06236235	0.00176865	2.92%
Large Industrial	0.10761600	0.11075717	0.00314117	2.92%
Pipeline	0.02688845	0.02767328	0.00078483	2.92%

Scenario 2, Table 3:
Impacts of Reducing Commercial Broad Class Ratio to 1.98

Realty Tax Class	CVA Tax		Change in Tax	
	2017 Year End (As Revised)	2018 Returned	$	%
Taxable				
Residential	$66,844,652	$68,356,272	$1,511,620	2.26%
Farm	$5,659	$6,186	$528	9.33%
Managed Forest	$7,104	$7,363	$259	3.64%
Multi-Residential	$5,140,956	$5,661,902	$520,945	10.13%
Commercial	$18,346,975	$16,599,741	-$1,747,234	-9.52%
Shopping Centre	$4,610,998	$4,262,626	-$348,372	-7.56%
Office Building	$631,433	$599,109	-$32,325	-5.12%
Parking Lot	$443,402	$422,601	-$20,801	-4.69%
Industrial	$2,713,725	$2,830,466	$116,741	4.30%
Large Industrial	$6,517,590	$6,505,259	-$12,331	-0.19%
Pipeline	$677,550	$688,511	$10,961	1.62%
Sub-Total Taxable	**$105,940,045**	**$105,940,036**	**-$8**	**0.00%**
Payment In Lieu				
Residential	$11,555	$11,842	$286	2.48%
Commercial	$1,902,835	$1,678,486	-$224,349	-11.79%
Office Building	$1,553,462	$1,443,062	-$110,400	-7.11%
Parking Lot	$39,056	$36,788	-$2,268	-5.81%
Landfill	$5,864	$6,227	$363	6.20%
Industrial	$99,052	$103,762	$4,710	4.75%
Sub-Total PIL	**$3,611,824**	**$3,280,166**	**-$331,658**	**-9.18%**
Total Taxable and PIL	**$109,551,869**	**$109,220,203**	**-$331,666**	**-0.30%**
Exempt	$0	$0	$0	0.00%
Total	**$109,551,869**	**$109,220,203**	**-$331,666**	**-0.30%**

Scenario 2, Table 4:
Four Year Tax Impact of Reducing Commercial Broad Class Ratio to 1.98

Realty Tax Class	CVA Tax			
	2017 Year End (As Revised)	2018	2019	2020
Taxable				
Residential	$66,844,652	$68,356,272	$67,965,154	$67,600,067
Farm	$5,659	$6,186	$6,525	$6,842
Managed Forest	$7,104	$7,363	$7,413	$7,459
Multi-Residential	$5,140,956	$5,661,902	$6,008,653	$6,332,333
Commercial	$18,346,975	$16,599,741	$16,655,342	$16,707,249
Shopping Centre	$4,610,998	$4,262,626	$4,361,100	$4,453,020
Office Building	$631,433	$599,109	$626,917	$652,874
Parking Lot	$443,402	$422,601	$443,896	$463,774
Industrial	$2,713,725	$2,830,466	$2,866,150	$2,899,458
Large Industrial	$6,517,590	$6,505,259	$6,318,398	$6,143,972
Pipeline	$677,550	$688,511	$680,486	$672,995
Sub-Total Taxable	**$105,940,045**	**$105,940,036**	**$105,940,034**	**$105,940,043**
Payment In Lieu				
Residential	$11,555	$11,842	$11,797	$11,756
Commercial	$1,902,835	$1,678,486	$1,644,085	$1,611,974
Office Building	$1,553,462	$1,443,062	$1,482,726	$1,519,750
Parking Lot	$39,056	$36,788	$38,258	$39,631
Landfill	$5,864	$6,227	$6,407	$6,576
Industrial	$99,052	$103,762	$105,482	$107,088
Sub-Total PIL	**$3,611,824**	**$3,280,166**	**$3,288,756**	**$3,296,774**
Total Taxable and PIL	**$109,551,869**	**$109,220,203**	**$109,228,790**	**$109,236,818**
Exempt	$0	$0	$0	$0
Total	**$109,551,869**	**$109,220,203**	**$109,228,790**	**$109,236,818**

Scenario 2, Table 5:
Four Year Percent of Tax Distribution of Reducing Commercial Broad Class Ratio to 1.98

Realty Tax Class	CVA Tax			
	2017 Year End (As Revised)	2018	2019	2020
Taxable				
Residential	61.02%	62.59%	62.22%	61.88%
Farm	0.01%	0.01%	0.01%	0.01%
Managed Forest	0.01%	0.01%	0.01%	0.01%
Multi-Residential	4.69%	5.18%	5.50%	5.80%
Commercial	16.75%	15.20%	15.25%	15.29%
Shopping Centre	4.21%	3.90%	3.99%	4.08%
Office Building	0.58%	0.55%	0.57%	0.60%
Parking Lot	0.40%	0.39%	0.41%	0.42%
Industrial	2.48%	2.59%	2.62%	2.65%
Large Industrial	5.95%	5.96%	5.78%	5.62%
Pipeline	0.62%	0.63%	0.62%	0.62%
Sub-Total Taxable	**96.70%**	**97.00%**	**96.99%**	**96.98%**
Payment In Lieu				
Residential	0.01%	0.01%	0.01%	0.01%
Commercial	1.74%	1.54%	1.51%	1.48%
Office Building	1.42%	1.32%	1.36%	1.39%
Parking Lot	0.04%	0.03%	0.04%	0.04%
Landfill	0.01%	0.01%	0.01%	0.01%
Industrial	0.09%	0.10%	0.10%	0.10%
Sub-Total PIL	**3.30%**	**3.00%**	**3.01%**	**3.02%**
Total Taxable and PIL	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Exempt	0.00%	0.00%	0.00%	0.00%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Scenario 3

Scenario 3, Table 1:
Tax Ratio Comparison Start Ratio vs Modelled Ratio

Class	2018 Start Ratio	Modelled Ratio's		
		2018	2019	2020
Residential	1.0000	1.0000	1.0000	1.0000
Farm	0.2500	0.2500	0.2500	0.2500
Managed Forest	0.2500	0.2500	0.2500	0.2500
Multi-Residential	1.1944	1.1944	1.1944	1.1944
Broad Commercial	**2.2598**	**1.9800**	**1.9800**	**1.9800**
Residual Commercial	**2.1940**	**1.9223**	**1.9223**	**1.9223**
Shopping Centre	**2.3290**	**2.0407**	**2.0407**	**2.0407**
Office Building	**3.2044**	**2.8077**	**2.8077**	**2.8077**
Parking Lot	**1.6221**	**1.4212**	**1.4212**	**1.4212**
Broad Industrial	**6.7518**	**2.6300**	**2.6300**	**2.6300**
Residual Industrial	**4.7187**	**1.8380**	**1.8380**	**1.8380**
Large Industrial	**8.3805**	**3.2644**	**3.2644**	**3.2644**
Pipeline	2.0939	2.0939	2.0939	2.0939
Landfill	2.0903	2.0903	2.0903	2.0903

Scenario 3, Table 2:
Tax Rate Comparison Start Ratio vs Modelled Ratio

Realty Tax Class	2018 Tax Rates		Difference	
	Start Ratio	Model Ratio	Actual	%
Taxable				
Residential	0.01284126	0.01396748	0.00112622	8.77%
Farm	0.00321032	0.00349187	0.00028155	8.77%
Managed Forest	0.00321032	0.00349187	0.00028155	8.77%
Multi-Residential	0.01533742	0.01668257	0.00134515	8.77%
Commercial	0.02817342	0.02685034	-0.00132308	-4.70%
Shopping Centre	0.02990792	0.02850338	-0.00140454	-4.70%
Office Building	0.04114863	0.03921621	-0.00193242	-4.70%
Parking Lot	0.02082945	0.01985126	-0.00097819	-4.70%
Landfill	0.02684208	0.02919622	0.00235414	8.77%
Industrial	0.06059370	0.02567291	-0.03492079	-57.63%
Large Industrial	0.10761600	0.04559575	-0.06202025	-57.63%
Pipeline	0.02688845	0.02924665	0.00235820	8.77%

Scenario 3, Table 3:
Impacts of Reducing Industrial and Commercial Ratios to Threshold Ratios

Realty Tax Class	CVA Tax		Change in Tax	
	2017 Year End (As Revised)	2018 Returned	$	%
Taxable				
Residential	$66,844,652	$72,242,666	$5,398,015	8.08%
Farm	$5,659	$6,538	$879	15.54%
Managed Forest	$7,104	$7,782	$677	9.53%
Multi-Residential	$5,140,956	$5,983,812	$842,855	16.39%
Commercial	$18,346,975	$17,543,525	-$803,450	-4.38%
Shopping Centre	$4,610,998	$4,504,980	-$106,019	-2.30%
Office Building	$631,433	$633,171	$1,738	0.28%
Parking Lot	$443,402	$446,629	$3,227	0.73%
Industrial	$2,713,725	$1,165,227	-$1,548,498	-57.06%
Large Industrial	$6,517,590	$2,678,040	-$3,839,549	-58.91%
Pipeline	$677,550	$727,657	$50,106	7.40%
Sub-Total Taxable	**$105,940,045**	**$105,940,026**	**-$19**	**0.00%**
Payment In Lieu				
Residential	$11,555	$12,515	$959	8.30%
Commercial	$1,902,835	$1,773,917	-$128,918	-6.78%
Office Building	$1,553,462	$1,525,108	-$28,355	-1.83%
Parking Lot	$39,056	$38,880	-$176	-0.45%
Landfill	$5,864	$6,581	$717	12.23%
Industrial	$99,052	$42,716	-$56,336	-56.88%
Sub-Total PIL	**$3,611,824**	**$3,399,716**	**-$212,108**	**-5.87%**
Total Taxable and PIL	**$109,551,869**	**$109,339,742**	**-$212,127**	**-0.19%**
Exempt	$0	$0	$0	0.00%
Total	**$109,551,869**	**$109,339,742**	**-$212,127**	**-0.19%**

Scenario 3, Table 4:
Four Year Tax Impact of Reducing Industrial and Commercial Ratios to Threshold Ratios

Realty Tax Class	CVA Tax			
	2017 Year End (As Revised)	2018	2019	2020
Taxable				
Residential	$66,844,652	$72,242,666	$71,763,279	$71,316,517
Farm	$5,659	$6,538	$6,890	$7,218
Managed Forest	$7,104	$7,782	$7,827	$7,869
Multi-Residential	$5,140,956	$5,983,812	$6,344,436	$6,680,467
Commercial	$18,346,975	$17,543,525	$17,586,098	$17,625,762
Shopping Centre	$4,610,998	$4,504,980	$4,604,811	$4,697,836
Office Building	$631,433	$633,171	$661,951	$688,767
Parking Lot	$443,402	$446,629	$468,702	$489,271
Industrial	$2,713,725	$1,165,227	$1,178,832	$1,191,508
Large Industrial	$6,517,590	$2,678,040	$2,598,722	$2,524,814
Pipeline	$677,550	$727,657	$718,514	$709,994
Sub-Total Taxable	**$105,940,045**	**$105,940,026**	**$105,940,061**	**$105,940,022**
Payment In Lieu				
Residential	$11,555	$12,515	$12,456	$12,402
Commercial	$1,902,835	$1,773,917	$1,735,962	$1,700,596
Office Building	$1,553,462	$1,525,108	$1,565,585	$1,603,302
Parking Lot	$39,056	$38,880	$40,396	$41,809
Landfill	$5,864	$6,581	$6,765	$6,937
Industrial	$99,052	$42,716	$43,384	$44,007
Sub-Total PIL	**$3,611,824**	**$3,399,716**	**$3,404,550**	**$3,409,053**
Total Taxable and PIL	**$109,551,869**	**$109,339,742**	**$109,344,611**	**$109,349,076**
Exempt	$0	$0	$0	$0
Total	**$109,551,869**	**$109,339,742**	**$109,344,611**	**$109,349,076**

Scenario 3, Table 5:
Four Year Percent of Tax Distribution of Reducing
Industrial and Commercial Ratios to Threshold Ratios

Realty Tax Class	CVA Tax			
	2017 Year End (As Revised)	2018	2019	2020
Taxable				
Residential	61.02%	66.07%	65.63%	65.22%
Farm	0.01%	0.01%	0.01%	0.01%
Managed Forest	0.01%	0.01%	0.01%	0.01%
Multi-Residential	4.69%	5.47%	5.80%	6.11%
Commercial	16.75%	16.04%	16.08%	16.12%
Shopping Centre	4.21%	4.12%	4.21%	4.30%
Office Building	0.58%	0.58%	0.61%	0.63%
Parking Lot	0.40%	0.41%	0.43%	0.45%
Industrial	2.48%	1.07%	1.08%	1.09%
Large Industrial	5.95%	2.45%	2.38%	2.31%
Pipeline	0.62%	0.67%	0.66%	0.65%
Sub-Total Taxable	**96.70%**	**96.89%**	**96.89%**	**96.88%**
Payment In Lieu				
Residential	0.01%	0.01%	0.01%	0.01%
Commercial	1.74%	1.62%	1.59%	1.56%
Office Building	1.42%	1.39%	1.43%	1.47%
Parking Lot	0.04%	0.04%	0.04%	0.04%
Landfill	0.01%	0.01%	0.01%	0.01%
Industrial	0.09%	0.04%	0.04%	0.04%
Sub-Total PIL	**3.30%**	**3.11%**	**3.11%**	**3.12%**
Total Taxable and PIL	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Exempt	0.00%	0.00%	0.00%	0.00%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

MUNICIPAL TAX ADVISORY GROUP

2018 TAX POLICY STUDY:

The City of Sault Ste. Marie

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DISCLAIMER

The information, views, data, and discussions in this document and related material are provided for general reference purposes only. Any regulatory and statutory references are, in many instances, not directly quoted excerpts and the reader should refer to the relevant provisions of the legislation and regulations for complete information.

The reader is cautioned that decisions should not be made in the sole consideration of or reliance on the information and discussions contained in this report. It is the responsibility of each individual in either of a decision-making or advisory capacity to acquire all relevant and pertinent information required to make an informed and appropriate decision with regards to any matter under consideration concerning municipal finance issues.

No attempt has been made by the Municipal Tax Advisory Group to establish the completeness or accuracy of the data prepared by the Municipal Property Assessment Corporation (MPAC) and the On-line Property Tax Analysis (OPTA) system, which have been relied upon for purposes of preparing this report. As a result, no warrantees or guarantees are provided that the source data is free of error or misstatement.

Finally, the Municipal Tax Advisory Group is not responsible to the municipality, nor to any other party for damages arising based on incorrect data or due to the misuse of the information contained in this study, including without limitation, any related, indirect, special, or consequential damages.

PREFACE

The following report has been prepared to assist The City of Sault Ste. Marie in fulfilling its annual property tax policy responsibilities for the 2018 taxation cycle.

As part of the exercise of establishing policies that are responsive to local sensitivities, circumstances and priorities, numerous decisions must be made that will affect the distribution of the property tax burden within and between property classes. Perhaps the most important of these decisions involves the setting of "tax ratios" to govern the unique rate of taxation applied to various property classes for municipal purposes.

Prior to City Council decision on tax policies, a clear understanding of various phenomena affecting both the size and composition of the overall assessment base within the municipality's jurisdiction must be established. Changes in assessment occurring between tax cycles will inevitably affect the distribution of the tax burden in the absence of any further tax policy and budgetary changes.

The City is charged with determining tax policy annually for the following:

- Class Ratios, Start Ratios or adoption of different ratios,
- Options for Vacant Land and Excess Land Discounts for both Commercial and Industrial Classes,
- Discounts for Vacant Unit Program,
- Revenue Neutral Rates and Filtering,
- Revenue Neutral Ratios,
- Optional tax classes (maintaining or adjusting relationship),
- Levy restrictions,
- Capping parameters (limits and recovery),
- Tax relief programs.

The contents of the following document are intended to quantify patterns of assessment change, both in terms of real growth and reassessment impacts. This understanding is required as a necessary starting point to inform decisions about tax policy both short term and longer term, municipal budgetary impacts, the resulting tax rates from budgetary decisions, and any adjustments that may be contemplated for 2018 taxation. For the purposes of this report, only the City's General Tax Rate is used in all calculations. The methodology used to develop this report is attached as Appendix "A".

To assist the 2018 tax policy and budget development process, this report contains an overview of:

- **Annualized Assessment Growth** affecting overall 2018 taxation levels and 2018 budgetary considerations;

- **Reassessment/Phase-in Changes in Current Value Assessment (CVA)** affecting the distribution of the tax burden including:
    - Revenue Neutral Tax Rates, and
    - Inter-class Tax Shifts,
    - Impact of assessment phase-in adjustments on other tax classes;

- **Tax Ratios**
    - Starting Ratios,
    - Revenue Neutral Tax Ratios[1], and
    - Tax Ratio Benchmark Survey of Neighbouring Jurisdictions.

The results of this exercise are respectfully offered for the City's consumption and consideration.

[1] Sensitivity analysis to model tax ratio changes will be prepared on an ad hoc basis in consultation with the City

EXECUTIVE SUMMARY

Sault Ste. Marie City Council has the opportunity to formulate long-term tax policy in 2018. The assessment is known over the period 2018 to 2020 (excluding significant ARB decisions or assessment corrections). Council can determine the tax per class and carefully manage the tax responsibility to:

- Provide balancing between classes so that each class reflects a proportionate share of the historical tax burden as determined by Council,
- Alternatively, Council can revise the tax burden by class to potentially assist to meet economic development goals and objectives,
- Provide relief where City Council considers it appropriate,
- Despite Section 106 of the Municipal Act, the City can consider some tax relief for business and industry classes in support of continued economic strategies,

The Tax Policy Study of The City of Sault Ste. Marie provides a detailed analysis of the growth (new builds) in 2017, the impact of phased updated market value assessment (valuation date January 1, 2016) and illustrates various options to consider during its policy setting consideration. Following market value update and assessment phase-in, the taxes between tax classes are redistributed. This report identifies the redistribution.

Growth

Overall, Sault Ste. Marie experiences modest growth during 2017 realizing an additional net tax available for 2018 taxation of $854,843 or 0.79%. Last year's net levy of $104,730,000, can now be increased to the Revenue Limit of $105,940,045 without a levy increase as 2017 growth provides the increased taxes without impacting any other property or tax class. This growth is a result of new builds, expansions, assessment corrections and revisions offset by tax write-offs and assessment reductions. It must be understood that increases or decreases in assessment as market value change do not translate into growth or loss but merely redistribution of the tax burden.

Market Value Changes

Assessment phase-in and resulting roll for 2018 tax, (Tables 3 and 4) shows the mix of CVA for each class and its relative proportion of sharing the City Levy (Revenue Limit). The tax per class in Table 4 demonstrates the redistribution effects of the CVA update and year two of the assessment phase-in program. This table is particularly important in considering tax policy for 2018 as it gives City Council an illustration of the impact of applying 2017 tax policy (start ratios and discounts) if carried over and applied to 2018. Note commercial and industrial broad class ratios have been ratcheted downward for 2018 as prescribed in accordance with the regulations due to their exceeding the Provincial Threshold Ratios (1.98 and 2.63 respectively) in 2017. City Council starts 2018 with systemically reduced commercial and industrial ratios.

Ratio Strategy: 2018, 2019, 2020

The City's option to develop longer-term strategy can be decided based on a number of factors, the primary one being the relative tax burden distribution by tax class (economic strategies, vacant unit and discount programs are others to consider). The City knows the value of assessment over the next three years ending the 2017-2020 tax cycle with final CVA values for all property in 2020 based on evaluation date of January 1, 2016. The tax class assessment distribution over the next three years is illustrated in Tables 6, 7, 8 and 9. While there is no change in assessment distribution in the Residential Class among all other classes from the beginning to the end of the four-year cycle, the class will see a reduction in its percent share of the overall levy by slightly over 1%; the result of weighting other classes. Multi-Residential, Commercial and Residual Industrial Classes will experience slight increases in tax burden over the next three years while the Large Industrial class will see a reduction. This assessment and tax overview is based on 2017 year-end roll applied as the Revenue Limit for 2018, 2019 and 2020 while reflecting changes in market value due to the assessment phase-in program.

Revenue/Class Neutral Ratios (RNR's)

Ontario has provided legislation to permit some limited and restricted ratio increase by employing Revenue Neutral or Class Neutral Ratios in circumstances where class ratios exceed the Provincial Threshold Ratios. The tax impact of adopting class neutral ratios for 2018 results in returning the relative share of tax burden in the commercial, industrial, multi-residential, and residential classes back to or near the 2017 levels. The adoption of RNR's serves to mitigate the shift in tax between classes caused by differing value changes in CVA level at each class. Table 11 illustrates the impact of adopting revenue/class neutral ratios from the "start ratio" position of 2018. However, both Commercial and Industrial Broad Class Ratios exceed Provincial Threshold. Consequently, these classes are levy restricted.

Education Tax

Tax ratio adjustment by City Council does not affect Education tax. Education rates are prescribed and apply regardless of tax ratios approved. The only impact on education tax is in the application of discounts or vacant unit rebates should Council consider a change in those percentages.

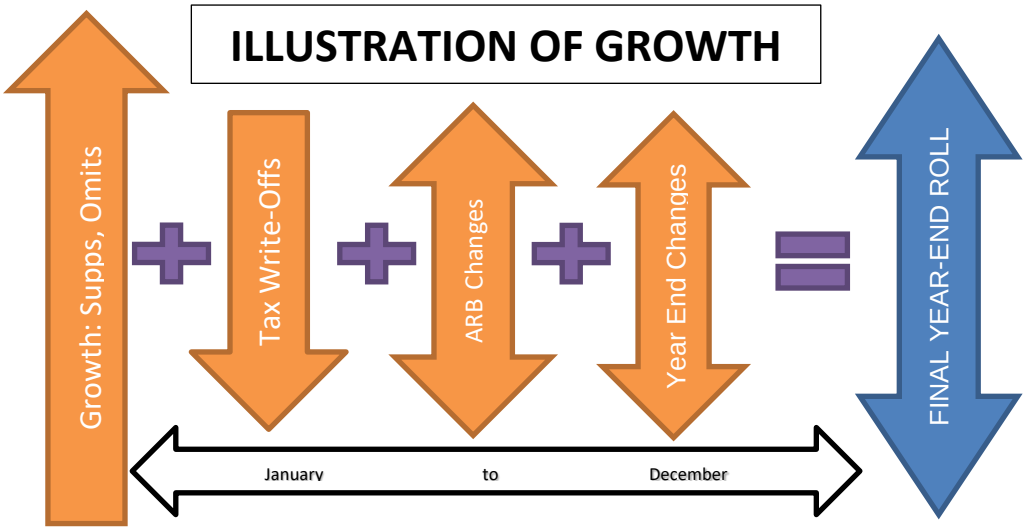
PART I – GROWTH IN ASSESSMENT AND TAXATION

Updates in Current Value Assessment (CVA) that result from changes in the state, use and condition of property affect the overall size and health of municipal revenue streams on an annual basis. Such changes occur on an on-going basis throughout the year and result from new construction, additions, improvements to, and demolitions of property, changes in ownership and occupancy, etc. The Municipal Property Assessment Corporation (MPAC) typically captures these changes in the form of supplementary and omitted assessments or post roll assessment notices. They are often triggered by the Assessment Review Board issuing notices of decision, local municipalities approving applications for tax relief under various provisions of the *Municipal Act, 2001*, and/or Minutes of Settlement being ratified by MPAC pursuant to the Request for Reconsideration process.

Regardless of the mechanism employed to update the assessment roll or respective tax account, the net result is the same in that these changes and updates occurring throughout the year impact the total pool of revenue available to taxing authorities for the next budget cycle. This phenomenon, which is defined as "growth in assessment", is measured by comparing the assessment roll as originally returned for the year prior against the most recently revised "year-end" assessment controls provided by MPAC.

In order to fully understand the impact of "growth" in assessment on the municipality's property tax base, it is necessary to isolate the effect of such changes from updates in value that are due to reassessment and the application of the 4-year phase-in of increases (assessment stabilization program). This serves as a starting point for both the budget and tax policy process because of the insight it provides as to whether the municipality has ended the previous reporting cycle in a revenue deficit or surplus position when compared to the budget amount that was originally approved as the total tax levy for the year by Council. Where the assessment base is decreasing in size, (write-offs and write-downs exceed supplementary and omitted assessment) the total amount of assessment loss (negative growth) needs to be carefully considered as maintaining status quo for levy actually reports as an increase in tax. Moreover, where the assessment base is increasing overall (positive growth) the new revenue that results should be appropriately accounted for in the budget process.

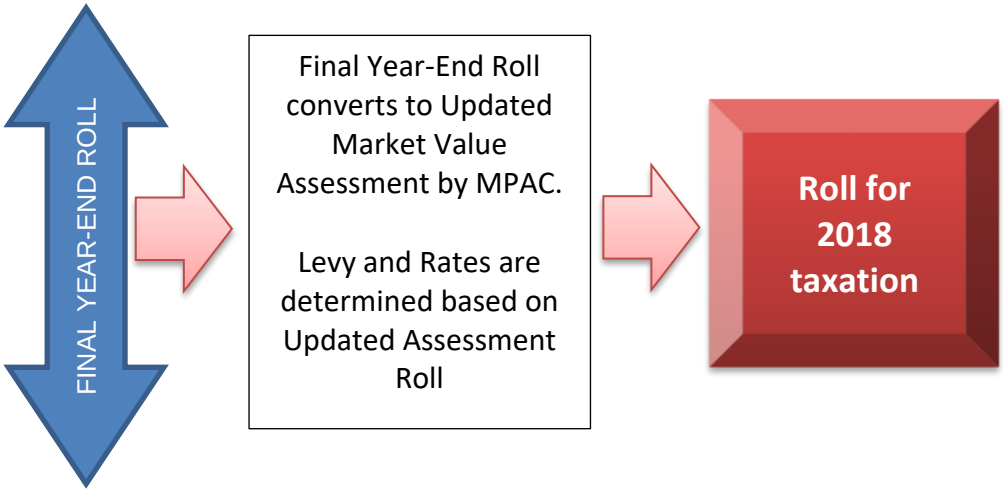
The entire process of in-year and year-end changes is demonstrated in the following Illustration. Growth in assessment does not change tax class redistribution where levies are not adjusted due to gains or losses in growth. Taxes between classes are redistributed when the proportion of market value changes between the classes.



Roll for 2017 taxation start of year; Strike **LEVY** & Rates

Roll at the end of 2017 X's rate = **REVENUE LIMIT**

1. **REVENUE LIMIT** (year-end, 2017) – **LEVY** (start of year, 2017) = Growth or Loss (additional revenue if net growth: revenue deficit if net loss).
2. Any tax change above or below the REVENUE LIMIT for next year represents a tax increase or decrease.
3. Market Value (MV) change in assessment DOES NOT affect REVENUE LIMIT nor municipal levy change.
4. Potential tax shifts between classes will occur due to MV update.
5. Calculate **Revenue Neutral Tax Rates** using **Revenue Limit** and Roll for 2018 Taxation.



The following tables highlight the overall net impact of assessment "growth", both in terms of actual assessment change and municipal tax dollars, for the City.

Table 1: City of Sault Ste. Marie – 2017 Assessment Growth

Realty Tax Class	Phased CVA		Change in Assessment	
	2017 Returned	2017 Year End (As Revised)	$	%
Taxable				
Residential	4,983,685,675	5,018,491,567	34,805,892	0.70%
Farm	1,733,450	1,699,310	-34,140	-1.97%
Managed Forest	1,923,600	2,133,522	209,922	10.91%
Multi-Residential	312,803,625	323,151,135	10,347,510	3.31%
Commercial	613,934,409	629,612,891	15,678,482	2.55%
Shopping Centre	146,148,092	148,635,680	2,487,588	1.70%
Office Building	14,801,593	14,794,018	-7,575	-0.05%
Parking Lot	19,787,278	20,522,674	735,396	3.72%
Industrial	45,055,961	45,444,072	388,111	0.86%
Large Industrial	58,994,512	58,994,512	0	0.00%
Pipeline	24,183,500	24,293,500	110,000	0.45%
Sub-Total Taxable	**6,223,051,695**	**6,287,772,881**	**64,721,186**	**1.04%**
Payment In Lieu				
Residential	867,550	867,550	0	0.00%
Commercial	77,103,168	65,153,118	-11,950,050	-15.50%
Office Building	36,396,488	36,396,488	0	0.00%
Parking Lot	2,078,325	1,807,675	-270,650	-13.02%
Landfill	210,600	210,600	0	0.00%
Industrial	1,641,250	1,641,250	0	0.00%
Sub-Total PIL	**118,297,381**	**106,076,681**	**-12,220,700**	**-10.33%**
Total Taxable and PIL	**6,341,349,076**	**6,393,849,562**	**52,500,486**	**0.83%**
Exempt	633,373,255	629,400,569	-3,972,686	-0.63%
Total	**6,974,722,331**	**7,023,250,131**	**48,527,800**	**0.70%**

Table 2: City of Sault Ste. Marie – 2017 Revenue Growth (-Loss)

Realty Tax Class	CVA Tax		Change in Tax	
	2017 Returned	2017 Year End (As Revised)	$	%
Taxable				
Residential	$66,381,049	$66,844,652	$463,603	0.70%
Farm	$5,772	$5,659	-$114	-1.97%
Managed Forest	$6,405	$7,104	$699	10.91%
Multi-Residential	$4,976,340	$5,140,956	$164,617	3.31%
Commercial	$17,889,533	$18,346,975	$457,442	2.56%
Shopping Centre	$4,533,828	$4,610,998	$77,170	1.70%
Office Building	$631,756	$631,433	-$323	-0.05%
Parking Lot	$427,513	$443,402	$15,889	3.72%
Industrial	$2,685,869	$2,713,725	$27,857	1.04%
Large Industrial	$6,517,590	$6,517,590	$0	0.00%
Pipeline	$674,482	$677,550	$3,068	0.45%
Sub-Total Taxable	**$104,730,138**	**$105,940,045**	**$1,209,907**	**1.16%**
Payment In Lieu				
Residential	$11,555	$11,555	$0	0.00%
Commercial	$2,252,052	$1,902,835	-$349,217	-15.51%
Office Building	$1,553,462	$1,553,462	$0	0.00%
Parking Lot	$44,903	$39,056	-$5,848	-13.02%
Landfill	$5,864	$5,864	$0	0.00%
Industrial	$99,052	$99,052	$0	0.00%
Sub-Total PIL	**$3,966,888**	**$3,611,824**	**-$355,064**	**-8.95%**
Total Taxable and PIL	**$108,697,026**	**$109,551,869**	**$854,843**	**0.79%**
Exempt	$0	$0	$0	0.00%
Total	**$108,697,026**	**$109,551,869**	**$854,843**	**0.79%**

PART II – REASSESSMENT AND PHASE-IN CHANGES

Impacts of Reassessment and the 4-year Phase-in of Assessment Increases

General reassessment impacts and the application of the four-year assessment increase phase-in program affect the overall distribution of the tax burden. Consequently, as part of its 2018 budget and tax policy processes, the City needs to understand the effect of the final year of the current assessment phase-in cycle on the apportionment of the tax burden both within and between tax classes.

Market Value Changes in assessment are not to be treated as growth nor loss in assessment. Valuation changes merely represent revaluation of the composition of the value of the different assessments within the assessment pool of the municipality; hence, the phenomena of taxes shifting between classes.

The Province mandates regular reassessments of all property every four years across Ontario to ensure that assessments relied upon for property tax purposes are reflective of current market conditions. The last comprehensive Province-wide reassessment was undertaken for 2017 taxation based on an effective valuation date of January 1, 2016; the next update is scheduled for 2021 taxation based on an effective valuation date of January 1, 2020.

To complicate simple reassessment, operating concurrently within Ontario's 4-year reassessment cycle is an assessment stabilization program. The program provides for the gradual phase-in of increases in CVA resulting from the general reassessment over that same 4-year cycle.

The program provides, where an increase in current value materializes (increase in value from January 1, 2012 to January 1, 2016); the full increase does not apply. The amount of the increase is divided by four. An amount equivalent to 25% of the total increase is added to the property's 2012 CVA in 2017. The City taxed on this phased-in assessment last year. For each year thereafter, twenty-five percent (25%) increments are added over the remaining three-year phase-in period until such time as the new destination CVA is reached (January 1, 2016 value) in 2020. As such, affected taxpayers are not taxed on their January 1st, 2016 full market value until 2020, which is the last year of the current assessment cycle.

The following table illustrates the assessment phase in program:

January 1, 2016 Value	Assessment for Taxation 2017 to 2020
2016 Market Value less than 2012 Market Value	Full reduction granted for 2017 -2020 taxation
2016 Market Value = 2012 Market Value	No Change, Assessment carried forward for 2017-2020 taxation
2016 Market Value is GREATER THAN 2012 Market Value	Determine the difference between 2012 and 2016 assessment; divide by 4; 2017 Assessment; add 1/4 of the difference to 2012; **2018 Assessment; add 1/2 of the difference to 2012;** 2019 Assessment; add 3/4 of the difference to 2012; 2020 Assessment; add ALL of the difference to 2012.

Assessment phase-in beginning in 2017 and ending in 2020 (destination assessment) provides an opportunity for municipal tax policy decision makers to set a longer-term strategy to better manage taxes per class. This year will see 50% of the increase in market value for each property between market value 2012 to market value 2016 added to their 2012 assessment (25% in 2017 and an additional 25% for 2018). The municipality has received the assessment phase-in data and can reasonably model ratio impacts and tax shifts over the remaining three years of the phase-in period. Assessment rolls are dynamic and there are ongoing adjustments to the roll due to assessment correction and revision (ARB's, PRAN's, SAN's, ANA's, RECON's and TIA's); however, Municipalities can realistically calculate and determine major tax policy despite those assessment corrections and adjustments[2]. Councils can plan long-term strategy over the next three years by understanding and modelling the impact of ratio decisions and class discounts for each of the next three years.

The following tables have been produced to quantify net changes in assessment related to updates in CVA manifest on the assessment roll for "year – 4" of the phase-in program.

In addition to measuring CVA update and impacts, the City must calculate Revenue Neutral Tax Rates, (Revenue Limit rates on the 2018 CVA) which include the impacts of growth in assessment reported in Part I of the report, market value changes and subsequent adopted tax policy. These are also included for the City to inform the base 2018 levy budget (0.0% levy change) and tax policy processes. As illustrated above, Revenue Neutral Tax Rates are required to be calculated every year (O.R. 73/03). These rates are determined by applying the start or class neutral or otherwise decided tax ratios and class discounts to the unweighted tax rate to raise the Revenue Limit on the phased assessment for the current taxation year.

[2] Significant in-year corrections or revisions in assessment will need to be analysed to determine magnitude and materiality of assessment corrections on an annual basis.

Table 3: City of Sault Ste. Marie – 2018 CVA Summary

Realty Tax Class	Phased CVA		Change in Assessment	
	2017 Year End (As Revised)	2018 Returned	$	%
Taxable				
Residential	5,018,491,567	5,172,204,749	153,713,182	3.06%
Farm	1,699,310	1,872,340	173,030	10.18%
Managed Forest	2,133,522	2,228,513	94,991	4.45%
Multi-Residential	323,151,135	358,686,457	35,535,322	11.00%
Commercial	629,612,891	655,265,291	25,652,400	4.07%
Shopping Centre	148,635,680	158,050,719	9,415,039	6.33%
Office Building	14,794,018	16,145,645	1,351,627	9.14%
Parking Lot	20,522,674	22,498,750	1,976,076	9.63%
Industrial	45,444,072	47,818,749	2,374,677	5.23%
Large Industrial	58,994,512	59,344,342	349,830	0.59%
Pipeline	24,293,500	24,880,000	586,500	2.41%
Sub-Total Taxable	**6,287,772,881**	**6,518,995,555**	**231,222,674**	**3.68%**
Payment In Lieu				
Residential	867,550	896,000	28,450	3.28%
Commercial	65,153,118	66,105,745	952,627	1.46%
Office Building	36,396,488	38,889,725	2,493,237	6.85%
Parking Lot	1,807,675	1,958,550	150,875	8.35%
Landfill	210,600	225,400	14,800	7.03%
Industrial	1,641,250	1,747,500	106,250	6.47%
Sub-Total PIL	**106,076,681**	**109,822,920**	**3,746,239**	**3.53%**
Total Taxable and PIL	**6,393,849,562**	**6,628,818,475**	**234,968,913**	**3.67%**
Exempt	629,400,569	643,314,281	13,913,712	2.21%
Total	**7,023,250,131**	**7,272,132,756**	**248,882,625**	**3.54%**

Table 4: City of Sault Ste. Marie – 2018 Inter-Class Tax Shifts

Realty Tax Class	CVA Tax		Change in Tax	
	2017 Year End (As Revised)	2018 Returned	$	%
Taxable				
Residential	$66,844,652	$66,417,626	-$427,026	-0.64%
Farm	$5,659	$6,011	$352	6.22%
Managed Forest	$7,104	$7,154	$50	0.70%
Multi-Residential	$5,140,956	$5,501,325	$360,368	7.01%
Commercial	$18,346,975	$18,408,002	$61,026	0.33%
Shopping Centre	$4,610,998	$4,726,968	$115,970	2.52%
Office Building	$631,433	$664,371	$32,938	5.22%
Parking Lot	$443,402	$468,637	$25,235	5.69%
Industrial	$2,713,725	$2,750,192	$36,467	1.34%
Large Industrial	$6,517,590	$6,320,764	-$196,826	-3.02%
Pipeline	$677,550	$668,985	-$8,566	-1.26%
Sub-Total Taxable	**$105,940,045**	**$105,940,034**	**-$11**	**0.00%**
Payment In Lieu				
Residential	$11,555	$11,506	-$50	-0.43%
Commercial	$1,902,835	$1,861,329	-$41,506	-2.18%
Office Building	$1,553,462	$1,600,259	$46,797	3.01%
Parking Lot	$39,056	$40,796	$1,740	4.45%
Landfill	$5,864	$6,050	$187	3.18%
Industrial	$99,052	$100,819	$1,767	1.78%
Sub-Total PIL	**$3,611,824**	**$3,620,758**	**$8,934**	**0.25%**
Total Taxable and PIL	**$109,551,869**	**$109,560,792**	**$8,923**	**0.01%**
Exempt	$0	$0	$0	0.00%
Total	**$109,551,869**	**$109,560,792**	**$8,923**	**0.01%**

Table 5: City of Sault Ste. Marie – 2018 Revenue Neutral Tax Rates

Realty Tax Class	TAX RATES			
	2017	2018	2019	2020
Taxable				
Residential	0.01331967	0.01284126	0.01239603	0.01198063
Farm	0.00332992	0.00321032	0.00309901	0.00299516
Managed Forest	0.00332992	0.00321032	0.00309901	0.00299516
Multi-Residential	0.01590883	0.01533742	0.01480564	0.01430950
Commercial	0.02922304	0.02817342	0.02719659	0.02628523
Shopping Centre	0.03102215	0.02990792	0.02887095	0.02790347
Office Building	0.04268165	0.04114863	0.03972192	0.03839083
Parking Lot	0.02160547	0.02082945	0.02010725	0.01943345
Landfill	0.02784210	0.02684208	0.02591141	0.02504311
Industrial	0.06285116	0.06059370	0.05849279	0.05653269
Large Industrial	0.11162529	0.10761600	0.10388473	0.10040353
Pipeline	0.02789019	0.02688845	0.02595617	0.02508637

Table 6: City of Sault Ste. Marie – Four-Year Assessment Distribution

Realty Tax Class	CVA				
	Base CVA (2012 Value)	2017	2018	2019	2020 (2016 value)
Taxable					
Residential	4,880,526,589	5,018,491,567	5,172,204,749	5,325,917,713	5,479,630,718
Farm	1,582,880	1,699,310	1,872,340	2,045,370	2,218,400
Managed Forest	2,076,426	2,133,522	2,228,513	2,323,509	2,418,500
Multi-Residential	288,194,313	323,151,135	358,686,457	394,221,779	429,757,100
Commercial	639,093,073	629,612,891	655,265,291	680,917,707	706,570,100
Shopping Centre	139,262,878	148,635,680	158,050,719	167,465,761	176,880,800
Office Building	13,527,790	14,794,018	16,145,645	17,497,273	18,848,900
Parking Lot	18,963,497	20,522,674	22,498,750	24,474,825	26,450,900
Industrial	44,533,608	45,444,072	47,818,749	50,193,424	52,568,100
Large Industrial	103,426,110	58,994,512	59,344,342	59,694,171	60,044,000
Pipeline	23,707,000	24,293,500	24,880,000	25,466,500	26,053,000
Sub-Total Taxable	**6,154,894,164**	**6,287,772,881**	**6,518,995,555**	**6,750,218,032**	**6,981,440,518**
Payment In Lieu					
Residential	839,100	867,550	896,000	924,450	952,900
Commercial	67,171,590	65,153,118	66,105,745	67,058,373	68,011,000
Office Building	33,903,250	36,396,488	38,889,725	41,382,963	43,876,200
Parking Lot	1,725,000	1,807,675	1,958,550	2,109,425	2,260,300
Landfill	195,800	210,600	225,400	240,200	255,000
Industrial	1,535,000	1,641,250	1,747,500	1,853,750	1,960,000
Sub-Total PIL	**105,369,740**	**106,076,681**	**109,822,920**	**113,569,161**	**117,315,400**
Total Taxable and PIL	**6,260,263,904**	**6,393,849,562**	**6,628,818,475**	**6,863,787,193**	**7,098,755,918**
Exempt	660,258,902	629,400,569	643,314,281	657,227,989	671,141,700
Total	**6,920,522,806**	**7,023,250,131**	**7,272,132,756**	**7,521,015,182**	**7,769,897,618**

Table 7: City of Sault Ste. Marie – Percent Assessment Distribution

Realty Tax Class	CVA				
	Base CVA (2012 Value)	2017	2018	2019	2020 (2016 Value)
Taxable					
Residential	70.52%	71.46%	71.12%	70.81%	70.52%
Farm	0.02%	0.02%	0.03%	0.03%	0.03%
Managed Forest	0.03%	0.03%	0.03%	0.03%	0.03%
Multi-Residential	4.16%	4.60%	4.93%	5.24%	5.53%
Commercial	9.23%	8.96%	9.01%	9.05%	9.09%
Shopping Centre	2.01%	2.12%	2.17%	2.23%	2.28%
Office Building	0.20%	0.21%	0.22%	0.23%	0.24%
Parking Lot	0.27%	0.29%	0.31%	0.33%	0.34%
Industrial	0.64%	0.65%	0.66%	0.67%	0.68%
Large Industrial	1.49%	0.84%	0.82%	0.79%	0.77%
Pipeline	0.34%	0.35%	0.34%	0.34%	0.34%
Sub-Total Taxable	**88.94%**	**89.53%**	**89.64%**	**89.75%**	**89.85%**
Payment In Lieu					
Residential	0.01%	0.01%	0.01%	0.01%	0.01%
Commercial	0.97%	0.93%	0.91%	0.89%	0.88%
Office Building	0.49%	0.52%	0.53%	0.55%	0.56%
Parking Lot	0.02%	0.03%	0.03%	0.03%	0.03%
Landfill	0.00%	0.00%	0.00%	0.00%	0.00%
Industrial	0.02%	0.02%	0.02%	0.02%	0.03%
Sub-Total PIL	**1.52%**	**1.51%**	**1.51%**	**1.51%**	**1.51%**
Total Taxable and PIL	**90.46%**	**91.04%**	**91.15%**	**91.26%**	**91.36%**
Exempt	9.54%	8.96%	8.85%	8.74%	8.64%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Table 8: City of Sault Ste. Marie – Tax Distribution Based on Start Ratios

Realty Tax Class	CVA Tax			
	2017 Year End (As Revised)	2018	2019	2020
Taxable				
Residential	$66,844,652	$66,417,626	$66,020,236	$65,649,428
Farm	$5,659	$6,011	$6,339	$6,644
Managed Forest	$7,104	$7,154	$7,201	$7,244
Multi-Residential	$5,140,956	$5,501,325	$5,836,706	$6,149,609
Commercial	$18,346,975	$18,408,002	$18,464,800	$18,517,793
Shopping Centre	$4,610,998	$4,726,968	$4,834,896	$4,935,588
Office Building	$631,433	$664,371	$695,025	$723,625
Parking Lot	$443,402	$468,637	$492,121	$514,032
Industrial	$2,713,725	$2,750,192	$2,784,130	$2,815,794
Large Industrial	$6,517,590	$6,320,764	$6,137,587	$5,966,686
Pipeline	$677,550	$668,985	$661,013	$653,575
Sub-Total Taxable	**$105,940,045**	**$105,940,034**	**$105,940,053**	**$105,940,019**
Payment In Lieu				
Residential	$11,555	$11,506	$11,460	$11,416
Commercial	$1,902,835	$1,861,329	$1,822,701	$1,786,662
Office Building	$1,553,462	$1,600,259	$1,643,811	$1,684,444
Parking Lot	$39,056	$40,796	$42,415	$43,925
Landfill	$5,864	$6,050	$6,224	$6,386
Industrial	$99,052	$100,819	$102,463	$103,998
Sub-Total PIL	**$3,611,824**	**$3,620,758**	**$3,629,073**	**$3,636,831**
Total Taxable and PIL	**$109,551,869**	**$109,560,792**	**$109,569,126**	**$109,576,850**
Exempt	$0	$0	$0	$0
Total	**$109,551,869**	**$109,560,792**	**$109,569,126**	**$109,576,850**

Table 9: City of Sault Ste. Marie – Percent of Tax Distribution

Realty Tax Class	CVA Tax			
	2017 Year End (As Revised)	2018	2019	2020
Taxable				
Residential	61.02%	60.62%	60.25%	59.91%
Farm	0.01%	0.01%	0.01%	0.01%
Managed Forest	0.01%	0.01%	0.01%	0.01%
Multi-Residential	4.69%	5.02%	5.33%	5.61%
Commercial	16.75%	16.80%	16.85%	16.90%
Shopping Centre	4.21%	4.31%	4.41%	4.50%
Office Building	0.58%	0.61%	0.63%	0.66%
Parking Lot	0.40%	0.43%	0.45%	0.47%
Industrial	2.48%	2.51%	2.54%	2.57%
Large Industrial	5.95%	5.77%	5.60%	5.45%
Pipeline	0.62%	0.61%	0.60%	0.60%
Sub-Total Taxable	**96.70%**	**96.70%**	**96.69%**	**96.68%**
Payment In Lieu				
Residential	0.01%	0.01%	0.01%	0.01%
Commercial	1.74%	1.70%	1.66%	1.63%
Office Building	1.42%	1.46%	1.50%	1.54%
Parking Lot	0.04%	0.04%	0.04%	0.04%
Landfill	0.01%	0.01%	0.01%	0.01%
Industrial	0.09%	0.09%	0.09%	0.09%
Sub-Total PIL	**3.30%**	**3.30%**	**3.31%**	**3.32%**
Total Taxable and PIL	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Exempt	0.00%	0.00%	0.00%	0.00%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

PART III – TAX RATIOS

The Rationale, Rules and Restrictions on Tax Ratios

As part of the Harris Government's attempts in 1998 to improve the simplicity and transparency of Ontario's property tax regime, a system of unique property classes and variable tax rates was implemented as part of the new Ontario Fair Assessment System (OFAS). Seven main classes of property were created: residential, multi-residential, commercial, industrial, managed forest, farmland, and pipeline. Additional classes could be created by regulation and in total and by 2018, there are now 24 tax classes:

Realty Tax Class (RTC)	RTC Description	Realty Tax Class (RTC)	RTC Description
R	Residential	**L**	Large Industrial
M	Multi-Residential	**H**	Landfill Site
N	New Multi-Residential	**P**	Pipeline
F	Farmland	**O**	Resort Condominium
T	Managed Forest	**J**	Industrial, New Construction
C	Commercial	**K**	Large Industrial, New Construction
A	Theatre	**X**	Commercial, New Construction
Q	Prof. Sports Facility	**Y**	Office Building, New Construction
G	Parking Lot	**Z**	Shopping Centre, New Construction
D	Office Building	**U**	Utility Corridor
S	Shopping Centre	**W**	Railway Right-of-Way
I	Industrial	**E**	Exempt

Since 1998, each property class has remained eligible to be treated at a distinct rate of taxation for municipal purposes at the discretion of City government. This variable tax rate scheme is governed by the setting of "tax ratios"; tax ratios dictate the relationship of each class's tax rate to the rate applied to residential property.

Municipalities are granted a limited degree of autonomy to establish tax rate and burden relationships for different property types to reflect local priorities on an annual basis. It should, however, be noted that the municipal community does not have unfettered authority to arbitrarily set variable tax rates at completely discretionary levels.

Consistent with the applicable regulations, the "Ranges of Fairness" prescribed by the Province for each class of property limit the City's ability to alter or vary tax rates. Where an existing tax ratio exceeds the prescribed range of fairness, tax ratio increases are only permitted to offset a shift in taxation that might result from a general reassessment. The calculation and setting of "Class Neutral Tax Ratios" is allowed by the Province, but only in accordance with a strictly regulated formula.

The City must also be mindful of the regulated "Threshold Ratios" that apply to the non-residential classes. Property classes with tax ratios exceeding the threshold ratios are protected to a certain extent from municipal budget increases until their respective Council's approve tax ratio reductions to bring them to or below the established maximum.

Municipalities must respect these limitations on tax ratio setting flexibility as part of their annual tax ratio setting exercise. Consequently, municipalities charged with the responsibility of making decisions affecting the apportionment of the tax burden must be mindful of these business rules. The following table has been prepared to illustrate the Province's tax ratio scheme in relation to the City's 2018 starting tax ratios for the various property classes.

Table 10: City of Sault Ste. Marie – 2018 Tax Ratio Summary

Class	2017 Adopted Ratio	2018 Start Ratio	Range of Fairness		Provincial Threshold Ratio	
			Lower Limit	Upper Limit	Applicable	
Residential	1.0000	1.0000	1	1		
Farm	0.2500	0.2500	0	0.25		
Managed Forest	0.2500	0.2500	0.25	0.25		
Multi-Residential	1.1944	1.1944	1	1.1	2.00	No
Broad Commercial	2.2655	2.2598	0.6	1.1	1.98	Yes
Residual Commercial	2.2487	2.1940				
Shopping Centre	2.3871	2.3290				
Office Building	3.2843	3.2044				
Parking Lot	1.6625	1.6221				
Broad Industrial	6.9701	6.7518	0.6	1.1	2.63	Yes
Residual Industrial	4.8363	4.7187				
Large Industrial	8.5894	8.3805				
Pipeline	2.0939	2.0939	0.6	0.7		
Landfill	2.0903	2.0903			2.113527	

Source: Online Property Tax Analysis (OPTA) System, 2017 and January 2018

On the basis of these Provincial guidelines, The Council in satisfying its 2018 tax ratio setting responsibility may choose to do one of the following for classes of properties where ratio adjustments are permitted:

1. Adopt the previous year's tax ratio[3] for the class for the current tax cycle in order to maintain the "ratio status quo" (start ratios); or
2. Establish a new tax ratio for any class that is closer to or within the Range of Fairness; or
3. Employ a revised "class neutral tax ratio" to limit the impact of reassessment related tax shifts that might occur between class in accordance with the regulated formula.

[3] In accordance with the Regulations, Class Tax Ratios that exceed the Provincial Threshold are systemically reduced. The starting ratios for commercial and industrial classes are lower than 2017 adopted ratios.

By changing the tax ratio for any class of property, Council has the ability to influence the overall apportionment of the tax burden between property classes. Consequently, before making any final decisions regarding tax ratios, comprehensive sensitivity analysis should be undertaken to quantify the scope and magnitude of tax shifts that result if the status quo is maintained. This analysis is contained in Part II of the body of this report quantifying shifts in taxation due to reassessment and the application of the 4-year phase-in of assessment increases, which reflects the starting tax ratios for 2018 taxation.

Tax Class Limitations in Sault Ste. Marie

Multi-Residential

The City is fortunate to have escaped the absolute hard cap introduced in 2017 by the Province for the Multi-residential Tax Class. The original Threshold Ratio established in 1998 has remained at 2.74 for the multi-residential class but was reduced to 2.0 in 2017. Any municipality whose ratio exceeds 2.0 was hard capped absolutely. In other words, the tax for the class regardless of the revaluation of the assessment remained at the tax level for the previous year. Moreover, the municipality so restricted, could not pass on any tax increase to the class and systemically the ratio would reduce (ratchet down) each year to at or below 2.0.

Commercial

Sault Ste. Marie is levy restricted in all of its commercial classes. The Broad Class Commercial Ratio exceeds the Provincial Threshold of 1.98. Consequently, up to 50% of the municipality's increase in tax above the Revenue Limit can flow through proportionally to the commercial classes. The foregone increase or that portion which exceeds the 50% levy change must be collected from all other classes. It is noted that the Broad Class Ratio for 2018 has been reduced in accordance with the regulations as the starting ratio for 2018. The ratio reduction causes a tax shift to other classes.

Industrial

Similar to the Commercial tax classes, the Industrial tax classes of the City are also levy restricted. The Threshold Ratio for Broad Class Industrial Tax Class is regulated at 2.4. The City's Broad Class Industrial Tax Ratio is 6.7518 and, therefore levy restriction applies. Moreover, the ratio for 2018 is automatically reduced or "ratcheted" down based on Provincial prescribed formula for starting ratios for 2018. This systemic reduction results in tax shifts to all other classes. Council will need to consider the impacts and the impact of the levy restriction on the other classes.

Commercial and Industrial Summary

Similar to 2017, Council may only flow through 50% of the 2018 levy increase (the amount of tax that exceeds the Revenue Limit). For instance, if the levy increase for 2018 was set at 3%, the commercial and industrial class tax is limited to a tax levy increase of 1.5%. The additional levy increase of 1.5% that is foregone due to the levy restriction has to be collected from all other classes.

Revenue or Class Neutral Tax Ratios (RNR)

The Province provides an option for municipalities to consider adopting "revenue/class neutral tax ratios" (RNR). This permits the increase and decrease of tax ratios to maintain the relative proportion of tax sharing by tax class as in the previous tax year. There are stipulations in respect of the adoption of RNR such that the total Revenue Neutral Tax Levy (Revenue Limit) is not increased. The municipality may not increase its revenue by adopting RNR's. In essence, this means that should the municipality adopt higher tax class ratios to maintain class neutrality for one or more tax classes, systemically there will be lower tax class ratios that it must also adopt. For the Sault's purposes, the Revenue Limit of $105,940,034 would remain as the Neutral Levy before and after revenue neutral ratio adoption.

It is important to note that Residential, Farm, and Managed Forest Tax Classes are considered one tax class for the purpose of RNR's and are primarily fixed by legislation.

All of Sault Ste. Marie's tax ratios exceed the Ranges of Fairness. They may not be increased except with the Revenue/Class Neutral Tax Ratio formula prescribed by regulation.

A schedule of "revenue/class neutral tax ratios" has been developed based on the applicable formula to assist the City with evaluating this option; the net tax impact of this alternative on the various tax classes is provided in the following tables.

Table 11: City of Sault Ste. Marie
Impact of Adopting 2018 Class Neutral Tax Ratios

Class	2018 Start Ratio	2018 Class Neutral Tax Ratio	Change in Ratio	2018 Start Ratio Tax Rate	2018 Class Neutral Tax Rate	Change in Tax Rate
Residential	1.000000	1.000000	0.00%	0.01284126	0.01292411	0.65%
Farm	0.250000	0.250000	0.00%	0.00321032	0.00323103	0.65%
Managed Forest	0.250000	0.250000	0.00%	0.00321032	0.00323103	0.65%
Multi-Residential	1.194386	1.109024	-7.15%	0.01533742	0.01433315	-6.55%
Residual Commercial	2.193976	2.158568	-1.61%	0.02817342	0.02789758	-0.98%
Shopping Centre	2.329048	2.291460	-1.61%	0.02990792	0.02961509	-0.98%
Office Building	3.204407	3.152691	-1.61%	0.04114863	0.04074573	-0.98%
Parking Lot	1.622072	1.595894	-1.61%	0.02082945	0.02062551	-0.98%
Residual Industrial	4.718672	4.771448	1.12%	0.06059370	0.06166673	1.77%
Large Industrial	8.380485	8.474217	1.12%	0.10761600	0.10952173	1.77%
Pipeline	2.093910	2.107189	0.63%	0.02688845	0.02723355	1.28%
Landfill	2.090299	2.012883	-3.70%	0.02684208	0.02601473	-3.08%

Table 12: City of Sault Ste. Marie
Inter Class Shifts as a Result of Adopting 2018 Class Neutral Tax Ratios

Realty Tax Class	CVA Tax		Change in Tax	
	2018 Returned (Start Ratio)	2018 Returned Class Neutral Ratio	$	%
Taxable				
Residential	$66,417,626	$66,846,143	$428,517	0.65%
Farm	$6,011	$6,050	$39	0.65%
Managed Forest	$7,154	$7,200	$46	0.65%
Multi-Residential	$5,501,325	$5,141,107	-$360,218	-6.55%
Commercial	$18,408,002	$18,227,773	-$180,229	-0.98%
Shopping Centre	$4,726,968	$4,680,686	-$46,282	-0.98%
Office Building	$664,371	$657,866	-$6,505	-0.98%
Parking Lot	$468,637	$464,048	-$4,588	-0.98%
Industrial	$2,750,192	$2,798,894	$48,702	1.77%
Large Industrial	$6,320,764	$6,432,696	$111,932	1.77%
Pipeline	$668,985	$677,571	$8,586	1.28%
Sub-Total Taxable	**$105,940,034**	**$105,940,034**	**$0**	**0.00%**
Payment In Lieu				
Residential	$11,506	$11,580	$74	0.65%
Commercial	$1,861,329	$1,843,105	-$18,224	-0.98%
Office Building	$1,600,259	$1,584,590	-$15,669	-0.98%
Parking Lot	$40,796	$40,396	-$399	-0.98%
Landfill	$6,050	$5,864	-$186	-3.08%
Industrial	$100,819	$102,604	$1,785	1.77%
Sub-Total PIL	**$3,620,758**	**$3,588,139**	**-$32,619**	**-0.90%**
Total Taxable and PIL	**$109,560,792**	**$109,528,173**	**-$32,619**	**-0.03%**
Exempt	$0	$0	$0	0.00%
Total	**$109,560,792**	**$109,528,173**	**-$32,619**	**-0.03%**

Alternatively, if any other changes in tax ratios are being contemplated, the consequential impact on taxpayers throughout the City must be analyzed. Additional support to prepare further tax ratio sensitivity specific to the City's preferences is readily available upon request.

To augment this quantitative analysis, Council should also carefully consider the following qualitative factors as part of the decision-making process affecting tax ratio treatment.

- Tax shifts will inevitably result each year based on the return of a newly revised assessment roll reflecting changes in property state, use, condition and assessed value; depending on the magnitude of such updates, the tax burden will shift both within and between property classes regardless of any tax ratio adjustments. Tax ratio changes may either exacerbate or offset tax shifts related to market updates.
- Tax ratio changes approved by Council *only* affect the distribution of the municipal levy; tax rates for education purposes, which are annually regulated by the Province, are not subject to municipal tax ratio decisions.
- Tax ratio reductions may be *permanent* where an approved tax ratio falls outside of the Range of Fairness. The rules affecting tax ratio movement apply to any and all revised tax ratios.
- Tax ratio reductions for any class of property will trigger increases in tax rates/taxation for all other taxpayers within the same jurisdiction. The cost to other classes of property and the impact on payments-in-lieu of tax must be quantified and understood.
- Approved tax ratio decreases for any one class of property may result in additional requests for preferential tax ratio treatment from other classes of ratepayers. It is not uncommon once a reduction in a tax ratio for one class is approved for other classes to demand similar consideration.
- The existence of other compelling evidence, if any, to support tax ratio changes and the demands of special interests or specific stakeholder groups pertaining to the setting of tax rates must be carefully weighed.
- The competitiveness of each class of property's tax ratio relative to the treatment of that same class in neighbouring jurisdictions should be considered in determining if tax ratio adjustments are warranted.

A survey of 2017 tax ratios employed by a broad cross section of municipalities in Ontario has been undertaken to assist the City in determining the tax ratios to employ for the various property classes for 2018. The results of this inter-jurisdictional scan of tax ratios in neighbouring jurisdictions follows in Table 14 and 14A.

Part IV - PROPERTY TAX CAPPING

With the budget announcement last year, came increased flexibilities in capping. It is acknowledged that the City revised its capping strategy in 2017, especially for the Industrial Classes.

Capping is simply a redistribution of the tax within class. Properties that have increases in market value can be somewhat protected from their increases through capping while those properties entitled to reduction have their reductions "clawed back" to fund the taxes foregone from tax cap limitations. Where there is not enough decrease properties to claw back from, the municipality has to increase its tax levy to all other classes to collect any foregone revenue not collected within class due to capping. Providing that the cap is funded from within each class, there are no impacts on the municipality's levy. Capping is merely redistribution within class. However, capping rides "on top" of levy changes and ratio changes. If the City approved an

increase in levy and altered ratios, a property whose assessment has increased may be protected from proportional levy increase (plus hard cap) as well as shifts due to ratio changes.

Most municipalities in Ontario are working towards exiting capping. What began in 1998 as a stop-gap measure to manage the change to market value assessment, has been a long term administratively difficult program. Consequently, in 2017, the Province provided numerous enhanced options for municipalities to "get out of capping". Capping options including increased opportunities to exit capping are illustrated in the following table:

Table 13 – Capping Parameters Options

Annualized Tax Limit	5.0% up to 10.00%
Prior Year CVA Tax Limit	5.0% up to 10.00%
CVA Tax Threshold - Increasers	$0.00 up to $500
CVA Tax Threshold - Decreasers	$0.00 up to $500
Exclude Properties Previously at CVA Tax	Optional
Exclude Properties that Move from Capped to Clawed Back	Optional
Exclude Properties that Move from Clawed Back to Capped	Optional
Exclude Reassessment Increase	Optional
Exit capping immediately	Program Determination
Capping phase-out	Program Determination

As capping rides "on top" of tax policy, further analysis of the capping impacts will be necessary once the City decides the 2018 tax policies.

Part V - RATIO COMPARISONS

Table 14: 2017 Tax Ratio Survey

Municipality	Farm	Multi-Residential	New Multi-Residential	Commercial				Industrial		
				Commercial	Office Building	Shopping Centre	Parking Lot	Industrial	Large Industrial	Pipeline
Brant County	0.25	1.70		1.90				2.55		1.78
Bruce County	0.25	1.00	1.00	1.23				1.75		1.02
Chatham-Kent Municipality	0.22	2.00	1.10	1.95	1.57	2.25	1.31	2.16	2.16	1.27
Dufferin County	0.25	2.68		1.22				2.20		0.84
Durham Region	0.20	1.87		1.45	1.45	1.45	1.45	2.26	2.26	1.23
Elgin County	0.25	1.99	1.00	1.64				2.23	2.83	1.14
Essex County	0.25	1.96		1.08	1.16		0.56	1.94	2.69	1.30
Frontenac County	0.25	1.00		1.00				1.00		0.70
Grey County	0.25	1.44	1.00	1.31				1.86		0.91
Guelph City	0.25	1.93	1.00	1.84				2.20		1.92
Haliburton County	0.25	1.39	1.00	1.48				1.72		0.00
Halton Region	0.20	2.00	2.00	1.46				2.36		1.06
Hamilton City	0.18	2.69	1.00	1.98			1.98	3.44	4.04	1.79
Hastings County	0.25	1.15		1.10				1.13		0.82
Huron County	0.25	1.10		1.10				1.10		0.70
Kawartha Lakes City	0.25	1.96	1.00	1.38				1.35		2.00
Lambton County	0.25	2.40	1.00	1.63	1.54	2.08	1.09	2.05	3.00	1.34
Lanark County	0.25	2.29	1.00	1.77				2.60		2.02
Middlesex County	0.25	1.77		1.14				1.75		1.06
Muskoka District	0.25	1.00	1.00	1.10				1.10		0.70

Table 14A: 2017 Tax Ratio Survey Continued

Municipality	Farm	Multi-Residential	New Multi-Residential	Commercial				Industrial		
				Commercial	Office Building	Shopping Centre	Parking Lot	Industrial	Large Industrial	Pipeline
Niagara Region	0.25	2.00	1.00	1.76				2.63		1.70
Norfolk County	0.25	1.69		1.69				1.69		1.49
North Bay City	0.15	2.16		1.88				1.40		1.17
Northumberland County	0.25	2.22		1.52				2.63		1.20
Oxford County	0.25	2.55		1.90				2.63	2.63	1.26
Perth County	0.25	1.93	1.00	1.25				1.97		1.64
Peterborough County	0.25	1.78	1.00	1.10				1.54		0.94
Prescott and Russell	0.25	2.04		1.44				3.08	4.14	1.42
Prince Edward County	0.25	1.44		1.11				1.39		0.54
Renfrew County	0.25	1.00		1.81				2.90	3.62	1.33
Simcoe County	0.25	1.40		1.25				1.54		1.30
Toronto	0.25	2.72	1.00	2.88				2.88		1.92
Waterloo Region	0.25	1.95	1.00	1.95				1.95		1.16
Wellington County	0.25	1.90	1.10	1.49				2.40		2.25
York Region	0.25	1.00		1.18				1.42		0.92
Average Ratio	**0.24**	**1.80**	**1.07**	**1.51**	**1.43**	**1.93**	**1.28**	**2.02**	**3.04**	**1.25**
Median Ratio	**0.25**	**1.93**	**1**	**1.46**	**1.50**	**2.08**	**1.31**	**1.97**	**2.83**	**1.23**

CONCLUDING REMARKS

The analysis contained in the preceding report has been prepared to assist The City of Sault Ste. Marie with understanding current changes in assessed value that affect the municipality's assessment base and how these trends ultimately impact the distribution of the tax burden. These phenomena need to be clearly and thoroughly understood as a foundation for informing the 2018 tax policy development process and any decisions about whether the City should exercise its jurisdiction and discretion to alter or vary status quo tax relationships. A decision in 2018 will impact tax policy considerations in 2019 and 2020; the data are known so modelling is imperative to provide for policy decisions impacting this four-year assessment cycle. Such insight is also integral to the budget process.

The Municipal Tax Advisory Group would be pleased to provide further detail, support and analysis on an as needed basis in response to local concerns or interests, which may be identified subsequent to the publication of this report. Additional support is also readily available to interpret and communicate the results of this analytical exercise to ensure informed decision making and to achieve locally desirable tax outcomes for the 2018 tax year and future budget cycles.

For further information, please do not hesitate to contact the undersigned.

Respectfully prepared and submitted
On behalf of Municipal Tax Advisory Group,



Robert (Bob) Heil,
Vice President, Paralegal

MTAG
Paralegal Professional Corp

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Appendix "A"
METHODOLOGY

OVERVIEW

Methodology employed in the preparation of this tax policy study is described following:

Ontario regulation 73/03 requires every municipality in Ontario to calculate **Revenue Neutral or Notional Tax Rates** (**RNTR**). **RNTR** are the tax rates used to raise the **Revenue Limit**. Increases and decreases in new tax rates are measured against RNTR and budgets are compared to Revenue Limit. Market Value Update or phase-in does not represent growth nor loss in Revenue but merely redistribution between tax classes.

GROWTH IN ASSESSMENT AND TAXATION

The **Revenue limit** is determined by applying the adopted tax rates to the year-end roll which includes all assessment adjustments made or to be made during the year. Adjustments to assessment are made based on the following change provisions:

1. Assessment Act: Sections 32, 33, 34, 39.1, 40 and 41;
2. Municipal Act: Sections 319, 345, 357, 357.1, 358, 362, 364, 365, 365.1 or 365.2.

MTAG obtains the data from MPAC's MCP (Market Change Profile) file. MTAG produces two tables to illustrate annualized growth (loss) available for the municipality to use in the next budget, or in the case of a deficit, to make up through additional levy. Two tables are:

1. The changes in assessment from roll returned to end of year illustrating growth in assessment and percent change by class.
2. The changes in taxation and the determination of the Revenue Limit. The Revenue Limit is required to calculate the RNTR using the new revised adjusted phased market roll for next year's taxation.[4]

Note: In two-tier (County or Regional Government), these two tables are also produced for each of the constituent lower-tier municipalities.

The Revenue Limit is determined at the total taxable assessment level or at the total taxable plus payment-in-lieu (PIL) assessment level depending on how the municipality calculates its tax rates. If PIL assessment is not incorporated into the municipality's tax rate calculation, then MTAG determines the Revenue Limit at the Taxable Assessment level only. This method of determining the Revenue Limit matches the methodology of the municipality at the time that it struck its tax rates for the current year.

[4] Note: Ontario Regulation 73/03 requires the use of the General Rate for the Municipality excluding special area rates for the calculation of the Revenue Limit. MTAG's calculations employ only the General Rate of the Municipality. Special Area Rates are not used in any of the calculations.

REASSESSMENT AND PHASE-IN CHANGES

Reassessment or phase-in of reassessment does not impact growth. Reassessment is merely the change in market value and cannot be used to determine taxation increases or decreases due to valuation changes. Reassessment merely redistributes tax by class where changes in class valuation are not or have not been equivalent to each other.

MTAG produces a number of Tables to measure and illustrate changes in assessment and tax class redistribution due to market value update or phase-in of assessment during the four-year phase-in program.

1. Compared against the assessment per class at year end, MTAG produces a table of phased assessment (roll returned) and calculates valuation changes and percent changes by class.
2. Using the Revenue Limit and "Start Ratios"[5], Revenue Neutral Tax Rates (RNTR) are determined and applied to the tax class to determine the property tax based on the updated assessment. Increases and decreases in tax responsibility by tax class are measured in absolute dollars and by percentage change compared to prior year's class tax distribution.
3. RNTR are illustrated for current and future years based on current Revenue Limit and assumes no growth or loss and reflects phased-assessment for each year.
4. Several tables to illustrate assessment changes over the phase-in period (ending 2020) are produced. The assessment phase-in values are employed.
5. An evaluation of the redistribution of tax by class by percentage of total tax share for each tax class is produced. The tables demonstrate the changes in tax by class as it is impacted by the phase-in from 2012 market value to 2016 market value applicable in 2020.

TAX RATIOS

MTAG creates a Ratio Summary Table to present Start Ratios, Ranges of Fairness, and Threshold Ratios.

Municipalities have been given the authority to approve **Revenue Neutral Tax Ratios** (RNR). MTAG determines RNR based on the formula in O.R. 73/03. Tables are produced to illustrate the RNR's, RNTR's compared to Tax Rates at Start Ratio, and percentage changes in tax rates from Tax Rates at Start Ratio. A table of tax distribution to illustrate impact of RNR impact is produced.

[5] Prior year's adopted ratios. Where prior year's ratios exceed the Provincial Threshold (2.0 for multi-residential class; 1.98 for broad commercial class; 2.63 for broad industrial class), start ratios reflect the statutory reduced class ratio (O.R. 73/03).

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Malcolm White, Deputy CAO / City Clerk**

DEPARTMENT: **Corporate Services**

RE: **Soo Blasters – Request for Municipally Significant Event**

PURPOSE

This report deals with a request from Soo Blasters for a concert event to be declared a municipally significant event.

BACKGROUND

Attached is a request from Soo Blasters, 343 Queen Street East, for a municipal resolution to declare their Nelly concert event a municipally significant event for the purposes of obtaining a Special Occasion Permit (SOP) from the Alcohol and Gaming Commission of Ontario (AGCO).

ANALYSIS

A Special Occasion Permit is required any time alcohol is offered for sale or served anywhere other than a licenced establishment or a private place, per the regulations of the AGCO. Information from the AGCO concerning SOP's and the need for a municipally significant event is attached to this report.

It is my understanding that Soo Blasters requires an SOP for this event as their request to increase the rated capacity of their permanent liquor licence has not been processed yet. As part of the SOP application process the Building Division, with the concurrence of Fire Services, has approved an increase in capacity for this event.

The representative from Soo Blasters is present tonight and can speak to the request.

FINANCIAL IMPLICATIONS

There is no financial impact associated with this request.

STRATEGIC PLAN / POLICY IMPACT

This is an operational matter not linked to the strategic plan.

RECOMMENDATION
It is therefore recommended that Council take the following action:

Resolved that the report of the Deputy CAO / City Clerk dated 2018 03 19 concerning Soo Blasters – Request for Municipally Significant Event be received and that Council has no objection to the Soo Blasters Nelly Concert Event, being held Tuesday, March 20, 2018 from 8:00 p.m. to 2:00 a.m. (concert 9:00 p.m. to 12 midnight) being declared a municipally significant event.

Respectfully submitted,

Malcolm White
Deputy CAO / City Clerk
705.759-5391
m.white@cityssm.on.ca

Malcolm White

From: Erik <erik@sooblaster.com>
Sent: Thursday, March 15, 2018 5:11 PM
To: Malcolm White
Cc: Mayor Provenzano
Subject: Re: Letter

Hi Malcolm,

I really appreciate your assistance in this matter, yes I am looking for a letter to accompany my SOP for this event. Stating a resolution that this "Nelly" event is municipally significant for the following reasons:
-A large tourist attraction for the city for someone whom has never been here, as well as opening our doors to future big name artist which are in the works -attracting tourists that may return seeing what great things this city has to offer - generating thousands of monitory revenue into our local market via hotels, restaurants and retail
- bringing nearly a thousand people to a new business that invested 3 million dollars in our city and needs positive support to ensure success
- Nelly's name since the moment was announced has brought such a huge positive vibe to the city and be the talk of the town ever since. Also on a side note sold out in 12 mins having 25000 people on the website to try and purchase tickets which is a record for Sault Ste. Marie for any artist.

Thanks Malcolm,
If there is more information or detail you required please let me know.

Erik

Sent from my iPhone

AGCO | Alcohol and Gaming

Were you able to easily find the information you came for today?

Yes No

HOME » ALCOHOL

What is a Public Event?

Public Events

Public Events may be held for events of significance and/or to raise funds for charitable purposes and objects that benefit the public-at-large (i.e. advancement of education, religion, relief of poverty, charitable purposes benefiting the community).

Public Event permits can be issued:

- To registered charities
- To non-profit organizations whose object is to promote charitable, educational, religious or community objects, or
- For events of municipal, provincial, national or international significance.

An event of municipal significance requires a designation by the municipality in which the event will take place. Applications must be accompanied by either a municipal resolution or a letter from a delegated municipal official designating the event as municipally significant.

- In order to be recognized as an event of provincial, national or international significance, it must be designated as such by the AGCO.
- Public events may be advertised to the public.
- Alcohol may be sold at a profit (to allow for fundraising).

Classes of SOPs

There are two classes of SOPs available:

Sale: A Sale SOP is issued when money is collected for the sale of alcohol either directly or indirectly. This could be through, for example, an admission charge to the event, when tickets for alcohol are sold to people attending the event, or when there is any pre-collection of money for the alcohol. The application fee for a Sale Permit is $75.00, for up to three consecutive days.

No Sale: A No Sale SOP is issued when alcohol is served without charge or when there is no money collected for alcohol – either directly or indirectly – from guests.

The application fee for a No Sale Permit is $25.00 per day.

AGCO | Alcohol and Gaming Commission of Ontario

Responsible Service Tip Sheet: Special Occasion Permits – PUBLIC EVENTS

INFORMATION SHEET FROM THE ALCOHOL AND GAMING COMMISSION OF ONTARIO



WHAT IS A SPECIAL OCCASION PERMIT?

A Special Occasion Permit (SOP) is required *any time* alcohol is offered for sale, served or consumed anywhere other than in a licensed establishment or a private place (for example, a corporate boardroom or a residence). SOPs are for occasional, special events only, and not for personal profit or running an ongoing business. There are three types of occasions for which a SOP may be issued: Private Events, Public Events and Industry Promotional Events. The following provides information specific to **Public Event SOPs.**

PUBLIC EVENT SOPS

Public Events are open to the public, such as charity fundraisers, outdoor street festivals, community festivals, etc. A SOP for a Public Event can be issued to:

- A charitable organization registered under the *Income Tax Act* (Canada); or
- A non-profit organization or association organized to promote charitable, educational, religious or community objects.

An individual or business may also apply for a Public Event SOP if organizing or conducting an event of:

- "Provincial, national or international significance"; or
- "Municipal significance" for which a municipal resolution or letter from the municipal clerk or designated authority is required and indicates the event is one of municipal significance.

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The event can be advertised and fundraising/profit from the sale of alcohol at the event is permitted.

The permit holder is required to purchase alcohol under the permit from an authorized government retail store (LCBO, LCBO Agency Store, The Beer Store or authorized manufacturer's retail store).

"SALE" AND "NO SALE" PERMITS

A "Sale" permit is required when money is collected for alcohol through, for example:

- Alcohol sales (cash bar) or alcohol tickets sold to people attending the event; or
- An admission charge to the event; or
- The collection of money and/or other forms of payment for alcohol before the event.

A "No Sale" permit is required when:

- Alcohol is served without charge;
- No money and/or other forms of payment is collected directly or indirectly for alcohol from guests (e.g. through admission charge or ticket sales); and
- The permit holder absorbs all alcohol costs.

OUTDOOR EVENTS

The local municipal clerk's department, police, fire and health departments must be given a written notice **30 days** before the event when expecting **fewer than 5,000 people** per day. If expecting **5,000 people or more** per day, a notice to the same group is required **60 days** prior to the event. If there is a tent, marquee, pavilion or tiered seating being used, then the local building department must be notified in writing.

If your event is taking place outdoors, you must submit a sketch or plan with your application, clearly showing the exact dimensions of the proposed permit area and the location of any tiered seating.

TIERED SEATING

If a SOP application is submitted for a location that includes tiered seating (e.g. bleachers, stadium seating, etc.), this may be indicated when you apply. If the event is outdoors, the location of the tiered seating must be clearly identified on a sketch and submitted along with the application.

DONATED ALCOHOL

Public events conducted by charitable organizations registered under the *Income Tax Act* and not-for-profit organizations/associations may accept alcohol donated by manufacturers of alcohol. Records (such as receipts or invoices) for all product must be obtained by the SOP holder and must be made available for inspection by an AGCO Inspector or a police officer. Donated alcohol must be processed by a government store (LCBO, LCBO Agency Store, The Beer Store or authorized manufacturer's retail store) under the permit.

Registered charities and non-profit organizations/associations may offer donated alcohol as a prize if a lottery licence has been issued for the event, however this alcohol must not be consumed at the event.

OUTDOOR PUBLIC EVENTS INVOLVING LIQUOR SALES LICENSED ESTABLISHMENTS

A Public Event SOP holder and a liquor sales licensee may jointly participate in an outdoor Public Event that allows patrons to carry a single serving of alcohol between the licensed area(s) and the area(s) covered by the SOP if the Public Event meets the following criteria:

- The event must be an outdoor event (e.g. street festival);
- The event must be designated "municipally significant" and the applicant must submit a resolution of municipal council or a letter from a delegated municipal official designating the event as "municipally significant"; and

- The licence holders and the permit holder have entered into an agreement to ensure there is no unreasonable risk to public safety, the public interest and the public, and no unreasonable risk of non-compliance with the *Liquor Licence Act* (LLA) and its regulations by either of the parties.

This agreement must be submitted to the AGCO for review and approval at least 30 days prior to the event.

MULTIPLE DAY EVENTS

Multiple day events can only be issued if:

- Each event is one in a series of events;
- The application for the permit is for all of the events (dates);
- The nature, purpose, location and target audience of each of the events (dates) are the same (e.g. service club monthly meeting); and
- As a result of doing so, the permit holder is not operating an ongoing business, or does not appear to be doing so.

Alcohol may be stored between event days under certain circumstances. Police and AGCO Inspectors must have full, authorized access to the location. Please see the **Special Occasion Permit Application Guide** for specific criteria and information that must be provided as part of the application process.

SOP COMPLIANCE

The AGCO uses a risk-based approach to issuing SOPs, which aids in assessing risks to public safety and the public interest. Additional documentation may consequently be required from a SOP applicant. Based on a risk analysis of the event and the applicant, conditions may be attached to the SOP. Where there is a breach of the *Liquor Licence Act* (LLA) or its regulations at a SOP event, the Registrar of Alcohol, Gaming and Racing ("Registrar") may impose sanctions on the permit holder, including a monetary penalty or refusing to issue further permits.

Responsibilities of a Public Event SOP holder include:

- The permit holder, responsible person (as indicated on the permit) or his/her designate must be present at all times.
- The permit and alcohol purchase receipt(s) must be available for inspection.
- All areas where alcohol will be served and consumed (indoor or outdoor) must be clearly defined and separated from areas where the permit does not apply by a barrier of at least 36" (0.9 m).
- Alcohol can only be sold and served during the hours that are stated on the permit. The regular hours for the sale and service of alcohol are 11 a.m. to 2 a.m. the following day, except for New Year's Eve (December 31) when sale and service must cease at 3 a.m. on January 1. The Registrar may restrict these hours as a condition of the permit.
- Police officers and AGCO Inspectors must be given unobstructed access to the event at all times and may revoke a SOP while the event is underway if they reasonably believe that the LLA or its regulations are being contravened.
- All signs of sale and service must be cleared within forty-five (45) minutes of the end time stated on the permit. This includes the removal of all partially consumed and empty bottles, and glasses that contain(ed) alcohol.
- Alcohol cannot be sold, served or provided to anyone who appears to be under nineteen (19) years of age without requesting identification. Proper identification must be checked for any person who appears to be under nineteen (19) years of age.
- Intoxication, disorderly conduct and unlawful gambling are not permitted.
- Encouraging immoderate consumption of alcohol is not permitted (for example, drinking contests or games).
- Non-alcoholic beverages must be available.

- Guests cannot be required to purchase a minimum number of drinks or drink tickets to enter or remain at the event, and no drink containing more than eighty-five (85) ml of spirits can be sold or served.
- There must be sufficient food available for those in attendance.
- Games of chance or mixed skill and chance (such as raffles, 50/50 draws, etc.) are not permitted unless the proper lottery licence has been obtained from the Registrar or municipality. Lottery licences are only issued to eligible charitable or religious organizations where the funds are raised for charitable or religious purposes.

It is recommended that SOP holders take the Smart Serve Responsible Alcohol Beverage Service Training Program and hire a licensed caterer and/or servers who have this certification. For more information on Smart Serve®, call 416 695-8737 or toll free at 1 877 620-6082 or visit their website at **www.smartserve.ca**.

For more information, please contact AGCO Customer Service at 416 326-8700 or 1 800 522-2876 (toll free in Ontario) or visit us online at **www.agco.ca**.

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Peter Johnson, Fire Chief**

DEPARTMENT: **Fire Services**

RE: **Comprehensive Risk Assessment and Fire Master Plan**

PURPOSE

The purpose of this report is to present the Comprehensive Risk Assessment (CRA) and Fire Master Plan (FMP) final reports prepared by Dillon Consulting (February 2018) to the Mayor and City Council. Together, these reports present the proposed strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie. The proposed strategic framework emphasises strategies that support the sustainability of Fire and Emergency services that will provide the most effective and efficient level of fire protection, resulting in the best value for the community. Recommendations of the Fire Chief are presented within this report for Council's consideration and approval.

BACKGROUND

On April 10, 2017, Council approved a request for proposal (RFP) to secure an independent third party to conduct a CRA. Dillon Consulting was awarded the contract to undertake and complete the assessment. On August 21, 2017 Council approved a request to expand Dillon's scope of work to include the preparation of a FMP. Collectively, these projects have included educational workshops and consultation including the Mayor, members of Council, senior Corporate and Department staff and the Executive of the Sault Ste. Marie Professional Firefighters Association.

ANALYSIS

A Comprehensive Risk Assessment is to determine the fire risk in a municipality through evidence based analysis of key factors such as, assessing potential fire loss, determining consequences of a fire, examining local infrastructure and analyzing building (property) stock. The CRA has been developed utilizing current industry best practices through the application of standards authored by the National Fire Protection Association (NFPA) and guidelines of the Office of the Fire Marshal and Emergency Management (OFMEM). Preparation of the

CRA was one of the recommendations of the Review of Fire Protection Services completed by the Ontario Fire Marshal and Emergency Management (OFMEM) in 2017.

The findings of the CRA include “key risks” that represent the outcome of the analysis for which there is sufficient and appropriate data to inform an assessment of risk, based on probability and consequence. Also included, are “key findings” that represent a risk-related conclusion that may also inform service levels or programs but does not have sufficient quantitative data to inform a key risk.

The CRA is intended to provide Council with evidenced based analysis of the fire risk within the community as part of informing the determination of local needs and circumstances when considering the level of fire protection services to be provided.

The identified key risks and key findings contained within the CRA have been utilized to inform the proposed FMP. The FMP is intended to provide Council with a comprehensive analysis of the existing services and programs provided by the Sault Ste. Marie Fire Services (SSMFS). In comparison to legislative requirements and industry best practices, the FMP identifies recommendations to enhance the delivery of fire protection services in response to community fire risk.

The FMP includes two types of recommendations:

1) “Council Recommendations” that have been recognized as requiring the direct consideration and approval of Council as they relate to a potential operating (opex) or capital (capex) financing request, or alternatively related to a policy decision and;
2) “Operational Recommendations” that recognize areas where authority has already been delegated to the Fire Chief that are within normal roles and responsibilities to respond to.

Collectively the CRA and the FMP reflect current municipal best practices in assessing the fire risk within a community and developing a consolidated strategic plan for the delivery of fire protection services. The FMP also includes an implementation schedule for responding to the recommendations of the 2017 OFMEM Review.

Also, as approved by Council (July 17/2017), a Firefighter Recruitment was conducted (now complete) to ensure that a reserve list of Firefighters is in place. Attached, as an appendix, is the Firefighter Selection Guide that outlines the Firefighter Recruitment process that commenced in August 2017. This process took nearly six (6) months to complete. Human Resource Staff and Senior Fire Management had overseen the process. Over 70 hours of staff’s time was committed to complete the interviews. Those successful candidates on the

reserve list are potential new hires, pending to fill the positions necessary for upcoming retirements or a change in the level of service, if approved by Council.

FINANCIAL IMPLICATIONS

The 2015 Fire Services Organizational Realignment Report presented a three-year attrition strategy intended to better manage the identified risk and liability with the Emergency Medical Service (EMS). In 2017, the SSMFS reached its anticipated minimum complement of sixty-eight (68) total firefighters and a deployment model of a minimum of (thirteen)13 firefighters on duty at all times.

The analysis within the FMP is recommending that Council consider an increase in the minimum number of firefighters on duty at all times to 15. This would reflect a total complement of 76 firefighters, which can be accommodated in the 2018 operating budget.

STRATEGIC PLAN / POLICY IMPACT

The information and data to support the strategies contained in the CRA and the FMP support the Corporate Strategic Plan in the area of Customer Service. The approval of the FMP as a strategic document will ensure a sustainable cost effective and efficient model of fire protection services for the City of Sault Ste. Marie.

RECOMMENDATION

It is therefore recommended that Council take the following actions:

Resolved that the report of the Fire Chief dated 2018 03 19 concerning Comprehensive Risk Assessment and Fire Master Plan be received and that:

1) The Fire Master Plan be approved as the strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie for the next 10-year planning horizon; and
2) Council direct the Fire Chief to implement Option 1 contained within the Fire Master Plan including a minimum on duty staffing of fifteen (15) firefighters at all times as the interim Fire Station and firefighter deployment model; and
3) Council approve Option 3 contained within the Fire Master Plan as the preferred Fire Station location and firefighter deployment model and direct the Fire Chief to develop an implementation plan for Option 3 for Council's consideration and approval; and
4) Council direct the Fire Chief to report further on the implementation of recommendations presented in the Fire Master Plan in accordance with the financial resources available through the annual budget process of the City of Sault Ste. Marie.

Respectfully submitted,



Peter Johnson, Fire Chief
705.949.3349
p.johnson@cityssm.on.ca

FIREFIGHTER RESERVE LIST SELECTION GUIDE 2017

Fire Services

We are committed to the protection of life, property and the environment within our community in a responsible and caring manner.

The City of Sault Ste. Marie Fire Service believes that the key element of an engaged and innovative workforce is providing personnel with a work environment that is supportive, inclusive and respectful.

Sault Ste. Marie Fire Department

Vision Statement

"Who We Want To Be"

The Sault Ste. Marie Fire Service is committed to provide effective and efficient emergency service in a caring manner to create a safe community.

Mission Statement

"Who We Are Today"

The Sault Ste. Marie Fire Service is a proud partner within our community that provides exceptional service through prevention, education, protection and wellness.

Our Values

- Public safety
- Firefighter safety
- Customer service
- Integrity and Honesty

Our four key values are at the forefront of everything we do. These values guide us every day as we integrate the three lines of defense - public education, inspection and code enforcement and emergency response - to prevent fires and reduce losses, injuries and deaths.

The Suppression Division is responsible for:

- Responding to all fires
- Auto extrication
- Hazardous material responses
- Fire response to marine incidents
- Rescue response (ice & water, confined space, tiered response - ambulance & police)
- Fire prevention activities
- Training in all aspects of emergency response
- Development of operating guidelines
- Maintenance of promotional system
- Researching firefighting methodologies

Preferred Competencies

Initiative	Actively seeks out challenge and opportunities to grow and advance; has pursued self-improvement; volunteers to help others; displays self-discipline in completing task and projects, and often goes beyond what was asked for demonstrates punctuality and reliability
Performance Under Stress	Remains clear-headed and takes effective, purposeful action when confronted with dangerous and/or stressful circumstances; remains outwardly calm and composed under pressure
Leadership/Integrity	Ensures assigned tasks are completed correctly; provides leadership by setting an example that others tend to follow; does a proper job, not taking short-cuts or the easy path; owns up to mistakes; speaks up on matters of principle
Effective Relationships	Actively participates in team activities, both on and off the job; motivated to do his/her best so as not to let the team down; able to offer and accept constructive criticism in a mature and objective manner; willing to share knowledge, and to help coach and develop others; puts team interests before own interests; demonstrates tact and respect for others feelings.
Communications	Listens well; avoids interrupting; asks clarifying questions; provides direct, non-evasive answers; responds to the question that was asked; speaks in a clear, coherent fashion; provides responses that are organized, and that offers an appropriate level of detail; maintains appropriate eye contact
Problem Solving	Approaches problem in logical manner; gathers facts and examines situation systematically; seeks assistance from appropriate sources; demonstrates openness to others' ideas and suggested solutions; willing to alter plans in light of changed circumstances; follows through on implementation and evaluates results.

Members of the Sault Ste. Marie Fire Services expect the following from all personnel.

- ✓ Ethics and Integrity
- ✓ Trust and Respect
- ✓ Employee Engagement
- ✓ Follow the chain of command
- ✓ Open communication and active listening

The Sault Ste. Marie Fire Service is a proud member of the community. The community expects our members to perform their tasks eagerly and in a professional manner every day.

Criteria

You will be challenged to look within yourself to see if you have what it takes to meet the expectations of a career as a Firefighter. Our competition is thorough and you need to be prepared for these question:

- What unique skills can you offer our department?
- What sets you apart from other candidates?
- Can you work in an environment that follows a strict code of conduct and follow a chain of command?
- Can you work in close quarters with others?
- Can you work shift work, evenings, weekends and holidays?
- Can you put your life at risk to save someone else?

If you feel that you can meet the above expectations and answer yes to all of these questions we encourage you to apply to the City of Sault Ste. Marie Fire Service.

To be considered as a candidate in this process you must meet the following mandatory qualifications:

- Secondary School Diploma; or equivalent
- Legally entitled to work in Canada
- Valid Ontario Class 'DZ' License, unrestricted
- Current Drivers Abstract
- First Aid and CPR certification, minimum Level C
- Pre-Service Firefighter Education and Training Program with proof; or, Completion of NFPA 1001 Firefighter Level I and II, IFSAC or PRO-Board; or, in progress with completion prior to employment offer.
- Sault Ste. Marie Municipal Swim Test Certificate

In addition to the above mandatory qualifications, candidates will be required to meet the following criteria to be considered as a Firefighter:

- Gledhill Shaw Firefighter Exams; includes OS-Fire Fighting Assessment Test and the CPS Entry Firefighter Test; minimum 70% required.
- Fitness Assessment
- Firefighter Physical Ability Test
- Acrophobia and Claustrophobia Test
- Visual Acuity
- Depth Perception (stereopsis Test)
- Colour Vision Test
- Hearing Test
- Lung Function Test
- 1st and 2nd round Interview
- Reference Check
- Police Vulnerable Sector Check (required upon offer of employment)

The Position

General Information

Career firefighters provide emergency response to a wide variety of occurrences including fires, emergency medical calls, motor vehicle accidents and alarm system activations.

Other duties include, but are not limited to, delivering fire safety public education, performing station duties such as tours, cleaning, maintaining grounds and dispatching units to alarms. You are expected to follow Standard Operating Guidelines and directions to complete tasks as assigned. Maintaining physical wellness is key in fulfilling your job requirements.

As a firefighter you will receive extensive and continuous in-service training. This education not only provides knowledge of the latest developments in firefighting and rescue techniques but also covers the handling of hazardous materials, emergency medical procedures, and fire prevention legislation. Firefighters use teaching skills to pass this knowledge on to the public, promoting fire prevention and safety awareness.

Equally important is the capacity to assess a situation and act accordingly as per your training and experience. Firefighters are frequently called upon to use their foresight, training and judgement to rescue others and protect themselves.

In addition to frequent contact with the public, firefighters also spend periods of time living and working together. Whether it is sharing routine maintenance chores or providing back up at the scene of emergency, firefighters must be able to accept orders without question and work effectively as members of a team of professionals.

What you can expect

There is a twelve-month probationary period in which the firefighter will undergo extensive in-service training. If you fail to meet performance expectations during this training period, your employment may be terminated. The City of Sault Ste. Marie offers a comprehensive benefit package, member of OMERS Pension Plan and will become a member of the Sault Ste. Marie Professional Firefighters' Association, Local 529 of the International Association of Firefighters.

Selection Process

The City of Sault Ste. Marie uses a process that promotes fairness and equity among candidates. We urge you to read through this entire section to gain a better understanding of the process. We have included the timing and submission requirements at each step to assist in you in preparing for this process. (Note: these can be subject to change.)



The recruitment process is lengthy and involves many steps. This ensures that we hire candidates that are best suited to the position and our organization. Being prepared is an important part of a Firefighters job and this starts with the recruitment process.

Outlined below is a brief description of the process that the City of Sault Ste. Marie will conduct.
Movement from one step to the next will depend on the applicants' performance at each step. Costs associated with obtaining qualifications, certificates, and mandatory requirements are the responsibility of the candidate.

The selection process consists of the following steps: Each step must be successfully passed in order to proceed to next step

Step One	Submit Application Package
Step Two	Applicant Qualifications Screened
Step Three	Selected applicants notified to Pre-Register with Gledhill Shaw for Exams
Step Four	Applicant completes Gledhill Shaw Exams
Step Five	Fitness Test
Step Six	Physical Test
Step Seven	Acrophobia, Claustrophobia, Vision
Step Eight	First Interview
Step Nine	Second Interview
Step Ten	References checked
Step Eleven	Candidate Added To Reserve List

Step One:

Submit Application Package online to:

E-mail: human.resources@cityssm.on.ca
Subject line: Firefighter #046
Deadline: August 14, 2017 at 4:30pm

Step Two:

Applicant's Qualifications Screened

To be considered as a candidate in this process you must provide proof of the following mandatory qualifications with your Application Package:

- Secondary School Diploma; or equivalent
- Valid Ontario Class 'DZ' License, unrestricted
- Current Drivers Abstract
- First Aid and CPR certification, minimum Level C
- Pre-Service Firefighter Education and Training Program with proof; or, Completion of NFPA 1001 Firefighter Level I and II, IFSAC or PRO-Board; or, in progress with completion prior to employment

Step Three:

Selected applicants notified to pre-register with Gledhill Shaw

Selected applicants will be notified and provided details on completing the Gledhill Shaw Exams.

Step Four:

Gledhill Shaw Written Exams

Written Aptitude Test (CPS) (Cooperative Personnel Services Test) assesses your knowledge, skills and aptitudes necessary to succeed as a firefighter in today's environment. The test is a series of questions, divided into sections to gauge your understanding of written and oral information, arithmetic reasoning, maps, diagrams and mechanical drawings.

Written Assessment Test (OS) (Occupational Skills Assessment) also referred to as the Gledhill Shaw OS Firefighter Test, or the Occupational Specific Firefighter (OSFF) test. The Written Assessment Test is a computer-based test. It serves as a functional characteristics readiness assessment on functional characteristics that are essential for effective firefighter performance. A series of questions are asked relating to specific emergency scenarios and workplace environment, as well as basic mathematical and logical reasoning.

Step Five:

Fitness Test

Applicants will be contacted and provided details on completing the Fitness Test, this includes a Max VO2 Test.

Step Six:

Physical Test- Job Related Performance Test

Step Seven:

Acrophobia, Claustrophobia, Vision

Acrophobia Test will require a candidate to climb a predetermined height on an aerial apparatus wearing a harness for safety purpose. Once at the desired height the candidate will be asked to anchor and lean backwards on the ladder and look down at the operator. Once this is complete the candidate will descend the ladder.

Claustrophobia Test requires the candidate to wear a blacked out face piece, then proceed through a maze from an entry to an exit point.

Vision minimum 20/30 in each eye uncorrected

Step Eight:

First Interview

Applicants will be contacted and provided details on first interview.
Only those applicants that are successful in the first interview will proceed in the selection process.

Step Nine:

Second Interview

Applicants will be contacted and provided details on second interview.

Step Ten:

Reference Check

Applicants successful in the first and second interview will have references contacted and verified.

Step Eleven:

Candidate Added to Reserve List

- The Firefighter Reserve List will be created with selected applicants.
- Selected candidates will be considered for future potential opportunities as new Firefighter Recruits with the Sault Ste. Marie Fire Service.
- This *does not* guarantee the candidate employment.
- The list may be valid for up to 3 years.

***NOTE** – The Firefighter Reserve List Selection Guide (PDF) is subject to change.

We thank all applicants for their interest; however, only candidates under consideration will be contacted.

The City of Sault Ste. Marie is an equal opportunity employer in accordance with the Accessibility for Ontarians with Disabilities Act and the Ontario Human Rights Code.

The City of Sault Ste. Marie will provide accommodations throughout the recruitment, selection and/or assessment process to applicants with disabilities. Personal information provided is collected under the authority of The Municipal Freedom of Information and Protection of Privacy Act.

Inquiries regarding the Selection Process can be directed to the City of Sault Ste. Marie Human Resource Department.

Tiffany Fleming
Recruitment and Training Coordinator
Corporate Services
City of Sault Ste. Marie
t. 705.759.5365
t.fleming@cityssm.on.ca

DILLON CONSULTING

CITY OF SAULT STE. MARIE

Comprehensive Risk Assessment

Final

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1.0 Introduction

From Simplified Risk Assessments completed by Ontario fire departments to the Vision 20/20 National Strategies for Fire Loss Prevention in the United States of America, the process of assessing community risk is receiving increased attention within the fire protection industry in North America. Historically, municipal fire departments focused their capabilities on fire suppression and emergency response. While fire suppression remains a core service, there is a shift occurring within the industry to risk mitigation and reduction. Within Ontario, the Ontario Office of the Fire Marshal and Emergency Management (OFMEM) refers to this as the "three lines of defence" which are prevention/education (line 1), enforcement (line 2), and fire suppression (line 3) as the fail-safe. Such strategies are informed by the results of a risk assessment.

A risk assessment is fundamental to planning and delivering fire and emergency services as a municipality deems necessary based on its needs and circumstances per the Fire Protection and Prevention Act. The results of a risk assessment are used to identify existing service gaps across the divisions of a fire department, with particular connections to fire prevention, enforcement needs, and emergency response (e.g., suppression). The report presents the methodology, analysis, and outcomes of a Comprehensive Risk Assessment (CRA) completed for the City of Sault Ste. Marie (City or SSM). The results of this CRA directly inform the Fire Master Plan (FMP) completed for the City under separate cover.

1.1 Project Background

The OFMEM initiated a ***Review of Fire Protection Services*** (2017 RFPS) of the City of Sault Ste. Marie's fire protection services in December of 2016. Completed in August 2017, the review evaluated the City's compliance with the fire prevention legislative requirements as per the *Fire Protection and Prevention Act* (FPPA). This included a review of public fire safety education including smoke and carbon monoxide alarm programs, fire safety inspections, code enforcement (Ontario Fire Code), investigations, and the simplified risk assessment. The review found that the City is "meeting the expectation of the OFMEM" (p.g. 4) by having adequate programs in place addressing the items listed.

In addition, throughout the Review several recommendations were presented which are explored and discussed in detail within the FMP. Within the context of this CRA, of particular note is Recommendation #1 (emphasis added):

> *"The Municipal Council of the City of Sault Ste. Marie should* ***ensure that a comprehensive municipal fire risk assessment is completed****. Subsequent to the review, the OFMEM has been advised that the Municipal Council of the City of Sault Ste. Marie is conducting a comprehensive municipal fire risk assessment. Therefore, it is anticipated that the comprehensive risk assessment is completed* ***and the***

***findings applied to further enhance the understanding and advance the decision-making process** related to the management of municipal fire risks and associated resources." (pg., 15)*

As suggested in the OFMEM recommendation, in response to the initiation of the review, the City proactively initiated a procurement process for the completion of a Comprehensive Risk Assessment. Dillon Consulting Limited (Dillon) was retained to complete this assignment which started in July 2017. As part of the project initiation consultation completed for this project (August 2017), it was identified that the completion of a Fire Master Plan (FMP) would be advantageous for three key reasons.

1. A FMP would provide an avenue to respond in a fulsome manner to the 2017 RFPS that was anticipated for completion;
2. A FMP would enable a meaningful link to assess and respond to the risks identified through the CRA; and
3. A FMP would provide strategic direction to Council and provide evidence-based analyses to inform service levels based on needs and circumstances.

Though under separate covers, the Comprehensive Risk Assessment and Fire Master Plan should be considered complementary documents. Further description of the CRA methodology and the relationship with the Fire Master Plan can be found in **Section 2.0**.

1.2 Municipal Overview

The City of Sault Ste. Marie (City or SSM) is located in Northern Ontario within the Algoma District, as shown in **Figure 1**. Sault Ste. Marie (colloquially known as "the Soo") is a border city to the United States which shares its name. Ideally located on the St. Marys River – which spans Lake Superior and Lake Huron – the City has a long history (including an Anishinaabe meeting place and a European trading post).[1] Sault Ste. Marie became well developed before and after World War II, largely because of growth in the steel industry. The steel economy required a freight system to ship steel to the United States and elsewhere in Canada.[2] Today, Sault Ste. Marie has two rail lines which are operated by Canadian National and Canadian Pacific Railways and has an economy with part of its foundation still in the steel industry.

Located 700 km from Thunder Bay and 315 km from Greater Sudbury, the City is a key regional and economic centre centrally located in Northern Ontario. Its immediate neighbours include Prince Township to the northwest (2016 Census population of 1,010), the Algoma District to the north, and

[1] City of Sault Ste. Marie. (2017). *Local History*. Retrieved January 15, 2018, from City of Sault Ste. Marie: http://saultstemarie.ca/City-Hall/City-Departments/Community-Development-Enterprise-Services/Community-Services/Recreation-and-Culture/Historic-Sites-and-Heritage/Local-History.aspx

[2] Wikipedia. (2018, January 11). *Sault Ste. Marie, Ontario*. Retrieved January 15, 2018, from Wikipedia: https://en.wikipedia.org/wiki/Sault_Ste._Marie,_Ontario

Batchewana First Nation (referred to as Rankin Location 15D by Statistics Canada) to the east.[3] Similar to other metropolitan centres in Northern Ontario, the City is a hub that stands alone in the region. Today, the City itself has a population of 73,378 (2016 Census Subdivision), reflecting a decrease in population compared to other recent Census years (-2.4% decrease from 2011). Population decline is a challenge with which some municipalities in Northern Ontario and rural Southern Ontario struggle. The City's population is dispersed across a large geographic area of 223.24 square kilometres. As much of this area is rural in nature (**Figure 1**), this results in an overall population density of 328.6 people per square kilometre (2016 Census). The majority of the population resides within the Urban Settlement Area boundary defined by the City's Official Plan shown in **Figure 1**. The rural area includes natural features like forested areas and wetlands, agricultural lands, clusters of residential development, the airport, and aggregate resource extraction sites. This CRA takes a closer look at the geography of the municipality, its built environment, and its population to assist in defining local needs and circumstances.

1.3 Report Structure

The Comprehensive Risk Assessment presents the results of a detailed analysis within ten main sections:

Section 2 – CRA Methodology;
Section 3 - Building Stock Profile;
Section 4 - Demographic Profile;
Section 5 - Fire Loss Profile;
Section 6 - Response Profile;
Section 7 - Geographic Profile;
Section 8 - Hazard Profile;
Section 9 - Economic Profile; and
Section 10 - Risk Analysis Outcomes.

Section 2 provides an overview of the overall methodology for the CRA and its relationship with the FMP. The seven profile sections (Sections 3 to 9) all begin with a methodology summary related to that particular analysis followed by the sub-topics analyses within each profile. Each profile section concludes with a summary of the profile risk analysis outcomes. All of the results are brought together in Section 10 – Risk Analysis Outcomes.

[3] According to the 2016 Census, the Algoma District (North Part) has a population of 5,739 people over a land area of 44,084.16 square kilometres. No 2016 Census population data is available for Rankin Location 15D.

DISTRICT OF ALGOMA

TOWNSHIP OF PRINCE

RANKIN 15D FIRST NATION

Highway 17 North

Fourth Line West

Fourth Line East

Third Line East

Second Line West

Base Line

Rossmore Road

Wallace Terrace

Lyons Avenue

Cathcart Street

Queen Street East

McNabb Street

Trunk Road

Gibbs Street

Queen Street East

Shannon Road

Black Road

Great Northern Road

Sackville Road

Willow Avenue

Pine Street

Lake Street

John Street

North Street

Gore Street

East Street

Allen's Side Road

Goulais Avenue

Peoples Road

Airport Road

Highway 17 East

#1 Fire Station

#2 Fire Station

#3 Fire Station

#4 Fire Station

St. Mary's River

USA

Ontario

Michigan

CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

MUNCIPAL OVERVIEW
FIGURE 1

- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- Urban Settlement Boundary
- First Nation Reserve
- Airport
- Wooded
- Waterway

0 0.5 1 2 km

1:80,084

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY
MNRF/STATSITICS CANADA

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Municipal Overview.mxd

DILLON CONSULTING

PROJECT: 175984

STATUS: DRAFT

DATE: 2018-01-29

2.0 CRA Methodology

Identifying risks and their contributing factors assists communities in defining their needs and circumstances. The results can then be used to make informed decisions for fire department service levels and to develop strategies to mitigate those risks. In addition to identifying the risks present within the City, this CRA provides: a prioritization of key risks based on a risk assignment exercise; categorization of the risk outcomes based on the OFMEM three lines of defence; and the development of a risk model (map) for suppression emergency response coverage assessment. Considerations of risks within the City of Sault Ste. Marie will assist Sault Ste. Marie Fire Services (SSMFS) with integrating risk considerations into SSMFS service levels through the Fire Master Plan

This section presents an overview of the primary components of the risk assessment – the seven profiles – followed by context for the overall CRA methodology. It also presents the risk assignment methodology based on probability and consequence.

2.1 Comprehensive Risk Assessment Profiles

The most current document outlining the process of risk assessments is the National Fire Protection Association (NFPA) 1730 "*Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations* (2016 Edition). [4] According to the standard, the purpose of a CRA is to "assist in the development and implementation of a community risk reduction plan and programs to reduce, mitigate, or eliminate the community's risks" (pg.6). NFPA 1730 outlines seven profiles that should be assessed and used to understand risk within the community:

1. Building Stock;
2. Demographics;
3. Fire Loss;
4. Response;
5. Geography;
6. Hazards; and
7. Economic.

As identified in NFPA 1730, these profiles incorporate the methodology of the Ontario Office of the Fire Marshal and Emergency Management (OFMEM) Public Fire Safety Guideline on Simplified Risk Assessments (PFSG 04-40A-03).[5] Where appropriate, references to OFMEM methodology and research

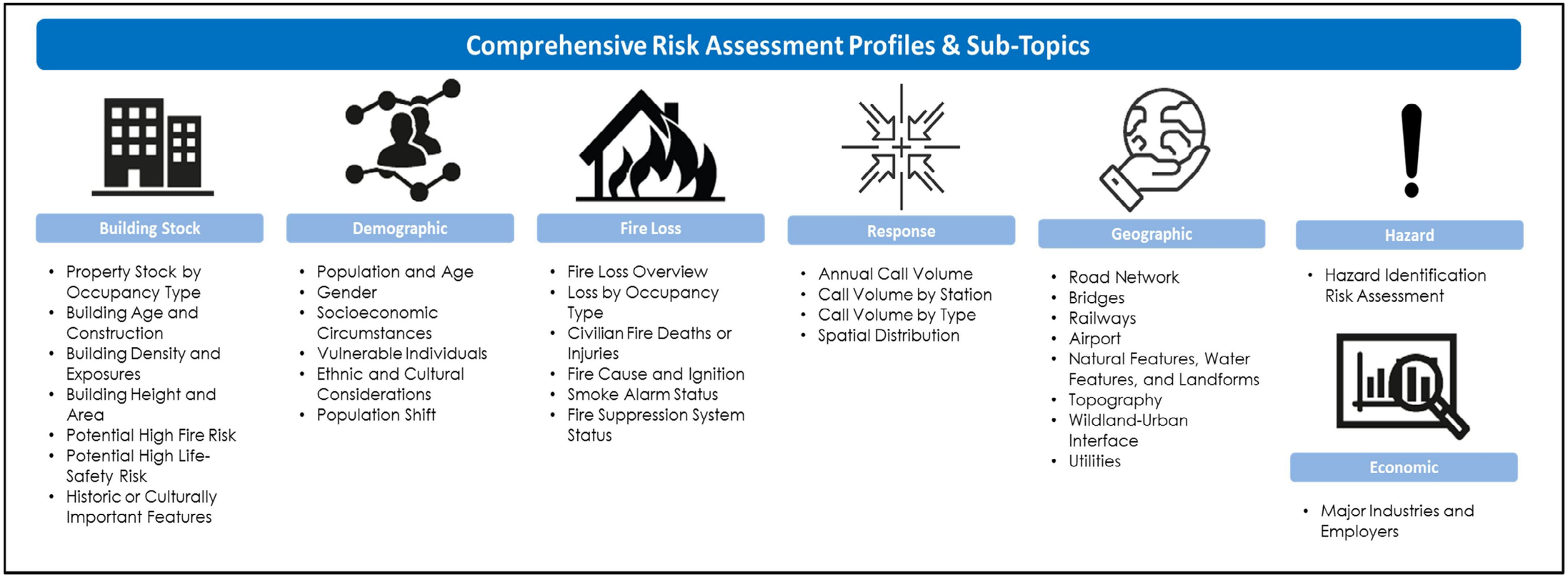
[4] 'NFPA 1300: Standard on Community Risk Assessment and Community Risk Reduction Plan' is in the development process. It is currently out for public input and is planned for release in 2019.
[5] It is noted that in January 2018, the Ministry of Community Safety and Correctional Services (MCSCS) issued notice that it is seeking public input on proposed regulations under the *Fire Protection and Prevention Act*, 1997 related to new requirements

are included within this CRA. In addition to NFPA 1730, this CRA is also based on the Ontario Office of the Fire Marshal's Fire Risk Sub-model.

Within each of the profiles, there are a number of sub-topics examined. The profiles and sub-topics are illustrated in **Figure 2.** Methodologies are provided in each of the profile sections. In summary, data was collected and analyzed to identify risks from the perspective of each of the seven profiles. Overall, key data sources included: City of Sault Ste. Marie Fire Services; City's Innovation Centre and Province of Ontario for spatial data; Statistics Canada 2016 Census; Statistics Canada 2011 National Household Survey; and OFMEM Standard Incident Reporting. The lens for this risk assessment is focused on fire risk or how a risk outcome relates to a fire department. The context for the risks identified and how they are analyzed to inform decision-making is described in the following section.

that include the completion of mandatory community risk assessments to inform the delivery of fire protection services. The draft regulation includes proposed new mandatory profiles such as a public safety response profile and a community services profile. These new requirements are proposed to come into force January 1, 2019.

Figure 2: Comprehensive Risk Assessment Profiles & Sub-Topics



2.2 CRA Overview

A Comprehensive Risk Assessment paints a picture about local needs and circumstances which can be used to inform decision-making including establishing service levels for a fire department. As part of service levels and risk mitigation, the outcomes can begin to inform the development of a Community Risk Reduction Program (e.g., refined inspection cycle or public education programs). This CRA is structured to directly inform the Fire Master Plan analysis and recommendations to inform risk reduction strategies for the City of Sault Ste. Marie.

As outlined in **Figure 3,** the CRA can be broken down into three broad stages and begins with data collection (stage 1). This is followed by stage 2 which includes analysis within the context of the seven profiles and related sub-topics (2a). The analyses results in conclusions identified as either a Key Risk or a Key Finding (2b). Within the context of this CRA, a **Key Risk** is an analysis outcome for which there is sufficient and appropriate information to inform an assessment of risk based on probability and consequence. This is referred to as a risk assignment process where a risk level of high, moderate, or low is assigned. In simple terms risk is defined as:

Risk = Probability x Consequence

Details on the risk assignment methodology including definitions of the above terms can be found in **Section 10**.

Similar to a key risk, a **Key Finding** is a risk related conclusion of the analysis that will inform service levels and other strategies. However, it is not put through the risk assignment process, in part because there is not sufficient quantitative data to do so. For example, a number of Key Findings are those identified through mapping analysis which more meaningfully illustrate a spatial priority area.

The third and final stage of the CRA takes the risk analysis outcomes and sets them up so that they can be directly applied within the Fire Master Plan. This includes three steps:

1. Risk Assignment of Key Risks;
2. Categorization of Key Risks and Key Findings based on the three lines of defence; and
3. Development of a Risk Map;

Further information on the three lines of defence is presented in the following section while further discussion on this process including risk assignment and the development of a risk model can be found in **Section 10.**

2.2.1 Three Lines of Defence

The OFMEM Comprehensive Fire Safety Effectiveness Model identifies a fire protection planning strategy known as the ***"Three Lines of Defence".*** The application of this strategy highlights the importance of recognizing that there are options to developing an effective community fire safety plan. Although emergency response (fire suppression) may be needed, there are other strategies that can be applied as elements of a broader community risk reduction strategy that can have a positive impact on reducing the need for emergency response and optimizing public safety within the community. The ***"Three Lines of Defence"*** model is summarized in **Table 1**.

Table 1: Overview of OFMEM Three Lines of Defence Model

Line	Description
I. Public Education and Prevention	*Educating residents of the community on means for them to fulfill their responsibilities for their own fire safety is a proven method of reducing the incidence of fire. Only by educating residents can fires be prevented and can those affected by fires respond properly to save lives, reduce injury and reduce the impact of fires*
II. Fire Safety Standards and Enforcement	*Ensuring that buildings have the required fire protection systems, safety features, including fire safety plans, and that these systems are maintained, so that the severity of fires may be minimized;*
III. Emergency Response:	*Providing well trained and equipped firefighters directed by capable officers to stop the spread of fires once they occur and to assist in protecting the lives and safety of residents. This is the failsafe for those times when fires occur despite prevention efforts.*

The CFSEM emphasizes the importance and value of preventing a fire. This is important from both an economic and public safety perspective. At the same time, the CFSEM ensures an appropriate level of health and safety for firefighters. The model also recognizes that developing programs and providing resources to implement the first line of defence (a proactive public education and fire prevention program) can be the most effective strategy to reduce and potentially minimize the need for the other lines of defence. To directly inform the FMP, this CRA process is designed to incorporate the three lines of defence model (see **Section 10**).

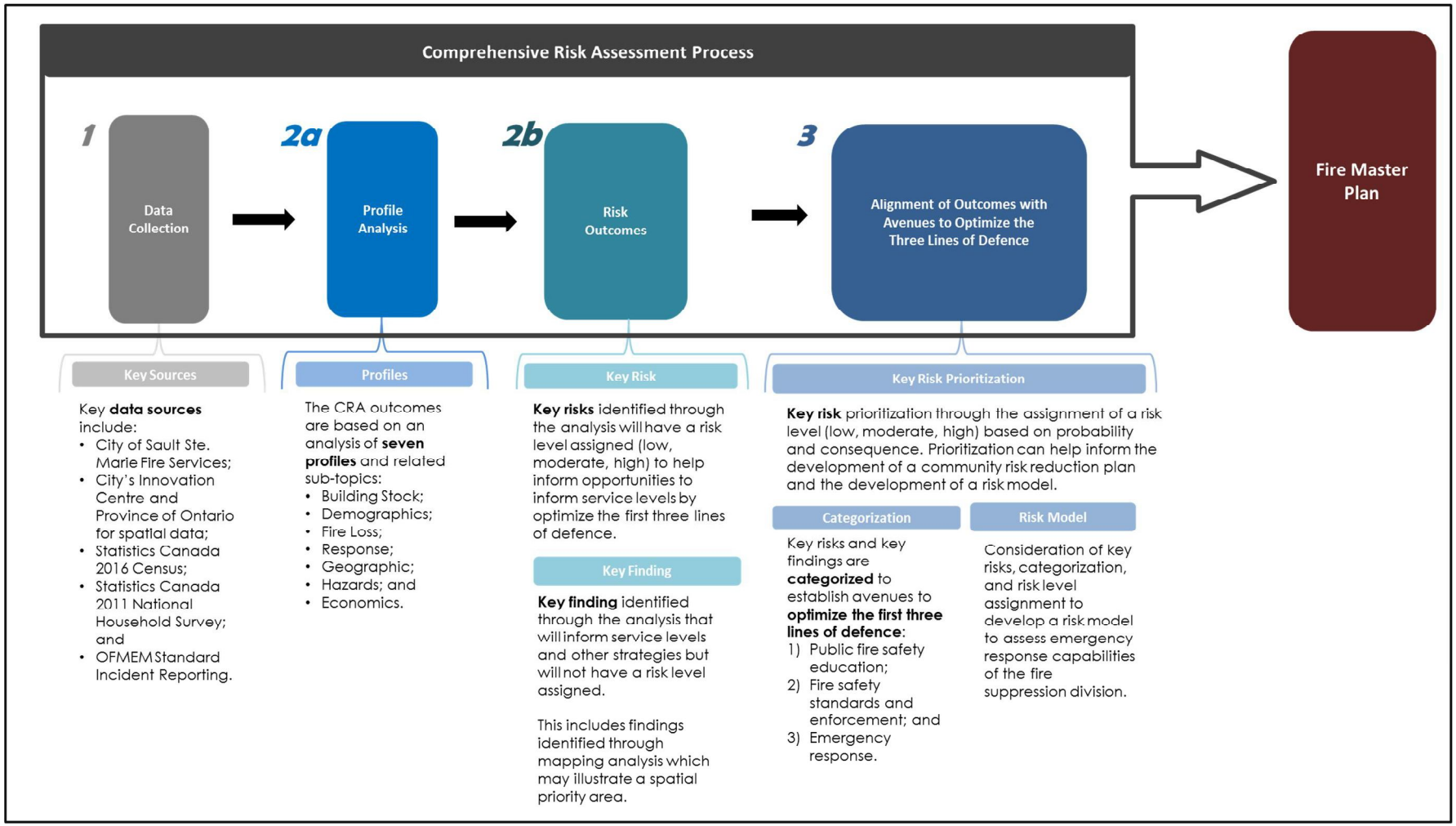


Figure 3: Comprehensive Risk Assessment Process

2.3 Risk Assignment Methodology

Once the risk outcomes have been identified, a risk assignment methodology is applied (in **Section 10.0**) to inform the prioritization of risks for community risk reduction strategies as well as to develop a risk model to assess emergency response coverage. This section provides an overview of the risk assignment methodology.

The OFMEM Fire Risk Sub-model defines risk "*as a measure of the probability and consequence of an adverse effect to health, property, organization, environment, or community as a result of an event, activity or operation. For the purposes of the Fire Risk Sub-model, such an event refers to a fire incident along with the effects of heat, smoke and toxicity threats generated from an incident*".

The OFMEM model develops an overall risk assessment by "*assigning probability and consequence levels to potential adverse events or scenarios due to fire and combining the two to arrive at an overall risk level.*" (p.5) The Sub-model also provides a matrix as one option in arriving at the level of risk for a range of scenarios.

At a high level, there are three steps included in the risk assignment exercise used for this study:

1. Determine a probability level to assign to each event;
2. Determine a consequence level to assign to each event; and
3. Establish the risk level (e.g., numerical value / location on the matrix) and risk category (e.g., low, moderate or high) for each based on the identified probability and consequence for each event.

Further detail is presented in the subsequent sections.

2.3.1 Probability Levels

The first step to identifying a risk level is to assign probability. The probability of a fire or emergency event occurring can be estimated in part based on historical experience of the community, similar communities, and that of the province as a whole. The application of broader risk management industry best practices is also a key element in assigning probability levels.

The OFMEM Fire Risk Sub-model categorizes the probability of an event occurring into five levels of likelihood, and provides descriptions for each probability level. These are shown in **Table 2.** The numerical weighted value assigned to the probability level has been adjusted from the OFMEM values to reflect broader risk management industry best practices. Similarly, the descriptions for each probability level reflect the basis of OFMEM descriptions; however they have been adjusted based on risk management industry best practices and definition of the adjusted probability values presented.

Table 2: Probability Levels

Likelihood Category	*Value (OFMEM)*	Value (Adjusted)	Description (Adjusted from OFMEM)
Rare	*1*	1	• May occur in exceptional circumstances • No incidents in past 25 years
Unlikely	*2*	10	• Could occur at some time, especially if circumstances change • At least one incident in past 10 years
Possible	*3*	100	• Might occur under current circumstances • Occurs annually on average (1 to 5 incidents in past year)
Likely	*4*	1,000	• Will probably occur at some time under current circumstances • Multiple or reoccurring incidents in the past year • May occur monthly (10 to 50 incidents per year)
Almost Certain	*5*	10,000	• Expected to occur in most circumstances unless circumstances change • Multiple or reoccurring incidents in the past year • May occur weekly or daily (more than 50 per year)

2.3.2 Consequence Levels

The second step to identifying risk levels is to assign a consequence level. The consequences as a result of an emergency event relates to the potential losses or negative outcomes associated with the incident. The Fire Risk Sub-model identifies four components that should be evaluated in terms of assessing consequence. These include:

1. ***Life Safety:*** Injuries or loss of life due to occupant and firefighter exposure to life threatening fire or other situations.
2. ***Property Loss:*** Monetary losses relating to private and public buildings, property content, irreplaceable assets, significant historic/symbolic landmarks and critical infrastructure due to fire.
3. ***Economic Impact:*** Monetary losses associated with property income, business closures, downturn in tourism, tax assessment value and employment layoffs due to fire.
4. ***Environmental Impact:*** Harm to human and non-human (i.e. wildlife, fish and vegetation) species of life and general decline in quality of life within the community due to air/water/soil contamination as a result of fire or fire suppression activities.

The OFMEM Fire Risk Sub-model evaluates the consequences of an event based on five levels of severity. The description and definition of each consequence level from the Fire Risk Sub-model are shown in **Table 3**. Similar to the probability levels, the numerical weighted value assigned to the identified consequence levels have been revised from the OFMEM values to reflect broader risk management industry practices for assigning risk levels. The OFMEM definitions are used for each consequence level.

Table 3: Consequence Levels

Consequence Category	*Value (OFMEM)*	Value (Adjusted)	Description (OFMEM)
Insignificant	*1*	1	• No life safety issue • Limited valued or no property loss • No impact to local economy and/or • No effect on general living conditions
Minor	*2*	10	• Potential risk to life safety of occupants • Minor property loss • Minimal disruption to business activity and/or • Minimal impact on general living conditions
Moderate	*3*	100	• Threat to life safety of occupants • Moderate property loss • Poses threat to small local businesses and/or • Could pose threat to quality of the environment
Major	*4*	1,000	• Potential for large loss of life • Would result in significant property damage • Significant threat to businesses, local economy, and tourism and/or • Impact to environment would result in a short term, partial evacuation of local residents and businesses
Catastrophic	*5*	10,000	• Significant loss of life • Multiple property damage to significant portion of the municipality • Long term disruption of businesses, local employment, and tourism and/or • Environmental damage that would result in long-term evacuation of local residents and businesses

2.3.3 Risk Matrix and Risk Levels

Once probability and consequence are determined for each major occupancy classification the level of risk is calculated by multiplying the numerical values for probability and consequence. The risk level is then attributed to a risk category.

The relationship between probability and consequence as it pertains to risk levels can be illustrated in a risk matrix. Risk matrices typically demarcate different levels of risk along a 45-degree angle, as **Figure 4** illustrates. Probability and consequence are each defined on separate scales with varying descriptors providing direction on how to assign the probability and consequence of an event. While these descriptors will vary, probability and consequence

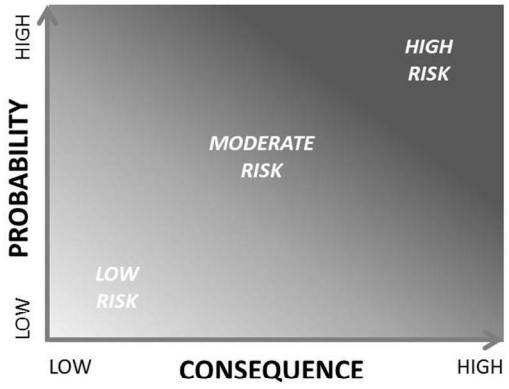


Figure 4: Generic Risk Matrix

must use the same logarithmic numeric scale, to reflect the fact that they are equally important. It is human tendency to place a higher weight on consequence than on probability, but robust risk analysis methods value probability and consequence equally.

NFPA 1730 identifies three risk categories (low, moderate, and high), while the OFMEM Fire Risk Sub-Model identifies four risk categories (low, moderate, high, and extreme). This study makes use of the risk categories identified in NFPA 1730 and the descriptions for each risk category provided in the OFMEM Fire Risk Sub-Model. **Table 4** shows the risk matrix for this CRA. As mentioned, the numerical values have been adjusted from those proposed in the OFMEM Fire Risk Sub-Model to reflect industry best practices.

Table 4: Risk Matrix

Consequence / Probability		Insignificant	Minor	Moderate	Major	Catastrophic
		1	*10*	*100*	*1,000*	*10,000*
Almost Certain	*10,000*	10,000	100,000	1,000,000	10,000,000	100,000,000
Likely	*1,000*	1,000	10,000	100,000	1,000,000	10,000,000
Possible	*100*	100	1,000	10,000	100,000	1,000,000
Unlikely	*10*	10	100	1,000	10,000	100,000
Rare	*1*	1	10	100	1,000	10,000

Risk Category	Definition (OFMEM)
Low Risk	• Manage by routine programs and procedures • Maintain risk monitoring
Moderate Risk	• Requires specific allocation of management responsibility including monitoring and response procedures
High Risk*	• Community threat, senior management attention needed • Serious threat, detailed research and management planning required at senior levels

** Note: The OFMEM descriptions for High Risk and Extreme Risk have been combined. NFPA 1730 does not use the Extreme Risk category.*

3.0 Building Stock Profile

The building stock found in a community is one of the key drivers of risk from the perspective of fire services. The building stock profile presents an overview of the community based on a review of property stock by Ontario Building Code occupancy classification, building age and construction, building density and exposures, building height and area, potential high fire risk occupancies, vulnerable occupancies, and historic or culturally important buildings and facilities. Through this analysis risks are identified and then assigned a risk level for the development of a building stock profile risk map.

3.1 Methodology

The analysis provided within this profile is based on several data sources. The first key source was spatial property stock data provided by the City's Innovation Centre. The Innovation Centre and SSMFS worked together to assign Ontario Building Code classifications based on to Municipal Property Assessment Corporation (MPAC) property codes. An OBC code is assigned to each MPAC code which resulted in a GIS layer of property parcels classified by occupancy type. It is important to note that there are some cases where there may be more than one building on a property so the analysis reflects an analysis of property stock based on parcel by occupancy type. It is not uncommon for municipalities to have partial data or no data focused on the occupancy type of a building. The availability of spatial data can be especially limited.

The second key source is Statistics Canada data from the 2016 Census. This information is primarily presented in table format and, where applicable, is used to provide some contextual analysis of the City of Sault Ste. Marie compared to the Province as a whole.

Additional datasets are used for the other topics explored in this profile including building exposures, building area, occupancies with potential high life-safety risk, and historic or culturally important buildings. The datasets presented for those topics include spatial or table data provided by the City of Sault Ste. Marie's Innovation Centre or SSMFS. The specific sources for the respective analyses are described when this information is presented.

3.2 Property Stock by Building Code Occupancy Classification

The Ontario Building Code (OBC) categorizes buildings by their major occupancy classifications. Each classification has definitions that distinguish it from other occupancy classifications. Utilizing the OBC as the source for defining the occupancy classifications provides a recognized definition and baseline for developing the community risk profile.

The OBC major occupancy classifications are divided into six major building occupancy classifications (groups). Within each group the occupancies are furthered defined by division. The OBC major classification groups and divisions are presented in **Table 5.** **Table 5** also shows the typical type of risks related to each occupancy group and the potential proactive measures to reduce risk.

3.2.1 SSM Property Stock by Major Occupancy Classification

Understanding the occupancy classification within the City, including spatial distribution, is one way to start identifying occupancy-based risks within the community. The previously described mapped MPAC data was used to identify the property stock within the City by major occupancy classification.

Table 2 presents the breakdown of the 29,319 property parcels by OBC major occupancy classification as assigned by the City and reviewed by Dillon. This includes 2,891 (or 9.9% of parcels) that for the purposes of this CRA have been classified as Open Space. Open Space includes areas such as those identified as vacant based on the MPAC codes. These parcels include lands with or without an MPAC roll number such as Conservation Authority lands, non-buildable lands (e.g., walkways, stormwater management pond, etc.), railway right-of-ways, as well as vacant lands that are designated for future uses such as residential or industrial. Other Open Space parcels includes large parcels in the rural area that do not have structures on them but may have, for example, a solar farm, a functioning aggregate resource extraction site, or be used for agricultural purposes.

With these open space parcels included in the analysis, the property stock analysis indicates that 86.0% of the City's total building stock is Group C – Residential occupancies. This classification includes single-detached dwellings, multi-unit residential, and hotels/motels. When open space lands are removed from the analysis, Group C – Residential occupancies comprise 95.4% of the occupied property stock. The priority of addressing the residential fire risk is supported by the historic data provided by the OFMEM that reports for the period from 2006 to 2015 residential fires accounted for 85% of all fire fatalities. [6] Historic data also reports that from 2011 to 2015, 73% of 36,508 structure loss fires occurred in Group C – Residential occupancies.[7]

[6] Source: "Ontario Fatal Fires: 10 Years, 2006 - 2015." Ministry of Community Safety and Correctional Services. 22 Feb. 2017. Web. 26 Jul. 2017: http://www.mcscs.jus.gov.on.ca/english/FireMarshal/MediaRelationsandResources/FireStatistics/OntarioFatalities/FatalFiresSummary/stats_fatal_summary.html.

[7] Source: "Fire Loss in Ontario 2011 – 2015". Ministry of Community Safety and Correctional Services. 22 Feb. 2017. Web. 26 Jul. 2017: https://www.mcscs.jus.gov.on.ca/english/FireMarshal/MediaRelationsandResources/FireStatistics/OntarioFires/FireLossesCausesTrendsIssues/stats_causes.html

Table 5: OBC Major Occupancy Classification

OBC Major Occupancy Classification	Division	Description of Major Occupancies	OBC Definition	Occupancy Risks	Proactive Measures for Reducing Risk
Group A - Assembly	1	Assembly occupancies intended for the production and viewing of the performing arts	The occupancy or the 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.	• Overcrowding by patrons • Lack of patron familiarity with emergency exit locations and procedures • Insufficient staff training in emergency procedures • Large quantities of combustible furnishings and decorations • Where alcohol is served, possibility of impairment which could slow exit • Loud performances may lead to delayed notification in the event of fire alarm	• Regular fire prevention inspection cycles • Automatic fire detection and monitoring systems • Approved fire safety plan and staff training • Pre-planning by fire suppression staff
	2	Assembly occupancies not elsewhere classified in Group A			
	3	Assembly occupancies of the arena type			
	4	Assembly occupancies in which occupants are gathered in the open air			
Group B - Care or Detention	1	Detention occupancies	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.	• Inability to evacuate or relocate patients • Presence of flammable/combustible gases (ie. Oxygen) • Insufficient staff • Insufficient staff training • Vulnerable occupants using overnight accommodations (sleeping) • Vulnerable occupants may be unable to evacuate without assistance • Evacuation may be delayed due to cognitive, physical limitations or the use of sleep aids • Combustible furnishings	• Regular fire prevention inspection cycles • Automatic fire detection and monitoring systems • Approved Fire Safety Plan and staff training • Pre-planning by fire suppression staff
	2	Care and treatment occupancies			
	3	Care occupancies			
Group C - Residential	-	Residential occupancies	An occupancy that is used by persons for whom sleeping accommodation is provided but who are not harboured or detained there to receive medical care or treatment or who are not involuntarily detained there.	• Overnight accommodation (sleeping) • Combustible furnishings • Secondary units (basement apartments) • High population density • Human behaviour (cooking, use of candles, smoking, alcohol, hoarding, etc.) • Delayed detection due to improper placement, lack of maintenance or missing smoke alarms	• Home smoke alarm programs • Public education programming including home escape planning • Retro-fit and compliance inspection cycles for OFC compliance • Pre-planning by fire suppression staff

OBC Major Occupancy Classification	Division	Description of Major Occupancies	OBC Definition	Occupancy Risks	Proactive Measures for Reducing Risk
Group D - Business and Personal Services	-	Business and personal services occupancies	An occupancy that is used for the transaction of business or the provision of professional or personal services.	• High volume of occupants • High combustible loading • Specialized equipment utilizing high risk substances such as radiation • Consumers unfamiliar with emergency exits and procedures	• Regular fire prevention inspection cycles to maintain OFC compliance • Targeted fire prevention inspections for OFC retro-fit compliance • Staff training in fire prevention and evacuation procedures • Public education programs • Pre-planning by fire suppression staff
Group E - Mercantile	-	Mercantile occupancies	An occupancy that is used for the displaying or selling of retail goods, wares, and merchandise.	• High volume of occupants/staff • High volume of combustible loading/high rack storage • Exit facilities blocked with merchandise • Lack of occupant familiarity with emergency exit locations and procedures • Size of building	• Regular fire prevention inspection cycles • Automatic fire detection and monitoring systems • Approved Fire Safety Plan and staff training • Pre-planning by fire suppression staff
Group F- Industrial	1	High-hazard industrial occupancies	An occupancy that is used for the assembly, fabrication, manufacturing, processing, repairing or storing of goods and materials	• Large dollar loss as a result of a major fire • Economic loss in the event of plant shut downs and job loss • Environmental impacts • Presence of ignition sources related to processing activities • Poor housekeeping and maintenance of equipment • Insufficient staff training • Improper use of equipment	• Regular fire prevention inspection cycles • Staff training in fire prevention and evacuation • Public education • Pre-planning by fire suppression staff • Installation of early detection systems (smoke alarms, heat detectors) • Installation of automatic sprinkler systems
	2	Medium-hazard industrial occupancies			
	3	Low-hazard industrial occupancies			

Key Risk

When open space lands are removed from the analysis, Group C – Residential occupancies comprise 95.4% of the occupied property stock.

Based on the property stock data provided by the City, Group E – Mercantile occupancies reflect the second highest properties of property stock at 1.4%. These occupancies can range in size from smaller corner stores and strip plazas to larger big box retail outlets. The third highest category of property stock by occupancy type is Group F – Industrial occupancies. This occupancy type represents 1.2% of the total property stock. The majority of the Group F – Industrial occupancies (1.18%) is within Division 2, reflecting medium-hazard industrial uses. The analysis reveals seven properties that are classified as low-hazard and five properties that are high-hazard industrial.

The breakdown of property stock does not identify those occupancies that would not be classified by MPAC including sheds, garages, or other features that may contribute to fire loss and emergency calls.

Key Finding

Group F – Industrial occupancies represent 1.2% of the total property stock including open space.

Key Finding

The majority of industrial uses are identified within the Group F, Division 2 – Medium-Hazard Industrial occupancies at 1.18% of the total property stock including open space.

Table 6: City of Sault Ste. Marie Property Stock (City provided Property Parcel Data)

Category or OBC Major Occupancy Classification	Division	Number of Property Parcels	% of Property Parcels by Major Occupancy Classification
Group A - Assembly	-	229	0.8%
Group B – Care or Detention	-	38	0.1%
Group C – Residential	-	25,219	86.0%
Group D – Business and Personal Services	-	166	0.6%
Group E – Mercantile	-	419	1.4%
Group F – Industrial	1	5	1.2%
	2	345	
	3	7	
Open Space	-	2,891	9.9%
	Total	29,319	100%

(Source: Analysis of Property Parcel data provided by the City)

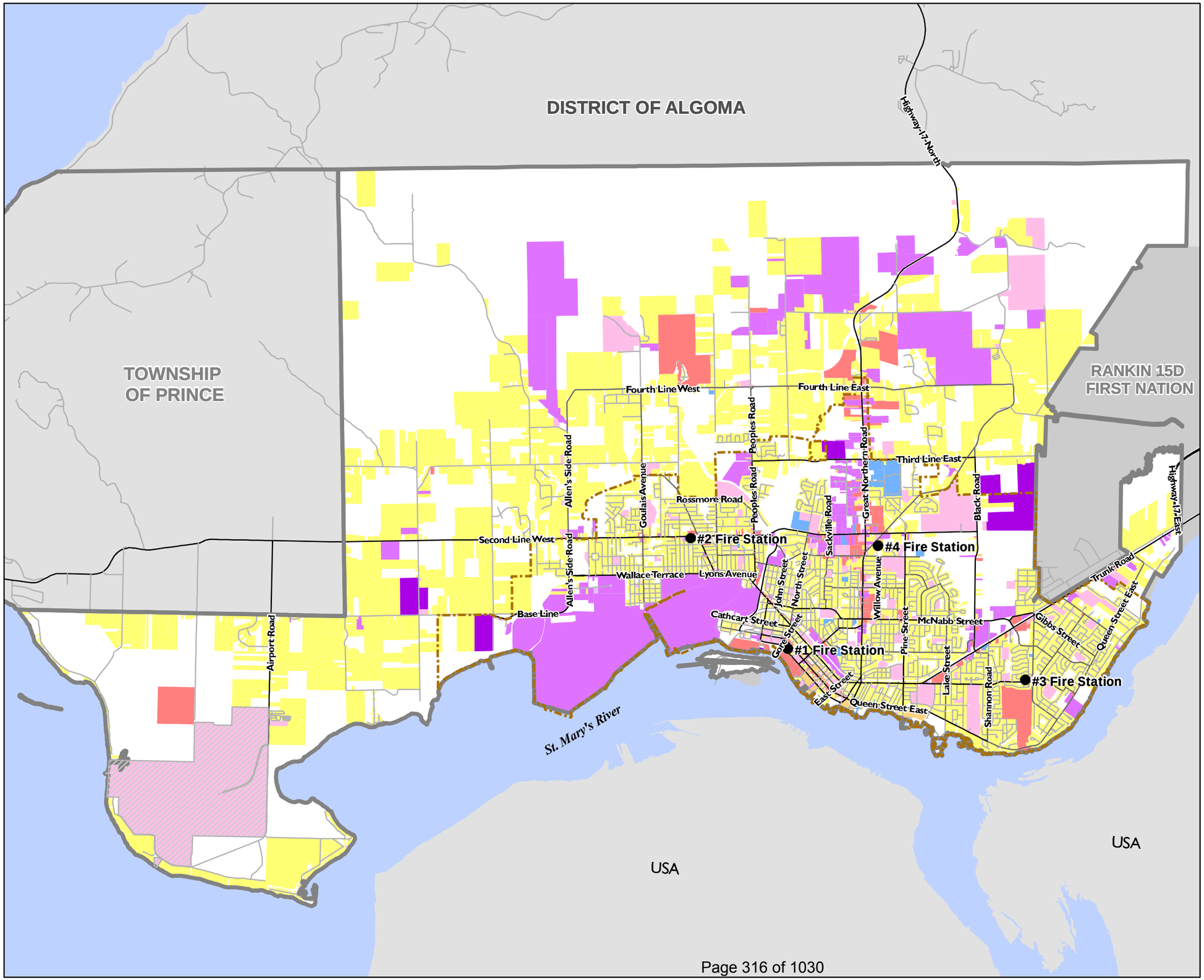
3.2.2 Mapping Analysis: Property Stock

The distribution of the property stock by major occupancy classification across the City is shown in **Figure 5**. This mapping is based on the property parcel data and assigned occupancy types provided by the City. Within the Urban Settlement Area, the figure shows a distribution that is in line with the designated land use of the municipality. This includes clusters of Group F – Industrial uses west of the downtown and west of Great Northern Road, north of Second Line West. Group A – Assembly, Group B – Care or Detention, and Group C – Residential occupancies are distributed across the City with clusters of Group D – Business and Personal Services and Group E – Mercantile occupancies found clustered including in the downtown, along Great Northern Road, and Trunk Road.

The mapping analysis by occupancy type also shows that outside of the Urban Settlement Area, there are some areas of development or other active uses. This includes residential subdivisions, aggregate resource extraction, and the airport. Recognized as a Rural Area within the Official Plan, these lands include a range of occupancy types including Group C – Residential, Group F – Industrial, Group A – Assembly, and Group E – Mercantile occupancies. The type of Group C – Residential development ranges from the rural (farm house) homes, modern and large cottages on the lake, and pockets of small and large lot subdivision-type developments. In addition, the mapping shows that the Canadian shield line reflects a natural northern boundary for development.

Key Finding:
Group F – Industrial Occupancies are typically located west of Great Northern Road north of Second Line West, and along the waterfront west of Downtown.

Key Finding:
Group C – Residential uses are distributed across the City including outside of the Urban Settlement Area.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

PROPERTY STOCK
OBC OCCUPANCY CLASSIFICATION

FIGURE 5

- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Urban Settlement Boundary
- Municipal Boundary
- First Nation Reserve
- Airport

Occupancy Type

- Group A - Assembly
- Group B - Care or Detention
- Group C - Residential
- Group D - Business and Personal Services
- Group E - Mercantile
- F1 - High-Hazard Industrial
- F2 - Medium-Hazard Industrial
- F3 - Low-Hazard Industrial
- Open Space

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY
CIT OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\OBC Class.mxd

DILLON CONSULTING

PROJECT: 175984
STATUS: DRAFT
DATE: 2018-01-29

3.3 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 the adoption of the OBC, municipalities had individually developed building codes which resulted in inconsistent construction standards and regulatory environment across the province. Together the OBC and OFC have provided the foundation for eliminating many of the inconsistencies in building construction and maintenance that were present before their adoption.

The OBC and the OFC were developed to ensure that uniform building construction and maintenance standards are applied for all new building construction (and some renovations). The codes also provide for specific fire safety measures depending on the intended use of the building. Examples of the fire safety considerations that are addressed include:

- Occupancy;
- Exits/means of egress including signs and lighting;
- Fire alarm and detection equipment;
- Fire department access; and
- Inspection, testing, and maintenance.

In 1983, the OFC was further expanded to include retrofit requirements for many of the buildings constructed prior to adoption of the code. Retrofit requirements were established to ensure that a minimum acceptable level of life safety is present. 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 that came into force on January 1, 2014. This regulation is intended to enhance fire safety in Retirement Homes, regulated under the *Retirement Homes Act*, care occupancies and care and treatment occupancies by including requirements for mandatory sprinklers, staff training, annual fire drill scenarios and fire safety inspections.

Linked to age of a building are the methods and materials used to construct it. During the late 19th century and early 20th century, balloon frame construction was a common framing technique used in both residential and small commercial construction. This technique permitted the spread of fire and smoke to move rapidly from the lower floors to upper floors and the roof level. Understanding the age of construction of occupancies (both residential and non-residential) can assist in determining if balloon framing may have been utilized.

Modern construction techniques have introduced the use of platform construction whereby each level is built as a component of the overall structure. This technique, in addition to the use of fire stops, has reduced the extension of fire and smoke by creating horizontal barriers. However, modern construction materials have also resulted in changes to fire growth rates that are defined by the Society of Fire Protection Engineers as slow, medium and fast. Fire growth rates, listed in **Table 7,** are measured by the time it takes for a fire to reach a one megawatt (MW) fire.

Table 7: Time to Reach 1 MW and 2 MW Fire Growth Rates in the Absence of Fire Suppression

Fire Growth Rate	Time in Seconds to Reach 1MW	Time in Seconds to Reach 2 MW
Slow	600 seconds	848 seconds
Medium	300 seconds	424 seconds
Fast	150 seconds	212 seconds

(Source: "Operational Planning: An Official Guide to Matching Resource Deployment and Risk", Office of the Fire Marshal and Emergency Management, January 24, 2011, *p. 4).*

In addition to building construction, fire growth rate depends on the flammability of the materials and contents within the building which introduces variances into the growth rates presented above. The impact of increasing fire growth rates is directly related to the time lapse from ignition to flashover when the combustible items within a given space reach a temperature that is sufficiently high for them to auto-ignite. The graph in **Figure 6** (below) highlights the exponential increase in fire temperature and the potential for loss of property/loss of life with the progression of time.

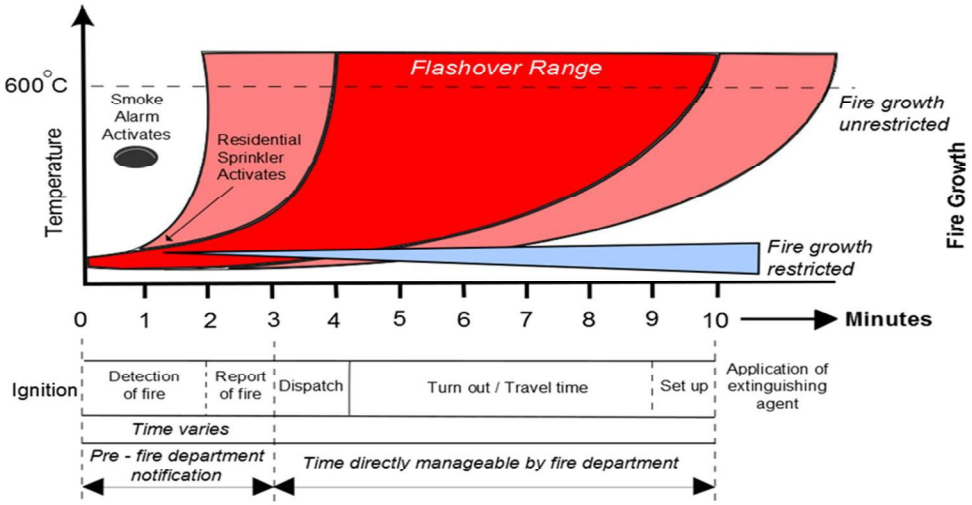
The sections that follow explore the age and construction of residential and non-residential buildings in the City.

3.3.1 Building Age Snapshot and Context

In part due to the probability of fires occurring in Group C – Residential occupancies, understanding the age and construction of a community's residential building stock is an important component of identifying key community risks when developing a Comprehensive Risk Assessment. The Simplified Risk Assessment completed by SSMFS in 2016 identifies that the Downtown has a large proportion of older buildings constructed prior to any building or fire codes.

To provide further analysis, this section compares the age of Group C – Residential occupancies types within the City and the Province according to Statistics Canada 2016 Census. Statistics Canada reports on the period of construction (age) of residential dwellings. The period of construction for residential dwellings in the City of Sault Ste. Marie and the Province of Ontario is illustrated in **Table 8** and **Figure 7**. According to Statistics Canada, the City of Sault Ste. Marie has a high proportion of dwellings constructed prior to 1981 (76.6% compared to 53% for the Province).

Figure 6:Example Fire Propagation Curve

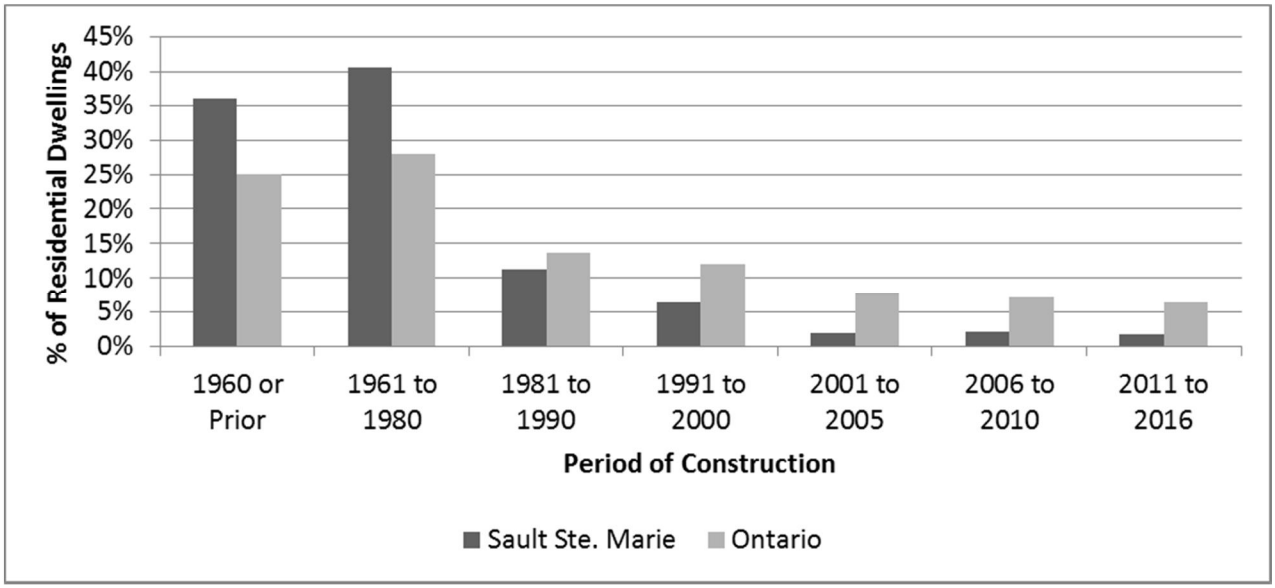


Reference: Fire Underwriters Survey "Alternative Water Supplies for Public Fire Protection: An Informative Reference Guide for Use in Fire Insurance Grading"(May 2009) and NFPA "Fire Protection Handbook" (2001)

For the period of 1981 to 1990, the City saw the next largest addition to the building stock (at 11.3% compared to 13.7% for the Province). In addition, from 1991 to 2016, the Province saw an addition of 33.2% of the total residential units compared to just 12.1% of the Province. This is linked to the demographic trends experienced by the City compared to the Province (further analysis can be found in the **Demographic Profile**). Overall, **Figure 7** and **Table 8** illustrate that the City of Sault Ste. Marie has an older residential building stock compared to that of the Province.

Table 8: Period of Construction of Residential Dwellings (2016 Census)

Construction Period	Sault Ste. Marie		Province of Ontario	
	Total Dwellings	% Dwellings	Total Dwellings	% Dwellings
1960 or Prior	11,720	35.9%	1,293,135	25.0%
1961 to 1980	13,275	40.7%	1,449,585	28.0%
1981 to 1990	3,675	11.3%	709,135	13.7%
1991 to 2000	2,070	6.3%	622,565	12.0%
2001 to 2005	615	1.9%	396,130	7.7%
2006 to 2010	710	2.2%	368,235	7.1%
2011 to 2016	570	1.7%	330,390	6.4%
Total:	**32,635**	**100.0%**	**5,169,175**	**100.0%**



Source: Statistics Canada, 2016 Census

Figure 7: Period of Construction of Residential Dwellings - City of Sault Ste. Marie and Province (2016 Census)

High-level information, such as census data, is not available for non-residential buildings. Generally speaking, based on planning experience, non-residential occupancies would have a similar age profile as residential occupancies within a community. Spatial analysis of building age and period of construction based on property parcel data for residential occupancies is presented in the following section.

3.3.2 Group C – Residential Building Age in Sault Ste. Marie

This analysis is based on an export of an MPAC structure table provided by the City. This table had information on building age for Group C – Residential occupancies. (This is a data source that is different than the property parcel layer used for the occupancy type analysis.) This data was then classified into one of age periods. The age periods are shown in **Table 9,** including what the category reflects for a code

perspective. These categories are based on the consideration of when the National Building Code of Canada was made available, and when the Ontario Building Code and Ontario Fire Code were put into effect.

Table 9: Building Age and Period of Construction Overview

Building Age	Period of Construction	Note
1 to 35 Years	1982 to Present	Both Ontario Fire Code and Ontario Building Code in effect
36 to 42 Years	1975 to 1981	Building Code in effect in Ontario
43 to 75 Years	1942 to 1974	National Building Code of Canada available for potential use by individual jurisdictions
≥ 76 Years	1941 or earlier	No model codes available or legislated guidelines in place

Table 10 shows the distribution of building by age based on these categories based on the MPAC exported structure table for residential occupancies. This illustrates that only 30% of residential buildings were constructed at a time when both the Ontario Fire Code and Ontario Building Code were in effect. About 12% of residential buildings were constructed when just the OBC was in effect and roughly 57% when no provincial codes were in effect.

Table 10: Building Age of Group C – Residential Occupancies with a Year Built Identified – City of Sault Ste. Marie

Building Age	Period of Construction	# of Group C – Residential Buildings	%
1 to 35 Years	1982 to Present	14,359	30%
36 to 42 Years	1975 to 1981	5,668	12%
43 to 75 Years	1942 to 1974	21,334	45%
≥ 76 Years	1941 or earlier	5,873	12%
	Total:	**47,234**	**100%**

Key Risk

Approximately 57% of Group C – Residential occupancies in the City were constructed when no provincial codes were in effect (prior to 1975).

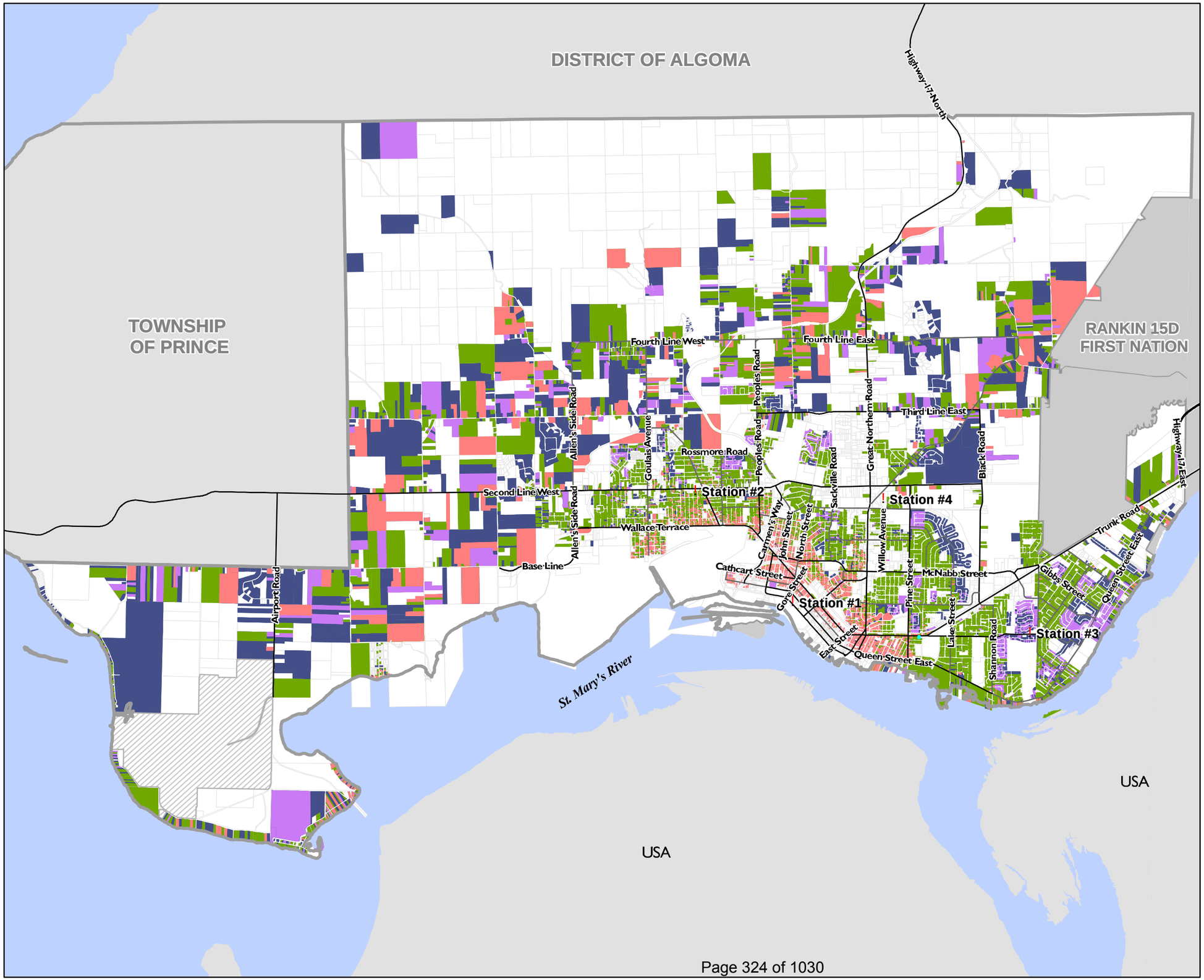
3.3.3 Mapping Analysis: Building Age

This section explores the spatial distribution of Group C – Residential occupancies within the City by age. The MPAC structure table provided by the City was mapped by Dillon by linking the Roll Number in the table to the property parcels provided by the City. The results are shown in **Figure 8**. It should be noted that the MPAC data may have had more than one building record for each property parcel (where parcels had more than one building). In these cases, a property parcel was assigned the oldest year as part of this spatial analysis. There were also instances where a year built may not have been identified.

The figure shows that – as a very general pattern – the residential building stock gets newer as one travels out from the Downtown. The Downtown has a notable concentration of Group C - Residential occupancies 76 years or older (built when no model codes were available or legislated guidelines in place). Surrounding these occupancies Downtown are buildings aged 43 to 75 years (built between 1942 to 1974) when no provincial codes were in effect. Expanding further outwards, there are residential occupancies built when the Ontario Building Code and/or the Ontario Fire Code was in effect.

Key Finding

Within the Urban Settlement Area Boundary, there is a high concentration of Group C – Residential occupancies built prior to any provincial codes being in effect.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

BUILDING AGE
FIGURE 8

! Existing Fire Station
Airport
Municipal Boundary
First Nation Reserve

Building Age (Period of Construction)
≥ 76 Years (1941 or Earlier)
43 to 75 Years (1942 to 1974)
36 to 42 Years (1975 to 1981)
1 to 35 Years (1982 to Present)

0 0.5 1 2 km
1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SFG
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Building Stock Profile\Building Age.mxd

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3.4 Building Density and Exposures

NFPA 1730 lists building density as a key factor for understanding potential fire risk. For the purposes of this analysis, building density is considered to include core areas (downtowns) and other areas that include exposure risk. Closely spaced buildings, typical of historic downtown core areas, newer infill construction, or even some subdivisions have a higher risk of a fire spreading to an adjacent exposed building. A fire originating in one building could easily spread to neighbouring structures due to the close proximity. The close proximity of buildings can also impede firefighting operations due to the limited access for firefighters and equipment. Exposure risk can also be increased with mixed-use occupancies, such as a restaurant below a residential dwelling.

Adoption of the OBC and the OFC has required spatial separations and the use of fire retardant materials and constructions methods to reduce the fire risks. In addition to the construction and planning requirements within the respective codes, basic firefighting practices consider the protection of exposures as a primary function and consideration in the event of a response by the fire and emergency services. As previously noted, older developments, as well as new infill, can have increased exposure risk due to density and even a mix of uses. The section that follows discusses spatial considerations of building density as it pertains to the City's Official Plan, an overview of residential dwelling types, and the results of a structure-based spatial analysis conducted by the City.

3.4.1 Building Density Snapshot and Context

The built form and densities within Ontario municipalities are guided by municipal Official Plans. As a municipality in Northern Ontario, the City of Sault Ste. Marie is subject to the Province of Ontario's Places to Grow – Growth Plan for Northern Ontario (2011). The Growth Plan for Northern Ontario encourages municipalities including Sault Ste. Marie to plan for a strategic core area to have increased densities, attract employment uses and clusters, and provide a range of amenities in a mixed-use walkable neighbourhood. The Official Plan for the City of Sault Ste. Marie directs mixed use and high density residential development, and the construction of major office buildings to the Downtown area (Section 2.3.2 of the OP). As previously discussed, the Downtown is currently home to a number of mixed use buildings that are older in age resulting in increased exposure risks and not sprinklered. As identified in the 2016 Simplified Risk Assessment, this area is also not subject to Part 9 – Retrofit requirements of the Ontario Fire Code.

Specifically for residential dwellings, understanding the breakdown by type can provide some indication of exposure risk based on type. **Table 11** shows residential dwelling types for the City and the Province according the 2016 census. In comparison to the Province, the City of Sault Ste. Marie has a higher proportion of single-detached dwellings (65.0% vs. 54.3%) and a lower proportion of apartment buildings greater than five storeys (6.4% vs. 17.2%) and of row housing (2.9% versus 8.9%). The 2016 census statistics indicate that Sault Ste. Marie has a residential dwelling profile that reflects a lower density when compared to the Province, resulting in decreased exposure risk compared to the Province.

Table 11: Residential Structural Dwelling Type (2016 Census)

Structural Dwelling Type	Sault Ste. Marie		Ontario	
	Total Dwellings	Total % Dwellings	Total Dwellings	Total % Dwellings
Single-detached house	21,215	65.0%	2,807,380	54.3%
Apartment in a building that has five or more storeys	2,095	6.4%	886,705	17.2%
Movable dwelling	10	0.0%	14,890	0.3%
Other attached dwellings				
Semi-detached house	1,845	5.7%	289,975	5.6%
Row house	935	2.9%	460,425	8.9%
Apartment or flat in a duplex	1,555	4.8%	176,080	3.4%
Apartment in a building that has fewer than five storeys	4,875	14.9%	522,810	10.1%
Other single-attached house	110	0.3%	10,910	0.2%
Total	**32,640**	**100.0%**	**5,169,175**	**100.0%**

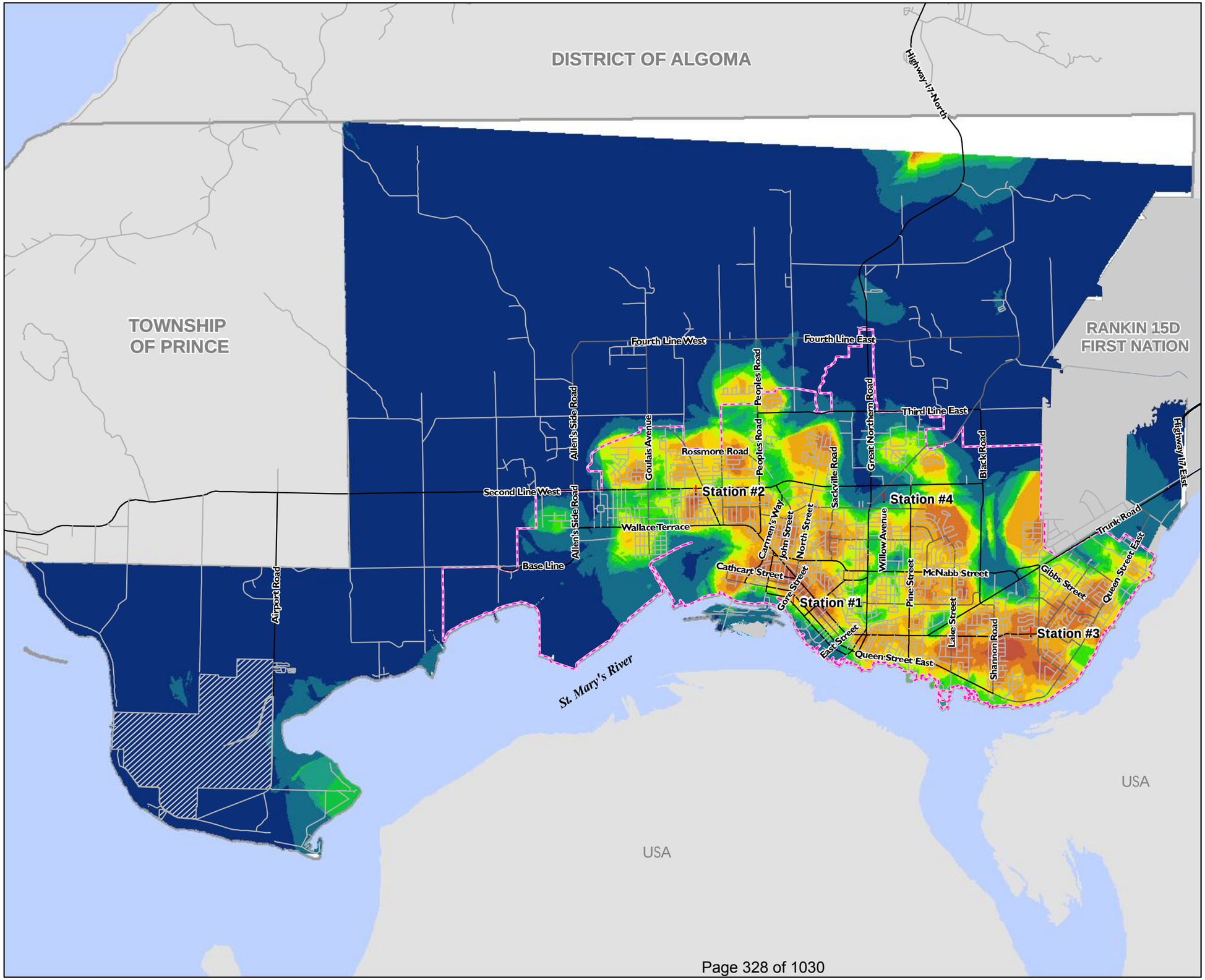
Source: Statistics Canada, 2016 Census

3.4.2 Mapping Analysis: Potential Building Exposures

While the majority of the residential dwellings may be comprised of single-detached housing, exposure risk is also linked to the proximity of these types of buildings to one another. To spatially identify potential exposure risks, the City completed an analysis of the average distance between structures throughout the city. The mapping analysis was based on residential and commercial buildings only (excluding secondary structures). The results of the analysis are shown in **Figure 9** indicating those structures separated by less than 3 metres, and by approximately one metre increments up to 10 metres. The results of this analysis show that greater exposure risks is expected primarily within the Urban Settlement Area Boundary, with clusters of increased exposure within the Downtown an across residential neighbourhoods east of downtown and west of downtown.

Key Finding

Potential building exposures are largely linked to the built up areas primarily found Downtown and throughout residential areas within the Urban Settlement Area boundary.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

BUILDING DENSITY AND EXPOSURE

FIGURE 9

- ! Existing Fire Stations
- Airport
- Urban Settlement Area
- Municipal Boundary
- First Nation Reserve

Building Density and Exposure

- <3m
- 3m - 4m
- 4m - 5m
- 5m - 6m
- 6m - 7m
- 7m - 8m
- 8m - 9m
- 9m - 10m
- 10m - 15m
- >15m

Note:
To spatially identify potential exposure risks, the City completed an analysis of the average distance between structures throughout the city. This was based on residential and commercial buildings only (excluding secondary structures)

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SFG
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Building Stock Profile\Building Density and Exposure.mxd

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3.5 Building Height and Area

Buildings that are taller in height, or contain a large amount of square footage (footprint), can have a greater fire loss risk and life safety concern. One of the unique characteristics and risks of tall / multi-storey buildings is known as the "stack effect". This is characterized as vertical air movement occurring throughout the building caused by air flowing into and out of the building, typically through open doors and windows. The resulting buoyancy caused by the differences between the indoor/outdoor temperature and elevation differences causes smoke and heat to rise within the building. This can have a dramatic effect on smoke permeation throughout the common areas and individual units within the building. This can be directly related to the high percentage of deaths that occur in taller buildings (high-rise) as a result of smoke inhalation.

Industry best practices and standards have also identified that fires in high-rise buildings can place significantly higher demands on fire suppression activities resulting in greater firefighter depth of response deployments. This is commonly referred to as "vertical response" which can include the initial deployment of firefighters to establish water supplies to upper levels, maintain elevator controls, and manage ventilation systems, for example.

Building area can cause comparable challenges as those present in taller buildings. Horizontal travel distances rather than vertical can mean extended response times by firefighters attempting rescue or fire suppression activities. 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 the use of 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. Building height and area are analyzed in the sections that follow**.**

3.5.1 Building Height and Area Snapshot and Context

When it comes to defining "high-rise", different sources use different terms. Some key definitions of high-rise are summarized in **Table 12**. This includes the Ontario Building Code which has detailed considerations to define a high-rise building based on the occupancy classification, floor area, occupant load, and what exactly is being measured. Within all occupancy classifications, when a building is 18 metres in height, additional OBC requirements are in effect. The analysis within this CRA is based on different sources so different height references may be used.

Table 12: High-Rise Definitions

Source	Simplified Definition
Ontario Building Code	18 metres in height or over
Ontario Fire Code	Greater than 6 storeys
NFPA 1710 (2016 Edition)	23 metres in height or over
Statistics Canada*	5 storeys or above
***Note**: Statistic Canada's references to building height are not focused on a strict definition of building height consideration but to provide insight as to the overall built form of housing within a community.*	

As presented in **Section 3.4.1**, **Table 11** provides an overview of residential structure dwelling types according to Statistics Canada for the 2016 census. This includes identification of dwellings that are apartments with five or more storeys. At a high-level, this data suggests that Sault Ste. Marie has a residential dwelling stock that is lower in density including a lower proportion of apartments five storeys and over when compared to the Province (6.4% vs. 17.2%). This suggests that the City may have buildings with lower heights and area as compared to the Province as a whole. The section that follows provides an overview of the building height information provided by the City as well as an analysis of the building area by building footprint.

3.5.2 Mapping Analysis: Sault Ste. Marie Building Height

As part of the data provided for this CRA, the City's Building Division identified all buildings within the City that are greater than 18 metres in height, reflecting a high-rise occupancy per Section 3.2.6 of the OBC. For the purposes of this analysis, it has been assumed that building 18 metres or less (roughly 5 storeys or less) are not considered high-rise. As part of this exercise, 24 buildings were identified whereby all but two were Group C – Residential occupancies (the other two types were Group D - Business and Personal Services being the Civic Centre and Roberta Bondar Place. The identified high-rise occupancies can be found in **Figure 10**. Most of these buildings are found within the Downtown and all are contained within the Urban Settlement Area Boundary.

Key Risk

The City identified 24 occupancies with a height in excess of 18 metres, which are defined as high-rise buildings.

Key Finding

Most of the identified high rise occupancies are found in the Downtown area.

3.5.3 Mapping Analysis: Sault Ste. Marie Building Area

As part of the data provided for this CRA, the City provided building footprints. **Table 13** provides a breakdown of the number of buildings based on building footprint area based on data provided by the City. Based on this analysis, the vast majority of building footprints (94.9%) are 2,500 square feet or less.

This category (0 to 2,500 square feet in building footprint size) would reflect most single-detached dwellings or small properties and is aligned with the overall property stock of 95.4% being Group C – Residential. Generally speaking, the larger building footprints reflect non-residential uses such as industrial or commercial/retail uses.

Figure 11 supports this observation by illustrating the location of those buildings with a larger footprint are consistent with lands designated for Industrial and Commercial uses in Schedule C of the Official Plan. This includes those lands Downtown, south of Wallace Terrace on the waterfront, along Great Northern Road, and along Trunk Road.

Table 13: Building Area - City of Sault Ste. Marie (City Building Footprint Data)

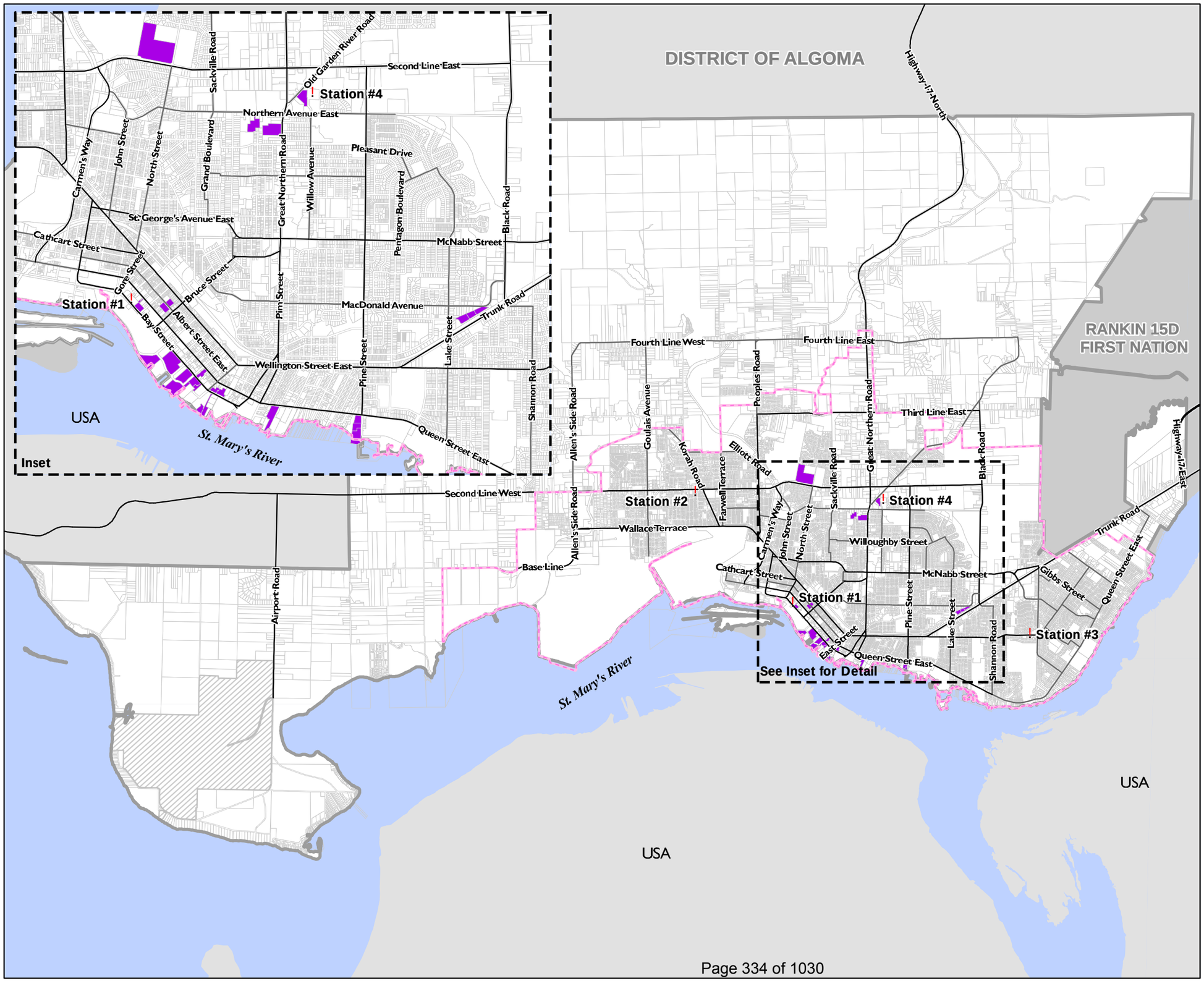
Building Size (Square Feet)	# of Buildings	% of All Buildings
0 to 2,500	47,295	94.9%
2,501 to 5,000	1,682	3.4%
5,001 to 10,000	454	0.9%
10,001 to 20,000	206	0.4%
20,001 to 50,000	151	0.3%
>50,000	61	0.1%
Total	**49,849**	**100%**

Key Finding

94.9% of the buildings have a footprint of 2,500 sq. ft. or less which is consistent with the proportion of the property stock that is Group C – Residential occupancies.

Key Finding

Buildings with a larger area are consistent with Industrial and Commercial uses such as those lands found Downtown south of Wallace Terrace on the waterfront, along Great Northern Road, and along Trunk Road.



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CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

BUILDING HEIGHT
FIGURE 1 0

- ! Existing Fire Station
- Airport
- Municipal Boundary
- Urban Settlement Area
- First Nation Reserve
- Identified High-Rise Occupancies
- Parcels

As part of the data provided for this CRA, the City's Building Division identified all buildings within the City that are greater than 18 metres in height, reflecting a high-rise occupancy per Section 3.2.6 of the OBC.

0 0.5 1 2 km

1:80,000

N W E S

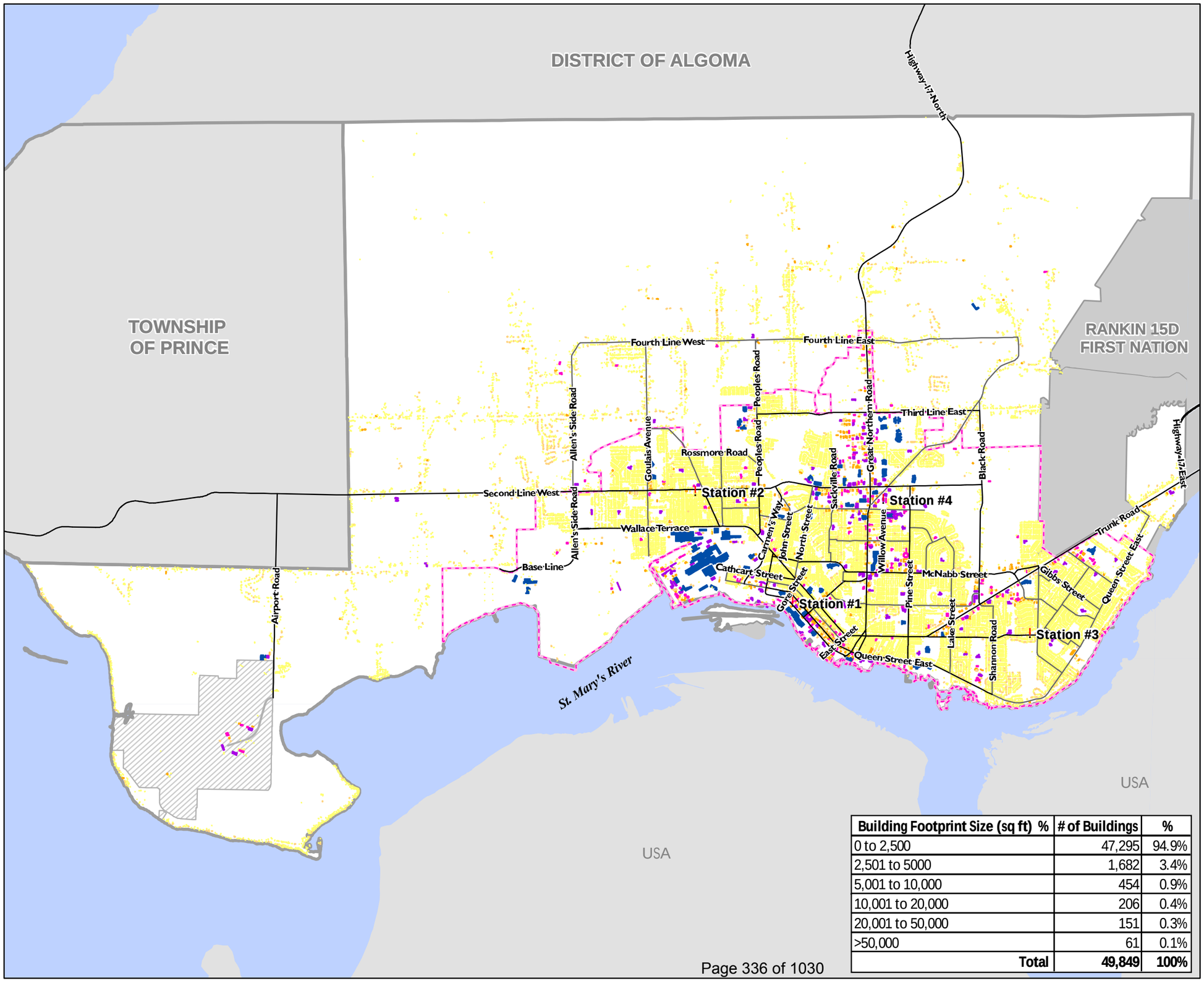
MAP DRAWING INFORMATION:
DATA PROVIDED BY THE CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SFG
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Building Stock Profile\Building Height.mxd

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Building Footprint Size (sq ft)	%	# of Buildings	%
0 to 2,500		47,295	94.9%
2,501 to 5000		1,682	3.4%
5,001 to 10,000		454	0.9%
10,001 to 20,000		206	0.4%
20,001 to 50,000		151	0.3%
>50,000		61	0.1%
Total		**49,849**	**100%**

CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

BUILDING AREA
FIGURE 11

- ! Existing Fire Station
- Airport
- Urban Settlement Area
- Municipal Boundary
- First Nation Reserve

Building Footprint Area (sqft)

- 0 - 2,500
- 2,501 - 5,000
- 5,001 - 10,000
- 10,001 - 20,000
- 20,001 - 50,000
- > 50,000

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SFG
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Building Stock Profile\Building Area.mxd

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PROJECT: 175984
STATUS: DRAFT
DATE: 11/13/2017

3.6 Potential High Fire Risk Occupancies (Fuel Load)

Potential high-fire risk occupancy consideration is another factor within building stock profile identified in NFPA 1730. High-fire risk can be linked to a combination of factors such as building density (exposures), fuel load, building age, and geography. This section of the comprehensive risk assessment buildings profile will focus primarily on fuel load for industrial occupancies. Fuel load typically 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. Combustible content tends to create the greatest potential fire loss risk. This can include industrial materials, commercial materials or typical office furnishings. Higher fuel loads results in increased fire loss risk due to increased opportunity for ignition and increased fire severity.

In many communities, large amounts of fuel load can be contained within a single occupancy such as a building supply business, within a large multi-unit residential building, or within a historic downtown core. As presented previously within this report, age and construction of a building can also have an impact on fuel load given that older buildings likely have a larger volume of combustible construction such as wood framing rather than newer construction utilizing concrete and steel products.

Recognizing that SSMFS did not have an identified list of fuel load concerns available, for the purposes of this CRA, high-level consideration was given to select occupancies based on MPAC codes and the identified property description.[8] This information is presented in **Table 14**. The majority of the occupancies are identified are based on a warehousing related use.

Table 14: Select Industrial Occupancies with Potential Fuel Load Concerns (SSM Mapped Property Stock)

Property Description	Parcel Count
Warehousing	48
Water treatment/filtration/water towers/pumping station	11
Marina - located on waterfront - defined as a commercial facility for the maintenance, storage, service and/or sale of watercraft	3
Heavy manufacturing (non-automotive)	3
Cement/asphalt manufacturing plant	3
Compressor station - structures and turbines used in connection with transportation and distribution of gas	3
Steel mill	2
Sewage treatment/waste pumping/waste disposal	2

[8] While this analysis is focused on fuel load informed by the description of the use of an industrial occupancy, it is recognized that other factors can ultimately impact risk within an individual building such as improper use of equipment, poor maintenance, hazardous processes, etc..

Property Description	Parcel Count
Intensive farm operation - without residence	1
Intensive farm operation - with residence	1
Sawmill/lumber mill	1
Dump/transfer station/incineration plant/landfill	1
Recycling facility	1
Scientific, pharmaceutical, medical research facility (structures predominantly other than office)	1
Armoury	1
Total:	82
(Source: Analysis of SSM Mapped Property Stock MPAC Property Codes)	

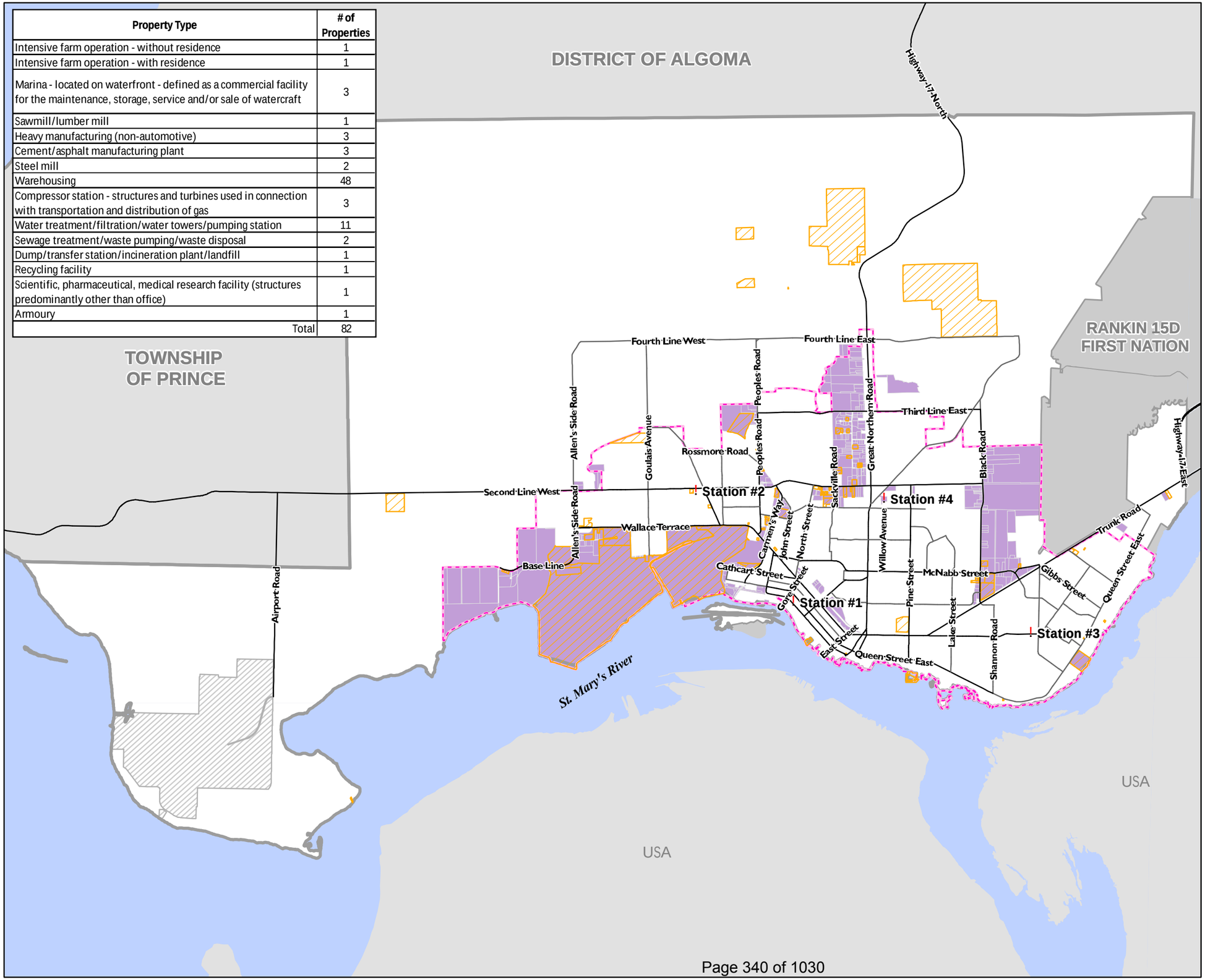
3.6.1 Mapping Analysis: Potential High Fire Risk Occupancies (Fuel Load)

Based on the classification of MPAC data described above and the property stock data provided by the City, this section explores the distribution of potential high fire risk occupancies (fuel load) within the City. The information presented within **Figure 12** identifies parcels with fuel load concerns. The locations of some of these properties are directly linked to the designated land use of Industrial, which is overlaid on the figure. These areas include Essar Steel on the waterfront and the industrial area east of Sackville Road and north of Northern Avenue East. As part of the risk assessment, these potential fuel load concerns are classified through consideration to Major Occupancy Classification through the OBC (**Section 10**).

Key Finding

There are properties within the City that have fuel load related concerns, primarily linked to the identified Industrial land use.

Property Type	# of Properties
Intensive farm operation - without residence	1
Intensive farm operation - with residence	1
Marina - located on waterfront - defined as a commercial facility for the maintenance, storage, service and/or sale of watercraft	3
Sawmill/lumber mill	1
Heavy manufacturing (non-automotive)	3
Cement/asphalt manufacturing plant	3
Steel mill	2
Warehousing	48
Compressor station - structures and turbines used in connection with transportation and distribution of gas	3
Water treatment/filtration/water towers/pumping station	11
Sewage treatment/waste pumping/waste disposal	2
Dump/transfer station/incineration plant/landfill	1
Recycling facility	1
Scientific, pharmaceutical, medical research facility (structures predominantly other than office)	1
Armoury	1
Total	82



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

POTENTIAL HIGH FIRE RISK OCCUPANCIES (FUEL LOAD)
FIGURE 12

- ! Existing Fire Station
- Potential Fuel Load Concern
- Industrial Land Use
- Airport
- Urban Settlement Area
- Municipal Boundary
- First Nation Reserve

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SFG
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Building Stock Profile\Fuel Load Concern.mxd

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PROJECT: 175984
STATUS: DRAFT
DATE: 11/20/2017

3.7 Occupancies with Potential High Life-Safety Risk

This section of the building stock profiles explores occupancies with potential high life-safety risk. Within the Province of Ontario, this includes Vulnerable Occupancies and, additional considerations such as elementary schools.

3.7.1 Vulnerable Occupancies in Ontario

As part of its registry of vulnerable occupancies, the OFMEM defines vulnerable occupancy as any care occupancy, care and treatment occupancy, or retirement home regulated under the *Retirement Homes Act.* These buildings are classified under either Group B or Group C occupancies within the Ontario Building Code. These occupancies contain vulnerable individuals who may require assistance to evacuate in the event of an emergency due to cognitive or physical limitations, representing a potential high-life safety risk.

Once a building has been determined to be a Vulnerable Occupancy by the Chief Fire Official, the fire department is responsible for ensuring an annual fire safety inspection (using the checklist which forms part of Fire Marshal's Directive 2014-001 as a minimum level of inspection) is performed, an approved fire drill scenario using the lowest staffing complement is witnessed, and certain information is filed with the Office of the Fire Marshal and Emergency Management, through its Vulnerable Occupancy Registry.

Although fire departments traditionally provide fire and rescue services in emergency situations, individuals should be reminded of the need to take responsibility for their own safety. That being said, in rental units and vulnerable occupancies, building owners have a duty of care to residents. It is important to note that unless otherwise specified, it is the owner's responsibility to comply with the provisions of the Ontario Fire Code (Div A 1.2.1.1.). This includes providing fire safety measures for people and property, maintaining life safety systems, implementing a fire safety plan when applicable and the installing and maintaining smoke and carbon monoxide detection devices.

3.7.2 Registered Vulnerable Occupancies in Sault Ste. Marie

As part of the provincial legislation, SSMFS has registered 25 Vulnerable Occupancies (**Table 15)** which includes seven 'care and treatment', three 'retirement homes', and 15 ' care occupancies' which are Community Living Algoma homes. Community Living Algoma provides services and support to people with intellectual disabilities, including services for children, adults, and families.[9]

[9] Community Living Algoma. (2017). Retrieved September 20, 2017, from Community Living Algoma : http://communitylivingalgoma.org/en/home/

Table 15: Registered Vulnerable Occupancies - Sault Ste. Marie

Occupancy	Address
Algoma Regional Community Hospice	229 Fourth Line West
Cedarwood Lodge	860 Great Northern Road
Collegiate Heights Retirement Home	95 Fauquier Avenue
Extendicare Mapleview Nursing Home	650 Northern Avenue East
Extendicare Van Daele Nursing Home	39 Van Daele Street
F.J. Davey Nursing Home	733 Third Line East
Great Northern Retirement Home	760 Great Northern Road
Kotitalo Assisted Living Retirement Home	725 North Street
Ontario Finish Rest Home	723 North Street
Pathways Retirement Home	375 Trunk Road
Sault Area Hospital	750 Great Northern Road
Community Living Algoma Care Homes	*Various Locations (14)*
(Source: City of Sault Ste. Marie Fire Services)	

Key Risk

There are 25 registered Vulnerable Occupancies in the City.

3.7.3 High Life-Safety Risk Occupancies

From the perspective of risk and for the purposes of the services provided by a fire service, including enhanced and targeted fire inspections and public education programming, it can be valuable for a department to identify additional potential high life-safety risk considerations. For example, this may include daycares or schools (where due to their age children would have a cognitive limitation to assisting themselves in the case of a fire) or regular apartment buildings known to house a large number of seniors but not officially qualify as a vulnerable occupancy.

For the purposes of this risk assessment, potential high life-safety risk occupancy considerations include elementary schools, and detention centres. SSMFS identified 33 schools and three detention centres as listed in **Table 16**.

Table 16: Detention Centres - Sault Ste. Marie

Detention Centres	Address
Algoma Treatment and Remand Center	800 Great Northern Road
Don Doucette Center	521 Second Line East
Northern Youth Center Justice Derek Holder House	631 Second Line West

(Source: City of Sault Ste. Marie Fire Services)

Key Risk

Additional potential high life-safety risk considerations in the City include 33 schools and 3 detention centres.

3.7.4 Mapping Analysis: High Life-Safety Risk Occupancies

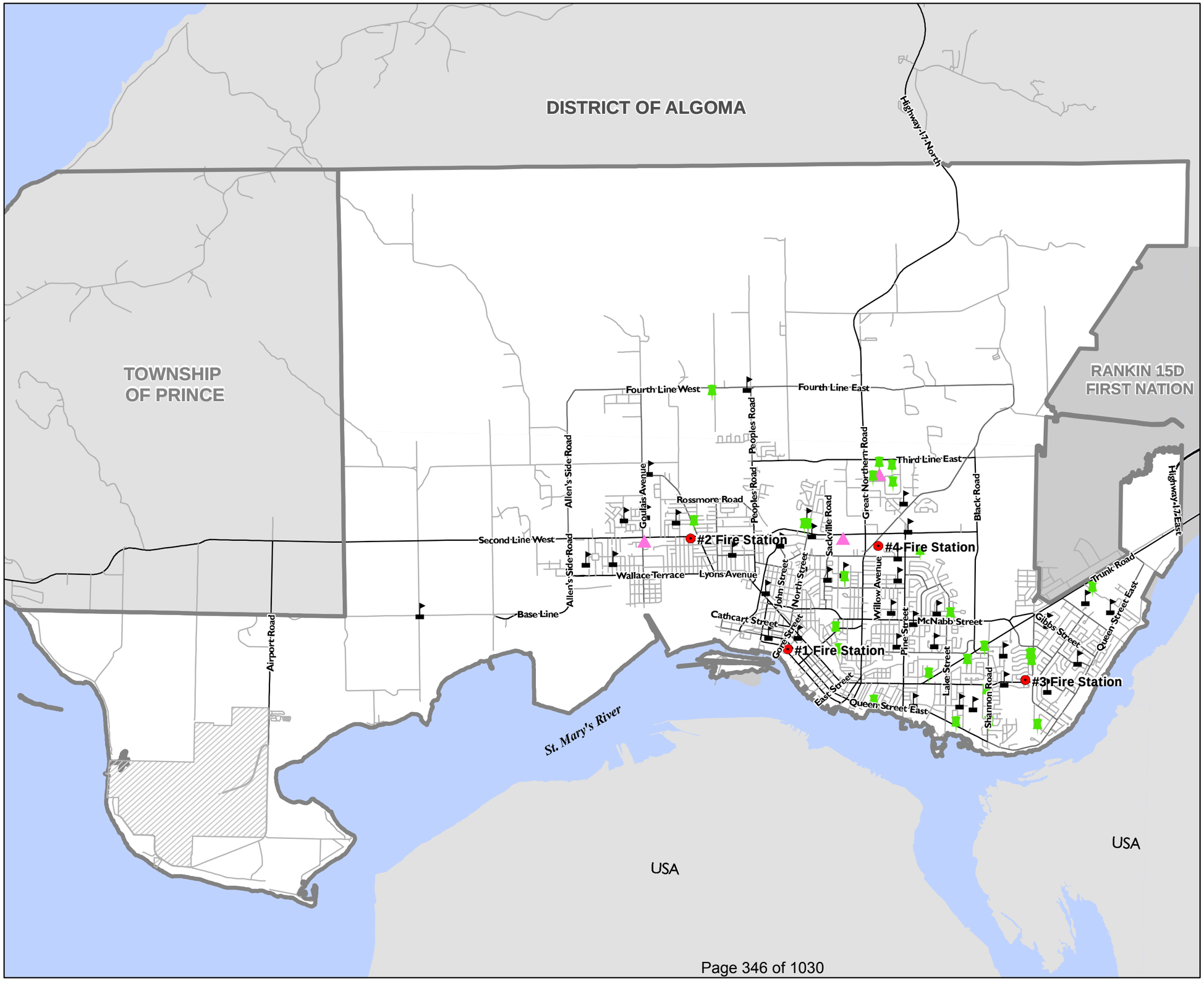
Summarized in **Table 17, s**patial information was provided by the City showing the location of the potential high life-safety risk occupancies described above including Vulnerable Occupancies. These occupancies are shown in **Figure 13.** (More information about the demographic profile and senior populations can be found in the **Demographic Profile**)**.** What this mapping analysis illustrates is the location of high life-safety risk occupancies including registered vulnerable occupancies.

Table 17: Potential High Life-Safety Risk - City of Sault Ste. Marie

Occupancy	# of Buildings	Type
Care and Treatment, Retirement Home, Care Occupancies	25	Vulnerable Occupancies
Schools	33	High Life-Safety Risk
Detention Centres	3	High Life-Safety Risk
Total	**63**	**-**
(Source: City of Sault Ste. Marie Fire Services)		

Key Finding

The identified Potential High Life-Safety Risk occupancies are primarily located within the Urban Settlement Area.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

POTENTIAL HIGH LIFE-SAFETY RISK
FIGURE 13

Vulnerable Occupancy

- Vulnerable Occupancy

Additional Potential High-Life Safety Risk Considerations

- Detention Center
- School
- Local Road
- Collector Road
- Arterial Road
- Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY
STATISTICS CANADA

MAP CREATED BY: SMW
MAP CHECKED BY: SLC
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\PDF\Building Stock\VulnerableOccupancy.mxd

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DATE: 2/23/2018

3.8 Historic or Culturally Important Buildings and Facilities

In addition to the consideration of building age and construction, understanding the location of historic or culturally important buildings or facilities is important since such sites / buildings / landscapes can be keystone features to a community. They provide a sense of heritage, place, and pride and may act as tourism destinations which could result in an economic impact in the case of their loss.

Historic areas can also present a high fire risk due to their age, the materials used to construct the buildings, the exposure to other buildings, and their importance to the community. Regular fire prevention inspection cycles and strategies to enforce continued compliance with the OFC are considered as best practices to achieving the legislative responsibilities of the municipality and providing an effective fire protection program to address fuel load risks.

Municipalities commonly have a registered heritage sites / buildings and/or designated heritage conservation districts. According to data provided by the City, there are 36 designated buildings or structures pursuant to the *Ontario Heritage Act* in Sault Ste. Marie. The locations of these properties are discussed in **Section 3.8.1**. Some municipalities have designated heritage conservation districts to further identified broader neighbourhoods or downtowns that have distinct heritage value. While the City has established registered heritage sites and buildings, there are no formal heritage conservation districts currently identified. According to a review of Municipal Heritage Committee meeting agendas/minutes, the City is still in the process of exploring different policy tools to identify and/or designate heritage areas (e.g., Heritage Conservation Districts under the *Ontario Heritage Act* or enable the identified of Locally Significant Districts through the Official Plan).[10]

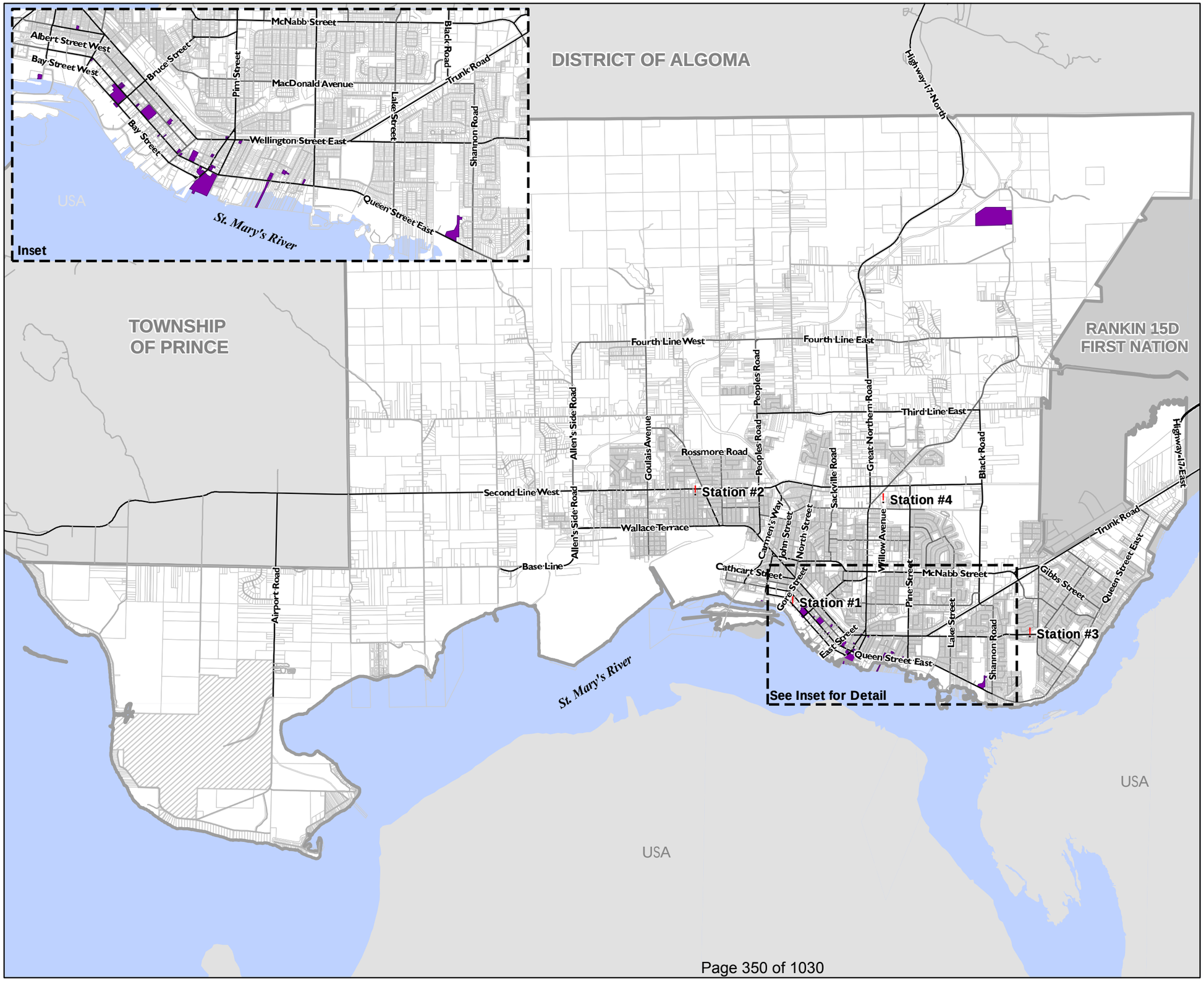
3.8.1 Mapping Analysis: Heritage Buildings

Figure 14 shows the location of the 36 historic or culturally important buildings or facilities identified and located in the City. The figure shows that there is a cluster of such facilities in the downtown core.

Key Finding

There are a number of identified heritage buildings with a number of such facilities in the Downtown.

[10] Municipal Heritage Committee. (2017, June 7). *Agendas and Minutes.* Retrieved November 4, 2017, from City of Sault Ste. Marie: http://saultstemarie.ca/City-Hall/City-Departments/Community-Development-Enterprise-Services/Community-Services/Recreation-and-Culture/Historic-Sites-and-Heritage/Municipal-Heritage-Committee/SSMMHC-Minutes.aspx



CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

HISTORIC OR CULTURALLY IMPORTANT BUILDINGS OR FACILITIES

FIGURE 14

- ! Existing Fire Station
- Airport
- Municipal Boundary
- First Nation Reserve
- Properties with Historic or Culturally Important Buildings or Facilities
- Parcels

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SFG
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Building Stock Profile\Historic or Culturally Important Buildings or Facilities.mxd

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DATE: 9/8/2017

3.9 Building Stock Profile Outcomes

The building stock profile considers fire-related risks arising from several characteristics, including composition of building stock by occupancy type, building density, building age and construction, building height and area, potential high-fire risk occupancies, vulnerable occupancies, and historic or culturally significant buildings. The outcomes of this analysis are summarized in **Table 18.** These outcomes are revisited in **Section 10.0** where further analysis and discussion linking risk and fire service levels is presented.

Table 18: Building Stock Profile - Summary of Outcomes

Building Stock Outcome	Type
When open space lands are removed from the analysis, Group C – Residential occupancies comprise 95.4% of the occupied property stock.	Key Risk
Group F – Industrial occupancies represent 1.2% of the City's total property stock including open space.	Key Finding
The majority of industrial uses are identified within the Group F, Division 2 – Medium-Hazard Industrial occupancies at 1.18% of the total property stock including open space.	Key Finding
Group F – Industrial Occupancies are typically located west of Great Northern Road north of Second Line West, and along the waterfront west of Downtown.	Key Finding
Group C – Residential uses are distributed across the City including outside of the Urban Settlement Area.	Key Finding
Approximately 57% of Group C - Residential occupancies in the City were constructed prior to the adoption of current building and fire codes (1975).	Key Risk
Within the Urban Settlement Area Boundary, there is a high concentration of Group C – Residential occupancies built prior to any provincial codes being in effect.	Key Finding
Potential building exposures are largely linked to the built up areas primarily found Downtown and throughout residential areas within the Urban Settlement Area Boundary.	Key Finding
The City identified 24 occupancies with a height in excess of 18 metres, which are defined as high-rise buildings. Most of these occupancies are found in the Downtown area	Key Risk
Most of the identified high rise occupancies are found in the Downtown area.	Key Finding
94.9% of the buildings have a footprint of 2,500 sq. ft. or less which is consistent with the proportion of the property stock that is Group C – Residential occupancies.	Key Finding
Buildings with a larger area are consistent with Industrial and Commercial uses such as those lands found Downtown south of Wallace Terrace on the waterfront, along Great Northern Road, and along Trunk Road.	Key Finding
There are properties within the City that have fuel load related concerns, primarily linked to the identified Industrial land use.	Key Finding
There are 25 registered Vulnerable Occupancies in the City.	Key Risk
Additional potential high life-safety risk considerations in the City include 33 schools and 3 detention centres.	Key Risk

Building Stock Outcome	Type
The identified Potential High Life-Safety Risk occupancies are primarily located within the Urban Settlement Area.	Key Finding
There are a number of identified heritage buildings with a number of such facilities in the Downtown.	Key Finding

4.0 Demographic Profile

As referenced in NFPA 1730, the demographic profile assessment includes analysis of age, gender, educational attainment and socioeconomic make-up, vulnerable individuals/occupancies, ethnic and cultural considerations, and population shifts. The following sections consider these demographic characteristics within the City of Sault Ste. Marie.

4.1 Methodology

Each of the risk sub-topics within this profile contains a high-level overview of its importance, how it pertains to fire risk, and how it can inform core services provided by a fire department. This is followed by a snapshot of statistics in table format, comparing the City of Sault Ste. Marie statistics to the Province of Ontario. Differences and similarities are highlighted, and resulting impacts on risk are noted. To complete snapshot analysis, Statistics Canada 2016 Census (and where appropriate 2011 National Household Survey) data were analyzed. Other information was provided by Sault Ste. Marie Fire Service to show demographic information with regard to the City's fire loss data.

Where appropriate, mapping analysis is then presented to provide spatial context related to the respective sub-topic. To complete the mapping analysis, Statistics Canada spatial information, including Dissemination Areas, was provided by the City's Innovation Centre. The census data by Dissemination Area (DA) was provided to in a relational database or "alternative format (IVT document)" which is interpreted by a program called Beyond 20/20. This program enables the ability to narrow the dataset down to specific locations and attributes. To use this data, relevant Dissemination Areas and attributes pertaining to population and age, socioeconomic circumstances and ethnic and cultural considerations were exported and joined to the DA shapefile using a unique identifier. Information was displayed and symbolized using ESRI ArcMap.

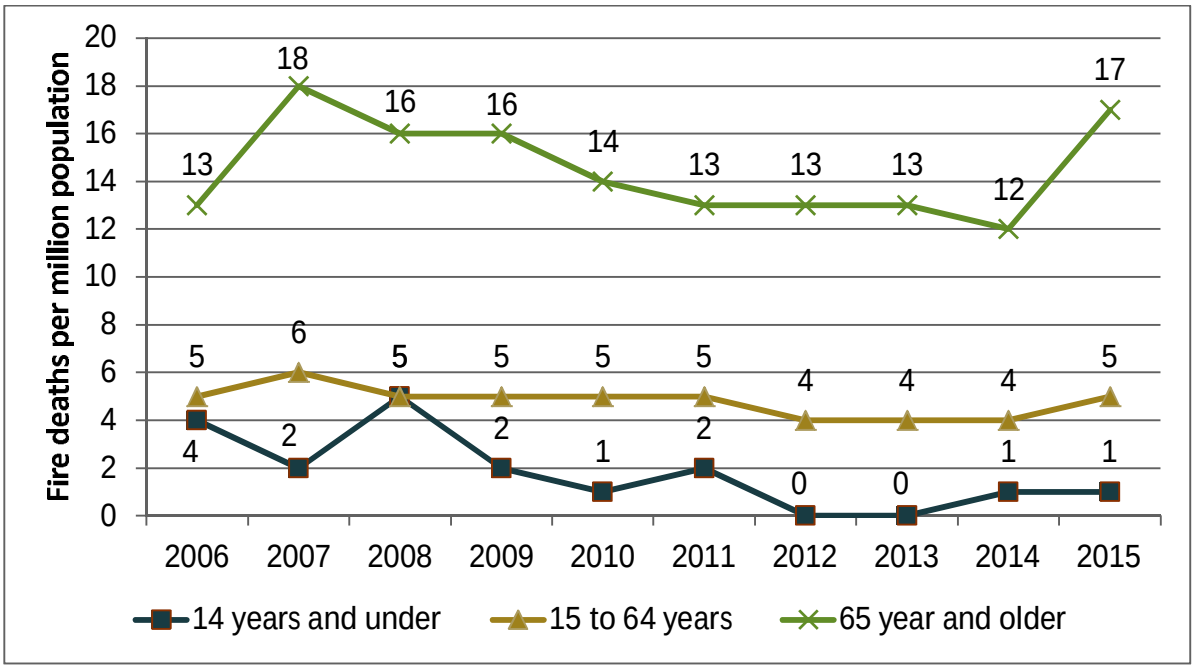
4.2 Population and Age

Population and age are important risk topics to understand because people are a primary source of emergency calls. In addition, certain age groups are more at risk as a result of fire and emergency incidents. Canada's aging population has been recognized as one of the most significant demographic trends in the nation. According to Statistics Canada, from 2011 to 2016 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 now more Canadians over the age of 65 (16.9% of the population) than there were children aged 14 years and younger (16.6%).[11]

Seniors (those 65 years and over) are considered to represent one of the highest fire risk groups across the province based on residential fire death rate (fire deaths per million of population). **Figure 15** illustrates the results of an analysis completed by the OFMEM's Fire Statistics in December 2016. The figure illustrates the fire death rate which is the number of fire fatalities per million of population. Through this analysis, it is identified that seniors at an increased risk of fatality in residential occupancies compared to other age groups. However, the fire death rate for seniors has been decreasing from 33 per million populations in 1997.[12]

Figure 15: Residential Fire Death Rate by Age of Victim in Ontario, 2006 to 2015



(Source: OFMEM)

While at a lower risk of fatality in residential occupancies overall when compared to seniors or adults, youth (aged 14 years and under) represent a vulnerable demographic due to their potential inability to respond effectively in an emergency situation. As a result, there should be public education and

[11] Source: Statistics Canada, The Daily: *Age and sex, and type of dwelling data: key results from the 2016 Census* http://www.statcan.gc.ca/daily-quotidien/170503/dq170503a-eng.htm?HPA=1, (date modified May 3, 2017; accessed May 23, 2017).

[12] Source: Ministry of Community Safety and Correctional Services. *Ontario Residential Fatal Fires.* 2016 December. https://www.mcscs.jus.gov.on.ca/english/FireMarshal/MediaRelationsandResources/FireStatistics/OntarioFatalities/HomeFireFatalitiesChildrenAdultsSeniors/stats_fatal_res.html (date modified February 22, 2017; accessed May 23, 2017).

prevention programs targeted to this demographic. Structured education programs consistently provided to children and youth can help to engrain fire and life safety awareness and knowledge into future generation. This may assist in altering human behaviour, potentially resulting in a future society that is more conscious of fire and life safety.

4.2.1 Snapshot and Context

Identifying a community's population by age is a core component of developing the Comprehensive Risk Assessment and identifying specific measures to mitigate risks associated with a specific age group, such as seniors. According to this 2016 Census, the City of Sault Ste. Marie experienced a decrease in population by -2.4% from 2011 and 2016 with a population change from 75,141 to 73,368 (see **Table** 19). Over the past 15 years, the City has experienced varying levels of population growth including periods of very modest growth resulting in an overall population change of -1.6% (2001 to 2016). Simultaneously, the number of total private dwellings has increased by 5% from 2001 to 2016. This decrease in population but increase in dwellings may be related to the impacts of the aging population and decreasing household size. In addition, a population decrease may signal some economic challenges for a municipality.

Table 19: Historic Growth in Population and Households

Year	Population	Change (%)	Total Private Dwellings*	Change (%)
2001	74,566	--	32,822	--
2006	74,948	0.51%	33,378	1.67%
2011	75,141	0.26%	33,901	1.54%
2016	73,368	-2.42%	34,485	1.69%

**Includes dwellings that may not have a permanently residing person or group of persons.*

(Source: Statistics Canada 2001, 2006, 2011, 2016 Census)

Table 20 provides a comparison of the City's population by age group based on the 2016 census completed by Statistics Canada to that of the Province.

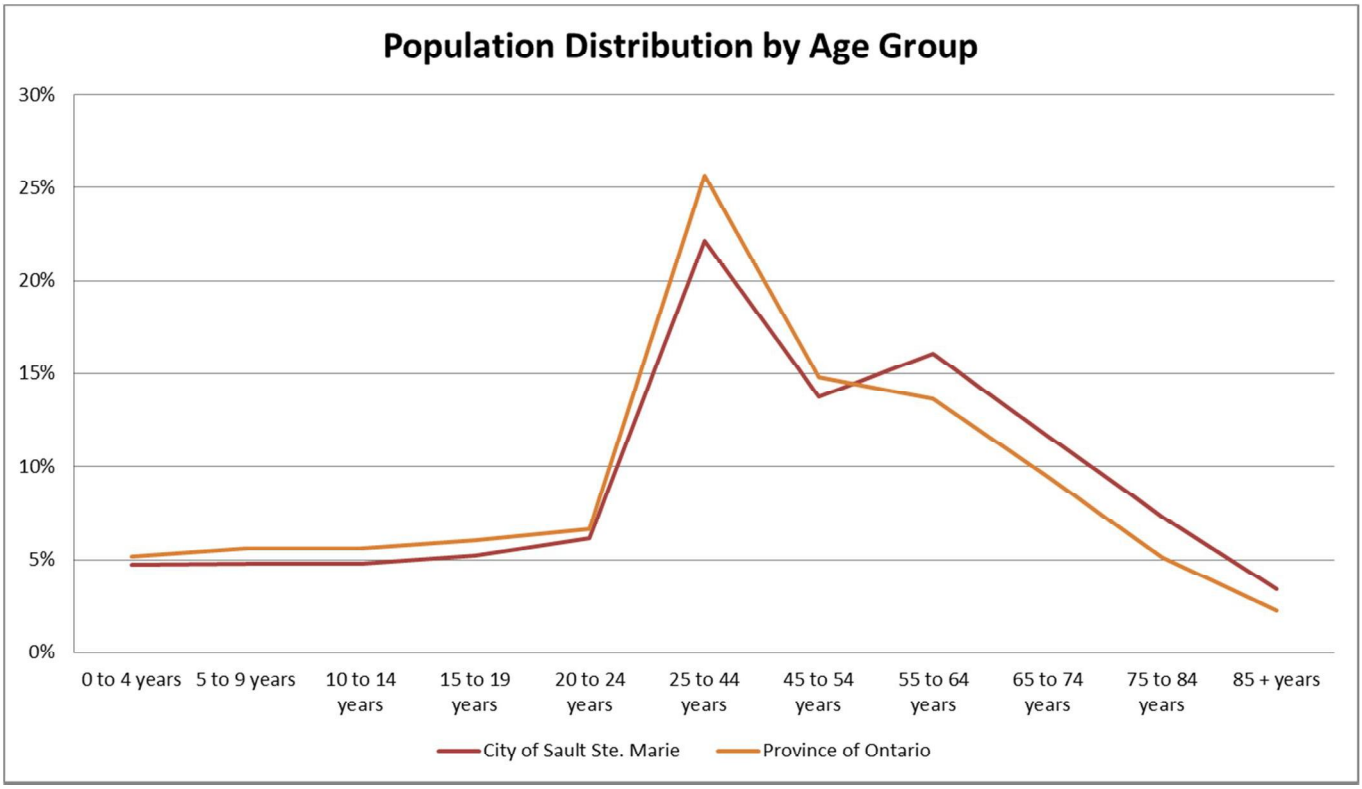
Table 20: Population by Age Group (2016 Census)

	City of Sault Ste. Marie		Province of Ontario	
Age Group	Population	% Total	Population	% Total
0 to 4 years	3,470	5%	697,360	5%
5 to 9 years	3,500	5%	756,085	6%
10 to 14 years	3,495	5%	754,530	6%
15 to 19 years	3,835	5%	811,670	6%

	City of Sault Ste. Marie		Province of Ontario	
20 to 24 years	4,535	6%	894,390	7%
25 to 44 years	16,265	22%	3,453,475	26%
45 to 54 years	10,085	14%	1,993,730	15%
55 to 64 years	11,800	16%	1,835,605	14%
65 to 74 years	8,550	12%	1,266,390	9%
75 to 84 years	5,355	7%	684,195	5%
85 + years	2,490	3%	301,075	2%
Total	**73,380**	**100%**	**13,448,495**	**100%**
Median Age of the Population	46.6	-	41.3	-
Population aged 14 and under	10,465	14%	2,207,975	16%
Population aged 65 and over	16,395	22%	2,251,660	17%
(Source: 2016 Census, Statistics Canada)				

As shown in **Table 20**, the 2016 census identifies a total population of 73,380 for the City. The age distribution for the City of Sault Ste. Marie and the Province are further illustrated in **Figure 16.** The age distribution of this population should be considered when developing targeted public education programs and risk reduction strategies. The figure illustrates that the age distribution of the City and the province follow a similar overall spread. However, there are two notable differences. One key observation is that there is a higher proportion of seniors in the City than in the Province (22% vs. 17%). Historical data also illustrates that the median age has increased from 45.7 (2011 census) to 46.8 years, higher than the median age of 41.3 in Ontario in 2016. As a second key observation, there is a similar proportion of mature adults (aged 45 to 64 years of age) at 30% in the City vs. 29% in the province. In line with national trends, these numbers also show that the population is aging in Sault Ste. Marie reflecting a proportion of the population that will soon be seniors who will be at greater risk based on historic residential fire fatality data. The third key observation is that the proportion of youth and young adults aged 24 and under is lower within the City than in the Province (26% versus 30%). This is in line with a lower proportion of adults aged 25 to 44 years than in the Province (22% versus 26%), reflecting a demographic that would have families. As noted in the 2016 Simplified Risk Assessment, the declining youth demographic may present a challenge in a key, effective education strategy: educating youth.

Figure 16: Population Distribution – Sault Ste. Marie and the Province of Ontario



(Source: 2016 Census, Statistics Canada)

As part of the reporting to OFMEM, SSMFS is required to track the persons associated with fire ignition by age. **Table 21** presents the results of an analysis of the SSM fire loss data from 2012 to 2016 of applicable and determined instances. The highest proportion of persons associated with ignition fell under the aged 40 to 64 subset. Young adults from age 20 to 39 were the second highest proportion, accountable for 11% of ignitions. Only 5% of seniors (people over the age of 65) were the persons associated with the ignition. It should be noted that the SSM data, as reported, includes roughly 129 instances where this item was identified as "not applicable" and 159 instances where it was reported as "unknown". While the instances of "not applicable" may be accurate, SSMFS should give consideration to reducing the proportion of calls where "unknown".

Table 21: Person Associated with Ignition by Age (SSM Fire Loss Data - 2012 to 2016)

Age (years)	2012	2013	2014	2015	2016	Total	%
0-9	0	0	0	0	1	*1*	*0%*
10-19	3	2	3	3	2	*13*	*3%*
20-39	10	5	14	11	9	*49*	*11%*
40-64	14	15	9	13	9	*60*	*14%*
65-79	3	7	5	3	3	*21*	*5%*
80+	0	0	0	0	0	*0*	*0%*
Not Applicable	28	17	25	30	29	*129*	*30%*
Unknown	34	22	23	37	43	*159*	*37%*
					Grand Total	***432***	***100%***

(Source: Analysis of SSM Fire Loss Data reported as determined and applicable.)

Key Risk:
Seniors (those 65 years and over) are considered to represent one of the highest fire risk groups across the province based on residential fire death rate (fire deaths per million of population). In Sault Ste. Marie there is currently a higher proportion of seniors in the City than in the Province (22% vs. 17%).

Key Risk:
The current total population of Sault Ste. Marie includes a component of 30% of people between the ages of 45 and 64 who are aging towards the seniors demographic of 65 or over.

Key Finding:
People aged 40 to 64 were the highest proportion of individuals reported as persons associated with ignition, in accordance with the SSM Fire Loss Data from 2012 to 2016.

4.2.2 Mapping Analysis

The following section includes two maps which relate to the population and age in Sault Ste. Marie. To understand the spatial distribution of populate and age, the 2016 Census was mapped by dissemination area using ArcGIS.

4.2.2.1 Population Count and Population Density by Dissemination Area

To understand the population distribution across the City, the count of each person by dissemination area is shown in **Figure 17**, and the population density in people per square kilometre was mapped in **Figure** 18**.** Areas with larger numbers of people or population density could be strategically targeted for public education or fire prevention programming to achieve more exposure with less coverage. The identified areas with high proportions of population are shown in **Table 22**. Note that the dissemination areas vary greatly in size and large extents of these areas encompass open space and rural areas.

DISTRICT OF ALGOMA

TOWNSHIP OF PRINCE

RANKIN 15D FIRST NATION

USA

USA

St. Mary's River

Highway 17 North

Highway 17 East

Fourth Line West

Fourth Line East

Third Line East

Second Line West

Base Line

Allen's Side Road

Goulais Avenue

Peoples Road

Rossmore Road

Sackville Road

Great Northern Road

Black Road

Airport Road

Wallace Terrace

Lyons Avenue

John Street

North Street

Willow Avenue

Cathcart Street

McNabb Street

Pine Street

Gore Street

Lake Street

East Street

Queen Street East

Shannon Road

Gibbs Street

Trunk Road

Queen Street East

#1 Fire Station

#2 Fire Station

#3 Fire Station

#4 Fire Station

CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

NUMBER OF RESIDENTS BY DISSEMINATION AREA

FIGURE 17

Population (Number of People)

- 115 - 280
- 281 - 435
- 436 - 570
- 571 - 835
- 836 -1,390
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- Urban Settlement Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY STATISTICS CANADA
CENSUS 2016/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

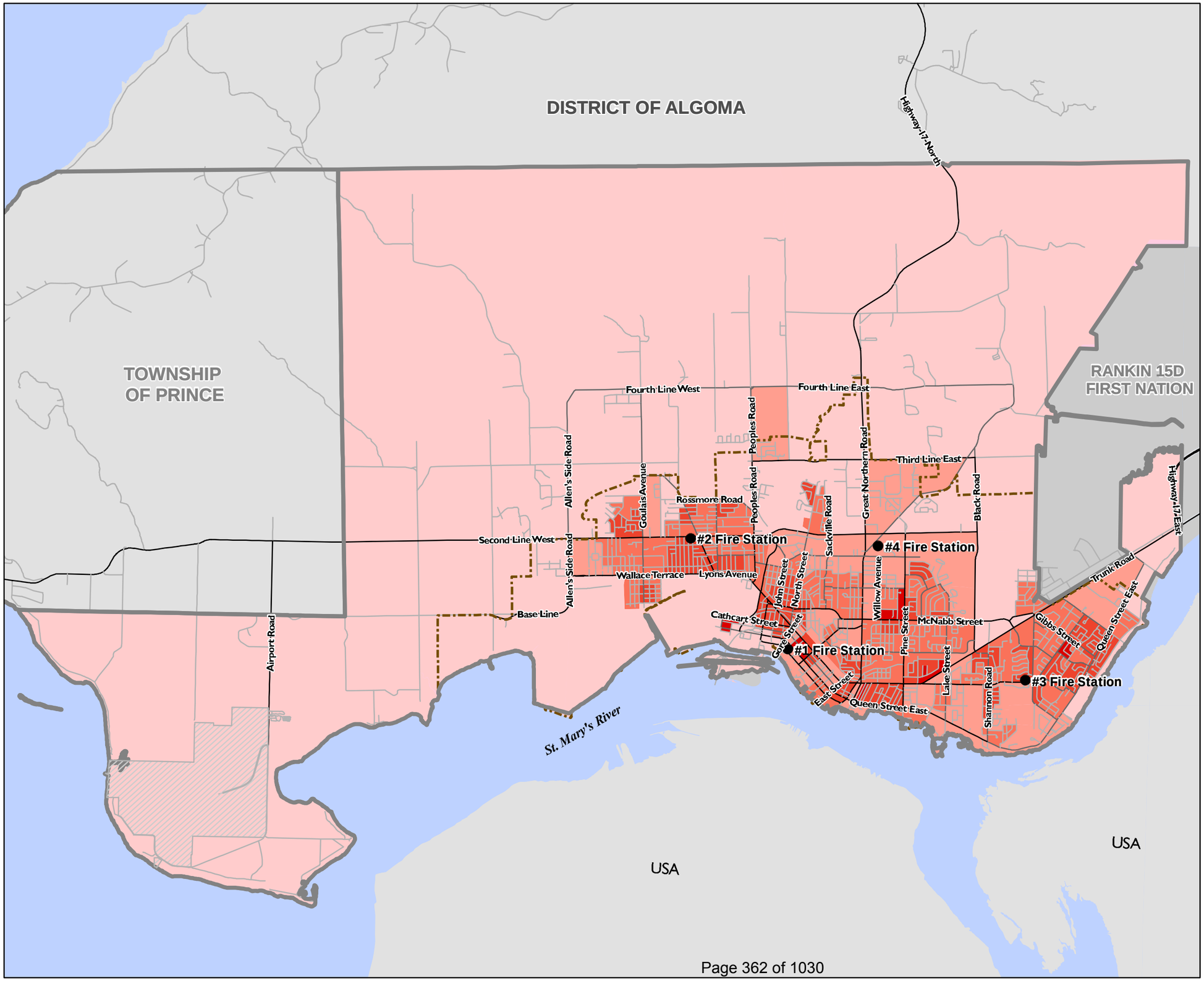
FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Demo_Population(count).mxd

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DATE: 2017-11-09



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

POPULATION DENSITY
PEOPLE PER SQUARE KILOMETRE

FIGURE 18

2016 Population Density (People Per Square Km)

- 15 - 407
- 408 - 1,416
- 1,417 - 2,368
- 2,369 - 3,705
- 3,706 - 6,324
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Urban Settlement Boundary
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION: DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF/STATISTICS CANADA

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Demo_PopulationDensity.mxd

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STATUS: DRAFT
DATE: 2017-11-09

Table 22: Population Density Observations (Census 2016)

Figure #	Map Observations
Figure 18	• Higher population densities in the Downtown core, along Cathcart Street, Queen Street and Wellington Street in particular. • Higher population density east of the Downtown core at Pine Street and McNabb Street, Trunk Road and Wellington Street.

4.2.2.2 Age Groups by Dissemination Areas

In order to take a closer look at the distribution of the population by age across the City, Figure **19** presents the distribution of the senior population (65 years and over) and **Figure 20** the distribution of youth population (0 to 14 years)**.** Both maps present the proportion of the population with each of the age categories. The identified areas observed and presented in **Table 23** could be targeted for relevant public education or fire prevention programming. It should be noted that, generally, no age category is discretely situation in one primary area but varying proportions are distributed across the City. **Figure 21** illustrates the senior population by DA as it pertains to occupancies with potential high life life-safety risk occupancies. In some cases, the high concentrations of seniors appear to be linked to the location of these types of occupancies.

Table 23: Youth and Senior Population Distribution Observations (Census 2016)

Figure #	Age Category	Map Observations
Figure 19	Seniors (65+)	• Higher proportion of seniors in the downtown with notable clusters at East Street at Bay Street and Queen Street East at Pine Street. • Higher proportion of seniors north of downtown with notable clusters at Third Line East at Old Garden River Road and Second Line West at North Street.
Figure 20	Youth (0 to 14 Years)	• Higher proportion of youth in: eastern portion of Downtown (east of Gore Street and South of Cathcart Street); in northern part of the City (north of Fourth Line East); and west of Downtown (east of of Goulais Avenue and north of Second Line West)

Key Finding

There is a higher proportion of seniors in the downtown with notable clusters at East Street at Bay Street and Queen Street East at Pine Street.

DISTRICT OF ALGOMA

TOWNSHIP OF PRINCE

RANKIN 15D FIRST NATION

USA

USA

St. Mary's River

Highway 17 North

Highway 17 East

Fourth Line West

Fourth Line East

Third Line East

Second Line West

Base Line

Rossmore Road

Wallace Terrace

Lyons Avenue

Cathcart Street

McNabb Street

Queen Street East

Trunk Road

Gibbs Street

Queen Street East

Peoples Road

Allen's Side Road

Goulais Avenue

Sackville Road

Great Northern Road

Black Road

John Street

North Street

Gore Street

Willow Avenue

Pine Street

Lake Street

East Street

Shannon Road

Airport Road

#1 Fire Station

#2 Fire Station

#3 Fire Station

#4 Fire Station

CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

PERCENTAGE OF SENIORS (65+ YEARS OLD) BY DISSEMINATION AREA

FIGURE 19

Percentage of Population 65 Years and Older (Seniors)

- 6.8% - 14.3%
- 14.31% - 20.6%
- 20.61% - 27.7%
- 27.71% - 37.1%
- 37.11% - 72.6%
- Industrial Lands (Official Plan)
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY STATISTICS CANADA CENSUS 2016/CITY OF SAULT STE. MARIE/ MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

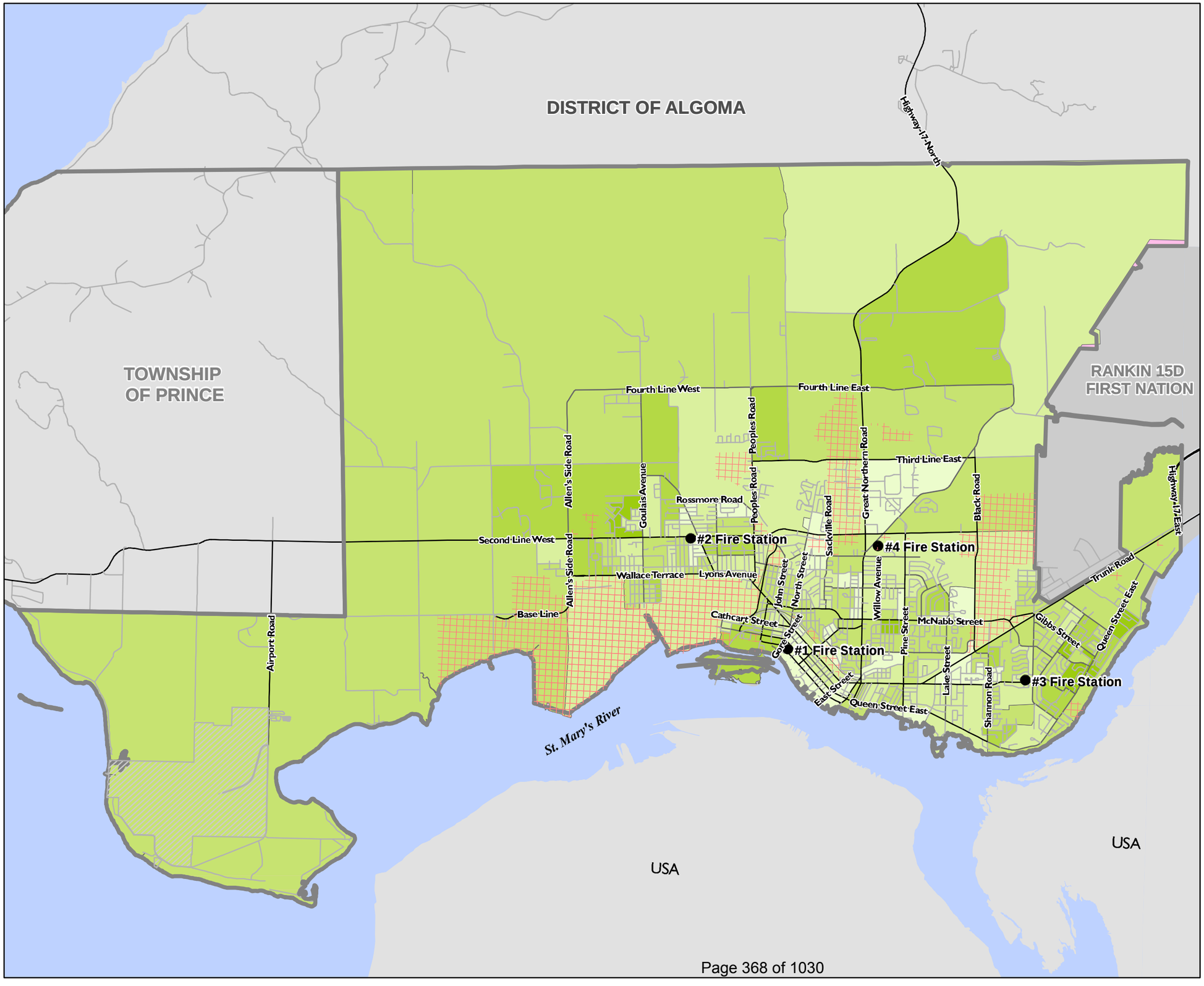
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PROJECT: 175984

STATUS: DRAFT

DATE: 2017-11-09



CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

PERCENTAGE OF POPULATION 0 OF 14 YEARS OLD (YOUTH) BY DISSEMINATION AREA

FIGURE 20

Percentage of Population 0 to 14 Years Old (Youth)

- 0% - 9.89%
- 9.9% - 13.64%
- 13.65% - 16.79%
- 16.8% - 21.13%
- 21.14% - 32.58%
- Industrial Lands (Official Plan)
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY STATISTICS CANADA CENSUS 2016//CITY OF SAULT STE. MARIE/ MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

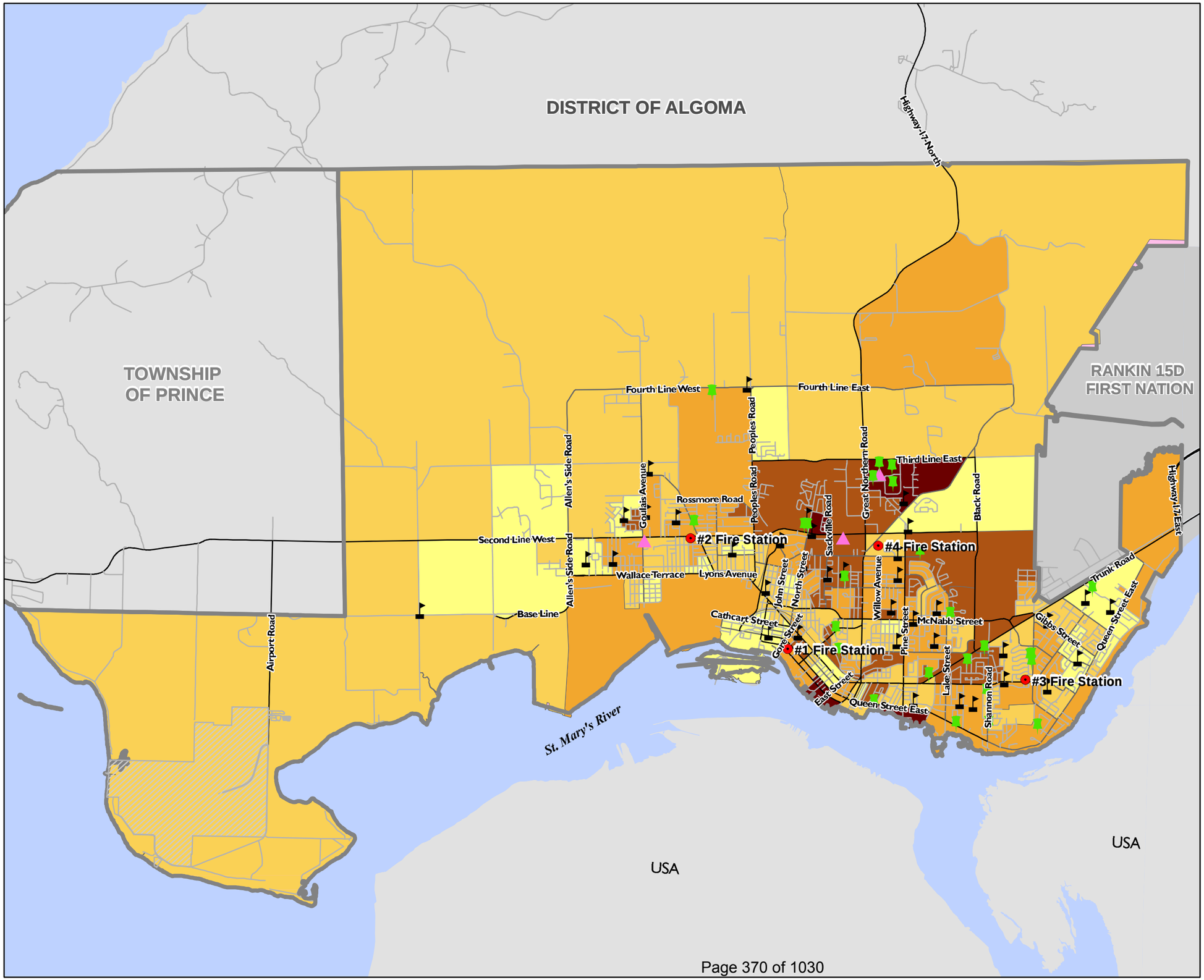
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DATE: 2017-11-09



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

POTENTIAL HIGH LIFE-SAFETY RISK SENIORS OVERLAY

FIGURE 21

Vulnerable Occupancy

- Vulnerable Occupancy

Additional Potential High-Life Safety Risk Considerations

- Detention Center
- School

Percentage of Population Greater than 65 Years Old (Seniors)

- 6.8% - 14.3%
- 14.31% - 20.6%
- 20.61% - 27.7%
- 27.71% - 37.1%
- 37.11% - 72.6%
- Local Road
- Collector Road
- Arterial Road
- Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY
STATISTICS CANADA

MAP CREATED BY: SMW
MAP CHECKED BY: SLC
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\PDF\Building Stock\VulnerableOccupancy_Overlay.mxd

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4.3 Gender

NFPA 1730 considers gender as part of Comprehensive Risk Assessments due to the findings that, based on historic data, males are more likely to be injured or lose their life in a fire.[13,14]

4.3.1 Snapshot and Context

Table 24 shows the gender distribution in the City across age groups. These results are based on the 2016 Statistics Canada census. When looking at the proportion of male versus female overall, they are fairly evenly split at 48% male and 52% female, as would be expected. When specific age groups are reviewed, there are greater variations. One of the greater differences is the proportion of males (35%) compared to females (65%) for the 85 years and over age group. Based on these statistics, it is not anticipated that public education programming would be refined based on gender. The impact of gender distribution on public education programming would be more notable in a community with unique demographics such as those that have transient populations due to employment.

As identified in the Simplified Risk Assessment completed by SSMFS in 2016, Sault Ste. Marie experienced 17 fatalities from 1998 to 2016 of which 11 men and 6 women. This suggests that in the City, males have experienced a higher proportion of fatalities than females at 68% of fatalities in the past 18 years.

Table 24: Gender Distribution by Age Group – Sault Ste. Marie (2016 Census)

Age Group	Total Population	Male	%	Female	%
0 to 4 years	3,470	1,785	*51%*	1,685	*49%*
5 to 9 years	3,500	1,830	*52%*	1,665	*48%*
10 to 14 years	3,495	1,770	*51%*	1,720	*49%*
15 to 19 years	3,835	2,005	*52%*	1,830	*48%*
20 to 24 years	4,535	2,340	*52%*	2,190	*48%*
25 to 44 years	16,265	7,925	*49%*	8,335	*51%*
45 to 54 years	10,085	4,820	*48%*	5,265	*52%*
55 to 64 years	11,800	5,650	*48%*	6,150	*52%*
65 to 74 years	8,550	4,070	*48%*	4,490	*53%*
75 to 84 years	5,355	2,365	*44%*	2,985	*56%*

[13] National Fire Protection Association. (2014, October). Characteristics of Home Fire Victims. Retrieved July 2016, from http://www.nfpa.org/~/media/Files/Research/NFPA%20reports/Victim%20Patterns/oshomevictims.pdf
[14] U.S. Department of Homeland Security. (2015, January). Fire Risk in 2011.. Retrieved July 2016, from U.S. Fire Administration: http://nfa.usfa.dhs.gov/downloads/pdf/statistics/v15i8.pdf

Age Group	Total Population	Male	%	Female	%
85 + years	2,490	865	*35%*	1,630	*65%*
Total	**73,380**	35,425	*48%*	37,945	*52%*
(Source: 2016 Census, Statistics Canada)					

As part of the reporting to OFMEM, SSMFS tracks the persons associated with fire ignition by gender in addition to age. **Table 25** presents the results of an analysis of the SSM fire loss data from 2012 to 2016 of applicable and determined instances. The person associated with the ignition was male in 29% of the instances compared to female in 15% of instances. However, it should be noted that in 245 instances (or 57% of total instances) the call was reported as unknown or not applicable. SSMFS should give consideration to reducing the proportion of calls where 'unknown' is reported.

Table 25: Person Associated with Ignition by Gender According to SSM Fire Loss Data

Gender	2012	2013	2014	2015	2016	Total	%
Male	27	29	26	21	21	*124*	*29%*
Female	14	8	10	14	17	*63*	*15%*
Not Applicable	26	17	25	33	27	*128*	*30%*
Unknown	25	14	18	29	31	*117*	*27%*
					Grand Totals	***432***	***100%***

Key Finding:
According to the 2016 Simplified Risk Assessment, the number of male fatalities recorded between 1998 and 2016 outnumbered female fatalities in the City. In addition, the highest proportion of people associated with ignition is men according to SSM fire loss data.

4.4 Socioeconomic Circumstances

Within the fire industry, it has been established through research that fire risk does not impact a community homogenously. Just as communities can be diverse, so too is the potential for fire risk. One of the factors that influences fire risk is the socioeconomic circumstances of a community. Socioeconomic circumstances can be indicated by several factors including educational attainment, income levels, and home ownership. These factors can be analyzed and considered on a number of levels such as neighbourhood, household, and individual as referred to in the report titled

"*Socioeconomic Factors and the Incidence of Fire*" completed by the Federal Emergency Management Agency (FEMA) United States Fire Administration (1997).[15]

Socioeconomic factors intersect in a number of ways and have a direct and indirect impact on fire risk. One such example is outlined in the Ontario's Office of the Fire Marshal and Emergency Management's Fire Risk Sub-Model. The Sub-Model makes reference to the relationship between income and fire risk. As one consideration, households with less disposable income may be less likely to purchase fire safety products (e.g., smoke alarms, fire extinguishers, etc.), which puts them at higher risk of experiencing consequences from a fire.[16] 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. While these complex relationships between socioeconomic circumstance and probability / consequence of a fire are not well understood, this Comprehensive Community Risk Assessment seeks to explore these factors.

4.4.1 Snapshot and Context

A number of socioeconomic indicators will be reviewed at a high-level for the City of Sault Ste. Marie in comparison to the Province of Ontario. Factors that are highlighted in this section include:

- Labour force status;
- Family structure;
- Educational attainment and income; and
- Household tenure, occupancy, suitability, and cost.

4.4.1.1 Labour Force Status

Labour force status is a possible indicator of income levels which directly influences on fire risk (e.g., lower income, increased fire risk). The participation rate (i.e. the proportion of residents in the labour force) can also be an indicator of income and can be considered alongside unemployment rates (e.g., lower participation rate and higher unemployment could mean lower income, higher fire risk).

When looking specifically at Census reporting, in terms of labour force status (), the City has a lower participation rate than the Province (59% versus 66%). This may be linked to having a higher proportion of senior citizens (a demographic more likely to be retired). The City of Sault Ste. Marie has an unemployment rate at 10% (based on 2011 National Household Survey) which is higher than the

[15] *Source: Federal Emergency Management Agency, United States Fire Administration. (1997, June). Socioeconomic Factors and the Incidence of Fires. Retrieved July 2016, from http://www.sustainable-design.ie/fire/socio.pdf*
[16] *Source*: Comprehensive Fire Safety Effectiveness Model: Fire Risk Sub-model. OFMEM. June 2009, accessed Sept 2015, <http://www.mcscs.jus.gov.on.ca/english/FireMarshal/FireServiceResources/ComprehensiveFireSafetyEffectivenessModel/FireRiskSub-Model/Fire_risk_submodel.html>.

Province at 8%, suggesting a higher amount of fire risk in comparison to the Province from the perspective of labour force status.

Table 26: Labour Force Status – Sault Ste. Marie and Ontario (NHS 2011)[17]

	Sault Ste. Marie	%	Ontario	%
In the labour force	37,415	*59%*	6,864,990	*66%*
Employed	33,500	*90%*	6,297,005	*92%*
Unemployed	3,915	*10%*	567,985	*8%*
Not in the labour force	25,625	*41%*	3,608,685	*34%*
Total	**63,040**	*100%*	**10,473,675**	*100%*

(Source: Statistics Canada, 2011 National Household Survey)

Based on 2016 Census data, the population with and without employment income is shown in **Table 27.** This data shows that the City has a slightly higher proportion of individuals without employment income in Sault Ste. Marie than Ontario (32% vs. 29%). Due to lower participation rate, higher unemployment rate, and the proportion of the population without employment income, Sault Ste. Marie may have a larger population base without significant disposable incomes to purchase fire safety products including smoke alarms and fire extinguishers.

Table 27: Employment Income Status in 2015 - Sault Ste. Marie and Ontario (Census 2016)

	Sault Ste. Marie		Ontario	
Without Employment Income (2015)	19,745	32%	3,247,760	29%
With Employment Income (2015)	41,705	68%	7,790,680	71%
Total	61,450	100%	11,038,440	100%

Source: Census 2016

In 2017, the Sault Ste. Marie Economic Development Corporation (SSMEDC) completed a labour force analysis informed by monthly labour force survey data compiled by Statistics Canada. This analysis further considers annual employment related indicators and trends over the past 20 years. This summary identified 2015 as the lowest annual labour force (employed and unemployed individuals) in the past 20 years.[18] Based on the historic trends, labour force population and the population legally permitted to work (15 years of age or older) may continue to decline into the future. This in turn affects

[17] 2016 Census data related to labour force status was not available at the time of writing.
[18] Sault Ste. Marie Economic Development Corporation. (2017). SSMEDC Labour Force Analysis - Summary. Sault Ste. Marie, Ontario.

the participation rate which has slowly declined from 61% in 2006 to 53.5% in 2017. The trend line of the participation rate and labour force indicated by SSMEDC is another key indicator that the population of Sault Ste. Marie is aging, resulting in a higher proportion of high risk senior populations.

4.4.1.2 Family Structure

Another indicator of socioeconomic status and level of income is the number of lone-parent families, or family structure. For example, a higher proportion of lone-parent families could reflect lower household income and therefore a higher fire risk. A higher proportion of lone-parent families also have the possible increased likelihood of a child being home alone or unsupervised leading to an increased fire risk.

Of the families with children in Sault Ste. Marie, 20% are lone-parent families compared to 18% for the Province as a whole (**Table 28**). This suggests that Sault Ste. Marie has a slightly higher fire risk from the perspective of lone-parent families compared to the Province.

Table 28: Family Structure – Sault Ste. Marie and Ontario (2016 Census)

	Sault Ste. Marie	%	Ontario	%
Couple-Only	9,470	44%	1,428,575	40%
Couple Families (with children)	7,650	36%	1,708,995	47%
Lone-Parent Families	4,180	20%	644,975	18%
Total	**21,300**	100%	**3,612,205**	100%

(Source: Statistics Canada, 2016 Census)

4.4.1.3 Educational Attainment and Income

The relationship between educational attainment and income is multi-layered. Based on analysis completed by Statistics Canada, high-income Canadians tended to be highly educated. One in four people in Canada with post-secondary education had incomes in the top 10% of all Canadians.[19] However, the analysis also showed that of the Canadians with the top 10% of incomes, only 50.3% had attained a university degree. Only 4% of the individuals with incomes in the top 10% had no certificate, diploma, or degree. For the purposes of this CRA, it is simply assumed that a higher education leads to more disposable income and a lower fire risk. It is also assumed that households with more disposable income are more likely to invest in fire life safety products such as fire extinguishers and smoke alarms reducing the fire risk.

[19] *Source*: Statistics Canada, Education and occupation of high-income Canadians, https://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-014-x/99-014-x2011003_2-eng.cfm, modified September 15, 2016: visited January 24, 2017.

In terms of educational attainment, based on 2011 National Household Survey data, Sault Ste. Marie has a similar proportion of the population that has no certificate, degree, or diploma compared to the Province (20% vs. 19%). As shown in **Table 29**, 51% of City residents have a post-secondary certificate, diploma or degree which is 4% less than the Province. A higher proportion of the population in Sault Ste. Marie has a high school diploma or equivalent compared to the Province (29% versus 27%). Furthermore, there are lower proportions of individuals with a post-secondary certificate; diploma or degree than the province (51% vs. 55%).

This overall level of educational attainment could be linked to the lower median household incomes found in Sault Ste. Marie ($61,020 which is roughly $13,000 lower than the Province). This suggests that the City of Sault Ste. Marie as a whole has a higher fire risk from the perspective of income using educational attainment as an indicator.

Table 29: Educational Attainment of Peoples ages 15+ – Sault Ste. Marie (NHS 2011)

Educational Attainment	Sault Ste. Marie	%	Ontario	%
No Certificate; Diploma or Degree	12,725	*20%*	1,954,520	*19%*
High School Diploma or Equivalent	18,075	*29%*	2,801,805	*27%*
Postsecondary Certificate; Diploma Or Degree	32,245	*51%*	5,717,340	*55%*
Total	**63,045**	*100%*	**10,473,665**	*100%*

(Source: Statistics Canada, 2011 National Household Survey)

In terms of income, based on 2016 Census data, Sault Ste. Marie falls slightly below the provincial median income per population aged 15 years and over at $29,747 per annum (before tax) compared to Ontario at $36,900. Another way to analyze income is based on decile groups. The 2016 Census also provided data on "economic family after-tax income decile groups". As stated by Statistics Canada, a "*decile group provides a rough ranking of the economic situation of a person based on his or her relative position in the Canadian distribution of the adjusted after-tax income of economic families*". The income by population categories into decile groups is presented in

Income Decile Group	Sault Ste. Marie		Ontario		Difference
	Population	%	Population	%	
Bottom Decile	7,645	10.6%	1,346,645	10.2%	0.5%
Second Decile	7,625	10.6%	1,280,675	9.7%	0.9%
Third Decile	7,450	10.4%	1,237,415	9.3%	1.0%
Fourth Decile	7,330	10.2%	1,223,510	9.2%	1.0%
Fifth Decile	7,040	9.8%	1,246,925	9.4%	0.4%
Sixth Decile	6,850	9.5%	1,279,095	9.7%	-0.1%
Seventh Decile	7,275	10.1%	1,321,220	10.0%	0.1%

Income Decile	Sault Ste. Marie		Ontario		Difference
Eighth Decile	7,800	10.9%	1,382,795	10.4%	0.4%
Ninth Decile	7,715	10.7%	1,464,415	11.1%	-0.3%
Top Decile	5,150	7.2%	1,459,465	11.0%	-3.9%
Total	**71,880**	**100.0%**	**13,242,160**	**100.0%**	-
Source: 2016 Census Statistic Canada					

and **Figure 22**. This analysis shows that the City has a higher proportion of population in the bottom half of income decile groups compared to the Province with 3.8% more in total. There are also higher proportions of high income families in Province than the City. This is illustrated in the ninth and top decile groups with a difference of -4.2% compared to the Province. These statistics are helpful to understand because the more disposable income a family can generate the higher likelihood that the family will purchase fire safety equipment.

Table 30: Economic Family Income Decile Group for the Population in Private Households (Sault Ste. Marie and Ontario)

Income Decile Group	Sault Ste. Marie		Ontario		Difference
	Population	%	Population	%	
Bottom Decile	7,645	10.6%	1,346,645	10.2%	0.5%
Second Decile	7,625	10.6%	1,280,675	9.7%	0.9%
Third Decile	7,450	10.4%	1,237,415	9.3%	1.0%
Fourth Decile	7,330	10.2%	1,223,510	9.2%	1.0%
Fifth Decile	7,040	9.8%	1,246,925	9.4%	0.4%
Sixth Decile	6,850	9.5%	1,279,095	9.7%	-0.1%
Seventh Decile	7,275	10.1%	1,321,220	10.0%	0.1%
Eighth Decile	7,800	10.9%	1,382,795	10.4%	0.4%
Ninth Decile	7,715	10.7%	1,464,415	11.1%	-0.3%
Top Decile	5,150	7.2%	1,459,465	11.0%	-3.9%
Total	**71,880**	**100.0%**	**13,242,160**	**100.0%**	-
Source: 2016 Census Statistic Canada					

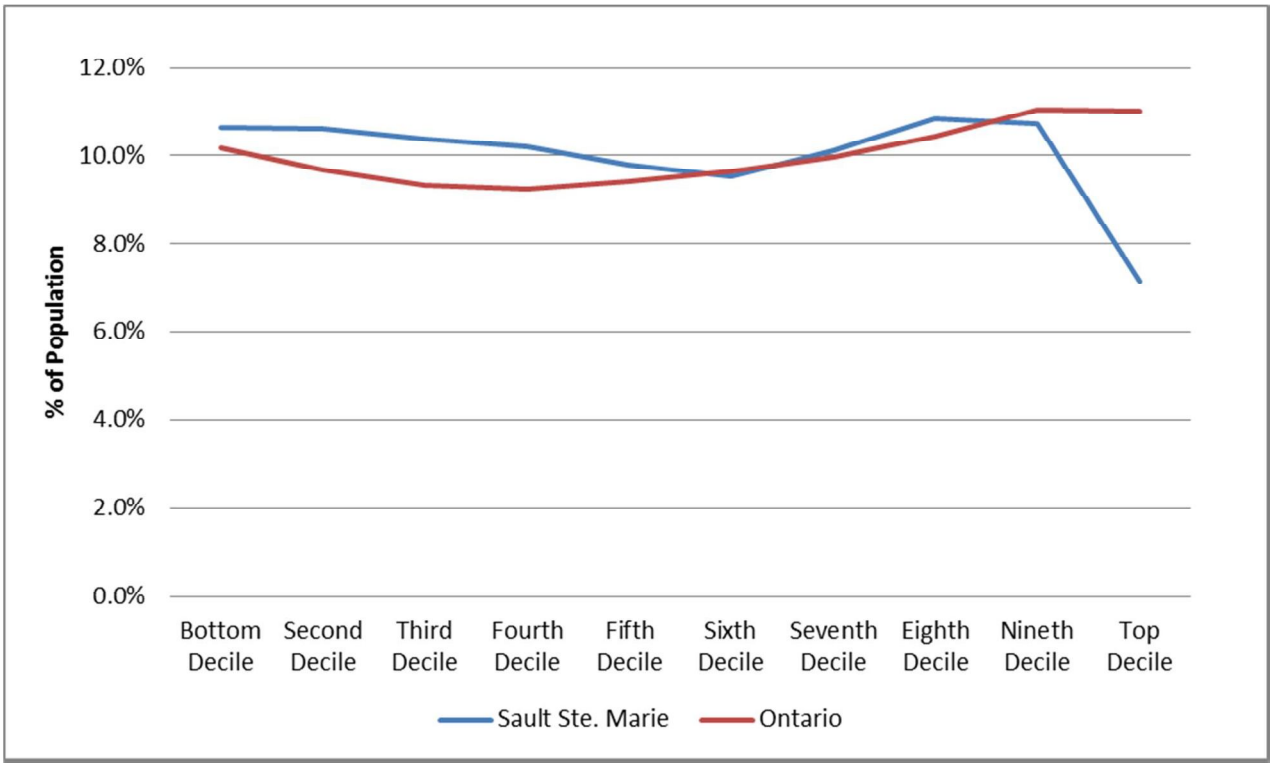


Figure 22: Percentage of Population by Income Decile Group in Sault Ste. Marie and Ontario (Statistics Canada 2016)

4.4.1.4 Household Tenure, Occupancy, Suitability, and Costs

Table 31 summarizes household statistics including tenure, occupancy, suitability, and costs based on 2016 Census data. Housing tenure reflects socioeconomic status whereby a low home ownership rate may reflect lower incomes in the community and a higher overall fire risk. The City of Sault Ste. Marie has a similar proportion of dwellings that are owned versus rented when compared to the Province (69% owned in Sault Ste. Marie versus 70% in the Province). In Sault Ste. Marie, fewer than 1% of the households (105 households) have more than one person per room compared to the Province at 2%. A higher proportion of multiple persons per room can result in an increased fire loss resulting in a higher risk. From the perspective of housing tenure and occupancy, Sault Ste. Marie appears to have a similar level of fire risk when compared to the Province.

Similarly, the 2016 Census reports on housing suitability which, according to Statistics Canada, refers to whether a private household reflects suitable accommodations according to the National Occupancy Standard. Suitable accommodations are defined by whether the dwelling has enough bedrooms based on the age and relationships among household members. Based on this measure, the City of Sault Ste. Marie has 2% of (or 665) households that are not suitable compared to 6% for the Province (311,005). From the perspective of housing suitability, Sault Ste. Marie has a lower fire risk compared to the Province.

Table 31: Household Tenure, Occupancy, Suitability, and Costs – Sault Ste. Marie and Ontario (2016 Census)

	Sault Ste. Marie	%	Ontario	%
Household Tenure				
Owner	22,410	*69%*	3,601,825	*70%*
Renter	10,225	*31%*	1,559,720	*30%*
Total Households	**32,635**	***100%***	**5,161,545**	***100%***
Household Occupancy				
One person or fewer per room	32,530	*~100%*	5,046,810	*98%*
More than one person per room	105	*<1%*	122,360	*2%*
Total Households	**32,635**	***100%***	**5,169,170**	***100%***
Housing Suitability				
Suitable	31,970	*98%*	4,858,170	*94%*
Not suitable	665	*2%*	311,005	*6%*
Total Households	**32,635**	***100%***	**5,169,175**	***100%***
Shelter Costs				
Spending less than 30% of household total income on shelter costs	25,665	*79%*	3,694,385	*72%*
Spending 30% or more of household total income on shelter costs	6,940	*21%*	1,411,900	*28%*
Total Households	**32,605**	***100%***	**5,106,285**	***100%***
Median value of dwellings	$200,553		$400,496	
Median monthly shelter costs for owned dwellings	$880		$1299	
Median monthly shelter costs for rented dwellings	$773		$1045	

(Source: Statistics Canada, 2016 Census)

Shelter costs further provide some indication of the amount of disposable income within a household. Households with less disposable income have fewer funds to purchase household fire life safety items resulting in a higher risk. In the City of Sault Ste. Marie, 21% of households spend 30% or more of the household total income on shelter costs. This is 7% less than the Province, where 28% of households spend 30% or more of income on shelter costs. This could in part be because the City has a different cost of living in terms of shelter costs when compared to the Province as a whole. For example, the median value of dwellings in the City is $200,553 and $400,496 in the Province. The City also has a lower median monthly shelter costs for owned and median monthly shelter costs for rented dwellings compared to the Province and the Toronto CMA. In terms of income specially, the City has a median household income of $61,020 (in 2015) which is lower than the Province at $74,287 per the 2016 Census (-$13,267). This analysis suggests that from the perspective of shelter costs and income, the fire risk

within the City of Sault Ste. Marie may overall be similar to or lower than that of the Province as a whole.

As previously noted, it is important to keep in mind that all these factors, as explored, can intersect with one another and have an impact on fire risk. For example, a community may have higher shelter costs resulting in less disposable income, but also have a higher level of educational attainment and therefore income. The quantitative impact intersecting factors can have on fire risk (probability and consequence) is not widely understood at a detailed level within the fire service. This should be considered when assessing socioeconomic factors.

4.4.2 Mapping Analysis

To understand the spatial distribution of such socioeconomic variables, 2016 Census data was mapped by dissemination area using ArcGIS. The following section includes five maps which relate to the employment, income, and education in Sault Ste. Marie, due to their relationship to risk. These figures are:

- **Figure 23**: Percentage of Population Unemployed in Sault Ste. Marie (2011 NHS)
- **Figure 24**: Percentage of Population with a Secondary Diploma by Dissemination Area (NHS 2011)
- **Figure 25:** Percentage of Population with No Diploma, Degree, or Certificate (NHS 2011)
- **Figure 26**: Percentage of Population Without Employment Income by Dissemination Area
- **Figure 27**: Percentage of Population in the Bottom Income Decile Group by Dissemination Area (2016 Census)
- **Figure 28**: Percentage of Population in the Top Income Decile Group by Dissemination Area (2016 Census)

Observations based on the mapped socioeconomic topics can be found in **Table 32**.

Table 32: Map Observations by Mapped Socioeconomic Topic

Figure #	Key Socioeconomic Topic	Consideration	Map Observation
Figure 23	Labour Force Status - Percentage of unemployed population	Higher unemployment, higher fire risk	• Dissemination areas with clusters of higher proportion of the population with no employment (32% - 60%) found east of downtown – (e.g., east of Black Road and north of Trunk Road, south of Gibbs Street and east of Boundary Road and south of Gibbs Street, west of Shannon Road and south of Wellington (Algoma University area) and west of Pine Street and south of Macdonald Avenue). • Cluster of higher proportion of the population with no employment (32% - 60%) in the downtown in the vicinity of John Street and St Georges Avenue West • Cluster of higher proportion of the population with no employment (32% - 60%) in the vicinity of Lyons Avenue

Figure #	Key Socioeconomic Topic	Consideration	Map Observation
			and Korah Road
Figure 24	Educational Attainment - Percentage of population with secondary diploma	Higher percent of population with diploma, lower fire risk	• Dissemination areas with high proportion of population with secondary diploma found outside of the Urban Settlement Area Boundary as well as to the east of Downtown. • Downtown contains lower proportion of population with a secondary diploma as well as south of Trunk Road and east of Shannon Road.
Figure 25	Educational Attainment – Percentage of population with no diploma, degree, or certificate	Higher percent of population with no degree, higher fire risk	• Dissemination areas with high proportion of population with no diploma, degree or certificate found in the downtown area • Dissemination areas with high proportion of population with no diploma, degree or certificate found north-east and north-west of downtown – (e.g., in the general vicinity of Creery Avenue between Lake Street and Pine Street, at the intersections of Pine Street and McNabb Street and Gibbs Street and Trunk Road, at the north-east corner of Second Line West and North Street, south of Wallace Terrace between Allen's Side Road and Goulais Avenue, etc.)
Figure 26	Income – Percentage of population with no employment income	Higher percent of population without income, higher fire risk	• Disseminations areas with high proportion of the population without employment income found primarily Downtown with additional areas north-west and north-east of downtown, south of Second Line.
Figure 27	Income – Percentage of population in bottom income decile	Higher percent of population in bottom income decile, higher fire risk	• Dissemination areas with high percentage of the population in the bottom income decile group in the Downtown south of Wellington Street East. • Additional areas with higher percentages can be found north of Downtown south of Second Line West at Great Northern Road, and west of downtown at the north-west corner of Second Line West and Goulais Avenue.
Figure 28	Income – percentage of population in top income decile	Higher percent of population in top income decile, lower fire risk	• Dissemination areas with high percentage of the population in the top income decile found in rural areas of the municipality as well as east of downtown south of Wellington Street East, and north of downtown north of Second Line West and east of Great Northern Road.

CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

PERCENTAGE OF UNEMPLOYED POPULATION BY DISSEMINATION AREA

FIGURE 23

DISTRICT OF ALGOMA
TOWNSHIP OF PRINCE
RANKIN 15D FIRST NATION
USA
USA
St. Mary's River
Highway 17 North
Highway 17 East
Fourth Line West
Fourth Line East
Third Line East
Second Line West
Base Line
Rossmore Road
Wallace Terrace
Lyons Avenue
Cathcart Street
McNabb Street
Queen Street East
Trunk Road
Gibbs Street
Queen Street East
Allen's Side Road
Goulais Avenue
Peoples Road
Peoples Road
Great Northern Road
Sackville Road
Black Road
John Street
North Street
Willow Avenue
Gore Street
Pine Street
Lake Street
Shannon Road
East Street
Airport Road
#1 Fire Station
#2 Fire Station
#3 Fire Station
#4 Fire Station

Percentage of Population Unemployed

- 0%
- 0.01% - 10.2%
- 10.21% - 18.8%
- 18.81% - 32.6%
- 32.61% - 60%
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY STATISTICS CANADA
/CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Demo_Unemployed.mxd

DILLON CONSULTING

PROJECT: 175984
STATUS: DRAFT
DATE: 2017-09-29

DISTRICT OF ALGOMA

TOWNSHIP OF PRINCE

RANKIN 15D FIRST NATION

USA

USA

St. Mary's River

Highway 17 North

Fourth Line West

Fourth Line East

Third Line East

Second Line West

Base Line

Rossmore Road

Wallace Terrace

Lyons Avenue

Cathcart Street

McNabb Street

Queen Street East

Trunk Road

Gibbs Street

Queen Street East

Peoples Road

Allen's Side Road

Goulais Avenue

Sackville Road

Great Northern Road

Black Road

John Street

North Street

Willow Avenue

Gore Street

Pine Street

Lake Street

Shannon Road

East Street

Airport Road

Highway 17 East

#1 Fire Station

#2 Fire Station

#3 Fire Station

#4 Fire Station

CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

PERCENTAGE OF POPULATION WITH SECONDARY DIPLOMA BY DISSEMINATION AREA

FIGURE 24

Percentage of Population with Secondary Diploma

- 18.18% - 30.14%
- 30.15% - 41.44%
- 41.45% - 52.53%
- 52.54% - 63.64%
- 63.65% - 78.79%
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY STATISTICS CANADA
NATIONAL HOUSEHOLD SURVEY 2011//
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

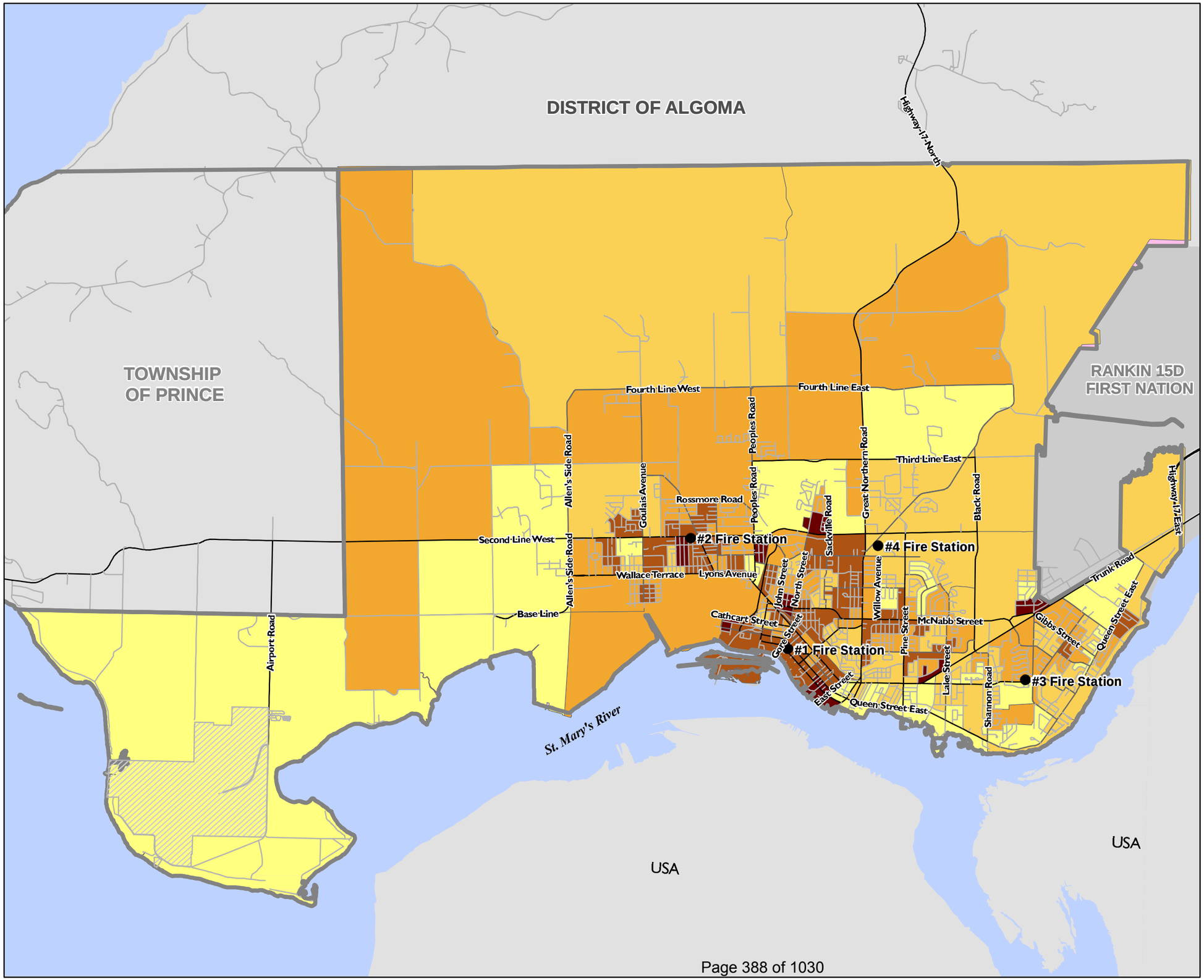
FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Demo_SecondaryCertifcate.mxd

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PROJECT: 175984

STATUS: DRAFT

DATE: 2017-09-29



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

PERCENTAGE OF POPULATION WITH NO DIPLOMA, DEGREE OR CERTIFICATE BY DISSEMINATION AREA
FIGURE 25

Percentage of Population with No Diploma, Degree or Certificate

- 5.45% - 11.11%
- 11.12% - 17.39%
- 17.4% - 25.64%
- 25.65% - 36.59%
- 36.6% - 53.23%
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY STATISTICS CANADA
NATIONAL HOUSEHOLD SURVEY 2011/
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Demo_NoEducation.mxd

DILLON CONSULTING

PROJECT: 175984
STATUS: DRAFT
DATE: 2017-09-29

DISTRICT OF ALGOMA

TOWNSHIP OF PRINCE

RANKIN 15D FIRST NATION

USA

USA

St. Mary's River

Highway 17 North

Highway 17 East

Fourth Line West

Fourth Line East

Third Line East

Second Line West

Base Line

Rossmore Road

Wallace Terrace

Lyons Avenue

Cathcart Street

McNabb Street

Queen Street East

Trunk Road

Gibbs Street

Queen Street East

Airport Road

Allen's Side Road

Goulais Avenue

Peoples Road

Sackville Road

Great Northern Road

Black Road

John Street

North Street

Willow Avenue

Pine Street

Lake Street

Shannon Road

Gore Street

East Street

#1 Fire Station

#2 Fire Station

#3 Fire Station

#4 Fire Station

CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

PERCENTAGE OF UNEMPLOYED POPULATION BY DISSEMINATION AREA

FIGURE 26

Percentage of Population Unemployed

- 0%
- 0.01% - 10.2%
- 10.21% - 18.8%
- 18.81% - 32.6%
- 32.61% - 60%
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY STATISTICS CANADA
/CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Demo_Unemployed.mxd

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STATUS: DRAFT

DATE: 2017-09-29

DISTRICT OF ALGOMA

TOWNSHIP OF PRINCE

RANKIN 15D FIRST NATION

USA

USA

St. Mary's River

Highway 17 North

Fourth Line West

Fourth Line East

Third Line East

Second Line West

Base Line

Airport Road

Allen's Side Road

Goulais Avenue

Peoples Road

Great Northern Road

Black Road

Sackville Road

Rossmore Road

Wallace Terrace

Lyons Avenue

John Street

North Street

Cathcart Street

Gore Street

Willow Avenue

Pine Street

McNabb Street

Lake Street

East Street

Queen Street East

Gibbs Street

Trunk Road

Shannon Road

Highway 17 East

#1 Fire Station

#2 Fire Station

#3 Fire Station

#4 Fire Station

CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

PERCENTAGE OF POPULATION IN BOTTOM INCOME DECILE BY DISSEMINATION AREA

FIGURE 27

Percentage of Population in Bottom Income Decile

- 0% - 5.26%
- 5.27% - 10.53%
- 10.54% - 20.37%
- 20.38% - 31.43%
- 31.44% - 47.37%
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY STATISTICS CANADA
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MAP CREATED BY: SMW
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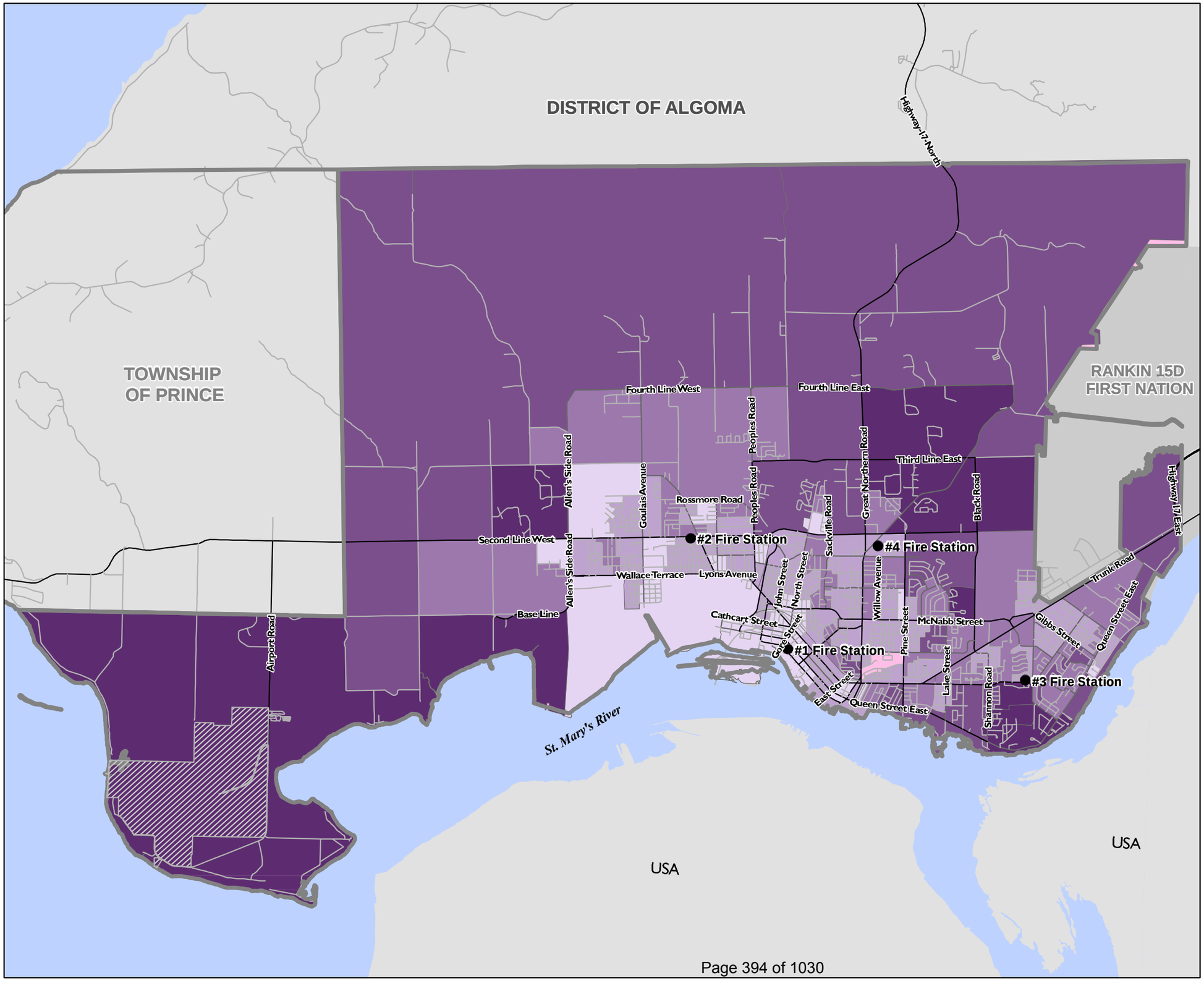
FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Demo_BottomDecile.mxd

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CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

PERCENTAGE OF TOP INCOME DECILE BY DISSEMINATION AREA

FIGURE 28

Percentage of Population in Top Income Decile

- 0% - 1.61%
- 1.62% - 5%
- 5.01% - 10.53%
- 10.54% - 18.6%
- 18.61% - 34.69%
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY STATISTICS CANADA CENSUS 2016/CITY OF SAULT STE. MARIE/ MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Demo_TopDecile.mxd

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DATE: 2017-09-29

4.5 Vulnerable Individuals

A group within a community that faces higher fire risk is known as vulnerable individuals. A vulnerable individual can be someone with mobility limitations, cognitive limitations, persons with developmental disabilities, or those generally who are unable to move on their own due to their own physical limitations or due to restraint. As such, vulnerable individuals can include seniors or youth.

Vulnerable individuals or occupancies are a particular focus of a fire and rescue department primarily because these individuals are unable to self-evacuate or require assistance to, evacuate in the event of a fire. A vulnerable occupancy is occupied by vulnerable individuals such as seniors, peoples requiring in-house care; however, not all vulnerable individuals reside in a vulnerable occupancy. As identified in the 2016 Simplified Risk Assessment, there is a high population of seniors living on their own or in subsidized housing which make them a vulnerable, yet key demographic to reach. From an occupancy perspective, vulnerable occupancies could be classified as either Group B or Group C. (Further information on these occupancies can be found in **Section 3.6**) A fire department can help reduce the risk faced by vulnerable individuals is to perform fire safety inspections; enforce the Ontario Fire Code; provide public education on fire safety issues; conduct pre-planning exercises to increase fire department personnel's familiarity with the facility; review fire safety plans for accuracy and encourage facility owner to updated as needed; provide staff training; and encourage fire drills. As discussed in Section 3.6, some of these activities are now legislated responsibilities under O. Reg. 150/13.

4.6 Ethnic and Cultural Considerations

Cultural diversity and ethnic background can be factors for fire service providers to consider in developing and delivering programs related to fire prevention and public education. Communication barriers, in terms of language and the ability to read written material, can have an impact of the success of these programs. There may also be familiarity challenges related fire safety standards within recent immigrant populations.

4.6.1 Snapshot and Context

A high proportion of immigrants could demonstrate a higher fire risk due to a large population that has a potential for: lower income; lack of familiarity with local fire life safety practices; and/or experience possible language barriers, for example. **Table 33** presents the overall immigrants status of the population in Sault Ste. Marie. The City has a much lower proportion of immigrants (9%) compared to Ontario as a whole (30%). When looking at the data by year of immigration, lower levels of immigration in the City compared to the Province is a consistent trend.

In Sault Ste. Marie, there have been very low levels of immigration from 1981 to 2016 with 7% of the 9% of immigrants immigrating before 1981. The most recent data available shows that 1.3% of immigrants (or 820 people) immigrated from 2001 to 2016. This suggests that, in comparison to the province, there are significantly lower proportions of at-risk (recent) immigrants in the City. For example, 2011 to 2016 saw 260 immigrants (or 0.4% of the total) in the City. This population should be monitored as new

Census data becomes available for consideration when planning public education programs and materials.

Table 33: Immigration Status – Sault Ste. Marie and Province of Ontario (2016 Census)

	Sault Ste. Marie	%	Ontario	%
Non-immigrants	65,290	91%	9,188,815	70%
Immigrants	6,230	9%	3,852,145	30%
Before 1981	4,840	7%	1,077,745	8%
1981 to 1990	275	0%	513,995	4%
1991 to 2000	295	0%	834,510	6%
2001 to 2010	560	1%	953,730	7%
2001 to 2005	230	0.3%	490,560	4%
2006 to 2010	330	0.5%	463,170	4%
2011 to 2016	260	0.4%	472,170	4%
Non-permanent residents	360	1%	201,200	2%
Total	**71,520**	**100%**	**13,040,960**	**100%**
(Source: Statistics Canada, 2016 Census)				

Table 34 provides a breakdown of the knowledge of official languages based on the 2016 Statistics Canada census information. As shown, 90% or 65,115 people in the City know English only. In addition, 9% of the population or 6,840 state that they know both English and French, 0.4% or 285 people with knowledge of neither English nor French, and 0.1% or 40 people with knowledge of only French. This is in alignment with the period of immigration analysis presented above. As identified by the 2016 Simplified Risk Assessment, language barriers do not reflect a significant risk to the community. The potential for communication barriers should be considered and monitored, especially when working with specific groups, such as tourists.

Table 34: Knowledge of Official Languages (2016 Census)

Language	Sault Ste. Marie		Ontario	
	Total	% Total	Total	% Total
Total population (non-institutional)	**72,285**	**-**	**13,312,865**	**-**
English Only	65,115	90%	11,455,500	86%
French Only	40	0.1%	40,040	0.3%
English and French	6,840	9%	1,490,390	11%
Neither English nor French	285	0.4%	326,935	2%

4.7 Population Shift

The population within a community can shift at various times during the day or week and throughout the year. Population shift can be a result of a number of factors including employment, tourism, and education. In some municipalities, residents occasionally leave the community for employment. Other communities may be major tourist and vacation destinations resulting in large population shifts related to seasonal availability of tourism activities. This can result in an increased risk due to overnight tourism accommodation (sleeping) which can impact the demand for fire protection services. Another impact of population shift could be an increase in vehicular traffic which could impact the number of motor vehicle calls and emergency response times. For the City of Sault Ste. Marie, as a population centre in northern Ontario, the main sources for population shift would be: recreation, education, and employment.

4.7.1 Tourism

In terms of seasonal recreational population, there are a number of features and events that would draw tourists to the region including the natural features in the area. Specific tourist destinations and attractions include: cruise ship docking; national historic sites (Sault Ste. Marie Canal and Ermatinger-Clergue); a regional mall; casino; nearby Provincial Parks (Packake Bay, Batchawana, Lake Superior); specific attraction packages; and resorts and lodges. As a result, the City experiences some population shift due to the tourism draw for recreational opportunities. According to the 2016 Annual Report completed by the Sault Ste. Marie Economic Development Corporation[20], 2016 saw more than 37,000 visitor days in part due to activity of attracting events and selling vacation packages.[21] While each event draws tourists at various times throughout the year, it is important to consider population shifts from a fire protection, education and prevention standpoint. Specific fire protection strategies to address population shifts should be accommodated as part of broader services, such as pro-active fire inspections of the facilities occupied by these demographics (e.g., hotels and motels).

4.7.2 Education and Employment

Educational institutions are a key source for population shift in larger communities as they attract people from outside of the typical community. They are important to consider since they may have school-based residences, or contribute to a population that is not captured through the census. In the Sault, there are two major post-secondary institutions: Algoma University and Sault College. According to the 2016 Simplified Risk Assessment, the 2013 influx of students attending these institutions from outside of the community is about 1,375 students at Algoma University and 570 at Sault College resulting in a population shift of nearly 2,000 people.

[20] Sault Ste. Marie Economic Development Corporation. (2016). *Research Reports & Publications.* Retrieved September 20, 2017, from Annual Report: https://www.sault-canada.com/en/aboutus/researchreportspublications.asp

[21]

The City of Sault Ste. Marie is unique in part due to its location in Northern Ontario. This location and the urban structure in part impacts the potential for population shift based on employment. Intuitively, there is no notable shift in population, from either commuters travelling into, or out of the City for employment. This observation is in part supported by the results of the 2011 NHS where the median commuting time for the City is 10.8 minutes.

4.8 Demographic Profile Outcomes

The demographic profile analysis identifies a number of key findings related to the demographic circumstances within the City including those based on age, population, vulnerable individuals, and ethnic and cultural considerations. The outcomes of this analysis are summarized in **Table 35.** These outcomes are revisited in **Section 1.0** where further analysis and discussion linking risk and fire service levels is presented.

Table 35: Demographic Profile - Summary of Outcomes

Demographic Outcomes	Type
Seniors (those 65 years and over) are considered to represent one of the highest fire risk groups across the province based on residential fire death rate (fire deaths per million of population). In Sault Ste. Marie there is currently a higher proportion of seniors in the City than in the Province (22% vs. 17%).	Key Risk
There is a higher proportion of seniors in the downtown with notable clusters at East Street at Bay Street and Queen Street East at Pine Street.	Key Finding
The current total population of Sault Ste. Marie includes a component of 30% of people between the ages of 45 and 64 who are aging towards the seniors demographic of 65 or over.	Key Risk
People aged 40 to 64 were the highest proportion of individuals reported as persons associated with ignition, in accordance with the SSMFS Historic Call Data from 2012 to 2016.	Key Finding
According to the 2016 Simplified Risk Assessment, the number of male fatalities recorded between 1998 and 2016 outnumbered female fatalities in the City. In addition, the highest proportion of people associated with ignition is men according to SSMFS Call data.	Key Finding

5.0 Fire Loss Profile

Past fire loss statistics can be assessed to understand trends within a community and design a community risk reduction plan including proactive public education programming and inspection cycles. This risk profile reviews overall fire loss, fires loss by occupancy type, death or injury by occupancy type, fire deaths or injuries by age and gender, reported fire cause, smoke alarm status, and fire suppression system status based on the 2012 to 2016 time period.

5.1 Fire Loss Methodology

The analysis provided within this profile is based on data from two key sources: OFMEM Standard Incident Reporting (SIR) data and the Sault Ste. Marie (SSM) Fire Loss Data. The OFMEM SIR data is based on information that each municipality within the province is required to submit to the OFMEM annually. The OFMEM compiles this data on behalf of the province in order to provide a consistent database for preparing province-wide fire statistics. OFMEM also compiles all of this information into a report for the Province as a whole.

The data provided by Sault Ste. Marie Fire Services included fire loss data with a number of attributes including statistics relating to fire suppression systems, smoke alarms and sprinklers. This dataset was mapped by Dillon to spatially illustrate civilian deaths or injuries, estimated losses, the source and possible cause of incidents and smoke alarm status. Throughout this profile, both datasets - OFMEM Standard Incident Reporting (SIR) and the Sault Ste. Marie (SSM) Fire Loss Data - are used and referenced separately and as a result there are small differences in the totals across the datasets. This is not atypical based on the processes for analysis and reporting.

All the data displayed from the OFMEM and the City of Sault Ste. Marie includes the five-year period from 2012 to 2016. For simplicity, where 'OFMEM Standard Incident Reporting' is referenced, the data analyzed was received from the Province. Where 'SSM Fire Loss Data' or 'SSM Mapped Fire Loss Data' is shown, it is referring to the information provided by Sault Ste. Marie Fire Services.

All spatial information was mapped using Esri ArcMap software. The SSM Fire Loss Data includes a set of X and Y coordinates which were used to display the information. To show the density of different fire loss attributes, fields of interest were queried and grouped accordingly and processed using a series of spatial analyst tools. To do this, fire loss incidents were converted to a raster dataset and transformed using the spatial analyst tool called 'point density'. For consistency, a number of parameters were automatically generated according to the overall sample size of the dataset. These parameters were carried over to the density analysis of the Response Profile.

5.2 Fire Loss in Sault Ste. Marie and Ontario

Analysis of historical data provides valuable insight into understanding the specific trends within a community. Assessing the key factors of life safety risk and fire risk in relation to provincial statistics provides a foundation for evaluating where specific programs or services may be necessary.

In terms of overall property loss as a result of fires, **Table 36** shows the total number of fires, and property loss for the City of Sault Ste. Marie for the period 2012 to 2016. An important consideration in evaluating this data is the impact of a major fire with a large dollar loss and/or a series of smaller fires with a combined significant large dollar loss. The City of Sault Ste. Marie had a total of 433 loss fires being structure, outdoor, or vehicles fires which accounted for $17,713,805 in total value property loss.

Over the five year period, structure fires accounted for 63% of the total fires, and 91% of the total dollar ($) loss. For the period from 2012 to 2016 there were 54,457 fires within Ontario with a loss reported to the OFMEM. During this period 66% (36,159) of these involved a structure, 26% (14,358) of these fires involved a vehicle and 7% (3,940) were outdoor. Structure fires accounted for 90% of total fire loss in the Province.

Table 36: City of Sault Ste. Marie Total Fire Loss (2012-2016)

Year	Structures		Outdoor		Vehicle		Total	
	# of Fires	Loss ($)	# of Fires	Loss ($)	# of Fires	Loss ($)	# of Fires	Loss ($)
2012	54	$2,818,973	24	$29,990	15	$115,167	93	$2,964,130
2013	44	$3,935,650	9	$8,025	14	$352,850	67	$4,296,525
2014	46	$1,185,200	7	$11,070	27	$324,350	80	$1,520,620
2015	62	$3,586,160	11	$7,070	25	$474,950	98	$4,068,180
2016	65	$4,632,435	10	$21,721	20	$210,194	95	$4,864,350
Total	**271**	**$16,158,418**	**61**	**$77,876**	**101**	**$1,477,511**	**433**	**$17,713,805**

(Source: OFMEM Standard Incident Reporting)

When looking specifically at structure fires, **Table 37** shows the proportion of structure fires and the property loss for the period of 2012 to 2016 based on total number of fires and total property loss for all fires (structures, outdoor, and vehicle). This shows that the proportion of structure fires is similarly but slightly lower in the City compared to the province (63% versus 66%). This table also illustrates that both for the Province and the City, structure fires account for the majority of overall fire loss, but that that proportion is variable by year. For example, in 2014, structure fires in the City accounted for just 7% of the total property loss. However, over the five year period, the proportion of fire loss due to structure fires is consistent across the City and the Province (91% vs. 90%).

Table 37: City of Sault Ste. Marie and Province of Ontario Structure Fires and Property Loss (2012-2016)

	City of Sault Ste. Marie				Province of Ontario			
Year	Structure Fires	Property Loss ($)	% ALL Fires	% ALL Property Loss	Structure Fires	Property Loss ($)	% ALL Fires	% ALL Property Loss
2012	54	$2,818,973	12%	16%	7,496	$543,115,732	14%	15%
2013	44	$3,935,650	10%	22%	7,191	$576,249,175	13%	16%
2014	46	$1,185,200	11%	7%	7,063	$784,681,080	13%	22%
2015	62	$3,586,160	14%	20%	7,240	$658,957,595	13%	18%
2016	65	$4,632,435	15%	26%	7,169	$654,466,771	13%	18%
Total for Structure Fires	271	$16,158,418	63%	91%	36,159	$3,217,470,353	66%	90%
Total for ALL Loss Fires	**433**	**$17,713,805**	**-**	**-**	**54,457**	**$3,573,005,208**	**-**	**-**

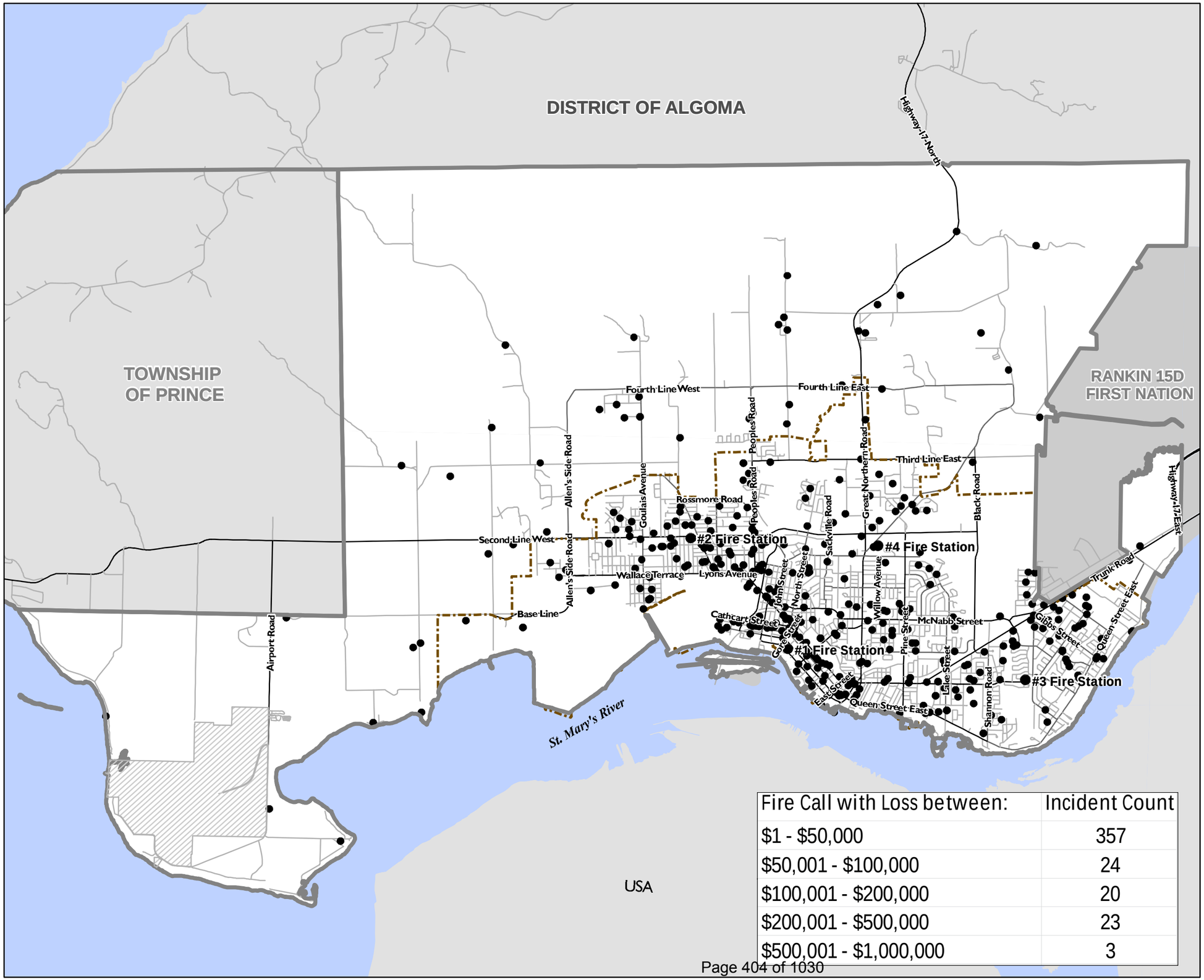
(Source: OFMEM Standard Incident Reporting)

5.2.1 Mapping Analysis: Fire Loss

Figure 29 shows the results of the analysis of the mapped SSM fire loss data from 2012 to 2016 for all fire loss categories. It should be noted that the analysis includes those calls that had a very low property value loss such as $1 or $80. **Table 38** summarizes the analysis of the SSM fire loss data from 2012 to 2016 for all fire loss categories. Based on this analysis, 83.6% of the calls reflect fire losses below an estimate of $50,000. Roughly 16% of losses are in the $50,001 to $500,000 range while only 0.7% or 3 fires amounted to a $500,001 to $1,000,000 loss. The fire loss amounts are distributed across the City generally in relation to built up areas.

Table 38: Fire Loss Overview - (SSM Mapped Fire Loss Data - 2012 to 2016)

Estimated Loss Range	Number of Mapped Fire Calls	% of Total
$1 to $50,000	357	83.6%
$50,001 to $100,000	24	5.6%
$100,001 to $200,000	20	4.7%
$200,001 to $500,000	23	5.4%
$500,001 to $1,000,000	3	0.7%
Total Mapped Loss Fires	**427**	**100%**



Fire Call with Loss between:	Incident Count
$1 - $50,000	357
$50,001 - $100,000	24
$100,001 - $200,000	20
$200,001 - $500,000	23
$500,001 - $1,000,000	3

CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

ESTIMATED LOSSES
(SSM MAPPED FIRE CALL DATA 2012 - 2016)
FIGURE 29

Fire Call with Loss Between:

- $500,001-$1,000,000
- $200,001 - $500,000
- $100,001 - $200,000
- $50,001 - $100,000
- $1 - $50,000
- Local Road
- Collector Road
- Arterial Road
- Existing Fire Station
- Urban Settlement Boundary
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Estimated_Losses.mxd

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5.3 Loss by Occupancy Type

Historical fires by occupancy type highlight occupancies which may be more vulnerable to fire loss. **Table** 39 presents an analysis of the proportion of structures fires and related property loss by occupancy type. Of the total structure fires which occurred in Sault Ste. Marie between 2012 and 2016, 218 fires (80.4%) occurred in Group C – Residential occupancies based on a total of 271 structure, accounting for the highest proportion of fires. As shown in **Table 39,** Group C – Residential occupancies account for 69.6% of all property loss for structure fires. Over this same period in Ontario, 73.4% of structure fires occurred within Group C - Residential occupancies, 7% lower than Sault Ste. Marie. **Figure** 30 shows that the proportion of fires in Group C – Residential occupancies is consistently higher in the Sault than the Province each year. The high proportion of Group C - Residential fires may be linked to the property stock where 87.4% of the City's property stock is Group C – Residential occupancies.

The next highest proportion of loss in the City was in occupancies not classified within the OBC at 6.6% (18 fires) but accounted for only 1.2% of the property loss ($) over the same period. This is followed by Group F – Industrial occupancies which account for the second most significant source of property loss within a defined OBC occupancy accounting at 5.2% of structural fire loss and 19.2% of property loss. This is lower when compared to the Province where overall the proportion of fires in Group F – Industrial occupancies is 7.5%. The proportion of fires by occupancy type is lower in the City compared to the Province for most occupancy types, as shown in **Table 39.**

Table 39: City of Sault Ste. Marie Fires and Fire Loss by Occupancy Classification (2012-2016)

Occupancy Classification	Property Classification	City of Sault Ste. Marie				Ontario Proportion of Structure Fires
		Structure Fires	% Fires	Property Loss	% Loss	% Fires
Group A	Assembly occupancies	7	*2.6%*	$72,900	0.5%	*4.0%*
Group B	Care or Detention occupancies	4	*1.5%*	$202,390	1.3%	*1.4%*
Group C	Residential occupancies	218	*80.4%*	$11,238,728	69.6%	*73.4%*
Group D	Business and Personal Services Occupancies	5	*1.8%*	$322,900	2.0%	*2.5%*
Group E	Mercantile occupancies	5	*1.8%*	$1,036,500	6.4%	*3.4%*
Group F	Industrial occupancies	14	*5.2%*	$3,096,000	19.2%	*7.5%*
Other occupancies	Not classified within the Ontario Building Code	18	*6.6%*	$189,000	1.2%	*5.1%*
	Classified under National Farm Building Code	*0*	*0.0%*	$0	0.0%	*2.6%*
Total Structure Fires		**271**	***100%***	***$17,713,805***	***91.2%***	***36,159 (100%)***

(Source: OFMEM Standard Incident Reporting)

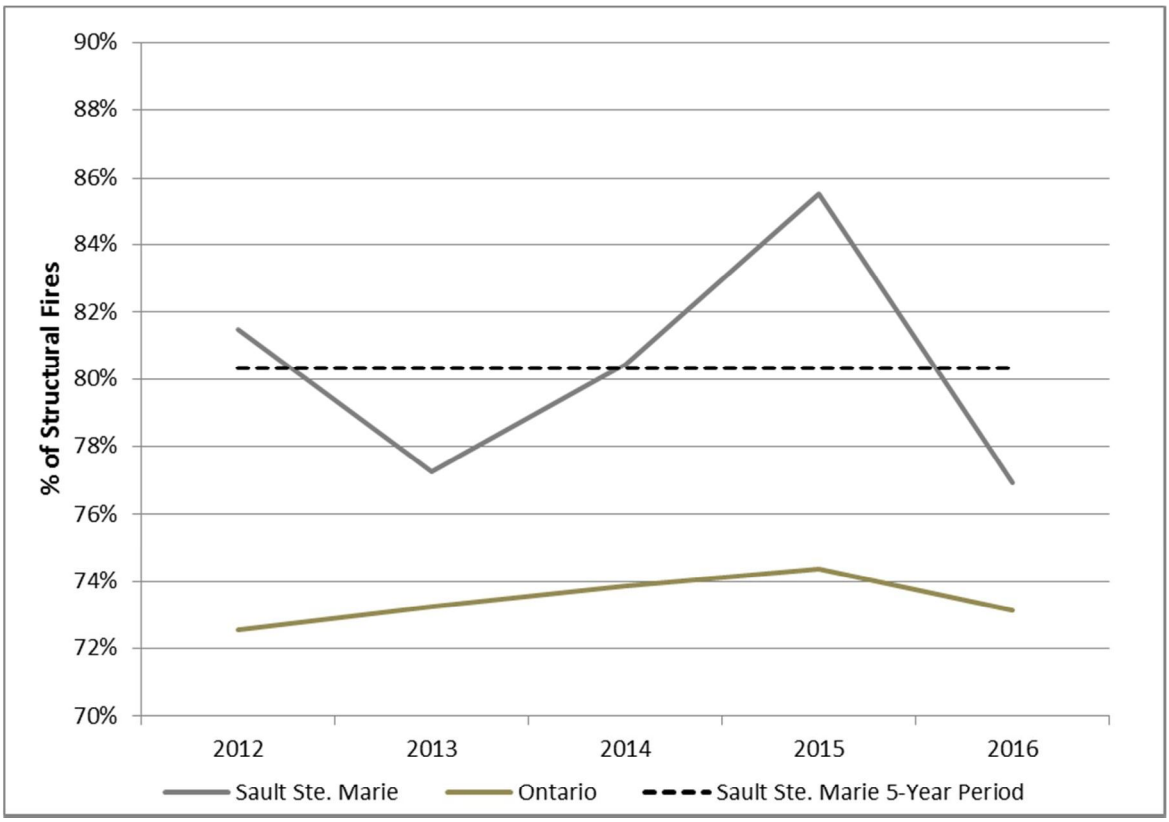


Figure 30: Proportion of Structure Fires in Group C - Residential Occupancies by Year - Sault Ste. Marie and Ontario (OFMEM Standard Incident Reporting - 2012 to 2016)

Key Risk:
Structural fires occurring in Group C – Residential buildings are the most frequent structural fire types and they occurred at a higher rate than the Province between 2012 and 2016 (80.4% vs. 73.4%).

Key Risk:
Although occurring at a lower proportion compared to the Province from 2012 to 2016 (5.2% vs. 7.5%), Group F – Industrial occupancies accounted for 19.2% of the property loss from structure fires in the City.

5.4 Civilian Fire Deaths or Injuries

Reviewing historic fire deaths or injuries by age and gender of victims can provide insight for the purposes of targeted community risk reduction programs. These trends can be used to inform programming. As explored in the Demographic Profile, seniors represent the highest proportion of fire fatalities in the Province of Ontario and males are more likely to be injured from a fire or lose their life in a fire.

5.4.1 Deaths or Injuries in the Sault and Ontario

OFMEM Standard Incident Reporting does not provide injury and fatality information based on age or gender specific to the City. It does, however, provide for an injury and fatality breakdown by major occupancy classification. As shown in **Table 40**, according to the 2012 to 2016 OFMEM's Standard Incident Reporting, during this period there were 40 reported civilian injuries and one fatality in the City. The majority of the injuries occurred in Group C – Residential occupancies accounting for almost all injuries in Sault Ste. Marie (95%). Moreover, the single fatality occurred in Group C – Residential occupancy classification. The two other injuries are accounted for in Group B – Care or Detention and Group E – Mercantile occupancies. The increased proportion of injuries and fatalities within Group C – Residential occupancies is consistent with trends in the province whereby, from 2012 to 2016, 92% of injuries and 96% of fatalities occurred in Group C – Residential occupancies

While injuries and fatalities by age/gender is not provided in OFMEM SIR summaries, the City does track the gender of injured or deceased individuals. As outlined in the SRA completed in 2016, the City experienced 17 fatalities between 1998 and 2016 including three in 2011; eleven of these fatalities were men (65%) and six were women (35%). According to the SRA, all of these historic fatalities occurred in Group C – Residential occupancies.

Table 40: City of Sault Ste. Marie Reported Civilian Injuries and Fire Deaths (2012–2016)

Occupancy Classification (OBC)	Occupancy Definition Fire Risk Sub-model (OFMEM)	Injuries	Fatalities
Group A – Assembly	Assembly occupancies	0	0
Group B – Care or Detention	Care or Detention occupancies	1	0
Group C - Residential	Residential occupancies	38	1
Group D - Business	Business and Personal Services Occupancies	0	0
Group E - Mercantile	Mercantile occupancies	1	0
Group F - Industrial	Industrial occupancies	0	0
Other occupancies	Not classified within the Ontario Building Code (i.e. farm buildings)	0	0
Total		**40**	**1**
(Source: OFMEM Standard Incident Reporting)			

Key Risk:
For the period 2012 to 2016, 95% of the fire related civilian injuries and 100% of the fatalities occurred in Group C – Residential occupancies.

5.4.2 SSM Fire Loss Data Analysis: Civilian Action

Table 41 shows the civilian action taken according to historic SSM fire loss data from 2012 to 2016. It is important to note when reviewing this table that civilian action can be informed by evacuation protocols. Namely, a civilian evacuation may not be required due to the nature of the emergency or the occupancy (e.g., buildings with shelter-in-place policies). The reporting categories available and presented in **Table 42** do not allow for this distinction so the results should be interpreted with caution.

With this in mind, the most typical civilian action over this period was a complete evacuation from a building which occurred in 41% of instances. The second most commonly reported civilian action is that an evacuation was not applicable or no one was present which occurred in 35% of the instances. If civilians did not evacuate, the primary reason as reported is that individuals did not perceive the event as an emergency. As shown in **Table 42**, the most commonly reported reason falls under the category of "not applicable – all evacuated or no persons present" at 86%. This may present a limitation in the data and reporting around civilian action around evacuation as the numbers in **Table 41** and **Table 42** are not consistent.

Table 41: Civilian Action: Evacuation (SSM Fire Loss Data - 2012 to 2016)

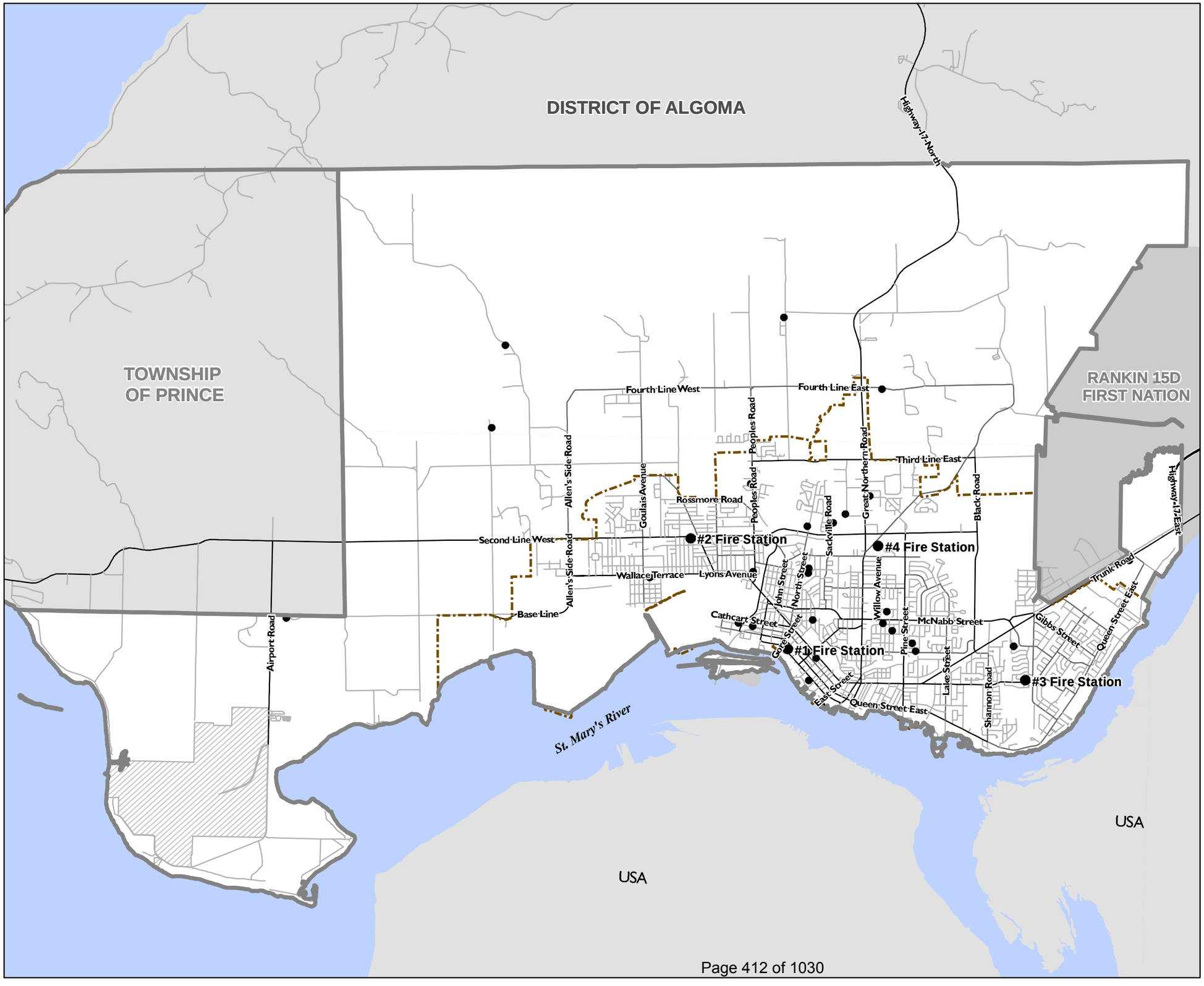
Civilian Action	2012	2013	2014	2015	2016	Total	%
All evacuated	33	32	32	40	38	*175*	*41%*
Some evacuated	3	2	4	7	4	*20*	*5%*
No one evacuated	18	12	15	14	19	*78*	*18%*
Not applicable, no one present	38	22	27	34	31	*152*	*35%*
Undetermined	0	0	1	2	4	*7*	*2%*
					Grand Total	***432***	***100%***

Table 42: Civilian Action: Reason for Not Leaving (SSM Fire Loss Data - 2012 to 2016)

Reason for Not Leaving	2012	2013	2014	2015	2016	Total	%
Person(s) did not perceive incident as emergency	17	8	6	6	18	*55*	*7%*
Age related (infants, children)	0	0	0	2	1	*3*	*0%*
Age related (seniors)	2	0	1	3	1	*7*	*1%*
Person(s) physically or mentally challenged	1	1	1	0	0	*3*	*0%*
Suspected impairment (alcohol, drugs)	0	0	0	0	1	*1*	*0%*
Smoke/fire blocked exit	0	3	0	3	1	*7*	*1%*
Physical barriers to exit (exit locked or obstructed)	1	1	0	0	0	*2*	*0%*
Not applicable - all evacuated or no persons present	151	111	134	161	154	*711*	*86%*
Undetermined	7	2	7	7	11	*34*	*4%*
					Grand Total	***823***	***100%***

5.4.3 Mapping Analysis: Civilian Injuries and Deaths

Figure 31 shows the distribution of civilian injuries and civilian fatalities occurring from 2012 to 2016 based on the SSM mapped fire loss data. Generally, these occurrences are distributed across the City but within the Urban Settlement Area Boundary. It should also be noted that there appears to be less injuries in the downtown area.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

NUMBER OF INJURIES AND FATALITIES
(SSM MAPPED FIRE CALL DATA 2012 - 2016)
FIGURE 31

- Fatality
- Injury
- Local Road
- Collector Road
- Arterial Road
- Existing Fire Station
- Urban Settlement Boundary
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\InjuryFatality.mxd

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STATUS: DRAFT
DATE: 2017-11-10

5.5 Fire Cause and Ignition

Assessing the possible cause of the fires reported is an important factor in identifying potential trends, or areas that may be considered for introducing additional public education or fire prevention initiatives as part of the community fire protection plan.

5.5.1 Fire Cause in Sault Ste. Marie and Ontario

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). Within OFMEM data, there are four categories of cause used to classify the cause of a fire. These include intentional, unintentional, other, and undetermined. **Table 43** provides a summary of the reported possible cause of the fires reported during the period of 2012 to 2016 in Sault Ste. Marie.

Table 43: City of Sault Ste. Marie Fire Loss by Major Acts or Omissions (2012-2016)

Nature	Fire Cause	City of Sault Ste. Marie			Province of Ontario			% Difference (+/- from Provincial %)
		# of Fires	% of Fires		# of Fires	% of Fires		
Intentional	Arson	28	10.3%	14.0%	2,136	5.9%	8.2%	+4.4%
	Vandalism	10	3.7%		808	2.2%		+1.5%
	Other Intentional	0	0.0%		13	0.0%		-
Unintentional	Children Playing	2	0.7%	68.3%	167	0.5%	67.9%	+0.3%
	Design/Construction/Maintenance deficiency	22	8.1%		2,861	7.9%		+0.2%
	Mechanical/Electrical failure	29	10.7%		5,373	14.9%		-4.2%
	Misuse of ignition source	109	40.2%		10,903	30.2%		+10.1%
	Other unintentional	12	4.4%		2,532	7.0%		+2.6%
	Undetermined	11	4.1%		2,682	7.4%		+3.4%
	Vehicle Collision	0	0.0%		25	0.1%		-0.1%
Other	Other	14	5.2%	5.2%	1,818	5.0%	5.0%	+0.1%
Undetermined	Undetermined	34	12.5%	12.5%	6,808	18.8%	18.8%	-6.3%
Unknown, not reported	Unknown, not reported	0	0.0%	0.0%	33	0.1%	0.1%	-0.1%
Total number of fires and percentage		**271**	**100%**	**100%**	**36,159**	**100%**	**100%**	**-**

(Source: OFMEM Standard Incident Reporting)

The "intentional" category recognizes the cause of a fire to be started for a specific reason. These are typically classified as arson fires, and for example can be related to acts of vandalism, or to achieve personal gain through insurance payment. As indicated in the table, 14.0% of the fires reported in Sault Ste. Marie for this period were intentional. This is higher (+5.8%) than the reported cause of fires in Ontario where 8.2% of fires were intentional. In terms of proportion, it appears as though the City has higher incidents of arson related causes (10.3%) compared to the Province (5.9%)

The "unintentional" category recognizes a number of the common causes of a fire that represent both human behavioural causes, such as playing with matches, and equipment failures, such as a mechanical failure. Unintentional causes represented 68.2% of the cause for the 271 fires during this period, with the leading unintentional cause being misuse of an ignition source at 40.2% (109 fires) followed by mechanical/electrical failure at 10.7% (29 fires). Within the province as a whole, 67.9% of fires were caused unintentionally with a similarly leading cause of misuse of ignition source and mechanical/electrical failure, reflecting a similar level of risk compared to the Province overall. This suggests a need for targeted education programs about fire causes and prevention.

The percentage of undetermined fires represents a total of 12.5% of all fire causes which is a lower rate as compared to Province at 18.8%. While this is a lower rate, there may be an opportunity to improve to reduce this gap.

Key Risk:
From 2012 to 2016, the City experienced a higher proportion of fires that were caused intentionally when compared to the Province (14% versus 8.8%), where the proportion caused by arson was 3.7% versus 2.2%, and the proportion related to vandalism was 10.3% versus 5.9%.

Key Risk:
Of the fires occurring in the City from 2012 to 2016, the leading cause of unintentionally set fires was misuse of an ignition source at 40.2%, compared to 30.2% in the Province.

Key Finding:
From 2012 to 2016, the City experienced a similar proportion of unintentionally set fires when compared to the Province (68.3% versus 67.9%).

5.5.2 Mapping Analysis: Sault Ste. Marie Possible Fire Cause

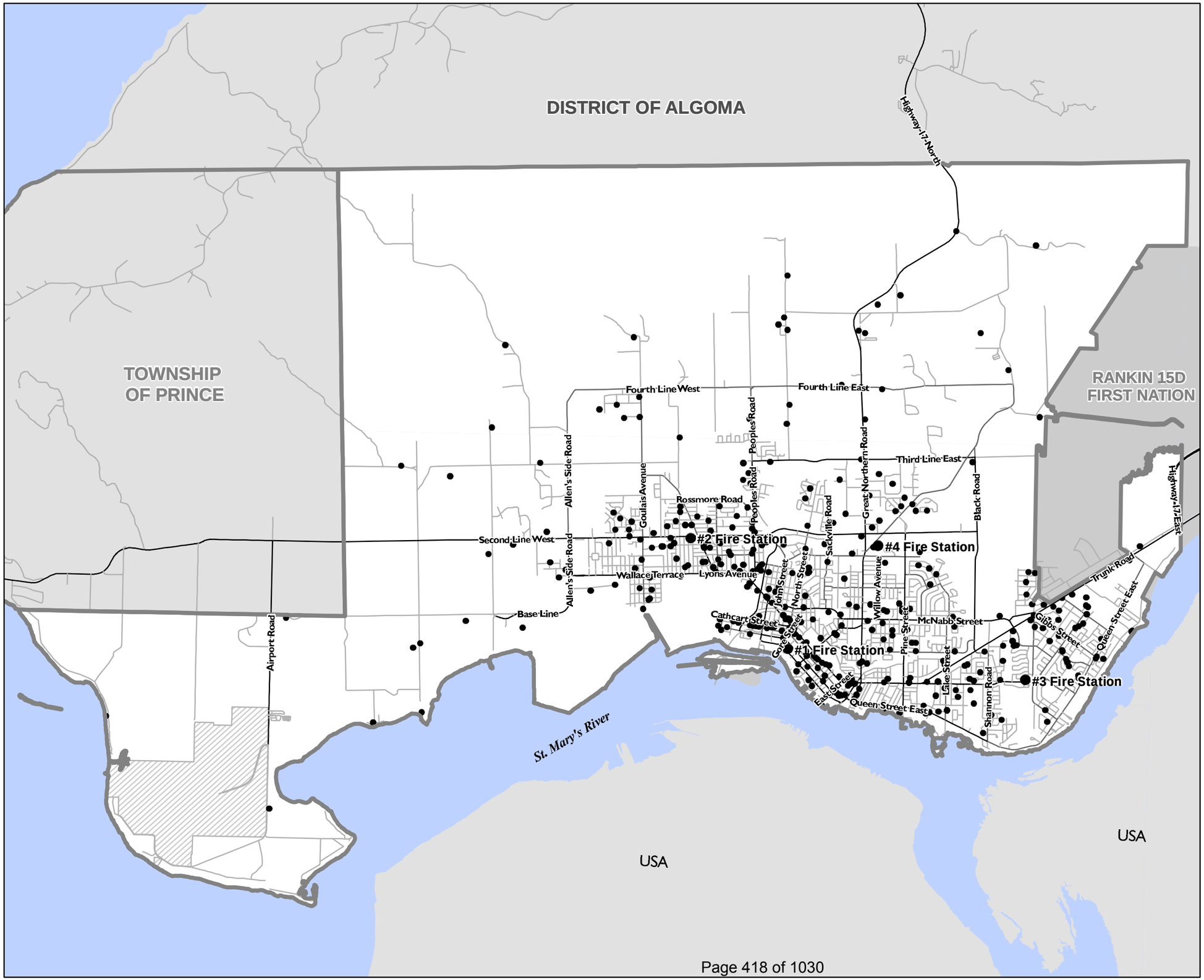
Figure 32 shows all fire calls occurring from 2012 to 2016 classified by the possible cause based on the mapped SSM fire loss data. The top three known causes identified within the OFMEM data from 2012 to 2016 are: misuse of ignition source (40.2%), arson (10.3%), and mechanical and electrical failure (10.7%). The density of incidents with these causes is mapped on the figures that follow.

Figure 33 maps the density of fire calls caused by a misuse of an ignition source using the mapped SSM fire loss data from 2012 to 2016. While the overall count of calls is not high, based on this analysis, clusters of areas with a higher density appear: Downtown; north of Downtown along North Street; west of Downtown near Lyons Avenue; and north of Downtown by Willow Avenue. Overall, most clusters occur within the Urban Settlement Area boundary.

Figure 34 shows an analysis for fires caused by a mechanical or electrical failure. The analysis shows that the overall distribution of calls is spread amongst the built up area of the city with a few areas that stand out including: Downtown around East Street; and west of Downtown around Lyons Avenue.

Figure 35 shows the density of fire calls that were caused by arson. Notable areas where calls relating to arson occurred include: Downtown; east of Downtown around Pine Street; and west of Downtown around Peoples Road.

Key Finding:
This analysis indicates that the Downtown appears to have a higher instance of fire calls related to arson, mechanical / electrical failure, and misuse of an ignition source.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

POSSIBLE CAUSE
(SSM MAPPED FIRE CALL DATA 2012 - 2016)
FIGURE 32

Fire Call

- Arson
- Vandalism
- Children Playing
- Design/Construction/Installation/ Maintenance Deficiency
- Mechanical/Electrical Failure
- Misuse of Ignition Source/Material Ignited
- Other Unintentional
- Other
- Undetermined
- Local Road
- Collector Road
- Arterial Road
- Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

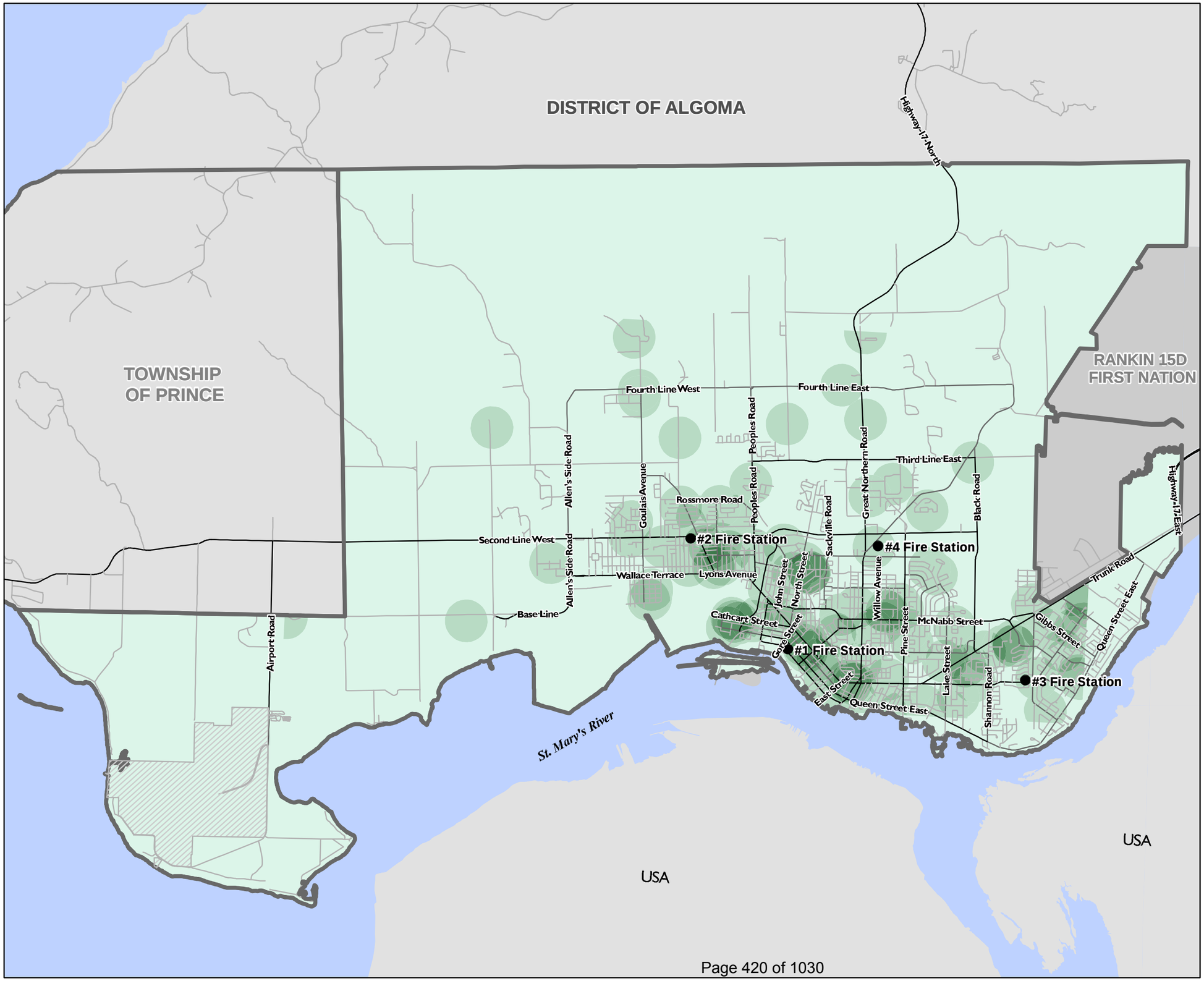
MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\PossibleCause.mxd

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DATE: 2017-11-10



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

DENSITY OF MISUSE OF IGNITION SOURCE (SSM MAPPED FIRE CALL DATA - 2012-2016)
FIGURE 33

Density of Fire Calls with Misuse of Ignition Source as the Possible Cause

- 0
- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 10+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\MisuseOfIgnitionSource.mxd

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PROJECT: 175984
STATUS: DRAFT
DATE: 2017-09-12

DISTRICT OF ALGOMA

TOWNSHIP OF PRINCE

RANKIN 15D FIRST NATION

USA

USA

St. Mary's River

Highway 17 North

Highway 17 East

Fourth Line West

Fourth Line East

Third Line East

Second Line West

Base Line

Rossmore Road

Wallace Terrace

Lyons Avenue

Cathcart Street

McNabb Street

Queen Street East

Trunk Road

Gibbs Street

Queen Street East

Allen's Side Road

Goulais Avenue

Peoples Road

Peoples Road

Great Northern Road

Black Road

Sackville Road

John Street

North Street

Willow Avenue

Gore Street

Pine Street

Lake Street

East Street

Shannon Road

Airport Road

#1 Fire Station

#2 Fire Station

#3 Fire Station

#4 Fire Station

CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

DENSITY OF ELECTRICAL/MECHANICAL FAILURE (SSM MAPPED FIRE CALL DATA - 2012-2016)

FIGURE 34

Density of Fire Calls with Electrical/Mechanical Source as the Possible Cause

- 0
- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 10+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- Airport
- First Nation Reserve

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

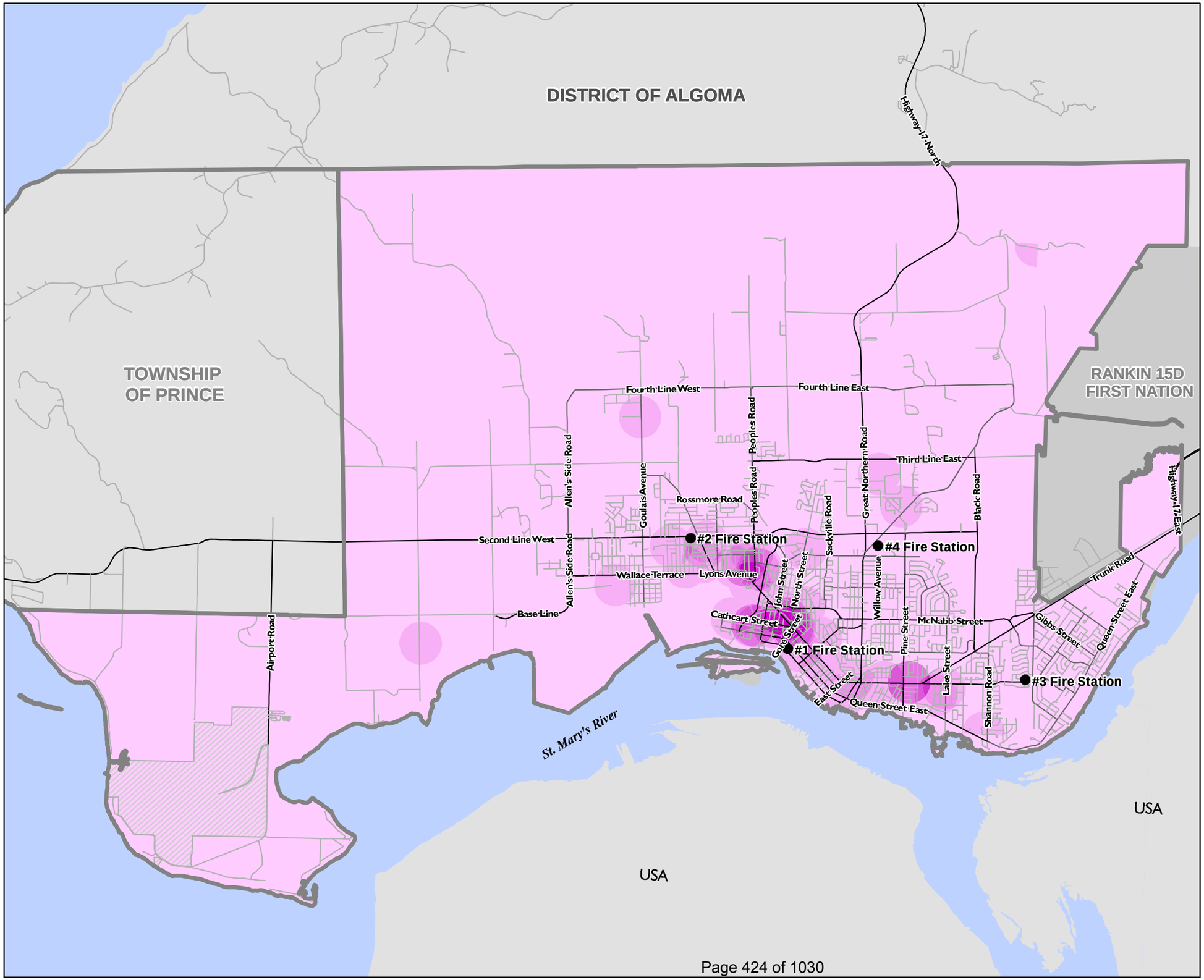
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PROJECT: 175984

STATUS: DRAFT

DATE: 2017-09-12



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

DENSITY OF ARSON AS POSSIBLE CAUSE
(SSM MAPPED FIRE CALL DATA 2012 - 2016)

FIGURE 35

Density of Fire Calls with Arson as the Possible Cause

- 0
- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 10+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Arson.mxd

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PROJECT: 175984
STATUS: DRAFT
DATE: 2017-09-12

5.5.3 Ignition Source in Sault Ste. Marie and Ontario

Table 44 illustrates the fire loss by source of ignition based on an analysis of the data provided from 2012 to 2016 from the Office of the Fire Marshal and Emergency Management for the City of Sault Ste. Marie and the Province. According to the 2013 NFPA glossary of terms, ignition source is defined as "*any item or substance capable of an energy release of type and magnitude sufficient to ignite any flammable mixture of gases or vapors that could occur at the site or onboard the vehicle*."

As illustrated in the table, most commonly, the ignition source is undetermined in Province at 23.9% of calls. However, in the case of the City, the undetermined source of ignition accounts for 17.0%, lower than the Province by 6.9%. The three most common known causes of fires in the home within the City are cooking equipment (24.4%), open flame tools/smokers articles (19.6%), and heating equipment sources (7.0%). This is similar to the province as a whole where these are also top ignition sources, but in the City, cooking equipment accounts for +6.6% and open flame tools/smokers articles account for +5.8% when compared to the Province.

Table 44: City of Sault Ste. Marie and the Province of Ontario Fire Loss by Reported Source of Ignition (2012 - 2016)

Reported Ignition Source	City of Sault Ste. Marie		Province of Ontario		% Difference (+/- from Provincial %)
	# of Fires	% of Fires	# of Fires	% of Fires	
Appliances	11	4.1%	1,651	4.6%	-0.5%
Cooking equipment	66	24.4%	6,427	17.8%	6.6%
Electrical distribution	13	4.8%	3,181	8.8%	-4.0%
Heating equipment, chimney etc.	19	7.0%	2,921	8.1%	-1.1%
Lighting equipment	7	2.6%	1,195	3.3%	-0.7%
Open flame tools/smokers' articles	53	19.6%	4,976	13.8%	5.8%
Other electrical/mechanical	10	3.7%	1,532	4.2%	-0.5%
Processing equipment	3	1.1%	458	1.3%	-0.2%
Miscellaneous	28	10.3%	3,685	10.2%	0.1%
Exposure	15	5.5%	1,473	4.1%	1.5%
Undetermined	46	17.0%	8,627	23.9%	-6.9%
Unknown, not reported	0	0.0%	33	0.1%	-0.1%
Total	**271**	**100%**	**36,159**	**100.0%**	-

(Source: OFMEM Standard Incident Reporting)

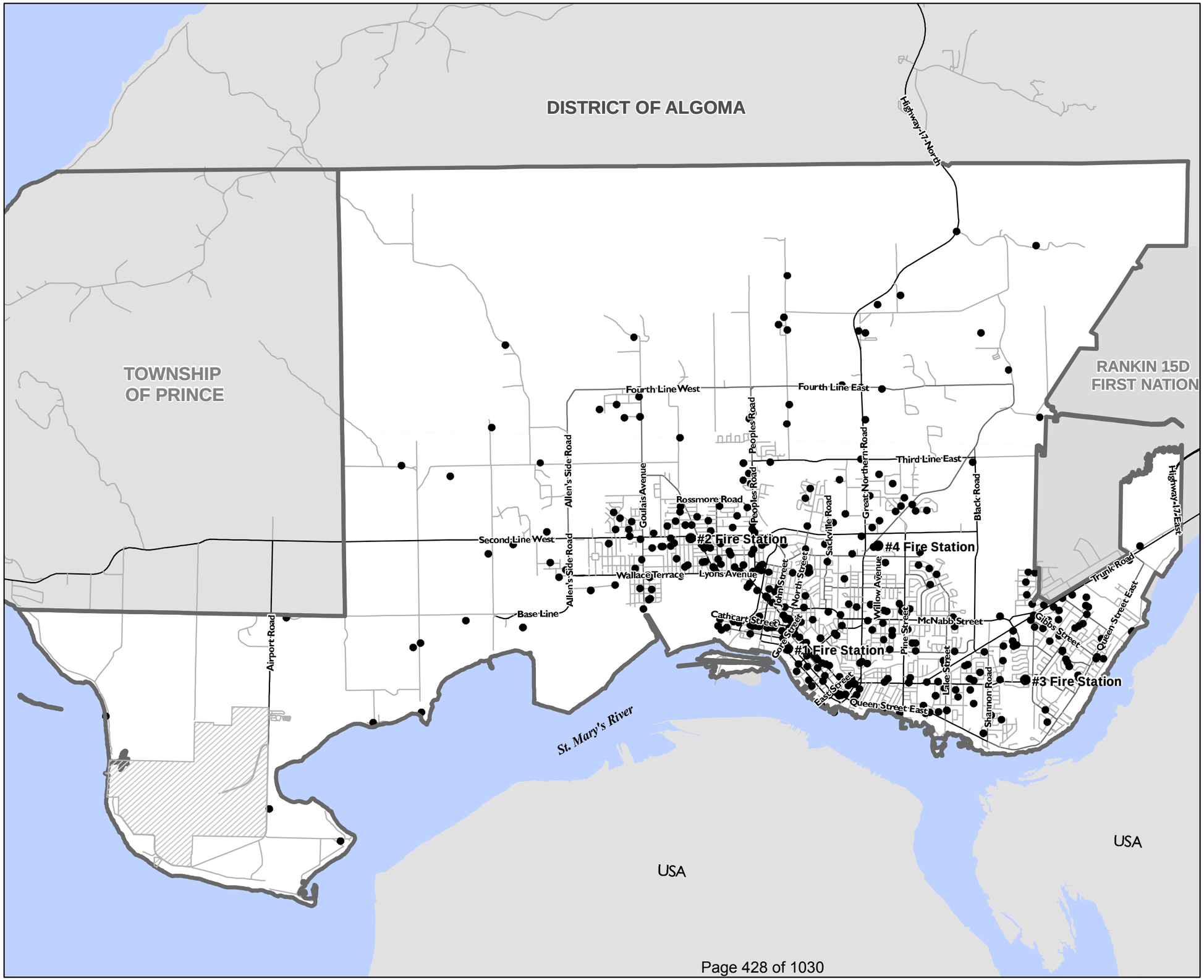
Key Risk
Of the fires occurring within the City from 2012 to 2016, 24.4% of fires occurred as a result of cooking equipment in Sault Ste. Marie, approximately 6.6% higher than that of the Province.

Key Risk
Of the fires occurring within the City from 2012 to 2016, 19.6% of fires occurred as a result of open flame tools / smokers' articles in the City, 5.8% higher than the Province.

5.5.4 Mapping Analysis: Sault Ste. Marie Ignition Source

Figure 36 shows fire calls occurring from 2012 to 2016 classified by the reported source of ignition based on analysis of the SSM mapped fire loss data. The top two known ignition sources based on the above analysis of the OFMEM SIR data from 2012 to 2016 are: cooking equipment (24.4%), and open flame tools/smokers articles (19.6%). These two known ignition sources are analyzed using the mapped data. **Figure 37** maps the density of fire calls with fires ignited open flame tools/smokers articles and **Figure 38** maps the density of fire calls with fires ignited by the use of cooking equipment. **Figure 37** shows a cluster of fires caused by cooking equipment in the Downtown, and east of Downtown (south of Trunk Road and east of Shannon Road). **Figure 38** shows a cluster of calls with open flame tools/smokers articles as an ignition source primarily in the Downtown.

Key Finding:
This analyses indicates that the Downtown appears to have a higher instance of fire calls with an ignition source of cooking equipment or open flame tools/smokers articles.



CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

SOURCE OF IGNITION
(SSM MAPPED FIRE LOSS DATA 2012 - 2016)

FIGURE 36

Fire Call

- Appliances
- Cooking Equipment
- Electrical Distribution
- Heating Equipment, Chimney Etc.
- Lighting Equipment
- Open Flame Tools/Smokers' Articles
- Other Mechanical/Electrical
- Processing Equipment
- Miscellaneous
- Exposure
- Undetermined
- Local Road
- Collector Road
- Arterial Road
- Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

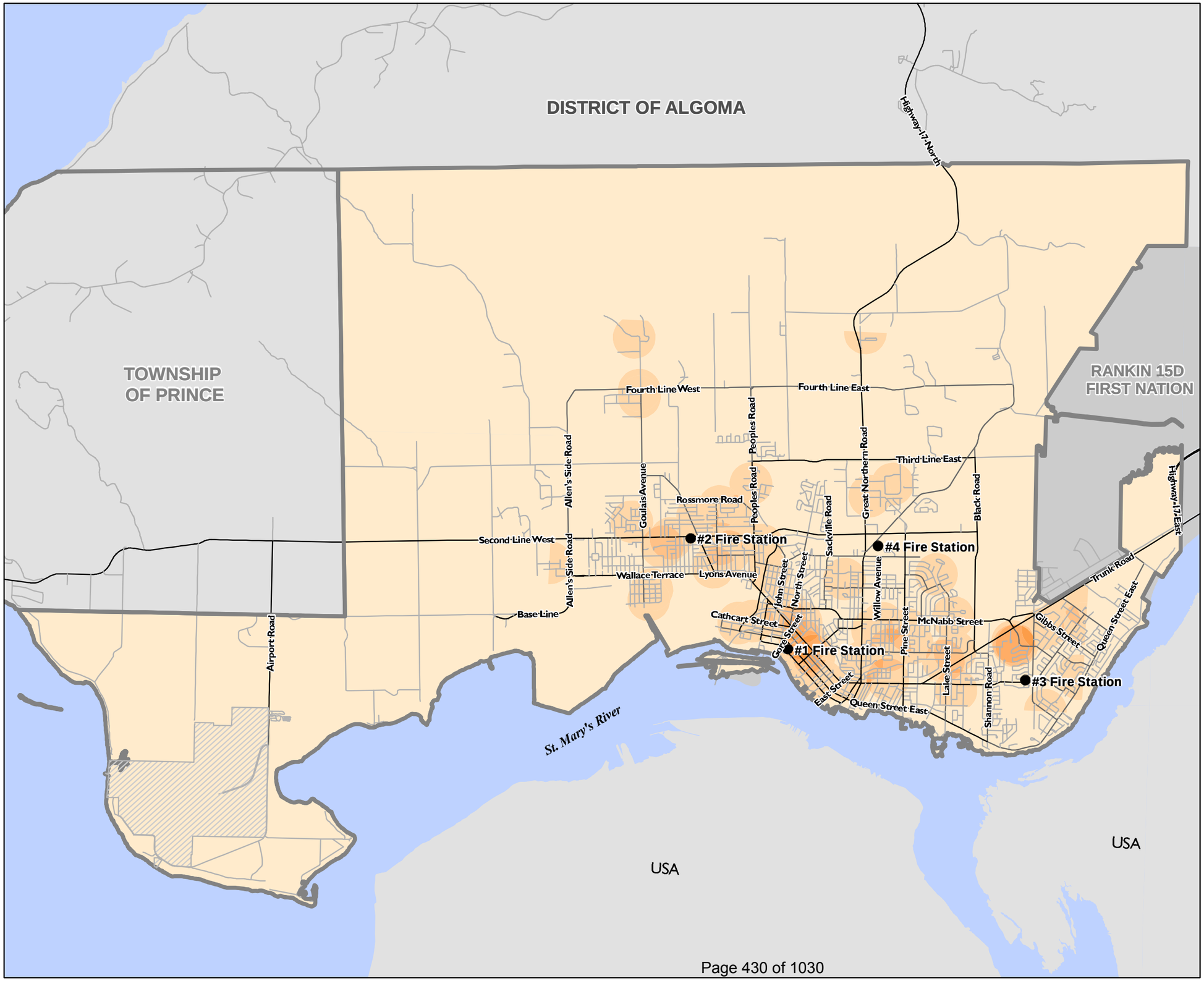
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DATE: 2017-09-12



CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

DENSITY OF COOKING EQUIPMENT AND SOURCE OF IGNITION (SSM FIRE LOSS DATA - 2012 - 2016)

FIGURE 37

Density of Fire Calls with Cooking Equipment as the Possible Cause

- 0
- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 10+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
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CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\CookingEquipment.mxd

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PROJECT: 175984

STATUS: DRAFT

DATE: 2017-09-12

DISTRICT OF ALGOMA

TOWNSHIP OF PRINCE

RANKIN 15D FIRST NATION

USA

USA

St. Mary's River

Highway 17 North

Fourth Line West

Fourth Line East

Third Line East

Second Line West

Rossmore Road

Wallace Terrace

Lyons Avenue

Base Line

Cathcart Street

McNabb Street

Queen Street East

Trunk Road

Gibbs Street

Queen Street East

Highway 17 East

Airport Road

Allen's Side Road

Goulais Avenue

Peoples Road

Sackville Road

Great Northern Road

Black Road

John Street

North Street

Willow Avenue

Gore Street

Pine Street

Lake Street

Shannon Road

East Street

#1 Fire Station

#2 Fire Station

#3 Fire Station

#4 Fire Station

CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

DENSITY OF OPEN FLAME TOOLS/ SMOKERS' ARTICLES SOURCE OF IGNITION (SSM MAPPED FIRE LOSS DATA 2012 - 2016)

FIGURE 38

Density of Fire Calls with Open Flame Tools/Smokers' Articles as the Possible Cause

- 0
- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 10+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\OpenFlameToolsSmokingArticles.mxd

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PROJECT: 175984

STATUS: DRAFT

DATE: 2017-09-12

5.6 Smoke Alarm Status

By law, smoke alarms are required on every storey of a dwelling and outside all sleeping areas in the Province of Ontario. Smoke alarm programs are also one of the required services to be provided by a fire department per the *Fire Protection and Prevention Act*, 1997. As a result, smoke alarm programs and compliance are a key component of public education and fire prevention activities provided by municipal fire departments across the province. The sections that follow provide an overview of smoke alarm status in Ontario, and present an analysis of related SSM fire loss data including mapping.

5.6.1 Smoke Alarm Status in Ontario

Data is publicly available at the Provincial level for the smoke alarm status in the event of a fire but not at the municipal level for ease of comparison. For the period 2011 to 2015, the OFMEM reported on the fires in Group C – Residential occupancies that resulted in a fire loss (financial or casualty) across the province. The results are shown in **Figure 39** (from OFMEM) and highlights that in 33% of the instances, there was no smoke alarm or one was present but did not operate. In 15% of instances, a smoke alarm was present but did not operate. This includes 4% of all loss fires where the smoke alarm did not have a battery or power. More than half (56%) of the homes with a casualty or property loss was not determined to have a smoke alarm in place that operated as anticipated.[22]

[22] Source: "Ontario Smoke Alarm Status in Residential Fires 2011 to 2015." Ontario Ministry of Community Safety and Correctional Services. Updated 22 Feb. 2017. Web. 26 Jul. 2017: https://www.mcscs.jus.gov.on.ca/english/FireMarshal/MediaRelationsandResources/FireStatistics/OntarioFires/SmokeAlarmStatusinHomeFires/stats_sa_status.html.

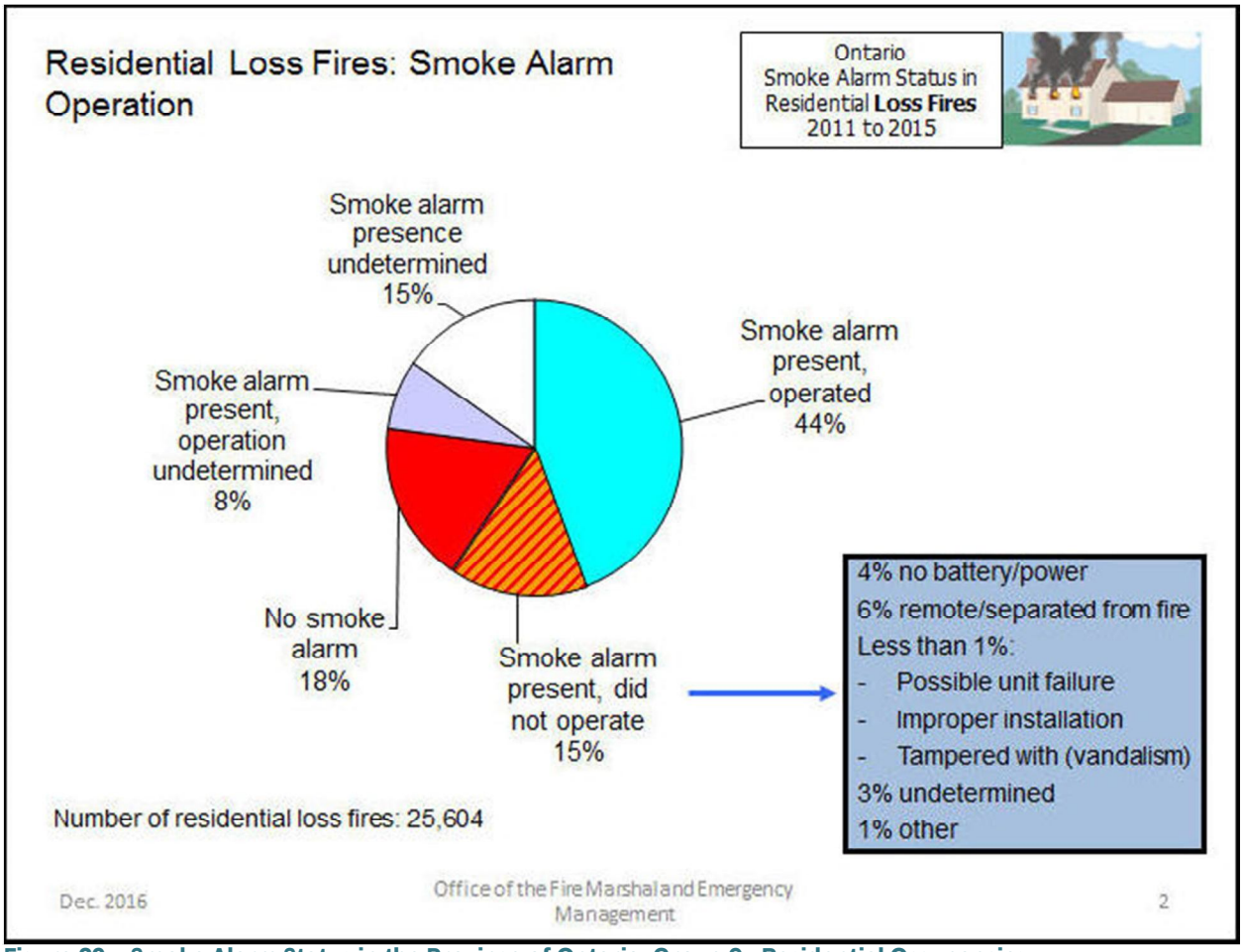


Figure 39: Smoke Alarm Status in the Province of Ontario, Group C - Residential Occupancies

(Source: OFMEM https://www.mcscs.jus.gov.on.ca/english/FireMarshal/MediaRelationsandResources/FireStatistics/OntarioFires/SmokeAlarmStatusinHomeFires/stats_sa_status.html)

5.6.2 SSM Fire Loss Data Analysis: Smoke Alarm Status

Currently SSMFS provides reporting on the smoke alarm status and fire alarm system presence and activation with the fire call data to the OFMEM. In regards to smoke alarms in a typical residential dwelling, **Table 45** highlights whether a smoke alarm was present and operating on the floor or in the suite of fire origin for period of 2012 to 2016. Of the 271 analyzed calls, 36% of the occurrences did not have a smoke alarm present. This is nearly twice as many occurrences when compared to the 18% provincial average between 2011 and 2015. A further 18% of occurrences saw a smoke alarm that was present but did not operate. This means that in half of the analyzed calls, (54% of the time) there was not operational smoke alarm present. In about one-third of instances was there known to be a fully operational smoke alarm (32%).

In about one-fifth of instances, the presence of a smoke alarm was undetermined (9%) or the operation of an existing smoke alarm was undetermined (4%). In the worst case scenario, this could be an additional 13% of instances where a smoke alarm was not present and/or operational.

These provincial and local statistics support having a targeted and proactive smoke alarm program in place. The statistics also suggest that there is value in formally compiling and analyzing this data at a local level. This information could be used to enhance the local smoke alarm program, and, over time, measure trends.

Key Risk

Based on the analyses of smoke alarms being present and operating the information available indicates that there is a potential risk that in 54% of the instances there was either no smoke alarm present, or it was not operational.

Key Finding

About a fifth of incidences the status or presence of a smoke alarm went underdetermined which could account for an additional 13% of instances where a smoke alarm was not present or operational.

Table 45: Smoke Alarm on Floor or Suite of Fire Origin: Presence and Operation

Smoke Alarm Status on Floor of Origin	City of Sault Ste. Marie* (All Occupancy Types)							Province of Ontario** (Group C - Residential)
	2012	2013	2014	2015	2016	Total	%	2011 - 2015
No smoke alarm	15	19	17	25	21	*97*	*36%*	18%
Smoke alarm present and operated	21	13	12	20	22	*88*	*32%*	44%
Smoke alarm present, did not operate	10	7	13	10	10	*50*	*18%*	15%
Smoke alarm present, operation undetermined	2	3	4	2	1	*12*	*4%*	8%
Smoke alarm presence undetermined	5	2	0	7	10	*24*	*9%*	15%
					Grand Total	***271***	***100%***	**25,604**

**(Source: Analysis of SSM Fire Loss Data 2012 to 2016)*
***(Source: OFMEM Website, http://www.mcscs.jus.gov.on.ca/english/FireMarshal/MediaRelationsandResources/FireStatistics/OntarioFires/SmokeAlarmStatusinHomeFires/stats_sa_status.html)*

Table 46 presents the reported reasons for which a smoke alarm on the floor or suite of origin failed to operate. The value in accuracy of this type of data is that it could be used to create targeted public education programs. The top reported reason for failure to operate is "Not applicable: Alarm operated, presence/operation undetermined OR no alarm" at 68% of the calls. This leaves a remaining 76 calls that have been categorized based on the reason of failure to operate. (It should be noted that this does

not perfectly reflect the 271 calls reported in **Table 45** that had a smoke alarm present but did not operate reflecting some opportunities to improve reporting.) Of the calls reported in **Table 46** with a stated reason, the most common reason for a failure to operate is "Remote from fire – smoke did not reach alarm" at 9%, followed by "other reason" at 8%, and 'undetermined' and 'no battery' at 4%.

Table 46: Smoke Alarm on Floor or Suite of Fire Origin: Reason for Failure to Operate (SSM Fire Loss Data - 2012 to 2016)

Reason for Failure to Operate	2012	2013	2014	2015	2016	Total	%
No battery	3	1	3	4	1	*12*	*4%*
Dead battery	1	2	2	0	1	*6*	*2%*
Electrical line or battery not connected	1	0	0	1	3	*5*	*2%*
Remote from fire – smoke did not reach alarm	6	3	6	7	3	*25*	*9%*
Separated from fire (e.g., wall, etc.)	0	1	0	0	4	*5*	*2%*
Improper installation of unit	0	0	0	0	0	*0*	*0%*
Unit failure	0	0	0	0	0	*0*	*0%*
Tampered with (vandalism)	0	0	0	0	1	*1*	*0%*
Other reason	4	8	4	3	3	*22*	*8%*
Not applicable: Alarm operated, presence/ operation undetermined or no alarm	37	26	29	47	44	*183*	*68%*
Reason for failure undetermined	1	3	2	1	3	*10*	*4%*
Grand Total						***269***	***100%***

Table 47 summarizes the analysis of the call data that reported on whether a smoke alarm was present on every level. Of those reported calls, it was identified that in 39% of cases there was an operational alarm on every level of the residential occupancy. It was reported that in 15% of instances, the presence of a smoke alarm on every level was undetermined.

Table 47: Smoke Alarm on Every Level (SSM Fire Loss Data - 2012 to 2016)

Smoke Alarm on Every Level	2012	2013	2014	2015	2016	Total	%
Yes, Operational alarms on every level	25	16	16	23	25	*105*	*39%*
No, alarms present on every level, not all operational	3	5	4	5	4	*21*	*8%*
No, alarms not present on every level	4	3	5	3	4	*19*	*7%*
No alarms present	3	3	5	8	3	*22*	*8%*
Not applicable: Non-residential structure	12	11	11	13	16	*63*	*23%*
Undetermined	6	6	5	12	11	*40*	*15%*
					Grand Total	***270***	***100%***

Understanding the impact of smoke alarm operation on the evacuation of persons at risk is another useful statistic that can be used to inform targeted public education programs within the City of Sault Ste. Marie. As shown in **Table 48**, most of the reported responses to evacuation was identified as not applicable. In 14% of instances, all of the persons at risk of injury self-evacuated, in 4% of the time only some persons evacuated and in 6% no one self-evacuated.

Table 48: Impact of Smoke Alarm Operation Evacuation of Persons at Risk (SSM Fire Loss Data - 2012 to 2016)

Impact of Smoke Alarm Operation Evacuation of Persons at Risk	2012	2013	2014	2015	2016	Total	%
All persons (at risk of injury) self-evacuated as a result of hearing alarm	7	7	7	10	7	38	*14%*
Some persons (at risk) self-evacuated as a result of hearing alarm	1	1	3	2	4	11	*4%*
No one (at risk) self-evacuated as a result of hearing alarm	4	2	1	2	6	15	*6%*
Alarm operated but failed to alert occupant(s) (at risk)	0	0	0	1	1	2	*1%*
Not applicable: Occupant(s) first alerted by other means	19	15	13	19	18	84	*31%*
Not applicable: No alarm, no persons present	15	14	17	21	18	85	*31%*
Undetermined	7	5	5	9	9	35	*13%*
					Grand Totals	***270***	***100%***

Within certain occupancies, such as an apartment building, a fire alarm system may be present. According to the analysis of the 2012 to 2016 call data shown in **Table 49**, in 39% of instances, the presence of a fire alarm system was not applicable for the structure type. For those instances where it was applicable, 34% of the time there was no fire alarm system present (93 over the five year period) and there was a system present 21% of the time. The presence of a fire alarm system was not determined in 6% of all fire calls (15 calls) over the five year period.

Table 49: Fire Alarm System Presence (SSM Fire Loss Data - 2012 to 2016)

Fire Alarm System Presence	2012	2013	2014	2015	2016	Total	%
Fire alarm system present	7	8	11	16	16	*58*	*21%*
No fire alarm system	21	17	16	20	19	*93*	*34%*
Not applicable for structure type (detached/semi, town residential, other buildings etc.)	22	18	18	22	25	*105*	*39%*
Undetermined	3	1	1	6	4	*15*	*6%*
					Grand Total	***271***	***100%***

Table 50 summarizes the instance of fire alarm system operation. Of those instances where a fire alarm system was in place, in 16% of instances the fire alarm system operated, in 4% of instances it was present but did not operate, and in 6% of instances the operation was undetermined.

Table 50: Fire Alarm System Operation (SSM Fire Loss Data 2012 to 2016)

Fire Alarm System Operation	2012	2013	2014	2015	2016	Total	%
Fire alarm system operated	6	6	9	10	11	*42*	*16%*
Fire alarm system did not operate	2	0	2	5	1	*10*	*4%*
Not applicable, no fire alarm system	44	36	34	43	45	*202*	*75%*
Operation Undetermined	1	2	1	5	7	*16*	*6%*
					Grand Totals	***270***	***100%***

Similar to the impact of the operation of a smoke alarm, understanding the impact of the operation of a fire alarm can be used to develop targeted public education programs. **Table 51** shows the analysis of the impact of fire alarm operation on the evacuation of persons at risk. In 78% of instances, this was reported as not applicable due to occupants being alerted by other means, or that no alarm system or persons were present. In 8% of instances (22 fire calls), all persons who were at risk evacuated as a result of hearing a fire alarm.

Table 51: Impact of Fire Alarm Operation Evacuation of Persons at Risk (SSM Fire Loss Data - 2012 to 2016)

Fire Alarm Impact	2012	2013	2014	2015	2016	Total	%
All persons (at risk) evacuated as a result of hearing fire alarm	2	4	5	7	4	*22*	*8%*
Some persons (at risk) evacuated as a result of hearing fire alarm	1	0	2	2	3	*8*	*3%*
No one (at risk) evacuated as a result of hearing fire alarm	2	0	1	1	2	*6*	*2%*
Fire Alarm system operated but failed to alert occupant(s) (at risk)	0	1	0	0	0	*1*	*0%*
Not applicable: Occupant(s) first alerted by other means	10	5	5	12	12	*44*	*16%*
Not applicable: No fire alarm system, no persons present	34	31	31	33	39	*168*	*62%*
Undetermined	4	3	2	8	4	*21*	*8%*
Grand Totals						***270***	***100%***

Table 52 shows how structure fires were initially detected from 2012 to 2016 according to the SSM fire loss data. In the majority of instances (74%), the fire was detected by a person either visually, through smell, or sound. In 21% of total instances, a person was notified by a smoke alarm, fire alarm, or automatic sprinkler system activation. There is a key limitation to this analysis, however, in that the high proportion of person detected fires may be linked to the relatively low proportion of present and operational smoke alarms or fire alarms.

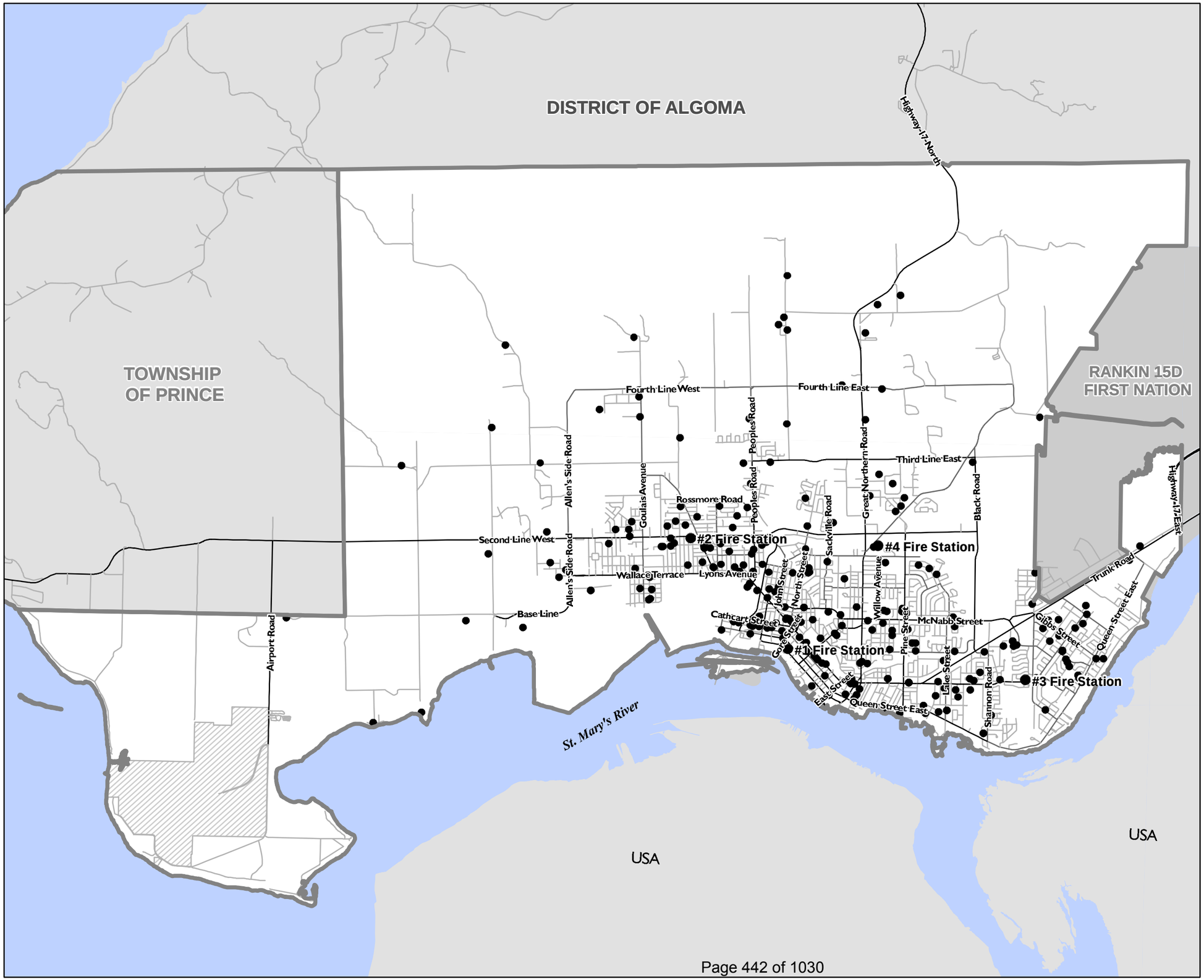
Table 52: Structure Fires Initial Detection (SSM Fire Loss Data - 2012 to 2016)

Structure Fires Initial Detection	2012	2013	2014	2015	2016	Total	%
Smoke alarm device sounded	9	6	7	13	11	*46*	*17%*
Fire alarm system sounded	0	2	2	1	2	*7*	*3%*
Automatic sprinkler system activated	0	0	0	1	1	*2*	*1%*
Automatic system other than sprinkler	1	0	0	0	0	*1*	*0%*
CO detector sounded	0	0	0	0	0	*0*	*0%*
Person detected - visual sighting, smell or sound	40	35	35	46	48	*204*	*74%*
Other initial detection	1	0	1	1	1	*4*	*1%*
No initial detection (burned out before detection)	0	0	1	1	0	*2*	*1%*
Undetermined	2	1	1	2	3	*9*	*3%*
					Grand Total	***275***	***100%***

5.6.3 Mapping Analysis: Sault Ste. Marie Smoke Alarm Presence and Operation

Figure 40 maps the fire calls from 2012 to 2016 categorized based on whether a smoke alarm was present or operational. **Figure 41** takes a closer look at the density of calls where there was no smoke alarm present or where one was present but failed to operate. Based on this analysis, there appears to be a cluster of instances of calls in areas including: Downtown; east of Downtown around Pine Street and McNabb Street, and around Gibbs Street; and west of Downtown around Lyons Avenue. This density may be linked to the occurrence of calls taking place.

Key Finding:
The areas most likely to have a high incidence of no operating smoke alarms are Downtown with some clusters to the east and west.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

SMOKE ALARM PRESENCE AND OPERATION
(SSM MAPPED FIRE LOSS CALL DATA 2012 - 2016)
FIGURE 40

Smoke Alarm Presence and Operation

- No smoke alarm
- Smoke alarm presence undetermined
- Smoke alarm present and operated
- Smoke alarm present, did not operate
- Smoke alarm present, operation undetermined
- Local Road
- Collector Road
- Arterial Road
- Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

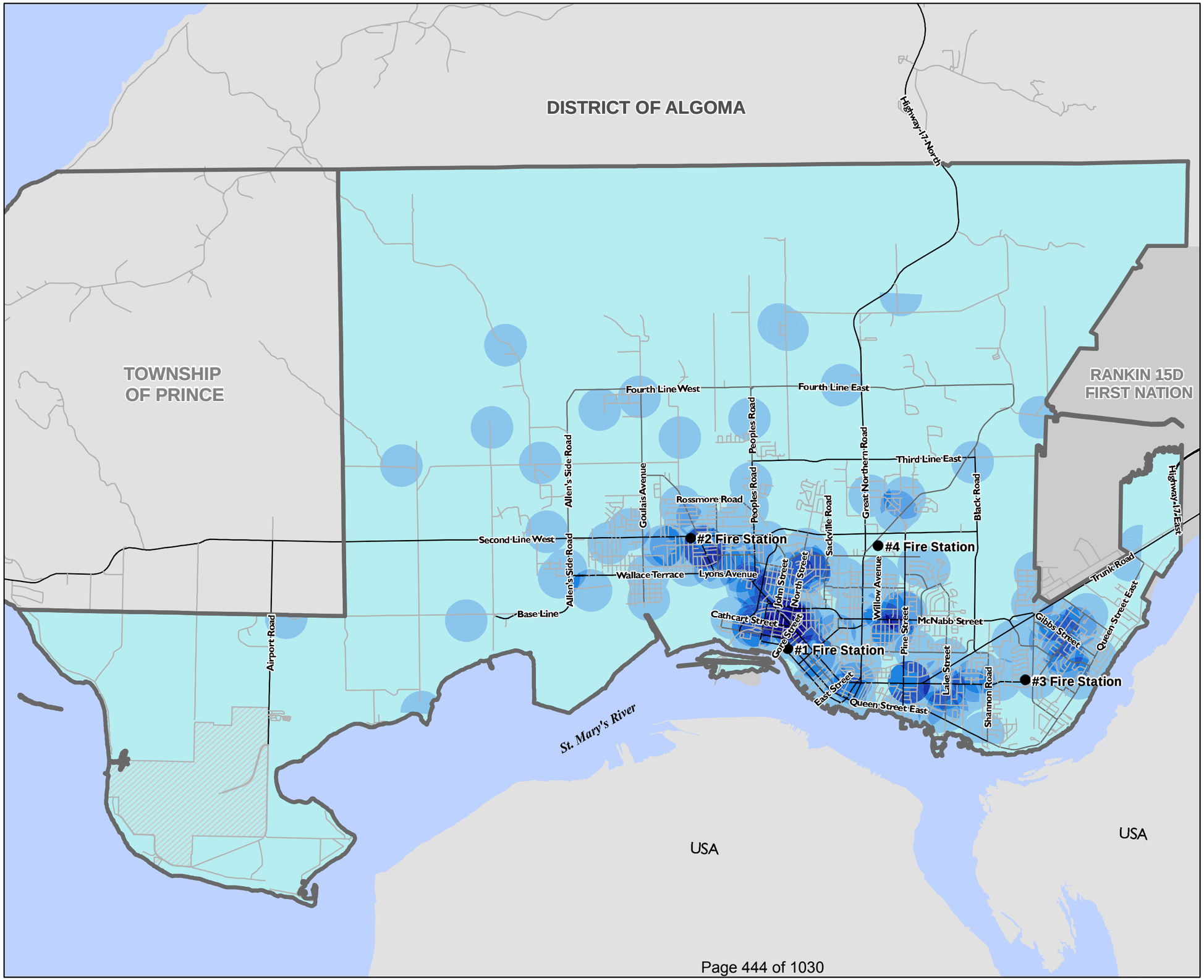
MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\SmokeAlarm_Points.mxd

DILLON CONSULTING

PROJECT: 175984
STATUS: DRAFT
DATE: 2017-09-12



CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

SMOKE ALARM PRECENCE AND OPERATION CALLS WITH NO ALARM OR NON-OPERATIONAL (SSM MAPPED FIRE LOSS DATA 2012 - 2016)

FIGURE 41

Density of Fire Calls Where Smoke Alarm Failed to Operate or Not Present

- 0
- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 11+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Density_SmokeAlarms.mxd

DILLON CONSULTING

PROJECT: 175984

STATUS: DRAFT

DATE: 2017-09-12

5.7 Fire Suppression System Status

Fire suppression systems are essentially automatic systems that extinguish fires without human intervention, such as fire sprinklers. These systems can detect fires using a variety of methods including heat sensors, wiring, or manual detection. These systems are often required in Group F – Industrial occupancies that may have a high fuel load, result in a large fire loss, or be home to hazardous materials. In 2013 Ontario became the first province to require the phasing-in of fire suppression systems in long-term care facilities or other facilities home to vulnerable occupants. Previously fire suppression systems were only required in facilities built in Ontario after 1998. These are important systems that prevent the loss of life and property in part due to the fire growth and time for flashover combined with occupants with mobility or cognitive issues.

Understanding the status of a fire suppression system in the case of a fire can be used as a check regarding prevention (e.g., inspection) activities. Although the OFMEM requires fire departments to report on the presence of fire suppression system status in every structure fire they attend, the data is not available as part of Standard Incident Reporting. Although the City of Sault Ste. Marie has a number of industrial buildings, these types of occupancies are typically subject to specific codes and standards that, for example, require a full sprinkler system or are equipped with a fire alarm system. Consideration should be given to formally tracking and reporting on this data as a means of informing and assessing the success of public education and prevention programming. The section that follows presents an analysis of the SSM from 2012 to 2016 around fire suppression system status.

5.7.1 SSM Fire Loss Data Analysis: Fire Suppression System Status

There are a number of variables available to analyze around fire suppression system status within the 2012 to 2016 SSM fire loss data. **Table 53** presents the results of the analysis of the call data regarding whether a sprinkler system was present. **Table 54** presents whether the sprinkler system was operational. In the case of the presence of a sprinkler system, it was reported that in the majority of instances (92%), no sprinkler system was present. However, since the City is following the SIR codes defined by OFMEM, this does not allow for distinguishing between whether a sprinkler system is not present but should be in place. There is a similar reporting challenge when looking at whether a sprinkler system was operational – 93% of reported incidents are classified as "Not applicable – no sprinkler systems present" but it does not offer the distinction to whether it was required and should be present. In the cases where a sprinkler system was present but did not activate, it did not activate 2% of the time because it was remote or separated from the fire. There are a proportion of reported calls (4% in sprinkler system presence, and 2% in sprinkler system operation) that are classified as undetermined.

Table 53: Sprinkler System Presence (SSM Fire Loss Data - 2012 to 2016)

Sprinkler System Presence	2012	2013	2014	2015	2016	Total	%
Full sprinkler system present	2	0	0	2	2	6	*2%*
Partial sprinkler system present	0	0	2	2	1	5	*2%*
No sprinkler system present	49	43	44	54	60	250	*92%*
Undetermined	2	1	1	6	1	11	*4%*
					Grand Totals	***272***	***100%***

Table 54: Sprinkler System Operation (SSM Fire Loss Data - 2012 to 2016)

Sprinkler System Operation	2012	2013	2014	2015	2016	Total	%
Sprinkler system activated	1	0	0	1	2	*4*	*1%*
Sprinkler did not activate: remote or separated from fire	1	1	2	2	0	*6*	*2%*
Sprinkler did not activate: fire too small to trigger system	0	0	0	1	0	*1*	*0%*
Sprinkler did not activate: other reason	0	0	0	0	1	*1*	*0%*
Sprinkler did not activate: reason unknown	0	0	0	0	0	*0*	*0%*
Not applicable - no sprinkler system present	51	43	44	54	60	*252*	*93%*
Activation/Operation undetermined	0	0	0	5	1	*6*	*2%*
					Grand Totals	***270***	***100%***

5.8 Fire Loss Profile Outcomes

The fire loss profile considers fire-related risks arising from several characteristics, including fires by occupancy type, civilian injuries/fatalities, fire cause and ignition, and smoke alarm/fire suppression system status. The outcomes of this analysis are summarized in **Table 55.** These outcomes are revisited in **Section 1.0** where further analysis and discussion linking risk and fire service levels is presented.

Table 55: Fire Loss Profile - Summary of Outcomes

Fire Loss Outcomes	Type
Structural fires occurring in Group C – Residential buildings are the most frequent structural fire types and they occurred at a higher rate than the Province between 2012 and 2016 (80.4% vs. 73.4%), for a total of 218 fires over the five year period.	Key Risk
Although occurring at a lower proportion compared to the Province from 2012 to 2016 (5.2% vs. 7.5%), Group F – Industrial occupancies accounted for 19.2% of the property loss from structure fires in the City, while accounting for just 14 fires.	Key Risk
For the period 2012 to 2016, 95% of the fire related civilian injuries (38 injuries) and 100% of the fatalities (1 fatality) occurred in Group C – Residential occupancies.	Key Risk
From 2012 to 2016, the City experienced a higher proportion of fires that were caused intentionally when compared to the Province (14% versus 8.8%), where the proportion caused by vandalism was 3.7% (10 fires) versus 2.2%, and the proportion related to arson was 10.3% (28 fires) versus 5.9%.	Key Risk
Of the fires occurring in the City from 2012 to 2016, the leading cause of unintentionally set fires was misuse of an ignition source at 40.2% (109 fires), compared to 30.2% in the Province.	Key Risk
From 2012 to 2016, the City experienced a similar proportion of unintentionally set fires when compared to the Province (68.3% versus 67.9%), accounting for 185 fires.	Key Finding
This analysis indicates that the Downtown appears to have a higher instance of fire calls related to arson, mechanical / electrical failure, and misuse of an ignition source.	Key Finding
Of the fires occurring within the City from 2012 to 2016, 24.4% of fires (66) occurred as a result of cooking equipment in Sault Ste. Marie, approximately 6.6% higher than that of the Province.	Key Risk
Of the fires occurring within the City from 2012 to 2016, 19.6% of fires (53) occurred as a result of open flame tools / smokers' articles in the City, 5.8% higher than the Province.	Key Risk
The Downtown appears to have a higher instance of fire calls with an ignition source of cooking equipment or open flame tools/smokers articles.	Key Finding
Based on the analyses of smoke alarms being present and operating, there is a potential risk that in 54% (147) of the incidents there was either no smoke alarm present, or it was not operational.	Key Risk
In about a fifth of incidences the status or presence of a smoke alarm went underdetermined which could account for an additional 13% of instances where a smoke alarm was not present or operational.	Key Finding
The areas most likely to have a high incidence of no operating smoke alarms are Downtown with some clusters to the east and west.	Key Finding

6.0 Response Profile

As described in NFPA 1730, the Response Profile describes and presents and analysis of the types of emergencies to which Sault Ste. Marie Fire Services responds. The profile assesses the historical emergency response capabilities of Sault Ste. Marie Fire Services based on data collected by the department for the period from January 2012 to December 2016. This includes an analysis of annual call volume, call volume by response type, comparison to provincial breakdown, and an analysis of the spatial distribution of calls.

6.1 Response Profile Methodology

To develop an understanding of community risks, the response profile analyzes the department's historic call data based on detailed Unit Response Data provided by SSMFS. The analysis provided within this profile is based on all historical calls responded to by the SSMFS for the years 2012 to 2016. This profile provides a statistical assessment of historic call volumes for the City as a whole by year as well as a detailed breakdown of calls by type and corresponding volumes. The call types are focused on call categories used by SSMFS within the fire department's Annual Reports:

1. Fire;
2. Pre-Fire Conditions;
3. False Alarm;
4. Medical;
5. Rescue;
6. Public Hazard; and
7. Other (No Fire).

Throughout this analysis these seven categories will be referred to as "SSM Response Types". Where appropriate, the focus of the analysis is based on the first six categories, while the seventh category 'Other (No Fire)' is often excluded from the analysis as the calls encompassed in this category are less critical to assessing community risk. The Other (No Fire) category consists of the following call types:

- Assistance to Police
- Assistance to Other Agencies
- Other Public Service
- Call cancelled on route
- Incident not found
- Assistance not required by other agency
- Other Response
- Assisting Other FD: Mutual Aid
- Assisting Other FD: Automatic Aid
- Assisting Other FD: Fire Protection Agreement
- Assisting Other FD: Other
- Illegal grow operation (no fire)
- Illegal drug operation (no fire)

Fire calls are broken down into three sub categories: Fire - Structure, Fire - Vehicle, and Fire - Other. Fire - Other includes no loss fires such as: grass/brush fires, dumpster fires, utility pole electrical fires, Substation electrical fires, and burning complaints. It is important to note that the SSM Response Type was assigned within what is referred to as SSM Unit Response Data. Each call over the five year period was assigned to one the seven categories.

In assigning the SSM Response Types for analysis purposes, there are two key methodological considerations. First, while the SSM Response Types are informed by categories used by the department within the Annual Reports, it is important to recognize that there may be some discrepancies in the call volumes and types reported within this CRA and the Annual Reports. This is in part because the CRA reflects an independent analysis of a dataset provided by and approved by SSMFS. The raw data provided was cleaned and set up for the purposes of the CRA and fire suppression services review as part of the Fire Master Plan. This included, for example, considering exposure related calls as one incident while when the department reports to the OFMEM (following reporting guidelines) requires these types of calls to be considered as separate records.

Second, two attributes within the call data were used to inform the assignment of the SSM Response Type categories: Response Code and Incident Type. Response Code was the primary source for this assigned because this type of code is based on the specific emergency related categories in the Standard Incident Report Codes List provided by the OFMEM. Within typical SSMFS procedures, this category is assigned by the Captain who was on-scene at the incident, based on a clearer understanding of the actual nature of the incident. The Incident Type reflects a call type assigned by the dispatcher at the onset of the call based on the information best available to that individual at the time. For this reason, it is not uncommon for the Incident Type to not be aligned with the Response Code.

The Response Code was the primary source used to assign the SSM Response Type categories in part because it reflects the on-scene understanding of the event, as well as that it is this code that is reported to the Province. However, for the purposes of subdividing Fire calls into structure, vehicle, or other, the Incident Type attribute was used to inform this assignment as it reflected a secondary set of available information for classification purposes. This data processing resulted in a key data source a spreadsheet which will be referred to as the SSM Unit Response Data.

To facilitate the mapping analysis, this SSM Unit Response Data was then mapped to create “SSM Mapped Unit Response Data” based on available X, Y coordinates. This mapped dataset was assessed spatially using ArcGIS to highlight the spatial distribution of calls based on the Sault Ste. Marie Response Types.

6.2 SSMFS Annual Call Volume

Annual call volume provides a high level understanding of the frequency of incidents occurring within Sault Ste. Marie. A summary of the total number of calls within the City from January 2012 to December 2016 is shown in **Figure 42.** Over the five year period, the total amount of annual calls has increased by 10% (reflecting an average annual increase of 2%). However, the annual call volume has varied on an annual basis with the highest amount of calls occurring in 2013 with 2,633 calls made and the lowest occurring in 2012 with 2,420 calls resulting overall in a relatively stable call volume. The average call volume over the span of the last five years is 2,565.

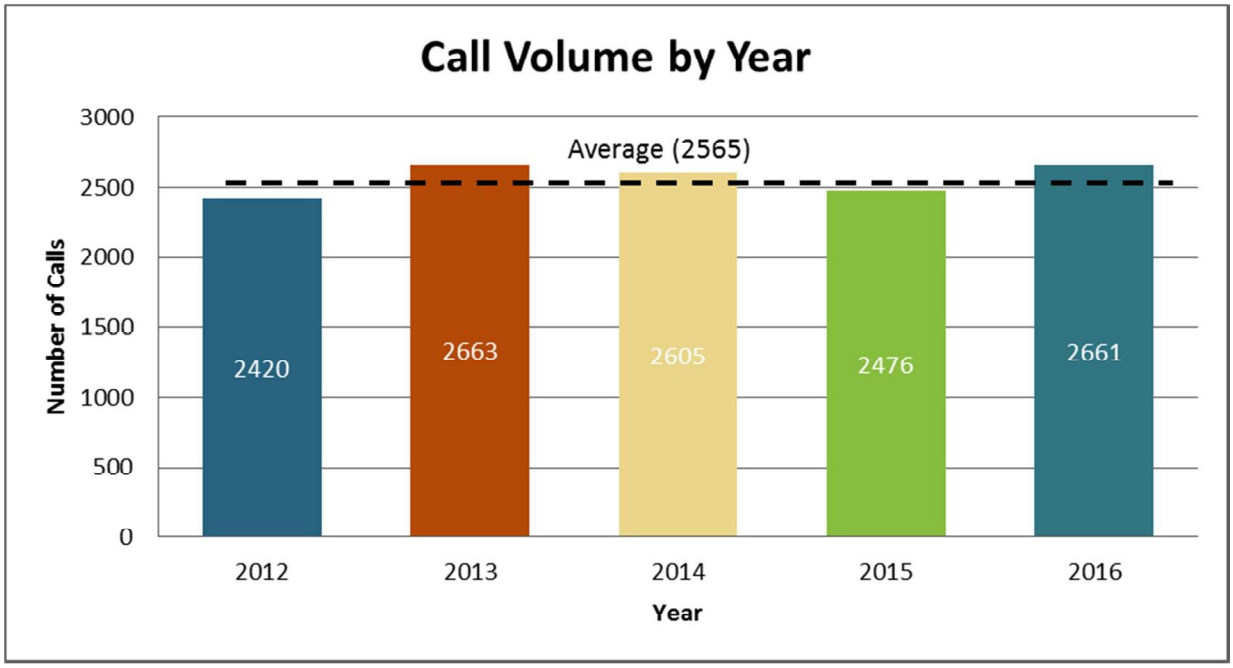


Figure 42: Annual Call Volume (SSM Unit Response Data – 2012 to 2016)

6.2.1 Average Annual Call Volume by Station

Overall, there was a total of 12,819 calls responded to by SSMFS from January 2012 through December 2016. Calls placed resulted in a specific station being dispatched depending on the location of the call. Therefore, the spatialized nature of calls result in different station workloads. As shown in **Figure 43** and **Figure 44**, Station 1 had the highest call volume between the years of 2012 and 2016 with the station receiving 30% (770) of all calls in total which is 129 calls higher than the average across all stations. This is consistent with the fact that Station 1 is located in the downtown core which is shown to historically have a high fire loss as analyzed in **Section 5.0**. Station 2 and Station 3 each received similar call volumes at 586 and 589 calls respectively or approximately 23% share of all calls and Station 4 with 24% of calls. The call volume by station and year is detailed in **Figure 45,** which shows that the station call volumes are subject to yearly fluctuations, with Station 1 with a consistently higher proportion, particularly in 2016.

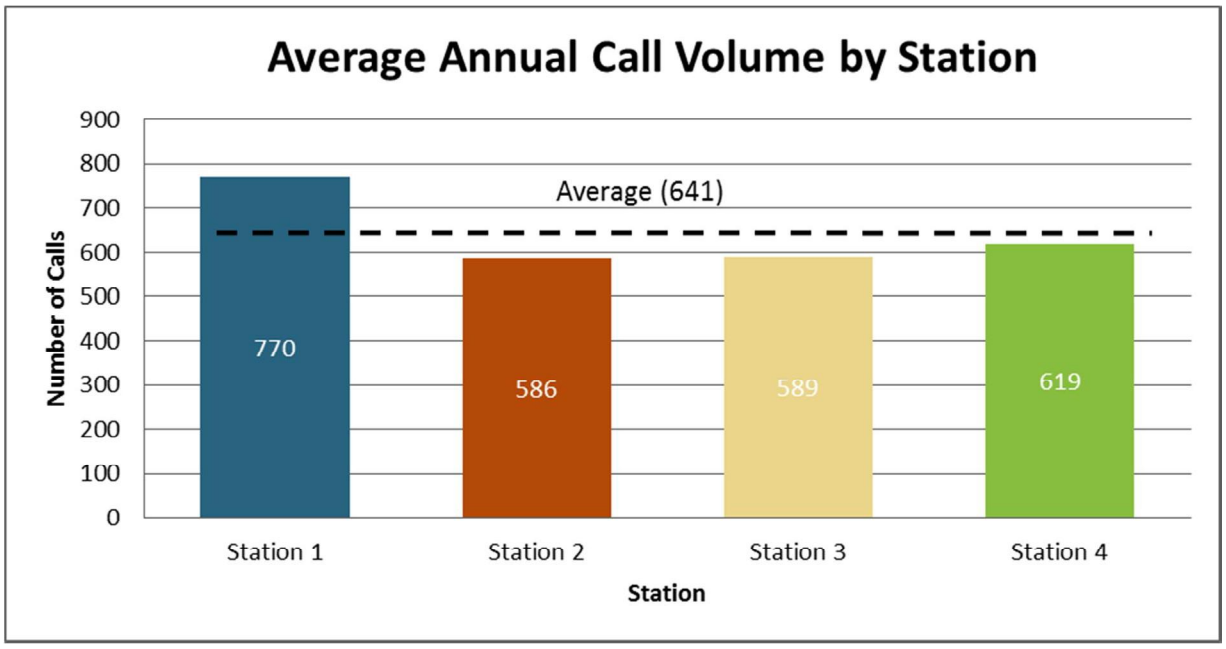


Figure 43: Average Annual Call Volume By Station (SSM Unit Response Data – 2012 to 2016)

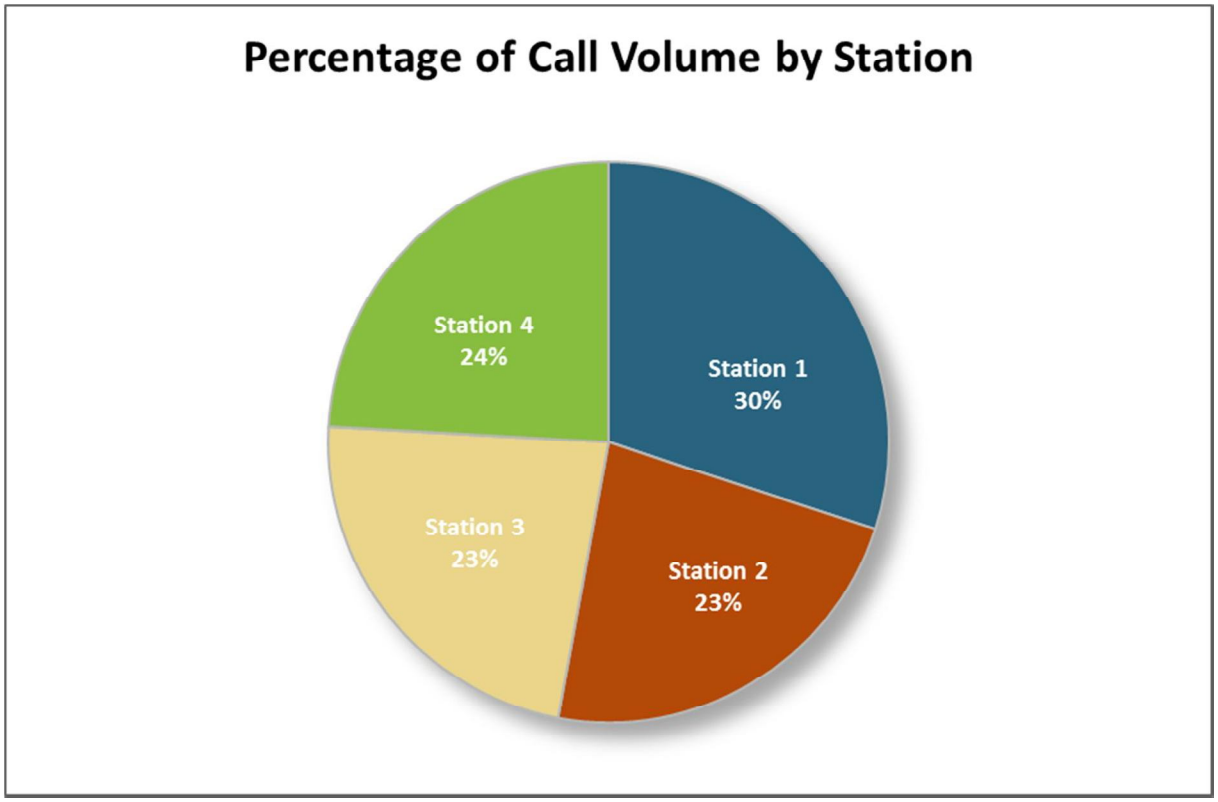


Figure 44: Percentage of Call Volume by Station (SSM Unit Response Data – 2012 to 2016)

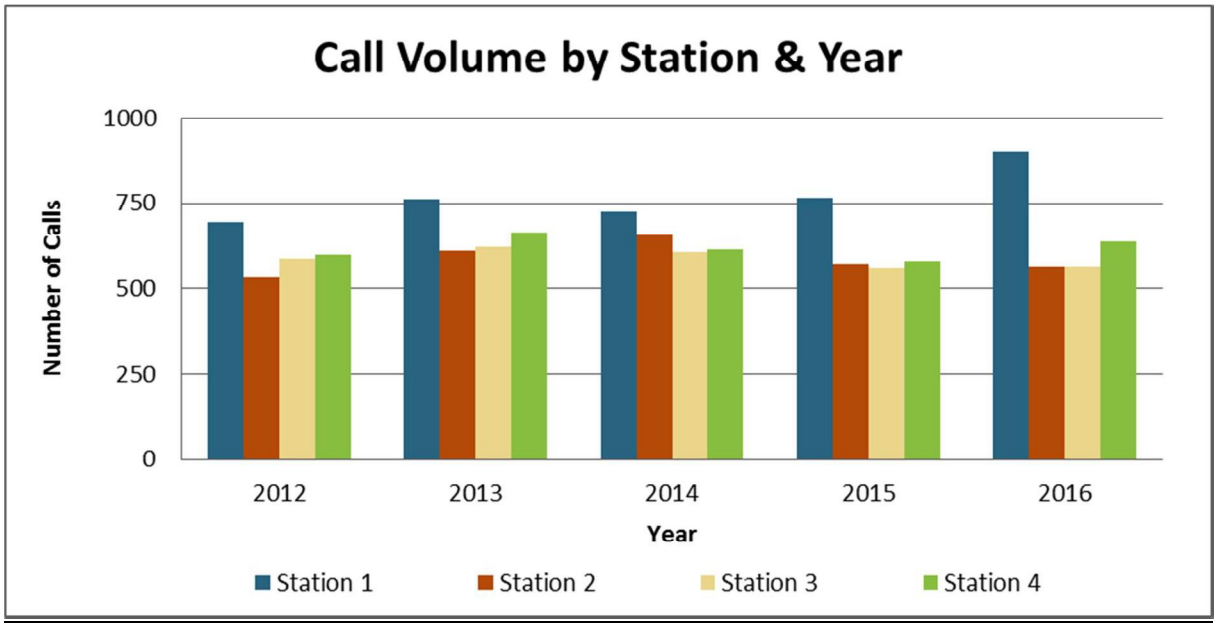


Figure 45: Call Volume by Station and Year (SSM Unit Response Data – 2012 to 2016)

Key Finding:
Overall, call volumes have increased by 10% from 2012 to 2016, with variability in volume over the five years.

Key Finding:
Of the four stations, Station 1 responds to the highest proportion of calls annually at 30% or 770 calls per year.

6.3 Call Volume by Sault Ste. Marie Response Type

An analysis of the call volume by SSM Response Type described in the methodology section is used to analyze the historic call volume and identify key findings / trends. The average annual calls by Sault Ste. Marie Response Type in absolute numbers is shown in **Figure 46,** and illustrated as a percentage in **Figure 46**. This analysis illustrates that SSMFS that the highest proportions of calls in the False Alarm, Medical, and Other (No Fire) response type categories.

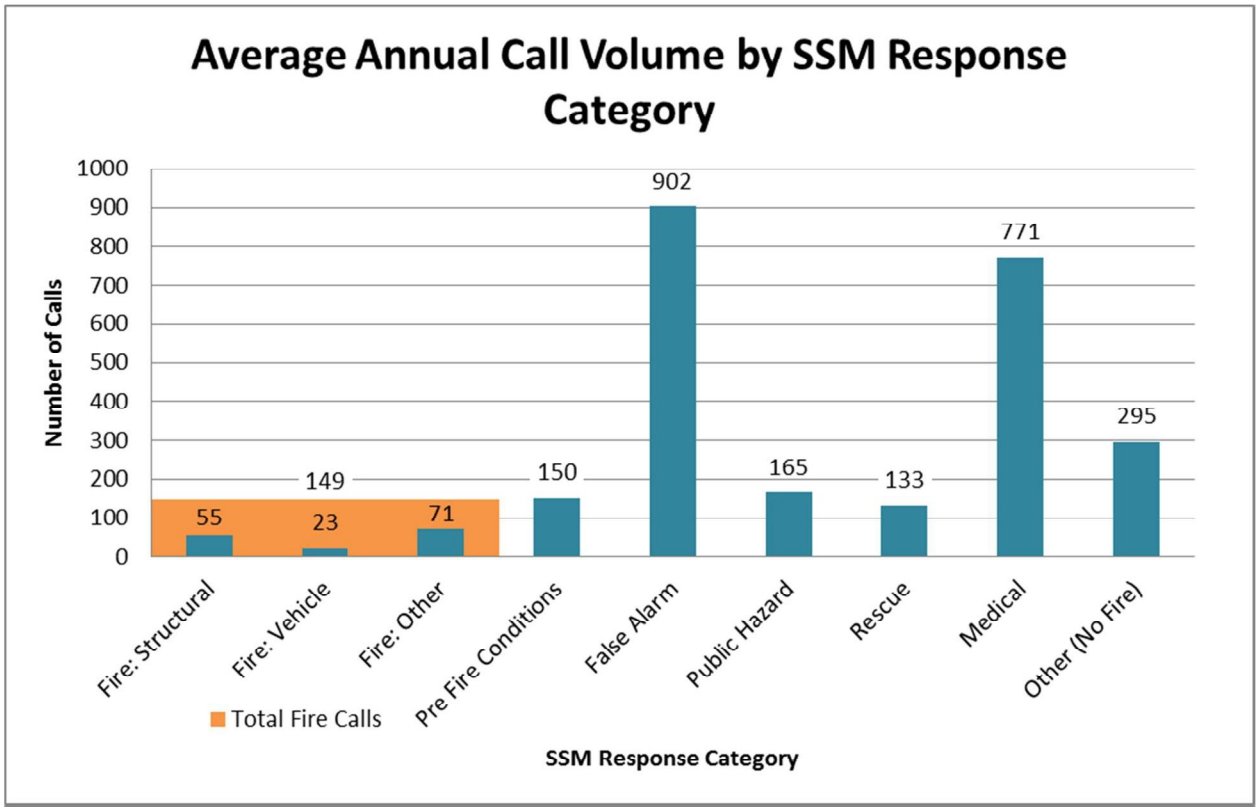


Figure 46: Average Annual Calls by Sault Ste. Marie Response Type (SSM Unit Response Data – 2012 to 2016)

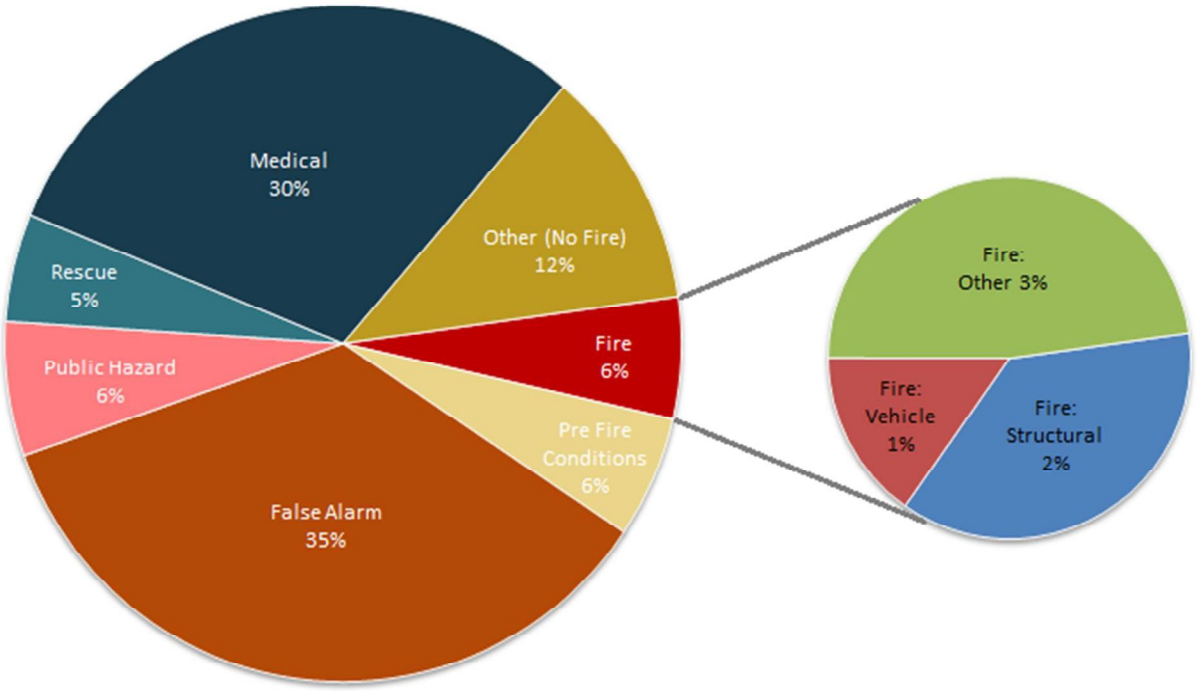


Figure 47: Percentage of Calls by Sault Ste. Marie Response Type (SSM Unit Response Data – 2012 to 2016)

Over the five year period, False Alarms comprised 35% of the total call volume - the highest of all the categories. This category includes false fire calls, CO false calls, and burning (controlled). Medical calls account for 30% of all calls and Other (No Fire) account for 11% over the same period. In regards to Fire calls, 6% of all calls fall within this category with 2% comprising of structure fires, 1% vehicle fires, and 3% other fires. Further discussion on false alarm, medical, and rescue calls can be found in **Section 6.4**.

Key Finding:
Based on an analysis of SSM Response Types, False Alarm calls account for the highest proportion of call types responded to within the City at 35% of all calls over the five year period from 2012 to 2016.

6.3.1 Call Volume by SSM Response Type and Year

The call volume by Sault Ste. Marie response type for each year, shown in **Figure 48,** depicts which call types have been increasing. As shown in this figure, the most frequented calls which include False Alarm and Medical calls have increased on average since 2012, with some fluctuation by year within the false alarm category. Call categories that have also increased since 2012 are pre fire conditions, public hazard and rescue calls. Fire calls, including structural, vehicle and other fire related calls have shown small annual variabilities (as shown in **Figure 49**) such as 57 structure fires in 2012 and 71 (+14) in 2016. However, on average, the proportion of Fire Calls has decreased over the fire year period.

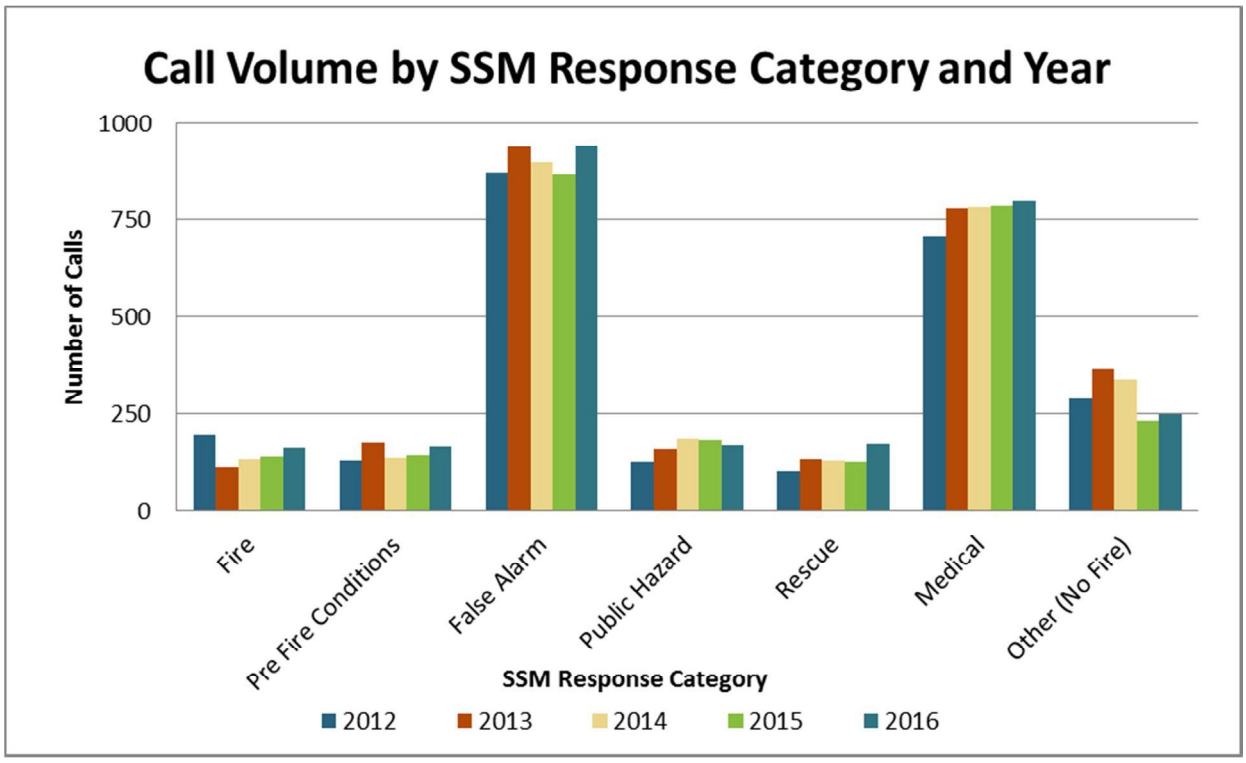


Figure 48: Call Volume by Sault Ste. Marie Response Type and Year (SSM Unit Response Data – 2012 to 2016)

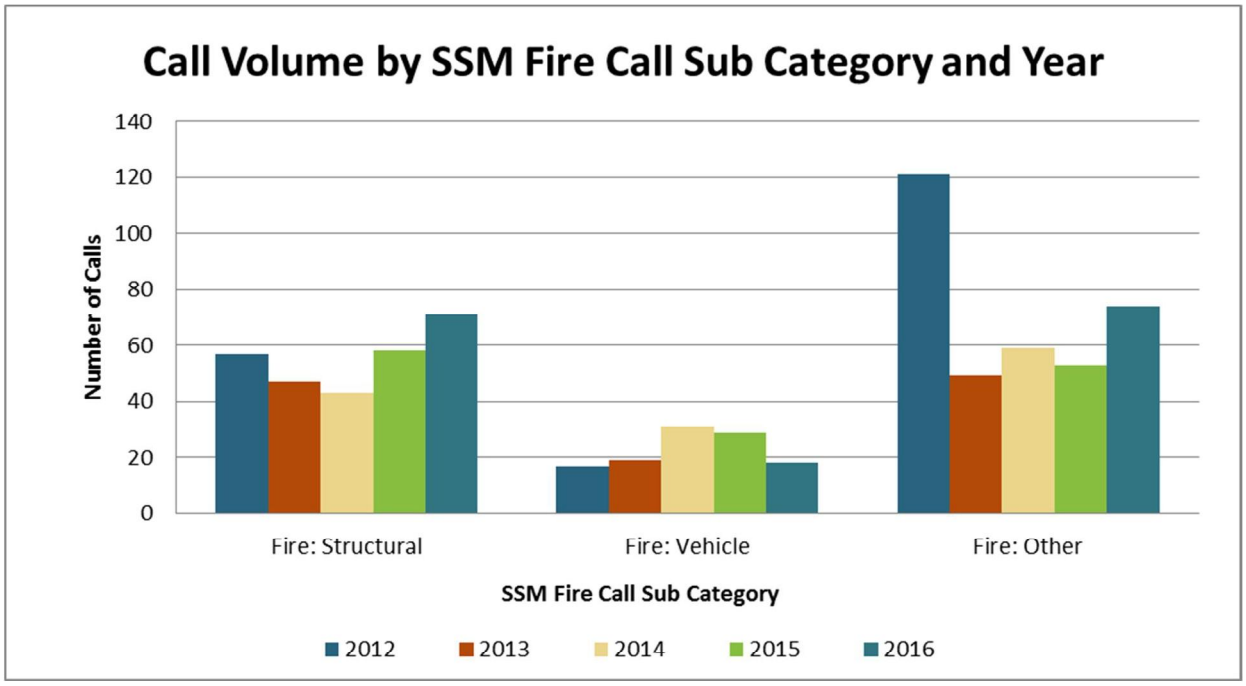


Figure 49: Call Volume of Fire Calls Sub-types by Year (SSM Unit Response Data – 2012 to 2016)

6.4 City of Sault Ste. Marie and Province of Ontario Comparison (by OFMEM Emergency Response Types)

Each fire department in Ontario must report their calls to the Office of the Fire Marshal and Emergency Management (OFMEM) annually. The OFMEM requires each call to be identified by an OFMEM emergency response type. The OFMEM-defined response types are used by jurisdictions throughout Ontario for comparative reporting purposes. **Table 56** illustrates the relationship between the Sault Ste. Marie Response Type categories and the OFMEM response type categories used in this analysis (see **Appendix A**).

Table 56: Emergency Response Types

Sault Ste. Marie Response Type	OFMEM Response Type
Fire	Property Fires / Explosions
Pre-Fire Conditions	Overpressure Rupture / Explosion (No Fire)
	Pre-Fire Conditions / No Fire
False Alarm	False Fire Call
	CO False Call
	Burning (Controlled)
Medical	Medical / Resuscitator Call
Rescue	Rescues
Public Hazard	Public Hazards
Other (No Fire)	Other Responses

6.4.1 Calls by OFMEM Emergency Response Type

A comparison of calls by emergency response type was completed between the City and the Province, using the OFMEM response types defined in **Table 56**. Calls responded to by SSM are shown in **Figure 50** based on the OFMEM Emergency Response Type codes indicated in the SSM Unit Response Data. **Figure 51** shows the proportion of calls across the province based on OFMEM Response Type for 2012 to 2016 (based on data provided by the OFMEM – Ontario Key Facts Emergency calls and Fires).

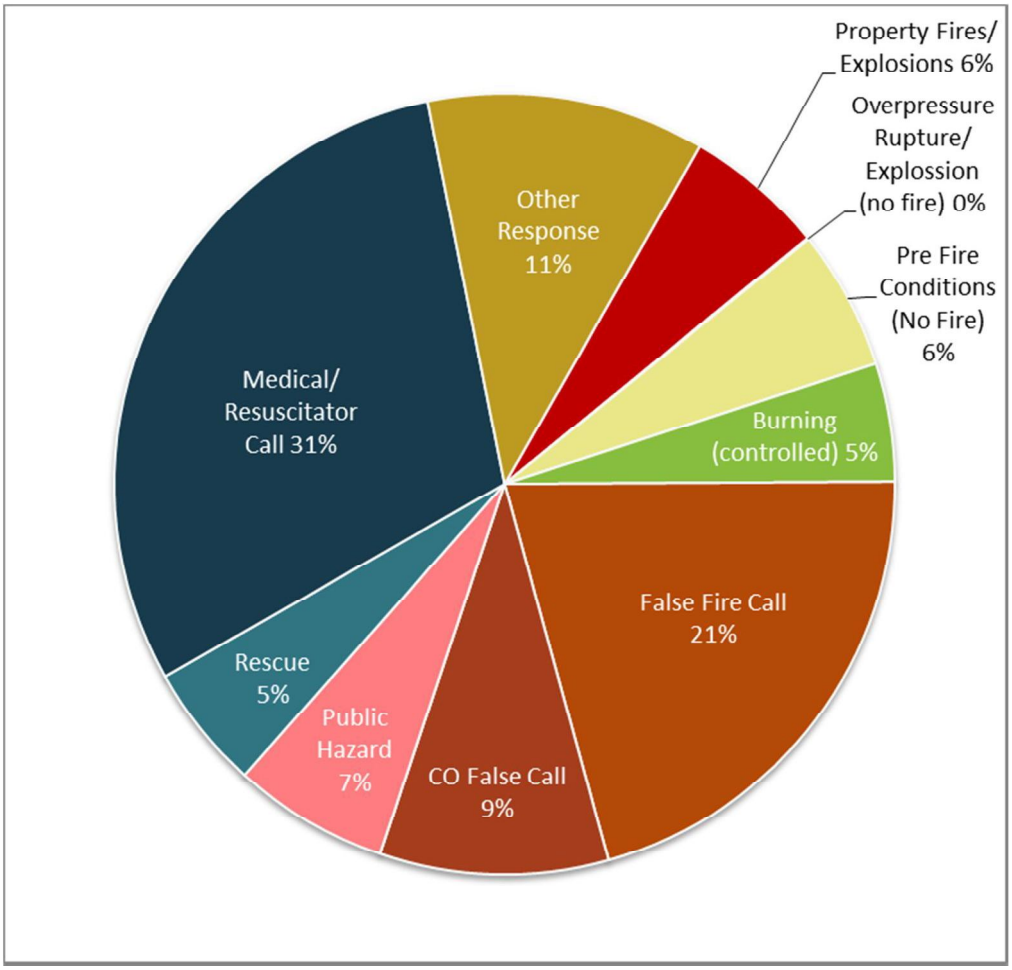


Figure 50: Percentage SSMFS Calls by OFMEM Response Type (SSM Unit Response Data – 2012 to 2016)

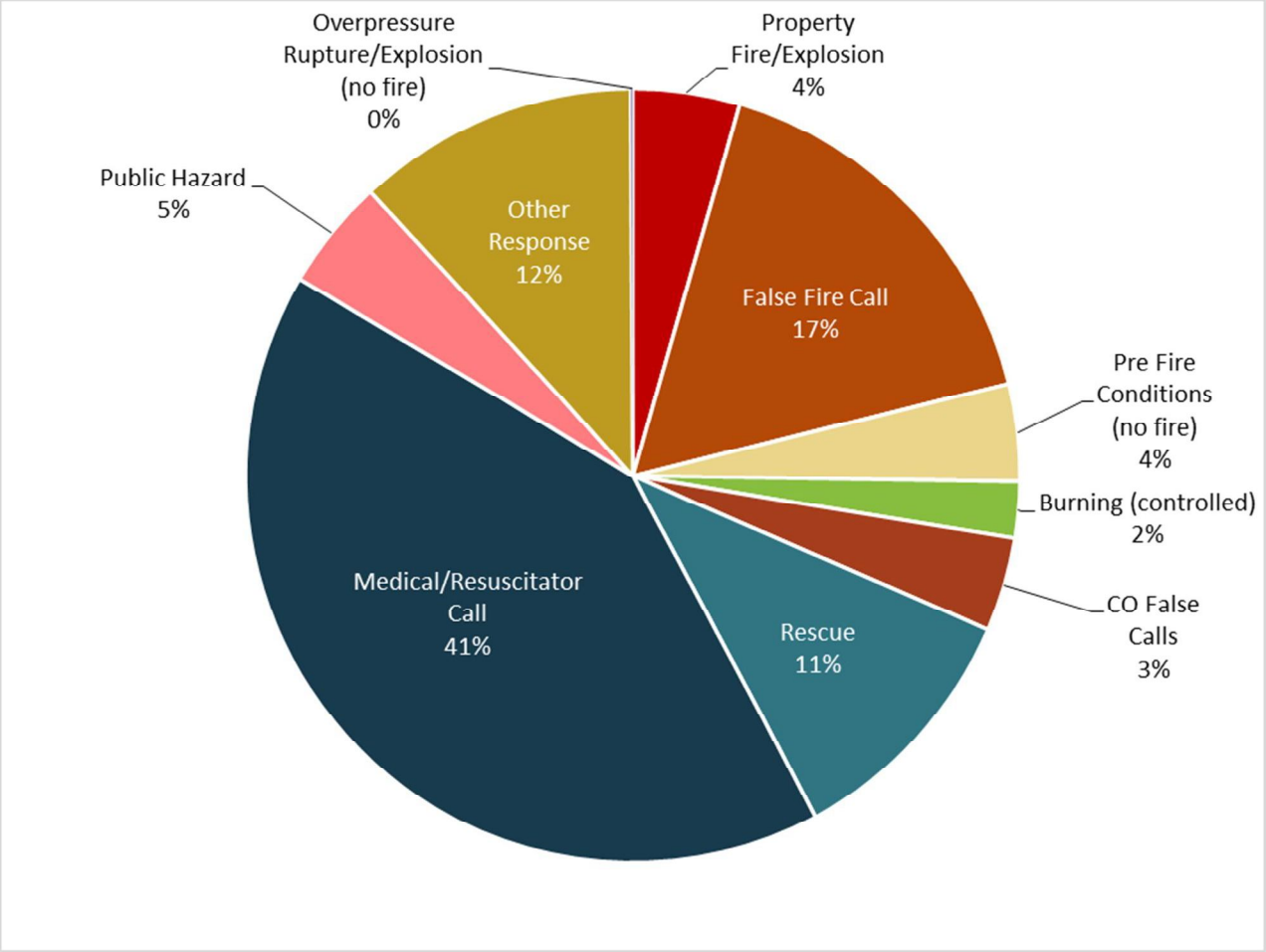


Figure 51: Percentage Provincial Calls by OFMEM Response Type (OFMEM Data - 2012 - 2016)

At a provincial level, medical calls are the most common response type (41%), followed by false fire calls (17%) and other calls (12%). Only 4% of provincial calls are fire calls. The call volume by OFMEM Response Type observed in Sault Ste. Marie varies compared to the Province. Some key difference are that the Sault Ste. Marie has 10% less medical/resuscitator calls, 6% less rescue calls, and 1% less other response calls. This is offset by a higher proportion of CO false calls (+6%), false fire calls (+3%), burning (controlled) calls (+3%), pre fire conditions/no fire calls (+3%), property fires/explosions (+2%) and 2 public hazard calls (+2%) than the provincial total.

Key Finding

From 2012 to 2016, based on OFMEM Response Types, SSM call volumes are comprised of 6% more CO false calls, 3% more false fire calls, 3% more burning (controlled) calls, 3% more pre fire conditions/no fire calls, 2% more property fires/explosions and 2% more public hazard calls than the provincial total.

6.4.1.1 False Alarm Calls

The false alarm call response type includes three sub-types as shown in **Table 57:** burning (controlled), false fire calls, and CO false calls. The majority of False Alarm calls that occurred over the five year period are related to false fire calls (59%), followed by CO false calls (27%), and burning (controlled) (14%).

Table 57: False Alarm Response Calls (SSM Unit Response Data – 2012 to 2016)

False Alarm Response Sub-Types	Total Calls (From 2012 to 2016)	Average Annual Call Volume	Percentage of False Alarm Calls
Burning (controlled)	629	126	14%
False Fire Call	2669	534	59%
CO False Call	1213	243	27%
Total	**4,511**	**902**	**100%**

Key Finding:
Of the False Alarm calls reported from 2012 to 2016, 59% were false fire calls, 27% CO false calls, and 14% burning (controlled).

6.4.1.2 Medical Calls

The medical call response type includes several sub-types as shown in **Table 58**. The majority of medical calls that occurred over the five year period are related to seizure (27% of all medical calls), oxygen administered (14%) and other medical/resuscitation call (13%). A number of calls are also related to alcohol or drug related incidents (12%), accident or illness related (cuts, fractures, person fainted, etc.) (9%), and vital signs absent (DOA) (8%).

Table 58: Medical Response Calls (SSM Unit Response Data – 2012 to 2016)

Medical Response Sub-Types	Total Calls (From 2012 to 2016)	Average Annual Call Volume	Percentage of Medical Calls
Seizure	**1043**	**209**	**27%**
Oxygen Administered	**544**	**109**	**14%**
Other Medical/Resuscitator Call	**487**	**97**	**13%**
Alcohol Or Drug Related	**448**	**90**	**12%**
Accident Or Illness Related - Cuts, Fractures, Person Fainted, etc.	**337**	**67**	**9%**
Vital Signs Absent, DOA	**305**	**61**	**8%**
Medical/Resuscitator Call No Action Required	**197**	**39**	**5%**

Medical Response Sub-Types	Total Calls (From 2012 to 2016)	Average Annual Call Volume	Percentage of Medical Calls
CPR Administered	132	26	3%
Medical Aid Not Required On Arrival	119	24	3%
Chest Pains or Suspected Heart Attack	86	17	2%
Defibrillator Used	67	13	2%
Asphyxia, Respiratory Condition	48	10	1%
Medical/Resuscitator Call False Alarm	32	6	1%
Traumatic Shock	6	1	<1%
Burns	2	<1	<1%
Electric Shock	1	<1	<1%
Total	**3,854**	**771**	**100%**

Key Risk:
Seizure, Oxygen Administered, Other Medical/Resuscitator and Alcohol Or Drug Related calls accounted for 65% of all medical calls in Sault Ste. Marie between 2012 and 2016.

6.4.1.3 Rescue Calls

The rescue call response type includes several sub-types as shown in **Table 59**. The majority of rescue calls relate to vehicle collisions (59%); however, other rescues (11%), persons trapped in elevator (9%) and animal rescues (5%) accounted for an additional 27% of rescue calls.

In terms of rescue calls and aligning services to community risk, it is worthwhile to take a closer look at the volume of technical rescue calls. Technical rescues are those types of calls that require specific skillset and include: vehicle extrication, water and water ice rescues, low angle rescue, high angle rescue, trench rescue, and confined space rescue calls. Of these calls, vehicle extrication is the most common type of rescue at an average annual call volume of seven. This is followed by water-related rescue (water rescue and water ice rescue) with a total of 23 calls over the five year period, or about five calls annually on average.

Table 59: Rescue Response Calls (SSM Unit Response Data – 2012 to 2016)

Rescue Response Sub-Types	Total Calls (From 2012 to 2016)	Average Annual Call Volume	Percentage of Rescue Calls
Vehicle Collision	394	79	59%
Other Rescue	72	14	11%

Rescue Response Sub-Types	Total Calls (From 2012 to 2016)	Average Annual Call Volume	Percentage of Rescue Calls
Persons Trapped in Elevator	**57**	**11**	**9%**
Animal rescue	**45**	**9**	**7%**
Vehicle Extrication	**33**	**7**	**5%**
Rescue no action required	**21**	**4**	**3%**
Water Rescue	**19**	**4**	**3%**
Home/Residential Accident	**6**	**1**	**1%**
Water Ice Rescue	**4**	**1**	**1%**
Low angle rescue (non fire)	**4**	**1**	**1%**
Building Collapse	**3**	**1**	**0%**
Commercial/Industrial Accident	**3**	**1**	**0%**
Rescue false alarm	**3**	**1**	**0%**
High angle rescue (non fire)	**1**	**0**	**0%**
Trench rescue (non fire)	**0**	**0**	**0%**
Confined space rescue (non fire)	**0**	**0**	**0%**
Total	**665**	**133**	**100%**

Key Risk:
Vehicle collisions account for 59% of rescue calls within the City of Sault Ste. Marie or 79 calls per year on average.

Key Risk:
Of the technical rescue type services, vehicle extrication is the most common type of rescue at an average annual call volume of seven.

Key Risk:
Of the technical rescue type services, water-related rescue (water rescue and water ice rescue) are the second most common type with a total of 23 calls over the five year period, or about five calls annually on average.

6.5 Mapping Analysis: Spatial Distribution of Calls

This section looks at the distribution of calls for each of the Sault Ste. Marie Response Type categories based on the SSM Mapped Unit Response Data from 2012 to 2016. The spatial distribution of calls provides insight on where a higher volume of calls has historically occurred within within the City.

Each of the SSM Response Type categories are mapped in terms of call density. Thresholds for each map may vary due to the varying degree of calls for each category; for example, the number of medical calls greatly out number fire related response calls. Call density maps were computed using the Spatial Analyst tool on ArcGIS for each respective response call category.

6.5.1 Fire Calls

As previously described, Fire Calls in Sault Ste. Marie were broken down into three subcategories, these include: structural (calls relating to a building or structure), vehicle, and other fires (fires related to other defined instances such as grass/brush fires, dumpsters, utility poles etc.).

Fire Calls – Structure

As shown in **Figure 52,** structure fire call density is distributed throughout the City primarily within the Urban Settlement Area with some small clusters within the rural area. As shown, key areas with high structural fire call density include the general downtown area at the intersection of Wellington Street West and Cathcart Street. Other pockets of moderate call density are east of downtown at the intersections of McNabb Street and Pine Street, and at Trunk Road and South Market Street. A cluster of class is also found at Lyons Avenue and Korah Road.

Fire Calls – Vehicle

It is important to note that the vehicle fire calls throughout the City are generally low density (between one to five calls). Subsequently, there are no notable areas with "high density" of calls. However, there are some clusters that stand out in the mapping, including Downtown around Pim Street and Queen Street East, at Lyons Avenue and Peoples Road, and east of Black Road along Trunk Road, as shown in **Figure 53.**

Fire – Other

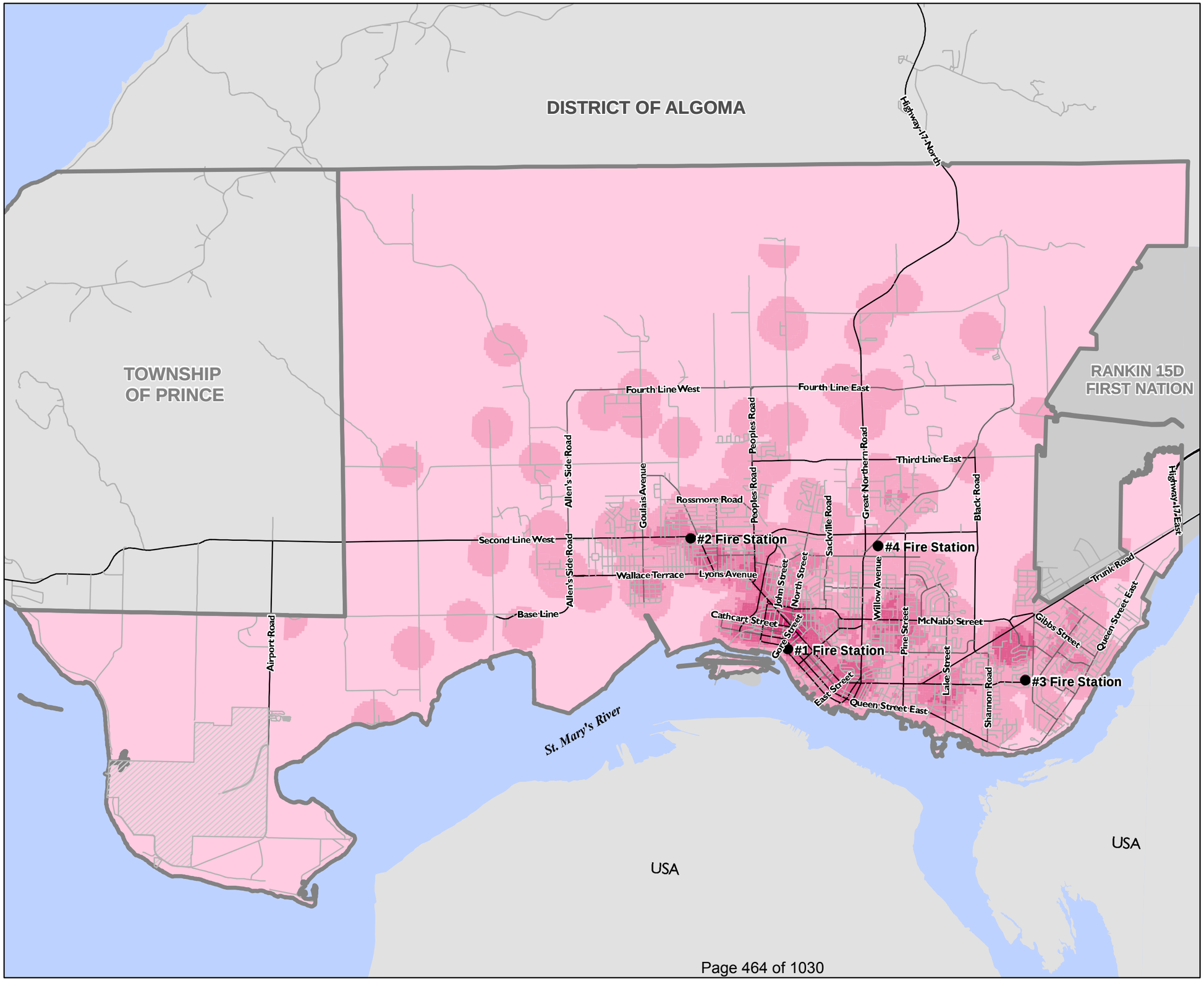
As shown in **Figure 54**, fire calls – other, appear primarily within the Urban Settlement Area with clusters of calls found in the downtown core, and west of the downtown at the intersection of Lyons Avenue and Korah Road. There is also a higher density cluster of calls that stand out in the rural area at Carpin Beach Road and the waterfront.

Key Finding:

The spatial analysis of Fire Calls - Structure for the period 2012 to 2016 shows a higher density of structure fire calls occurring in the downtown area around Wellington Street West and Cathcart Street, and with some other pockets east and west of Downtown.

Key Finding:

The spatial analysis of fire calls for the period 2012 to 2016 indicates a higher density of Fire Calls - Other occurring in the Downtown and west of downtown at the intersection of Lyons Avenue and Korah Road.



CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

DENSITY OF STRUCTURAL FIRE RESPONSE CALLS (FIRE CALLS 2012 - 2016)

FIGURE 52

Density of Response Calls relating to Fire (Structural)

- 0
- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 30
- 30+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Response\Fire_Structural.mxd

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DATE: 2017-11-21

DISTRICT OF ALGOMA

TOWNSHIP OF PRINCE

RANKIN 15D FIRST NATION

Highway 17 North

Fourth Line West

Fourth Line East

Third Line East

Second Line West

Rossmore Road

Wallace Terrace

Lyons Avenue

Base Line

Airport Road

Allen's Side Road

Goulais Avenue

Peoples Road

Sackville Road

Great Northern Road

Black Road

John Street

North Street

Willow Avenue

Cathcart Street

Gore Street

Pine Street

Lake Street

McNabb Street

Gibbs Street

Trunk Road

Queen Street East

East Street

Shannon Road

Highway 17 East

#1 Fire Station

#2 Fire Station

#3 Fire Station

#4 Fire Station

St. Mary's River

USA

USA

CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

DENSITY OF VEHICLE FIRE RESPONSE CALLS (FIRE CALLS 2012 - 2016)

FIGURE 53

Density of Response Calls relating to Fire (Vehicle)

- 0
- 1 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 8+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

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MAP CHECKED BY: AJN
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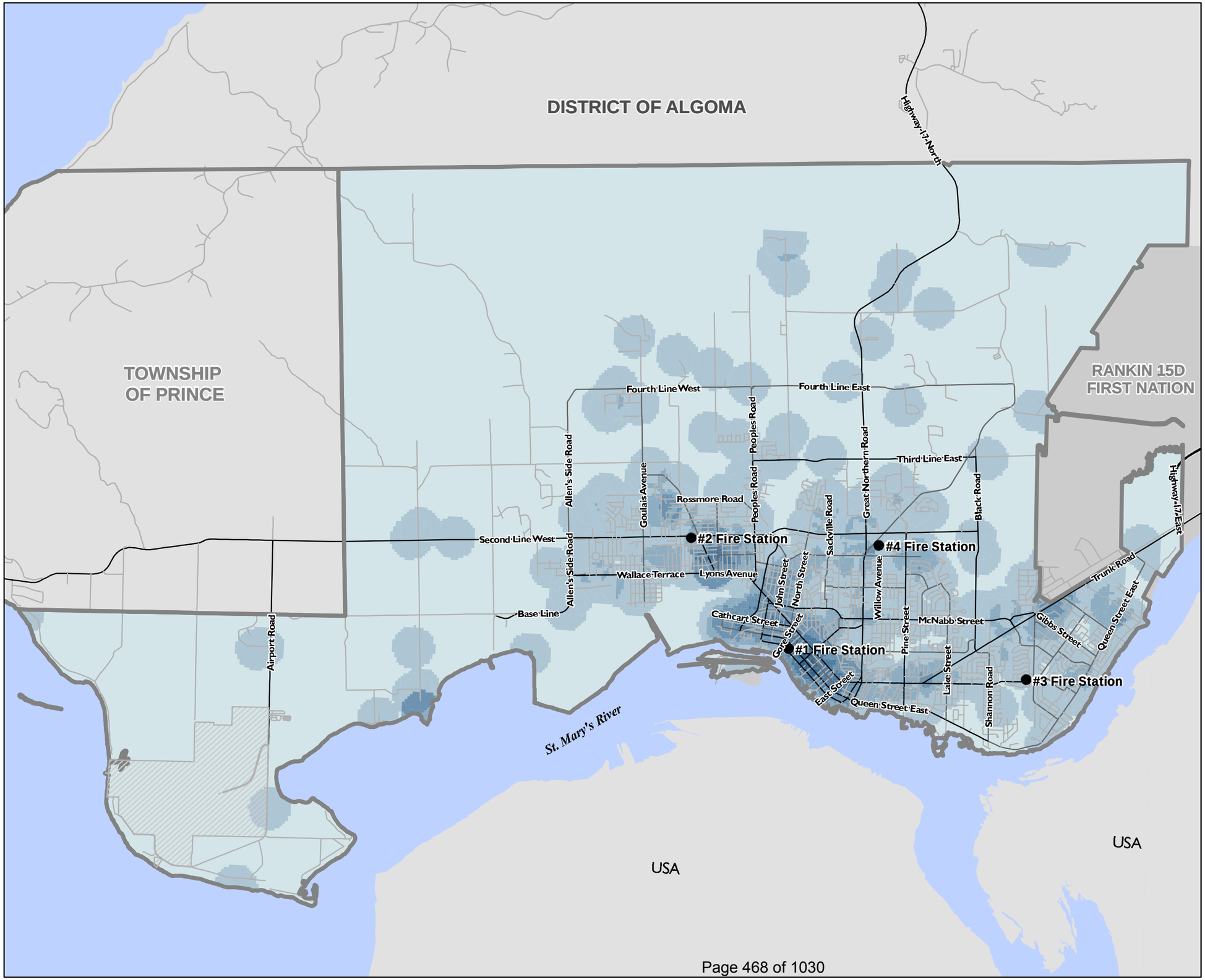
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CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

DENSITY OFFIRE (OTHER) CALLS (FIRE CALLS 2012 - 2016)

FIGURE 54

Density of Response Calls relating to Fire (Other)

- 0
- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 30
- 30+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

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DATE: 2017-11-21

6.5.2 Pre-Fire Calls

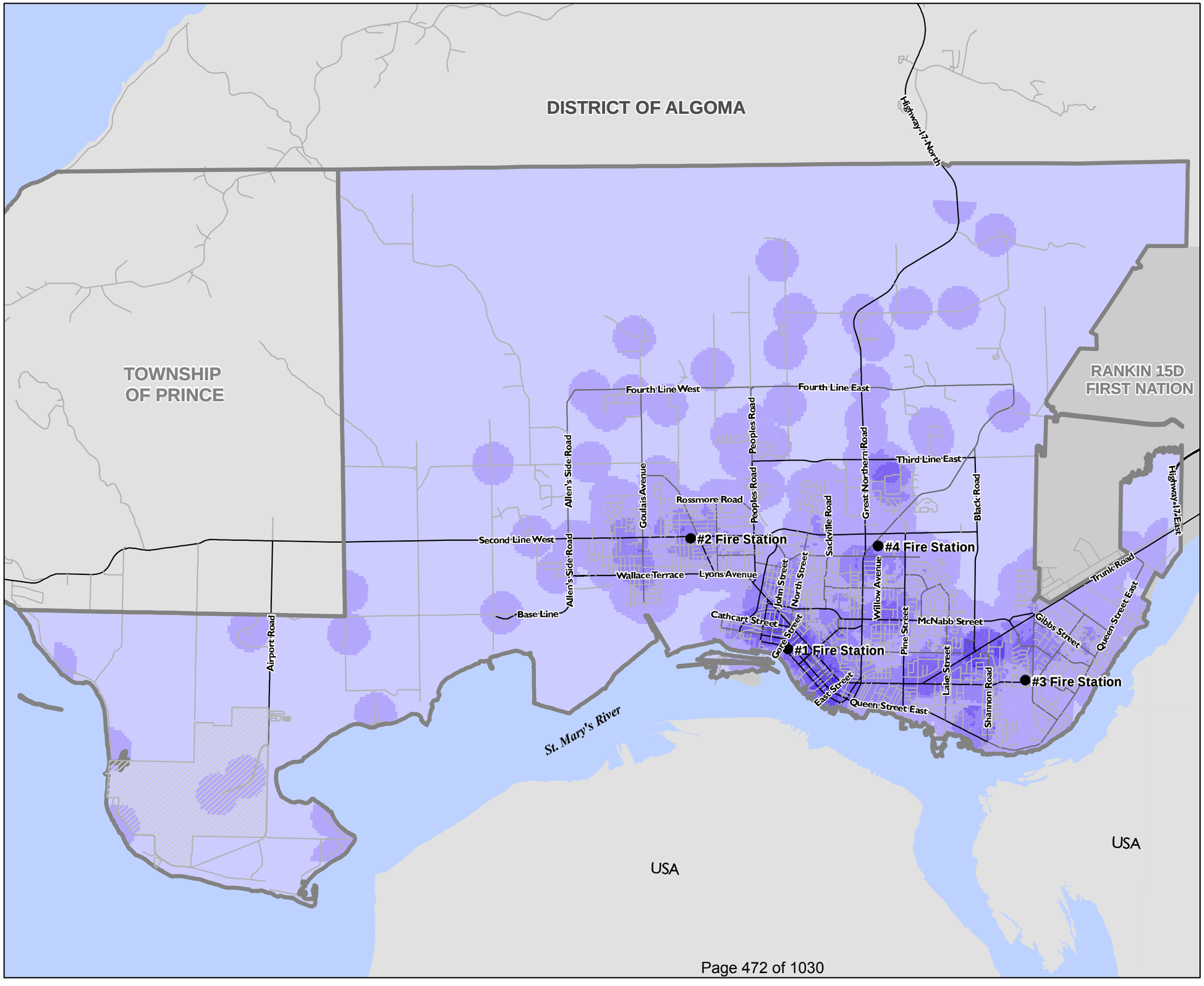
Pre-Fire Calls, shown in **Figure 55,** are widely spread-out primarily within the Urban Settlement Area of the City. In particular, there is high concentration of calls in the downtown core along the Wellington Road West corridor and the Lyons Avenue/Wallace Terrace corridor west of downtown and the Trunk Road corridor to the east. There is also a cluster of calls at the south-east corner of the intersection of Great Northern Road and Third Line East

Key Finding:
The spatial analysis of Pre-Fire Calls for the period 2012 to 2016 indicates a higher density of Pre-Fire Calls occurring in the in the Downtown and along the Wellington Road West corridor in the downtown, the Lyons Avenue/Wallace Terrace corridor west of downtown and the Trunk Road corridor to the east of downtown.

6.5.3 False Alarm Calls

The spatial distribution of False Alarm Calls is shown in **Figure 56**. This figure shows that there is a widespread distribution of calls primarily within the Urban Settlement Area, with a more even distribution compared to the other response types. Areas with higher rates of False Alarm Calls is in the downtown core with areas with 300+ calls in some areas between 2012 and 2016. Another high density area of calls is north of the downtown on the south-east side of the intersection of Great Northern Road and Third Line East which is roughly the location of the Sault Area Hospital.

Key Finding:
The spatial analysis of False Alarm Calls for the period 2012 to 2016 indicates a higher density of False Alarm Calls occurring in the in the Downtown and north of Downtown on the south east side of Great Northern Road and Third Line East by Sault Area Hospital.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

DENSITY OF PRE FIRE CONDITION RESPONSE CALLS (SSM MAPPED FIRE CALL DATA 2012 - 2016)
FIGURE 55

Density of Response Calls relating to Pre Fire Conditions

- 0
- 1 - 15
- 16 - 30
- 31 - 45
- 46 - 60
- 61 - 75
- 75+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

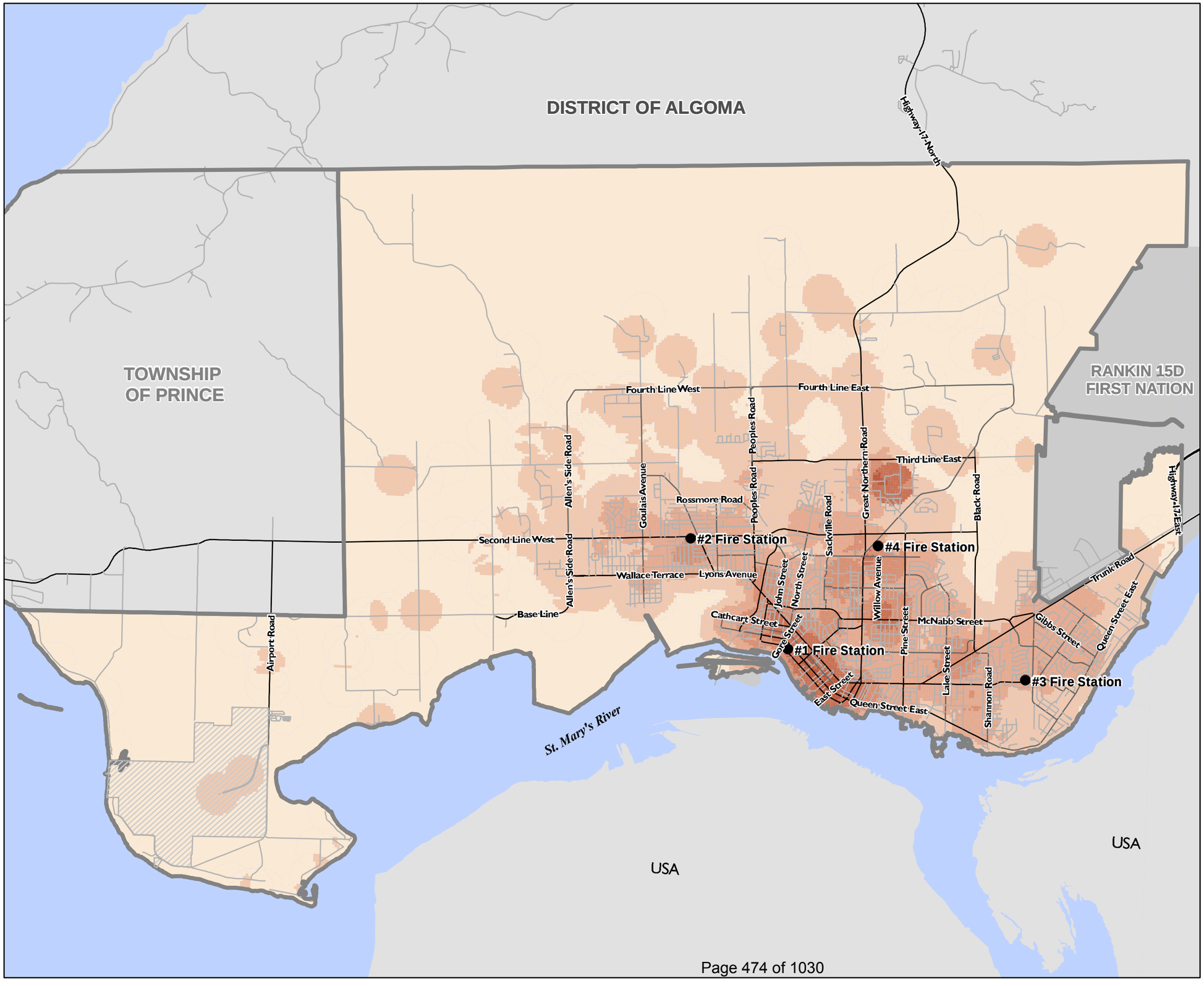
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FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Response_PreFireConditions2.mxd

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CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

DENSITY OF FALSE ALARM RESPONSE CALLS
(SSM MAPPED RESPONSE CALL DATA 2012 - 2016)
FIGURE 56

Density of Response Calls relating to False Alarms

- 0 - 3
- 4 - 60
- 61 - 120
- 121 - 180
- 181 - 300
- 301 - 360
- 360+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

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6.5.4 Medical Calls

The spatial distribution of response calls relating to Medical Calls is shown in **Figure 57.** As presented, there is a high concentration of these response calls spread out evenly throughout the city including some located in the rural area. As observed, the main correlation of call density may be related to the residential density of the City. However, there does appear to be a higher density of Medical Calls historically occurring in the Downtown. .

Key Finding:
The spatial analysis of Medical Calls for the period 2012 to 2016 indicates a higher density of Medical Calls occurring in the in the Downtown with a notable distribution throughout the City primarily within the Urban Settlement Area.

6.5.5 Rescue Calls

Rescue Calls are shown to occur throughout the Urban Settlement Area, consistent with land use, as shown in **Figure 58.** Higher concentrations of call volumes are shown in a few areas throughout the City. These include: Downtown; north of downtown along the Great Northern Road corridor (roughly between Mcnabb Street and Second Line West); and north of downtown along the Second Line West corridor (between Goulais Avenue and Peoples Road).

Key Finding:
The spatial analysis of Rescue Calls for the period 2012 to 2016 indicates a higher density of Rescue Calls occurring in the in the Downtown and north of Downtown along Great Northern Road (between McNabb Street and Second Line West) and Second Line West (between Goulais Avenue and Peoples Road).

DISTRICT OF ALGOMA

TOWNSHIP OF PRINCE

RANKIN 15D FIRST NATION

Highway 17 North

Fourth Line West

Fourth Line East

Third Line East

Second Line West

Base Line

Allen's Side Road

Goulais Avenue

Peoples Road

Rossmore Road

Great Northern Road

Sackville Road

Black Road

Wallace Terrace

Lyons Avenue

John Street

North Street

Willow Avenue

Cathcart Street

McNabb Street

Gore Street

Pine Street

Lake Street

East Street

Queen Street East

Gibbs Street

Trunk Road

Shannon Road

Airport Road

Highway 17 East

#1 Fire Station

#2 Fire Station

#3 Fire Station

#4 Fire Station

St. Mary's River

USA

USA

CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

DENSITY OF MEDICAL RESPONSE CALLS
(SSM MAPPED RESPONSE CALL DATA - 2012 - 2016)

FIGURE 57

Density of Medical Response Calls

- 0
- 1 - 10
- 11 - 50
- 51 - 100
- 101 - 200
- 201 - 500
- 501 - 1000
- 1000+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

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CITY OF SAULT STE. MARIE/MNRF

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MAP CHECKED BY: AJN
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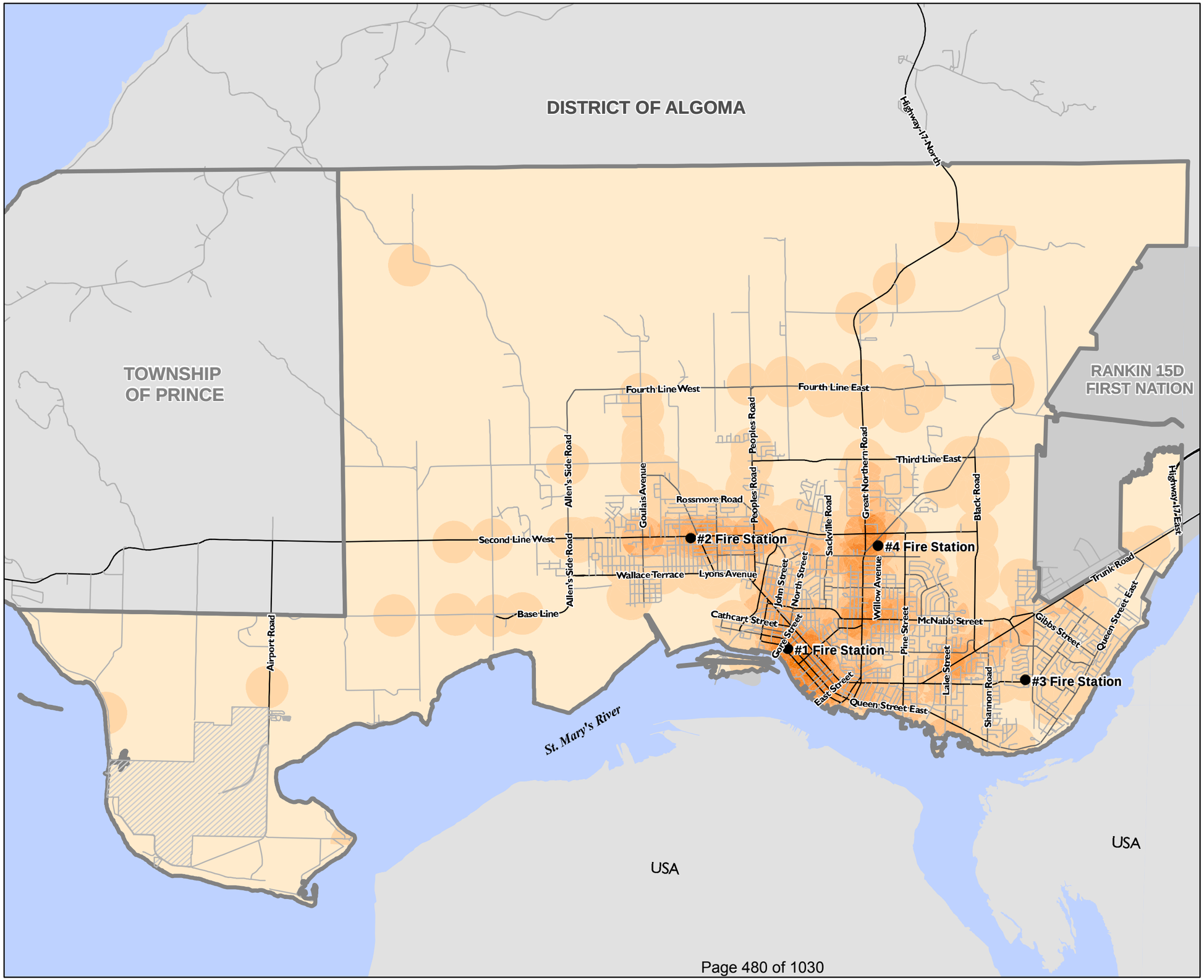
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DATE: 2017-09-13



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

DENSITY OF RESCUE RESPONSE CALLS
(SSM MAPPED FIRE CALL DATA 2012 - 2016)

FIGURE 58

Density of Rescue Response Calls

- 0
- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 80
- 80+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Response\Response_Rescue.mxd

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DATE: 2017-09-13

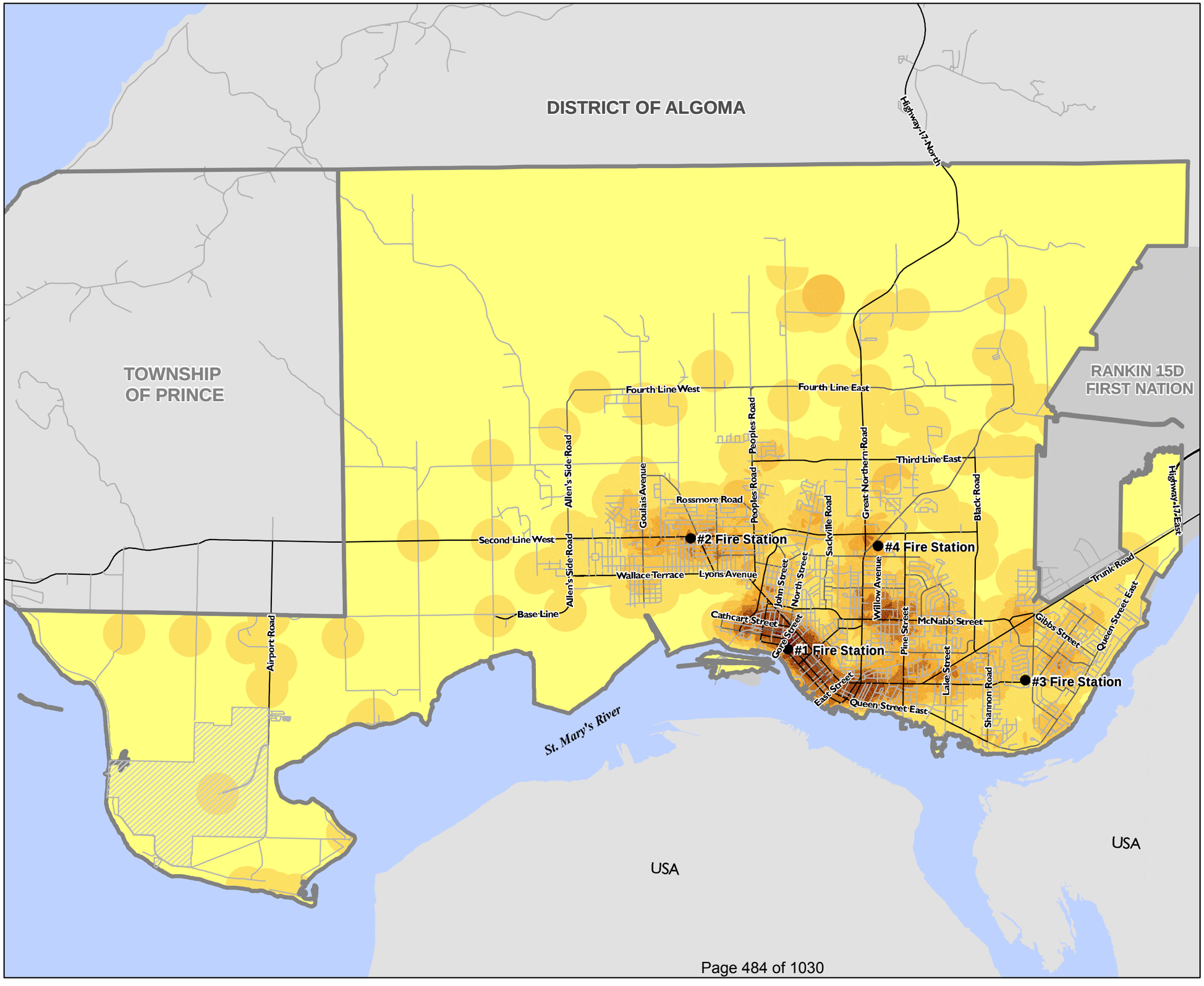
6.5.6 Public Hazard

The spatial distribution of response calls relating to Public Hazards are detailed in **Figure 59.** Consistent with the other spatial analyses, there are calls distributed throughout the limits of the Urban Settlement Area. However, the Downtown stands out greatly in terms of density as well as an area north of the Downtown in the vicinity Willow Avenue and McNabb Street.

Key Finding:
The spatial analysis of Public Hazard Calls for the period 2012 to 2016 indicates a higher density of Public Hazard Calls occurring in the in the Downtown, and north of downtown in the vicinity of Pine Street at McNabb Street.

6.5.7 Other Calls

The spatial distribution of Other (No Fire) response calls is detailed in **Figure 60.** As shown, there are calls within the Urban Settlement Area and some within the rural area, consistent with other call types. In particular, there are higher densities of Other (No Fire) calls in the Downtown and north of the downtown along Great Northern Road and in the vicinity of Willow Avenue and McNabb Street.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

DENSITY OF PUBLIC HAZARD RESPONSE CALLS (SSM MAPPED FIRE CALL DATA 2012 - 2016)
FIGURE 59

Density of Public Hazard Response Calls

- 0
- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 60
- 60+
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

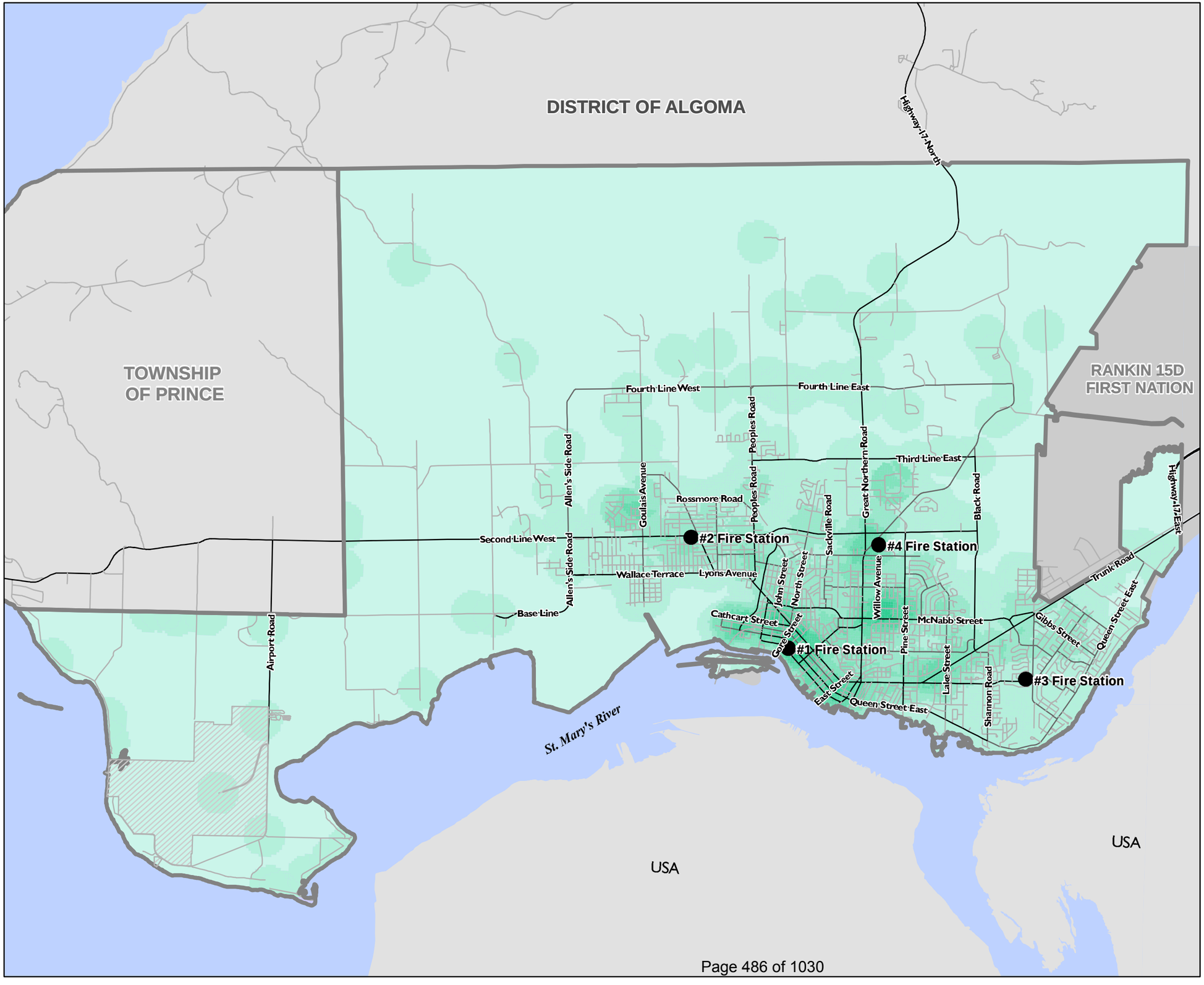
MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Response\Response_PublicHazard.mxd

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STATUS: DRAFT
DATE: 2017-09-13



CITY OF SAULT STE. MARIE

COMPREHENSIVE RISK ASSESSMENT

DENSITY OF OTHER (NO FIRE) RESPONSE CALLS
(SSM MAPPED FIRE CALL DATA 2012 - 2016)
FIGURE 60

Density of Response Calls relating to Other (No Fire)

- 0
- 1 - 20
- 21 - 40
- 41 - 60
- 61 - 80
- 81 - 100
- 100+
- Local Road
- Collector Road
- Arterial Road
- Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Response\Response_OtherNoFire.mxd

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STATUS: DRAFT

DATE: 2017-11-01

6.5.8 Summary

The spatial distribution of calls provides insight on where a higher volume of each call type has historically occurred within the City. Overall, the spatial distribution trends show a historically higher call volume in the downtown core. These high call volumes may in part be linked to population density. There are some differences in response call volumes for each SSM Response Type outside of the downtown core but other areas such as along Great Northern Road, Trunk Road, and the vicinity of Lyons Avenue and Korah Road and McNabb Street and Willow Avenue have historically had a consistently higher density of calls. In summary, it is in the best interest of SSMFS to target the downtown in particular for all types of incidents and target other areas in the City to aforementioned response types in this section.

6.6 Response Profile Outcomes

The response profile considers call volume, call types, and spatial distribution of calls. The outcomes of this analysis are summarized in **Table 60.** These outcomes are revisited in **Section 1.0** where further analysis and discussion linking risk and fire service levels is presented.

Table 60: Response Profile - Summary of Outcomes

Response Outcomes	Type
Overall, call volumes have increased by 10% from 2012 to 2016, with variability in volume over the five years.	Key Finding
Of the four stations, Station 1 responds to the highest proportion of calls annually at 30%.	Key Finding
Based on an analysis of SSM Response Types, False Alarm calls account for the highest proportion of call types responded to within the City at 35% of all calls over the five year period from 2012 to 2016.	Key Finding
From 2012 to 2016, based on OFMEM Response Types, SSM call volumes are comprised of 5% more CO false calls, 3% more false fire calls, 3% more burning (controlled) calls, 3% more pre fire conditions/no fire calls, 2% more property fires/explosions and 2% more public hazard calls than the provincial total.	Key Finding
Of the False Alarm calls reported from 2012 to 2016, 59% were false fire calls, 27% CO false calls, and 14% burning (controlled).	Key Finding
Seizure, Oxygen Administered, Other Medical/Resuscitator and Alcohol Or Drug Related calls accounted for 65% of all medical calls in Sault Ste. Marie between 2012 and 2016.	Key Risk
Vehicle collisions account for 59% of rescue calls within the City of Sault Ste. Marie or 79 calls per year on average.	Key Risk

Response Outcomes	Type
Of the technical rescue type services, vehicle extrication is the most common type of rescue at an average annual call volume of seven followed by water-related rescue (water rescue and water ice rescue) with a total of 23 calls over the five year period, or about five calls annually on average.	Key Risk
The spatial analysis of Fire Calls - Structure for the period 2012 to 2016 shows a higher density of structure fire calls occurring in the downtown area around Wellington Street West and Cathcart Street, and with some other pockets east and west of Downtown.	Key Finding
The spatial analysis of fire calls for the period 2012 to 2016 indicates a higher density of Fire Calls - Other occurring in the Downtown and west of downtown at the intersection of Lyons Avenue and Korah Road.	Key Finding
The spatial analysis of Pre-Fire Calls for the period 2012 to 2016 indicates a higher density of Pre-Fire Calls occurring in the in the Downtown and along the Wellington Road West corridor in the downtown, the Lyons Avenue/Wallace Terrace corridor west of downtown and the Trunk Road corridor to the east of downtown.	Key Finding
The spatial analysis of False Alarm Calls for the period 2012 to 2016 indicates a higher density of False Alarm Calls occurring in the in the Downtown and north of Downtown on the south east side of Great Northern Road and Third Line East by Sault Area Hospital.	Key Finding
The spatial analysis of Medical Calls for the period 2012 to 2016 indicates a higher density of Medical Calls occurring in the in the Downtown with a notable distribution throughout the City primarily within the Urban Settlement Area.	Key Finding
The spatial analysis of Rescue Calls for the period 2012 to 2016 indicates a higher density of Rescue Calls occurring in the in the Downtown and north of Downtown along Great Northern Road (between McNabb Street and Second Line West) and Second Line West (between Goulais Avenue and Peoples Road).	Key Finding
The spatial analysis of Public Hazard Calls for the period 2012 to 2016 indicates a higher density of Public Hazard Calls occurring in the in the Downtown, and north of downtown in the vicinity of Pine Street at McNabb Street.	Key Finding

7.0 Geographic Profile

A geographic profile reviews key natural and human-made features within a jurisdiction. Per NFPA 1730, a geographic profile should consider highways, bridges, railways, water features, geographic landforms, and wildland-urban interface.

7.1 Geographic Profile Methodology

A geographic profile reviews key natural and human-made features within a jurisdiction. As part of the geographic profile analysis, several key data sources were accessed. The primary sources included spatial data from the City of Sault Ste. Marie Innovation Centre, SSMFS Mapped Unit Response Data for the years 2012 to 2016, and rail incident data from the Transportation Safety Board. The majority of the spatial data received identified specific geographic features. The City's spatial information was cross-referenced with discussions with the SSMFS as well as community planning documents found on the City's website. To paint a picture of the geographic based risks in the City, the historical call data was reviewed and assessed in alignment with the identified geographic features.

7.2 Geographic Snapshot of the Sault

The City of Sault Ste. Marie is one of the key regional centres in Northern Ontario. Located on the shores of Lake Superior, Sault Ste. Marie is approximately halfway between Toronto and Thunder Bay (700 km to each metropolis). The closest major Canadian city is Sudbury, located over 300 km from Sault Ste. Marie to the east.

Sault Ste. Marie is a border city to the United States (Sault Ste. Marie, Michigan), separated by the St. Marys River, a 1 to 1.5 kilometre wide river which connects and drains Lake Superior to Lake Huron. The entire length of the St. Mary's River is an international border separating Michigan from Ontario. The St. Marys rapids are bypassed by freight traffic through engineered locks. There are two sets of locks which manage traffic from Lake Superior to Lake Huron called the Soo Locks and the Sault Ste. Marie Canal. The Soo Locks represent the locks owned by the United States and the Sault Ste. Marie Canal is the Canadian lock, and a National Historic Site[23]. The Soo Locks transport approximately 7,000 vessels and 86 million tons of cargo annually[24] and the Canadian lock is used primarily by recreational water craft. The locks are closed during winter months when ice closes the passageway.

[23] Source: "Sault Ste. Marie Canal National Historic Site". Parks Canada, National Historic Sites. 11 Nov. 2017. Web. 14 Nov. 2017: http://www.pc.gc.ca/en/lhn-nhs/on/ssmarie
[24] Source: "Soo Locks – a Wonder of Engineering and Human Ingenuity". Sault Ste. Marie, Attractions. Web 14 Nov. 2017: http://www.saultstemarie.com/attractions/soo-locks/

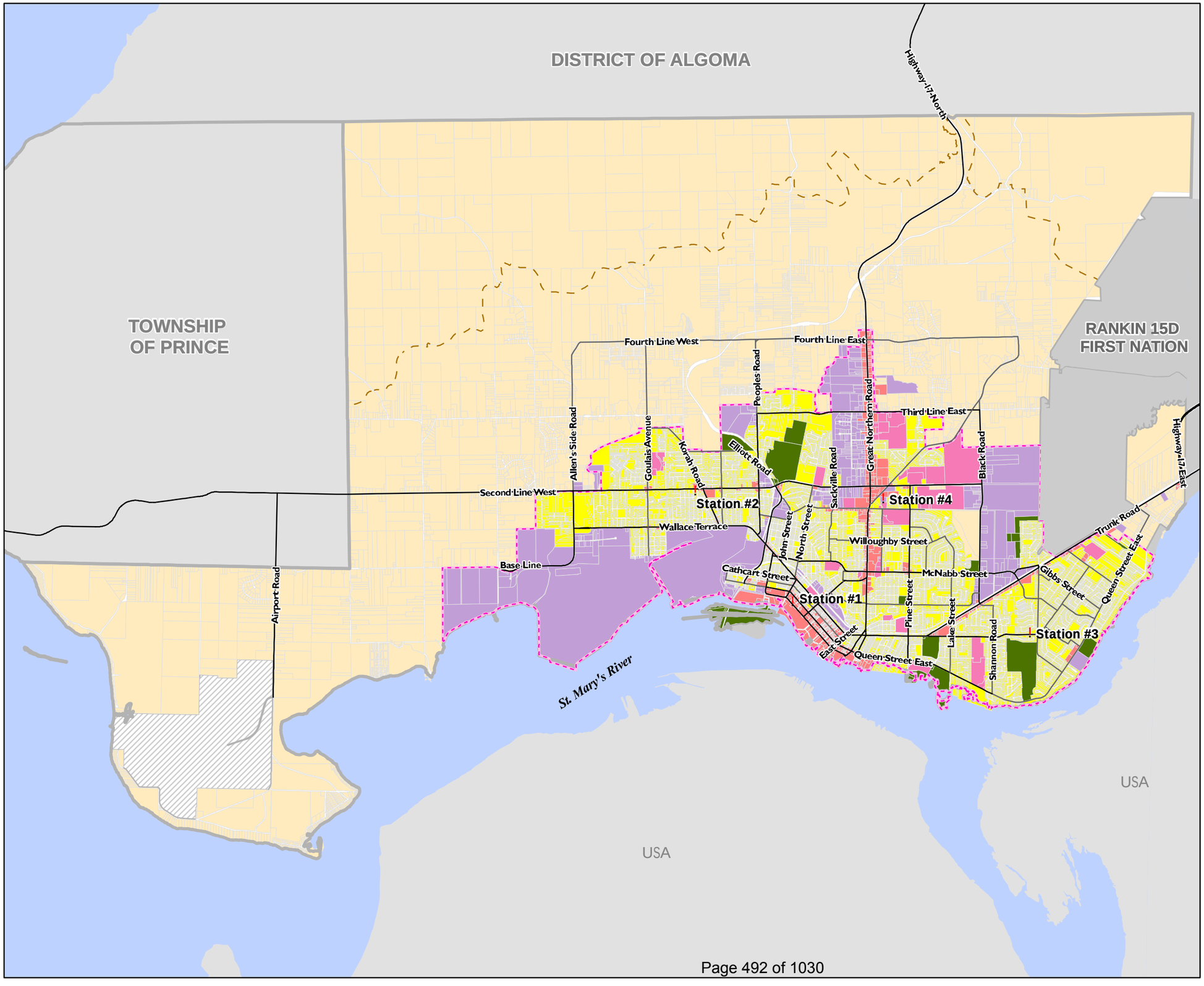
While the St. Marys River defines the shore line, and the southern boundary of the City of Sault Ste. Marie, other natural features shape the City including significant outcropping of the Canadian Shield which formed as a result of pre-historic water levels on Lake Superior[25]. This is referred to within the Official Plan as the Shield Line and impacts the development of the City due to its terrain. The Shield Line is depicted on **Figure 57.**

As defined by the Official Plan, the City has two primary planning areas – the Urban Settlement Area and the Rural Area. The Urban Settlement Area is delineated by the boundary shown in **Figure 61,** with the Rural Area being the remaining municipal area outside of this boundary**.** Rural land uses include agriculture, forestry, golf courses, and residential dwellings including some clusters. Examples of clusters of residential development can be seen at Fourth Line West and Goulais Ave and South of Third Line West on Palomino Drive. Development outside the Urban Settlement Area also includes the Sault Ste. Marie Airport as well as large lot residential along Lake Superior. The industry outside the Urban Settlement Area includes active gravel quarries, solar panel facilities, greenhouses, and farming.

The City boundary covers 223 square kilometres (86 square miles).[26] The City is geographically large with a combination of urban areas and rural uses, which is not uncommon across Ontario. What this means in terms of emergency response, however, is extended emergency response times to areas at the edges of the municipal boundary. For example, from Station 2 (according to Google maps) the western boundary of the municipality along Lake Superior at Sunnyside Beach Road is 16 km away – reflecting a drive of about 16 km.

Key Finding:
The geographic size of the City with its makeup of urban settlement areas and rural areas results in extended emergency response times to the some areas of the City.

[25] Source: "Location/Climate/Setting". Official Community Plan. 1996. Web 14 Nov 17. http://saultstemarie.ca/Cityweb/media/Engineering-and-Planning/Planning/OfficialPlan.pdf
[26] Source: "Stats and Facts". Sault Ste. Marie Economic Development Corporation. April 2015. Web 14 Nov 17. https://www.sault-canada.com/en/investlocateexpand/resources/Stats_and_Facts_April_2015.pdf



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

DESIGNATED LAND USE
FIGURE 61

- ! Existing Fire Station
- Urban Settlement Area
- Municipal Boundary
- First Nation Reserve
- Shield Line

Designated Land Use

- Airport Lands
- Commercial
- Industrial
- Institutional
- Parks Recreation
- Residential
- Rural Area

Source: Official Plan 1996, Office Consolidated Version 2006. Schedule C (2012)

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SFG
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Geographic Profile\Designated Land Use.mxd

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7.3 Road Network

Understanding the profile of a road network within a municipality is important from a risk and emergency response perspective. Vehicle-related incidents can be a key source of call volume for a municipality. The road network is also how fire apparatus travel through a municipality; thus it is valuable to consider where there may be a lack of connectivity due to natural (e.g., river) or human-made barriers (e.g., rail line with no crossing, or road network design).

The Sault Ste. Marie road network is shown in **Figure 62.** Sault Ste. Marie is served by a network of highways, arterial roads, collector roads, and local roads. The TransCanada Highway runs through the City. The primary road network is a modified grid network of Urban and Rural Arterial and Collector roads. The local roads are defined by a curvilinear pattern with cul-de-sacs in some areas (impacting the options for entering a neighbourhood) and a grid network in others.

As identified within Schedule C of the Official Plan, in the Urban Settlement Area there are a number of Urban Arterial roads which travel east to west and north to south, providing connectivity and transportation options through this area. Some east-west arterials include Third Line, Second Line, McNabb Street, Trunk Road, Wellington Street, and Queen Street. Some north-south arterials include Peoples Road, Hudson Street, Great Northern Road, Pine Street, and Black Road. Urban Collector roads are distributed between the Urban Arterial roads and connect with the local road network. Select collector roads include Goulais Avenue, Farwell Terrace, North Street, Willow Avenue, and Boundary Road going north-south and Northern Avenue and MacDonald Avenue going east-west. In the downtown area of the City, the orientation of the road network is shifted to reflect the constraint of St. Marys River.

Ontario Highway 17 is a major section of Canada's primary commercial trucking and leisure driving route, and is one of the only highways linking the eastern and western regions of the country. While the TransCanada Highway or Ontario Highway 17 travels through Sault Ste. Marie within Schedule D of the Official Plan, identifies the highway routes as arterial roads. The highway travels along the north coast of Lake Superior from the east. Ontario Highway 17 bypasses downtown Sault Ste. Marie by travelling along Trunk Road, going north along Black Road and continues north out of the municipality along Great Northern Road.

Outside the Urban Settlement Area, there are Rural Arterial roads, Rural Collector Roads and local roads. The Rural Arterial roads include Airport Road, Second Line West, and Highway 17 North. Rural Collectors include Allen's Side Road, Goulais Avenue, Peoples Road and Fourth Line West. Based on a desktop review, the vast majority of roads within the rural area appear to be paved.

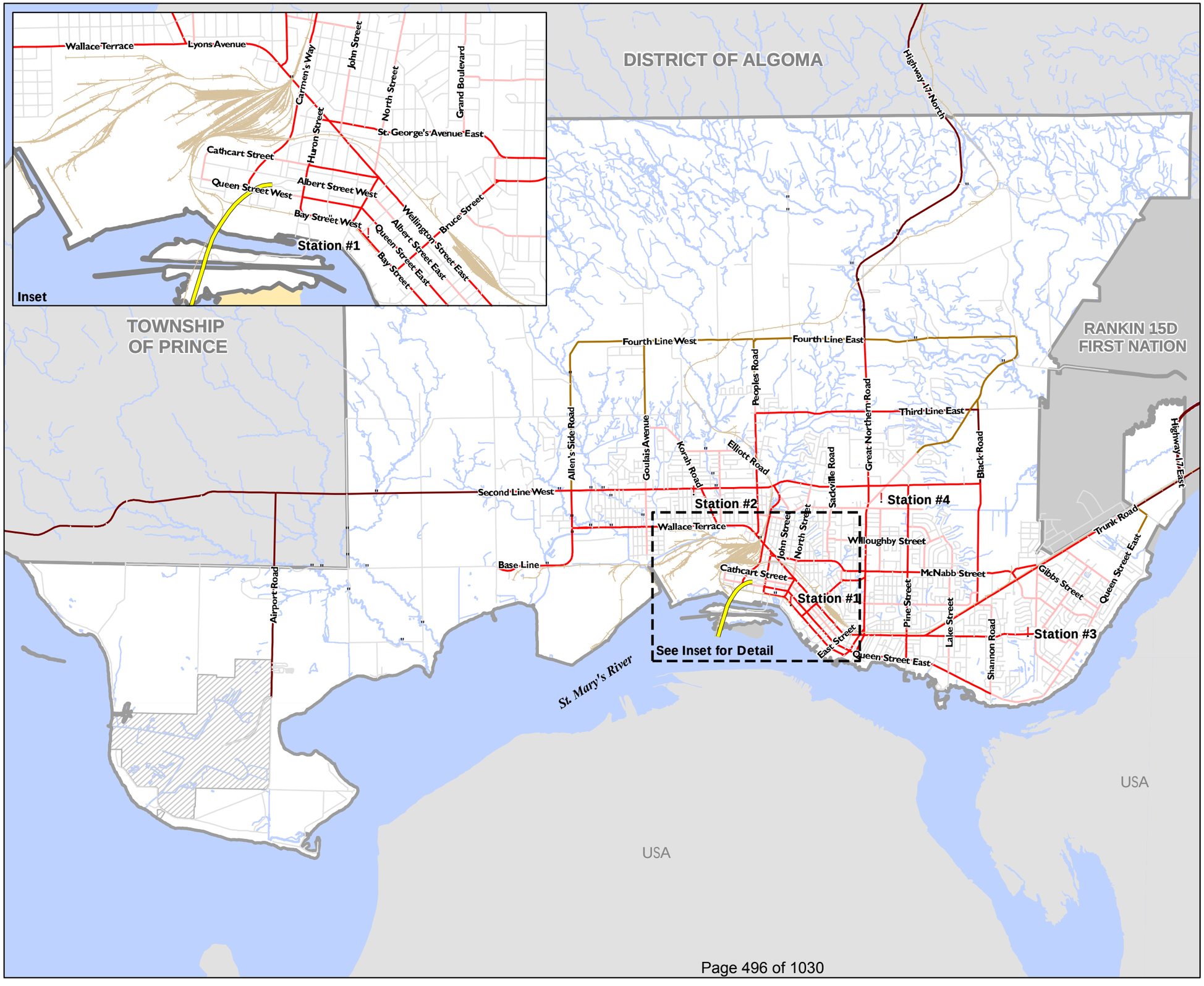
It is common within a municipality for road networks to be a contributor to emergency call volume due to motor vehicle collisions. A road network may also impact emergency response times due to

congestion. SSMFS identified that during peak hours, there is some congestion experienced along major roadways such as Great Northern Road, Second Line, and Trunk Road.

As identified in the Official Plan, the City is considered a 'winter city', which means that the city faces harsh winter conditions, including heavy snowfalls and cold temperatures.[27,28] With this, there are additional hazards in the winter months on the road network including reduced visibility, icy conditions, and snow load narrowing roadways. SSMFS has indicated that hydrants are often covered during winter months because of snow load. In addition, the City's Hazard Identification and Risk assessment highlighted key risks to the road network including flooding, transportation – rail, snowstorm/ blizzard, freezing rain, and hazardous material spill.

[27] Source: "What is a "Winter City" World Winter Cities Association for Mayors – City of Sapporo. Web 17 Nov 17 https://www.city.sapporo.jp/somu/kokusai/wwcam/definition.html

[28] Source: "Official Plan" Sault Ste. Marie Planning Division 1996. Web 14 Nov 17. http://saultstemarie.ca/Cityweb/media/Engineering-and-Planning/Planning/OfficialPlan.pdf



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

TRANSPORTATION SYSTEMS
FIGURE 62

- ! Existing Fire Station
- " Bridges
- International Bridge
- Railroads
- Urban Collector
- Urban Arterial
- Rural Collector
- Rural Arterial
- Local Roads
- Rivers
- Airport
- Municipal Boundary
- First Nation Reserve

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SFG
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Geographic Profile\Transportation Systems Map.mxd

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7.3.1 Location Analysis: Road Network

SSM Mapped Unit Response Data from 2012 to 2016 was analyzed to calculate the number of emergency calls originating from each road classification (rural and urban arterial roads and rural and urban collector roads). The Unit Response Data for each road classification was disaggregated by type of emergency response specific to vehicle-related incidents. The calls were identified based on a Road Area layer provided by the City that essentially reflects the paved/travel portion of a road network. The results of this analysis are presented **Table 61.** In general, the analysis revealed that urban area roads, both Arterial and Collector, have the highest occurrence of emergency calls of any road classification in SSM, with Urban Arterial roads accounting for the vast majority.

Table 61: Vehicle Related Calls Originating from Arterial and Collector Roads Roadways

	Vehicle Related Incidents	2012	2013	2014	2015	2016	Total	Annual Average
Urban Arterial	Vehicle Extrication	3	4	3	2	7	19	4
	Vehicle Collision	30	32	45	39	52	198	40
	Vehicle Fire	0	1	2	2	2	7	1
	Sub-total	**33**	**37**	**50**	**43**	**61**	**224**	**45**
Rural Arterial	Vehicle Extrication	0	0	0	0	0	0	0
	Vehicle Collision	0	3	2	1	3	9	2
	Vehicle Fire	0	0	0	0	1	1	0
	Sub-total	**0**	**3**	**2**	**1**	**4**	**10**	**2**
Urban Collector	Vehicle Extrication	1	0	1	0	0	2	0
	Vehicle Collision	9	5	11	6	11	42	8
	Vehicle Fire	0	0	0	0	0	0	0
	Sub-total	**10**	**5**	**12**	**6**	**11**	**44**	**9**
Rural Collector	Vehicle Extrication	0	0	0	0	1	1	0
	Vehicle Collision	1	1	2	0	0	4	1
	Vehicle Fire	0	0	0	0	0	0	0
	Sub-total	**1**	**1**	**2**	**0**	**1**	**5**	**1**

Table 62 presents an analysis of the number of calls per kilometer of urban and rural arterials and urban and rural collectors within the City by year. This illustrates that, overall, there is a higher incidence of emergency calls per kilometer of urban arterial road.

Table 62: Vehicle-Related Incidents per Kilometre of Roadway

	Length (km)	2012	2013	2014	2015	2016	Annual Average*
Urban Arterial	71.5	0.46	0.52	0.70	0.60	0.85	0.63
Rural Arterial	19.6	0.51	0.26	0.61	0.31	0.56	0.45
Urban Collector	54.5	0.00	0.06	0.04	0.02	0.07	0.04
Rural Collector	20.6	0.05	0.05	0.10	0.00	0.05	0.05
(based on average call volume)							

Key Finding

The road network is a contributor to emergency call volume due to motor vehicle collisions, vehicle extrication, and vehicle fires. Incidents occur on arterial roads. Such incidents, on average by road type length, more commonly occurs on Urban Arterial roads.

7.4 Bridges

Bridges are considered within a CRA because of a few key considerations: the potential for crossing restrictions due to weight; and potential for impact on network connectivity if a bridge were to be out of service. Bridges within the City of Sault Ste. Marie are shown in **Figure 62**. There are 35 bridges located throughout the City, including the International Bridge to the United States. Many of these bridges are required to cross over water features within the City; however, some bridges have been developed to cross man-made features such as a railway lines or highways. Bridges within the City are geographically distributed in roughly three main areas. There is a cluster of bridges which cross the Big Carp River, near Baseline Road and Town Line Road. Another cluster of bridges is around Allen's Side Road and Second Line West, crossing over Bennet Creek. There is also a cluster of bridges north of Fourth Line East, where the Root River interacts with the Great Northern Road as well as some local roads. Discussions with the SSMFS have revealed that all bridges within the City have been upgraded and the bridge structures can all handle fire apparatus. Based on a visual assessment through a desktop review, there are a number of bridge structures west of fire Station # 2, along key urban arterial roads including Second Line West, Allen's Side Road, Wallace Terrace and Base Line Road. However, unless a number of bridges were impacted simultaneously, alternative routes appear to be available.

Sault Ste. Marie also has an International Bridge to the United States of America, located on the southern boundary of the City. This bridge serves as a major access point for trade and travel between Canada and the United States, crossing the international border and the St. Marys River. The International Bridge is 4.5 kilometres long and was constructed between 1960 and 1962, officially

opening to traffic on October 31, 1962.[29] The International Bridge is the only land crossing between the United States and Canada for almost 700 kilometres, and connects to Sault Ste. Marie, Michigan. **Table 63** shows the annual traffic across the International Bridge from 2006 to 2016.[30] The highest volume during this period was recorded in 2013 with 2,104,458 vehicles crossing the bridge. Since 2013, there has been a steady decline in annual traffic data to 1,429,389 vehicles per year recorded in 2016. Services to the bridge are provided through a mutual aid agreement with the neighbouring USA fire department.

Table 63: Sault Ste. Marie International Bridge Annual Traffic

Year	Annual Traffic
2006	1,911,339
2007	1,915,512
2008	1,906,735
2009	1,673,785
2010	1,828,524
2011	1,998,068
2012	2,070,449
2013	2,104,458
2014	1,980,841
2015	1,572,050
2016	1,429,389

***Source**: "International Bridge –Facts and Trivia" Michigan Department of Transportation 2017. Web 14 Nov 17. http://www.michigan.gov/mdot/0,1607,7-151-9618_48384-30286--,00.html*

7.5 Railways

Railways are considered within a CRA for two primary considerations: potential impact on emergency response due to at-grade crossings; and risk of an emergency incident related to rail (e.g., vehicle incident, hazardous materials, etc.). Two rail lines pass through the City of Sault Ste. Marie, as shown in **Figure 63**. The rail line entering the City on the east side, called the Webbwood Subdivision, is owned by Canadian Pacific and is leased to Huron Central Railway.[31] Canadian National owns the majority of the rail yards located in the centre of the City as well as the north to south corridor which moves goods into

[29] Source: "International Bridge –Facts and Trivia" Michigan Department of Transportation 2017. Web 14 Nov 17. http://www.michigan.gov/mdot/0,1607,7-151-9618_48384-30286--,00.html
[30] Source: "International Bridge Historical Traffic" International Bridge Administration Web. 14 Nov. 17 Data retrieved from: http://www.saultbridge.com/international-bridge-historical-traffic/
[31] Source: Railway Investigation Report R15H0092 . 2015. Transportation Safety Board of Canada. 23 Nov 17 Web http://www.bst-tsb.gc.ca/eng/rapports-reports/rail/2015/r15h0092/r15h0092.asp

the United States and north of Sault Ste. Marie. The rail line owned and operated by Canadian National is referred to as The Soo Subdivision. As shown in the figure, one rail line travels adjacent to Trunk Line and Wellington Street with a concentration of spur lines servicing Essar Steel Algoma, and a rail yard north of Wellington Street East and east of Bruce Street.
These rail lines necessitate at-grade rail-road crossing where grade-separated crossing are not warranted. There are 52 at-grade crossings and 2 grade-separated crossings within the City as shown in **Figure 3.** At-grade rail crossing present the risk of stopping emergency vehicles while a train is crossing, and preventing access if a crossing is closed (e.g., if there is a train accident or track construction). In Sault Ste. Marie, the redundancy provided by the street network and locations of the fire stations reduce the risk of barred access due to closed rail crossings. Most of the at-grade rail crossings are located on local roads, with the exception of a crossing on Second Line West and in the downtown areas. In the downtown there are seven rail crossings, with three located on Urban Arterial roads.

In addition to at-grade crossing considerations, depending on the goods being transported, the railway itself may present a higher risk associated with transportation of dangerous goods through built-up areas. Such risks are receiving renewed focus in part through municipal emergency planning programs. (Transport Canada requires that railways provide historical data on dangerous goods to municipal emergency responders to better plan for emergencies). The portion of rail lines intersecting the City are used by both Canadian National and Canadian Pacific to transport goods, which may include those which are potentially flammable and explosive. The City's HIRA also states that rail is an extreme risk relating to the movement of dangerous goods.

The Transportation Safety Board (TSB) compiles data for accidents and incidents on all railways within Canada, organized by subdivision and milepost.[32] This data includes the type of accident/ incident and number of fatalities and serious injuries, if any. For the years 2004 to 2016, TSB accident/ incident data for the section of railways within Sault Ste. Marie was analysed and is summarized in **Table 64.** Within the City boundaries there have been no reported fatalities caused by accidents involving the railway. However, in 2005 and 2007 there were two incidents involving serious injuries, averaging 0.14 per year over the 13 year period.

Table 64: Railway Statistics involving Railway within City Limits (2004 to 2016)

Year	Fatalities	Accidents/ Incidents with Serious Injuries	Total Accidents/ Incidents
2004	0	0	0
2005	0	1	7
2006	0	0	11

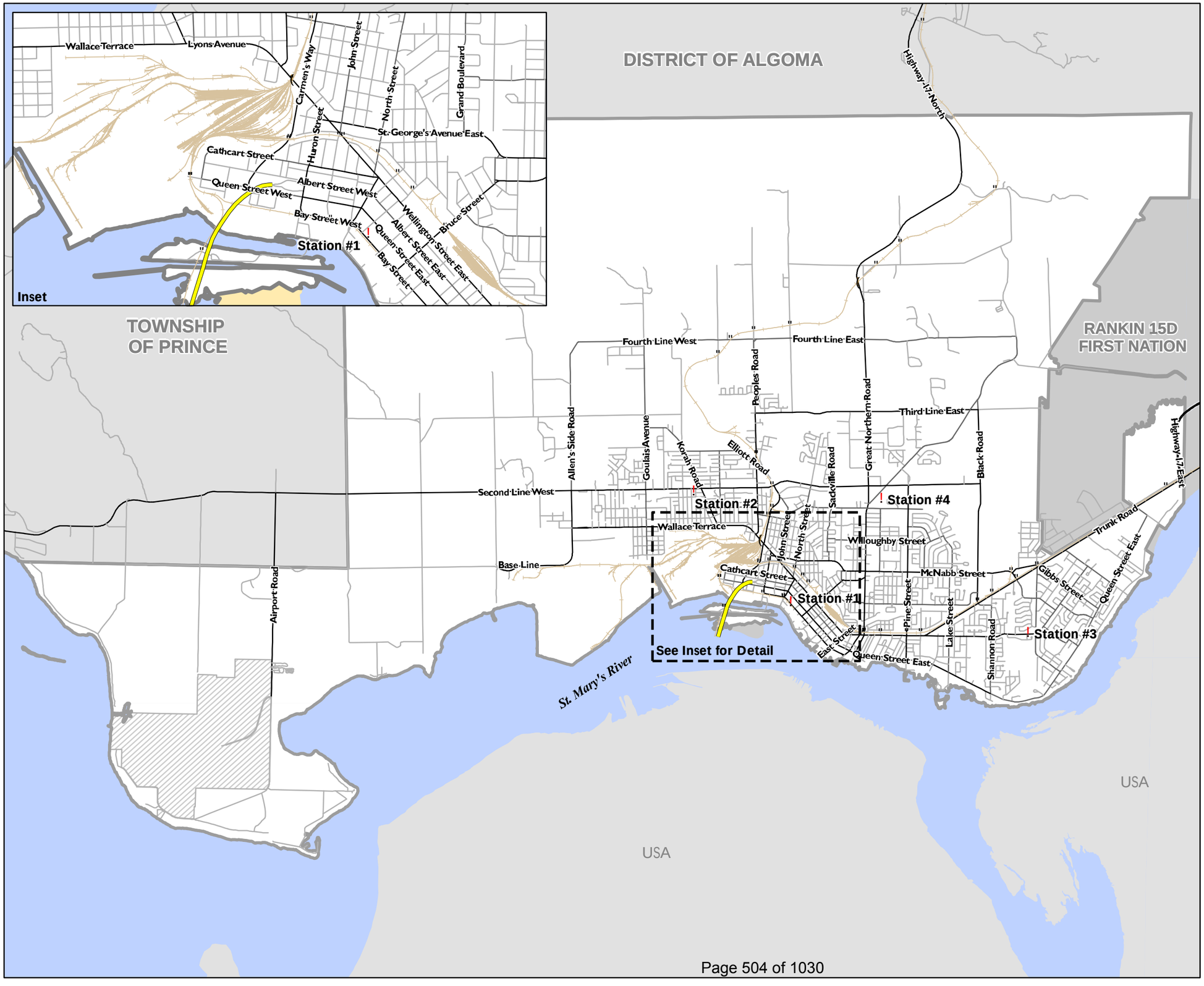
[32] See http://www.tsb.gc.ca/eng/stats/rail/

Year	Fatalities	Accidents/ Incidents with Serious Injuries	Total Accidents/ Incidents
2007	0	1	3
2008	0	0	5
2009	0	0	2
2010	0	0	7
2011	0	0	2
2012	0	0	0
2013	0	0	3
2014	0	0	3
2015	0	0	3
2016	0	0	3
Total	**0**	**2**	**49**
Average per year	**0**	**0.14**	**3.77**

(Source: Analysis of Transportation Safety Board, Railway occurrence data from January 2004)

Key Finding:

The rail lines within the City present a risk related primarily to the movement of goods.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

RAILWAY CROSSINGS
FIGURE 63

- ! Existing Fire Station
- " Railway Crossings At Grade
- (Railway Crossings Separated
- International Bridge
- Railroads
- Local Roads
- Collector Road
- Arterial Roads
- Airport
- Municipal Boundary
- First Nation Reserve

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
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MAP CREATED BY: SFG
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Geographic Profile\Railway Crossings.mxd

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7.6 Airport

Airports can play a key role in a municipality in terms of the movement of goods and people. They also present unique hazards. The Sault Ste. Marie Airport (YAM) is an International Airport operated by the Sault Ste. Marie Airport Development Corporation. There are three passenger airlines, two seasonal passenger airlines and two cargo airlines that use the airport as summarized in **Table 65**.

Table 65: Airlines Operating at Sault Ste. Marie Airport

Airport Services	Airlines
Regular Passenger Service	Air Canada Express Bearskin Airlines Porter Airlines
Seasonal Service	Air Transat Sunwing Airlines
Cargo Service	FedEx Express SkyLink Express

Source: Sault Ste. Marie Airport Development Corporation. (n.d.). Retrieved November 2018, from Airlines: http://saultairport.com/services/airlines/

The airport provides most of its own services, including emergency response, fire suppression, and has its own water supply.[33] It has been identified as part of the data collection for this CRA that support services are provided to the airport by SSMFS in the form of fire suppression staff, providing incident command, and complementing the existing airport water supply. However, from the perspective of the road network, there is some concern regarding access to the airport, as currently the airport can only be accessed from Airport Road. Any incidents along this primary access could impede the ability of SSMFS to respond which is already roughly 15 minutes (from Station #2).

7.6.1 Location Analysis: Airport

Though the airport has some dedicated emergency response services, SSMFS responds to certain airport emergency calls, as well as to emergencies extending beyond the airport boundary. **Table 66** outlines calls received by SSMFS from within the airport area, based on SSM Mapped Unit Response Data 2012 to 2016. The annual number of calls originating from the Airport area has remained consistently low (approximately 10 calls per year) over the past five years, with the majority of calls (59% of the total calls over the five years) being 'False Fire Calls'.

[33] Source: Sault Ste. Marie Airport Development Corporation. (n.d.). Retrieved November 2018, from Airlines: http://saultairport.com/investment/

Table 66: Emergency Calls Originating from Airport Area

	2012	2013	2014	2015	2016	Total	%
Property Fires/Explosions	0	0	0	0	0	0	*0%*
False Alarm Call	4	7	2	9	4	26	*59%*
Rescue	0	0	0	0	0	0	*0%*
Medical/Resuscitator Call	2	1	1	1	0	5	*11%*
Public Hazard	1	0	0	0	0	1	*2%*
Pre Fire Conditions/No Fire	0	0	1	1	1	3	*7%*
Other Response	0	2	3	2	2	9	*20%*
TOTAL	**7**	**10**	**7**	**13**	**7**	**44**	***100%***

The risk of an air transportation related incident is identified through the Hazard Identification and Risk Assessment discussed in the **Hazard Profile.**

Key Finding:
SSMFS response to the airport is primarily for calls categorized as False Alarm Calls.

7.7 Natural Features, Water Features, and Landforms

The City of Sault Ste. Marie is influenced greatly by its natural features including water bodies, rivers, and natural landforms, such as the escarpment. This section explores some of the key waterways and Conservation Areas within the City, as well as the topography from a risk perspective.

7.7.1 Waterways and Conservation Areas

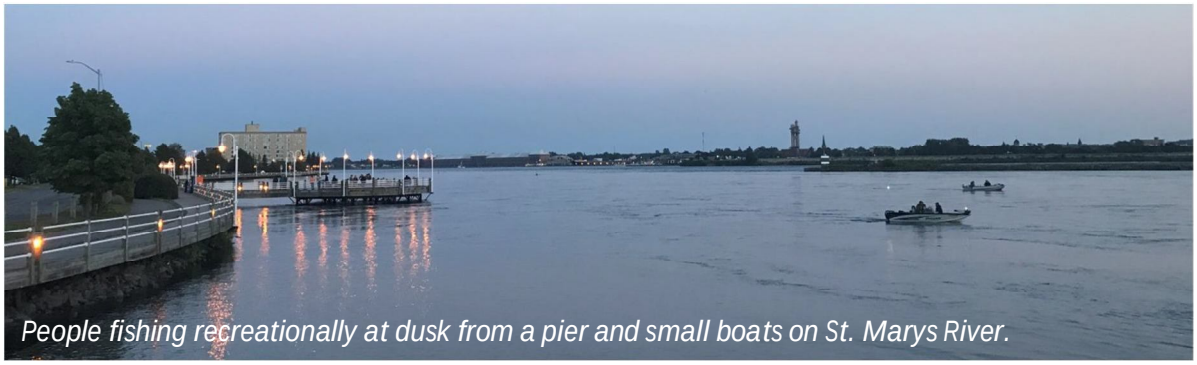
Waterways and Conservation Areas are important from a risk perspective in part due to recreational activities that take place and the natural hazards that they present (e.g., flooding). **Figure 64** shows the natural features which are located throughout the City including rivers, creeks, wetlands, parks and significant woodlands surrounding the City.

Waterways
As identified in Section 1.0 of the Official Plan, Sault Ste. Marie "has a river valley setting" (p.g., 1) and is nestled on the shores of Lake Superior and St. Marys River. The river is a major corridor connecting Lake Superior and Lake Huron, and separating Canada from the United States. Other rivers and creeks within the City boundary, as shown on **Figure 64,** include:

- Big Carp River;
- Little Carp River;
- Bennett Creek;
- Fort Creek;
- Root River;
- Coldwater Creek;

- Crystal Creek; and
- Clark Creek.

Waterways throughout the City pose a potential risk in part due to the recreational activity that occurs on them. Residents and tourists alike, for example, enjoy fishing in local areas including St. Marys River. An additional consideration is that during summer months, flooding and/or faster currents could occur and there is potential for swift water rescue. During winter months, the frozen streams and rivers pose a risk and incidents could include ice rescue.



People fishing recreationally at dusk from a pier and small boats on St. Marys River.

Conservation Areas

As depicted in **Figure 64,** there are two provincially significant wetlands located in the western portion of the City called Carp Rivers Wetland and Shore Ridges Wetland. The Shore Ridges Wetland is a part of one of the four Conservation Areas (CA) in the City – the Shore Ridges Conservation Area. The three other conservation areas are: Mark's Bay Conservation Area, Fort Creek Conservation Area, and the Hiawatha Highlands Conservation Area. Some traits of these areas including location and recreational opportunities are summarized in **Table 67**. The Fort Creek Conservation Area includes a portion of the Hub Trail, a 22.5 kilometre trail for non-motorized uses that circles the city including a portion that travels along the waterfront. Motorized trail uses include those for snowmobiling, for example, which also acts as a tourist attraction within the City and region. Given the location of some of these recreational opportunities within the City and limited access to the trail system, there is a potential impact on emergency response in the event of an incident.

Table 67: Sault Ste. Marie Conservation Areas

Conservation Area	Size / Location	Recreational Opportunities
Shore Ridges Conservation Area[1]	•443 ha •Western boundary of Municipality on shores of Lake Superior	•Hiking, cross country skiing, and snowshoeing
Mark's Bay Conservation Area[2]	•103 ha •East of Airport Road on the shores	•Old logging roads and deer corridors provide the opportunity

Conservation Area	Size / Location	Recreational Opportunities
	of St. Marys River	for hiking and winter activities. •Boat launch and swimming.
Fort Creek Conservation Area[3]	•77 ha •North-east intersection of Peoples Road and Second Line	•Hiking, cycling, cross country skiing, and snowshoeing. •Includes a portion of the Hub Trail. •Originally purchased for flood control purposes.
Hiawatha Highlands Conservation Area[4]	•East of Great Northern Road, north of Fifth Line East	• Hiking, park amenities, cycling, mountain biking, winter cycling, snowshoeing, and cross country skiing (Soo Finnish Nordic Ski Club)

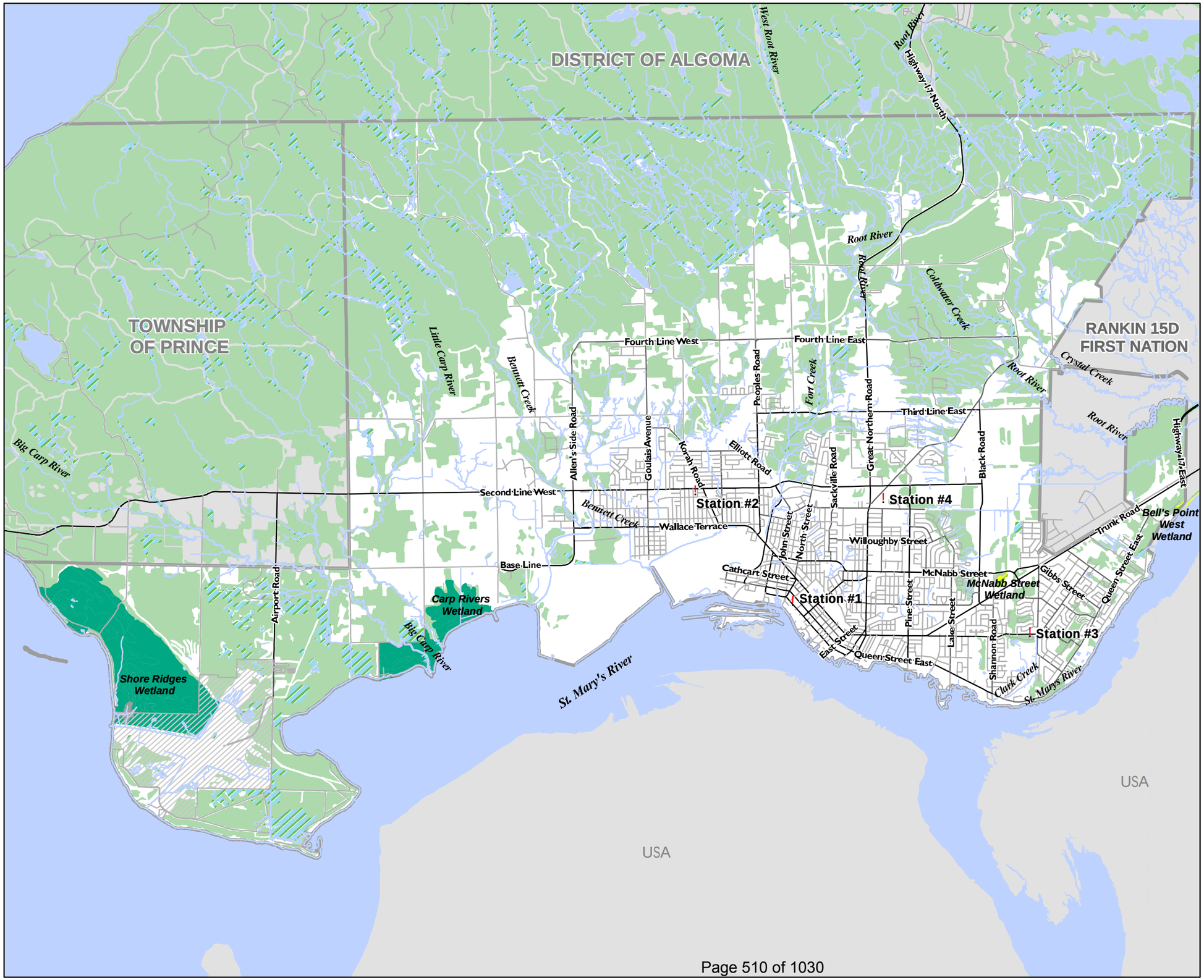
[1] *Source*: Conservation Ontario. (2015). Shore Ridges Conservation Area. Retrieved September 20, 2017, from Conservation Ontario: https://ontarioconservationareas.ca/component/mtree/conservation-authorities-of-ontario/sault-ste-marie-region/sault-ste-marie-region-explore-the-shore/shore-ridges-conservation-area
[2] *Source*: Sault Ste. Marie Region Conservation Authority. (2017). Mark's Bay Conservation Area. Retrieved September 20, 2017, from Sault Ste. Marie Region Conservation Authority: http://ssmrca.ca/recreation/marks-bay-conservation-area/
[3] *Source*: Sault Ste. Marie Region Conservation Authority. (2017). Fort Creek Conservation Area. Retrieved September 20, 2017, from Sault Ste. Marie Region Conservation Authority: http://ssmrca.ca/recreation/fort-creek-conservation-area/
[4] *Source*: Conservation Ontario. (2015). *Hiawatha Highlands Conservation Area*. Retrieved September 20, 2017, from Conservation Ontario: https://ontarioconservationareas.ca/component/mtree/conservation-authorities-of-ontario/sault-ste-marie-region/hiawatha-highlands-con-area?Itemid

Emergency incidents experienced in these types of natural settings could require services such as water rescue or high-angle rescue, for example. The Response Profile presents the results of the analysis of technical rescue calls including those related to water rescues.

7.7.2 Topography

Figure 65 shows the topography for the City. A key distinctive feature within the municipality is referred to in the Official Plan as the 'shield line' and is a result of a historic low land plateau with the shield line being "outcroppings of Precambrian rock of the Canadian Shield Highland" 30 metres above the shore line (pg., 1 of the Official Plan).[34] This feature results in a natural boundary with the rural area and is illustrated in **Figure 65**.

[34] Sault Ste. Marie (1996) Official Plan http://saultstemarie.ca/Cityweb/media/Engineering-and-Planning/Planning/OfficialPlan.pdf



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

NATURAL FEATURES
FIGURE 64

- ! Existing Fire Station
- Airport
- Municipal Boundary
- First Nation Reserve
- Watercourse
- Waterbody
- Unevaluated Wetland
- Locally Significant Wetland
- Provincially Significant Wetland
- Woodland

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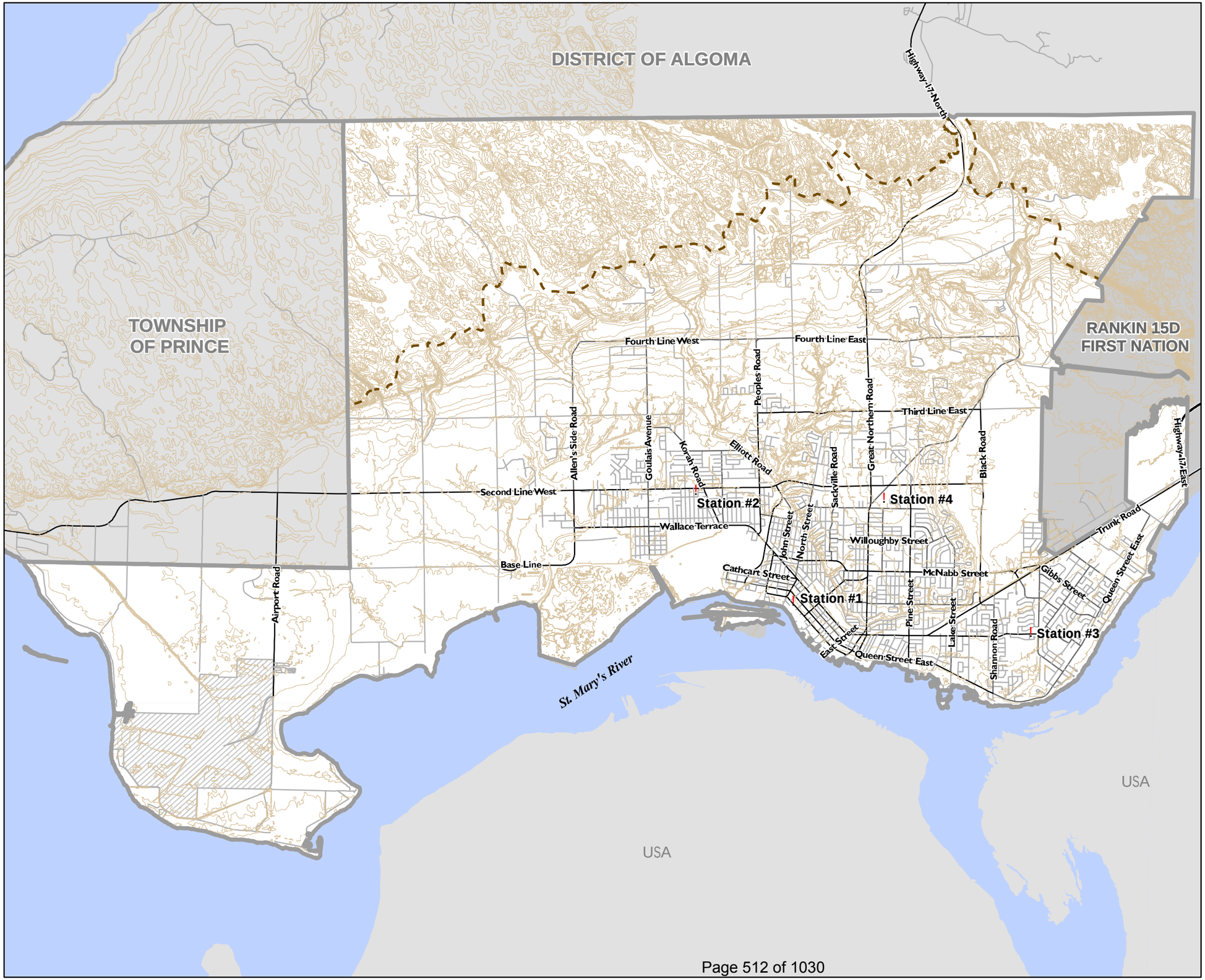
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CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

TOPOGRAPHY
FIGURE 65

- ! Existing Fire Station
- 5 m Contours
- Shield Line
- Airport
- Municipal Boundary
- First Nation Reserve

0 0.5 1 2 km

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DATA PROVIDED BY THE
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7.8 Wildland-Urban Interface

The frequency and intensity of wildfires, and recent incidents such as the Fort McMurray forest fire in 2016, has garnered significant attention in the fire industry, media, municipalities, and with the general public. This section provides an overview of: wildfires; the wildland-urban interface; legislative context and policy tools; and a spatial analysis.

7.8.1 Overview of Wildfires

As identified in the Province of Ontario's Wildland Fire Risk Assessment and Mitigation Reference Manual (Reference Manual), wildfires are the second most common type of natural disaster that is reported in Canada next to flooding, though wildfires occur more frequently.[35] According to a webinar provided through the Forestry Adaptation Community of Practice (FACoP) (2017), on average in Canada, there are 7,000 wildfires per year, burning 2 to 2.5 million hectares of land. This has increased from approximately 1,000,000 hectares per year in the early 1970s.[36] The key ignition sources of wildfires are either human-caused or through lighting, with lightning fires accounting for 35% of total fires in Canada and 85% of the area burned, according to the FACoP.[37]

As described in the FACoP webinar, overall climate change will have an impact on the frequency and intensity of wildfires, (recognizing that there would be spatial and temporal variability in the impact). This is in part because of the four key factors that impact forest fires: fuel, ignition, weather, and human footprint (such as land use and fire management polices). Climate change has a direct impact on the weather factor from the perspective of impacting temperature, precipitation, and atmospheric moisture, for example. Warmer temperatures will increase the potential for lightning, therefore increasing the potential for a wildfire ignition source. Warmer temperatures will also lead to less air moisture and in some cases less precipitation to mitigate the spread of wildfire. In addition, warmer temperatures will lead to longer fire seasons and more susceptibility to wildfires. According to the Province of Ontario's Wildland Fire Risk Assessment and Mitigation Reference Manual, research shows that the total fires in Ontario could increase by 15 percent by 2040, and by 50 percent by 2100.[38]

[35] Source: Ontario Ministry of Natural Resources. April 2017. Wildland Fire Assessment and Mitigation Reference Manual in Support of Provincial Policy Statement, 2014. Toronto: Queen's Printer for Ontario
[36] Source: Forestry Adaptation Community of Practice Webinar (2017) The Future of Wildland Fire in Canada – Hot and Smoky? By: Mike Flannigan
[37] Source: Forestry Adaptation Community of Practice Webinar (2017) The Future of Wildland Fire in Canada – Hot and Smoky? By: Mike Flannigan
[38] Source: Ontario Ministry of Natural Resources. April 2017. Wildland Fire Assessment and Mitigation Reference Manual in Support of Provincial Policy Statement, 2014. Toronto: Queen's Printer for Ontario

7.8.2 Wildland-Urban Interface

The wildland-urban interface is defined within the Reference Manual as "*any point where the fuel feeding a wildland fire changes from natural (wildland) fuel to human-made fuel*".[39] Therefore, wildland fire hazard and associated risks are created where human activity and development intersect with forested areas. However, historically, wildfires were thought to be primarily a fuel load (forested area) problem, and efforts were taken to combat the wildfire after ignition including direct firefighting costs. This traditional approach is becoming less attractive economically and from an effectiveness perspective. This is compounded when considering the possible impacts of climate change.[40]

Similar to the application of the first two lines of defence within the fire service in Ontario – where fire suppression is the failsafe – a prevention/mitigation lens can also be applied to wildfires. As mentioned, historically this lens was applied by managing the wildfire through suppression. However, as stated in an article published through the Proceedings of the National Academy of Sciences, the impact of wildfires can more effectively be reduced by focusing on the surrounding vegetation as well as the ignition potential of buildings – not just fighting the fire.[41] This approach is supported through recent guiding policy documents explored in the next section.

7.8.3 Legislative and Policy Framework

Within Ontario, the legislative framework for wildfires is established primarily in the *Forest Fires Prevention Act*, 1990 (FFPA) as well as the *Emergency Management and Civil Protection Act*, 1990 (EMCPA) which outlines the emergency management program requirements required from municipalities. (Further discussion on the EMCPA can be found in the Fire Master Plan). The FFPA sets out the legislation which guides wildland fire management including establishing the fire season, permitting, fire restriction zones, and fire suppression responsibilities of local authorities.[42] The implementation of *Forest Fires Prevention Act* and the EMCPA is supported by Ontario's FireSmart program, which is a voluntary program that focuses on reducing wildfire risks through identification of hazards, education, and mitigation.[43]

Land use in Ontario is regulated by the *Planning Act,* 1990 with policy direction provided through the 2014 Provincial Policy Statement (PPS). PPS policy 3.1.8 states that development shall be directed outside of lands that have a presence of hazardous forest types for wildland fire and that if development is permitted, risk must be mitigated in accordance with the wildland fire assessment and mitigation

[39] Source: Ontario Ministry of Natural Resources. April 2017. Wildland Fire Assessment and Mitigation Reference Manual in Support of Provincial Policy Statement, 2014. Toronto: Queen's Printer for Ontario, p.g. 8.
[40] Source: Forestry Adaptation Community of Practice Webinar (2017) The Future of Wildland Fire in Canada – Hot and Smoky? By: Mike Flannigan
[41] Calkin, David E, Cohen, Jack D, Finney, Mark A, Thompson, Matthew P (2013) How risk management can prevent future wildfire disasters in the wildland-urban interface.
[42] Source: Ontario. 2017. *Forest Fire and Protection Act,*R.S.O. 1990, Chapter F. 24
[43] Source: What is FireSmart? 2017. FireSmart Canada 23 Nov 17. Web. https://www.firesmartcanada.ca/what-is-firesmart

standards.[44] The Ontario Ministry of Natural Resources and Forestry's Wildland Fire Assessment and Mitigation Reference Manual (April 2017) was created in support of the Provincial Policy Statement in part to provide clarity on the stated policies. Local policy approaches - including Official Plans, zoning by-laws, site plan control tools, and Ontario Building Code enforcement through planning authorities - emphasize the opportunity to reduce risk by focusing on buildings through land use planning.

Part 2 of the Reference Manual provides Wildland Fire Assessment and Wildland Fire Mitigation Techniques. This includes guidance on conducting a wildland fire assessment through a *"review of generalized MNRF wildland fire hazard mapping, planning authority mapping, [and] broad level site assessment*" (pg. 19). The Reference Manual recommends that "local planning authorities undertake a broad-level/municipal-wide wildland fire assessment".[45] While this CRA considers available information to review this risk at a high level, this study does not reflect a wildland fire assessment as described within the Reference Manual. However, it does review the generalized MNRF wildland fire hazard mapping, as well as additional source of spatial information from Natural Resources Canada, as described in the section that follows.

7.8.4 Identifying the Wildland-Urban Interface in Canada

In 2016, research was conducted at the University of Alberta to define and map the wildland-urban interface in Canada. The analysis was based on national datasets around structures/infrastructure as well as land cover to identify interface areas. An interface refers to those areas where a structure may be at risk of a fire due to wildfires. Interfaces were defined spatially by assessing the fuel area surrounding structures based on a buffer. This research resulted in national spatial mapping of the wildland-urban interface which is housed at and provided by the Government of Canada's Canadian Forest Service, Natural Resources Canada.[46]

The resulting spatial data reflects three different datasets: wildland-urban interface; wildland-industrial interface; and infrastructure interface. The wildland-urban interface (WUI), as defined in the research, refers to areas "*where homes or other community structures meet with or are interspersed with wildland fuels*".[47] The wildland-industrial interface (WII) shows the interface of wildland fuels with industrial structures such as oil and gas, or mining structures. The infrastructure interface illustrates the interface of infrastructure such as transmission lines, roads, or railways.

[44] Source: Ontario Ministry of Municipal Affairs and Housing. 2014. Provincial Policy Statement, 2014. 3.1.8. Toronto: Queen's Printer for Ontario.
[45] In addition to the Reference Material, the National Fire Protection Association has standards on wildfire including NFPA 1141 Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas, NFPA 1143 Standard for Wildland Fire Management, and NFPA 1144 Standard for Reducing Structure Ignition Hazards from Wildland Fire.
[46] Johnston, Lynn M. (2016) Mapping Canadian Wildland Fire Interface Areas. MSc thesis. Department of Renewable Resources. University of Alberta. 161 pgs. doi: 10.7939/R3GT5FR9Z.
[47] Johnston, Lynn M. (2017). Interface Mapping Readme

It is important to note that the WUI, WII, and infrastructure interface identified in the mapping **do not reflect an area at risk** but an area of potential risk. In addition, data was generated based on information that lends itself to analysis at a regional or community scale, not at smaller scales (neighbourhood/single structure).[48] The mapping analysis of this data is presented in the following section.

7.8.5 Mapping Analysis: Sault Ste. Marie Wildland-Urban Interface

This section explores the spatial data described above including Ministry of Natural Resources and Forestry's Potential Hazardous Forest Types for Wildland Fire and the three interface datasets from Natural Resources Canada.

Figure 66 illustrates the potential hazardous forest types for wildland fires based on data provided by the MNFR. This figure shows that the majority of potential forest type hazard levels in the City is low and is located primarily in the northern part of the City (around and above the Shield Line) as well as around the airport. There are some pockets of moderate hazardous forest type and an 'edge' of high hazardous forest types roughly south of Fourth Line West.

Figure 67 depicts the wildland-urban interface as defined above. The wildland-urban interface shown throughout Sault Ste. Marie is generally located outside of the Urban Settlement Area. A key area where the wildland-urban interface is prevalent is around the Sault Ste. Marie Airport and Airport Road. There is also a large portion of the interface located north-east of the Great Northern Road Fourth Line East. Both of these areas are characterized by dense forest and some residential development.

Figure 68 depicts the wildland-industrial interface (industrial referring to structures such as oil and gas or mining facilities). These areas in Sault Ste. Marie are primarily outside of the Urban Settlement Area, including near active quarries and aggregate resources (e.g., northeast of the intersection of Allen's Side Road and Fourth Line West).

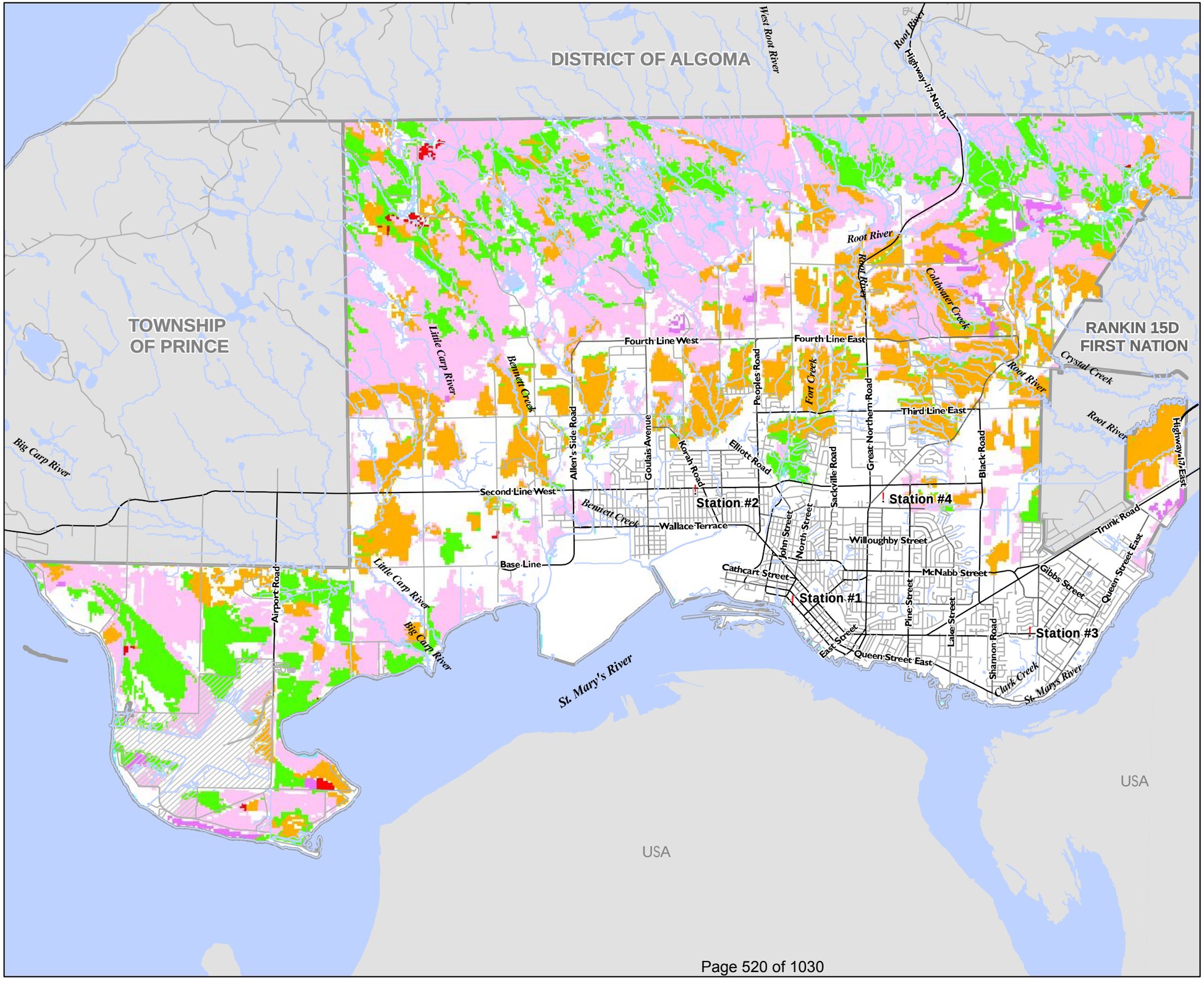
Figure 69 shows the infrastructure interface (infrastructure such as roads, transmission lines and rail lines). The wildland-infrastructure interface is generally dispersed around the Urban Settlement Area, where potential wildland fuels interact with local roads in the rural area, for example.

The Wildland Urban interface is present along the western, northern, and eastern boundaries of Sault Ste. Marie, where there is an interaction of wildland fuel with community infrastructure or structures. Most of the wildland-urban interface is outside the Urban Settlement Area.

Key Finding:

[48] Johnston, Lynn M. (2017). Interface Mapping Readme

The City has potential risk of wildland fire due to potential hazardous forest types and the wildland-urban interface primarily outside of the Urban Settlement Area.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

POTENTIAL HAZARDOUS FOREST TYPES FOR WILDLAND FIRE

FIGURE 66

- ! Existing Fire Station
- Airport
- Municipal Boundary
- First Nation Reserve
- Watercourse
- Waterbody

Potential Hazardous Fuel Types for Willdland Fires

- Extreme
- High
- Moderate
- Low
- Pine Needs Evalutaion
- Water

Note: Data provided by the Government of Canada's Canadian Forest Service, Natural Resources Canada. Areas depicted do not reflect an area at risk but an area of potential risk.

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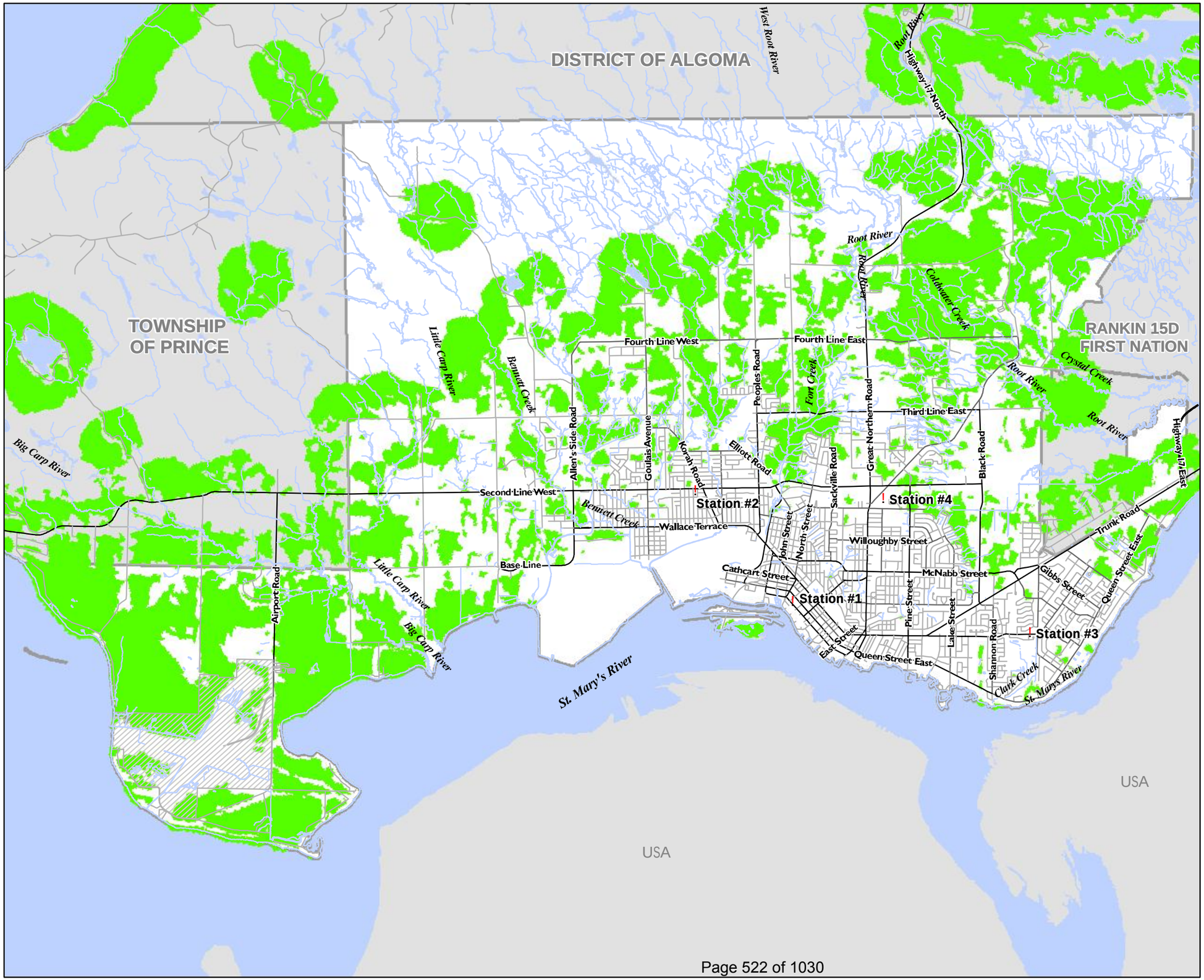
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MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Geographic Profile\Fire-Potential Hazardous Forest Types for Wildland Fire.mxd

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CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

WILDLAND-URBAN INTERFACE
FIGURE 67

- ! Existing Fire Station
- Airport
- Municipal Boundary
- First Nation Reserve
- Watercourse
- Waterbody
- Wildland-Urban Interface (Oct 11)

Note: Data provided by the Government of Canada's Canadian Forest Service, Natural Resources Canada. Areas depicted do not reflect an area at risk but an area of potential risk.

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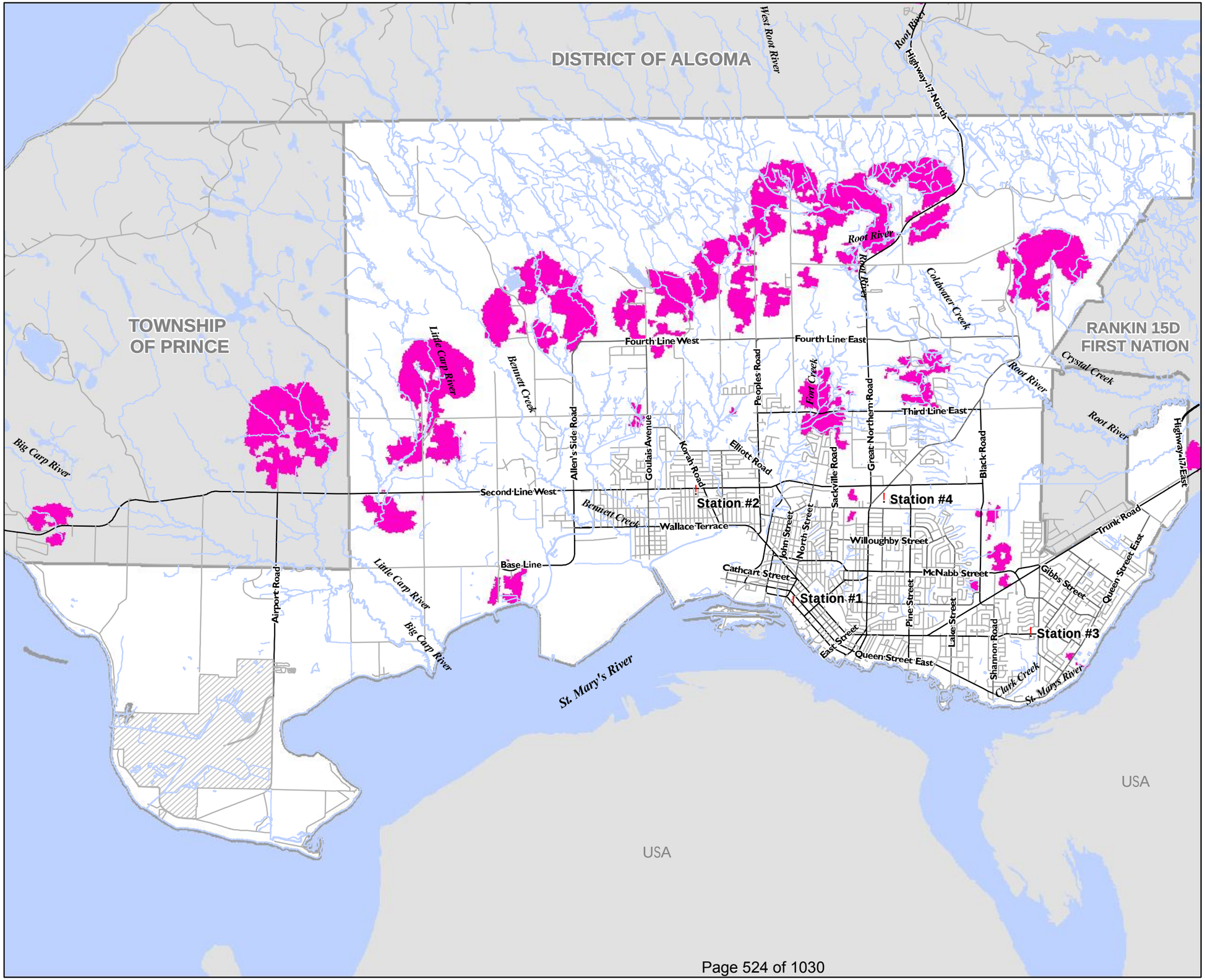
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CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

WILDLAND-INDUSTRIAL INTERFACE
FIGURE 68

- ! Existing Fire Station
- Airport
- Municipal Boundary
- First Nation Reserve
- Watercourse
- Waterbody
- Wildland-Industrial Interface (Oct 17)

Note: Data provided by the Government of Canada's Canadian Forest Service, Natural Resources Canada. Areas depicted do not reflect an area at risk but an area of potential risk.

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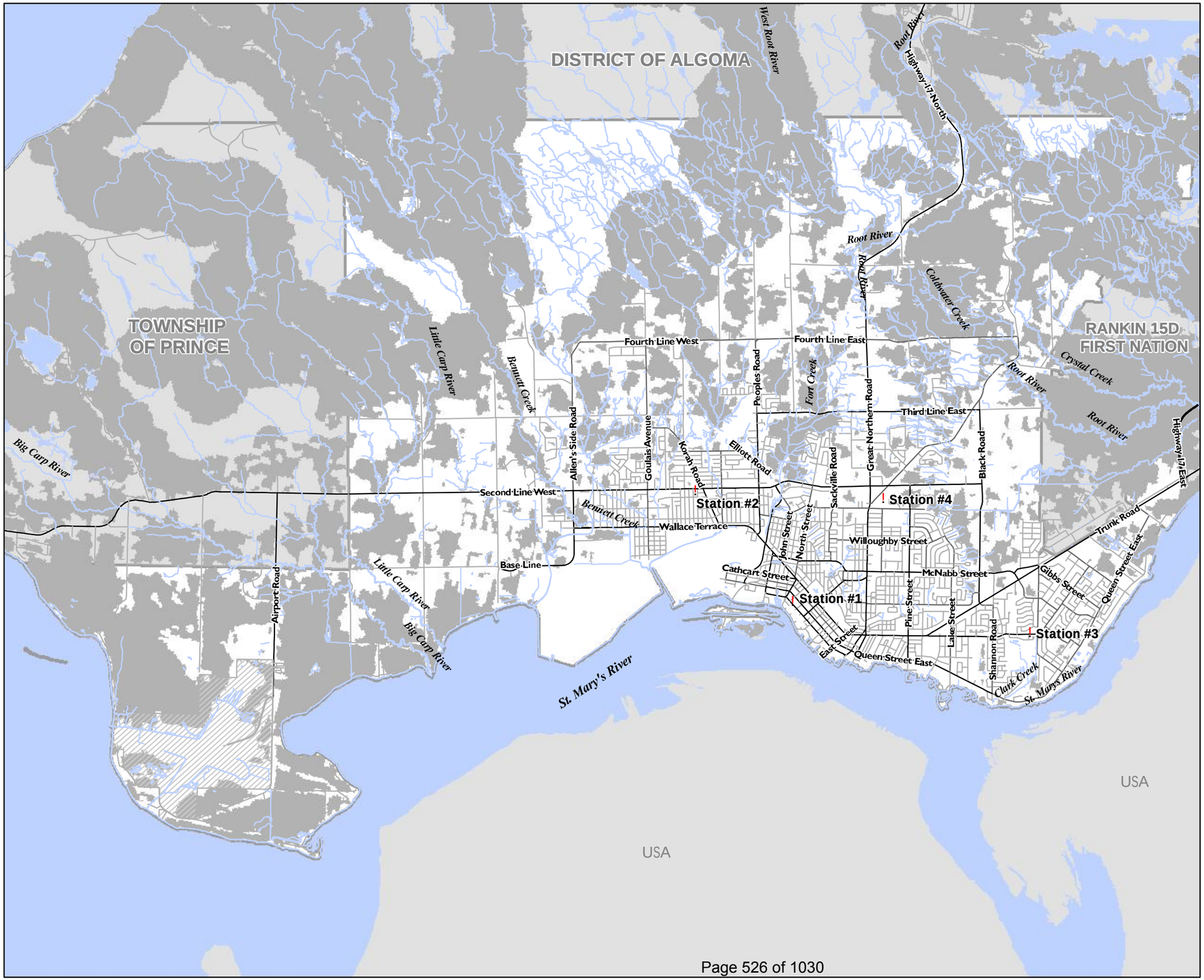
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FILE LOCATION: G:\cad\GIS\175984\Mapping\Geographic Profile\Wildland Industrail Interface.mxd

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DATE: 11/20/2017



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

WILDLAND-INFRASTRUCTURE INTERFACE
FIGURE 69

- ! Existing Fire Station
- Airport
- Municipal Boundary
- First Nation Reserve
- Watercourse
- Waterbody
- Wildland-Infrastructure Interface (Oct 17)

0 0.5 1 2 km

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N W E S

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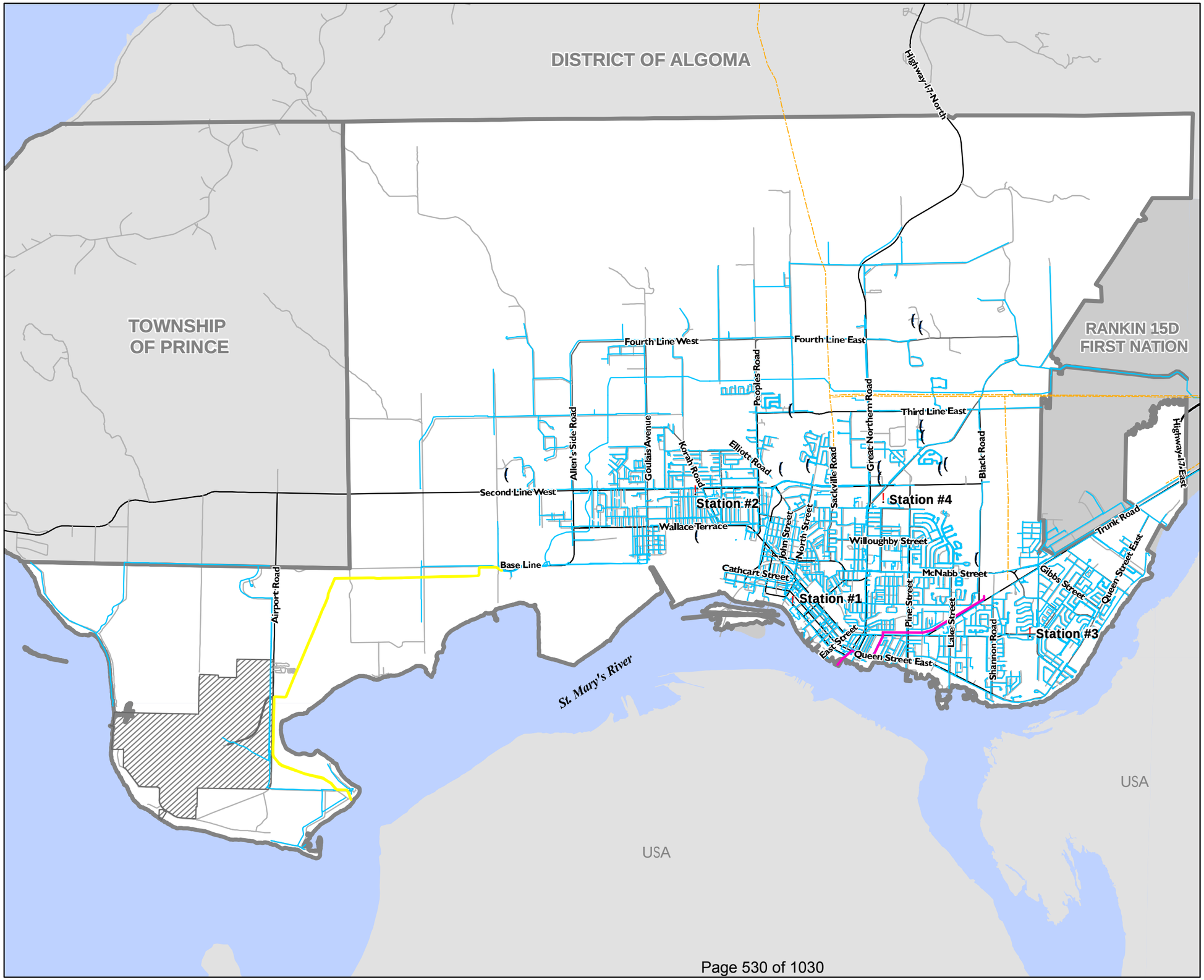
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7.9 Utilities

Figure 70 shows the municipal servicing systems throughout the City of Sault Ste. Marie. The City is almost entirely serviced by natural gas provided by Union Gas. There are two major pipelines located along the southern boundary of the City owned by TransCanada Pipelines and Imperial Oil. The TransCanada pipeline is located in the south west area of the city and enters the City boundary at St. Marys River east of the Airport, and travels around Mark's Bay, terminating at Baseline Road and Leighs Bay Road. The Imperial Oil pipeline is located just south of downtown and travels along the Trunk Road and terminates at the Imperial Oil facility just north of the intersection of Trunk Rd and Black Rd. Pipelines can present a risk which varies depending on the nature of the material being transported. The material within pipelines is not outlined in the data provided; however, their presence does reflect a key risk within the community.

According to information provided by the Public Utilities Commission, the City benefits from two primary sources of water. Half of the City is supplied water from five wells that tap into an aquifer. The other half of the City is supplied by water from a single pipe into Lake Superior. In addition, there are 14 stormwater management ponds dispersed around the city. Stormwater management ponds can present a water-related risk; however, the majority of the stormwater ponds in the City are dry ponds.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

UTILITIES
FIGURE 70

- ! Existing Fire Station
- (Sewer/Stormwater Management Ponds
- Hydro Line
- Imperial Oil Pipeline
- TransCanada Pipeline
- Union Gas Pipeline
- Airport
- Municipal Boundary
- First Nation Reserve

0 0.5 1 2 km

1:80,000

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MAP CREATED BY: SFG
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Geographic Profile\Utilities Map.mxd

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PROJECT: 175984
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DATE: 11/13/2017

7.9.1 Power and Communications Infrastructure

The City also has power and communications infrastructure. These include hydro lines, pipelines and transmission lines **(Figure 70).**There is a Hydro Line corridor which runs through the City from the east side at Rankin 15D First Nation and exists north into the district of Algoma. There are also two hydro lines which connect to this corridor one east of Black Road, terminating at McNabb Street and one east of Sackville Road, terminating at Second Line West.

Risks arising from these utilities relates to fallen hydro lines (e.g., from a storm). There are also risk related to hydro lines may not all occur within hydro corridors – down power lines throughout the City also present a risk. **Table 68** shows annual calls related to downed power lines, arcing as identified in the 2012 to 2016 Mapped Unit Response Data. In total over the five year period there were 101 calls relating to downed power lines, resulting in a an average annual call volume of 20 calls.

Table 68: Calls Relating to Downed Power Lines

	2012	2013	2014	2015	2016	Total
Power Lines Down	14	19	18	31	19	**101**

Key Risk:
Incidents related to power and communications infrastructure results in an average of 20 calls per year on average.

7.9.2 Hydrants

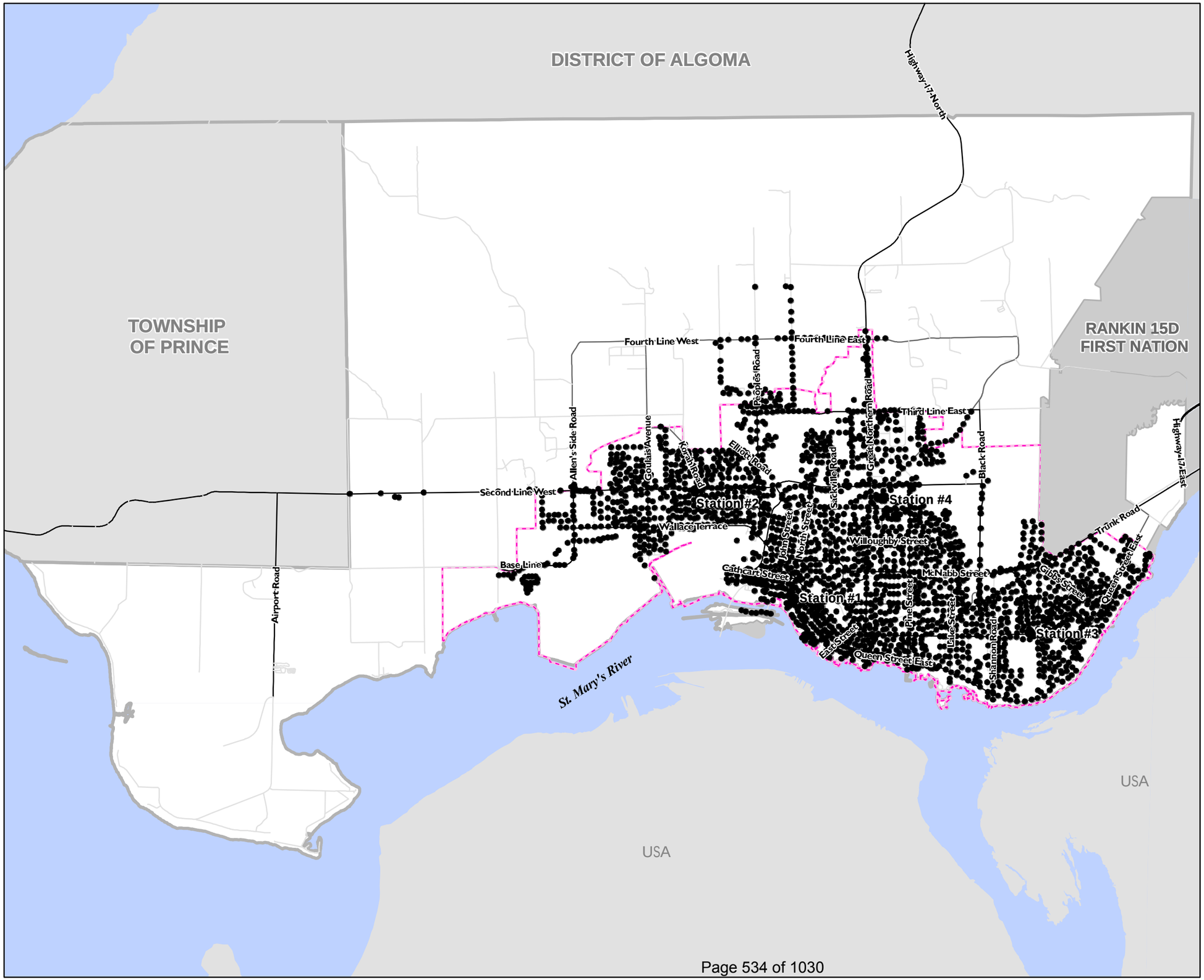
A municipal utility provided as part of the third line of defence (emergency response), hookup to a fire hydrant(s) is one of the first actions taken by firefighters arriving on-scene. The city is served by both public and private hydrants with ownership dictating who is responsible for maintenance. Within the City, there are 2,461 hydrants (public and private) according to spatial information provided by the Public Utilities Commission. Of these hydrants, 96% are found within the Urban Settlement Area and 4% (99) within the rural area. As shown in **Figure 71**, the location of hydrants in the rural area includes along Second Line West, Fourth Line West, Peoples Road, and Old Goulais Bay Road.

Table 69: Fire Hydrant Locations and Types

	Public Hydrant	Private Hydrant	Total	% Total
Within Urban Settlement Area Boundary	2,082	280	2,362	96%
Within Rural Area	86	13	99	4%
Total	2,168	293	2,461	--

Key Finding

96% of hydrants providing service to the City are found within the Urban Settlement Area.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

FIRE HYDRANT
FIGURE 71

- ! Existing Fire Station
- Public Hydrant
- Private Hydrant
- Urban Settlement Area
- Municipal Boundary
- First Nation Reserve

Source: Official Plan 1996, Office Consolidated Version 2006. Schedule C (2012)

0 0.5 1 2 km

1:80,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF/
PUBLIC UTILITIES COMMISSION

MAP CREATED BY: SFG
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: G:\cad\GIS\175984\Mapping\Working\Hydrants.mxd

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STATUS: DRAFT
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7.10 Geographic Profile Outcomes

The geographic profile considers key natural and human-made features within a jurisdiction including the road network, railways, geographic features, and the wildland-urban interface. The outcomes of this analysis are summarized in **Table 70.** These outcomes are revisited in **Section 1.0** where further analysis and discussion linking risk and fire service levels is presented.

Table 70: Geographic Profile - Summary of Outcomes

Response Outcomes	Type
The geographic size of the City with its makeup of urban settlement areas and rural areas results in extended emergency response times to the some areas of the City.	Key Finding
The road network is a contributor to emergency call volume due to motor vehicle collisions, vehicle extrication, and vehicle fires. Incidents occur on arterial roads. S**uch incidents, on average by road type length, more commonly occurs on Urban Arterial roads.**	Key Finding
The rail lines within the City present a risk related primarily to the movement of goods.	Key Finding
SSMFS response to the airport is primarily for calls categorized as False Alarm Calls.	Key Finding
The City has potential risk of wildland fire due to potential hazardous forest types and the wildland-urban interface primarily outside of the Urban Settlement Area.	Key Finding
Incidents related to power and communications infrastructure results in an average of 20 calls per year on average.	Key Risk
96% of hydrants providing service to the City are found within the Urban Settlement Area.	Key Finding

8.0 Hazard Profile

Hazards are important to consider from a fire risk, emergency response and overall public safety perspective. The National Fire Protection Association (NFPA) 1730 and the Ontario Office of the Fire Marshal and Emergency Management (OFMEM) identify three overarching hazard types: natural; human-caused; and technological. This profile assessment: summarizes the context within which municipalities identify hazards; presents the top hazards identified for Sault Ste. Marie; and presents an assessment of those hazards through the lens of the fire and emergency risks to inform fire and emergency services planning, prevention, and management.

8.1 Hazard Identification and Risk Assessment in Ontario

At the provincial and municipal level, emergency management and fire services are complementary. This is reinforced by the transition of the Ontario Office of the Fire Marshal (OFM) to the Office of the Fire Marshal and Emergency Management (OFMEM). In practice at the municipal level, staff within municipal fire departments play a leadership role in identifying natural, human-caused, or technical hazards based on those detailed by the province as well as developing emergency management programs.

Under the Ontario *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 their municipality. The HIRA assists municipalities in preparing for, responding to, and recovering from emergency incidents. The HIRA also informs community emergency preparedness through the development of emergency management programs. The OFMEM's Hazard Identification and Risk Assessment Workbook (2012) identifies four steps to creating and maintaining a HIRA: hazard identification; risk assessment; risk analysis; and monitor and review.

8.1.1 Province of Ontario HIRA Methodology

The methodology for Hazard Identification and Risk Assessment was developed by the Province. The methodology is outlined below based on the 2012 Hazard Identification and Risk Assessment Workbook.[49]

[49] Office of the Fire Marshal and Emergency Management. (2016, May 25). *Hazard Identification and Risk Assessment for the Province of Ontario*. Retrieved November 2016, from Ministry of Community Safety & Correctional Services: https://www.emergencymanagementontario.ca/english/emcommunity/ProvincialPrograms/hira/hira_2012.html

Hazard Identification

Based on a historic and scientific review, the province developed a list of natural, human-caused, or technological hazards that may occur in Ontario which are listed in **Table 71**. The first step of a municipal HIRA process is to identify which events could occur in a local municipality.

Table 71: OFMEM Natural, Human-Caused, or Technological Hazards[50]

Natural Hazards	Human-Caused Hazards	Technological Hazards
agricultural and food emergency (food emergency, farm animal disease, and plant disease and pest infestation)	civil disorder	building/structural collapse
drinking water emergency	cyber-attack	critical infrastructure failure
drought/low water	sabotage	dam failure
Earthquake	special event	energy emergency (supply)
Erosion	terrorism/CBRNE	explosion/fire
extreme temperatures (heat wave, cold wave)	war and international emergency	hazardous materials incident (fixed site incident, transportation incident)
flood (riverine flooding, urban flooding, seiche, storm surge)	hazards that have been added to the 2005 Ontario Provincial Hazard Identification and Risk Assessment	human-made space object crash
Fog		mine emergency
forest/wildland fire		nuclear facility emergency
freezing rain		oil/natural gas emergency
geomagnetic storm,		radiological emergency
Hail		transportation emergency (air, marine, rail, road)
human health emergency (epidemic, pandemic)		
Hurricane		
land subsidence		
Landslide		
Lightning		

[50] Office of the Fire Marshal and Emergency Management. (2016, May 25). *Hazard Identification and Risk Assessment for the Province of Ontario*. Retrieved November 206, from Ministry of Community Safety & Correctional Services: https://www.emergencymanagementontario.ca/english/emcommunity/ProvincialPrograms/hira/hira_2012.html

Natural Hazards	Human-Caused Hazards	Technological Hazards
natural space object crash		
snowstorm/blizzard		
Tornado		
Windstorm		

Risk Assessment

After a community identifies local hazards, a risk assessment is undertaken. This process includes the identification of risk levels based on a formula: *Risk = Frequency x Consequence x Changing Risk*.[51] The elements of this formula are described below.

Frequency

The frequency levels and categories used in assessing identified risks according to the Province of Ontario methodology is outlined in **Table 72**.

Table 72: HIRA - Frequency (Province of Ontario)

Frequency	Category	Percent Chance	Description
1	Rare	Less than 1% chance of occurrence in any year	Hazards with return periods of >100 years
2	Very Unlikely	Between 1% to 2% chance of occurrence in any year	Occurs every 50-100 years and includes hazards that have not occurred but are reported to be more
3	Unlikely	Between 2% to 10% chance of occurrence in any year	Occurs every 20-50 years
4	Probable	Between 10% to 50% chance of occurrence in any year	Occurs every 5-20 years
5	Likely	Between 50% to 100% chance of occurrence in any year	Occurs >5 years
6	Almost Certain	100% chance of occurrence in any year	Hazard occurs annually

(Source: Province of Ontario – Emergency Management Ontario, Hazard Identification and Risk Assessment Workbook, 2012)

Consequence

The consequence of an event is assessed in terms of several sub-variables and summed to determine the overall consequence level. The sub-variables are:

[51] Office of the Fire Marshal and Emergency Management. (2016, May 25). *Hazard Identification and Risk Assessment for the Province of Ontario*. Retrieved November 2016, from Ministry of Community Safety & Correctional Services: https://www.emergencymanagementontario.ca/english/emcommunity/ProvincialPrograms/hira/hira_2012.html

- Fatalities;
- Injuries;
- Evacuation;
- Property Damage;
- Critical Infrastructure Impact;
- Environmental Damage;
- Business/ Financial Impact; and
- Psychosocial Impact.

The consequence levels and descriptions are listed in **Table 73.**

Table 73: HIRA – Consequence (Province of Ontario)

Consequence	Sub-Variable Total	Description
1	1 – 4	Minor
2	5 – 6	Slight
3	7 – 8	Moderate
4	9 – 10	Severe
5	11 – 12	Very Severe
6	13	Catastrophic

(Source: Province of Ontario – Emergency Management Ontario, Hazard Identification and Risk Assessment Workbook, 2012)

Changing Risk

Changing risk recognizes that the frequency and consequence of an event can be "influenced by factors such as mitigation actions and climate change" (Province of Ontario, Hazard Identification and Risk Assessment Workbook, 2012). This considers changes in frequency and vulnerability as outlined in **Table 74.**

Table 74: HIRA - Changing Risk (Province of Ontario)

Changing Risk		Yes / No
Change in Frequency		
A	Is the number of non-emergency occurrences of the hazard increasing?	If the answer is "yes" to two or more, then the change in frequency = 2
B	Is human activity (e.g., population growth, change of drainage patterns) likely to lead to more interaction with the hazard or an increase in frequency?	
C	Is there an environmental reason (e.g., climate change) why the frequency of this hazard may increase?	
D	Are human factors such as business, financial, or international practices more likely to increase the risk?	
Change in Vulnerability		

Changing Risk		Yes / No
A	Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?	If the answer is "yes" to two or more, then the change in frequency = 2
B	Does critical infrastructure reliance or a "just-on-time" delivery system (e.g., stores not keeping a supply of food and relying on frequent shipments) make the population more vulnerable?	
C	Are response agencies not aware of, practiced, and prepared to respond to this hazard?	
D	Are no prevention/mitigation measures currently used for this hazard?	
Total Changing Risk = Change in Frequency + Change in Vulnerability		

(Source: Province of Ontario – Emergency Management Ontario, Hazard Identification and Risk Assessment Workbook, 2012)

Risk Analysis

At this stage, the hazard risk assessment results are used to categorize the hazards into risk levels as described in **Table 75**. This methodology results in six different risk levels ranging from very low to extreme.

Table 75: HIRA - Risk Analysis (Province of Ontario)

Level of Risk	Description
>50	Extreme
41 – 50	Very High
31 – 40	High
21 – 30	Moderate
11 – 20	Low
<10	Very Low

(Source: Province of Ontario – Emergency Management Ontario, Hazard Identification and Risk Assessment Workbook, 2012)

Monitor and Review

It is legislated that HIRA is reviewed annually and best practices suggest a new HIRA exercise is completed every five years. This timeline is becoming increasingly pertinent as communities experience the effects of climate change.

8.2 Sault Ste. Marie HIRA 2014

The HIRA process is used to identify local hazards and assign risk levels. As part of legislated requirements, the City of Sault Ste. Marie completed a HIRA in 2014. Based on the methodology described in the prior section, through this process the identified hazards (in no particular order) were:

- Drinking Water (municipal)
- Extreme Cold

- Extreme Heat
- Flooding
- Forest Fires
- Freezing Rain
- Human Health
- Snowstorm/ Blizzard
- Windstorm
- Building/ Structural Collapse
- Critical Infrastructure Failure
- Electricity
- Dam Failure
- Explosions/ Fires
- Hazardous Material Spill
- Oil/ Natural Gas Emergency
- Transportation- Air
- Transportation- Marine
- Transportation- Rail
- Terrorism/ CBRNE

Through the risk assessment and risk analysis process, the top ten risks in Sault Ste. Marie were identified as listed in **Table 76**. (The results are reviewed annually by the Emergency Management Program Committee.[52]) The top three hazards identified through the HIRA are human health, drinking water (municipal), and electricity. The Fire Master Plan, under separate cover, includes discussion on the emergency management programs and operational approaches including the identification and consideration of vulnerable groups.

Table 76: Top Hazard-Related Risks (City of Sault Ste. Marie HIRA, 2014)

Hazard	City HIRA Risk Level
Human Health	Extreme
Drinking Water (municipal)	Extreme
Electricity	Extreme
Flooding	Extreme
Explosions/ Fires	Very High
Transportation – Rail	Very High
Snowstorm/ Blizzard	Moderate

[52] It was noted by SSFMS that a comprehensive review of risks is slated for 2018 based on the update being completed by the Province. This review is planned to be partially informed by considerations of climate change impacts.

Hazard	City HIRA Risk Level
Freezing Rain	Moderate
Hazardous Material Spill	Moderate
Transportation - Air	Moderate

Source: City of Sault Ste. Marie HIRA, 2014

Key Finding:
The top ten hazard related risks for the City are: human health, drinking water, electricity, flooding, explosions/fires, transportation – rail, snowstorm/blizzard, freezing rain, hazardous material spill, and transportation – air. Some of these hazards can occur as major or minor events.

8.2.1 Mapping Analysis: Hazards

While not a part of a HIRA process, to inform the CRA, the City provided available hazard-related spatial data which is shown on **Figure 72.** This data includes flood related data illustrating Tributary Flood Lines identified by the Conservation Authority and Specific Flood Areas. According to the City's Official Plan (1996, Office Consolidated 2006), the Tributary Flood Line was identified by the Conservation Authority reflecting areas subject to flooding that are not on the Lake Superior - St. Mary's River shoreline (OP Section 4.3). Listed policies guide development depending on the location of the proposed development, (within flood plain, floodway, or flood fringe). The Specific Flood Areas identify "urban areas have been built upon and are prone to flooding" (OP Section 4.4). The OP policies identify requirements for development and redevelopment in the Bayview, Gateway, and Steelton areas. It was identified as part of the stakeholder engagement completed for the CRA that the flood plain mapping is out of date. Since flooding is a top risk identified through the HIRA, consideration could be given to updating the flood plain mapping. This could help inform updates and refinements to Official Plan policy as well as inform the Emergency Response planning.

Figure 72 also shows propane facilities with risk and a propane tank safety distance buffer. Although not specifically identified through the HIRA, these types of facilities could be linked to explosions / fires. Propane facilities are regulated by licensed through the Technical Standards and Safety Authority (TSSA). In terms of local fire department involvement, different levels of facilities require different levels of involvement from a local fire department for servicing purposes. In this case, SSMFS approved one Level 2 facility and reviewed three Level 1 facilities for licensing in 2011.

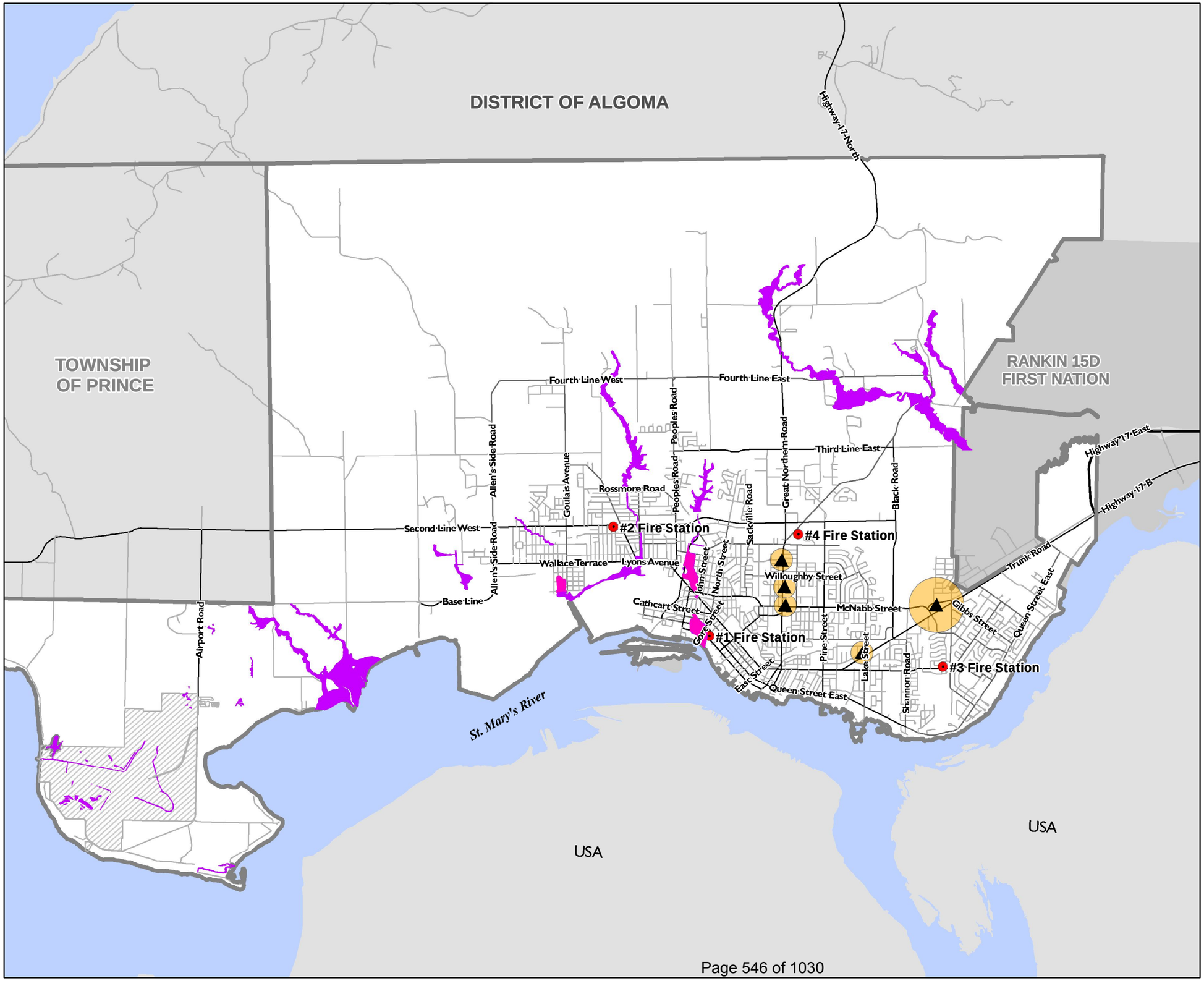
Key Finding:
As a top risk identified through the HIRA, flooding is an important consideration for the City. Consideration should be given to updating the flood plain mapping.

8.3 HIRA and the CRA

The hazards identified through the provincially established and mandated Hazard Identification and Risk Assessment reflects the level of risk of hazards for the City of Sault Ste. Marie. As identified within the 2017 OFMEM Review, the results of a HIRA are used by a municipality to "*prioritize and develop emergency preparedness plans*" (pg., 10). Further discussion on these plans is presented in the Fire Master Plan.

The Review also identified that the information contained in the HIRA "*could be used in conjunction with the findings of a comprehensive risk assessment"* and that it could assist with *"prioritizing risk mitigation plans and determining capability and capacity requirements for emergency response (fire suppression) services"* (pg., 10). For the purposes of the Comprehensive Risk Assessment and Fire Master Plan, to support the prioritization of risk mitigation and considering impact on emergency response, a new lens is required. The HIRA process involves different stakeholder and informs plans and strategies that are different than the purpose of the CRA and Fire Master Plan. This CRA is intended to inform strategies and plans specifically through the lens of fire and emergency service capability and capacity as identified in the CRA.

When looking specifically through this lens at the top ten hazard related risks for the City, SSMFS would play a particular role in the following: flooding, explosions/fires, transportation – rail, hazardous material spill, and transportation – air.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

HAZARDS IDENTIFIED BY THE CITY

FIGURE 72

- # Propane Tank Safety Plans
- Propane Tank Safety Distance
- Specific Flood Area (Official Plan)
- Tributary Flood Line (Official Plan)
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

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MAP DRAWING INFORMATION:
DATA PROVIDED BY THE
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Hazards_Identified.mxd

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8.4 Hazard Profile Outcomes

The hazard profile considers hazards identified through the City's 2014 Hazard Identification Risk Assessment. The outcomes of this analysis are summarized in **Table 77.** These outcomes are revisited in **Section 1.0** where further analysis and discussion linking risk and fire service levels is presented.

Table 77: Hazard Profile - Summary of Outcomes

Hazard Outcomes	Type
The top ten hazard related risks for the City are: human health, drinking water, electricity, flooding, explosions/fires, transportation – rail, snowstorm/blizzard, freezing rain, hazardous material spill, and transportation – air. Some of these hazards can occur as major or minor events.	Key Finding
As a top risk identified through the HIRA, flooding is an important consideration for the City. Consideration should be given to updating the flood plain mapping.	Key Finding

9.0 Economic Profile

According to NFPA 1730, the Economic Profile of a community considers particular infrastructure, employers, institutions, events or attractions in a community that contribute to its financial vitality and sustenance. If these facilities, employers, or events are impacted through a fire or emergency event, it could have a negative impact on the overall well-being of the City.

9.1 Economic Profile Snapshot and Context

In terms of economic well-being of a community, municipalities and provincial authorities recognize the importance that businesses (industry / employers) play locally. Economic well-being is especially critical in regional centres like Sault Ste. Marie. This is in part reinforced by policy documents such as the Growth Plan for Northern Ontario in 2011 which outlines economy related policies with the intent to "build a strong, resilient and more diversified northern economy" (pg. 7). In addition, the Growth Plan identifies Sault Ste. Marie as a strategic core area as priority areas for long-term revitalization, intensification, and investment. The Demographic Profile explores some of the trends related to a decreasing and aging population, as well as educational levels within the City. As an economy with a historically strong reliance on manufacturing, the City has undergone initiatives to diversify the local economy such as the Destiny Sault Ste. Marie initiative as well as the recognition of the importance of local educational institutions.[53,54]

For the purposes of the CRA, SSMFS provided input on features of the community that play a key role in the economic well-being of the City. Of those identified features, all were major employers and institutions that are explored in the section that follows.

9.2 Major Industries and Employers

Historically seen as a steel town, according to the City's Economic Development Corporation, today the City has four key industry sectors: steel, alternative energy, information technology, and forestry. The City identified major employers are detailed in **Table 78**. As shown, the top three employers within the private sector are Essar Steel Algoma (3,400 employees), Tenaris Algoma Tubes (620 employees), and Wal-Mart (427 employees). Within the not-for-profit / public sector, the major employers are Sault Area Hospitals (1,905 employees), Algoma District School Board (1,361 employees), and the City of Sault Ste.

[53] Background document provided on the Density Sault Ste. Marie website (www.destinyssm.com).
[54] For example, the November 6, 2017 Council meeting included a decision for the City and Algoma University to review the annual funding provided to the university to enhance student recruitment to grow the student base and ultimately increase economic activity within the City. ***Source***: City of Sault Ste. Marie. (November, 6 2017). Council Agendas and Minutes. Retrieved November 23, 2017, from City of Sault Ste. Marie: http://saultstemarie.ca/City-Hall/City-Departments/Corporate-Services/City-Clerk/Council-Agendas-and-Minutes.aspx

Marie (1,313 employees).In addition to the employers listed in the table, SSMFS also identified two employers with over 50 employees - Arauco with 140 and Anthony-EACOM with 54. These results show that the steel industry represents a large employment base for the City. The employment base is also heavily reliant on government related jobs including public administration, health and social services and educational services. The loss of private sector employer Essar Steel Algoma would have a particularly catastrophic level consequence on the City. The City continues to work to diversify the economy of the City. (It is noted that while tourism is not a major sector of the economy, there are unique features which draw tourists to the area which is discussed in **Section 4.7– Population Shift**.)

Table 78: Major Employers in Sault Ste. Marie (City of Sault Ste. Marie Economic Development Corporation)

Employer Name	Employer Type	Address	Number of Employees
Essar Steel Algoma	Private Sector	105 West Street	3,400
Sault Area Hospital	Not-for-Profit / Public Sector	750 Great Northern Road	1,905
Algoma District School Board	Not-for-Profit / Public Sector	644 Albert Street East	1,361
City of Sault Ste. Marie	Not-for-Profit / Public Sector	99 Foster Drive	1,313
Sault College	Not-for-Profit / Public Sector	443 Northern Avenue East	940
Ontario Lottery and Gaming Corporation	Not-for-Profit / Public Sector	70 Foster Drive	917
Huron-Superior Catholic District School Board	Not-for-Profit / Public Sector	90 Ontario Avenue	900
Tenaris Algoma Tubes	Private Sector	547 Wallace Terrace	620
Wal-Mart	Private Sector	293 Bay Street	427 (total of two locations)
Wal-Mart	Private Sector	446 Great Northern Road	
Metro Inc.	Private Sector	248 Northern Avenue East	378 (total of three locations)
Metro Inc.	Private Sector	150 Churchill Boulevard	
Metro Inc.	Private Sector	275 Second Line West	
Group Health Centre	Not-for-Profit / Public Sector	240 McNabb Street	364
Agero	Private Sector	475 Pim Street	350
Community Living Algoma	Not-for-Profit / Public Sector	99 Northern Avenue East	285
Sutherland Group	Private Sector	71 Old Garden River Road	250
Rome's Independent Grocer	Private Sector	44 Great Northern Road	230
Canadian Tire	Private Sector	200 McNabb Street	210
Algoma Public Health Unit	Not-for-Profit / Public Sector	294 Willow Avenue	205

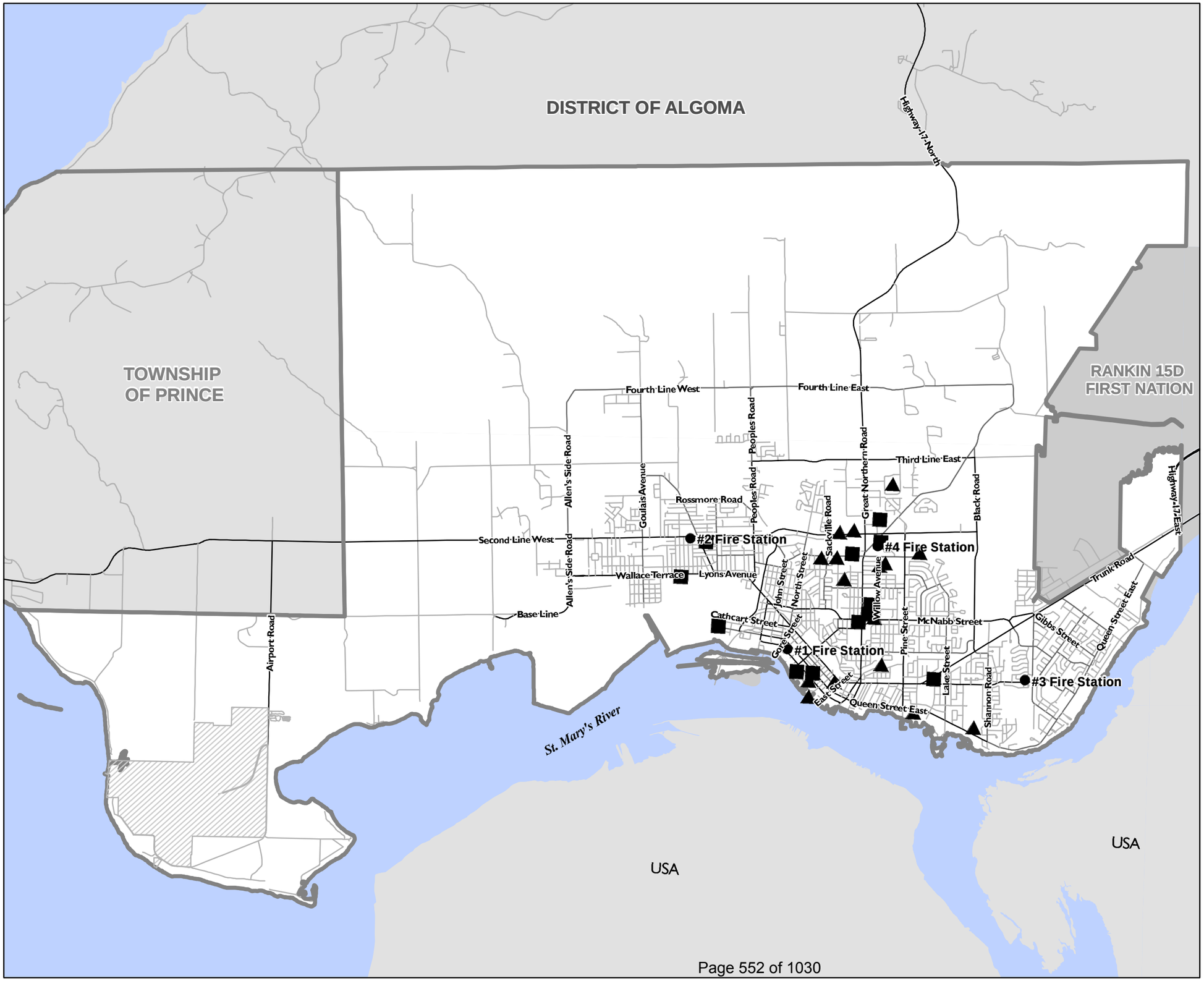
Employer Name	Employer Type	Address	Number of Employees
Sault Ste. Marie Police Services	Not-for-Profit / Public Sector	580 Second Line East	194
Eazy Express Inc.	Private Sector	451 Queen Street East	188
Public Utilities Commission	Not-for-Profit / Public Sector	500 Second Line East	175
Extendicare Maple View	Not-for-Profit / Public Sector	650 Northern Avenue East	160
Children's Aid Society of Algoma	Not-for-Profit / Public Sector	191 Northern Avenue East	160
Great Lakes Forestry Centre	Not-for-Profit / Public Sector	1219 Queen Street East	160
Extendicare Van Daele	Not-for-Profit / Public Sector	39 Van Daele Street	150
Algoma University	Not-for-Profit / Public Sector	1520 Queen Street East	150

Source: City of Sault Ste. Marie Economic Development Corporation. (2017). *Top Employers*. Retrieved September 26, 2017, from Sault Ste. Marie Economic Development Corporation: https://www.sault-canada.com/en/investlocateexpand/topemployers.asp

9.2.1 Mapping Analysis: Major Employers in Sault Ste. Marie

Figure 73 maps the locations of the major employers identified in the table above along with the designated Industrial lands. Essar Algoma Steel has a prominent physical footprint in the City on the waterfront. Generally speaking, there are clusters of major employers in the Downtown and north of Downtown east and west of Great Northern Road.

Key Finding:
The City has key facilities / employers that greatly contribute to the economic wellbeing of the municipality which are found distributed throughout the City.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

MAJOR EMPLOYERS IN THE CITY (ECONOMIC DEVELOPMENT CORPORATION)
FIGURE 73

Major Employers

- # Not-for-Profit/Public
-) Private

- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Municipal Boundary
- First Nation Reserve
- Airport

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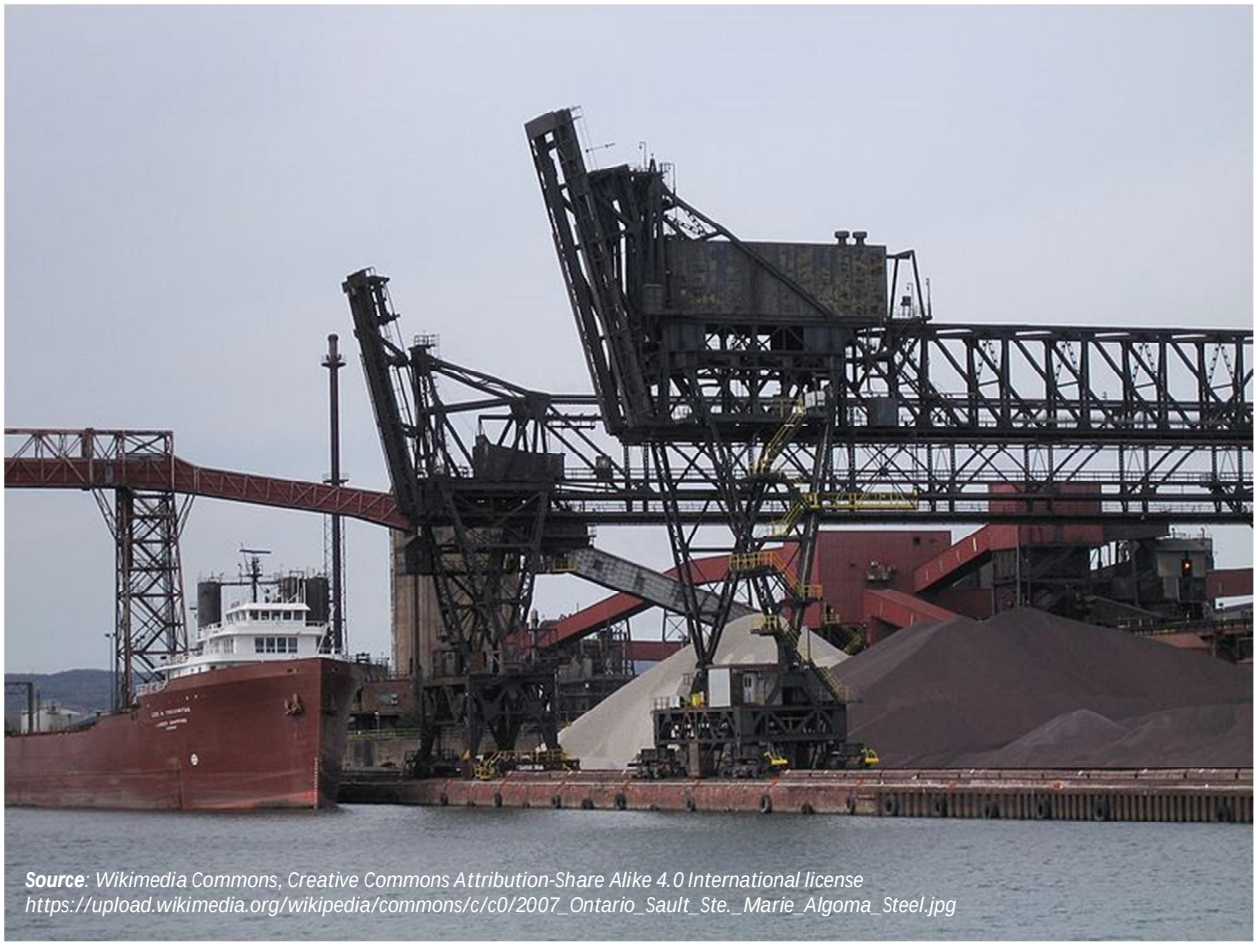
MAP DRAWING INFORMATION: DATA PROVIDED BY CITY OF SAULT STE. MARIE/MNRF/ECONOMIC DEVELOPMENT CORPORATION

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Economic_MajorEmployers_Areas.mxd

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PROJECT: 175984
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DATE: 2018-02-09



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Major Employer - Essar Steel Algoma, Sault Ste. Marie, Ontario

9.3 Risks of Key Economic Contributors

As identified in Annex B of NFPA 1730 (Section B.3.7), for the Economic Profile, once key facilities have been identified, the risks of these facilities should be considered. This is especially important for a City that is a standalone centre and has a strong reliance on certain facilities for economic wellbeing. By understanding the risks to a facility through the lens of fire risk, this can better inform strategies to reduce the overall risk within critical facilities. Recognizing that some of the largest employers do not house all their employees in one facility (such as the Algoma District School Board), for the purposes of this CRA, general risks for the following facilities are explored: Essar Steel Algoma, Sault Area Hospital, City of Sault Ste. Marie, Sault College, Ontario Lottery and Gaming Corporation, and Tenaris Algoma Tubes. While there are fire risk considerations within such facilities, the presence of fire risks can be mitigated through different factors such as those related to community risk reduction and the first two

lines of defence (prevention, education, and enforcement). These fire risks and mitigation factors are presented in **Table 79**. The mitigation factors will be explored further in the Fire Master Plan.

Table 79: Risks of Key Economic Contributors

Key Economic Contributing Facility/Employer	Example Risk Considerations	Risk Mitigation Factors
Essar Steel Algoma	• Nature of the processes being performed (e.g., open flame) and materials being handled; • Building area; • Maintenance of fire protection equipment; • Potential fuel load concerns; • Age of the buildings/facilities; • Commercial cooking equipment (cafeteria).	• Presence of regular fire inspection program? • Certification and qualification of ESAR fire inspection/suppression resources? • Regular joint training with SSMFS fire suppression staff? • Fire suppression compatibility with SSMFS equipment and apparatus? • Is the Fire Safety Plan current? • Is there a pre-plan for this facility? • Is commercial cooking equipment (cafeteria) properly maintained? • Is there a targeted public education program for this facility?
Sault Area Hospital	• Safety use of oxygen; • Maintenance of fire protection equipment; • Radiological storage; • Egress / fire routes not kept clear; • Commercial cooking equipment (cafeteria); • Vulnerable occupants.	• Is commercial cooking equipment (cafeteria) properly maintained? • Are annual fire safety inspections completed based on an approved checklist and an approved fire drill scenario witnessed in alignment with provincial protocol for Vulnerable Occupancies? • Is there a pre-plan for this facility? • Is the Fire Safety Plan current? • Are fire routes enforced? • Is there a targeted public education program for this facility?
City of Sault Ste. Marie	• Storage of ammonia in arenas; • Access and awareness of city facilities such as parks; • Maintenance of fire protection equipment; • Commercial cooking equipment; • Age of facilities / buildings.	• For parks and waterways, is the address at each location clearly displayed? • Is there a pre-plan for City-owned facilities? • Are the Fire Safety Plans for City-owned buildings current? • Are there regular inspections of City-owned buildings? • Is there a targeted public education program for City-owned facilities?
Sault College	• Student accommodations; • Maintenance of fire protection equipment; • Cooking equipment; • Age of facilities / buildings.	• Are the dorms routinely inspected? • Are fire routes enforced? • Is there a pre-plan for campus buildings? • Is the Fire Safety Plan current? • Is commercial cooking equipment (cafeteria) properly maintained? • Is there a targeted public education program for this facility?

Key Economic Contributing Facility/Employer	Example Risk Considerations	Risk Mitigation Factors
Ontario Lottery and Gaming Corporation	• Building height / area; • Maintenance of fire protection equipment; • Commercial cooking equipment.	• Is there a pre-plan for this facility? • Is the Fire Safety Plan current? • Are inspections performed in this facility and at what frequency? • Is commercial cooking equipment (cafeteria) properly maintained? • Is there a targeted public education program for this facility?
Tenaris Algoma Tubes	• Nature of the processes being performed and materials being handled; • Maintenance of fire protection equipment; • Building area; • Potential fuel load concerns; • Age of the buildings/facilities; • Commercial cooking equipment.	• Are there regular fire inspections? • Is there a pre-plan for this building? • Is the Fire Safety Plan current? • Is commercial cooking equipment (cafeteria) properly maintained? • Is there a targeted public education program for this facility?

Key Finding:

The City has key facilities / employers, including Essar Steel Algoma, that greatly contribute to the economic wellbeing of the municipality. By playing a proactive role from the perspective of education and prevention strategies within these facilities, the fire department can mitigate fire risk.

9.4 Economic Profile Outcomes

The economic profile considers key facilities and infrastructure from the perspective of economic well-being for the City. The outcomes of this analysis are summarized in **Table 80.** These outcomes are revisited in **Section 1.0** where further analysis and discussion linking risk and fire service levels is presented.

Table 80: Economic Profile - Summary of Outcomes

Economic Outcomes	Type
The City has key facilities / employers that greatly contribute to the economic wellbeing of the municipality which are found distributed throughout the City.	Key Finding
The City has key facilities / employers, including Essar Steel Algoma, that greatly contribute to the economic wellbeing of the municipality. By playing a proactive role from the perspective of education and prevention strategies within these facilities, the fire department can mitigate fire risk.	Key Finding

10.0 Risk Assessment Outcomes

The Comprehensive Risk Assessment and Fire Master Plan are complementary documents. The findings help to define local needs and circumstances and inform the recommendations identified within the Fire Master – and ultimately the service levels provided by a fire department. This section of the CRA brings together all the risk assessment outcomes and frames how they can be used to inform the Fire Master Plan. This is accomplished by applying the risk outcomes in three layers:

1. Risk prioritization of the key risks (based on risk level assignment);
2. Categorization of key findings and key risks based on the three lines of defence; and
3. Development of a risk model for assessing emergency response coverage.

10.1 Risk Prioritization – Key Risks

Risk is defined as the product of probability and consequence. Of the risk analysis outcomes presented throughout this CRA, some have been labelled as a **Key Risk**. This means that the analysis and information available provides the opportunity to quantify the risk through a risk assignment process. This process will inform the FMP in two ways: first, it will help guide the prioritization of the risk analysis outcomes when it comes to the development of and implementation of the Fire Master Plan; and second, it will inform the risk model developed for assessing emergency response capabilities (see **Section 1.1** of this CRA).

The methodology is described in further detail in **Section 2.3** with the risk assignment matrix shown for reference purposes in **Table 81.**

Table 81: Risk Matrix

Consequence / Probability		Insignificant	Minor	Moderate	Major	Catastrophic
		1	*10*	*100*	*1,000*	*10,000*
Almost Certain	*10,000*	10,000	100,000	1,000,000	10,000,000	100,000,000
Likely	*1,000*	1,000	10,000	100,000	1,000,000	10,000,000
Possible	*100*	100	1,000	10,000	100,000	1,000,000
Unlikely	*10*	10	100	1,000	10,000	100,000
Rare	*1*	1	10	100	1,000	10,000

Risk Category	Definition (OFMEM)
Low Risk	• Manage by routine programs and procedures • Maintain risk monitoring
Moderate Risk	• Requires specific allocation of management responsibility including monitoring and response procedures
High Risk*	• Community threat, senior management attention needed • Serious threat, detailed research and management planning required at senior levels

** Note: The OFMEM descriptions for High Risk and Extreme Risk have been combined. NFPA 1730 does not use the Extreme Risk category.*

The assignment of risk for the key risks within each profile, including a rationale for the probability and consequence is presented in **Table 82.** The primary lens being applied is the probability and consequence of fire risk from the perspective of that particular key risk. This includes consideration of findings of other profiles where appropriate and referenced with the rationale provided.

Within the Building Stock profile the probability and consequence considers the risk of a fire occurring in that particular type of occupancy. Within the Demographic Profile, the probability and consequence considers the risk of a fire occurring within that particular demographic. The risks within the Fire Loss Profile consider the probability and consequence of a fire occurring within that occupancy type or based on a particular cause / incident. The risks identified within the Response Profile or Geographic Profile considers the risk of that particular response type -- for example, the probability and consequence of a vehicle collision incident or power and communications infrastructure incident.

Table 82: Risk Prioritization - Key Risks

Key Risk	Probability	Rationale	Consequence	Rationale	Assigned Risk Level
Building Stock Profile					
When open space lands are removed from the analysis, Group C – Residential occupancies comprise 95.4% of the occupied property stock.	Likely	In considering the proportion of the property stock comprised of Group C – Residential occupancies as well as historic fire loss, the probability is Likely.	Moderate	Potential for threat to life safety of occupants, moderate property loss, threat to small local businesses and/or to quality of the environment	Moderate
Approximately 57% of Group C - Residential occupancies in the City were constructed when no provincial codes were in effect (prior to 1975).	Likely	In considering the proportion of the property stock comprised of Group C – Residential occupancies as well as historic fire loss, the probability is Likely.	Moderate	Potential for threat to life safety of occupants, moderate property loss, threat to small local businesses and/or to quality of the environment, especially with consideration of exposure based risk	Moderate
The City identified 24 occupancies with a height in excess of 18 metres, which are defined as high-rise buildings. Most of these occupancies are found in the Downtown area	Likely	In considering the proportion of the property stock comprised of Group C – Residential occupancies as well as historic fire loss, the probability is Likely.	Major	Potential for large loss of life and significant property damage due to density	High
There are 25 registered Vulnerable Occupancies in the City.	Possible	An incident in a Vulnerable Occupancy might occur under the current circumstances.	Catastrophic	Potential for large loss of life due to the nature of the vulnerable occupants and long term disruption of businesses, local employment, etc.	High
Additional potential high life-safety risk considerations in the City include 33 schools and 3 detention centres.	Possible	An incident might occur in a potential high life-safety risk occupancy.	Catastrophic	Potential for large loss of life due to the nature of the vulnerable occupants and long term disruption of businesses, local employment, etc.	High
Demographic Profile					
Seniors (those 65 years and over) are considered to represent one of the highest fire risk groups across the province based on residential fire death rate (fire deaths per million of population). In Sault Ste. Marie there is currently a higher proportion of seniors in the City than in the Province (22% vs. 17%).	Almost Certain	Almost certain based on the proportion of the population (over 16,000 people) and known through OFMEM data that seniors are at a greater risk of experiencing a fatality in a residential fire	Moderate	Potential for threat to life safety of occupants, moderate property loss, threat to small local businesses and/or to quality of the environment	High
The current total population of Sault Ste. Marie includes a component of 30% of people between the ages of 45 and 64 who are aging towards the seniors demographic of 65 or over.	Likely	Will probably occur at some time under current circumstances. Known through OFMEM data that seniors are at a greater risk of experiencing a fatality in a residential fire.	Moderate	Potential for threat to life safety of occupants, moderate property loss, threat to small local businesses and/or to quality of the environment	Moderate
Fire Loss Profile					
Structural fires occurring in Group C – Residential buildings are the most frequent structural fire types and they occurred at a higher rate than the Province between 2012 and 2016 (80.4% vs. 73.4%), for a total of 218 fires over the five year period.	Likely	Multiple or reoccurring incidents in the past year, Will probably occur at some time under current circumstances, Based on the call data 2012 to 2016 there are approximately 43 incidents a year on average.	Moderate	Potential for threat to life safety of occupants, moderate property loss, threat to small local businesses and/or to quality of the environment	Moderate

Key Risk	Probability	Rationale	Consequence	Rationale	Assigned Risk Level
Although occurring at a lower proportion compared to the Province from 2012 to 2016 (5.2% vs. 7.5%), Group F – Industrial occupancies accounted for 19.2% of the property loss from structure fires in the City, while accounting for just 14 fires.	Possible	Might occur under current circumstances. Based on the call data from 2012 to 2016, there were approximately 3 incidents a year on average.	Catastrophic	Potential for significant loss of life, long term disruption of businesses, local employment, and tourism, and/or environmental damage that would result in long-term evacuation within F1 industrial occupancies.	High
			Moderate	Potential for threat to life safety of occupants, moderate property loss, threat to small local businesses and/or to quality of the environment within F2 and F3 industrial occupancies	Moderate
For the period 2012 to 2016, 95% of the fire related civilian injuries (38 injuries) and 100% of the fatalities (1 fatality) occurred in Group C – Residential occupancies.	Possible	Might occur under current circumstances. Based on the OFMEM Standard Incident Reporting from 2012 to 2016, there were approximately 8 civilian injuries a year on average.	Moderate	Potential for threat to life safety of occupants, moderate	Moderate
From 2012 to 2016, the City experienced a higher proportion of fires that were caused intentionally when compared to the Province (14% versus 8.8%), where the proportion caused by vandalism was 3.7% (10 fires) versus 2.2%, and the proportion related to arson was 10.3% (28 fires) versus 5.9%.	Possible	Might occur under current circumstances. Based on the call data from 2012 to 2016, there were approximately 8 incidents a year on average resulting from arson or vandalism.	Moderate	Potential for threat to life safety of occupants, moderate property loss, threat to small local businesses and/or to quality of the environment	Moderate
Of the fires occurring in the City from 2012 to 2016, the leading cause of unintentionally set fires was misuse of an ignition source at 40.2% (109 fires), compared to 30.2% in the Province.	Likely	Multiple or reoccurring incidents in the past year, Will probably occur at some time under current circumstances, Based on the call data 2012 to 2016 there are approximately 22 incidents a year on average.	Moderate	Potential for threat to life safety of occupants, moderate property loss, threat to small local businesses and/or to quality of the environment	Moderate
Of the fires occurring within the City from 2012 to 2016, 24.4% of fires (66) occurred as a result of cooking equipment in Sault Ste. Marie, approximately 6.6% higher than that of the Province.	Likely	Multiple or reoccurring incidents in the past year, Will probably occur at some time under current circumstances, Based on the call data 2012 to 2016 there are about 13 incidents a year on average.	Moderate	Potential for threat to life safety of occupants, moderate property loss, threat to small local businesses and/or to quality of the environment	Moderate
Of the fires occurring within the City from 2012 to 2016, 19.6% of fires (53) occurred as a result of open flame tools / smokers' articles in the City, 5.8% higher than the Province.	Likely	Multiple or reoccurring incidents in the past year, Will probably occur at some time under current circumstances, Based on the call data 2012 to 2016 there are approximately 11 incidents a year on average.	Moderate	Potential for threat to life safety of occupants, moderate property loss, threat to small local businesses and/or to quality of the environment	Moderate

Key Risk	Probability	Rationale	Consequence	Rationale	Assigned Risk Level
Based on the analyses of smoke alarms being present and operating, there is a potential risk that in 54% (147) of the instances there was either no smoke alarm present, or it was not operational.	Likely	Multiple or reoccurring incidents in the past year, Will probably occur at some time under current circumstances, Based on the call data 2012 to 2016 there are approximately 29 incidents a year on average.	Moderate	Potential for threat to life safety of occupants, moderate property loss, threat to small local businesses and/or to quality of the environment	Moderate
Response Profile					
Seizure, Oxygen Administered, Other Medical/Resuscitator and Alcohol Or Drug Related calls accounted for 65% of all medical calls in Sault Ste. Marie between 2012 and 2016.	Almost Certain	Expected to occur in most circumstances unless circumstances change. Multiple or reoccurring incidents in the past year. Based on the call data 2012 to 2016, there were 505 calls per year on average.	Minor	Potential risk to life safety of occupants, minor property loss, minimal disruption to business activity and/or, minimal impact on general living conditions	Moderate
Vehicle collisions account for 59% of rescue calls within the City of Sault Ste. Marie or 79 calls per year on average.	Almost Certain	Expected to occur in most circumstances unless circumstances change. Multiple or reoccurring incidents in the past year. Based on the call data 2012 to 2016, there were 79 calls per year on average.	Minor	Potential risk to life safety of occupants, minor property loss, minimal disruption to business activity and/or, minimal impact on general living conditions	Moderate
Of the technical rescue type services, vehicle extrication is the most common type of rescue at an average annual call volume of seven.	Likely	Multiple or reoccurring incidents in the past year. Will probably occur at some time under current circumstances. Based on the call data 2012 to 2016 there are about 7 incidents a year on average.	Minor	Potential risk to life safety of occupants, minor property loss, minimal disruption to business activity and/or, minimal impact on general living conditions	Moderate
Of the technical rescue type services, water-related rescue (water rescue and water ice rescue) are the second most common type with a total of 23 calls over the five year period, or about five calls annually on average.	Possible	Might occur under current circumstances. Based on the call data 2012 to 2016, there are about 5 incidents annually on average.	Minor	Potential risk to life safety of occupants, minor property loss, minimal disruption to business activity and/or, minimal impact on general living conditions	Moderate
Geographic Profile					
Incidents related to power and communications infrastructure results in an average of 20 calls per year.	Likely	Multiple or reoccurring incidents in the past year, Will probably occur at some time under current circumstances, Based on the call data 2012 to 2016 there are about 20 incidents a year on average.	Minor	Potential risk to life safety of occupants, minor property loss, minimal disruption to business activity and/or, minimal impact on general living conditions	Moderate

10.2 Risk Categorization

When it comes to aligning service levels with risks that define local needs and circumstances, it is important to recognize that not all risk analysis outcomes align with the services provided by a fire department in the same way. For this reason, the risk outcomes - Key Findings and Key Risks - are categorized based on how they can be used to inform the activities, strategies, and services provided by SSMFS. This categorization is then directly used within the Fire Master Plan.

The categories used for this process are based on the three lines of defence: Public Fire Safety Education; Fire Safety Standards and Enforcement, and Emergency Response as shown in **Table 83**.

Table 83: Risk Analysis Outcome Categorization

Category	Overview	Purpose
Line 1 Public Fire Safety Education	Education is the first line of defence. As a proactive approach to mitigating fire risk, the identified risk outcome can and should be considered as part of informing a Community Risk Reduction Plan including public education programming.	For consideration within the proposed Public Education Program
Line 2 Fire Safety Standards and Enforcement	Inspection/Enforcement is the second line of defence. As a proactive approach to mitigating fire risk, the identified risk outcome can and should be considered as part of informing a Community Risk Reduction Plan including inspection cycles, and enforcement strategies.	For consideration within the proposed Inspection/Enforcement Program
Line 3 Emergency Response	Emergency response is the third line of defence. The identified risk outcomes can and should be considered as part of assessing emergency response coverage aligned with local needs and circumstances, as well as the level of service provided by the municipality.	For consideration within the proposed Emergency Response Deployment Options

The risk outcomes from each profile that inform local needs and circumstances are aligned with the three lines of defence. Table 84 presents the Key Findings and Table 85 presents the Key Risks in a matrix format indicate the ways in which the risks can be addressed by the fire department and ultimately considered within the Fire Master Plan analysis and recommendations.

Table 84: Categorization of Key Findings

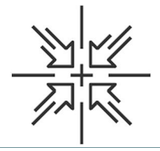
Profile	CRA Key Findings Analysis Outcomes	FIRST LINE OF DEFENCE For consideration within the proposed Public Education Program	SECOND LINE OF DEFENCE For consideration within the proposed Enforcement Program	THIRD LINE OF DEFENCE For consideration within the proposed Emergency Response Program
Building Stock	Group F – Industrial occupancies represent 1.2% of the City's total property stock including open space.		✓	✓
	The majority of industrial uses are identified within the Group F, Division 2 – Medium-Hazard Industrial occupancies at 1.18% of the total property stock including open space.		✓	✓
	Group F – Industrial Occupancies are typically located west of Great Northern Road north of Second Line West, and along the waterfront west of Downtown.		✓	✓
	Group C – Residential uses are distributed across the City including outside of the Urban Settlement Area.	✓		
	Within the Urban Settlement Area Boundary, there is a high concentration of Group C – Residential occupancies built prior to any provincial codes being in effect.	✓		
	Potential building exposures are largely linked to the built up areas primarily found Downtown and throughout residential areas within the Urban Settlement Area Boundary.		✓	
	Most of the identified high rise occupancies are found in the Downtown area.		✓	
	94.9% of the buildings have a footprint of 2,500 sq. ft. or less which is consistent with the proportion of the property stock that is Group C – Residential occupancies.	✓	✓	✓
	Buildings with a larger area are consistent with Industrial and Commercial uses such as those lands found Downtown south of Wallace Terrace on the waterfront, along Great Northern Road, and along Trunk Road.		✓	
	There are properties within the City that have fuel load related concerns, primarily linked to the identified Industrial land use.		✓	
	The identified Potential High Life-Safety Risk occupancies are primarily located within the Urban Settlement Area.	✓	✓	✓
	There are a number of identified heritage buildings with a number of such facilities in the Downtown.		✓	
Demographic	There is a higher proportion of seniors in the downtown with notable clusters at East Street at Bay Street and Queen Street East at Pine Street.	✓		
	People aged 40 to 64 were the highest proportion of individuals reported as persons associated with ignition, in accordance with the SSMFS Historic Call Data from 2012 to 2016.	✓		
	According to the 2016 Simplified Risk Assessment, the number of male fatalities recorded between 1998 and 2016 outnumbered female fatalities in the City. In addition, the highest proportion of people associated with ignition is men according to SSMFS Call data.	✓		
Fire Loss	From 2012 to 2016, the City experienced a similar proportion of unintentionally set fires when compared to the Province (68.3% versus 67.9%), accounting for 185 fires.	✓	✓	
	This analyses indicates that the Downtown appears to have a higher instance of fire calls related to arson, mechanical / electrical failure, and misuse of an ignition source.	✓	✓	
	The Downtown appears to have a higher instance of fire calls with an ignition source of cooking equipment or open flame tools/smokers articles.	✓	✓	
	About a fifth of incidences the status or presence of a smoke alarm went underdetermined which could account for an additional 13% of instances where a smoke alarm was not present or operational.	✓		
	The area's most likely to have a high incidence of no operating smoke alarms are Downtown with some clusters to the east and west.	✓		

Profile		FIRST LINE OF DEFENCE	SECOND LINE OF DEFENCE	THIRD LINE OF DEFENCE
Response	Overall, call volumes have increased by 10% from 2012 to 2016, with variability in volume over the five years.			✓
	Of the four stations, Station 1 responds to the highest proportion of calls annually at 30%.			✓
	Based on an analysis of SSM Response Types, False Alarm calls account for the highest proportion of call types responded to within the City at 35% of all calls over the five year period from 2012 to 2016.	✓	✓	
	From 2012 to 2016, based on OFMEM Response Types, SSM call volumes are comprised of 5% more CO false calls, 3% more false fire calls, 3% more burning (controlled) calls, 3% more pre fire conditions/no fire calls, 2% more property fires/explosions and 2% more public hazard calls than the provincial total.			✓
	Of the False Alarm calls reported from 2012 to 2016, 59% were false fire calls, 27% CO false calls, and 14% burning (controlled).	✓	✓	
	The spatial analysis of Fire Calls - Structure for the period 2012 to 2016 shows a higher density of structure fire calls occurring in the downtown area around Wellington Street West and Cathcart Street, and with some other pockets east and west of Downtown.			✓
	The spatial analysis of fire calls for the period 2012 to 2016 indicates a higher density of Fire Calls - Other occurring in the Downtown and west of downtown at the intersection of Lyons Avenue and Korah Road.			✓
	The spatial analysis of Pre-Fire Calls for the period 2012 to 2016 indicates a higher density of Pre-Fire Calls occurring in the in the Downtown and along the Wellington Road West corridor in the downtown, the Lyons Avenue/Wallace Terrace corridor west of downtown and the Trunk Road corridor to the east of downtown.			✓
	The spatial analysis of False Alarm Calls for the period 2012 to 2016 indicates a higher density of False Alarm Calls occurring in the in the Downtown and north of Downtown on the south east side of Great Northern Road and Third Line East by Sault Area Hospital.	✓	✓	
	The spatial analysis of Medical Calls for the period 2012 to 2016 indicates a higher density of Medical Calls occurring in the in the Downtown with a notable distribution throughout the City primarily within the Urban Settlement Area.			✓
	The spatial analysis of Rescue Calls for the period 2012 to 2016 indicates a higher density of Rescue Calls occurring in the in the Downtown and north of Downtown along Great Northern Road (between McNabb Street and Second Line West) and Second Line West (between Goulais Avenue and Peoples Road).			✓
	The spatial analysis of Public Hazard Calls for the period 2012 to 2016 indicates a higher density of Public Hazard Calls occurring in the in the Downtown, and north of downtown in the vicinity of Pine Street at McNabb Street.			✓
Geographic	The geographic size of the City with its makeup of urban settlement areas and rural areas results in extended emergency response times to the some areas of the City.			✓
	The road network is a contributor to emergency call volume due to motor vehicle collisions, vehicle extrication, and vehicle fires. Incidents occur on arterial roads. Such incidents, on average by road type length, more commonly occurs on Urban Arterial roads.			✓
	The rail lines within the City present a risk related primarily to the movement of goods.			✓
	SSMFS response to the airport is primarily for calls categorized as False Fire Calls.			✓
	The City has potential risk of wildland fire due to potential hazardous forest types and the wildland-urban interface primarily outside of the Urban Settlement Area.			✓
	96% of hydrants providing service to the City are found within the Urban Settlement Area.			✓
Hazard	The top ten hazard related risks for the City are: human health, drinking water, electricity, flooding, explosions/fires, transportation – rail, snowstorm/blizzard, freezing rain, hazardous material spill, and transportation – air. Some of these hazards can occur as major or minor events.			✓

Profile		FIRST LINE OF DEFENCE	SECOND LINE OF DEFENCE	THIRD LINE OF DEFENCE
	As a top risk identified through the HIRA, flooding is an important consideration for the City. Consideration should be given to updating the flood plain mapping.			✓
Economic 	The City has key facilities / employers that greatly contribute to the economic wellbeing of the municipality which are found distributed throughout the City.		✓	
	The City has key facilities / employers, including Essar Steel Algoma, that greatly contribute to the economic wellbeing of the municipality. By playing a proactive role from the perspective of education and prevention strategies within these facilities, the fire department can mitigate fire risk.		✓	

Table 85: Categorization of Key Risk

Profile	CRA Key Risks Analysis Outcomes	Risk Level	FIRST LINE OF DEFENCE For consideration within the proposed Education Program	SECOND LINE OF DEFENCE For consideration within the proposed Enforcement Program	THIRD LINE OF DEFENCE For consideration within the proposed Emergency Response Program
Building Stock	When open space lands are removed from the analysis, Group C – Residential occupancies comprise 95.4% of the occupied property stock.	Moderate	✓		✓
	Approximately 57% of Group C - Residential occupancies in the City were constructed prior to the adoption of current building and fire codes (1975).	Moderate	✓		
	The City identified 24 occupancies with a height in excess of 18 metres, which are defined as high-rise buildings. Most of these occupancies are found in the Downtown area	High		✓	✓
	There are 25 registered Vulnerable Occupancies in the City.	High	✓	✓	
	Additional potential high life-safety risk considerations in the City include 33 schools and 3 detention centres.	High			
Demographic 	Seniors (those 65 years and over) are considered to represent one of the highest fire risk groups across the province based on residential fire death rate (fire deaths per million of population). In Sault Ste. Marie there is currently a higher proportion of seniors in the City than in the Province (22% vs. 17%).	High	✓		
	The current total population of Sault Ste. Marie includes a component of 30% of people between the ages of 45 and 64 who are aging towards the seniors demographic of 65 or over.	Moderate	✓		
Fire Loss 	Structural fires occurring in Group C – Residential buildings are the most frequent structural fire types and they occurred at a higher rate than the Province between 2012 and 2016 (80.4% vs. 73.4%), for a total of 218 fires over the five year period.	Moderate	✓		✓
	Although occurring at a lower proportion compared to the Province from 2012 to 2016 (5.2% vs. 7.5%), Group F – Industrial occupancies accounted for 19.2% of the property loss from structure fires in the City, while accounting for just 14 fires.	Moderate (F2 and F3) High (F1)		✓	✓
	For the period 2012 to 2016, 95% of the fire related civilian injuries (38 injuries) and 100% of the fatalities (1 fatality) occurred in Group C – Residential occupancies.	Moderate	✓	✓	
	From 2012 to 2016, the City experienced a higher proportion of fires that were caused intentionally when compared to the Province (14% versus 8.8%), where the proportion caused by vandalism was 3.7% (10 fires) versus 2.2%, and the proportion related to arson was 10.3% (28 fires) versus 5.9%.	Moderate	✓	✓	
	Of the fires occurring in the City from 2012 to 2016, the leading cause of unintentionally set fires was misuse of an ignition source at 40.2% (109 fires), compared to 30.2% in the Province.	Moderate	✓	✓	
	Of the fires occurring within the City from 2012 to 2016, 24.4% of fires (66) occurred as a result of cooking equipment in Sault Ste. Marie, approximately 6.6% higher than that of the Province.	Moderate	✓	✓	
	Of the fires occurring within the City from 2012 to 2016, 19.6% of fires (53) occurred as a result of open flame tools / smokers' articles in the City, 5.8% higher than the Province.	Moderate	✓	✓	
	Based on the analyses of smoke alarms being present and operating, there is a potential risk that in 54% (147) of the instances there was either no smoke alarm present, or it was not operational.	Moderate	✓		
Response	Seizure, Oxygen Administered, Other Medical/Resuscitator and Alcohol Or Drug Related calls accounted for 65% of all medical calls in Sault Ste. Marie between 2012 and 2016.	Moderate			✓

Profile	CRA Key Risks	Risk Level	FIRST LINE OF DEFENCE	SECOND LINE OF DEFENCE	THIRD LINE OF DEFENCE
	Vehicle collisions account for 59% of rescue calls within the City of Sault Ste. Marie or 79 calls per year on average.	Moderate			✓
	Of the technical rescue type services, vehicle extrication is the most common type of rescue at an average annual call volume of seven.	Moderate			✓
	Of the technical rescue type services, water-related rescue (water rescue and water ice rescue) are the second most common type with a total of 23 calls over the five year period, or about five calls annually on average.	Moderate			✓
Geographic 	Incidents related to power and communications infrastructure results in an average of 20 calls per year on average.	Moderate			✓

10.3 Risk Model for Assessing Emergency Response Coverage

Risk analysis is a key element to informing the development of risk reduction strategies related to the first line of defence including public fire safety education programs, and the second line of defence including fire inspection and enforcement strategies. To inform risk reduction strategies that target the third line of defence including emergency response, or fire suppression deployment, the most applicable analyses are those that relate to the building occupancy type.

Current fire suppression standards and guidelines representing industry best practices for the delivery of fire suppression services recognise the importance of ***"Dispatch time + Turnout time + Travel time = Total Response Time"*** to fire related incidents in different occupancy types. For example, the industry best practices fire suppression deployment to a fire-related incident in a Group C – Single-Detached Residential Occupancy (Moderate Risk) is 14 firefighters; and 15 firefighters if an aerial device is required. Whereas for a Group B – Care or Detention occupancy (High Risk), the industry best practices for fire suppression deployment to a fire-related incident is 26 firefighters.

Research indicates that there are currently no applicable fire suppression deployment requirements that reference ***"Total Response Time"*** or required number of firefighters for assessing emergency response incidents such as a water rescue, motor vehicle accidents or other non-building occupancy responses.

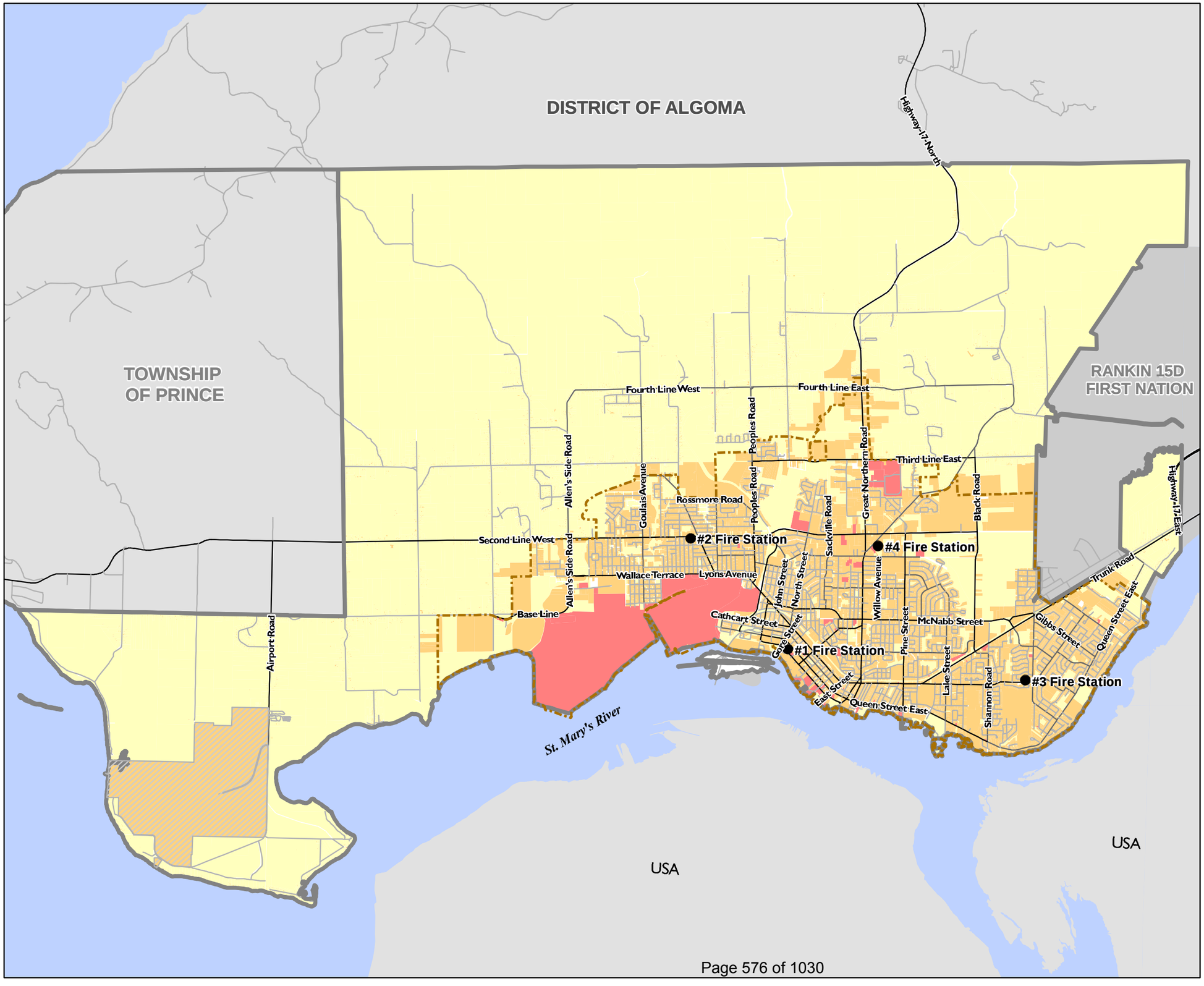
As a result this CRA utilizes the Ontario Building Code Major Building Occupancy types to assess the historical, existing and proposed fire suppression capabilities of the SSMFS in response to the identified high, moderate and low risks levels assigned to each of the OBC occupancy types. **Table 86** outlines the assignment of risk levels to occupancy types with consideration to the findings of the profile assessments. The probability level is informed quantitatively by the average annual events from fire loss as well as the breakdown by property stock in building stock profile as described under the rationale. Consequence is informed more qualitatively by property stock, demographic, fire loss, geography, and economic profile considerations as described under the rationale.

Within the Urban Settlement Area, the property parcels as assigned by occupancy type presented within the Building Stock Profile were used to assign risk. To better spatially reflect the distribution of occupancy (structure) based risk within the rural area, the occupancy type by property parcel was linked to a building footprint layer provided by the City. It was the building footprint layer that had the risk levels assigned. It should be noted that some of the structures may be secondary structures not subject to the OBC. A classification of Low Risk was assigned to the remaining portion of the parcels and those other parcels identified as Open Space. The resulting risk model is shown in **Figure 74**. This model will be used to assess emergency response coverage including existing conditions and future scenarios including station location and deployment options.

Table 86: Risk Model – Risk Assignment

OBC Major Occupancy Classification		Probability		Consequence							Risk Level
					Rationale						
		Level	Rationale	Level	Building Stock	Demographic	Fire Loss	Response	Geographic	Economic	
Group A	Assembly	Possible	Might occur under current circumstances. Occurs annually Based on the OFMEM SIR data 2012 to 2016 there is approximately 1 call per year on average. Of the total property stock in the City, 0.8% is Group A - Assembly.	Moderate	Presence and maintenance of fire protection equipment (e.g., fire alarm system, sprinklers, etc.)	Potential for large groups of vulnerable individuals; consumption of alcohol may impair judgement of occupants and impede evacuation in the event of an emergency;	Potential for moderate property loss and threat to life safety of occupants.		Occupancy type distributed throughout the municipality including the rural areas.	Some Group A occupancies play a key role in the economic well-being of the municipality.	Moderate
Group B	Care or Detention	Possible	Might occur under current circumstances. Occurs annually Based on the OFMEM SIR data 2012 to 2016 there is approximately 1 call per year on average. Of the total property stock in the City, 0.1% is Group B - Care or Detention.	Catastrophic	Presence and maintenance of fire protection equipment (e.g., fire alarm system, sprinklers, etc.); use of oxygen; Impeded egress in detention facilities;	Potential for large groups of vulnerable individuals with cognitive and/or physical limitations and/or combative behaviours who require assistance to evacuate; facility staff; visitors;	Potential for large loss of life and significant property damage.			Some Group B occupancies play a key role in the economic well-being of the municipality.	High
Group C	Low-rise Residential	Likely	Multiple or reoccurring incidents in the past year, Will probably occur at some time under current circumstances, Based on the OFMEM SIR data 2012 to 2016 there are approximately 44 incidents a year on average. Of the total property stock in the City, 86.0% is Group C - Residential.	Moderate	Exposure risk in some neighbourhoods as well as building age; Presence and maintenance of fire protection equipment (e.g., fire alarm system, sprinklers, etc.)	Potential for vulnerable individuals including elderly and young; potential for language or cultural barriers;	95% of injuries (40 injuries) and 100% of fatalities (1 fatality) occurring in the City from 2012 to 2016 have occurred within Group C - Residential. Cooking fires are the leading cause of house fires and injuries.		Occupancy type distributed throughout the municipality including the rural areas.	Within mixed-use occupancies, a residential fire could have an economic impact. In addition, economic impact could occur in the downtown where there is greater exposure risk and older buildings.	Moderate
	High-rise Residential			Major	Exposure risk in some neighbourhoods as well as building age; Presence and maintenance of fire protection equipment (e.g., fire alarm system, sprinklers, etc.)			Impact of need for vertical response; preplanning opportunity;			High
Group D	Business	Possible	Might occur under current circumstances. Occurs annually Based on the OFMEM SIR data 2012 to 2016 there is approximately 1 call per year on average. Of the total property stock in the City, 0.6% is Group D - Business and Personal Services.	Moderate	Presence and maintenance of fire protection equipment (e.g., fire alarm system, sprinklers, etc.)		Potential for moderate property loss and threat to life safety of occupants.			Some Group D occupancies play a key role in the economic well-being of the municipality.	Moderate

OBC Major Occupancy		Probability		Consequence						Risk
Group E	Mercantile	Possible	Might occur under current circumstances. Occurs annually Based on the OFMEM SIR data 2012 to 2016 there is approximately 1 call per year on average. Of the total property stock in the City, 1.5% is Group E - Mercantile.	Moderate	Presence and maintenance of fire protection equipment (e.g., fire alarm system, sprinklers, etc.)	Patrons may be unfamiliar with exit facilities;	Potential for moderate property loss and threat to life safety of occupants.			Some Group E occupancies play a key role in the economic well-being of the municipality.	Moderate
Group F	High Hazard Industrial (F1)	Possible	Might occur under current circumstances. Occurs annually Based on the OFMEM SIR data 2012 to 2016 there are approximately 3 calls per year on average. Of the total property stock in the City, 1.3% is Group F - Industrial.	Catastrophic	All Group F - Industrial occupancies could have building area, building height and/or exposure related risks. Fuel load considerations of high-hazard Group F1 occupancies. Presence and maintenance of fire protection equipment (e.g., fire alarm system, sprinklers, etc.)		Group F has a larger overall proportion of property loss ($) compared to the number of fires. Processes can be hazardous.	Potential for hazardous materials impact on occupants and firefighters; preplanning opportunity;	Occupancy type distributed throughout the municipality including the rural areas.	Some Group F occupancies play a key role in the economic well-being of the municipality; the environmental impact of a fire in a Group F occupancy is a consideration.	High
	Medium-Hazard Industrial (F2)			Major							Moderate
	Low Hazard Industrial (F3)			Moderate							Moderate
Group F - Special Considerations	Essar Algoma Steel	Possible		Catastrophic						An incident as Essar Algoma or Tenaris Algoma Tubes Steel could have a catastrophic impact on the community due to its role as a major employer.	High
	Tenaris Algoma Tubes	Possible									High



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

CITY RISK MODEL FOR EMERGENCY RESPONSE COVERAGE ASSESSMENT

FIGURE 74

Risk Level

- High
- Moderate
- Low
- Local Road
- Collector Road
- Arterial Road
- ! Existing Fire Station
- Urban Settlement Boundary
- Municipal Boundary
- First Nation Reserve
- Airport

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY
STATISTICS CANADA

MAP CREATED BY: SMW
MAP CHECKED BY: SLC
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Risk Model\Risk Model2.mxd

DILLON CONSULTING

PROJECT: 175984

STATUS: DRAFT

DATE: 2018-01-19

Appendix A

OFMEM Response Codes

The Office of the Fire Marshal

Ontario

Standard Incident Report Codes List

Jan 2009 **Bolded code** indicates new in 2009

ALL EMERGENCY RESPONSES

AID To/FROM OTHER DEPARTMENT(S)

1	Mutual aid
2	Automatic aid
3	Fire Protection agreement
4	Not applicable

INCIDENT LOCATION

NFPP

See separate code listing

FIRE DEPT ID CODE

NFPP OR FD

See separate code listing

ALARM TO FIRE DEPARTMENT

1	911
2	Telephone from Civilian (other than 911)
3	From Ambulance
4	From Police Services
5	From Monitoring Agency
6	Direct Connection
7	Verbal Report to Station (in person)
8	Two-Way Radio (fire department)
9	Other Alarm
10	No Alarm Received - No Response
11	No Alarm rcv'd - incident discovered by FD personnel

RESPONSE TYPE

Property Fires/Explosions

1	Fire
2	Explosion (exc. codes 3, 11 to 13)
3	No loss outdoor fire (excluding arson, vandalism, children playing, recycling or dump fires)

Overpressure rupture/explosion (no fire)

11	Overpressure Rupture (no fire, e.g. steam boilers, hot water)
12	Munition Explosion - (no fire, e.g. bombs, dynamite)
13	Overpressure Rupture - gas pipe (no fire)

Pre fire conditions/no fire

21	Overheat (no fire, e.g. engines, mechanical devices)
22	Pot on Stove (no fire)
24	Other Cooking/toasting/smoke/steam (no fire)
25	Lightning (no fire)
26	Fireworks (no fire)
29	Other pre fire conditions (no fire)

Burning (controlled)

23	Open air burning/unauthorized controlled burning (no uncontrolled fire)
36	Authorized controlled burning - complaint

False fire calls

31	Alarm System Equipment - Malfunction
32	Alarm System Equipment - Accidental activation (exc. code 35)
33	Human - Malicious intent, prank
34	Human - Perceived Emergency
35	Human - Accidental (alarm accidentally activated by person)
39	Other False Fire Call

CO False calls

37	CO false alarm - perceived emergency (no CO present)
38	CO false alarm - equipment malfunction (no CO present)

Public Hazard

53	CO incident, CO present (NOT false alarm)
41	Gas Leak - Natural Gas
42	Gas Leak - Propane
43	Gas Leak - Refrigeration
44	Gas Leak - Miscellaneous
45	Spill - Gasoline or Fuel
46	Spill - Toxic Chemical
47	Spill - Miscellaneous
48	Radio-active Material Problem
49	Ruptured Water, Steam Pipe
50	Power Lines Down, Arcing
51	Bomb, Explosive Removal, Standby
54	Suspicious substance
57	Public Hazard no action required
58	Public Hazard call false alarm
59	Other public hazard

Rescue

61	Vehicle Extrication
62	Vehicle Collision
63	Building Collapse
64	Commercial/Industrial Accident
65	Home/Residential Accident
66	Persons Trapped in Elevator
67	Water Rescue
68	Water Ice Rescue
69	Other Rescue
601	Trench rescue (non fire)
602	Confined space rescue (non fire)
603	High angle rescue (non fire)
604	Low angle rescue (non fire)
605	Animal rescue
698	Rescue no action required
699	Rescue false alarm

Medical/resuscitator call

701	Oxygen administered
702	CPR administered
703	Defibrillator used
71	Asphyxia, Respiratory Condition
73	Seizure
74	Electric Shock
75	Traumatic Shock
76	Chest pains or suspected heart attack
82	Burns
84	Medical Aid Not Required on Arrival
85	Vital signs absent, DOA
86	Alcohol or drug related
88	Accident or illness related - cuts, fractures, person fainted, etc.
89	Other Medical/Resuscitator Call
898	Medical/resuscitator call no action required
899	Medical/resuscitator call false alarm

Other response

921	**Illegal grow operation (no fire)**
922	**Illegal drug operation (no fire)**
910	Assisting other FD: Mutual Aid
911	Assisting other FD: Automatic Aid
912	Assisting other FD: Fire Protection Agreement
913	Assisting other FD: Other
92	Assisting Police (exc 921, 922)
93	Assisting Other Agencies (exc 921, 922)
94	Other Public Service
96	Call cancelled on route
97	Incident not found
98	Assistance not required by other agency
99	Other Response

FIRES AND EXPLOSIONS

STATUS ON ARRIVAL

1	Fire extinguished prior to arrival
2	Fire with no evidence from street
3	Fire with smoke showing only - including vehicle, outdoor fires
4	Flames showing from small area (one storey or less, part of a vehicle, outdoor)
5	Flames showing from large area (more than one storey, large area outdoors)
7	Fully involved (total structure, vehicle, spreading outdoor fire)
8	Exposure involved
9	Unclassified

WATER

1	Hydrant within 150 meters
2	Hydrant within 150 to 300 meters
3	Hydrant 300 or more meters
4	Tanker shuttle service available (NO hydrant)
5	None of the above
9	Undetermined

FIRE CONTROL

1	Extinguished by fire department
2	Extinguished by automatic system
3	Extinguished by occupant
4	Fire self extinguished
5	Action taken unclassified

PROPERTY TYPE	
Group A Assembly	
Production/Viewing performing arts	
101	Theatre - Motion Picture
102	Theatre - Concert Hall, Live
103	TV, radio, motion picture studio
104	Opera House
Museum/Art gallery/Auditorium	
111	Museum
112	Art Gallery
113	Library
114	Auditorium
115	Lecture Hall
Recreation/sports facility	
121	Bowling Alley, Billiard Centre, pool hall
122	Dance Studio
123	Community/Exhibition/Dance Hall
124	Sports/Country/Social/Yacht Club
125	Gymnasium
126	Non Residential Club
127	Casino
128	Bingo Hall
Education facility	
131	School - Pre-Elementary
132	School – Elementary
133	School - Secondary Junior High (Gr. 7 & 8)
134	School - Secondary/Senior High (Gr. 9+)
135	School - Technical, Industrial Trade
136	School - Business, Commerce, Secretarial
137	School - Post Secondary (University)
138	School – Post Secondary (College)
Transportation Facility	
141	Airport, Heliport
142	Bus Terminal
143	Railway Station
144	Subway Station
145	Marine Terminal
Other assembly	
151	Restaurants (occupant load greater than 30 persons, licensed)
152	Bar, Tavern, Night Club
153	Church, Other Similar Place of Worship
154	Funeral Facility
155	Legislative Facility/Building
156	Court Facility
157	Day Care Centre
158	Church Hall
Arenas/Swimming pools	
161	Arena
162	Ice Rink
163	Indoor Swimming Facility
Participating/Viewing open air facilities	
171	Theatre - Drive-In
172	Stadium
173	Exhibition or Amusement Park Structure
174	Bleacher, Grandstand, Reviewing Stand
175	Tent or temporary structure for assembly activity

Other assembly	
199	Other Assembly
Group B Care and Detention	
Persons under restraint	
201	Jail, Prison, Penitentiary
202	Reformatory (with detention quarters)
203	Adult Detention Camp (minimum security)
204	Police Station (with detention quarters)
205	Young Offender Detention Facility
206	Psych Hospital (with detention quarters)
Persons under supervisory care	
211	Psychiatric Hospital (without detention quarters)
212	Public/Private Hospital
216	Convalescent Home or long term care (excluding senior care)
217	Infirmary
218	Hospice
219	Children Custodial Home
Care facility	
222	Institute for the blind, deaf
223	Seniors long term care facility, licensed
229	Other care facility
Transitional shelter	
231	Shelter for displaced/abused persons
232	Halfway/transitional house
Group/Retirement Home	
233	Group Home
234	Retirement Home
Other Care and Detention	
299	Other Care or Detention not classified
Group C Residential	
Detached/semi/attached residential	
301	Detached Dwelling
302	Semi-Detached Dwelling
303	Attached Dwelling (e.g. rowhouse, townhouse, etc.)
Dual Residential/Business	
331	Apartment/flat/tenement with Business
332	Detached Dwelling with Business
333	Semi-Detached Dwelling with Business
334	Attached Dwelling with Business
335	Detached/Semi/Attached residence with Accessory Apartment above grade
336	Detached/Semi/Attached residence with Accessory Apartment below grade
Rooming/Boarding	
311	Rooming/Boarding House
Multi unit dwelling	
321	Multi-Unit Dwelling - 2 to 6 Units
322	Multi-Unit Dwelling - 7 to 12 Units
323	Multi-Unit Dwelling - Over 12 Units
Seasonal dwelling/Mobile home	
341	Motor Home, Camper, Trailer
342	Mobile Home
343	Tent
344	Houseboat
345	Cottage

Hotel/Motel/Lodging	
355	Hotel, Motel, Lodging - 4 or more guests or suites
356	Hotel, Motel, Lodging - Less than 4 guests or suites (inc B&B)
Other residential	
361	School/College Dormitory (detached from education facility)
363	Military Barrack
364	Bunkhouse, Workers Barrack
365	Detached Garage
366	Residential Club (inc sorority, fraternity)
367	Hostel
368	Residential Camp
369	Convent, Monastery
399	Other Residential
Group D Business and Personal Services	
401	Bank
402	Post Office
403	Barber Shop, Hairdresser, Beauty Parlour, tanning salon
404	Laundry, Dry Cleaner (inc self-service)
405	General Business Office
406	Police Station (without detention quarters)
407	Dental/Medical Office
408	Animal Hospital
409	Radio Station
410	Small Tool/Appliance Rental/Service Establishment
411	Fire Station
412	Engineering, Architect or Tech office
413	Mailing, photocopying office
414	Document centre, record repository (inc archives)
415	Computer, electronic data processing, records storage
416	Furniture, upholstery repair without sales
417	Shoe repair
418	Tent or temporary structure for business or personal service activity
Other Business/personal services	
498	Garage: General Auto parking - Structure
499	Other Business or Personal Services
Group E Mercantile	
Food/beverage sales	
501	Restaurant (occupant load less than 30 persons)
502	Supermarket, Grocery Store
503	Specialty Food Store (butcher, deli, etc.)
504	Convenience/Variety Store
505	Liquor/Wine/Beer Store
506	Market - Outdoors (flowers, fruit, etc.)
507	Market - Indoors (flowers, fruit, etc.)
Department store/catalogue/mail outlet	
510	Mall - public area common to multi store facility
511	Department Store

PROPERTY TYPE CONTINUED	
512	Catalogue/Mail Order Outlet
Specialty stores	
521	Clothing Store, Accessories, fur
522	Fabric Store
523	Furniture/Appliance Store
524	Paint/Wallpaper Store
525	Hardware Store
526	Building Supply Store
527	Lumber Yard
528	Garden Supply
529	Book/Stationery/Art Supply Store
530	Pharmacy
531	Florist
532	Hobby Shop, Sporting Goods, music store
533	Pet Shop
534	Video Rental Shop
535	Computer/electronics store, service or repair
536	Fireworks sales
537	Rug, floor covering store
538	Newsstand, tobacco shop
539	Gifts, jewellery, leather goods, mixed gds.
541	Tent or temporary structure for Mercantile activity
Other mercantile	
543	Big Box Store
599	Other Mercantile
Group F Industrial	
Vehicle sales/service	
601	Motor Vehicle Sales
602	Service Station
603	Motor Vehicle Repair Garage
604	Motor Vehicle Parts, Accessory Sales
605	Car Wash
606	Watercraft Sales
607	Marina, Marine Service Station
609	Other Vehicle Sales/Service
Utilities	
611	Hydro Generating Plant
612	Hydro Distribution Facility
613	Gas Processing Plant
614	Gas Distribution Facility
615	Water Works
616	Water Distribution Facility
617	Sanitary Services (includes plant)
618	Flammable Liquid Distribution Facility
619	Other Utilities
620	Heating plant - central/district heating plant, steam, etc.
Manufacturing or processing (Mfg:) Chem/Petroleum /Paint/ Plastic products	
621	Mfg:Petroleum Products
622	Mfg:Chemicals, inc hazardous chemicals
623	Mfg:Plastics
624	Mfg:Paint, Varnishes, Lacquers
625	Mfg:Drugs, Cosmetics, Pharmaceutical
626	Mfg:Rubber Goods
627	Mfg:Asphalt Products
628	Mfg:Coal Products
629	Mfg:Other Chemical/Petroleum/ Paint/ Plastic Products
Mfg/process Agr/Food/Bev/Tobacco products	
631	Mfg:Meat/Poultry/Fish Products
632	Mfg:Dairy Goods, Produce
633	Mfg:Grain Products, Bakery Goods
634	Mfg:Alcoholic Beverages
635	Mfg:Soft Drinks
636	Mfg:Tobacco Products
637	Mfg:Vegetable/Animal Oil Products
638	Mfg:Sugar Refining, Sugar Products
639	Mfg:Other Agr/Food/Beverage/Tabac
640	Mfg:Canning, preserving, processing fruits vegetables
Mfg/process textiles/cloth/leather products	
641	Mfg:Textile (e.g. preparing fibres, spinning, weaving)
642	Mfg:Tannery
643	Mfg:Footwear
644	Mfg:Wearing Apparel
645	Mfg:Dry Cleaning Plant
646	Mfg:Floor covering and coated fabrics (exc rubber, ceramic)
649	Mfg:Other Textiles, Clothing, Leather Goods
Mfg/process Wood/Furn/Paper/print products	
651	Mfg:Pulp/Paper
652	Mfg:Primary Processing (e.g. sawmill, plywood manufacturer, etc)
653	Mfg:Secondary Processing (e.g. finished goods, furniture, etc)
654	Mfg:Printing, Publishing (e.g. newspapers, magazines, books)
655	Mfg:Job Printing (e.g. forms, greeting cards, etc.)
659	Mfg:Other Wood, Furniture, Paper Products, Printing
Mfg/process vehicles parts	
661	Mfg:Road Vehicles, Parts
662	Mfg:Rail Vehicles, Parts
663	Mfg:Watercraft, Parts
664	Mfg:Aircraft, Parts
665	Mfg:Specialty Vehicles, Parts
669	Mfg:Other Vehicles, Parts
Mfg/process other metal/elect/misc products	
671	Mfg:Primary Metal Processing (e.g. refining, melting, etc.)
672	Mfg:Secondary Metal Processing (e.g. rolling, drawing, polishing)
673	Mfg:Prec. Goods/Instruments (e.g. surgical instr., cameras, etc.)
674	Mfg:Precious Metals, Jewellery
675	Mfg:Sporting Goods, Toys, bicycles
676	Mfg:Appliances, Appliance Parts
677	Mfg:Photo film processing (inc motion and still)
678	Mfg:Glass & glass products, china, pottery
679	Mfg:Other Metal/elect/misc. products
Storage Chem/Petrol/Paint/Plastic products	
681	Sto:Petroleum Products
682	Sto:Chemicals, inc hazardous chemicals
683	Sto:Plastics
684	Sto:Paint, Varnishes, Lacquers
685	Sto:Drugs, Cosmetics, Pharmaceutical
686	Sto:Rubber Goods
687	Sto:Asphalt Products
688	Sto:Coal Products
689	Sto:Medical Supplies - Cold Storage
690	Sto:Tank, Tank Farm - Flammable or Combustible liquids/gases
691	Sto:Tank, Tank Farm - Other Liquids
692	Sto:Tank, Tank Farm - Empty
699	Sto:Other Chemical/Petroleum/Paint/Plastic Products
Storage Agr/Food/Bev/Tobac products	
701	Sto:Meat/Poultry/Fish Products
702	Sto:Dairy Goods, Produce
703	Sto:Grain Products, Bakery Goods
704	Sto:Alcoholic Beverages
705	Sto:Soft Drinks
706	Sto:Tobacco Products
707	Sto:Vegetable/Animal Oil Products
708	Sto:Sugar Refining, Sugar Products
709	Sto:Cold Storage - Processed Food
710	Sto:Cold Storage - Beverages
711	Sto:Tank, Tank Farm - Agricultural Products
712	Sto:Tank, Tank Farm - Processed Food, Beverages
713	Sto:Elevator – Seed, Bean, Grain, etc.
714	Sto:Elevator - Other Goods
715	Sto:Elevator - Empty
716	Sto:Packed food stuffs (not classified by other codes)
717	Sto:Fertilizers, peat moss
719	Sto:Other Agricultural Products, Food, Beverages, Tobacco
Storage Textile/cloth/leather products	
721	Sto:Textiles
722	Sto:Footwear
723	Sto:Wearing Apparel
724	Sto:Dry Cleaning Plant
725	Sto:Furs - Cold Storage
729	Sto:Other Textile Goods
Storage Wood/Furn/Paper/print products	
731	Sto:Pulp, Paper
732	Sto:Primary Products (e.g. plywood, banded lumber, etc.)
733	Sto:Secondary Products (e.g. finished goods, furniture, etc.)
734	Sto:Printing, Publishing
735	Sto:Job Printing (e.g. forms, greeting cards, etc.)
739	Sto:Other Wood, Furniture, Paper Products, Printing

PROPERTY TYPE CONTINUED	
Storage vehicles, parts	
741	Sto:Road Vehicles, Parts
742	Sto:Rail Vehicles, Parts
743	Sto:Watercraft, Parts
744	Sto:Aircraft, Parts
745	Sto:Specialty Vehicles, Parts
749	Sto:Other Vehicles, Parts
Storage Metal/Elect/misc	
751	Sto:Primary Metal Products (e.g. ingots, bars, etc.)
752	Sto:Secondary Metal Products
753	Sto:Precision Goods/Instruments
754	Sto:Precious Metals/Jewellery
755	Sto:Sporting Goods/Toys
756	Sto:Appliances, Appliance Parts
759	Sto:Other Metal/Electrical/Miscellaneous Products
760	Sto:Warehouse, variety of items, not classified by codes
761	Sto:Glass & glass products, pottery, chinaware
Other Industrial	
769	Sto:Tent or temporary structure for industrial storage
791	Recycling Facility
792	Waste Transfer Station
793	Laboratory
794	Aircraft Hangar
796	Wind Turbine
799	Other Industrial
Structures/Properties not classified by the Ontario Building Code	
Mine/Well	
801	Mine
802	Petroleum/Natural Gas Well
803	Quarry
Transportation facility	
811	Chair Lift, Cable Car, Ski Lift
812	Bridge, Overpass, Trestle, Tunnel, Underpass
Communications facility	
821	Radio Transmission Site, Microwave Tower
822	Telephone Exchange
823	Weather Station, Lighthouse
Open (outdoor) storage	
831	Agricultural Products
832	Processed Food Beverages
833	Flammable/Combustible Liquids, Gases
834	Chemicals, Plastics, Rubber Products
835	Textiles, Fibres, Clothing
836	Metal Products, Machinery, Appliances
837	Vehicles or Vehicle Parts
838	General Goods
Miscellaneous structure	
839	Tent or temporary structure not classified under other occupancy
841	Mailbox
842	Fence
843	Shed, Children's Playhouse
844	Privy
845	Telephone Booth
846	Hydro/Telephone Pole
847	Toll Station, Weather/Bus Shelter
848	Trash/Rubbish Container
849	Tarpot
850	Parking Lot Kiosk
852	Clothing Drop Box, etc.
853	Gazebo
854	Sauna - Outdoors
855	Outbuildings - structures not classified elsewhere
856	Free standing deck
Miscellaneous property	
860	Lawn around structure
861	Open Land (e.g. light ground cover, bush, grass, etc.)
862	Forest, Standing Timber
863	Tree, Hedge
864	Dump, Land Fill Site
867	Crops
Classed under National Farm Building Code	
866	Silo, Storage Facility
868	Greenhouse
869	Other farm building (e.g. curing shed, growing facility)
870	Barn - containing equipment or produce only
871	Barn - housing animals
Other Miscellaneous property, structure	
872	Animal shelter - excluding barns
890	Composting site (large scale, e.g. municipal)
891	Outdoor general auto parking
893	Cemetery
896	Sidewalk, street, roadway (do not use for fire incidents)
897	Structure under 10 sq. metres not classified
898	Other property non structure not classified
Vehicles	
Road vehicles	
901	Automobile
902	Small Truck (e.g. pick-up, van, etc.)
903	Large Truck (Excluding Truck Trailer)
904	Trailer Combin. (egg. auto trailer, small t&t, t&t,etc.)
905	Motorcycle
906	Bus, Trackless Trolley
907	Emergency Vehicle
909	Multiple road vehicles
Rail vehicles	
911	Railway Train
912	Subway Train
914	Multiple rail vehicles
Watercraft	
921	Private or Business Watercraft
922	Commercial Watercraft
923	Military Watercraft
924	Multiple watercraft
Aircraft	
931	Private or Business Aircraft
932	Commercial Aircraft
933	Military Aircraft
934	Multiple aircraft
Misc/specialty vehicle	
941	Construction
942	Industrial
943	Agricultural
944	Multiple specialty vehicles
945	Tank truck - Compressed or LP gas, flammable liquid, chemicals
946	Other specialty vehicle
994	Multiple vehicles - combination of types
999	Other Vehicle
AREA OF ORIGIN	
Means of Egress	
11	Lobby, Entranceway
12	Hallway, Corridor
13	Stairway, Escalator
18	Covered Court, Atrium, mall concourse
19	Other Means of Egress
Functional Area	
21	Living Area (e.g. living, T.V., recreation, etc)
22	Sleeping Area or Bedroom (inc. patient's room, dormitory, etc)
23	Dining or Beverage Area (inc. lunchroom, café, mess, etc)
24	Cooking Area or Kitchen
25	Washroom or Bathroom (inc. locker rooms)
26	Sauna
27	Laundry Area
28	Office
29	Electronic equipment area
30	Sales, Showroom Area
31	Process Manufact. (inc. product assembly, repair, etc)
32	Assembly Area (inc. school room, spectator area, church, etc)
33	Laboratory
34	Operating Room, Treatment or Examination Area
35	Performance Area (inc. stage, rink, boxing ring, gym floor, etc)
36	Backstage, dressing room
39	Other Functional Area
Storage Area	
41	Closet (e.g. clothes, broom, linen, etc.)
42	Garage
43	Locker (apartment storage)
44	Trash, Rubbish Storage (inc. chute room, indust. waste area etc)
45	Supply Storage Room (inc. maintenance/document storage etc)

AREA OF ORIGIN CONTINUED	
46	Product Storage (inc. products to be assembled, sold, shipped etc)
47	Shipping/Receiving/Loading Platform
48	Records storage area (inc vaults)
49	Other Storage Area
Building Services/Support Facilities	
51	Elevator (includes shaft)
52	HVAC Equipment Room (furnace room, water heater closet, boiler)
53	Chimney/Flue Pipe
54	Incinerator Room
55	Mechanical/Electrical Services room
56	Conv. Shaft or Chute (inc. dumbwaiter, laundry/garbage chute)
57	Ducting - Heating, Air Conditioning
58	Ducting - Exhaust (inc. cooking, fumes, etc.)
59	Utility Shaft (e.g. electrical wiring/phone, etc.)
60	Other Building Services/Support Facilities
Structural Area	
50	Basement/cellar not partitioned
61	Exterior Wall
62	Roof
63	Awning or Canopy
64	Porch or Balcony
65	Crawl Space (includes sub-structure)
66	Concealed Ceiling Area
67	Concealed Floor Area
68	Concealed Wall Area
69	Attic Area
70	Other Structural Area
Outside Area	
71	Open Area (inc lawn, field, farmyard, park, playing field)
72	Court, Patio, Terrace
73	Parking Area, Parking Lot
74	Storage Area (outside)
75	Trash, rubbish area (outside)
76	Fuel dispensing area (outside)
78	Attached deck
79	Other Outside Area
Vehicle Areas	
81	Engine Area
82	Running Gear (e.g). wheels and braking systems, transmission)
83	Electrical Systems
84	Fuel Systems (e.g. fuel tank, etc.)
85	Operator/Control Area
86	Passenger Area
87	Trunk/Cargo Area
89	Other Vehicle Area
Miscellaneous	
91	Multiple Areas of origin
92	Residential/Business: restaurant area
93	Residential/Business: other business area
97	Other - unclassified
99	Undetermined

SOURCE OF IGNITION	
Cooking equipment	
11	Stove, Range-top burner
12	Oven
13	Microwave
14	Open Fired Barbeque - Fixed or Portable
15	Range Hood
16	Deep Fat Fryer
19	Other Cooking Items (e.g.. toaster, kettle, electric frying pan)
Electrical distribution equipment	
20	Service/Utility Lines (includes power/hydro transmission lines)
21	Transformer
22	Meter
23	Distribution Equipment (includes panel boards, fuses, circuits)
24	Circuit Wiring - Copper (inc conductors)
25	Circuit Wiring - Aluminum (inc conductors)
26	Terminations – Copper (inc receptacles, switches, lights)
27	Terminations – Aluminum (inc receptacles, switches, lights)
28	Cord, Cable for Appliance, Electrical Articles
29	Extension Cord, Temporary Wiring
30	Other Electrical Distribution Item
Heating equipment, chimney etc.	
17	Wood burning stove
31	Central Heating/Cooling Unit
32	Water Heater
33	Space Heater - Fixed
34	Space Heater - Portable
35	Fireplace - Factory Built
36	Fireplace - Masonry
37	Fireplace Insert
38	Chimney - Factory Built
39	Chimney - Masonry
40	Flue Pipe
41	Other Heating Equipment
Appliances	
42	Television, Radio, Stereo, Tape Recorder, etc.
43	Clothes Dryer
44	Iron, Pressing Machine
45	Washing Machine
46	Electric Blanket, Heating Pad
47	Refrigerator, Freezer (inc vending machine)
48	Air Conditioner - Window or Room Unit
49	Other Appliances
Lighting equipment	
51	Incandescent Lamp - Light Bulb, Spotlight
52	Florescent Lamp - bulb or tube (includes ballast)
53	Christmas Lights, Decorative Lighting
54	Lamp (e.g.. coal, oil, naphtha, etc.)
55	Candle
56	Halogen lamp or light
59	Other Lighting Equipment

Processing equipment	
61	Incinerator
62	Heat Treatment Equip. (furnace, oven, kiln, quench tanks, etc.)
63	Painting Equipment
64	Chemical Processing Equipment (e.g.. reactors, distilling unit)
69	Other Processing Equipment
Open flame tools, smokers' articles	
71	Smokers' Articles (e.g.. lit cigarettes, pipes NOT matches or lighters)
72	Cutting/Welding Equipment
73	Blow Torch, Bunsen Burner
74	Salamander
75	Matches (open flame)
76	Lighters (open flame)
77	Matches or Lighters (unable to distinguish)
79	Other Open Flame Tools/Smokers' Articles
Other mechanical, electrical	
80	Portable generator
81	Vehicle - Electrical
82	Vehicle - Mechanical
83	Other Electrical
84	Other Mechanical
Miscellaneous	
85	Vehicle collision
88	Multiple Ignition Source or Igniting Equip (suspected arson)
90	Explosives
91	Fireworks
92	Open Fire (e.g.. camp fire, rubbish fire, etc.)
93	Hot Ashes, Embers, Spark
94	Static Electricity (spark)
95	Lightning
96	Chemical Reaction (e.g.. spontaneous combustion, etc.)
97	Rekindle
98	Other, not classified
100	Outdoor fireplace/heater
Exposure	
101	Exposure, source structure detached
102	Exposure, source structure semi-detached or attached
103	Exposure, source outside storage container, tank
104	Exposure, source open fire (inc campfire, rubbish fire)
105	Exposure, source forest, trees, wildland
106	Exposure, source grass, shrubs, bush
107	Exposure, source vehicle (outside structure)
108	Exposure, source other
999	Undetermined

FUEL OF IGNITION SOURCE	
1	Gasoline
2	Diesel Fuel/Fuel Oil
3	Propane
4	Electricity
5	Natural Gas
6	Hydrogen
7	Wood
8	Alcohol (methanol)
9	Mixed Fuel
10	Aviation Fuel
12	Other unknown gas
13	Smoker's materials, matches or lighters
14	Ethanol
15	Pyrophoric metals
96	Exposure fire
97	Other, unclassified
98	Not applicable (igniting equip/source does not use fuel)
99	Undetermined

OBJECT FIRST IGNITED	
Building Component	
11	Exterior Roof Covering
12	Exterior Cladding (excluding roof)
13	Floor
14	Interior Wall/Ceiling
15	Structural Member
16	Insulation
19	Other Building Component
Furniture	
21	Upholstered Sofa, Chair, etc.
22	Non-upholstered Chair, etc.
23	Cabinetry
29	Other Furniture
Soft goods, wearing apparel	
31	Mattress, Pillow
32	Bedding
33	Linen Other than Bedding
34	Wearing Apparel on a Person
35	Curtain, Drapery
36	Rug, Carpet
39	Other Soft Goods, Wearing Apparel
Other Objects	
40	Christmas Tree
41	Books, Magazines, Newspapers
42	Cleaning Supplies
43	Electrical Wiring Insulation
44	Creosote (chimney, flue pipe)
45	Nest
46	Rubbish, Trash, Waste
47	Vehicle
48	Multiple Objects or Materials
Materials	
51	Bush, Grass, Tree, Leaves, etc.
52	Agricultural Product - Grown (e.g. straw, seeds, etc.)
53	Agricultural Product - Other (e.g. pesticide, fertilizer)
54	Plastic
55	Wood, wood shavings
56	Paper, Cardboard
57	Fabric - Natural (e.g. cotton, wool, etc.)
58	Fabric - Synthetic, Combination
59	Asphalt, Tar Product
Gases	
61	Propane
62	Natural Gas
63	Hydrogen
69	Other Gases
Flammable, combustible liquids	
71	Gasoline
72	Diesel Fuel/Fuel Oil
73	Alcohol (methanol)
74	Cooking Oil, Grease
75	Stored Paint, varnish
79	Other Flammable, Combustible Liquid
Other Materials	
81	Rubber, not classified above
82	Oxidizing material (inc bleach, peroxide)
83	Oily rags (inc. paint rags, etc)
86	Pyrophoric metals
87	Other chemicals, not classified above
Miscellaneous	
96	Multiple diverse objects ignited
97	Other
99	Undetermined

POSSIBLE CAUSE	
Intentional	
1	Suspected Arson
2	Riot/Civil Commotion
3	Suspected Vandalism
4	Suspected Youth Vandalism (Ages 12 to 17)
Unintentional	
11	Children Playing (Ages 11 and under)
12	Vehicle Collision
Design/Construction/Maintenance deficiency	
20	Design/Construction/Installation/Maintenance Deficiency
28	Routine maintenance deficiency, e.g. creosote, lint, grease buildup)
Misuse of ignition source/material ignited	
44	Unattended
45	Improperly Discarded
46	Used or placed too close to combustibles
47	Improper handling of ignition source or ignited material
48	Used for purpose not intended
49	Improper storage
50	Other misuse of ignition source/material ignited
Mechanical/Electrical Failure	
51	Mechanical Failure
52	Electrical Failure
Other Unintentional	
60	Other unintentional cause, not classified
Other	
72	Rekindle
73	Natural cause
80	Exposure fire
Undetermined	
98	Unintentional, cause undetermined
99	Undetermined

VEHICLE PURPOSE/USE	
1	Passengers
2	Flammable Liquids
3	Compressed Flammable Gas
4	Other Dangerous Goods
5	Both Dangerous Goods and General Cargo
6	General Cargo
7	Mobile Utility, Service Vehicle
8	Abandoned, junked
9	Other
10	Stolen
99	Undetermined

VEHICLE FUEL	
1	Gasoline
2	Diesel Fuel/Fuel Oil
3	Propane
4	Electricity
5	Natural Gas
6	Hydrogen
7	Wood
8	Alcohol (methanol)
9	Dual Fuel
10	Mixed Fuel
11	Aviation Fuel
14	Ethanol
15	Hybrid
97	Other
99	Undetermined

INSURANCE ESTIMATE OF LOSS	
1	Yes
2	No
8	Not applicable
9	Undetermined

ESTIMATED VALUE AT RISK	
1	$0
2	$1 to $9,999
3	$10,000 to $49,999
4	$50,000 to $99,999
5	$100,000 to $199,999
6	$200,000 to $499,999
7	$500,000 to $749,999
8	$750,000 to $999,999
9	$1 MIL to $1.9 MIL
10	$2 MIL +
99	Undetermined

RESCUED PERSONS: PHYSICAL CONDITION	
1	No person(s) present with evacuation difficulties
2	Person(s) rescued under age 5
3	Person(s) rescued with age related impaired mobility, e.g. seniors
4	Person(s) rescued with mobility impairment NOT age related
5	Person(s) rescued with visual impairment
6	Person(s) rescued with hearing impairment
7	Person(s) rescued with other impairment (mental or physical)
8	Suspected impairment (alcohol, drugs)
98	Not applicable, no persons rescued
99	Undetermined

CIVILIAN ACTION: FIRE CONTROL	
1	Attempted to extinguish fire (without moving ignited object)
2	Moved ignited object to extinguish or prevent spread
3	Did not attempt to extinguish fire
4	Not applicable, no persons present
9	Undetermined

CIVILIAN ACTION: EVACUATION	
1	All evacuated
2	Some evacuated
3	No one evacuated
4	Not applicable, no one present
9	Undetermined

CIVILIAN ACTION: REASON FOR NOT EVACUATING	
1	Person(s) did not perceive incident as emergency
2	Age related (infants, children)
3	Age related (seniors)
4	Person(s) physically or mentally challenged
5	Suspected impairment (alcohol, drugs)
6	Smoke/fire blocked exit
7	Physical barriers to exit (exit locked or obstructed)
8	Not applicable - all evacuated or no persons present
9	Undetermined

PERSON ASSOCIATED WITH IGNITION: GENDER	
1	Male
2	Female
8	Not applicable
9	Unknown

PERSON ASSOCIATED WITH IGNITION: AGE CATEGORY	
1	0-9
2	10-19
3	20-39
4	40-64
5	65-79
6	80+
8	Not applicable
9	Unknown

KEY HUMAN FACTOR IN IGNITION	
1	Asleep (excludes suspected impairment alcohol or drugs)
2	Possible temporary loss of judgment, panic (excluding impairment)
3	Physical or mental disability
4	Possible impairment alcohol
5	Possible impairment other (e.g. drugs)
6	Unaware of hazard
7	Distracted, preoccupied, fatigued
8	Delay in calling fire department
9	Not applicable (e.g. suspected arson, exposure fire, natural fire etc)
10	No person present at the time of the fire
99	Undetermined

STRUCTURE FIRES	
INITIAL DETECTION	
1	Smoke alarm device sounded
2	Fire alarm system sounded
3	Automatic sprinkler system activated
4	Automatic system other than sprinkler
5	CO detector sounded
6	Person detected - visual sighting, smell or sound
7	Other initial detection
8	No initial detection (burned out before detection)
9	Undetermined
EXTENT OF FIRE	
1	Confined to object of origin
2	Confined to part of room/area of origin
3	Spread to entire room of origin
4	Spread beyond room of origin, same floor
5	Multi unit bldg: spread beyond suite of origin but not to separate suite(s)
6	Multi unit bldg: spread to separate suite(s)
7	Spread to other floors, confined to building
8	Entire Structure
9	Confined to roof/exterior structure
10	Spread beyond building of origin
11	Spread beyond building of origin, resulted in exposure fire(s)
99	Undetermined
SMOKE SPREAD	
2	Confined to part of room/area of origin
3	Spread to entire room of origin
4	Spread beyond room of origin, same floor
5	Multi unit bldg: spread beyond suite of origin but not to separate suite(s)
6	Multi unit bldg: spread to separate suite(s)
7	Spread to other floors, confined to building
8	Entire Structure
9	Confined to roof/exterior structure
10	Spread beyond building of origin
99	Undetermined

POSSIBLE BUSINESS IMPACT	
1	No business interruption
2	May resume operations within a week
3	May resume operations within a month
4	May resume operations within a year
5	May NOT resume operations
8	Not applicable (not a business)
9	Undetermined

COMPLEX	
1	Airport, Air Terminal
2	Amusement Park, Exhibition, Fair Grounds
3	Apartment
4	Arena, Stadium, Cultural Centre, Auditorium
5	Business Residential
6	Church/Religious Complex
7	Country/Yacht/Sports/Recreation Club
8	Convention Centre
9	Education Institution
10	Farm
11	Hospital
12	Hotel, Motel, Motor Hotel
13	Marine Terminal
14	Manufacturing/Storage Complex
15	Market
16	Military Base
17	Office Building
18	Prison, Penitentiary, Reformatory, Detention Centre
19	Railway Terminal, Railway Yard
20	Shopping Centre, Plaza
21	Utility
97	Other
98	Not Applicable
99	Undetermined

OCCUPANCY STATUS	
1	Permanent - Person(s) Present
2	Permanent - No Person(s) Present
3	Seasonal (In Use) - Person(s) Present
4	Seasonal (In Use) – No Person(s) Present
5	Seasonal (Not in Use)
7	Illegally occupied
8	Not applicable
9	Undetermined

OCCUPANT TYPE	
1	Owner(s) occupied (business or residential)
2	Renter(s) only (business or residential, exc. students)
3	Student renter(s) (residential only)
4	Other
8	Not applicable (not occupied)
9	Undetermined

BUILDING STATUS	
1	Normal (no change)
2	Under Renovation
3	Under Construction
4	Under Demolition
5	Abandoned, vacant (long term)
8	Not Applicable
9	Undetermined

ILLEGAL BUILDING USE	
1	Illegal use: marijuana grow operation
2	Illegal use: methamphetamine lab
3	Illegal use: Crack house/drug den
4	Illegal use: other
8	Not applicable
9	Undetermined

BUILDING HEIGHT	
001	1 storeys
002	2 storeys
	:
100	100 storeys
997	Other
998	Not applicable

LEVEL OF ORIGIN	
001	1ST floor
002	2nd floor
	:
100	100th floor
B01	1st floor below grade
B02	2nd floor below grade
	:
996	Roof level
997	Other
998	Not applicable
999	Undetermined

AGE OF STRUCTURE	
1	Designated an historic building
2	Constructed pre 1946 (older)
3	Constructed between 1946 to 1970 (old)
4	1971 to 2000 (recent)
5	2001 to 2010 (newly constructed)
6	After 2010
9	Undetermined

SMOKE ALARMS	
ALARM ON FLOOR OR SUITE OF FIRE ORIGIN: PRESENCE AND OPERATION	
1	No smoke alarm
2	Smoke alarm present and operated
3	Smoke alarm present, did not operate
4	Smoke alarm present, operation undetermined
9	Smoke alarm presence undetermined

ALARM ON FLOOR/SUITE: REASON FOR FAILURE TO OPERATE	
1	No battery
2	Dead battery
3	Electrical line or battery not connected
4	Remote from fire – smoke did not reach alarm
5	Separated from fire (e.g. wall, etc)
6	Improper installation of unit
7	Unit failure
8	Tampered with (vandalism)
9	Other reason
98	Not applicable: Alarm operated, presence/ operation undetermined OR no alarm
99	Reason for failure undetermined

ALARM ON FLOOR/SUITE: TYPE	
1	Battery operated
2	Hardwired (standalone)
3	Wireless
4	Interconnected (hardwired)
8	Not applicable - no smoke alarm or presence undetermined
9	Type undetermined

SMOKE ALARM ON OTHER FLOORS: PRESENCE AND OPERATION	
1	Other floor(s): No smoke alarms
2	Other floor(s): Smoke alarm(s) present and operated
3	Other floor(s): Smoke alarm(s) present did not operate
4	Other floor(s): Smoke alarm(s) present, operation undetermined
8	Not applicable: Single level
9	Other floor(s): Smoke alarm presence undetermined

SMOKE ALARM ON EVERY LEVEL	
1	Yes, Operational alarms on every level
2	No, alarms present on every level, **not all operational**
3	No, alarms **not present on every level**
4	No alarms present
8	Not applicable: Non residential structure
9	Undetermined

IMPACT OF SMOKE ALARM OPERATION EVACUATION OF PERSONS AT RISK	
1	All persons (at risk of injury) self evacuated as a result of hearing alarm
2	Some persons (at risk) self evacuated as a result of hearing alarm
3	No one (at risk) self evacuated as a result of hearing alarm
4	Alarm operated but failed to alert occupant(s) (at risk)
7	Not applicable: Occupant(s) first alerted by other means
8	Not applicable: No alarm, no persons present
9	Undetermined

Number of persons at risk who self evacuated due to smoke alarm	
	Input the number of persons or codes below
98	98 persons or more
99	Undetermined

FIRE ALARM SYSTEM PRESENCE	
1	Fire alarm system present
2	No Fire alarm system
8	Not applicable for structure type (detached/semi, town residential, other buildings etc)
9	Undetermined

FIRE ALARM SYSTEM OPERATION	
1	Fire alarm system operated
2	Fire alarm system did not operate
8	Not applicable, no fire alarm system
9	Operation Undetermined

FIRE ALARM IMPACT	
1	All persons (at risk) evacuated as a result of hearing fire alarm
2	Some persons (at risk) evacuated as a result of hearing fire alarm
3	No one (at risk) evacuated as a result of hearing fire alarm
4	Fire Alarm system operated but failed to alert occupant(s) (at risk)
7	Not applicable: Occupant(s) first alerted by other means
8	Not applicable: No fire alarm system, no persons present
9	Undetermined

SPRINKLER SYSTEM PRESENCE	
1	Full sprinkler system present
2	Partial sprinkler system present
3	No sprinkler system present
9	Undetermined

SPRINKLER SYSTEM OPERATION	
1	Sprinkler system activated
2	Sprinkler did not activate: remote or separated from fire
3	Sprinkler did not activate: fire too small to trigger system
4	Sprinkler did not activate: other reason
5	Sprinkler did not activate: reason unknown
8	Not applicable - no sprinkler system present
9	Activation/Operation undetermined

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DILLON CONSULTING

CITY OF SAULT STE. MARIE

Fire Master Plan

Final

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Appendices

Appendix A - OFMEM Public Fire Safety Guidelines

Acronyms

ANSI	American National Standards Institute
CAO	Chief Administrative Officer
CEMC	Community Emergency Management Coordinator
CFSEM	Comprehensive Fire Safety Effectiveness Model
CO	Carbon Monoxide
CRA	Comprehensive Risk Assessment
EMCPA	*Emergency Management and Civil Protection Act*
EOC	Emergency Operations Centre
EVT	Emergency Vehicle Technician
FMP	Fire Master Plan
FPPA	*Fire Protection and Prevention Act* (1997)
GIS	Geographic Information Systems
IMS	Incident Management System
MW	Megawatt
NFPA	National Fire Protection Association
OBC	Ontario Building Code
OFC	Ontario Fire Code
OFMEM	Office of the Fire Marshal and Emergency Management (Ontario)
OHSA	*Occupational Health and Safety Act*, R.S.O. 1990
PFSG	Public Fire Safety Guidelines
SCBA	Self-Contained Breathing Apparatus
SSMFS	Sault Ste. Marie Fire Services

Executive Summary

The Corporation of the City of Sault Ste. Marie Corporate Strategic Plan (2016 – 2020) recognizes the value of creating a strong community through a commitment to strategic planning. This includes the vision of the City "*To be the leading innovative, dynamic and efficient municipal corporation in the Province of Ontario".*

This Fire Master Plan (FMP) was developed to provide Council with a strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie. The findings and recommendations contained within this FMP have been informed by a *Comprehensive Risk Assessment* (CRA) that was developed as a companion document to assess the existing fire risk within the community. Collectively the CRA and FMP provide a clear picture of the existing fire risks within the community, and the existing fire protection capabilities of the Sault Ste. Marie Fire Services (SSMFS).

This FMP and accompanying CRA have been developed in consideration of the municipality's legislative requirements as contained within the *Fire Prevention & Protection Act (1997)*, and the *Occupational Health and Safety Act, R.S.O. 1990 (OHSA).* In addition, current industry best practices as defined by the Office of the Fire Marshal and Emergency Management (OFMEM) and leading industry organizations such as the National Fire Protection Association (NFPA) have been utilized to guide and inform the recommendations presented.

The findings and recommendations of this FMP are also intended to inform Council's decisions with respect to the findings of the *Review of Protection Services* (2017 RFPS) completed by the Office of the Fire Marshal and Emergency Management in August of 2017. The FMP provides further analysis related to each of the 2017 RFPS recommendations, and provides Council with a consolidated strategic plan to further enhance the delivery of fire protection services within the community.

Under the leadership of the Fire Chief, the Sault Ste. Marie Fire Services (SSMFS) senior management team currently oversees the delivery of a wide range of fire protection services through the application of the *Comprehensive Fire Safety Effectiveness Model* (CFSEM) supported by the OFMEM. This model reflects the primary of objective of a fire department as being to provide the optimum level of fire protection services while ensuring an appropriate level of health and safety for firefighters. The CFSEM prioritizes a strategy referred to as the *"three lines of defence"*. These include:

i. *Public Education and Prevention;*
ii. *Fire Safety Standards and Enforcement; and*
iii. *Emergency Response (Fire Suppression)*

Within the Province of Ontario the *"three lines of defence"* model has proven to be an effective strategy in reducing the number of fire related fatalities and injuries, and reducing the overall impacts of fire while enhancing the safety of firefighters. The options and recommendations presented within this FMP are intended to optimize the use of the *"three lines of defence"* model in providing the most effective and efficient level of fire protection services, with the most value to the community.

The information presented within this FMP will highlight the emphasis that the SSMFS places on public fire safety education. The *role of the public* in maintaining working *Smoke Alarms* in their home, having a *Carbon Monoxide Detector* and practicing *Home Escape Planning* are all core elements of a comprehensive community fire safety plan.

The analyses within this FMP presents findings that indicate the SSMFS is very proactive in optimizing the use of the first two lines of defence including the delivery of public education and fire prevention programs and the application of fire safety standards and enforcement. Of importance to this area will be the need to sustain and further enhance the qualifications and certification of staff providing these services. This need was highlighted in a recent communication from the *Ministry of Community Safety and Correctional Services* (MCSCS) that requested *"Public consultation on proposed regulations for mandatory training and certification and conducting community risk assessments".* The importance of training to achieve recognised industry best practices and appropriate qualifications and certifications will be seen as a theme throughout this FMP.

This fire master planning process has also considered the findings and recommendation of the *Fire Services Organizational Alignment* (FSOA) dated October 26, 2015. This report presented a plan to re-align the delivery of Fire and Emergency Medical Services through the implementation of *"a 3 year attrition strategy to better manage the risk and liability under Bill C-45, improve EMS response time, and provide better customer service."*[1] Bill C-45 also known as the *"Westray Bill"* established new legal duties for workplace health and safety, and imposed serious penalties for violations that resulted in injuries or death of a worker. This report presented Council with a strategy to manage its fiscal responsibilities with that of its due diligence as an employer. Based on the analyses presented within the FSOA the findings and recommendation provided a strategy to enhance the delivery of emergency medical care, and respond to specific resource needs of the SSMFS including additional Public Education Officers and a Training Officer.

As a result, the analysis within this FMP includes a review of the *historical* fire suppression capabilities of the SSMFS *(Pre-October 26, 2015)* and the *existing* fire suppression capabilities *(Post-October 26, 2015).*

[1] Fire Services Organizational Realignment – Dated October 26th 2015

In comparison to the current applicable fire suppression benchmarks, the analysis within this FMP identify how the methodology applied in the FSOA has evolved to the current methodology of utilizing risk-based analysis to determine the appropriate fire suppression response within a community. This strategy recognises that different firefighter deployments are required based on the fire risk present within a specific building occupancy type.

The risk-based methodology presented in this FMP indicates the presence of three current fire suppression tactical limitations. These include the initial response *(initial responding apparatus and number of firefighters)*, depth of response *(total number of firefighters responding),* and simultaneous calls for emergency response. Options are presented for Council's consideration to minimize these limitations through further optimization of the *"three lines of defence"*, enhancing the efficiency and reliability of the call back process of off duty firefighters, increasing the minimum number of firefighters on duty at all times, and implementing a revised fire station location model.

Subject to Council's consideration, this FMP is intended to inform the development of clear goals and objectives for each of the programs and services provided by the SSMFS to be included within an updated *Establishing and Regulating By-law.* This includes a clear description of the intended service level, process for implementation and requirements for the ongoing monitoring and reporting to Council and the community

List of Recommendations

Administration

Council Recommendation:

1. That that the strategic priorities identified within the proposed Fire Service Master Plan be adopted to form the strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie including:

    i. The utilization of a Comprehensive Risk Assessment in determining the level of existing fire safety risks within the municipality as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services;

    ii. The optimization of the first two lines of defence, including public education and fire prevention, and the utilization of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Comprehensive Risk Assessment; and,

    iii. Emphasis on strategies that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services resulting in the best value for the community.

Operational Recommendations:

1. That the current job description for the Fire Chief be reviewed and updated as referenced in the proposed Fire Master Plan.
2. That an appointment by-law for the current Deputy Chief Fire Operations, Training and Logistics be developed and presented to Council for consideration and approval..
3. That the current job description for the Deputy Chief Fire Operations, Training and Logistics be reviewed and updated as referenced in the proposed Fire Master Plan.
4. That an appointment by-law for the current Deputy Chief- Education/Prevention and Emergency Management be developed and presented to Council for consideration and approval.
5. That the current job description for the Deputy Chief – Education/Prevention and Emergency Management be reviewed and updated as referenced in the proposed Fire Master Plan.
6. That consideration be given to improving the administrative work space as identified within the proposed Fire Master Plan.
7. That subject to Council's consideration and approval of the proposed Fire Master Plan that the Establishing and Regulating By-law be updated and presented to Council for approval.
8. That the Fire Chief be directed to implement a regular process for the review of all applicable fire protection services by-laws.
9. That the Fire Chief be directed to review the current user Fee and Service Charge By-law #2016-180 and provide additional information for Councils consideration to expand the scope of services included.
10. That the SSMFS implement the framework for the utilization of department policies, operating guidelines and department memorandums referenced within the proposed Fire Master Plan.
11. That the SSMFS implement the proposed Operating Guideline Committee referenced within the proposed Fire Master Plan.
12. That By-law #90-90 - To Establish the Retention Period of Documents and Records of the Corporation be reviewed and updated including revisions to Schedule 20 regarding the SSMFS.
13. That the SSMFS continue to present an Annual Report to Council and the community including the findings of an annual review of the Comprehensive Risk Assessment.

Fire Prevention and Public Education

Council Recommendations:

2. That the proposed public fire safety education activities and program cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.
3. That the proposed fire inspection cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.
4. That the proposed Fire Prevention and Public Education staff resource plan presented within the proposed FMP be considered for implementation.

Operational Recommendations:

14. That the SSMFS replace the current Simplified Risk Assessment with the framework of the comprehensive risk analyses model.
15. That the draft Fire Prevention Policy be updated and presented to Council for consideration and inclusion within the proposed Establishing and Regulating By-law as an appendix.
16. That department Notice #300-01 – Pre-Fire Plans be replaced with a comprehensive operating guideline informed by the findings of the Fire Master Plan and Comprehensive Risk Assessment
17. That an Operating Guideline be developed for the SSMFS home smoke alarm, carbon monoxide alarm and home escape planning program, and that this program be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.
18. That the SSMFS develop an operating guideline to define the process of tracking all public fire safety information distributed to the public in response to legislative requirements of the FPPA.
19. That the SSMFS continue to prioritize the delivery of seniors (aged 65 and over) public education programs as referenced within the proposed Fire Master Plan.
20. That the proposed public fire safety education activities and program cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.
21. That the SSMFS develop a consolidated Operating Guideline containing the goals and objectives for all services related to vulnerable occupancies within the City.
22. That the SSMFS develop a comprehensive strategy for managing false alarm calls that includes additional public education, enhanced routine fire inspections and the implementation of user fees as referenced within the proposed FMP, and further cost recovery be included within the Establishing and Regulating By-Law.
23. That the SSMFS develop a department Operating Guideline for responding to requests and complaints as referenced within the proposed FMP.

Emergency Management

Council Recommendations:

5. That Council considers a reorganization of the Emergency Management staff resources and functions as referenced within the FMP.

Operational Recommendations:

24. That consideration be given to updating the City's flood plain mapping as part of the next Hazard Identification and Risk Assessment (HIRA) review process.

Training

Operational Recommendations:

25. That the SSMFS consolidate the current firefighter training initiatives into one Comprehensive Training Program including performance goals and objectives to be defined within a consolidated Operating Guideline.
26. That the SSMFS complete additional research and consultation with external organizations to identify options for the delivery of water-related technical rescues as referenced within the FMP.
27. That the SSMFS conduct a review of the current Tiered Response Agreement for medical calls to ascertain if any revisions can be made to reduce the response of fire suppression staff.
28. That the SSMFS develop one comprehensive operating guideline for responses to the Sault Ste. Marie Airport.
29. That the SSMFS develop a Business Plan for Council's consideration in developing a Training Centre including the capability of "live fire" training as presented within the FMP.
30. That the SSMFS further develop the current Company Officer training initiatives into a comprehensive Officer Development Program.
31. That the SSMFS consider adoption of the Blue Card Incident Command Training program to enhance its current Incident Command training program.
32. That the SSMFS consider developing a defined succession plan to guide the career development of all members of the SSMFS.
33. That the SSMFS review and update the Respiratory Protection Program in a comprehensive operating guideline.
34. That the SSMFS consider developing a Training Development Committee as identified within the proposed FMP.

Operations (Fire Suppression)

Council Recommendations:

6. That the Council of the City of Sault Ste. Marie approves the Fire Suppression Model – Option 3 included within the proposed Fire Master Plan as the preferred operating model for the SSMFS including a minimum of fifteen firefighters on duty at all times and the proposed three fire station location model.

7. That the proposed Fire Suppression Performance Benchmarks included within the Fire Master Plan be approved including:

    I. The Sault Ste. Marie Fire Services will strive to achieve a deployment of six firefighters arriving on scene within a 14 minute travel time to all structural fires within the defined rural area of the City;

    II. The Sault Ste. Marie Fire Services will strive to achieve an initial deployment of four firefighters arriving on scene within a four minute travel time to all structural fires within the defined urban area of the City; and

    III. The Sault Ste. Marie Fire Services will strive to achieve an initial depth of response deployment of 14 firefighters arriving on scene within an eight minute travel time to all structural fires occurring within identified moderate risk occupancies located in the defined urban area of the City.

Operational Recommendations:

35. That the SSMFS further investigate the existing emergency response capabilities of Mutual Aid and International Response Agreements to define within a department operating guideline the expected capability, capacity, reliability and compatibility of the participating agencies.
36. That the SSMFS prioritize the development and implementation of a revised call back process for off-duty firefighters including defined performance benchmarks and record management process, and that the revised call back process be monitored and evaluated to assess its efficiency and reliability as presented within the proposed FMP.
37. That in the absence of implementing an efficient and reliable call back process for full-time firefighters the SSMFS consider the implementation of a Composite Fire Department model as presented within the FMP.
38. That the SSMFS optimize the recognised “Three lines of Defence” fire protection model in prioritizing the delivery of public education, fire prevention and enforcement programs within occupancy types assigned as high risk and high-rise high risk within the Comprehensive Risk Assessment.
39. That the SSMFS develop an ongoing process for tracking and reporting all proposed fire suppression performance benchmarks for inclusion within the Annual Report to Council.

Apparatus, Equipment, Stations

Operational Recommendations:

40. That the SSMFS consider adopting the Emergency Vehicle Technician Certification (EVT) for all Mechanical Division staff.
41. That the SSMFS considers transitioning to the major apparatus replacement cycle presented within the Fire Master Plan.
42. That the SSMFS sustain its current complement of service ready apparatus at all times.
43. That the SSMFS develop a life cycle replacement plan for all major equipment such as self-contained breathing apparatus and protective clothing including manufacturers recommended life cycles.

Communications

Council Recommendation:

8. That the City of Sault Ste. Marie conduct a comprehensive review of the radio system infrastructure replacement requirements of the SSMFS.
9. That the City of Sault Ste. Marie conduct a comprehensive review of the costs associated with sustaining the current communications centre operating model in comparison to contracting these services from another agency.

Operational Recommendation:

44. That the City of Sault Ste. Marie prioritize the replacement of the SSMFS telephone system.

1.0 Introduction

This Fire Master Plan (FMP) was initiated by the City of Sault Ste. Marie to assess the current and future delivery of fire protection services provided by the Sault Ste. Marie Fire Services (SSMFS). The analyses and recommendations within this FMP do not include any review of emergency medical services such as Primary Care Paramedics or Land Ambulance services where the City is a contracted service provider.

Analyses of the existing fire protection services provided by the Sault Ste. Marie Fire Services has been conducted by reviewing compliance with the *Fire Protection and Prevention Act* (1997), *Occupational Health and Safety Act*, R.S.O. 1990 (OHSA), consideration of current industry best practices including recognised guidelines and standards, and municipal fire risk.

The findings and recommendations of this FMP have been informed by a Comprehensive Risk Assessment (CRA) that was prepared in conjunction with this fire master planning process by Dillon Consulting Limited (Dillon). The CRA is presented under separate cover. The CRA presents a *comprehensive* analysis of the existing *municipal fire risk* within the City of Sault Ste. Marie. The identified *key risks* and *key findings* of the CRA are presented within this FMP to assist Council in developing community risk reduction strategies.

Prior to initiating this fire master planning process, the City of Sault Ste. Marie was the focus of a *Review of Fire Protection Services* in 2017 (2017 RFPS) completed by the Office of the Fire Marshal and Emergency Management (OFMEM). Findings of the 2017 RFPS indicate that the City of Sault Ste. Marie is currently achieving its legislative requirements as contained in the *Fire Protection and Prevention Act (1997).* However, the 2017 RFPS contains 18 recommendations identified by the OFMEM to *"improve the efficiency and effectiveness of the SSMFS fire protection service delivery model".* This FMP presents options for Council's consideration and recommendations to respond to each of the 18 recommendations of the 2017 RFPS.

Completion of this Fire Master Plan recognizes the continued commitment of the City's Council and senior municipal staff in striving to achieve the most effective and efficient level of fire protection services resulting in the best value for the community.

1.1 Purpose and Scope

The objective of this Fire Master Plan and Comprehensive Risk Assessment is to provide Council with strategic planning documents to guide the delivery of fire protection services, including a long term (ten-year) vision and systematic approach for implementation. This FMP provides an objective analyses of local "needs and circumstances" as defined by the FPPA to support decision-making with respect to community fire protection and prevention programs and services.

Developing this FMP has included evidence-based analyses of the following key areas as outlined within the City's Request for Proposal *File 2017FIR-03-P "Proposal for Comprehensive Risk Assessment for Fire Services for Sault Ste. Marie"* including:

- *Investigate the resource requirements including costs to operate the City's Fire Services in relation to the identified risk;*
- *Assess the operational performance, efficiencies and effectiveness of the City's Fire Services including number and location of stations, utilization of apparatus, equipment, communications, staffing levels, and other resources;*
- *Investigate the options for maximizing efficiencies of the City's Fire Services including operating (opex) and capital (capex);*
- *Review staffing requirements and deployment provisions based on applicable legislation, and industry best practices and guidelines;*
- *Assess the ability of Fire Services to provide a service that meets the community and council's expectations;*
- *Assess the ability of Fire Services to provide a service that ensures that the quickest available apparatus with the assigned capability to control the emergency is dispatched; and*
- *Investigate the provision of fire service to Prince Township and the associated revenue for that service.*

This analysis has been utilized to inform the fire master planning process with a focus on the delivery of fire suppression services in addition to all other services and programs provided by the SSMFS including:

- *Administration (organizational structure, governance, staffing, legislation, by-laws, department policies);*
- *Fire Prevention & Public Education (staffing, service delivery, legislation, programs, department policies, mitigation strategies);*
- *Firefighter Training (staffing, organization, legislation, annual plan, department policies, specialized services, training facilities);*
- *Emergency Planning (staffing, emergency plan, legislation); and*
- *Communications (staffing, dispatch & radio systems) and Mechanics (staffing, organization, department policies, facilities).*

1.2 Related Plans and Reports

Research undertaken to develop this FMP identified a number of related plans and reports that have been considered in regards to developing the proposed options for the delivery of fire protection services within the City of Sault Ste. Marie. The related plans and reports include the Corporate Strategic Plan, 2016 Verdict of the Coroner's Jury, and 2017 Office of the Fire Marshal and Emergency Management review of Fire Protection Services.

1.2.1 Corporate Strategic Plan

The 2016-2020 Corporate Strategic Plan is an example of Council's commitment to seeing the City of Sault Ste. Marie recognised as *"a leading and dynamic community".* Through the leadership of Council and senior staff the City's vision is stated as *"To be the leading innovative, dynamic and efficient municipal corporation in the Province of Ontario".*

The vision of the community is supported by a mission statement that states the City is committed "*To promote, encourage and lead economic and social growth within our community through the effective provision of municipal services and the development of community partnerships".* The vision and mission 2016-2020 Corporate Strategic Plan of the City of Sault Ste. Marie are guided by Council's values that include (pg. 4):

- *Accountability and Transparency: We will be accountable to our citizens and transparent in carrying out our responsibilities.*
- *Integrity and Honesty: We will demonstrate honesty, sincerity and fairness in carrying out our responsibilities.*
- *Commitment to Citizens and the Community: We will work together to provide inclusive and accessible services to our diverse community. We will strive to improve productivity and achieve excellence in customer service.*
- *Innovation and Productivity: We will embrace innovative solutions to improve productivity and achieve excellence in customer service.*
- *Fiscal Responsibilities: We will manage municipal finances in a responsible and prudent manner. We will implement best practices to ensure best value in service delivery.*
- *Respect, Engage and Value Employees: We will foster a respectful workplace where employees are treated with dignity and can excel as members of the corporate team.*
- *Environmental Stewardship: We will use resources wisely to maintain and create a sustainable city for future generations.*

This Fire Master Plan has considered these values, and specifically terms such as *"excellence in customer service, best value in service delivery, and sustainable city"* in developing the strategies presented for delivering the most effective and efficient fire protection services and programs for the City of Sault Ste. Marie.

1.2.2 2015 Fire Services Organizational Realignment Report

On October 26th 2015, the previous Fire Chief presented a plan to Council to develop and implement a realignment of Fire and Emergency Medical Services (EMS). This plan presented a three year attrition

strategy intended to better manage the identified risks and liability in response to Bill C-45 also known as the Westray Bill.[2]

The realignment plan included reallocating up to 20 of the 88 total full-time firefighter positions, at that time, through a process of attrition to implement new positions within the SSMFS including the following:

- 4 Paramedic Supervisors;
- 8 Paramedics;
- 2 Public Education Officers;
- 1 Training Officer;
- 1 Mechanic; and
- 1 Emergency Planning Officer.

The analyses within this FMP will present the status of this realignment plan with respect to the impacts on the delivery of *fire protection services*.

1.2.3 2016 Verdict of Corners Inquest

Mandated under the *Coroners Act*, 1990, coroners specialize in death investigation for certain deaths as identified under the Act. In Ontario, the Office of the Chief Coroner has a mandate to: *"...serve the living through high quality death investigations and inquests to ensure that no death will be overlooked, concealed or ignored. The findings are used to generate recommendations to help improve public safety and prevent deaths in similar circumstances".*[3]

As a result of a fatal fire in 2012 in Whitby, and a second fatal fire in the Town of East Gwillimbury in 2013, the Office of the Chief Coroner initiated an inquest to determine the events surrounding all of the fire-related deaths that occurred. It included all of the various aspects related to fire safety, before and during a fire situation, and local emergency services response to a fire. The intent of an inquest such as this is designed to focus public attention on the circumstances of a death through an objective examination of facts. The findings of this inquest resulted in 33 recommendations to a range of organizations and stakeholders within Ontario including municipalities.

[2] As explained on the Government of Canada Canadian Centre for Occupational Health and Safety website, this 2003 Bill amended the Canadian Criminal Code and "*established new legal duties for workplace health and safety, and imposed serious penalties for violations that result in injuries or death. The Bill provided new rules for attributing criminal liability to organizations, including corporations, their representatives and those who direct the work of others."*
Source: https://www.ccohs.ca/oshanswers/legisl/billc45.html

[3] Ministry of Safety & Correctional Services. *Office of the Chief Coroner.* February 8, 2016. http://www.mcscs.jus.gov.on.ca/english/DeathInvestigations/office_coroner/coroner.html (accessed November 2016).

Our review of these recommendations and their relevance to this master fire planning process highlight the importance of the *"three lines of defence"* identified within this FMP. In our view, each of the 33 recommendations is important and relate to enhancing public safety. Examples of these recommendations included directly from the inquest report are presented to support the analyses and recommendations of this FMP:[4]

Directed to the Office of the Fire Marshal and Emergency Management:

- ü *To educate the public on its responsibility to maintain and not dismantle/vandalize smoke alarms;*
- ü *To continue and expand the accessibility of all training resources to municipalities by providing standard curriculum e-learning, Train the Trainer packages, local training opportunities and teaching materials to municipalities to provide consistent province wide training standards;*

Directed to Municipalities:

- ü *Consult with stakeholders to explore the installation of clearly visible house numbers; and*
- ü *Work towards a provincially integrated computer software program to assist dispatching of 911 calls.*

Directed to the Office of the Fire Marshal and Emergency Management and Municipalities:

- ü *To continue and expand public education on the fact that upon discovery of smoke or fire every person must immediately get out and stay out of the building; and*
- ü *As part of public education, promote awareness of different types and appropriate use of fire extinguishers. Included in this education, could be demonstrations and hands-on practice.*

Directed to the Ontario Association of Fire Chiefs:

- ü *Fire Departments to explore re-allocating their current resources, and/or utilizing resources from the suppression area, for fire prevention, public education and fire safety inspections in their municipalities. This could include a Home Visit Public Education program and literature that will provide occupants home fire safety information, such as the presence of smoke detectors, CO detectors, escape plans, vulnerable occupants (physical and cognitive disabilities), appliance (e.g. dryer) safety, delivered by fire fighters as provided by the municipality. Such programs may include a home inspection as determined by the municipality.*

[4] Ministry of Community Safety and Correctional Facilities. "Verdict of Coroner's Jury." *Office of the Chief Coroner.* April 2016. https://www.mcscs.jus.gov.on.ca/sites/default/files/content/mcscs/docs/Harrison_et_al_2016.pdf (accessed November 2016).

Directed to the Ministry of Community Safety and Correctional Services

- ü *To make a Regulation, pursuant to clause 78(1)(k) of the Fire Protection and Prevention Act, requiring mandatory certification and training, to recognized industry standards, for all personnel (as defined in the Fire Protection and Prevention Act) whose primary job function is to perform: 1) fire inspections, 2) public education, and/or 3) communications (call-taking / dispatch).*

This fire master planning process recognises the importance of recommendations such as those provided through this inquest. All of the recommendations, and specifically those referenced within this FMP, have been considered in developing the options and strategies presented for Council's consideration.

1.2.4 2017 Review of Fire Protection Services by the Office of the Fire Marshal and Emergency Management

On December 7th 2016 the Office of the Fire Marshal and Emergency Management under the authority of the FPPA initiated a Review of Fire Protection Services (2017 RFPS) in the City of Sault Ste. Marie. This authority is defined with sub-clause 9. (1)(a) of the FPPA that states:

> *Powers of the Fire Marshal*
> *9.1 (1) The Fire Marshal has the power.*
> *(a) to monitor, review and advise municipalities respecting the provision of fire protection services and to make recommendations to municipal councils for improving the efficiency and effectiveness of those services.*

This review process in not uncommon, and reflects a fundamental role of the OFMEM within the Province. Of importance to this fire master planning process are the references within the 2017 RFPS that identify that it is a municipal council's responsibility to determine the level of fire protection services to be delivered in accordance with *"local needs and circumstances"*. The 2017 RFPS identifies a number of factors that should be considered in defining these local needs and circumstances such as:

- *Type of service delivery system (full-time, composite, or volunteer);*
- *Economic situation;*
- *Demographic considerations;*
- *Geography and physical layout of the municipality;*
- *Building profile;*
- *Various risks to be protected; and*
- *Community infrastructure of roads, water systems, hydrants.*

The analyses within this FMP will provide Council with a thorough analyses of these and other factors in determining options for the delivery of fire protection services within the City of Sault Ste. Marie. Assessing the financial impact of each option, and choosing the preferred option will be a key element in

Council's decision making process in defining the local needs and circumstances for the City of Sault Ste. Marie. Where applicable, this FMP will present the 18 recommendations of the 2017 RFPS providing a link to the analyses within this FMP and the proposed recommendations to address the findings of the 2017 RFPS.

1.3 Municipal Overview

The City of Sault Ste. Marie (City or SSM) is located in Northern Ontario within the Algoma District, as shown in Figure 1. Sault Ste. Marie (colloquially known as "the Soo") is a border city to the United States which shares its name. Ideally located on the St. Marys River – which spans Lake Superior and Lake Huron – the City has a long history (including an Anishinaabe meeting place and a European trading post).[5] Sault Ste. Marie became well developed before and after World War II, largely because of growth in the steel industry. The steel economy required a freight system to ship steel to the United States and elsewhere in Canada.[6] Today, Sault Ste. Marie has two rail lines which are operated by Canadian National and Canadian Pacific Railways and has an economy with part of its foundation still in the steel industry.

Located 700 km from Thunder Bay and 315 km from Greater Sudbury, the City is a key regional and economic centre centrally located in Northern Ontario. Its immediate neighbours include Prince Township to the northwest (2016 Census population of 1,010), the Algoma District to the north, and Batchewana First Nation (referred to as Rankin Location 15D by Statistics Canada) to the east.[7] Similar to other metropolitan centres in Northern Ontario, the City is a hub that stands alone in the region.

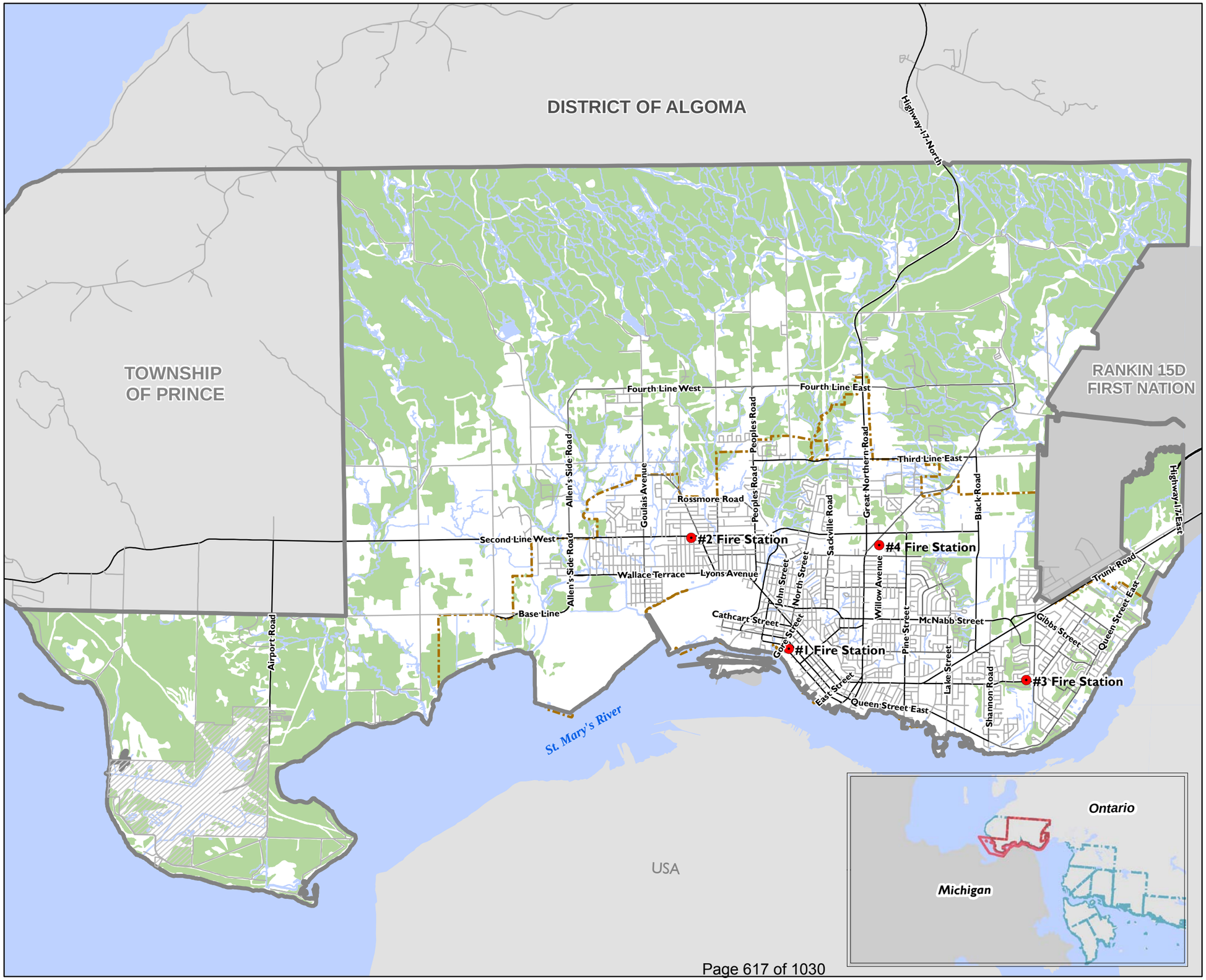
Today, the City itself has a population of 73,378 (2016 Census Subdivision), reflecting a decrease in population compared to other recent Census years (-2.4% decrease from 2011). Population decline is a challenge with which some municipalities in Northern Ontario and rural Southern Ontario struggle. The City's population is dispersed across a large geographic area of 223.24 square kilometres. As much of this area is rural in nature and includes the shield line to the north (Figure 1), this results in an overall population density of 328.6 people per square kilometre (2016 Census). The majority of the population resides within the Urban Settlement Area boundary defined by the City's Official Plan shown in Figure 1. The rural area includes natural features like forested areas and wetlands, agricultural lands, clusters of residential development, the airport, and aggregate resource extraction sites. The Comprehensive Risk

[5] City of Sault Ste. Marie. (2017). *Local History*. Retrieved January 15, 2018, from City of Sault Ste. Marie: http://saultstemarie.ca/City-Hall/City-Departments/Community-Development-Enterprise-Services/Community-Services/Recreation-and-Culture/Historic-Sites-and-Heritage/Local-History.aspx

[6] Wikipedia. (2018, January 11). *Sault Ste. Marie, Ontario*. Retrieved January 15, 2018, from Wikipedia: https://en.wikipedia.org/wiki/Sault_Ste._Marie,_Ontario

[7] According to the 2016 Census, the Algoma District (North Part) has a population of 5,739 people over a land area of 44,084.16 square kilometres. No 2016 Census population data is available for Rankin Location 15D.

Assessment under separate cover provides an analysis of the City's building stock, population, and geography to assist in defining local needs and circumstances.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

MUNCIPAL OVERVIEW
FIGURE 1

- Local Road
- Collector Road
- Arterial Road
- Existing Fire Station
- Municipal Boundary
- Urban Settlement Boundary
- First Nation Reserve
- Airport
- Wooded
- Waterway

0 0.5 1 2 km

1:80,084

MAP DRAWING INFORMATION:
DATA PROVIDED BY
CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Municipal Overview.mxd

DILLON CONSULTING

PROJECT: 175984
STATUS: DRAFT
DATE: 2018-01-29

1.4 Department Overview

The SSMFS currently delivers fire protection services through an organizational structure that includes three primary divisions including administration, fire prevention and operations. For the purposes of this fire master planning process analyses of the SSMFS is presented by core function. This strategy provides opportunity for a more comprehensive analysis. The core functions of the SSMFS for the delivery of fire protection services are presented as follows:

- Administration;
- Fire Prevention/Public Education;
- Training;
- Fire Suppression/Operations;
- Emergency Management;
- Communications; and
- Stations, Apparatus and Equipment.

1.4.1 Current Organizational Model

The organizational structure of the SSMFS has been under transition since the *Fire Services Organizational Realignment* plan was presented to Council in October 2015. In consultation with the Fire Chief, the current organizational model of the SSMFS was developed and is presented in Figure 2. This figure illustrates the organizational structure of the SSMFS as of January 2018.

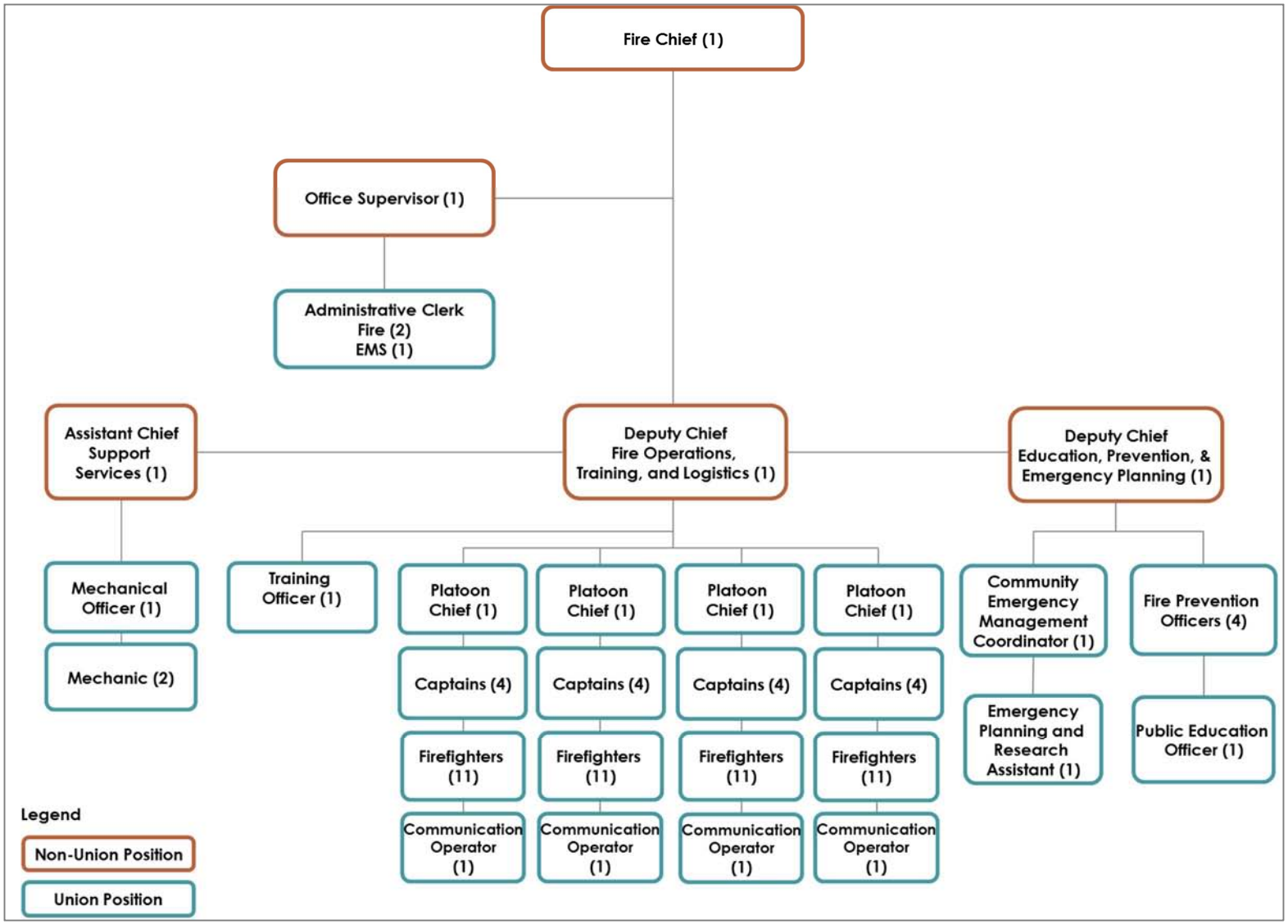


Figure 2: SSMFS Organizational Structure – January 2018

The current total staffing complement of the SSMFS includes 87 full-time staff as listed in Table 1. More information on staffing to provide the core services can be found in the respective core service sections of this plan.

Table 1: Sault Ste. Marie Fire Services Current Staffing

Role	# Full-Time Staff
Administration	
Fire Chief	1
Deputy Chief Fire Operations, Training, and Logistics	1
Deputy Chief Education, Prevention and Emergency Management	1
Office Supervisor	1
Administrative Clerk	3
Operations/Suppression	
Platoon Chief	4
Captain	16
Firefighter	44
Communication Operator	4
Training	
Training Officer	1
Fire Prevention/Public Education	
Fire Prevention Officers	4
Public Education Officer	1
Support Services	
Assistant Chief Support Services	1
Mechanical Officer	1
Mechanic	2
Emergency Management	
Community Emergency Management Coordinator	1
Emergency Planning & Research Assistant	1
Total Staffing:	87

1.5 Process and Report Overview

This fire master planning process is guided by Public Fire Safety Guidelines *PFSG - 03-02-13 – Master Planning Process for Fire Protection Services* and *PFSG – 01-01-01 Fire Protection Review Process* authored by the OFMEM. These guidelines provide an industry recognized best practice for assessing the current delivery of fire protection services. These also assist in defining a municipality's needs and circumstances as defined by the *Fire Protection and Prevention Act, 1997*. This fire master is intended to present a *"consolidated strategic plan"* as recommended by the 2017 RFPS including:

2017 RFPS Recommendation #16: The Municipal Council of the City of Sault Ste. Marie should continue the planning process for the SMFS and work towards completing the requirements for the development of a consolidated strategic plan and supporting operational plans for the SSMFS.

The 2017 RFPS utilized a methodology that included a systematic process to *"securing sources of information including OFMEM records, municipal records, interviews with municipal staff, review team observations and any other documents pertaining to the scope of the Review"*[8]. The methodology within this FMP utilizes a similar foundation for assembling the documentation and information required to inform this fire master planning process. This FMP then further supplements this data collection process by including a review of the departments historical services for the period from January 1st 2012 to October 30th 2017. In addition to assessing the SSMFS legislative requirements this fire master planning process then presents detailed analyses of current industry best practices to identify applicable performance benchmarks for Councils consideration in defining local "*needs and circumstances"* as required by the FPPA.

In several areas this FMP will present further evidence to support the findings of the 2017 RFPS. Where the 2017 RFPS presented recommendations in these areas this FMP will provide Council with direction and a schedule to respond to the findings of the 2017 RFPS. Where the 2017 RFPS recommended additional review, evaluation and consideration of enhancement opportunities this FMP will present supporting evidence through comprehensive analyses for Councils consideration. Where applicable these recommendations are informed by the findings of the Comprehensive Risk Assessment.

This FMP includes a comprehensive analysis of all current fire protection services provided by the SSMFS. Options and recommendations for Council's consideration and approval are presented to clearly communicate the level of fire protection services to be provided to the community including proposed performance benchmarks for ongoing monitoring and evaluation.

To provide Council with guidance and clarity around the approval and implementation of the recommendations proposed, a classification system has been applied to the recommendations presented within this FMP. This includes categorizing recommendations as *"operational"* or *"council"* recommendations which are defined as follows:

> *Operational Recommendations: These include recommendations that can be administered and implemented within the current authority assigned to the Fire Chief. In some cases this may require the Fire Chief to prepare further documentation and internal reporting to Council for approval. An*

[8] Office of the Fire Marshal and Emergency Management – Review of Fire Protection Services in the City of Sault Ste. Marie, dated August 31, 2017

example of this is updating the current Establishing and Regulating By-law. This is a process that can be led by the Fire Chief, and senior corporate staff and through normal reporting be brought to Council for consideration and approval.

Council Recommendations: These include recommendations that require the consideration and approval of Council related to a potential operating or capital financing impact or to inform a municipal policy decision including setting a municipal service level or where further direction to corporate staff may be needed.

This FMP then presents a proposed implementation schedule to address the recommendations of the 2017 RFPS and this FMP.

2.0 Fire Master Planning Process

This section provides an overview of the fire master planning process including the relevant legislation, guidelines and the stakeholder engagement process that was undertaken to frame this Fire Master Plan in defining the needs and circumstances of the City of Sault Ste. Marie.

2.1 Legislation

All municipalities, whether they have volunteer, full-time, or composite fire services, are subject to provincial legislation. Key pieces of legislation impacting the delivery of fire protection services include the *Fire Protection and Prevention Act (1997),* and the *Occupational Health and Safety Act, R.S.O. 1990 (OHSA).*

2.1.1 Fire Protection and Prevention Act, 1997

Within the Province of Ontario the relevant legislation for the operation of a fire department is contained within the *Fire Protection and Prevention Act, 1997* (FPPA). While all legislation should be read and understood in its entirety, the following are applicable sections of the FPPA for reference purposes.

PART I DEFINITIONS	
Definitions	1.(1) In this Act, "fire chief" means a fire chief appointed under section 6 (1), (2) of (4); ("chef des pompiers") "fire code" means the fire code established under Part IV; ("code de prevention des incendies") "fire department" means a group of firefighters authorized to provide fire protection services by a municipality, group of municipalities or by an agreement made under section 3; ("service d' incendie") "Fire Marshal" means the Fire Marshal appointed under subsection 8 (1); ("commissaire des incendies") "fire protection services" includes fire suppression, fire prevention, fire safety education, communication, training of persons involved in the provisions of fire protection services, rescue and emergency services and the delivery of all those Services; ("services de protection contre les incendies") "municipality" means the local municipality as defined in the Municipal Act, 2001; ("municipalite") "prescribed" means prescribed by regulation ("prescript") "regulation" means a regulation made under this Act; ("reglement") "volunteer firefighter" means a firefighter who provides fire protection services either voluntarily or for a nominal consideration, honorarium, training or activity allowance; ("pompier volontaire")
Application of definition of firefighter	(3) The definition of firefighter in subsection (1) does not apply to Part IX. 1997, c. 4, s. 1 (2)

PART I DEFINITIONS	
Automatic aid agreements	(4) For the purposes of this Act, an automatic aid agreement means any agreement under which, (a) a municipality agrees to ensure the provision of an initial response to fires and rescues and emergencies that may occur in a part of another municipality where a fire department in the municipality is capable of responding more quickly than any fire department situated in the other municipality; or, (b) a municipality agrees to ensure the provision of a supplemental response to fires, rescues and other emergencies that may occur in a part of another municipality where a fire department situated in the municipality is capable of providing the quickest supplemental response to fires, rescues and other emergencies occurring in the part of the other municipality. 1997, c. 4, s. 1 (4)
PART II RESPONSIBILITY FOR FIRE PROTECTION SERVICES	
Municipal responsibilities	2.(1) Every municipality shall (a) establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and, (b) provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.
Services to be provided	(3) In determining the form and content of the program that it must offer under clause (1)(a) and the other fire protection services that it may offer under clause (1)(b), a municipality may seek the advice of the Fire Marshal.
Automatic aid agreements	(6) A municipality may enter into an automatic aide agreement to provide or receive the initial or supplemental response to fires, rescues and emergencies.
Review of municipal fire services	(7) The Fire Marshal may monitor and review the fire protection services provided by municipalities to ensure that municipalities have met their responsibilities under this section, and if the Fire Marshal is of the opinion that, as a result of a municipality failing to comply with its responsibilities under subsection (1), a serious threat to public safety exists in the municipality, he or she may make recommendations to the council of the municipality with respect to possible measures the municipality may take to remedy or reduce the threat to public safety.
Failure to provide services	(8) If a municipality fails to adhere to the recommendations made by the Fire Marshal under subsection (7) or to take any other measure that in the opinion of the Fire Marshal will remedy or reduce the threat to public safety, the Minister may recommend the Lieutenant Governor in Council that a regulation be made under subsection (9).
Regulation	(9) Upon the recommendation of the Minister, the Lieutenant Governor in council may make regulations establishing standards for fire protection services in municipalities and requiring municipalities to comply with the standards.
Fire departments	(1) A fire department shall provide fire suppression services and may provide other fire protection services in a municipality, group of municipalities or in territory without municipal organization. 1997, c. 4, s. 5 (1).
Same	(2) Subject to subsection (3), the council of a municipality may establish more than one fire department for the municipality. 1997, c. 4, s. 5 (2)

PART I DEFINITIONS	
Exception	(3) The council of a municipality may not establish more than one fire department if, for a period of at least 12 months before the day this Act comes into force, fire protection services in the municipality were provided by a fire department composed exclusively of full-time firefighters. 1997, c. 4, s. 5 (3)
Same	(4) The councils of two or more municipalities may establish one or more fire departments for the municipalities. 1997, c. 4, s. 5 (4)
Fire chief, municipalities	6. (1) If a fire department is established for the whole or part of a municipality or for more than one municipality, the council of the municipality or the councils of the municipalities, as the case may be, shall appoint a fire chief for the fire department.
Same	(2) The council of a municipality or the councils of two or more municipalities may appoint a fire chief for two or more fire departments.
Responsibility to council	(3) A fire chief is the person who is ultimately responsible to the council of a municipality that appointed him or her for the delivery of fire protection services.
Powers of a fire chief	(5) The fire chief may exercise all powers assigned to him or her under this Act within the territorial limits of the municipality and within any other area in which the municipality has agreed to provide fire protection services, subject to any conditions specified in the agreement.
PART III FIRE MARSHAL	
Appointment of Fire Marshal	8 (1) There shall be a Fire Marshal who shall be appointed by the Lieutenant Governor in Council.
Powers of Fire Marshal	9.(1) the Fire Marshal has the power, (a) to monitor, review and advise municipalities respecting the provision of fire protection services and to make recommendations to municipal councils for improving the efficiency and effectiveness of those services; (b) to issue directives to assistants to the Fire Marshal respecting matters relating to this Act and the regulations; (c) to advise and assist ministries and agencies of government respecting fire protection services and related matters; (d) to issue guidelines to municipalities respecting fire protection services and related Matters; (e) to co-operate with anybody or person interested in developing and promoting the principles and practices of fire protections services; (f) to issue long service awards to persons involved in the provision of fire protection services; and, (g) to exercise such other powers as may be assigned under this Act or as may be necessary to perform any duties assigned under this Act.
Duties of Fire Marshal	9.(2) It is the duty of the Fire Marshal, (a) to investigate the cause, origin and circumstances of any fire or of any explosion or condition that in opinion of the Fire Marshal might have caused a fire, explosion, loss of life, or damage to property; (b) to advise municipalities in the interpretation and enforcement of this Act and the regulations;

PART I DEFINITIONS	
	(c) to provide information and advice on fire safety matters and fire protection matters by means of public meetings, newspaper articles, publications, electronic media and exhibitions and otherwise as the Fire Marshal considers available; (d) to develop training programs and evaluation systems for persons involved in the provision of fire protection services and to provide programs to improve practices relating to fire protection services; (e) to maintain and operate a central fire college; (f) to keep a record of every fire reported to the Fire Marshal with the facts, statistics and circumstances that are required under the Act; (g) to develop and maintain statistical records and conduct studies in respect of fire protection services; and, (h) to perform such other duties as may be assigned to the Fire Marshal under this Act.

2.1.2 Occupational Health and Safety Act, 1990

The *Occupational Health and Safety Act*, R.S.O. 1990 requires every employer to: "take every precaution reasonable in the circumstances for the protection of the worker." The OHSA provides for the appointment of committees, and identifies the "Ontario fire services Section 21 Advisory Committee" as the advisory committee to the Minister of Labour with the role and responsibility to issue guidance notes to address firefighter-specific safety issues within Ontario.

Where 20 or more workers are regularly employed at a workplace, the OHSA requires the establishment of a Joint Health and Safety Committee (JHSC). The committee must hold regular meetings including the provision of agendas and minutes.

Firefighter safety must be a high priority in considering all of the activities and services to be provided by a fire department. This must include the provision of department policies and procedures that are consistent with the direction of the OHSA Section 21 Guidance Notes for the fire service.

2.2 Public Fire Safety Guidelines (PFSG)

Within the Province of Ontario one of the key roles of the Office of the Fire Marshal and Emergency Management (OFMEM) is to develop Public Fire Safety Guidelines to assist municipalities in achieving their legislative responsibilities in providing the most effective and efficient level of fire protection services for their community based on local needs and circumstances.

2.2.1 Office of the Fire Marshal and Emergency Management, Ontario

As indicated within the FPPA, the duties of the Office of the Fire Marshal and Emergency Management include responsibilities to assist with the interpretation of the Act, to develop training and evaluation systems and enforcement of the Act and its regulations. One of these roles includes the review of

compliance with the minimum requirements of the FPPA by having at a minimum the following components in place:

- Having conducted a Simplified Risk Assessment;
- Establishing a Home Smoke and Carbon Monoxide Alarm Program;
- Distribution of public fire safety education materials; and
- Conducting inspections upon request or complaint.[9]

The OFMEM has developed Public Fire Safety Guidelines (PFSG) to assist municipalities in making informed decisions to determine local "*needs and circumstances*" and achieve compliance with the FPPA.

It is important to note that the OFMEM began a comprehensive review of all Public Fire Safety Guidelines in January 2015. The following information is presented on the OFMEM website regarding this review:

> *"Please be advised that Office of the Fire Marshal and Emergency Management Public Fire Safety Guidelines are currently under review but continue to be made available for reference purposes."*[10]

With the City's approval, Dillon Consulting Limited continued the completion of this FMP utilizing the current PFSGs, recognizing the current review process is underway.

2.2.1.1 PFSG **01-02-01** "Comprehensive Fire Safety Effectiveness Model"

The Comprehensive Fire Safety Effectiveness Model (CFSEM) (PFSG 01-02-01, attached as *Appendix A*) was developed by the OFMEM to assist communities in evaluating their level of fire safety. The model recognizes that there is more to providing fire protection services than building fire stations, purchasing equipment and deploying firefighters. The Comprehensive Fire Safety Effectiveness Model confirms that the fire service within Ontario is currently experiencing an evolution of significant change. In response to increasing public expectations and diminishing financial resources municipalities are being forced to critically assess their fire protection needs in identifying new and innovative ways to providing the most cost effective fire protection services.

The following is an excerpt from PFSG 01-02-01:

[9] O. Reg #365-13 requires specified persons to undertake an assessment of fire safety complaints and requests for approval.
[10] OFMEM website, PFSG Index page, as of May 5, 2017.

> *"The provision of fire protection in Ontario is a municipal responsibility. The level and amount of fire protection provided is determined by the residents of the community through decisions made by and support provided by the local municipal council. Due to a wide variety of factors, the Ontario fire service finds itself in a period of change. Increased community expectations coupled with reduced financial resources are forcing all communities to critically assess their fire protection needs and to develop new and innovative ways of providing the most cost effective level of service. A refocus on fire protection priorities is providing progressive fire departments and communities throughout Ontario with an exciting opportunity to enhance community fire safety. There is more to providing fire protection than trucks, stations, firefighters and equipment."*

The CFSEM identifies that every municipality should be guided by a master or strategic plan covering a planning horizon of five to ten years. Shifting from the traditional focus of hazard identification and fire suppression response, the CFSEM recognizes more comprehensive risk assessments and optimizing the use of fire prevention and control systems are part of a paradigms shift within the fire service.

Figure 3 shows the factors which make up the comprehensive model. Although the chart is divided equally, in reality each factor will contribute differently to the total level of fire protection provided to a community.



Figure 3: Factors in a Comprehensive Fire Safety Effectiveness Model

Figure 4 shows how the comprehensive model can be applied to a typical fire department. The "gap" depicts the difference between the existing level of protection and the ideal.

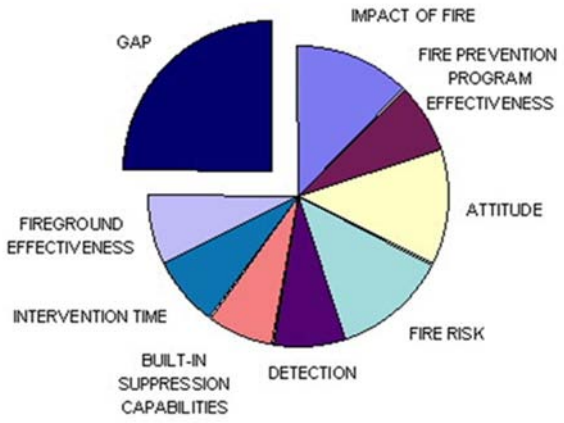


Figure 4: Comprehensive Model Applied to a Typical Fire Department

Utilizing the framework of the CFSEM and the fire protection service assessment processes developed by the OFMEM the primary objective of this FMP is to identify, through evidence-based analysis, the presence of any existing gaps in the current delivery of fire protection services within the municipality. The FMP also identifies where options for optimizing the level of fire protection services may be available.

2.2.1.2 PFSG **00-00-01** "Framework for Setting Guidelines within a Provincial-Municipal Relationship"

PFSG 00-00-01 (attached as *Appendix A*) provides an understanding of the municipal and provincial roles and responsibilities in terms of delivering fire protection services at the local level. The following is an excerpt from the background section of this guideline that states the following:

> "*Municipalities are compelled to establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention. The act also states that municipalities are responsible for arranging such other fire protection services as they determine may be necessary according to their own needs and circumstances. The relationship between the province and municipalities is based on the principle that municipalities are responsible for arranging fire protection services according to their own needs and circumstances."*

As referenced in this document, PFSGs represent one component of the strategy that the Ministry of Community Safety and Correctional Services proposes for public fire protection in Ontario. The strategy referenced in PFSG 00-00-01 includes:

- ü *Clarifying municipal responsibility for local fire protection, while protecting the provincial interest in public safety.*
- ü *Removing remaining legislative barriers which forestall the restructuring and reorganization of municipal fire services.*
- ü *Facilitating a shift in focus which places priority on fire prevention and public education as opposed to fire suppression.*
- ü *Providing municipalities with decision-making tools to help them provide services according to their own needs and circumstances.*
- Ü *Facilitating more active involvement of the private sector and other community groups in fire prevention and public education through the Fire Marshal's Public Fire Safety Council.*

2.2.1.3 PFSG **03-02-13** "Master Planning Process for Fire Protection Services"

PFSG 03-02-13 (attached as *Appendix A*) outlines the process to develop a Master Fire Plan as the strategic blueprint for the delivery of fire protection services that address the local "*needs and circumstances",* as defined by the FPPA, and in determining the level of fire protection services the community can afford.

Examples of the guiding principles of PFSG 03-02-13 that are applicable to the City of Sault Ste. Marie include the following:

- *The residents of any community are entitled to the most effective, efficient and safe fire services possible; and*
- *Those responsible must work within these parameters in making recommendations for improving municipal fire services*.

2.2.1.4 PFSG **01-01-01** "Fire Protection Review Process"

Analyzing local needs and circumstances is a core component of the master fire planning process. PFSG 01-01-01 (attached as *Appendix A*) identifies a number of factors to be considered in conducting the fire protection review process including:

- ü *The overall objective of any fire protection program is to provide the optimum level of protection to the community, in keeping with local needs and circumstances;*
- ü *Extensive research has demonstrated that there are a variety of factors that will have an impact on the fire department's capacity to fulfill this objective;*
- ü *Conversely, there are many different options that a municipality may pursue to improve the efficiency and effectiveness of its fire protection system;*
- ü *Local circumstances will have a profound effect on which factors are most important for any one municipality, and what options are available for its fire protection system;*
- ü *Selecting among these options is an extremely complex task; and*
- ü *Success will require a combination of specialized expertise in fire protection, and a thorough appreciation of your municipality's economic, social and political circumstances.*

Figure 5 reflects the framework for developing a plan for optimizing public fire safety.

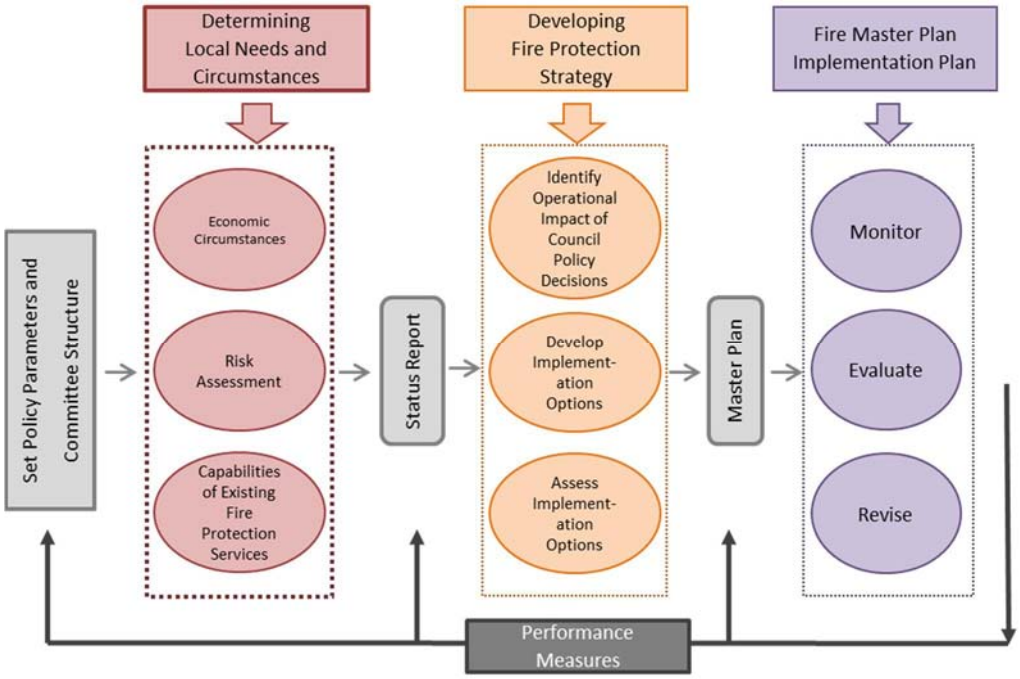


Figure 5: Framework for Optimizing Fire Safety

2.2.1.5 PFSG **04-08-10** "Operational Planning: An Official Guide to Matching Resource Deployment and Risk"

PFSG 04-08-10 (attached as *Appendix A*) was developed by the OFMEM to assist municipalities in meeting their responsibilities under Section 2. (1) (b) *"provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances"* of the FPPA.

As stated by the OFMEM in PFSG *"04-08-10 Operational Planning: An Official Guide to Matching Resource Deployment and Risk:*

"*The overall public safety objective of a municipality is to provide the community with an optimal level of fire protection. Fire suppression is one aspect of the three lines of defence; the other two lines are Public Education and Prevention and Fire Safety Standards and Enforcement. A municipality needs to evaluate its existing fire suppression capabilities to ensure that it is managing all fire risk levels within the community, responding to and addressing fires that occur, and meeting public and council expectations."*

2.3 Three Lines of Defence

The Comprehensive Fire Safety Effectiveness Model identifies a fire protection planning strategy known as the *"Three Lines of Defence"*. The application of this strategy further highlights the importance of

recognizing that there are options to developing an effective community fire safety plan. Although emergency response (fire suppression) may be needed, there are other strategies that can be applied as elements of a broader community risk reduction strategy that can have a positive impact on reducing the need for emergency response and optimizing public safety within the community.

The SSMFS applies the *"Three Lines of Defence"* strategy with their current 2011 – 2016 Simplified Risk Assessment. In response to identified municipal fire risks the department has identified programs and activities specifically aligned with the first two lines of defence. In our view this represents a current industry best practice that is consistent with the optimization of the *"Three Lines of Defence"* model that includes:

I. *Public Education and Prevention*
II. *Fire Safety Standards and Enforcement*
III. *Emergency Response*

Further summary of the *"Three Lines of Defence"* model is found in Table 2.

Table 2: Overview of OFMEM Three Lines of Defence Model

Line	Description
I. Public Education and Prevention	*Educating residents of the community on means for them to fulfill their responsibilities for their own fire safety is a proven method of reducing the incidence of fire. Only by educating residents can fires be prevented and can those affected by fires respond properly to save lives, reduce injury and reduce the impact of fires*
II. Fire Safety Standards and Enforcement	*Ensuring that buildings have the required fire protection systems, safety features, including fire safety plans, and that these systems are maintained, so that the severity of fires may be minimized;*
III. Emergency Response:	*Providing well trained and equipped firefighters directed by capable officers to stop the spread of fires once they occur and to assist in protecting the lives and safety of residents. This is the failsafe for those times when fires occur despite prevention efforts.*

The CFSEM emphasizes the importance and value of preventing a fire. This is important from both an economic and public safety perspective. At the same time, the CFSEM ensures an appropriate level of health and safety for firefighters. The model also recognizes that developing programs and providing resources to implement the first line of defence (a proactive public education and fire prevention program) can be the most effective strategy to reduce and potentially minimize the need for the other lines of defence.

The analyses within this FMP continue to apply the *"Three Lines of Defence"* fire protection model to identify and support risk reduction strategies based on the findings of the Comprehensive Risk Assessment.

3.0 Administration

Within the current organizational structure of the SSMFS, the Fire Chief is directly responsible for the overall administration of the Sault Ste. Marie Fire Services. The Fire Chief reports directly to the Chief Administrative Officer (CAO) and ultimately to Council. The Fire Chief is supported by the Deputy Chief Fire Operations, Training and Logistics and the Deputy Chief Education, Prevention and Emergency Management. The Office Supervisor reports directly to the Fire Chief and is responsible for overseeing the daily administrative functions of the department.

The core administrative functions of the SSMFS include:

- *Oversee compliance with federal and provincial legislation, corporate policies, and department policies;*
- *Oversee fire prevention and public education initiatives;*
- *Oversee all department operational activities and manage related equipment;*
- *Preparation and implementation of City-wide emergency management;*
- *Oversee training and development;*
- *Managing labour relations and human resource issues; and,*
- *Department records management including attendance and payroll.*

This section of the FMP describes the resources available to achieve these core functions. It also presents the current department organizational structure, vision and mission, by-laws and agreements, policies and guidelines, records management, performance measures and proposed strategic priorities for the City.

3.1 Administrative Staff Resources

The current staff resources assigned to the core functions listed above includes the Fire Chief, two Deputy Fire Chiefs, Office Supervisor and two Administrative Clerks. The primary roles and responsibilities of these positions are described within this section. The analysis within this section has considered the 2017 RFPS recommendation #7.

> *2017 RFPS Recommendation #7: The Municipal Council of the City of Sault Ste. Marie should consider having in place documents that set out the current reporting relationships, duties, roles and responsibilities for all positions within the SSMFS.*

3.1.1 Fire Chief

Part II, sub-clause 6 (3) of the FPPA defines the responsibilities of the Fire Chief as *"A Fire Chief is the person who is ultimately responsible to the council of a municipality that appointed him or her for the*

delivery of fire protection services". The current Fire Chief was appointed by Council through By-law #2017-159 on July 31, 2017.

Research conducted as part of this FMP indicates that the current duties and responsibilities of the Fire Chief are described in the job description for this position dated April 1, 2002 including:

- *Discharges duties and responsibilities of an incident commander at major emergency scenes;*
- *Discharges duties and responsibilities of Director of EMS;*
- *Supervises the overall administration and operations of all divisions of the fire department including the EMS Division;*
- *Responsible for preparation and administration of the capital and operating budget for the City Fire Services and EMS operations. Conducts long and short term financial planning;*
- *Ensures appropriate interpretation and application of Legislation, Codes and By-laws for the City Fire Services and EMS operations;*
- *Develops and maintains thorough working knowledge of the Corporation's Health & Safety Policies/Procedures and applicable legislation for the City Fire Services and EMS operations and ensure all divisions comply with the health and safety policy;*
- *Ensures that Fire Services policies and programs are developed and implemented for both unique Fire and EMS operations;*
- *Contributes to formulation of Municipal policies, programs and services at the senior management level;*
- *Responsible for promoting and facilitating Public Education and Public Media Relations with respect to all Fire and EMS operations;*
- *Advises Council on strategic issues associated with emergency and related issues;*
- *Facilitates effective labour management and employee relations;*
- *Supervises employees in accordance with City policy and applicable collective agreements inclusive of ensuring satisfactory work performance, maintaining acceptable conduct and taking appropriate disciplinary action;*
- *Assumes on-call duties as required; and*
- *Performs other related duties as required.*

The current job description for the position of Fire Chief is in excess of 15 years old; this is older than other more recent job descriptions within the SSMFS such as the Deputy Chief Fire Operations, Training and Logistics. In responding to OFMEM Recommendation #7, there are several areas of the Fire Chief's job description that should be reviewed and updated. For example, within the job description of the Deputy Chief Fire Operations, Training and Logistics there is an identified duty to*" Develop and implement strategies in line with the City's corporate strategic plan".* This is an example of a duty and responsibility that should also be included within the Fire Chief's job description. Subject to Council's consideration and approval of this Fire Master Plan there may also be a need to consider revisions to the Fire Chief's job description to align with the proposed strategic priorities for delivery of fire protection services.

Operational Recommendation #1: That the current job description for the Fire Chief be reviewed and updated as referenced in the proposed Fire Master Plan

3.1.2 Deputy Chief Fire Operations, Training and Logistics

The Deputy Chief Fire Operations, Training and Logistics reports directly to the Fire Chief. A core function of this position is to support the Fire Chief in providing strategic leadership in achieving the goals and objectives of the SSMFS. Research into preparing this FMP indicates that there is currently no appointment by-law for the position of Deputy Chief Fire Operations, Training and Logistics.

Operational Recommendation #2: That an appointment by-law for the current Deputy Chief Fire Operations, Training and Logistics be developed and presented to Council for consideration and approval.

This position is directly responsible for overseeing delivery of the department's Operations and Training functions. Research conducted as part of this FMP indicates that the current duties and responsibilities of the Deputy Chief Fire Operations, Training and Logistics are described in the job description for this position dated August 2016 including:

- *Develop and implement strategies in line with the City's corporate strategic plan;*
- *Create business plans for the attainment of goals and objectives set out by City Council;*
- *Build as effective team of leaders by providing guidance and coaching;*
- *Ensure adherence to the City's daily activities and long-term plans of established policies and legal guidelines;*
- *Establish and maintain relations of trust with stakeholders, co-workers and community partners;*
- *Public relations representative when required;*
- *Prepare and review various reports;*
- *Devise remedial actions for identified issues and conduct crisis management as needed;*
- *Establish standards and policies for delivery of services to ensure a quality level of efficient services is provided in compliance with Provincial/Municipal guidelines and policies;*
- *Initiate and oversee departmental budget preparation and to control departmental budget;*
- *Coordinate the preparation of departmental reports to City Council on changes, improvements, plans and projects and to make presentations to City Council on these matters;*
- *Consult with groups, agencies, citizens, Provincial Ministries, other Municipal Departments on service delivery (ie. service expansion, reduction and needs);*
- *Set framework of work to be completed and services to be provided; monitor the same and develop improvements, plans and changes;*
- *Analyze legislation, regulations, policies and procedures to ensure compliance;*
- *Ensure purchasing, payroll and accounting procedures for the department are performed in accordance with City Policy;*
- *Direct personnel to achieve the most effective utilization of personnel and facilities;*
- *Review for approval; reports, time sheets, major purchases, etc. as required;*

- *Oversee the work practices and procedures of a departmental unit. Establish priorities and control work quality;*
- *Supervise employees in accordance with City policy and applicable collective agreements inclusive of ensuring satisfactory work performance, maintaining acceptable conduct and taking appropriate disciplinary action;*
- *Maintain a thorough working knowledge of the City's health and safety policies and procedures and ensure application in all Divisions; and*
- *Perform all other related duties.*

This job description is the same as the Deputy Chief Education, Prevention and Emergency Management. While it includes the primary duties and responsibilities of this position, it does not contain any references to the specific functions of operations and training for which this position is directly responsible. In responding to RFPS recommendation #7, the current job description does not contain any reference to the responsibility to act in the position of Fire Chief in his/her absence. Subject to Council's consideration and approval of this Fire Master Plan there may also be a need to consider further revisions to this job description to align with the proposed strategic priorities for delivery of fire protection services.

Operational Recommendation #3: That the current job description for the Deputy Chief Fire Operations, Training and Logistics be reviewed and updated as referenced in the proposed Fire Master Plan.

3.1.3 Deputy Chief Education, Prevention and Emergency Management

The Deputy Chief Education, Prevention and Emergency Management reports directly to the Fire Chief. A core function of this position is to support the Fire Chief in providing strategic leadership in achieving the goals and objectives of the SSMFS. Research into preparing this FMP indicates that there is currently no appointment by-law for the position of Deputy Chief Education, Prevention and Emergency Management.

Operational Recommendation #4: That an appointment by-law for the current Deputy Chief-Education/Prevention and Emergency Management be developed and presented to Council for consideration and approval.

This position is directly responsibility for overseeing delivery of the department's Education/Prevention and Emergency Management functions. The current duties and responsibilities of the Deputy Chief Education, Prevention and Emergency Management are described in the job description for this position dated August 2016. The job description for this position is the same as the Deputy Chief Fire Operations, Training and Logistics. While it includes the primary duties and responsibilities of this position, it does not contain any references to the specific functions of education, prevention and emergency management for which this position is directly responsible. In responding to RFPS

recommendation #7, the current job description does not contain any reference to the responsibility to act in the position of Fire Chief in his/her absence.

Subject to Council's consideration and approval of this Fire Master Plan there may also be a need to consider further revisions to this job description to align with the proposed strategic priorities for delivery of fire protection services.

Operational Recommendation #5: That the current job description for the Deputy Chief – Education/Prevention and Emergency Management be reviewed and updated as referenced in the proposed Fire Master Plan.

3.1.4 Office Supervisor

The Office Supervisor is a non-union position that reports directly to the Fire Chief. This position is integral to the administrative functionality of the department. The job description for this position was last updated in September 2016. The current job description for this position provides clear definition of the primary duties and responsibilities of this position. The primary functions of this position include supervising, directing and coordinating all activities related to supporting the administrative functions of the department such as:

- *Supervising and coordinating work assigned to the Administrative Assistants;*
- *Coordinating the administrative needs of other divisions within the department;*
- *Liaison with other corporate departments including Human Resources, Finance and Information Technology;*
- *Developing and coordinating department current and capital budgets including payroll, purchasing, and monitoring;*
- *Coordinating the information technology needs including overseeing the records management needs of the department;*
- *Participates in the development and implementation of department goals, objectives, policies and procedures;*
- *Coordinating with outside agencies and the general public;*
- *Providing administrative support to the Fire Chief and Deputy Chiefs relating to all confidential human resource and other matters.*

3.1.5 Administrative Clerks

The department currently has three Administrative Clerks that report directly to the Office Supervisor. All three of these positions are represented by the Sault Ste. Marie Professional Firefighters Association. Core functions of this staff include utilizing a range of computer software applications to support the following examples of administrative support:

- *Issue open air burning permits and reconciliation of payments;*
- *Prepare purchase requisitions and tender documents;*

- *Input training records;*
- *Maintain divisional records and files;*
- *Conduct statistical research and analyses;*
- *Process all department invoices; and*
- *Complete fire inspection letters and orders of compliance.*

In addition to these types of administrative support, the three clerks respond to general public inquiries including reception at the central fire station. Two of the current Administrative Clerks are specifically assigned to assisting services and programs to support the delivery of fire protection services. The third Administrative Clerk is assigned to supporting the delivery of Emergency Medical Services. As all three positions are members of the Sault Ste. Marie Professional Firefighters Association this staffing model creates a model that is potentially vulnerable to dispute. The administrative work to support these two agencies including the fire service and medical service require differing training requirements and authorization to access specific records. In a unionized work environment such as within the SSMFS this creates potential challenges in what is, and what is not representative bargaining unit work.

The analyses within this FMP further assess the administrative support needs for the current and proposed options for the delivery of fire protection services.

3.2 Vision and Mission Statements

PFSG 03-02-13 "*Master Planning Process for Fire Protection*" identifies the importance of a mission statement for a fire department. A mission statement should clearly communicate the primary goal that members of the department are committed to achieving. Effective mission statements identify what an organization does, who it does it for, and how it does it. As provided by the SSMFS, the department has recently updated its mission statement to include:

"*A proud partner within our community that provides exceptional service through prevention, education, protection and wellness*"

In contrast vision statements, although also defining an organization's purpose, are intended to express the future goals and objectives. Vision statements can often remain the same while mission statements can evolve as the organization changes. The SSMFS has also recently developed a vision statement that includes:

"Committed to provide effective and efficient emergency services in a caring manner to create a safe community"

3.3 Administrative Workspace

Workspace for the administrative staff of the SSMFS is located within Fire Station #1 located at 72 Tancred Street. This building was constructed prior to adoption of the current *Accessibility for Ontarians with Disabilities Act 2005* (AODA). As all of the administrative staff are located on the 2nd floor of this building, public access is currently limited to those that can utilize the stairs.

Office space is currently provided for the Fire Chief and Deputy Chiefs while the Office Supervisor utilizes a workstation located in an open area adjacent to other work stations. Current workspace for the Office Supervisor is not conducive to dealing with confidential information or reports. There is limited space available for file and supply storage that is easily accessible to staff working in this area.

In addition to the administrative staff, this area also includes fire prevention/public education staff workspace. This shared workspace provides some efficiency in accessing printers and supplies; however, the close proximity of work stations within this area creates an environment that can be loud due to several people on the phone at the same time or meeting with the public at the reception counter.

The current workspace has exceeded its intended use as the number of people assigned to work in this area has increased and new legislation such as the AODA has been introduced. In the short-term, the department should be implementing strategies to reduce the need for the public to access this area for things such as burn permits, inspection reports and other inquiries. Further options for the use of on-line access and access to this information at the Civic Centre should be considered. This FMP includes analyses of fire station locations that may in the longer term warrant the renovation, relocation and/or construction of new fire stations. Priority should be given to improving the administrative work space of the SSMFS to accommodate public access and to enhance the efficiency and effectiveness of the work space provided. This should include recognition of work that may be sensitive or confidential.

Operational Recommendation #6: That consideration be given to improving the administrative work space as identified within the proposed Fire Master Plan.

3.4 Municipal By-Laws

The *Municipal Act*, R.S.O. 1990 requires a municipality to enact a number of by-laws to operate the municipality and specifically their fire department. In addition to meeting this legislative responsibility by-laws provide the community with important information with regard to the level of service that a municipality intends to provide. By-laws also provide municipal staff with the authorization to provide these services as well as the responsibility to achieve the prescribed service level.

3.4.1 Establishing and Regulating By-Law

The Establishing and Regulating By-law for a fire department should provide clear and accurate policy direction to the community and the department in reference to the types of programs and services the

fire department is authorized to provide. It should also define the performance objectives to which the department is authorized to provide each of these programs and services. PFSG 01-03-12 *"Sample Establishing and Regulating By-law"* (*Appendix A*) prepared by the OFMEM provides a description of the primary issues to be addressed, as well as a template for developing an Establishing and Regulating By-law. The primary components identified by the OFMEM include the following:

- *General functions and services to be provided;*
- *The goals and objectives of the department;*
- *General responsibilities of department members;*
- *Method of appointment to the department;*
- *Method of regulating the conduct of members;*
- *Authority to apply costs to property owners for fire inspections;*
- *Procedures for termination from the department; and,*
- *Authority to proceed beyond established response areas.*

The 2017 RFPS referred to the SSMFS current Establishing and Regulating By-law:

> *2017 RFPS Recommendation #5: The Municipal Council of the City of Sault Ste. Marie should ensure that the Establishing and Regulating By-law is kept current by reviewing and updating as necessary.*

The review conducted as part of this FMP identified that the current Establishing and Regulating By-law was approved by Council on June 11th, 2001. As referenced by the OFMEM, the current by-law does not reflect the current organizational model of the SSMFS and does not clearly define the levels of fire protection services to be provided, or the goals and objectives of the department. The OFMEM has recommended that Council develop, approve and implement service levels for all identified core services provided by the SSMFS.

> *2017 RFPS Recommendation #17: The Municipal Council of the City of Sault Ste. Marie should ensure that core services and levels of service for fire protection services provided by the SSMFS are developed, approved and implemented.*

It is not uncommon for changes to occur within the organization and operation of a fire department that incrementally shift away from the foundation of an Establishing and Regulating By-law.

Recommendation #3 of the 2017 RFPS indicates that:

> *2017 RFPS Recommendation #3: The Municipal Council of the City of Sault Ste. Marie should ensure that service levels for fire protection services are clearly described, documented, implemented and monitored on a regular basis.*

Of importance to updating the current Establishing and Regulating By-law is defining and including the levels of services applicable to each of the programs, activities and services the SSMFS provides. A process should then be developed to assess the impact of ongoing change within the department that may affect the approved Establishing and Regulating By-law. These decisions need to consider the potential impact on the approved Establishing and Regulating By-law, and specifically whether the by-law provides the authority for the change.

Changes that have the potential to impact an Establishing and Regulating By-law typically occur during the development of the annual operating and capital budget. Implementing a process whereby a review of any related by-laws, including the Establishing and Regulating By-law, into the annual budget process would be an effective and efficient means to initiating a regular review.

Subject to the Council's consideration and approval of this FMP there will be further changes required to the current Establishing and Regulating By-law.

Operational Recommendation #7: That subject to Council's consideration and approval of the proposed Fire Master Plan that the Establishing and Regulating By-law be updated and presented to Council for approval.

Operational Recommendation #8: That the Fire Chief be directed to implement a regular process for the review of all applicable fire protection services by-laws.

3.4.2 Additional By-laws

The *Municipal Act, 2001* provides the authority for a municipal Council to pass by-laws related to the delivery of services to be provided by the municipality. The 2017 RFPS included a recommendation related to the current additional by-laws in place regarding the delivery of fire protection services including:

> *2017 RFPS Recommendation #6: The Municipal Council of the City of Sault Ste. Marie should review all fire related by-laws to ensure accuracy, are approved, and that they remain in effect.*

3.4.2.1 User Fee and Service Charge By-law

The current User Fee and Service Charge By-law #210 came into effect on January 1st, 2018. This by-law enables the City to recover costs for the provision of fire protection services, building services, and planning services among others.

By-law #2017-210 identifies the range in services provided by the SSMFS which qualify for cost recovery as categorized by: fire alarm systems, inspection charges, air bottle refills, training and burning permits.

Table 3 indicates the current cost recovery included within User Fee and Service Charge By-law #2017-210.

Table 3: Current User Fee and Service Charge By-law #2017-210

User Fee/Service Provided	Fee (Excluding HST)
Fire Alarm System	
Installation/Hook up charge	N/A
Annual Surveillance Fee	N/A
Inspection Charges	
File Search – Residential Property	$64.50
File Search – Commercial Property	$64.50
Filed Inspection (Minimum charge 1 hour)	N/A
Property Resale Inspection	$112.36
Daycare Licensing Inspection	$112.36
Air Bottle Refills	
Refill per bottle	$7.14 Inc. HST
Training	
Fire Extinguisher Training (30 person maximum)	$110.16
Burning Permits	
New (first) Burning Permit – Valid for 3 years	$75.00
Burning Permit – Renewal 4 years	$60.00
Burning Permit - Annual	$30.00

The current range of user fees included within the approved by-law is limited in scope. Industry best practices reflect a much wider scope of services where user fees are applied. Where applicable, municipalities within Ontario determine the emergency and non-emergency response recovery rates based on the most recent Ontario Ministry of Transportation rates for cost recovery of fire department emergency response services. This relates to the cost of an emergency response, including personnel and apparatus. This rate is currently $450.00 per vehicle for the first hour, for up to three vehicles, and apparatus. Examples of other cost recovery initiatives used by fire services in Ontario include the following:

- Response to motor vehicle accidents for resident and non-residents;
- Response to unauthorized burning complaints;
- Response to second/third and subsequent false fire alarms per building in a calendar year caused by equipment malfunction, preventable cause or malicious intent;

- Permanent or temporary permit for fireworks vendors;
- Fireworks discharge permit;
- Costs associated with fire investigations, including rental of heavy equipment, securing scene, staff time etc.;
- Response to specialized rescue incidents; and
- Administration and Enforcement of the *Spills Act* and *Transpiration of Dangerous Goods Act.*

The analysis indicates that there are other services such as those identified above that the SSMFS should consider for inclusion in the User Fee and Service Charge By-law.

Operational Recommendation #9: That the Fire Chief be directed to review the current user Fee and Service Charge By-law #2016-180 and provide additional information for Council's consideration to expand the scope of services included.

3.4.2.2 Other By-Laws Related to the Fire Department

The 2017 RFPS identifies a number of other by-laws related to the delivery of fire protection services:

- "*By-law #2011-58: A By-law to appoint Fire Prevention Officers for the purpose of enforcing By-laws #2009-82 and #81-404;*
- *By-law #2003-246: To Authorize an Agreement with the City and The Batchewana First Nation of Ojibways of the Rankin Indian Reserve to Provide Fire Protection for the Rankin Reserve*
- *By-law #98-11: To Appoint a Deputy Fire Chief;*
- *By-law #95-54: Property Standards;*
- *By-law #90-90: A By-law to Establish the Retention Period of Documents and Records of the Corporation;*
- *Schedule A to By-law #83-122, A By-law Between 705952 Ontario Limited and the City;*
- *By-law #78-37: Respecting Fire Prevention Conditions for Prevention Fires and the Spreading of Fires, and for the Preservation of Life by Measures Introduced for the Purpose of Fire Prevention and Fire Protection*" (pg., 17 to 18 of the 2017 RFPS).

The OFMEM has recommended that these be reviewed to ensure they are still required and if so updated to reflect current conditions. In particular areas of this FMP, the analysis presented within this FMP references specific by-laws including some of those listed above that require revisions and approval by Council. This FMP has also recommended that the Fire Chief develop a regular process for the review of all by-laws applicable to the delivery of fire protection services.

3.5 Fire Protection Service Agreements

Within the fire service there are multiple approaches to sharing services or procuring services including mutual aid, automatic aid, and fire protection agreements. The 2017 RFPS included the following recommendation pertaining to current service agreements:

2017 RFPS Recommendation #8: The Municipal Council of the City of Sault Ste. Marie should consider an assessment of the capability, capacity, reliability and compatibility of resources that may be requested through provincial mutual aid system, through local or regional organizations of through international agreements. Through assessment consideration should be given to the need for the development and implementation of policies and operating guidelines designed to guide decisions and determine a course of action depending on the needs and circumstances.

Research into preparing this FMP identified several applicable agreements which are described in the sections that follow. Where applicable, these agreements are reviewed from the perspective of capability, capacity, reliability, and compatibility in response to 2017 RFPS recommendation #8.

3.5.1 Mutual Aid Agreement

Mutual aid agreements are predetermined plans that allow a participating fire department to request assistance from a neighbouring fire department. Public Fire Safety Guideline (PFSG 04-05-12 "Mutual Aid", Appendix A) provided by the OFMEM identifies the information required to develop and approve these agreements.

There are two main scenarios when mutual aid agreements are enacted:

1. *A fire department may ask for mutual aid assistance when it is at the scene or has information that immediate assistance is required.*
2. *Fire departments may immediately request a simultaneous response from a participating fire department where distance and/or conditions dictate.*

The SSMFS is an active participant in the District of Algoma Mutual Aid Plan. This mutual aid plan forms an integral component of the province-wide fire service mutual aid system. The City of Sault Ste. Marie is identified within Zone 3 of this mutual aid agreement that also includes seven other local fire services within the District of Algoma including the communities of Echo Bay, Hilton, Desbarats, Tarbutt, St. Joseph, Prince, and Jocelyn.

Capability

All of the fire services within Zone 3 excluding the SSMFS are volunteer fire services. Their local community fire risk relates primarily to single-family dwellings, vehicles and grass/wildland fires. Their capabilities are consistent with those of a typical small community that would reflect predominantly exterior attack capabilities due to the limited number of responding volunteer firefighters.

Capacity

The number of volunteer firefighters in each volunteer fire service currently ranges from 11 to 24. They operate either a typical pump/engine and in some communities a tanker. Their capacity to assist the SSMFS is very limited due to the number of volunteer firefighters that may respond at any given time. Consultation completed by the SSMFS indicates that this may be approximately 25% of the membership representing a potential response of three to six volunteer firefighters subject to their availability.

Reliability
Research and consultation into the historical utilization of the seven volunteer fire services to respond and support the SSMFS could not identify an incident where this has occurred. The SSMFS is the primary provider of supporting fire suppression and emergency response services to the other seven participating municipalities.

Compatibility of Resources
All of the identified fire services in Zone 3 are individually responsible for the purchasing and maintenance of their fire suppression apparatus and equipment. There is currently no record or analysis of the compatibility of equipment such as breathing apparatus, firefighting hose or operating guidelines such as an accountability system. Joint training sessions are not conducted between the participating fire services.

In summary, although a mutual aid agreement exists, the SSMFS is the primary provider of fire suppression and emergency response services to the other seven participating communities. There is no evidence to indicate that this is a reciprocal agreement, or that the other seven volunteer fire services are able to provide reciprocal fire suppression or emergency response services within a timely manner. There may be opportunity for the seven neighbouring volunteer fire services to provide limited resources to assist the SSMFS in the event of a large scale event such as a declared emergency within the City of Sault Ste. Marie. However, based on the above analysis, the assistance of these volunteer fire services would be limited to a supporting role.

3.5.2 Inter-Municipal Civil Defense and Emergency/Disaster Compact (Agreement)

The City of Sault Ste. Marie - Ontario and Sault Ste. Marie - Michigan are parties to an international mutual aid compact (agreement) to respond to emergencies and disasters across the international bridge and into the municipality requiring assistance. This agreement extends beyond the provision of fire suppression and emergency response services and includes provisions for evacuation or reception of injured people, and the exchange necessities such as food, clothing, equipment and supplies.

In addition to providing fire protection services, the Sault Ste. Marie – Michigan Fire/Ambulance Services provide advanced care ambulance services. The department is operated by a complement of 20 full-time staff including the Fire Chief with the ability to provide one pump/engine apparatus or one 75’ aerial device to support the SSMFS if required.

Capability
The Sault Ste. Marie – Michigan Fire/Ambulance Service would be required to utilize off-duty firefighters to staff either one pump/engine or a 75’ aerial device depending on the type of incident.

Capacity
The available capacity of this fire service is limited to the number of off-duty firefighters that would respond back to the fire station through a call-back process to staff the required apparatus. The number of firefighters that may be able to respond ranges from 0 to 12.

Reliability
The current mutual aid compact does not require the Sault Ste. Marie – Michigan Fire/Ambulance Service to respond. In the event there was a simultaneous event within the City, the department would be unable to respond. The department would also be unable to respond unless sufficient off -duty firefighters were available, and this may require an extended response time.

Compatibility of Resources
There is currently no record or analysis of the compatibility of equipment such as breathing apparatus, firefighting hose or operating guidelines such as an accountability system. Joint training sessions are not conducted between the participating fire services.

In summary, although a mutual aid compact (agreement) exists, no example of the Sault Ste. Marie – Michigan Fire/Ambulance Services ever responding to Ontario could be found. However, examples of the SSMFS responding to Michigan were identified. This analysis indicates that one additional fire apparatus staffed with full-time firefighters may be available from across the international bridge. However, the response time is dependent on off-duty firefighters returning to work and there being sufficient minimum firefighters to staff the apparatus.

Similarly to the District of Algoma Mutual Aid Plan, the Inter-Municipal Civil Defense and Emergency/Disaster Compact (Agreement) may provide limited resources in the event of a large-scale event such as a declared emergency within the City of Sault Ste. Marie. However, based on this analysis there is no assurance as to the response time or number of firefighters responding.

3.5.3 Memorandum of Understanding – Provincial CBRNE/Hazmat Team

The City of Sault Ste. Marie has a Memorandum of Understanding with the Minister of Community Safety and Correctional Services that was last updated in 2008 to develop a Chemical, Biological, Radiological, Nuclear Explosives (CBRNE) Level 2- Hazmat Team. This agreement was initially approved by Council through By-Law #2003-168 on July 21st, 2003.

The SSMFS is required to ensure that a minimum of 8 firefighters are trained and assigned to the CBRNE/Hazmat response team including the qualifications identified within the *NFPA 472 – Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents* or a recognised equivalent courses approved by the OFMEM. As referenced within the 2017 RFPS the SSMFS is achieving this requirement. This Memorandum of Understanding also includes a compensation plan for equipment, training and the response of staff at the request of the OFMEM.

The City's participation in this agreement reflects a commitment to a larger provincially managed CBRNE/Hazmat response plan. As a result the City receives training support and compensation to recover any cost associated with a deployment of SSMFS outside of the City.

3.5.4 Municipal Forest Fire Management Agreement

The City of Sault Ste. Marie has an agreement with the Ministry of Natural Resources and Forestry (MNRF) that sets out the roles and responsibilities of both the SSMFS and the MNRF in responding to forest fires. The agreement defines both the *"Crown Protection Area"* where the MNRF is the primary provider of fire suppression services, and "*Municipal Protection Area"* where the SSMFS is the primary responder.

Analysis indicates that this is a common agreement between the MNRF and municipalities who have a border with provincially-owned lands. Participation in the agreement includes the provision of Instructor Training Kits for:

- *Municipal Fire Department Forest Fire Training (SP103); and*
- *Air Attack Safety Training Module for Municipal Fire Operations*.

The importance of this agreement and training are supported by a key finding of the CRA that indicates:

CRA Key Findings Analysis Outcomes	FIRST LINE OF DEFENCE For consideration within the proposed Emergency Response Program
The City has potential risk of wildland fire due to potential hazardous forest types and the wildland-urban interface primarily outside of the Urban Settlement Area.	X

3.5.5 Batchewana First Nation of Objibways of the Rankin Indian Reserve 15D Agreement

The City of Sault Ste. Marie and the Batchewana First Nation of Objibways of the Rankin Indian Reserve 15D (First Nation) are parties to an agreement whereby the SSMFS responds to fire, medical assist, and carbon monoxide alarms on the reserve. The agreement also requires a response to brush fires if they present danger to a structure and are easily accessible. Response to alarms on CP Rail lines are also included if the fire endangers the First Nations lands.

Services provided by the SSMFS are subject to the availability of resources and on a cost-recovery formula included within the agreement. The current agreement expires on December 31, 2018.

This agreement is consistent with common Automatic Aid Agreements (Fire Protection Agreements) where one municipality seeks to purchase services from a neighboring community for specific services.

3.5.6 Summary of Fire Protection Service Agreements

This analysis indicates that the City of Sault Ste. Marie is a participant in a wide range of agreements related to the delivery of fire suppression and emergency response services. This analysis highlights that the City of Sault Ste. Marie is recognized as the largest municipality located within the District of Algoma and as such is predominantly looked upon to provide services rather than to receive services from the smaller surrounding communities.

In response to the 2017 RFPS recommendation #8, this analysis indicates that there is minimal capability, capacity, reliability and compatibility of the existing resources to support the delivery of fire suppression services within the City of Sault Ste. Marie. The unpredictable response time, capability and quantity of potential responding resources significantly limits the use of this strategy to supplement the fire suppression resources of the SSMFS.

3.6 Operating Guidelines, Department Notices and Memorandums

As part of the review conducted for this FMP, it was identified that the SSMFS currently utilizes a number of strategies to communicate to staff including operating guidelines, department notices and memorandums. Dillon's experience within the Ontario fire service identifies the use of operating guidelines to provide a framework to guide decision making in contrast to department policies that provide clearly defined actions and expectations.

Operating Guidelines (OGs) are commonly used within the fire service to establish a written statement to guide the performance or behaviour of departmental staff, whether functioning alone or in groups. PFSG 04-69-13 *"Co-ordination, Development, Approval and Distribution of Standard Operating Guidelines for Various Disciplines"* (included as *Appendix A*) provides the following points to reflect the intent of Operating Guidelines:

- Enhance safety;
- Increase individual and team effectiveness;
- Improve training efficiency;
- Improve orientation for entry-level staff;
- Improve risk management practices;
- Prevent / avoid litigation;
- Create objective post-incident evaluations; and,
- Permit flexibility in decision making.

Industry best practices indicate that operating guidelines should be finalized and approved by the Fire Chief prior to being distributed to all staff within the department. Follow up is then required to ensure

that these operating guidelines are clearly understood and implemented by all relevant staff. Applicable operating guidelines should also be in place to record this process of developing, approving and distributing operating guidelines to ensure due diligence on behalf of the fire department and the City, as the employer.

Health and safety is an essential consideration for fire and emergency services. In addition to the relevant sections of Ontario's *Occupational Health and Safety Act* (OHSA) fire departments must place compliance with the OHSA Section 21 Guidance Notes as a priority in developing department policies and operating guidelines.

In addition to operating guidelines, and department notices there are several examples of where the SSMFS advises department staff that they are required to be familiar with and adhere to City policies by communicating this direction through a department notice. For example, department Notice #1400-31 – Attendance Management Policy references the City's Attendance Management Policy. This practice can be confusing to staff and is inconsistent with industry best practices that support clear differentiation of operating guidelines (department notices) and department policy.

Department Notice #1400-45 indicates that all current operating guidelines and notices are available on the department's desktop computers. Ensuring all staff have access to these documents is an important component of the internal communications process that the SSFMFS currently does well. However, the 2017 RFPS included a recommendation related to operating guidelines, notices and memorandums including:

2017 RFPS Recommendation #9: The Municipal Council of the City of Sault Ste. Marie should ensure the consolidation of notices, operating guidelines, applicable memorandums and similar type documents into one set of guidelines for the SSMFS.

The review conducted as part of this FMP confirms the findings of the 2017 RFPS that identified the presence of department notices, operating guidelines and memorandums. There are many examples of where information must be obtained from more than one of these information sources in order to clearly understand the intended objective. To assist the department in responding to the OFMEM's recommendation in this area the following framework is provided for consideration:

- Department Policies should be identified and informed by applicable legislation and align with the policies of the City as approved by Council. These documents should include a standard format that includes the date of last revision, date of approval and signature of the Fire Chief as the authorizing person. Department policies should be formatted with an index that references major areas such as the primary divisions (e.g. fire prevention, suppression and training) of the department, or alternatively major areas of focus such as health and safety. Department policies should be utilized where clearly defined actions are required.

- Operating Guidelines should be developed and informed by the intended goals and objectives of the activity, service or program indicated. Operating guidelines should be developed through research of applicable legislation and industry best practices. These documents should also include a standard format that includes the date of last revision, date of approval and signature of the Fire Chief as the authorizing person. Operating guidelines should be formatted with an index that references primary divisions (e.g. fire prevention, suppression and training). Operating guidelines should provide a clear framework to guide decision making to achieve the intended goals and objectives. There should be no overlap between a department policy and an operating guideline.
- Department Memorandums should be continued as a communication tool to department staff. The use of department memorandums should be limited to subjects that do not have the potential to change, or revise any department policy or operating guideline. Department memorandums should be utilized by senior department staff as a tool to communicate information to staff under their direction.
- An Operating Guideline Committee is proposed. Developing and maintaining operating guidelines that are current and reflect ongoing legislative requirements, and reference industry best practices can be a major challenge. Developing a committee consisting of a cross section of department staff who are assigned this task can be an effective strategy to sustaining the currency of operating guidelines. An important element of this strategy is defining a clear terms of reference for this type of committee. The terms of reference should include a requirement that all operating guidelines be reviewed prior to any proposed operational change, as a result of any legislative change, or annually.

Operational Recommendation #10: That the SSMFS implement the framework for the utilization of department policies, operating guidelines and department memorandums referenced within the proposed Fire Master Plan.

Operational Recommendation #11: That the SSMFS implement the proposed Operating Guideline Committee referenced within the proposed Fire Master Plan.

3.7 Departmental Records Management

The reporting requirements for fire departments are significant, with documentation being a key method of exercising due diligence on behalf of the municipality. As a core administrative function, overseeing records management and reporting is critical for a variety of reasons including but not limited to fire suppression emergency response, firefighter training records, and measuring the effectiveness of fire prevention and public education programs.

PFSG 04-60-12 "*Records Management*" provides a comprehensive overview of an effective and efficient records management program that includes the appropriate use and protocol by division of the records

management systems in place; record retention schedules; standards for record quality; protocols for record security and integrity of hard-copy and electronic records; and outline other applicable codes, standards or industry best practices that apply (e.g., *Municipal Freedom of Information and Protection of Privacy Act*, *1990*).

Within SSMFS, the Office Supervisor oversees the tracking and managing of data for all divisions of the SSMFS including: invoicing, training records, emergency response attendance records, personnel records, inventory and purchasing, and municipal addresses. As part of the review completed for this FMP, it was identified that the department utilizes a range of software solutions such as Microsoft Office components including Excel spreadsheets to track many of the department's activities and programs.

The department also utilizes the CriSys Expert ^{Fire} software program for fire dispatching and records management in several other areas including tracking fire prevention, public education and training activities. In addition to providing a central database, the CriSys Expert ^{Fire} software provides a range of options for reporting on activities such as the number of hours per fire inspection. The current approach to department records management is meeting the needs of the department with the opportunity to enhance the use of dedicated software programs.

Department Notice #1400-13- Note Taking Policy is an example of the department's current records management practices. This policy describes the importance of accurate note keeping as well as the process of retaining these documents as part of the department's records management initiatives.

The records retention policy of the City is defined within *By-law #90-90 – To Establish the Retention Period of Documents and Records of the Corporation.* The records retention requirements for the SSMFS are included within Schedule 20 of this by-law. *By-law #90-90* has not been updated since the *Municipal Act*, 2001 came into effect on January 1st, 2003. There have also been revisions to Schedule 20 that have not been reflected in the current by-law.

Operational Recommendation #12: That By-law #90-90 - To Establish the Retention Period of Documents and Records of the Corporation be reviewed and updated including revisions to Schedule 20 regarding the SSMFS.

3.8 Performance Measures

PFSG 01-01-01 *"Fire Protection Review Process"* includes information pertaining to the purpose and use of performance measures. This guideline describes the six primary categories that performance measures can be categorized within including:

- *Time: The time it takes to complete as process (cycle time) or deliver a service or product;*
- ***Effectiveness:** Doing the right things, meeting corporate objectives and strategic directions;*

- *Quality: A measure of the extent to which a thing or experience (service meets a need, solves a problem, or adds value for someone (client, stakeholder, taxpayer);*
- ***Effi**ciency: Outputs relative to inputs, doing things right every time;*
- *Costs and Product**i**vity: Cost to provide a product or service, the relationships among costs, inputs and outputs; and,*
- *Safety: The extent to which important assets (personnel, property, records) are safeguarded so that the organization is protected from danger of losses that could threaten its success, credibility, continuity etc.*

Municipal best practices highlight the importance of performance measurement and benchmarking as an integral component of the administrative function of public services, including the fire department. Ongoing analysis of the department's performance through a quantitative and qualitative process provides valuable insight into the overall efficiency and effectiveness of the programs and services provided.

PFSG 01-01-01 also identifies the importance of establishing clear goals and objectives to measure the performance of all services provided by the fire and emergency services. Ongoing evaluation of organizational performance objectives provides a necessary and critical process to assessing current and future levels of fire protection services.

The importance and value of enhancing existing performance measures, where present, and establishing additional measures (including clear goals and objectives for all services provided by the fire department) is an integral component of this FMP.

3.9 Annual Report

The OFMEM's "Optimizing Public Fire Safety" model recognizes the importance of ongoing monitoring, evaluation and revisions to the fire protection services approved by Council. Fire services across the province have utilized annual reports to Council as a tool to provide a high degree of accountability and transparency on behalf of the Fire Chief in reporting to the community and Council on the level of fire protection services provided. This regular reporting process is also an ideal opportunity to update the Comprehensive Risk Assessment and fire related by-laws. This regular review process can provide further value in identifying changes or trends within the community.

Annual reports can include highlights, such as public education events, program successes, as well as the number and type of emergency response calls. The reports can further be organized by division, providing details on staff, programs, changes and accomplishments.

Maintaining the information within a Comprehensive Risk Assessment as part of an annual report also enhances the level of information provided to Council and the public. In addition to the reporting benefit, the practice of issuing an annual report helps to ensure that risk assessments remain up to date,

enhancing the SSMFS understanding and presenting to Council any evolving trends within the community.

While annual reports have numerous benefits, they do require a considerable amount of resources to complete including data collection, inter-divisional communication, analysis, document design, reviews and approvals. Care in refining language and graphics used in an annual report is especially important if they are to be used as a tool for communicating level of service to the public. The demanding nature of the process in the context of the day-to-day operations of a department can be challenging to handle without sufficient resources.

Our research into developing this FMP indicates that the SSMFS recognises the value and importance of developing an Annual Report. Industry best practices support the continuation of this initiative as well as including the additional performance measures included within this FMP. Developing the expanded Annual Report including the annual review of the Comprehensive Risk Assessment is an effective strategy for the department in monitoring ongoing performance and identifying evolving trends that may require identifying a change in services or programs to Council.

Operational Recommendation #13: That the SSMFS continue to present an Annual Report to Council and the community including the findings of an annual review of the Comprehensive Risk Assessment.

3.10 Strategic Priorities

The purpose of this FMP is to provide Council and senior staff with a strategic framework to assist in making decisions regarding the provision of fire and emergency services. This FMP has been prepared with regard for the legislated and regulatory responsibilities of the municipality as contained within the *Fire Protection and Prevention Act* (1997) and the *Occupational Health and Safety Act, R.S.O. 1990*.

Emphasis has been placed on the use of the current Public Fire Safety Guidelines and the resources provided by the Office of the Fire Marshal and Emergency Management. One of the primary roles of the OFMEM is to provide assistance to municipalities through the provision of information and processes to support determining the fire protection services a municipality requires based on its local needs and circumstances. The Comprehensive Fire Safety Effectiveness Model and Fire Risk Sub-model are examples of the OFMEM documents that have been referenced to prepare this Fire Master Plan.

Dillon's interpretation of Council's commitment to the community, garnered through the consultation process in developing this FMP, is to provide the optimal level of fire and emergency services as determined through the analysis of the needs and circumstances of the City of Sault Ste. Marie as referenced in the FPPA, and in achieving the most effective and efficient level of fire protection services resulting in the best value for the community.

The analyses within this report recognize three strategic priorities to assist Council in defining the service levels for the delivery of fire and emergency services within the City of Sault Ste. Marie including:

- ü *The utilization of a Comprehensive Risk Assessment in determining the level of existing fire safety risks within the municipality as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services;*
- ü *The optimization of the first two lines of defence, including public education and fire prevention, and the utilization of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Comprehensive Risk Assessment; and*
- ü *Emphasis on strategies that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services resulting in the best value for the community.*

Council Recommendation #1: That that the strategic priorities identified within the proposed Fire Service Master Plan be adopted to form the strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie including:

i. The utilization of a Comprehensive Risk Assessment in determining the level of existing fire safety risks within the municipality as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services;

ii. The optimization of the first two lines of defence, including public education and fire prevention, and the utilization of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Comprehensive Risk Assessment; and,

iii. Emphasis on strategies that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services resulting in the best value for the community.

3.11 Administration Division Summary and Recommendations

Under the leadership of the Fire Chief and Deputy Chiefs the Sault Ste. Marie Fire Services, with the support of Council and senior corporate staff, have undertaken the development of this Fire Master Plan and Comprehensive Risk Assessment. Our research indicates that this is the first time in the City's history that a strategic fire master planning process such as this has been undertaken.

Our analysis of the Administration functions of the SSMFS has identified a high degree of skills and competencies within the staff resources assigned to this area. This division has achieved, and in some cases extended, past their workload capacity. The evidence of this is presented in the examples within this report of sustaining key functions of the division's responsibilities such as developing and sustaining current Policies and Operating Guidelines, By-laws and agreements. Competing priorities, such as the

increasing workload in the area of labour relations are challenging the current workload balance. The introduction of further performance goals and objectives as presented within this FMP will further negatively impact this workload balance if left unaddressed. This FMP will present specific strategies to address the current workload balance particularly in the area of administrative support in the following divisional analyses.

Our review of the Administration activities and resources has identified the following Council and Operational recommendations for consideration:

Council Recommendation:

2. *That that the strategic priorities identified within the proposed Fire Service Master Plan be adopted to form the strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie including:*

    i. *The utilization of a Comprehensive Risk Assessment in determining the level of existing fire safety risks within the municipality as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services;*

    ii. *The optimization of the first two lines of defence, including public education and fire prevention, and the utilization of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Comprehensive Risk Assessment; and,*

    iii. *Emphasis on strategies that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services resulting in the best value for the community.*

Operational Recommendations:

1. *That the current job description for the Fire Chief be reviewed and updated as referenced in the proposed Fire Master Plan.*

2. *That an appointment by-law for the current Deputy Chief Fire Operations, Training and Logistics be developed and presented to Council for consideration and approval..*

3. *That the current job description for the Deputy Chief Fire Operations, Training and Logistics be reviewed and updated as referenced in the proposed Fire Master Plan.*

4. *That an appointment by-law for the current Deputy Chief- Education/Prevention and Emergency Management be developed and presented to Council for consideration and approval.*

5. *That the current job description for the Deputy Chief – Education/Prevention and Emergency Management be reviewed and updated as referenced in the proposed Fire Master Plan.*

6. *That consideration be given to improving the administrative work space as identified within the proposed Fire Master Plan.*

7. *That subject to Council's consideration and approval of the proposed Fire Master Plan that the Establishing and Regulating By-law be updated and presented to Council for approval.*

8. *That the Fire Chief be directed to implement a regular process for the review of all applicable fire protection services by-laws.*

9. *That the Fire Chief be directed to review the current user Fee and Service Charge By-law #2016-180 and provide additional information for Councils consideration to expand the scope of services included.*

10. *That the SSMFS implement the framework for the utilization of department policies, operating guidelines and department memorandums referenced within the proposed Fire Master Plan.*

11. *That the SSMFS implement the proposed Operating Guideline Committee referenced within the proposed Fire Master Plan.*

12. *That By-law #90-90 - To Establish the Retention Period of Documents and Records of the Corporation be reviewed and updated including revisions to Schedule 20 regarding the SSMFS.*

13. *That the SSMFS continue to present an Annual Report to Council and the community including the findings of an annual review of the Comprehensive Risk Assessment.*

4.0 CRA and FMP Overview

This FMP has been informed by a Comprehensive Risk Assessment (CRA) that was developed as a companion document with a primary focus on identifying and assessing existing fire risk within the community. The 2017 RFPS conducted by the OFMEM recommended that the City complete a comprehensive municipal fire risk assessment including:

2017 RFPS Recommendation #1: The Municipal Council of the City of Sault Ste. Marie should ensure that a comprehensive municipal fire risk assessment is completed. Subsequent to the review, the OFMEM has been advised that the Municipal Council of the City of Sault Ste. Marie is conducting a comprehensive municipal fire risk assessment. Therefore, it is anticipated that the comprehensive risk assessment is completed and the findings applied to further enhance the understanding and advance the decision-making process related to the management of municipal fire risks and associated resources.

A Comprehensive Risk Assessment paints a picture about local needs and circumstances which can be used to inform decision-making including establishing service levels for a fire department. As part of service levels and risk mitigation, the outcomes can begin to inform the development of a Community Risk Reduction Program (e.g., refined inspection cycle or public education programs). The City of Sault Ste. Marie Comprehensive Risk Assessment is structured to directly inform the analysis and recommendations presented within this Fire Master Plan to inform risk reduction strategies for the City of Sault Ste. Marie.

The CRA is broken down into three broad stages and begins with Stage 1 that focuses on data collection. Stage 2 includes analysis within the context of the seven profiles and related sub-topics. The analyses results in conclusions identified as either a Key Risk or a Key Finding. Within the context of the CRA, a Key Risk is an analysis outcome for which there is sufficient and appropriate information to inform an assessment of risk based on probability and consequence. This is referred to as a risk assignment process where a risk level of high, moderate, or low is assigned. In simple terms risk is defined as:

Risk = Probability x Consequence

Similar to a key risk, a Key Finding is a risk related conclusion of the analysis that will inform service levels and other strategies. However, it is not put through the risk assignment process, in part because there is not sufficient quantitative data to do so. For example, a number of Key Findings included within the CRA are those identified through mapping analysis which more meaningfully illustrate a spatial priority area.

The third and final stage of the CRA brings all of the risk assessment outcomes together and frames how they can be used through three layers to inform this Fire Master Plan.

4.1 Layer 1: Risk Prioritization – Key Risks

Risk is defined as the product of probability and consequence. Of the risk analysis outcomes presented throughout the CRA, some have been labelled as a Key Risk. Within the CRA, key risks have risk levels assigned. This informs the FMP in two ways: first, it will help guide the prioritization of the risk analysis outcomes when it comes to the development of and implementation of the Fire Master Plan; and second, it informs the risk model developed for assessing emergency response capabilities. The findings of this layer are presented within this FMP in the table format:

CRA Key Risks Analysis Outcomes	CRA
	Identified Risk Level
Identified Key Risk	Low/Moderate/High

4.2 Layer 2: Risk Categorization

When it comes to aligning service levels with risks that define local needs and circumstances, it is important to recognize that not all risk analysis outcomes align with the services provided by a fire department in the same way. For this reason, within the CRA, the risk outcomes - Key Findings and Key Risks - are categorized based on how they can be used to inform the activities, strategies, and services provided by SSMFS. This categorization is then directly used within this Fire Master Plan. The categories used for this process are based on the three lines of defence: Public Fire Safety Education; Fire Safety Standards and Enforcement, and Emergency Response and presented in similar table format:

CRA Key Risks Analysis Outcomes	LINE OF DEFENCE
	For consideration
Identified Key or Key Finding	1st, 2nd, or 3rd Line of Defence

4.3 Layer 3: Development of a Risk Model for Assessing Emergency Response Coverage

The CRA utilizes the Ontario Building Code Major Building Occupancy types to develop a risk model that can be used to assess the historical, existing and proposed fire suppression capabilities of the SSMFS in response to the identified high, moderate and low risks levels assigned to each of the OBC occupancy type. This includes the assignment of risk levels to occupancy types with consideration to the findings of the seven profile assessments. The probability level is informed quantitatively by the average annual events from fire loss as well as the breakdown by property stock in building stock profile as described under the rationale. Consequence is informed more qualitatively by property stock, demographic, fire loss, geography, and economic profile considerations as described under the rationale. The assessment of emergency response risk is presented within this FMP in the form of GIS modeling.

5.0 Fire Prevention and Public Education

The minimum requirements of fire prevention and fire safety education programs are outlined within the following section of *Fire Protection and Prevention Act,* 1997:

Section 2.(1) of the *Fire Protection and Prevention Act* states:
"(1) Every municipality shall,

a) *Establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and*
b) *Provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances."*

PFSGs 04-40-03 and 04-40-12 "*Selection of Appropriate Fire Prevention Programs"* (Appendix A) provides further information defining the minimum acceptable level of fire prevention and fire safety education services that a municipality must provide. According to the OFMEM's 2015 Municipal Fire Protection Profile, the minimum acceptable model is comprised of the following:

- ü *Carbon Monoxide and Smoke Alarm Program, including home escape planning as described within PFSG 04-40B-03 and 04-40B-12;*
- ü *Distribution of public education information and implementation of public education programs as per PFSG 04-40C-03 and 04-40C-12;*
- ü *Municipal Risk Assessment as per PFSG 04-40A-03 and 04-40A-12; and*
- ü *Fire prevention inspections upon complaint or request, and as directed by the Fire Marshal, and Ontario Fire Code enforcement as per PFSG 04-40D-03 and 04-40D-12*

Assessing community fire risk allows a municipality to determine the level of fire protection services required based on local needs and circumstances. This includes the level of fire prevention and public fire safety education required to comply with the minimum levels identified within the FPPA.

Integrating risk analysis into the process to determine the level of fire protection services to be provided by a municipality recognizes there are alternatives to simply providing fire suppression services and emergency response. The introduction of sprinkler systems is an example of integrating alternatives to managing the inherent risks of a building rather than simply developing a larger emergency response deployment plan.

This section of the FMP highlights fire prevention and public education best practices and key functions of the division. It also explores existing division staffing and activities in consideration of these best practices and presents recommendations to address existing gaps and future needs.

5.1 Fire Prevention and Public Education Best Practices

The fire prevention and public education services provided by the SSMFS should be guided by the legislative requirements and industry best practices. Primarily these include the Ontario Comprehensive Fire Safety Effectiveness Model and NFPA 1730 *Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations to the Public* (2016 Edition).

5.1.1 Comprehensive Fire Safety Effectiveness Model (OFMEM)

The fire prevention and public education services provided by a fire department are intended to optimize impact of applying the first two lines of defence identified within the Comprehensive Fire Safety Effectiveness Model including:

I. *Public Education and Prevention*
II. *Fire Safety Standards and Enforcement*

The first two lines of defence have been defined as:

> *"I. Public Education and Prevention:*
>
> *Educating residents of the community on means for them to fulfill their responsibilities for their own fire safety is a proven method of reducing the incidence of fire. Only by educating residents can fires be prevented and can those affected by fires respond properly to save lives, reduce injury and reduce the impact of fires; and*
>
> *II. Fire Safety Standards and Enforcement:*
>
> *Ensuring that buildings have the required fire protection systems, safety features, including fire safety plans, and that these systems are maintained, so that the severity of fires may be minimized."*

Information reported by the OFMEM indicates that from 2010 to 2014 the number of fire losses, described as any fire with an injury, fatality or dollar loss reported, have declined from 12,840 in 2010 to 10,632 in 2014 resulting in a decrease of 17%. This occurred during a period of time when the population and number of structures across Ontario continued to grow.

Through engagement with fire chiefs across the province and staff from the OFMEM, there is consensus that the efforts of fire departments dedicated at optimizing the first two lines of defence are responsible for reducing fire losses and improving the overall level of fire protection within the community.

In our view, strategies that optimize the use of the first two lines of defence to address the findings of the Comprehensive Risk Assessment (CRA) should be considered a strategic priority of this FMP. For example, this should include prioritizing fire prevention and public education programs in areas of the community where vulnerable occupants such as seniors reside.

5.1.2 NFPA 1730: Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations to the Public (2016 Edition)

As referenced within the Comprehensive Risk Assessment the NFPA has recently finalized a Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations. The stated purpose of the standard is to "*specify the minimum criteria addressing the effectiveness and efficiency of the fire prevention organization… based on an approved community risk reduction plan"* (pg. 4). The standard establishes its criteria through five main chapters:

1) *Community Risk Assessment*
2) *Fire Prevention Inspection and Code Enforcement Activities in Existing Occupancies*
3) *Plan Review*
4) *Investigations*
5) *Public Education Programs*

The essence of the standard is to ensure that a fire prevention organization has a Community Risk Reduction Plan (CRRP) in place that is based on the local needs and circumstances. A department is to identify needs and circumstances through a risk assessment. A risk assessment involves the assessment of: demographics; geography; building stock; fire experience (fire loss); responses; hazards; and economics.

A Community Risk Reduction Plan is then used to assign resources and develop programs that are consistent with identified risk. This would include inspection activities, plan review, investigations, and public education programs. For example, the NFPA 1730 standard identified a minimum inspection frequency cycle which could be refined based on the local context. Additional CRRP implementation considerations within the standard is to circulate the CRRP to all stakeholders who help implement it and to establish partnerships to facilitate implementation. This standard further emphasizes the importance of the application of the first two lines of defence and is consistent with the current industry trend to emphasize prevention and education within the fire service.

These identified best practices as well as PFSGs developed by the OFMEM will be referenced throughout the review of the operations of the Fire Prevention/Public Education Division.

5.2 Existing Fire Prevention and Public Education Staff Resources

The Deputy Chief Education, Prevention, and Emergency Management is directly responsible for Fire Prevention and Public Education services and programs. This includes four Fire Prevention Officers and one Public Education Officer. Prevention and Public Education staff are responsible for enforcement of the Ontario Fire Code including conducting fire inspections, fire investigations, and delivery of the department's public education program. One of the Administrative Clerks provides administrative support to this division.

5.2.1 Training and Qualifications

In partnership with the Ontario Association of Fire Chiefs, the OFMEM, and other fire service stakeholders the Ontario Fire Services Standards (OFSS) was developed and historically provided guidance to the training and qualifications of fire department staff. Together these competency-based standards were applied in developing a comprehensive provincial fire service training program that included a firefighter curriculum, Fire Prevention Officer Diploma program, Company Officer Diploma program, and a Training Officer Diploma program.

In April 2013 the OFMEM announced that the Ontario fire service would be shifting away from the provincial fire service training program and adopting the National Fire Protection Association Professional Qualifications (NFPA Pro-Qual) Standards.

The previous Ontario Fire Prevention Officer Diploma Program has now been replaced by the *NFPA 1031 – Standard for Professional Qualifications for Fire Inspector and Plans Examiner*. *Table 4* summarizes the different fire inspector designations included within the NFPA 1031 standard.

Table 4: Fire Inspector Designations (NFPA 1031 Standard)

Fire Inspector	NFPA 1031 Standard
Fire Inspector I	An individual at the first level of progression who has met the job performance requirements specified in this standard for Level I. The Fire Inspector I conducts basic fire inspections applies codes and standards.
Fire Inspector II	An individual at the second or intermediate level of progression who has met the job performance requirements specified in this standard for Level II. The Fire Inspector II conducts most types of inspections and interprets applicable codes and standards.
Fire Inspector III	An individual at the third and most advanced level of progression who has met the job performance requirements specified in this standard for Level III. The Fire Inspector III performs all types of fire inspections, plans review duties, and resolves complex code-related issues.

At a minimum, staff resources conducting fire inspections should have the skills and competencies included within the *NFPA 1031 – Fire Inspector Level I*. Fire inspections involving more complex issues and requiring interpretation of various legislation and codes are recommended to have the Level II designation.

There is a similar certification and designation process for individuals assigned to deliver public education programs that is contained within the *NFPA 1035 – Standard for Professional Qualifications for Fire and Life Safety Educator, Public Information Officer, and Juvenile Firesetter Intervention Specialist.*

Table 5 summarizes the different public education designations included within the NFPA 1035 standard.

Table 5: Public Education Designations (NFPA 1035 Standard)

Fire and Life Safety Educator	NFPA 1035 Standard
Fire and Life Safety Educator I	The individual who has demonstrated the ability to coordinate and deliver existing educational programs and information.
Fire and Life Safety Educator II	The individual who has demonstrated the ability to prepare educational programs and information to meet identified needs.
Fire and Life Safety Educator III	The individual who has demonstrated the ability to create, administer, and evaluate educational programs and information.

The SSMFS has been proactive in ensuring that all staff resources assigned to fire prevention and public education programs and activities are qualified as per the applicable NFPA designations. The majority of the staff resources in this area have also attained the *NFPA 1041 – Fire Instructor Level I* designation as presented within Table 6.

Table 6: Fire Instructor Designations (NFPA 1041 Standard)

Fire and Life Safety Educator	NFPA 1035 Standard
Fire Instructor I	A fire service instructor who has demonstrated the knowledge an ability to deliver instruction effectively from a prepared lesson plan, including instructional aids and evaluation instruments, adapt lesson plans to the unique requirements of the student and authority having jurisdiction; organize the learning environment so that learning and safety are maximized; and meet the record-keeping requirements of the authority having jurisdiction.
Fire Instructor II	A fire service instructor who, in addition to meet Instructor I qualifications, has demonstrated the knowledge and ability to develop individual lesson plans for a specific topic including learning objective, instructional aids, and evaluation instruments; schedule training sessions based on overall training plan of authority having jurisdiction; and supervise and coordinate the activities of other instructors.
Fire Instructor III	A fire service instructor who, in addition to meeting Instructor II qualifications; has demonstrated the knowledge and ability to develop comprehensive training curricula and programs for the use by single or multiple organizations; conduct organization needs analyses; design record keeping and scheduling systems; and develop training goals and implementation strategies.

Table 7 summarizes the current training and qualifications of the staff resources assigned to delivering fire prevention and public education programs and activities.

Table 7: Current Fire Prevention/Public Education Staff Resource Qualifications

Position	NFPA 1031 Level I	NFPA 1035 Level I	NFPA 1035 Level II	NFPA 1041 Level I
Deputy Chief	.	.		.
Fire Prevention Officers	.	.		.
Public Education Officer	.	.	.	

5.3 Division Workspace

Staff resources assigned to the fire prevention and public education activities currently work from Fire Station #1 located at 72 Tancred Street. The Community Emergency Management Coordinator (CEMC) and the Emergency Planning and Research Assistant operate from work space at Station #4. Operating from two locations is currently required due to the limited space at Fire Station #1.

As referenced with Section 3.3 – Administrative Workspace the current workspace for fire prevention and public education staff provides some efficiencies in accessing printers and supplies; however, the close proximity of work stations within this area creates an environment that can be loud due to several people on the phone at the same time or meeting with the public at the reception counter. In dealing with matters that are confidential in nature, or require members of the public to meet in-person with staff in this division, the current workspace is not meeting the department's needs, or compliant with current AODA legislation.

The current workspace has limited storage capacity for files, supplies and supporting information such as codes and standards that are required for frequent research. The storage of educational tools, props and pamphlets to support the public education programs is limited to a small closet area that is not meeting the division's current needs.

As previously indicated, the current workspace has exceeded its intended use as the number of people assigned to work in this area has increased and new legislation such as the AODA has been introduced. In the short-term the department should be implementing strategies to reduce the need for the public to access this area for things such as burning permits, inspection reports and other inquiries. Further options for the use of on-line access and access to this information at the Civic Centre should be considered.

This FMP includes analyses of fire station locations that may in the longer term warrant the renovation, relocation and/or construction of new fire stations. In our view priority should be given to improving the work space for staff assigned to the Prevention/Education and Emergency Management, and providing work space within one location.

5.4 Simplified Risk Assessment

The development of a Simplified Risk Assessment (SRA) is a legislative requirement of the municipality identified within section 2 (1) (a) of the FPPA. Our review of *PFSG 04-40A-12 Simplified Risk Assessment* and knowledge of current industry best practices indicates that the SSMFS is achieving compliance with this legislated requirement. The City's current Simplified Risk Assessment -2011-2016 was last updated in April of 2017.

The OFMEM's review of the current Simplified Risk Assessment concluded that "*It is the assessment of the OFMEM that the SRA is well done, and may be considered an enhanced SRA due to the detail and the links found between the assessment process and program development".*

The OFMEM's reference to the linkage of the SRA assessment process to program development is of particular interest to this fire master planning process. The following sections will provide further analyses of the current prevention/education programs in addition to presenting findings of the Comprehensive Risk Assessment (CRA) that is presented as a companion document to this FMP. Priority should be given to sustaining the current strategy of the SSMFS in linking the findings of the CRA to program development. This is consistent with current industry best practices that recommend developing a Community Risk Reduction Plan (CRRP).

The City's current SRA also applies a strategy that aligns the proposed fire prevention and public education programs with the *"three lines of defence"* which also reflects current industry best practices.

The City's commitment to developing the Comprehensive Risk Assessment provides the opportunity for the SSMFS to further enhance its risk analyses process. Utilizing the framework of the CRA, the SSMFS could evolve its current SRA process even further in sustaining a Comprehensive Risk Assessment in the future. In addition to complying with the City's legislative responsibilities, this strategy would provide a more comprehensive risk analyses for determining the most effective and efficient prevention/education program based on community fire risk.

Operational Recommendation #14: That the SSMFS replace the current Simplified Risk Assessment with the framework of the comprehensive risk analyses model.

5.5 Fire Prevention Policy

The components of a Fire Prevention Policy are provided in *PFSG 04-45-12* "*Fire Prevention Policy"* which presents a framework for developing a fire prevention policy. An example of the purpose of a fire prevention policy includes:

- *To establish policies and procedures for fire department personnel for fire prevention, public education programs and activities as a primary means of protecting lives and property from fire; and,*

- *To maintain compliance with the minimum fire prevention and public education activities as required by the Fire Protection and Prevention Act, 1997.*

A Fire Prevention Policy should also identify the following fire prevention and fire safety education activities such as:

- *Fire inspection activities;*
- *Fire code enforcement;*
- *Fire and life safety education;*
- *Fire investigation and cause determination;*
- *Fire loss statistics; and,*
- *Fire department operational guidelines identifying how, when and where activities will be conducted.*

The 2017 RFPS included a recommendation related to the SSMFS developing a fire prevention policy including:

2017 RFPS Recommendation #10: The Municipal Council of the City of Sault Ste. Marie should ensure the development of a fire prevention policy that describes the components of the public fire safety education efforts for identified risks.

The SSMFS has already begun to develop a fire prevention policy. Analysis completed as part of preparing this FMP included a review of the current draft fire prevention policy. Based on this review, the draft policy aligns with the framework of *PFSG 04-45-12* "*Fire Prevention Policy".* In its current form the draft policy references the use of a simplified risk assessment "*to be created on a 5 year interval and reviewed on an annual basis*[11]*.* This fire master planning process includes the development of a more comprehensive analysis of community fire risk as included within the Comprehensive Risk Assessment.

Subject to Council's consideration and approval of this FMP and the Comprehensive Risk Assessment the SSMFS will have a more comprehensive tool for assessing community fire risk than the current Simplified Risk Assessment process. In our view the SSMFS should develop a process for the annual review of the proposed Comprehensive Risk Assessment. Any revisions to the CRA should then be utilized to inform the proposed Fire Prevention Policy. This process provides the opportunity for the department to develop an ongoing (annual) analysis of community fire risk in order to monitor and identify evolving trends and changes within the community. The results of this strategy will further support the proposed strategic priorities of this FMP including:

[11] 2017 SSMFS Draft Fire Prevention Policy

i. *The utilization of a Comprehensive Risk Assessment in determining the level of existing fire safety risks within the municipality as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services;*

ii. *The optimization of the first two lines of defence, including public education and fire prevention, and the utilization of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Comprehensive Risk Assessment;*

The current draft fire prevention policy identifies the various programs and activities related to the department's fire prevention and public education programs. This FMP includes recommendations to further develop clear goals and outcomes (performance objectives) for all programs and activities provided by this division. Of importance to this strategy is that the identified outcomes be realistic, specific and measurable. Once completed the fire prevention policy should provide a description of each program and activity including the goals and objectives.

Subject to Council's consideration of the proposed FMP and accompanying CRA the draft fire prevention policy should be reviewed and updated. The completed draft fire prevention policy should then be presented to Council for consideration and approval, and then included within the updated Establishing and Regulating By-law as an appendix. This strategy represents due diligence on behalf of the City in providing clear direction and authority to staff to deliver the Council approved fire protection services.

Operational Recommendation #15: That the draft Fire Prevention Policy be updated and presented to Council for consideration and inclusion within the proposed Establishing and Regulating By-law as an appendix.

5.6 Pre-Incident Planning

Pre-incident planning includes the activities required to collect information such as site plans, floor plans, fire safety plans, hazard identification, demographics and other information related to a specific occupancy (building). This information is then utilized to develop a Pre-Plan or Quick Action Plan to assist fire suppression crews when they respond to incidents in these buildings.

The current SSMFS pre-incident plans are guided by *Notice #300-01-Pre-Fire Plans*. This guideline was last updated in 2013 and includes a comprehensive procedure for developing and recording building pre-incident plans that can be loaded to the department's CrySis data base and accessed by responding emergency response crews.

The 2017 RFPS included a recommendation related to the department's current pre-incident planning program:

2017 RFPS Recommendation #14: The Municipal Council of the City of Sault Ste. Marie should ensure the development of an operating guideline for pre-incident planning and include the enhancement opportunities noted above, that will further strengthen the program.

The OFMEM identified the following enhancements to further improve the department's current pre-incident planning program within the proposed operating guideline:

- *Connects to the current municipal fire risk assessment (and future comprehensive risk assessment when completed) to assist with determining properties that should be pre-planned-in particular high and extreme risk type properties;*
- *Ensures that the pre-plan identifies the process to access additional resources, such as through the District of Algoma Mutual Aid Program regional agreements in the event of a major fire emergency;*
- *Links pertinent information found in fire safety plans to the pre-incident plan for a respective property, i.e., utility shut offs, floor plans and emergency contacts;*
- *Refers to best practices and standards[12] for pre-incident planning; and*
- *Includes references to standardized pre-incident plan templates that will promote consistency in completion and context of pre-plans.*

In addition to identifying the low, moderate and high risks within the City the CRA also includes a number of key findings that provide more detailed layers of information such as spatial data that will be beneficial to informing the priorities of the department's pre-planning program.

To address this OFMEM recommendation this FMP also includes detailed analyses of the existing fire suppression deployment practices of the SSMFS including analyses of the available mutual aid partners and provides recommendations for enhancing the City's fire suppression deployment practices based on the fire risks present.

Dillon's review confirms the findings of the 2017 RFPS that stated *"Overall, the OFMEM found that the pre-incident planning is well done".* Of importance to addressing the OFMEM's recommendation in this area, and this fire master planning process is updating the department's current *Notice #300-01-Pre-Fire Plans* with a comprehensive operating guideline that is informed by the findings of this FMP and the Comprehensive Risk Assessment.

Operational Recommendation #16: That department Notice #300-01 – Pre-Fire Plans be replaced with a comprehensive operating guideline informed by the findings of the Fire Master Plan and Comprehensive Risk Assessment.

[12] NFPA 1620: Standard for Pre-Incident Planning (NFPA 1620)

5.7 Smoke Alarm and Carbon Monoxide Alarm Program

The provision of a smoke alarm program is a legislative requirement of the municipality identified within section 2 (1) (a) of the FPPA. Review of *PFSG 04-40B-03 Some Alarm Program* and knowledge of current industry best practices indicates that the SSMFS is achieving compliance with this legislated requirement through a wide range of initiatives that include an in-service fire safety awareness program delivered by on duty fire suppression staff, educational programs provided by public education staff, and the application of conditions within other programs such as the issuance of burning permits. The presence of working smoke alarms, carbon monoxide alarms and home fire escape planning that is practiced regularly by occupants are critical components of the first line of defence in an overall community fire protection plan. The relevance of these components must be further emphasized, especially in areas of the community where extended emergency response travel times may be present, and where vulnerable demographics such seniors reside.

As of April 15th, 2015 homeowners and property owners/tenants in buildings that contain no more than six suites must also install and maintain carbon monoxide alarms as required by the Ontario Fire Code. Generally this means that a carbon monoxide alarm must be installed adjacent to each sleeping area of the residence. As the FPPA has also been revised to address "unsafe levels of carbon monoxide" the fire service has been tasked with monitoring compliance with this legislation.

The 2017 RFPS included a recommendation related to the department's current smoke alarm and CO alarm program including:

2017 RFPS Recommendation #11: The Municipal Council of the City of Sault Ste. Marie is encouraged to maintain and enhance an already good program by developing a comprehensive program that includes the smoke alarm program, home escape planning and carbon monoxide alarm program, in addition to goals, objectives, performance measurers as well as evaluation and assessment processes.

The importance of a proactive smoke alarm, carbon monoxide alarm and home escape planning program is further supported by the key risks identified within the CRA that include the following:

CRA Key Risks Analysis Outcomes	FIRST LINE OF DEFENCE	CRA
	For consideration within the proposed Public Education Program	Identified Risk Level
When open space lands are removed from the analysis, Group C – Residential occupancies comprise 95.4% of the occupied property stock.	X	Moderate
Approximately 57% of Group C - Residential occupancies in the City were constructed when no provincial codes were in effect (prior to 1975).	X	Moderate
Structural fires occurring in Group C – Residential buildings are the most frequent structural fire types and they occurred at a higher rate than the Province between 2012 and 2016 (80.4% vs. 73.4%), for a total of 218 fires over the five year period.	X	Moderate

CRA Key Risks Analysis Outcomes	FIRST LINE OF DEFENCE	CRA
For the period 2012 to 2016, 95% of the fire related civilian injuries (38 injuries) and 100% of the fatalities (1 fatality) occurred in Group C – Residential occupancies.	X	Moderate
Based on the analyses of smoke alarms being present and operating, there is a potential risk that in 54% (147) of the instances there was either no smoke alarm present, or it was not operational.	X	Moderate

In addition, the CRA identified a number of key findings that are valuable to informing evaluation of the current program and opportunities to prioritize and further enhance this program. These include:

CRA Key Findings Analysis Outcomes	FIRST LINE OF DEFENCE For consideration within the proposed Public Education Program
Within the Urban Settlement Area Boundary, there is a high concentration of Group C – Residential occupancies built prior to any provincial codes being in effect.	X
About a fifth of incidences the status or presence of a smoke alarm went underdetermined which could account for an additional 13% of instances where a smoke alarm was not present or operational.	X
The areas most likely to have a high incidence of no operating smoke alarms are Downtown with some clusters to the east and west.	X
Group C – Residential uses are distributed across the City including outside of the Urban Settlement Area.	X

Review of current department memorandums, operating guidelines and notices confirmed the findings of the 2017 RFPS that identified the following documentation:

- *Memorandum Dated May 11th 2009 – In-Service Fire Safety Awareness Program;*
- *Memorandum dated May 11th 2015 – 2016 In-Service Fire Safety Awareness Program;*
- *Department Notice #1700-15 – Distribution of Loaner Smoke Alarms and Carbon Monoxide Detectors; and*
- *Operating Guideline #1700-02 – Issuing Open-Air Burning Permits & Responding to Burning Complaints.*

The review completed for this FMP also included consideration of the "Sault Ste. Marie Fire Department- Residential and Apartment Fire Safety Program" data collection forms. These are utilized to collect specific data such as:

- *Address of the residence;*
- *Whether any one was home or not;*
- *Whether a home escape plan was available;*
- *Number of smoke alarms required;*
- *Number of smoke alarms present and working;*
- *Whether a loaner smoke alarm was provided; and*
- *Whether a CO alarm was installed.*

The review of all existing programs related to smoke alarms, carbon monoxide alarms and home escape planning as well as consultation with senior department staff indicates that the SSMFS is well positioned to respond to this OFMEM recommendation. This should include the development of one comprehensive operating guideline that includes the departments smoke alarm, CO alarm and home escape planning programs. This review should consider the key risks and key findings identified by the CRA including opportunities to further enhance the use of spatial data analyses to inform the priorities of the program. The comprehensive operating guideline should include defined goals and objectives for each of the initiatives and include key indicators to evaluate the performance of each initiative as part of an ongoing evaluation and assessment process.

It is recommended that an overview of the consolidated operating guideline including the goals and objectives, key performance indicators and program evaluation process be included within the proposed Fire Prevention Policy to be attached to the proposed Establishing and Regulating By-law as an appendix. This strategy ensures that Council is informed, and approves the level of services proposed for these programs. This is of particular importance to those elements of these programs that the City is legislated to provide.

Operational Recommendation #17: That an Operating Guideline be developed for the SSMFS home smoke alarm, carbon monoxide alarm and home escape planning program, and that this program be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.

5.8 Current Public Education Programs and Activities

The experience of other municipalities has proven that expanding and enhancing public education efforts can be an effective strategy to mitigate emergency call volume and increase the overall level of fire safety within a community. The City of Sault Ste. Marie hired a dedicated staff resource in 2016 to enhance the delivery of its public fire education program. Prior to this initiative the SSMFS utilized its Fire Prevention Officers to deliver these programs and activities.

Within SSMFS, there has also been significant involvement of the on-duty fire suppression staff (firefighters) in delivering the department's public fire safety education initiatives. This is another illustration of the commitment of the SSMFS to community fire safety, and specifically the optimization

of the *"Three Lines of Defence"*. The department has historically utilized its Simplified Risk Assessment to inform the delivery of the public education programs. The addition of a dedicated staff resource in this area will further support the expansion of the department's historically proactive public education program.

The department's current public education programs and activities are presented within the following sections.

5.8.1 Distribution of Fire Safety Information (Legislated)

The distribution of fire safety information to the public is a legislative requirement of the municipality identified within section 2 (1) (a) of the FPPA. Our review of *PFSG 04-40C-03 Distribution of Public Fire Safety Education Materials* and knowledge of current industry best practices indicates that the SSMFS is achieving compliance with this legislated requirement through a wide range of initiatives that include utilization of web-based information, social media forums, and the distribution of hard copy fire safety information/pamphlets.

5.8.1.1 Department Website

The department's website located at www.saultstemarie.ca/firesafe provides information related to school programs, seasonal safety tips, fire extinguisher training, safety videos, kids zone and awareness events and programs. In our experience the department's website represents an industry best practice in distributing fire safety information to a broad range of demographics within the community.

5.8.1.2 Static Display Boards

In addition to the department's website fire safety messages are displayed at each of the City's fire stations. Department Notice *#1700-05-Fire Safety Sign Boards* identifies the process for receiving fire safety messages from the Fire Prevention Division and posting them on the station sign boards.Through community partnerships the department also promotes fire safety messages to the general public at the Essar Centre and on seven static sign boards throughout the community.

5.8.1.3 Social Media

The use of social media including Twitter, Facebook and Instagram as a communication tool has been further enhanced through the hiring of the full-time Public Educator. This new position is responsible for monitoring these communication tools and in "real time" provides valuable information to the community. These social media platforms provide access to targeted demographics, with one example being a Grade 8 social media contest. Such platforms also provide access to students attending Algoma University and Sault College who may be living away from home for the first time and require additional fire safety information.

5.8.1.4 Public Events and Seminars

The SSMFS attends a wide range of public events and delivers seminars to a range of community organizations and demographics annually. These are activities that generally include the presence of both fire prevention/public education staff as well as on-duty firefighters. These events provide the opportunity to provide a display of fire suppression apparatus as a draw for younger participants, while also offering an organized display of public education materials in conjunction with a presentation.

Examples of these activities include:

- NHL Alumni Hockey Game;
- Residential awareness sprinkler program;
- Real estate agency partnership;
- Fire safety & escape seminar;
- Burn permit awareness;
- Festival of beer;
- Sweet life road show – teen safety;
- Multi-unit residential seminar;
- Rotary fest awareness booth; and
- Educate the Soo "Social Housing and Seniors Campaign".

All of these activities focus on the distribution of public education information including pamphlets to identified demographics and address specific fire safety issues.

5.8.1.5 Hard Copy Fire Safety Information

Printed fire safety information is provided by the department as part of formal programs and activities and attending public events. Examples of these include the "Smoke Alarm In-Service Program" facilitated by on-duty fire suppression personnel. This program includes distributing pamphlets and fire safety information related to smoke alarms, home escape planning and carbon monoxide detectors. Annually this represents a distribution of fire safety information to approximately 2,500 homes.

The department also facilitates a number of school programs such as the "Fire & the Law" and "Food and Nutrition Course" programs targeting high school students, and "Matches and Lighters are Tools and Not Toys" program which targets younger students. These programs account for the distribution of approximately 3,500 fire safety pamphlets annually.

The department also provides tours of the fire stations on a regular basis as part of its public education programing. Approximately 60 station tours are facilitated annually representing the distribution of approximately 1,800 fire safety pamphlets.

The department was able to provide historical statistical data for many of the programs and activities where public fire safety information is currently distributed to the public. This is an important due

diligence task on behalf of the department for tracking the City's legislative requirements in this area. Our review suggests there are a number of these programs and activities where this tracking process is not in place. It is recommended that the department consider implementing a process for tracking the distribution of all public fire safety information that is distributed.

Operational Recommendation #18: That the SSMFS develop an operating guideline to define the process of tracking all public fire safety information distributed to the public in response to legislative requirements of the FPPA and for inclusion within the Annual Report.

5.8.2 School Programs

Children are referenced within the Comprehensive Risk Assessment as having a lower risk of fatality in residential occupancies overall when compared to seniors or adults. However, youth (aged 14 years and under) represent a vulnerable demographic due to their potential inability to respond effectively in an emergency situation. Structured education programs consistently provided to children and youth can help to engrain fire and life safety awareness and knowledge into future generation. This may assist in altering human behaviour, potentially resulting in a future society that is more conscious of fire and life safety.

The importance of targeted school programs program is further supported by the key risks identified within the CRA that include the following:

CRA Key Risks Analysis Outcomes	FIRST LINE OF DEFENCE	CRA
	For consideration within the proposed Public Education Program	Identified Risk Level
Additional potential high life-safety risk considerations in the City include 33 schools and 3 detention centres.	X	High

The SSMFS provides a number of structured school programs that target specific age groups with designed fire safety education. The SSMFS provides structured school programs and activities in both English and French that include:

- Stop Drop and Roll;
- Get Out Stay Out;
- Tools Not Toys;
- Plan Your Escape;
- Where There's Smoke There's Science:
- Food and Nutrition Course;
- Fire and the Law;
- Social Media Contest;
- Community Christmas for Children Program;

- YMCA Healthy Kids Day;
- Kids Summer Festival; and
- Seminars for Post-Secondary Students.

5.8.3 Adult Programs

In addition to the In-Service Fire Safety Awareness Program that focuses on homeowners, the department also provides other programs which target the adult demographic in general. The importance of these programs are confirmed within the key risk identified within the CRA that indicate:

CRA Key Risks Analysis Outcomes	FIRST LINE OF DEFENCE	CRA
	For consideration within the proposed Public Education Program	Identified Risk Level
The current total population of Sault Ste. Marie includes a component of 30% of people between the ages of 45 and 64 who are aging towards the seniors demographic of 65 or over.	X	Moderate

The CRA key findings provide further information to inform the departments risk reduction strategies including:

CRA Key Findings Analysis Outcomes	FIRST LINE OF DEFENCE
	For consideration within the proposed Public Education Program
People aged 40 to 64 were the highest proportion of individuals reported as persons associated with ignition, in accordance with the SSMFS Historic Call Data from 2012 to 2016.	X
According to the 2016 Simplified Risk Assessment, the number of male fatalities recorded between 1998 and 2016 outnumbered female fatalities in the City. In addition, the highest proportion of people associated with ignition is men according to SSMFS Call data.	X

Examples of the department's current public education programs and activities that target the adult demographic include:

- Real estate agency partnership;
- Residential sprinklers;
- Multi-unit residential seminar; and
- Fire extinguisher training.

5.8.1 Seniors Programs

Seniors (those 65 years and over) have been recognized as one of the most significant demographic growth trends in Canada. According to Statistics Canada, from 2011 to 2016 the country experienced "the largest increase in the proportion of seniors since Confederation" due to the baby boomer generation reaching the age of 65.

The Comprehensive Risk Assessment identifies the following key risk related to the current seniors demographic in the City:

CRA Key Risks Analysis Outcomes	FIRST LINE OF DEFENCE	CRA
	For consideration within the proposed Public Education Program	Identified Risk Level
Seniors (those 65 years and over) are considered to represent one of the highest fire risk groups across the province based on residential fire death rate (fire deaths per million of population). In Sault Ste. Marie there is currently a higher proportion of seniors in the City than in the Province (22% vs. 17%).	X	High

The CRA key finding to provide further information to inform the departments risk reduction strategies including:

CRA Key Findings Analysis Outcomes	FIRST LINE OF DEFENCE
	For consideration within the proposed Public Education Program
There is a higher proportion of seniors in the downtown with notable clusters at East Street at Bay Street and Queen Street East at Pine Street.	X

Of importance to this fire master planning process is developing and implementing education programs that target the current and future senior's demographics. The SSMFS current public education program recognises the importance of seniors programs. Current public education programs for seniors include the following:

- Seniors home fire safety;
- Hearing impaired fire safety;
- 12 days of fire safety radio program;
- Project asap; and
- Social housing and seniors program.

The department's Simplified Risk Assessment identifies the need for additional senior's public education. In response to this finding the department has identified a number of strategies that include the following elements:

- ü *Working with seniors still living at home;*
- ü *Phone-in service to schedule testing/changing of alarms and fire safety planning;*
- ü *Building partnerships with companies to supply supporting program materials;*
- ü *Promoting various communications strategies including social media, partnerships and use of fire suppression staff; and*
- ü *Providing a finger pointer as a gift for testing smoke alarms.*

The findings of the Comprehensive Risk Assessment further support the importance of prioritizing the department's public education programs and activities targeting seniors aged 65 or over. Analysis indicates that in the past the SSMFS has been very successful in developing collaborative partnerships within the community. In addition to the strategies identified above, our knowledge of industry best practice suggests additional options further expand the delivery of targeted senior's public education programs. In consultation with community partners the development of a senior's roundtable, or other initiative that would provide an ongoing forum with seniors care providers and senior support organizations may be beneficial in identifying how best to reach out to the current and future seniors demographics.

Operational Recommendation #19: That the SSMFS continue to prioritize the delivery of seniors (aged 65 and over) public education programs as referenced within the proposed Fire Master Plan.

5.9 Proposed Public Education Program and Activity Cycle

It is evident by the range of public education programs and activities that the SSMFS recognizes the benefits of a pro-active public education program to mitigate the probability and consequences of fire events. These public education programs and activities can directly reduce emergency call volume and increase overall level of fire protection within a community.

The current public education program also reflects that of industry best practices that have recognized the value of targeting public education activities to key demographics. This has traditionally included vulnerable demographics such as seniors and children. Results of the Comprehensive Risk Assessment contained within this FMP further support this priority as 22% of the current population is seniors aged 65 and over, and 15% are youth aged 14 and under (2016 census).

Implementing goals and objectives for conducting public fire safety education activities and programs is consistent with responding to the strategic priorities identified within this FMP. This would include developing regularly scheduled public education programs and activities (cycles) for providing fire safety education to the various occupancies classifications identified by the Comprehensive Risk Assessment.

Developing a cycle provides the opportunity to prioritize the delivery of fire safety education programs based on the results of the Comprehensive Risk Assessment.

Implementation of the dedicated Public Education Officer in 2016 resulted in the department developing a *"Public Education Report"* to identify the priorities and scheduling of public education programs and activities for 2017. In addition to providing a schedule to guide the delivery of programs and activities this report provides a very effective work plan for the Public Education Officer.

As part of Dillon's research into the effective and efficient delivery of public education programs and activities a review of relevant NFPA standards, PFSGs and industry best practices was completed. To build on the foundation of the "Public Education Report" framework it is recommended that the SSMFS consider developing public fire safety education activities and program delivery cycles utilizing the Ontario Building Code (OBC) occupancy classifications.

This strategy is intended to supplement the current initiatives of the SSMFS targeted at ensuring the City sustains its legislated public education responsibilities. Subject to consideration and approval it is recommended that the proposed Fire Prevention Policy include performance objectives to define the goals and objectives of each of the department's public education programs and activities within categories that may include:

- *Media releases and public safety announcements;*
- *Smoke alarm and home escape planning;*
- *Public fire and life safety events and displays;*
- *Awareness and targeted education programs, such as students, seniors, and fire-safe living; and,*
- *Fire Prevention Week, community event activities.*

Table 8 identifies the proposed frequencies of delivering public education programs and activities utilizing the Ontario Building Code (OBC) occupancy classifications. These are presented to form a component of the proposed performance objectives for each of formalized public education identified above in sustaining the City's legislative requirements.

Table 8: Proposed Public Safety Education Activities and Programs Cycle Objectives

Occupancy Classification (OBC)	Buildings	Proposed Public Safety Education Program Delivery Cycle Objectives
Group A – Assembly	Schools, Recreation Centres (Arenas)	1 – 2 Years
Group A – Assembly	Licensed Properties, Nursery/Day Care Facilities, Churches, Special Occasion Permits	1 – 2 Years

Occupancy Classification (OBC)	Buildings	Proposed Public Safety Education Program Delivery Cycle Objectives
Group B – Detention	B1 - General	1 – 2 Years
Group B – Care, Care and Treatment	B-2 and B-3 Long-Term Care and Care Facilities	Annually
Group C – Residential	Apartments regulated by Part 9.3 of the OFC Apartments regulated by Part 9.5 of the OFC Apartments regulated by Part 9.8 of the OFC Hotels, Motels and occupancies regulated by Part 9.9 of the OFC Smoke Alarm/CO Alarm Program	1 - 2 Years 1 – 2 Years 1 - 2 Years 3 – 4 Years Annually
Group D - Business	Business and Personal Services Occupancies	Upon Request
Group E - Mercantile	Mercantile Occupancies	3 - 4 Years
Group F - Industrial	F1 – High Hazard	1 – 2 Years
Group F - Industrial	F2 – Medium Hazard	3 – 4 Years

Council Recommendation #20: That the proposed public fire safety education activities and program cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.

5.10 Current Fire Inspection Program

The provision of fire inspections as a result of a complaint or a request are a legislative requirement of the municipality identified within section 2 (1) (a) of the FPPA. Our review of *PFSG 04-40D-03 Inspections Upon Request or Complaint* and *PFSG 04-40D-12 Inspections Upon Request of Complaint (Fire Code)* and knowledge of current industry best practices indicates that the SSMFS is achieving compliance with this legislated requirement.

The department's current fire inspection program is guided by OG #1700-03 Fire Code Inspections. In addition to responding to complaints or requests for a fire inspection this operating guideline provides direction to the Fire Prevention Officers to conduct routine fire inspections of major building code occupancy classifications based on a monthly schedule. Each Fire Prevention Officer is assigned a specific geographical area within the City to complete the monthly schedule. Once completed, all fire inspection information is recorded in the CrySis database. Table 9 illustrates the results of the department's current routine fire inspection schedule.

Table 9 Current Routine Fire Inspection Schedule

Major Building Occupancy Type	Month											
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Group A - Assembly			x	x	x				x	x		
Group B – Care or Detention											x	x
Group C - Residential		x				x	x					
Group D/E – Business/Mercantile	x											
Group F - Industrial								x				

Operating guideline #1700-03 provides a list of options for the Fire Prevention Officers to consider when conducting a fire inspection subject to the severity of violations that may be present, potential risk to life and/or property safety and the overall objective of attaining compliance with the Ontario Fire Code (OFC.).

Operating guideline #1700-03 also provides direction with respect to conducting re-inspections when necessary. The SSMFS utilizes the OFMEM Technical Guideline OFM-TG-01-2012 "Fire Safety Inspections and Enforcement" which includes a scope *"to assist municipalities and their fire services in meeting their fire safety inspection and enforcement responsibilities in the most effective and efficient way possible, as provided by the FPPA."*. The 2017 RFPS included an audit of the department's current fire inspection process that concluded *"The inspection records and audits indicated that the Fire Prevention Officers were very thorough and knowledgeable in their fire safety inspection practices".*

In the context of the results of the Comprehensive Risk Assessment, the current scheduling of inspections at Group B – Care or Detention occupancies is a consideration. The winter months may not be the most practical timing for these facilities to undertake fire drill scenarios due to the likelihood of inclement weather and seasonal influenza outbreaks.

The review completed as part of this FMP included requesting a sample of the annual workload of the Fire Prevention Officers related to the current routine fire inspection program. This information was provided by the department from the CrySis data base for the year 2016.

Table 10 illustrates the results of the department's workload to conduct routine fire inspections and re-inspections in 2016. Of importance to this fire master planning process is that this workload summary does not include the time spent on requests or complaints that generated additional workload. This summary analysis also does not include the time associated with other fire prevention and public education activities that were assigned to the Fire Prevention Officers. The department would benefit from implementing a process for tracking these activities as referenced in NFPA 1730. It should also be noted that this analysis is for the year 2016 prior to the hiring of the dedicated Public Education Officer.

Table 10: 2016 Routine Fire Inspection and Re-inspection Workload

Major Building Occupancy Type	Initial Inspection (Hours)	Re-Inspection (Hours)	Total (Hours)
Group A - Assembly	134	165	422
Group B – Care or Detention	41	48	182
Group C - Residential	387	510	1042
Group D/E – Business/Mercantile	55	46	203
Group F - Industrial	50	40	124
Total	667	809	1973

The analysis presented above reflects a very proactive fire inspection program. This confirms the findings of the 2017 RFPS that concluded "*The assessment by the review team found a good system in place. Files were up to date, there were no outstanding time lags regarding Fire Code enforcement measurers".*

The time spent on re-inspection for assembly, institutional and residential occupancies is not insignificant. Consideration should be given to strategies which may reduce the time re-inspecting properties. This may include improved communication with building owners and property managers as to what will be inspected and what the expectations are for compliance prior to inspection. Making the public aware that property owners will be invoiced for unnecessary follow up inspections for non-compliance may also act as a deterrent and thus reduce time spent on re-inspections.

The findings of the Comprehensive Risk Assessment and the recommendations of this FMP may result in further workload on the current Fire Prevention Officers in order to sustain the degree of routine fire inspections currently provided by the SSMFS. This FMP includes a proposed staff resource plan for the Fire Prevention/Public Education Division that includes options for Council's consideration in sustaining and further enhancing the current proactive fire inspection program in achieving the proposed strategic priorities of this FMP that include:

> *"The optimization of the first two lines of defence, including public education and fire prevention, and the utilization of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Community Risk Assessment"*

Industry best practices reflect that fire inspection cycles should be identified and approved by Council within the Fire Department Establishing and Regulating By-Law. The current Establishing and Regulating By-law does not include specifics with regard to the types of occupancy fire inspections and the fire inspection cycles. A list of the occupancy types and inspection cycles should be included within the Establishing and Regulating By-Law as a part of the proposed Fire Prevention Policy to authorize the fire

department to conduct these activities and indicate to the community the levels of service to be provided. Identifying key performance objectives such as fire prevention inspection cycles is also a core component of fire master planning and the ongoing monitoring and evaluation of the levels of fire protection services provided by the fire department.

5.11 Enhancing Fire Safety in Occupancies Housing Vulnerable Ontarians, Ontario Regulation 150/13

Ontario Regulation 150/13 was filed on May 9, 2013. This regulation introduced amendments to the Ontario Fire Code that came into force on January 1, 2014. The OFMEM led the development of this new regulation in consultation with a Technical Advisory Committee of industry experts. This regulation is intended to enhance fire safety in occupancies that house vulnerable occupants. This would include those occupancies classified as Group B – Care or Detention occupancies.

Compliance with this new regulation is achieved through a multi-pronged strategy including mandatory fire safety inspections by local fire department; the performance of fire drill scenarios in all care, care and treatment and retirement homes as approved and witnessed by local fire departments; as well as fire protection upgrades to existing buildings, including the installation of automatic sprinkler systems. Under the direction of the OFMEM, local fire departments are now required to update registry of all buildings affected by the new legislation. This task has been completed by the SSMFS. The registry requires updating after each inspection is performed and fire drill scenario is witnessed by the local fire department.

The proposed fire inspection cycles presented within this FMP includes the requirements for the annual inspection of each building affected by this legislation. The 2017 RFPS also identified that for vulnerable occupancies it would be beneficial for the SSMFS to "*develop and implement operating guidelines, to support the program and promote operational continuity and consistency within the SSMFS".*

The Comprehensive Risk Assessment identifies the following key risks related to the current vulnerable occupancies in the City:

CRA Key Risks Analysis Outcomes	SECOND LINE OF DEFENCE	CRA
	For consideration within the proposed Inspection/Enforcement Program	Identified Risk Level
There are 25 registered Vulnerable Occupancies in the City.	X	High
Additional potential high life-safety risk considerations in the City include 33 schools and 3 detention centres.	X	High

The department has completed the required registration process for all of the identified Vulnerable Occupancies. Updates are required as inspections and fire drill scenarios are performed. Of importance to this fire master planning process and community fire safety planning is that the CRA also confirms the following key finding:

CRA Key Findings Analysis Outcomes	SECOND LINE OF DEFENCE For consideration within the proposed Inspection/Enforcement Program
The identified Potential High Life-Safety Risk occupancies are primarily located within the Urban Settlement Area.	X

The findings of the CRA further highlight the importance of proactive education, inspection and enforcement strategies to mitigate the potential risk to occupants of a vulnerable occupancy. In our view this further supports the benefits of developing an operating guideline to consolidate and define the goals and objectives of the departments programs and activities related to the applicable legislation and fire safety strategy for all vulnerable occupancies within the City.

Operational Recommendation #21: That the SSMFS develop a consolidated Operating Guideline containing the goals and objectives for all services related to vulnerable occupancies within the City.

5.12 Fire Safety Plans

The Ontario Fire Code (OFC) requires a Fire Safety Plan (FSP) for specific occupancy types. These plans provide the on-site staff and the responding fire and emergency services with an understanding of the protocols to be utilized in the event of an emergency. FSPs typically include building layouts, evacuation plans, and details regarding fire alarm and life safety systems in place, and the protocols for staff in an emergency.

The Ontario Fire Code (Section 2.8) requires a fire safety plan for specific occupancy types. These premises include (but are not limited to):

- an assembly occupancy;
- a care occupancy;
- a care and treatment occupancy;
- a detention occupancy;
- a residential occupancy where the occupant load exceeds 10;
- a retirement home;
- a business and personal services occupancy where the occupant load exceeds 300;
- a mercantile occupancy where the occupant load exceeds 300;
- a high hazard industrial occupancy where the occupant load exceeds 25;

- a medium hazard industrial occupancy where the occupant load exceeds 100; or,
- a low hazard industrial occupancy where the occupant load exceeds 300;
- buildings or premises containing 4 storeys or more, including storeys below grade;
- outdoor tire storage yards;
- buildings and open areas where the quantities of flammable liquids and combustible liquids exceeds 500L in total or exceeds 250L of Class I liquids;
- laboratories;
- boarding, rooming and lodging houses;
- buildings up to and including 6 storeys in building height with residential occupancies;
- used as convalescent home or children's custodial home providing sleeping accommodations for more than three persons
- recreational camps regulated by or under the Health Protection and Promotion Act; and
- facilities regulated by or under the *Developmental Services Act*.

A designated Chief Fire Official of the municipality is required by the Ontario Fire Code to review and approve the fire safety plans for the occupancies listed above when the building is first occupied and on an ongoing basis. *OG#1700-09 – Fire Safety Plan Review and Approval* identifies the process for Fire Prevention Officers to review and approve Fire Safety Plans.

The 2017 RFPS included a recommendation related to Fire Safety Plans that stated:

2017 RFPS Recommendation #13: The Municipal Council of the City of Sault Ste. Marie must ensure SSMFS Fire Prevention Officers take the training necessary to approve Fire Safety Plans (FSP) for Vulnerable Occupancies (VO), if they are to continue to do so. Any VO FSP's approved post December 31, 2016 in the absence of the required training need to be reviewed and approved by personnel that have the required training.

This same training is required to approve fire drill scenarios representing the lowest staffing complement in care occupancies, care and treatment occupancies and retirement homes.

Our research indicates that the SSMFS has complied with this recommendation by implementing the following steps:

- *All Fire Prevention Officers have been designated as "Chief Fire Officials" for the purposes of reviewing and approving Fire Safety Plans for all building occupancies where they are required excluding vulnerable occupancies; and*
- *The Deputy Chief responsible for the Prevention/Education Division has completed the required "Training for Chief Fire Officials" and has been designated as the sole authority for reviewing and approving Fire Safety Plans for all vulnerable occupancies.*

The SSMFS has also updated *OG#1700-09 – Fire Safety Plan Review and Approval* to reflect these operational changes.

5.13 Fire Investigations and Cause Determination

Investigating the origin and cause of a fire is a municipal fire department's responsibility. Where fires meet specific criteria the local fire and emergency service can request assistance from the OFMEM to conduct these investigations. The criteria and process for this request are contained within OFMEM *Directive #2015-002 – Reporting of Fires and Explosions Requiring Investigation.*

Department Notice #1400-10 – Call-Out Procedures for Fire Investigation and Scene Security describes the roles and responsibilities of the SSMFS to conduct fire investigations included origin and cause determination. The Deputy Chief responsible for the Prevention/Education Division and the four Fire Prevention Officers have all completed the "Certified Fire and Explosion" (CFEI) training and received designation through the National Association of Fire Investigators International (NAFI). This certification is renewed every five years.

The SMFS is also a participant in a procedural agreement with the Sault Ste. Marie Police Services and the Office of the Fire Marshal and Emergency Management that defines how the three organizations will consult and cooperate with respect to conducting fire and explosion investigations.

The 2017 RFPS references that *"When reviewing the fire investigation program consideration should be given to developing and implementing operating guidelines for conducting interviews and for the sharing of information between the Fire Prevention Division and Operations Division regarding the outcomes of fire investigations".* Our interpretation of the OFMEM's findings of the SSMFS current fire investigation process is that it complies with the municipality's legislative responsibilities and reflects an example of industry best practices in this area.

The department should consider adding a section within *Department Notice #1400-13 Note-Taking Policy* that provides direction with respect to providing guidance on how to properly conduct an interview with individuals related to a fire investigation.

The department currently utilizes the information garnered from fire investigations to assess the effectiveness of prevention and education programs and activities. In many instances this information sharing is not formalized but rather intrinsic to the department's ongoing business planning and evaluation process. The OFMEM that references developing an operating guideline that defines this process may be difficult. Alternatively, the department may want to consider enhancing the sharing of fire investigation information between the Fire Prevention Division and Operations Division by including further direction within *Department Notice #1400-10 – Call Out Procedures for Fire Investigation and Scene Security.* This could include guidance for the assigned fire investigator to review his/her findings

throughout the investigation with the responding Platoon Chief for communication to responding Operations Division staff.

The CRA identified a number of key risks related to the origin and cause of fires that should be communicated to fire suppression staff and considered in developing the department public education and routine inspection programs. These include:

CRA Key Risks Analysis Outcomes	FIRST & SECOND LINE OF DEFENCE	CRA
	For consideration within the proposed Public Education & Inspection/Enforcement Programs	Assigned Risk Level
From 2012 to 2016, the City experienced a higher proportion of fires that were caused intentionally when compared to the Province (14% versus 8.8%), where the proportion caused by vandalism was 3.7% (10 fires) versus 2.2%, and the proportion related to arson was 10.3% (28 fires) versus 5.9%.	X	Moderate
Of the fires occurring in the City from 2012 to 2016, the leading cause of unintentionally set fires was misuse of an ignition source at 40.2% (109 fires), compared to 30.2% in the Province.	X	Moderate
Of the fires occurring within the City from 2012 to 2016, 24.4% of fires (66) occurred as a result of cooking equipment in Sault Ste. Marie, approximately 6.6% higher than that of the Province.	X	Moderate
Of the fires occurring within the City from 2012 to 2016, 19.6% of fires (53) occurred as a result of open flame tools / smokers' articles in the City, 5.8% higher than the Province.	X	Moderate

Key findings of the CRA that should also be considered within the departments risk reduction strategies include:

CRA Key Findings Analysis Outcomes	FIRST and SECOND LINE OF DEFENCE
	For consideration within the proposed Public Education & Inspection/Enforcement Programs
From 2012 to 2016, the City experienced a similar proportion of unintentionally set fires when compared to the Province (68.3% versus 67.9%), accounting for 185 fires.	X
This analysis indicates that the Downtown appears to have a higher instance of fire calls related to arson, mechanical / electrical failure, and misuse of an ignition source.	X
The Downtown appears to have a higher instance of fire calls with an ignition source of cooking equipment or open flame tools/smokers articles.	X

5.14 Proposed Fire Inspection Program

The findings of the 2017 RFPS indicate that the current fire inspection program provided by the SSMFS reflects a good program that meets the legislative requirements of the City. Fire department staff is well trained in this area and utilize efficient processes to conduct routine fire inspections of occupancies based on the priorities identified. The 2017 RFPS included a recommendation related to multiple false alarms at the same building, and the process for determining the need for an inspection as a result of a complaint or request.

2017 RFPS Recommendation #12: The Municipal Council of the City of Sault Ste. Marie should consider the development and implementation of operating guidelines for the SSMFS that address:

1. *Internal communications processes and the management of occurrences of multiple false alarms at the same address.*
2. *Assessment and determination of the need for conducting a fire safety inspection when a complaint or a request is received.*

This recommendation stems from Ontario Regulation 365/13, Mandatory Assessment of Complaints and Requests for Approval which came into force January 1, 2014 under the authority of the FPPA. The regulation was supported by subsequent Fire Marshal Directive 2014-03, which formalizes certain responsibilities assigned to Chief Fire Officials and Assistants to the Fire Marshal. These include:

- Assessment of all fire safety complaints received, and if determined appropriate, a fire safety inspection;
- Assessment of all requests for assistance with Fire Code compliance when approval of the Chief Fire Official is required, and if determined appropriate, a fire safety inspection;
- The OFMEM registry be updated if complaints or requests for assistance relate to a care occupancy, care and treatment occupancy or retirement home.

Request and complaint inspections will be discussed further under separate heading below.

As previously discussed in Section 4.3.3, By-law 2017-210, sets out fees for fire safety inspections, file searches, air bottle refills, fire extinguisher training and burn permits. It does not however address investigations. Worth consideration is the concept of introducing cost recovery as a way of recouping the costs of securing a scene, fire watch, staff time or the use of heavy equipment. Investigations can be complex and time consuming and the costs to the municipality can be significant. Other jurisdictions within Ontario have opted to adopt by-laws to recoup some or all of these costs.

5.14.1 False Alarms

Our research into preparing this FMP indicates that the SSMFS utilizes an informal process that includes targeting public education to reduce the potential for false alarms as well as prevention staff following up in the event of multiple false alarms to the same address. Department *OG #1700-03 Fire Code*

Inspections that defines the current department policy for conducting Fire Code inspections; however it does not reference the current process for dealing with false alarms.

Our research further indicates that current industry best practices for managing the occurrence of false alarms is to include cost recovery (user fee) for services based on the number of false alarms within a given time frame. Examples of where a cost recovery provision (user fee) that may be considered as a deterrent at any one occupancy include:

- *Multiple nuisance false alarms that occur with a 24 to 72 hour period;*
- *Following the second and/or third false alarm in any one calendar year; and*
- *As a result of a malicious act.*

The authority to recover costs should be included in the Establishing and Regulating By-law.

The CRA identified three key findings related to the department's historical false alarm experience including:

CRA Key Findings Analysis Outcomes	SECOND LINE OF DEFENCE
	For consideration within the proposed Inspection/Enforcement Program
Based on an analysis of SSM Response Types, False Alarm calls account for the highest proportion of call types responded to within the City at 35% of all calls over the five year period from 2012 to 2016.	X
Of the False Alarm calls reported from 2012 to 2016, 59% were false fire calls, 27% CO false calls, and 14% burning (controlled).	X
The spatial analysis of False Alarm Calls for the period 2012 to 2016 indicates a higher density of False Alarm Calls occurring in the in the Downtown and north of Downtown on the south east side of Great Northern Road and Third Line East by Sault Area Hospital.	X
SSMFS response to the airport is primarily for calls categorized as False Fire Calls.	X

The findings of the 2017 RFPS, our research and the CRA indicate that false alarm calls result in a significant demand on the current resources of the SSMFS. In our experience these findings support the development of a comprehensive strategy that includes additional public education, enhanced routine fire inspections and use of cost recovery (user fees) to mitigate the occurrence of false alarms within the City. Where applicable this strategy should be supported by operating guidelines to provide direction to staff.

Operational Recommendation #22: That the SSMFS develop a comprehensive strategy for managing false alarm calls that includes additional public education, enhanced routine fire inspections and the implementation of user fees as referenced within the proposed FMP, and further that cost recovery be included in the Establishing and Regulating By-law.

5.14.2 Request or Complaint Inspections

On receipt of a request or a complaint the SSMFS initiates a process to comply with its legislative requirements. Our research and consultation with senior department staff indicates that the current process is driven by the historical practices of the department. The Fire Prevention Officers are well trained and knowledgeable in their requirements and respond to these requests and complaints. Our research indicates that this current process is not formally documented within a department operating guideline or notice.

To address the recommendations of the 2017 RFPS and to further enhance the department practices in this area it is recommended that the SSMFS develop an operating guideline for responding to complaints and requests for fire inspections in keeping with the requirements of O. Reg. 365/13 and Fire Marshal's Directive 2014-03.. In our view this could be achieved by documenting the department's current process that defines the steps to be followed once a request or complaint is received including the time frame for responding.

Operational Recommendation #23: That the SSMFS develop a department Operating Guideline for responding to requests and complaints as referenced within the proposed FMP.

5.14.3 Routine Inspections

The findings of the Comprehensive Risk Assessment and recent legislative changes including the new *"Enhancing Fire Safety in Occupancies Housing Vulnerable Ontarians, Ontario Regulation 150/13"* support considering the implementation of a strategy to further enhance the current scheduling process for conducting routine fire inspections including identifying cycles to achieve the proposed strategic priority of this FMP including:

> *"The optimization of the first two lines of defence, including public education and fire prevention, and the utilization of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Comprehensive Risk Assessment"*

The Comprehensive Risk Assessment identifies the following key risks that should be considered within the department's fire inspection programming:

CRA Key Risks Analysis Outcomes	SECOND LINE OF DEFENCE	CRA
	For consideration within the proposed Inspection/Enforcement Program	Assigned Risk Level
The City identified 24 occupancies with a height in excess of 18 metres, which are defined as high-rise buildings by the OBC. Most of these occupancies are found in the Downtown area	X	High
Although occurring at a lower proportion compared to the Province from 2012 to 2016 (5.2% vs. 7.5%), Group F – Industrial occupancies accounted for 19.2% of the property loss from structure fires in the City, while accounting for just 14 fires.	X	High/Moderate

In addition to the identified key risks the CRA also identified the following key findings that should be considered within the department's fire inspection programming:

CRA Key Findings Analysis Outcomes	SECOND LINE OF DEFENCE
	For consideration within the proposed Inspection/Enforcement Program
Buildings with a larger area are consistent with Industrial and Commercial uses such as those occupancies found Downtown south of Wallace Terrace on the waterfront, and along the Great Northern Road and Trunk Road.	X
Group F – Industrial Occupancies are typically located west of Great Northern Road north of Second Line West, and along the waterfront west of Downtown.	X
94.9% of the buildings have a footprint of 2,500 sq. ft. or less which is consistent with the proportion of the property stock that is Group C – Residential occupancies.	
There are properties within the City that have fuel load related concerns, primarily linked to the identified Industrial land use.	X
Potential building exposures are largely linked to the built up areas primarily found Downtown and throughout residential areas within the Urban Settlement Area.	X
Group F-Industrial Occupancies represent 1.2% of the City's total property stock.	X
The majority of industrial uses are identified within the Group F, Division 2 – Medium-Hazard Industrial occupancies at 1.18% of the total property stock including open space.	X
Group F – Industrial Occupancies are typically located west of Great Northern Road north of Second Line West, and along the waterfront west of Downtown.	X
There are a number of identified heritage buildings located in the Downtown area.	X
Most of the identified high rise occupancies are found in the Downtown area.	X

In our view the current routine fire inspection schedule appears to have worked very well for the SSMFS in prioritizing inspections through information obtained from the SRA, fire investigations and fire incident reports. To assist the department in moving towards developing Council approved performance

objectives for each of the programs the department provides this FMP includes a strategy to develop fire inspection cycles based on the major building occupancy classifications of the Ontario Building Code.

The application of this strategy would further enhance the current routine scheduling process, allow for prioritization of inspections utilizing the findings of the CRA, and result in the development of fire inspection cycles that could be presented to Council for consideration and approval as performance objectives for the routine fire inspections conducted by the SSMFS. Subject to acceptance of the proposed fire inspection performance objectives we recommend that they be included within the proposed Fire Prevention Policy for inclusion within the proposed Establishing and Regulating By-law.

Table 11 identifies the proposed fire inspection performance objectives for conducting routine fire inspections within the City of Sault Ste. Marie based on the Comprehensive Risk Assessment.

Table 11: Proposed Fire Inspection Performance Objectives

Occupancy Classification (OBC)	Buildings	Proposed Fire Inspection (Performance Objectives)
Group A – Assembly	Schools, Recreation Centres (Arenas), Curling/Golf Centres	1 – 2 Years
Group A – Assembly	Licensed Properties, Nursery/Day Care Facilities, Churches, Special Occasion Permits	1 – 2 Years
Group B – Care or Detention	B-2 and B-3 Nursing homes, Homes for Special Care	Annually
Group C – Residential	Apartments regulated by Part 9.3 of the OFC Apartments regulated by Part 9.5 of the OFC Apartments regulated by Part 9.8 of the OFC Hotels/Motels - regulated Part 9.9 of the OFC	2 – 3 Years 2 – 3 Years 2 – 3 Years 2 – 3 Years
Group D - Business	Business and Personal Services Occupancies	3 – 5 Years
Group E - Mercantile	Mercantile Occupancies	3 – 5 Years
Group F - Industrial	Factories and Complexes	1 – 2 Years

Within the Group F – Industrial occupancy category the Comprehensive Risk Assessment identifies two occupancies within the City where “special considerations” may be applicable. These include Essar Algoma Steel and Tenaris Algoma Tubes. The CRA highlights the importance of risk mitigation in these

occupancies. Examples of fire department risk mitigation strategies may include pre-planning, routine fire inspections and the review and approval of a Fire Safety Plan. The findings of the CRA should be considered in applying the proposed fire inspection cycles to these two occupancies. Key findings from the CRA that contribute to the identification of special considerations are as follows.

CRA Key Findings Analysis Outcomes	SECOND LINE OF DEFENCE For consideration within the proposed Inspection/Enforcement Program
The City has key facilities / employers that greatly contribute to the economic wellbeing of the municipality which are found distributed throughout the City .	X
The City has key facilities / employers, including Essar Steel Algoma, that greatly contribute to the economic wellbeing of the municipality. By playing a proactive role from the perspective of education and prevention strategies within these facilities, the fire department can mitigate fire risk.	X

To achieve the proposed fire inspection cycles including enhancements to the department's current routine fire inspection schedule, and implementation of the strategies proposed to achieve the strategic priorities of this FMP the SSMFS will need to consider further staffing resource options. The proposed Fire Prevention/Public Education Staff Resource Plan will present options for Councils consideration.

Council Recommendation #3: That the proposed fire inspection cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.

5.15 Proposed Fire Prevention/Public Education Staff Resource Plan

Best practices within the fire service, and more recent evidence across Ontario indicates that optimizing the delivery of fire prevention and public education programs can have a positive impact in changing human behavior. In addition to reducing emergency call volume the resulting impacts can include a reduction in the number of fire related deaths and injuries, and property loss as a result of fire.

This FMP includes strategic priorities to enhance the programs and activities provided by the SSMFS in this area including the proposed public education programs and enhanced fire inspection program. To achieve this, the following options are presented.

5.15.1 Public Education Officer

Prior to the implementation of this new positon in 2016 the department's public education programs and activities were predominantly facilitated by the Fire Prevention Officers. This review indicates that the department is still assessing the impacts of this added resource in relation to the workload capacity within this Division. As this assessment proceeds and the recommendations of this FMP are considered this assessment may indicate that as a result of the implementation of the new Public Education Officer the Fire Prevention Officers will have some additional inspection/enforcement workload capacity.

5.15.2 Fire Suppression Staff

On-duty fire suppression staff remain instrumental to the success of the department's public education programming and specifically the In-Service Safety Awareness Program. Under the leadership of the Fire Chief, the OFMEM has agreed to provide *NFPA 1031 – Fire Inspector – Level I* training to the Captains and Acting Captains over the course of the next two years. This is a proactive strategy towards ensuring the Captains and Acting Captains are qualified to assist in delivering the department's fire inspection program including the In-Service Fire Awareness Program.

Consideration should also be given to providing the Captains and Acting Captains *NFPA 1035 Public Fire and Life Safety Educator – Level I* training. This would provide similar qualifications for supporting the department's public education program.

Subject to completion of the applicable qualifications, the Captains and Acting Captains will be available to add additional capacity to the department's fire inspection and public education programming. This should include additional roles and responsibilities in areas such as:

- *Developing a process for in-service suppression staff to conduct the initial investigation of requests for an inspection or upon receipt of a complaint;*
- *Developing a process for in-service suppression staff to complete fire inspections of identified low risk occupancies; and*
- *Delivery of targeted public education programs to identify demographic risks such as seniors.*

5.15.3 Qualifications of Existing Fire Prevention/Public Education Staff Resources

Review of the current fire prevention and public education staff resources indicates that they have attained a range of qualifications. Current industry best practices indicates that the SSMFS should consider opportunities for all of the Fire Prevention Officers and the Deputy Chief responsible for fire inspections to attain the *NFPA 1031 – Fire Inspector – Level II* qualifications. Due to approaching retirements this strategy should prioritize the Deputy Chief as the first step and then become a mandatory requirement for all new Fire Prevention Officers. Consideration should also be given to supporting all of the Fire Prevention Officers and the Deputy Chief in attaining the *NFPA 1033 – Standard for Professional Qualifications for Fire Investigator*.

5.15.4 Recruit Firefighters

Fire departments across Ontario have traditionally recognized the added value that on- duty fire suppression staff (firefighters) can provided to supporting the first two lines of defence. More recently departments have begun to implement strategies to further enhance this value by providing additional initial training to recruit firefighters to attain qualification to *NFPA 1031 – Fire Inspector – Level I and NFPA 1035 Public Fire and Life Safety Educator – Level I* qualifications similar to those proposed for the Captains and Acting Captains.

This strategy reflects the continuing evolution of the fire service that recognizes the added value that the participation of on-duty fire suppression staff can have in optimizing the overall safety of a community. This is a strategy that the SSMFS should consider as it embarks on future firefighter recruitment processes and is a natural extension of the strategy to qualify existing Captains and Acting Captains.

5.15.5 Additional Fire Prevention Officer

The implementation of the strategies listed above should assist in providing additional capacity and broader staff qualifications for the SSMFS to enhance the department's current public education and fire inspection programs and activities. Current staffing levels within the prevention and public education division are insufficient to achieve the strategic priorities of this FMP aimed at reducing risk to the community.

It is recommended that subject to consideration of the proposed fire prevention/public education staff resource plan that the SSMFS consider hiring an additional Fire Prevention Inspector within the next 1 to 3 year period.

5.15.6 Proposed Fire Prevention/Public Education Staff Qualifications

Review of current industry best practices is informed by applicable guidelines, standards and other applicable information such as the findings of recent Coroner's Inquests. This review highlights the importance of ensuring that staff resources have the appropriate skills, experience and qualifications to deliver the department's fire inspection and public education programming.

Research into developing this FMP indicates that the SSMFS is well aware of these requirements and is committed to staff training and ongoing professional development. Table 12 summarizes the proposed fire prevention/public education staff qualifications.

Table 12: Proposed Fire Prevention/Public Education Staff Qualifications

Position	NFPA 1031 Level I	NFPA 1031 Level II	NFPA 1035 Level I	NFPA 1035 Level II	NFPA 1041 Level I	NFPA 1033
Deputy Chief		•		•	•	•
Fire Prevention Officers		•		•	•	•
Public Education Officer		•		•	•	•
Fire Suppression Officers (Captains & Acting Captains)	•		•			

5.15.7 Proposed Fire Prevention/Public Education Staff Resource Plan Summary

The proposed fire prevention/public education staff resource plan provides a range of strategies for the SSMFS to enhance the capacity and qualifications of staff delivering fire inspection and public education programming. Proposed qualifications for all staff are also presented to further inform the staff training and professional development program.

Council Recommendation #4: That the proposed Fire Prevention and Public Education staff resource plan presented within the proposed FMP be considered for implementation.

5.16 Fire Prevention and Public Education Summary and Recommendations

This FMP recognizes the significant value of fire prevention and public education programs in reducing the probability and consequences of a fire, and improving public safety. The fire prevention division delivers a range of effective programs and activities that are consistent with applicable standards, guidelines and industry best practices.

The recommendations of this FMP for enhancing the fire prevention and public education activities and programs currently being delivered by the SSMFS are intended to respond to the increasing legislative requirements identified, and optimize the benefits of these activities in reducing the probability and consequences of a fire, resulting in a safer community.

The strategic priorities contained within this FMP are presented to provide Council with a framework to optimize the use of fire prevention and public education programs in providing the most cost effective and efficient level for fire protection services that provides the most value to the community.

Our review of the Fire Prevention and Public Education activities and resources has identified the following Council and Operational recommendations for consideration:

Council Recommendations:

2. *That the proposed public fire safety education activities and program cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.*
3. *That the proposed fire inspection cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.*
4. *That the proposed Fire Prevention and Public Education staff resource plan presented within the proposed FMP be considered for implementation.*

Operational Recommendations:

14. *That the SSMFS replace the current Simplified Risk Assessment with the framework of the comprehensive risk analyses model.*
15. *That the draft Fire Prevention Policy be updated and presented to Council for consideration and inclusion within the proposed Establishing and Regulating By-law as an appendix.*
16. *That department Notice #300-01 – Pre-Fire Plans be replaced with a comprehensive operating guideline informed by the findings of the Fire Master Plan and Comprehensive Risk Assessment*

17. *That an Operating Guideline be developed for the SSMFS home smoke alarm, carbon monoxide alarm and home escape planning program, and that this program be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.*
18. *That the SSMFS develop an operating guideline to define the process of tracking all public fire safety information distributed to the public in response to legislative requirements of the FPPA.*
19. *That the SSMFS continue to prioritize the delivery of seniors (aged 65 and over) public education programs as referenced within the proposed Fire Master Plan.*
20. *That the proposed public fire safety education activities and program cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.*
21. *That the SSMFS develop a consolidated Operating Guideline containing the goals and objectives for all services related to vulnerable occupancies within the City.*
22. *That the SSMFS develop a comprehensive strategy for managing false alarm calls that includes additional public education, enhanced routine fire inspections and the implementation of user fees as referenced within the proposed FMP, and further cost recovery be included within the Establishing and Regulating By-Law.*
23. *That the SSMFS develop a department Operating Guideline for responding to requests and complaints as referenced within the proposed FMP.*

6.0 Emergency Management

This section presents the municipal standards for emergency management across the Province and explores the division staffing and approach within the City.

6.1 Municipal Standards for Emergency Management

Under the Ontario *Emergency Management and Civil Protection Act (EMCPA),* the Solicitor General has authority to make regulations setting standards for the development, implementation and maintenance of emergency management programs required by communities. It is the responsibility of every municipality, minister of the Crown and designated agency, board, commission and other branches of government to ensure that their respective emergency management plans conform to the standards set within the Act. The Act also requires every municipality to adopt the emergency management program by by-law.

The Office of the Fire Marshal and Emergency Management has a core emergency program, with elements focused on supporting emergency preparedness and response activities. The program requires designating an Emergency Management Program Coordinator, typically known as a Community Emergency Management Coordinator (CEMC), having a written emergency response plan and forming a program committee. Part II of the *Ontario Regulation 380/04* lays out the Municipal Standards for emergency management. There are six main standards relating to:

i. Emergency Management Program Coordinator;
ii. Emergency Management Program Committee;
iii. Municipal Emergency Control Group;
iv. Emergency Operations Centre;
v. Emergency Information Officer; and
vi. Emergency Response Plan.

6.1.1 Emergency Management Program Coordinator and Committee

Under the EMCPA and Ontario Regulation 380/04, each municipality within Ontario is required to designate an emergency management program coordinator, who is required to complete training as determined appropriate by the Chief, Emergency Management Ontario. A guidance document dated 2017-01-09 sets out the following training requirements for CEMCs within one year of appointment to the position:

- EM200 Basic Emergency Management (BEM)
- EM300 Community Emergency Management Coordinator Course
- IMS100 Introduction to Incident Management System (on-line)

- IMS200 Basic Incident Management System

These courses are made available in locations across the Province through the OFMEM. Municipalities may request to host these courses locally to ease travel costs as well as to promote a working relationship with neighbouring jurisdictions, partner agencies, and the Province.

The CEMC is responsible for coordinating a municipality's emergency management program and report his/her work to the community's emergency management program committee. The emergency management program committee includes the CEMC; a senior municipal official appointed by council; other appointed members of council; municipal employees responsible for emergency management functions; as well as other persons as appointed by council. The emergency management program committee is responsible for conducting an annual review of the emergency management program as well as for making recommendations to municipal council for changes and updates to the plan, as determined necessary.

6.1.2 Emergency Control Group

Each municipality is also required to have an Emergency Control Group (ECG) consisting of elected officials and employees who have been appointed by council. This group is required to participate in annual training, including a simulated emergency incident. The training can be live or a table top exercise, although the former is preferable. The ECG directs the Emergency Response Plan (ERP) in the event of an emergency, adjusting procedures and recommending improvements to the ERP as it determines necessary after training exercises or actual emergency incidents.

6.1.3 Emergency Operations Centre

The Emergency Operations Centre (EOC) is activated and staffed by the ECG during emergency events. It is to be equipped with appropriate equipment and technology, including a means of providing effective communications during an emergency. When planning an EOC, consideration regarding the resiliency and interoperability of technology and the suitability of a facility for emergency events of varied duration and severity. This includes the need for appropriate location; washroom and shower facilities; access to food and water; stable telecommunications systems including multiple options such as cell phones, landlines, Voice Over Internet Protocol (VOIP), satellite phones, two way radios, Amateur Radio Emergency Services (ARES); dry erase boards and or flip charts; television and radio; computer and projection system; and back-up power generator.

6.1.4 Emergency Information Officer

An Emergency Information Officer (EIO) is designated by each municipality as the primary media and public relations contact in the event of an emergency. The individual responsible for carrying out this role ensures that accurate information about the emergency is communicated with both the public and the media.

6.1.5 Emergency Response Plan

The importance of an Emergency Response Plan is to ensure that there is a coordinated, controlled and effective response to emergencies with the objective of minimizing impacts to safety, health and welfare of residents in a municipality. The scope of these emergencies can vary temporally, lasting a few hours to several days or longer.

Municipalities are required to identify local risks and hazards, the potential impact of the hazards as well as existing infrastructure. This process is known as a Hazard Identification and Risk Assessment (HIRA). Further, as part of the HIRA, municipalities are required to prepare a Critical Infrastructure (CI) list, setting out details of infrastructure and facilities that may be at risk in the event of an emergency. An emergency could impact the residents, the jurisdiction's ability to provide services as well as the local economy.

Preparing an ERP requires considerable planning involving a number of factors including but not limited to:

- Population, including vulnerable persons
- Major employers and industry;
- Transportation and traffic management;
- Potential shelters;
- Incident specific hazards (flooding, weather, HazMat) etc.;
- Site specific hazards;
- Staff and financial resources;
- Geographic considerations;
- Language issues;
- Means of communication;
- Food, water and fuel supply;
- Medical resources;
- Local infrastructure;
- Environmental safety; and
- Response capabilities.

Section 2.1 of the EMCPA requires that in addition to an emergency management program consists of an emergency plan; training and exercise programs for all persons with responsibilities under the plan; and public education specific to public safety and public preparedness;

A public education program which addresses risks to public safety and ways for residents to be prepared should there be an emergency may take a variety of forms including:

- Displays and presentations at local public events;

- Distribution of print materials;
  Public Service Announcements though media contacts (i.e., radio, television, etc.)
- Social media presence; and
- Information on municipal website.

A summary of the public education activities is required to be submitted to verify municipal compliance with the EMCPA.

6.2 Municipal Compliance

In 2017, the Office of the Fire Marshal and Emergency Management circulated the Emergency Management and Civil Protection Act Compliance Guide for Municipalities. The guide provides information to assist municipalities in achieving compliance with the EMCPA.

To verify compliance with the EMCPA, municipalities are required to annually review and submit the following documentation:

- Emergency Response Plan (ERP);
- Proof of training;
- Proof of exercises;
- Evidence of public education program;
- Municipal Hazard Identification Risk Assessment (HIRA);
- Critical Infrastructure (CI) List; and
- Emergency Management Program By-law.

A municipality's compliance under the *Emergency Management and Civil Protection Act* and Ontario Regulation 380/04, can now be reported through online submission to the OFMEM. Documents that support annual compliance can be uploaded to a new, secure submission tool. Submitted data is used by the OFMEM to identify provincial trends as well as a method of informing programming. Compliance is monitored by the OFMEM.

6.3 City of Sault Ste. Marie Emergency Management

The City has established a number of roles, committees, and documents to meet the required standards and be prepared for an emergency within the municipality. These are described in the sections that follow.

6.3.1 Community Emergency Management Coordinator

Reporting directly to the Deputy Chief Education, Prevention, and Emergency Management the primary role of the Community Emergency Management Coordinator (CEMC) is to oversee the City's Emergency Management Plan to ensure continued compliance with the *Emergency Management and Civil*

Protection Act. Primary roles and responsibilities as taken from the current job description for this position include:

- *Provides strategic direction and oversight and the day-to-day management of the City's Emergency Management Program;*
- *Ensures the mandatory requirements of the Emergency Management and Civil Protection Act are met and continues to be ready to respond to and recover from any type of emergency or significant event;*
- *Establish and maintain a collaborative working relationship with staff in all departments, local municipalities, local hydro utilities, the police services, school boards, hospitals, other community partners, the Province and the business sector to ensure a coordinated response to any type of emergency or significant event;*
- *Ensure Community Emergency Response Plan and business continuity plans are current, reflective of response capabilities and incorporate industry recognized best practices;*
- *Implements a comprehensive program of testing, assessing and revising the Emergency Response Plan and business continuity plans through a rigorous training program including conducting a series of mock emergency exercises;*
- *Ensure there is a comprehensive public awareness program making residents are aware of the importance and the need for personal emergency preparedness; and*
- *Participate on inter-agency working group and committees.*

6.3.2 Community Emergency Planning and Research Assistant

Reporting to the CEMC the Community Emergency Planning and Research Assistant provides a supporting role to the CEMC including acting as the alternate CEMC in the absence of the Community Emergency Management Coordinator. Primary roles and responsibilities as taken from the current job description for this position include:

- *Provide emergency management expertise and administrative support during an actual emergency;*
- *Develop and implement annual public awareness campaign and perform public education initiatives, including media relations;*
- *Evaluate, review and validate annual public awareness campaign;*
- *Assist in developing the "Hazard Identification Risk Assessment (H.I.R.A.);*
- *Identify critical infrastructure and develop strategies in the event of their loss;*
- *Establish and maintain the Emergency Operations Center;*
- *Provide assistance to conduct annual training of the Community Control Group and Emergency Operations Center Staff;*
- *Assist in the Development, coordination of the annual training exercise; and*
- *Initiate and facilitate meetings with owners and operators of facilities identified in H.I.R.A.*

6.3.3 Emergency Management Planning Committee

The Emergency Management Planning Committee is made up of a variety of members associated with the Emergency Operations Centre Team and other major roles within the City. There are also alternate roles for the majority of members sitting on the Emergency Management Planning Committee in the instance where a primary member is absent. Its main purpose is to discuss relevant emerging information on emergency management, review the City's emergency management program, provide recommendations to the CEMC in development of the emergency management work plan, support the development and delivery of the emergency management program objectives (including training and exercises), make recommendations to Council for continued development of the program and assist the CEMC in meeting legislation by the Province.

6.3.4 Emergency Management Advisory Committee

The Emergency Management Advisory Committee is made up of members of the Emergency Management Planning Team who have required a level of expertise. The main purpose is to share ideas and topics amongst members of the Advisory Committee while correcting inconsistencies and minimizing duplications. In addition, their main role is to provide support to members of their own organization in regard to best practices in emergency management and act as experts in the field and provide their knowledge to assist the Emergency Management Planning Team.

6.3.5 City Emergency Response Plan

As mentioned, the Emergency Response Plan is the key guiding document in emergency preparedness. This plan ensures that emergencies of all types are controlled and responded to effectively with the objective of minimizing impacts to health, safety and the welfare of society. The City's Emergency Response Plan is recent as of 2017 and is in effect through municipal by-law 2008-40.

The Emergency Response Plan outlines processes for the activation of the plan, declaring a state of emergency, provides an overview of the Emergency Operations Centre, and outlines the roles and responsibilities of the Emergency Operations Centre Team (EOCT).

The EOCT is the main group responsible for providing direct response to emergency situations. Roles and responsibilities are filled appropriately depending on the type of emergency situation. Before an emergency, the EOC Commander or Section Chief is responsible for all emergencies until delegated. There are four sections to the EOCT which include operations, planning, finance and administration. Operations are broken down into two distinct branches including Human Health and Public Safety with each relating to a specific scope of work. Each branch includes units which are further related to each branch in greater specificity. For instance, the Human Health Branch includes the Emergency Social Services Unit and the Public Safety Branch includes the Police Service Unit.

The City of Sault Ste. Marie's Emergency Operations Centre Team consists of staff from a range of municipal services including:

- Mayor;
- Chief Administrative Officer;
- Police Chief;
- Fire Chief;
- Algoma Public Health;
- Social Services Administrative Board;
- Central Ambulance Communication Centre;
- Sault Area Hospital;
- 49th Field Regiment, Commanding Officer;
- Corporate Services; and
- Community Emergency Management Coordinator.

To activate the plan, any member of the EOCT or Incident Commander at the site of an emergency may notify the CEMC to request to activate the EOCT. Where the emergency exists the CEMC will notify all members of the EOCT. Where a threat of an impending emergency is present, the CEMC is to contact the CAO and Lead Agency for advice. The CAO or lead agency will decide to assemble the EOCT or they will be asked to be put on standby. The EOCT will be notified to convene and organize appropriate staff depending on the emergency.

6.3.5.1 City EOC

The Emergency Operations Centre (EOC) is the main locations where the EOCT convenes in the event of an emergency situation. Best practice suggests that there is a primary EOC and an alternate EOC for redundancy purposes. It was identified as part of the review completed for this FMP that the alternate EOC location is in close proximity to the primary location.

Consideration should be given to relocating one of the centres to provide as much physical separation in distance between the primary and alternate location. Where possible the supporting infrastructure such as water, communications, and hydro should also be on separate grids or systems in the event one of the centres is incapacitated as a result of the emergency incident. This FMP includes options for relocating fire stations that may present an opportunity for re-locating either the primary or alternate EOC.

6.3.5.2 Incident Action Plans

As required by the EMCPA, Sault Ste. Marie is required to complete a Hazard Identification and Risk Assessment (HIRA). The HIRA identifies the top hazards within Sault Ste. Marie in relation to probability and consequence. The City identified the top hazard-related risks as Human Health, Drinking Water (municipal), Electricity, Flooding, and Explosions / Fire and Transportation (rail). The Comprehensive Risk Assessment details this process (see Section 8.0).

As recommended by the HIRA, response plans or Incident Action Plans should be developed in conjunction with high risk hazards identified. For specific emergencies, Incident Action Plans were developed by the EOC Commander and planning group within the EOCT. There are multiple Incident Action Plans developed for the City which include:

- *Long Term Care and Emergency Plan;*
- *Hot Weather Response Plan;*
- *Animals and Emergencies Plan; and*
- *Emergency Fuel Plan.*

6.4 2017 Public Education Program Evaluation

In 2017, the SSMFS initiated a review of its emergency planning and preparedness public education awareness. This review was divided into three phases that included: community preparedness survey; implementation of new preparedness strategies; and a process to monitor and re-evaluate. Review of this initiative and its findings indicates a well organised and thorough process for assessing community emergency preparedness.

While other communities may experience similar findings, the results of the survey of Sault Ste. Marie residents identified some concerning statistics that indicate in general the community is not well prepared for a significant emergency. Of the 555 survey participants only 18% of participants owned a 72-hour survival kit, 18% had identified a family meeting place, and 54% were not at all aware of how to stay informed during an emergency. The survey results also showed that 81% of participants strongly agreed or agreed that they were capable of preparing, 96% strongly agreed or agreed that getting prepared would be an effective way to reduce their risk, only 18% were very aware or aware of what steps needed to be taken to prepare and less than 5% believed that preparedness was popular among other residents.

In response to the findings of the survey the following strategies were identified for inclusion within the City's emergency preparedness public education program:

1. *Increase availability and accessibility of local preparedness resources, tools and information;*
2. *Better utilize social media outlets to promote emergency preparedness;*
3. *Utilize proven public education strategies to counter Saultites denial and unrealistic optimism and instead encourage preparedness action;*
4. *Create measures to counter preparedness barriers including financial constraints, health/age limitations, ignorance, lack of motivation and lack of time;*
5. *Popularize preparedness by crafting normative messages that are consistent and repetitive; and*
6. *Better utilize the windows of opportunity after major disasters outside of our community.*

In our view these are positive strategies that though the implementation of Phase 3 which includes ongoing monitoring and re-evaluation should assist in raising the importance of emergency preparedness within the community.

6.5 Hazard Identification and Risk Assessment (HIRA)

The Comprehensive Risk Assessment includes a *"Hazard Profile"* that is predominantly informed by the City's current (2014) Hazard Identification and Risk Assessment (HIRA). The Ontario *Emergency Management and Civil Protection Act* (EMCPA) requires municipalities to complete a HIRA to outline all hazards and risks present in their municipality. The HIRA assists municipalities in preparing for, responding to, and recovering from emergency incidents. The HIRA also informs community emergency preparedness through the development of emergency management programs. The CRA identified the following key findings related to the City's identified HIRA hazards and key risks of particular relevance to emergency management.

CRA Key Findings Analysis Outcomes	THIRD LINE OF DEFENCE For consideration within the proposed Emergency Response
The top ten hazard related risks for the City are: human health, drinking water, electricity, flooding, explosions/fires, transportation – rail, snowstorm/blizzard, freezing rain, hazardous material spill, and transportation – air. Some of these hazards can occur as major or minor events.	X
As a top risk identified through the HIRA, flooding is an important consideration for the City. Consideration should be given to updating the flood plain mapping.	X
The rail lines within the City present a risk related primarily to the movement of goods.	X

CRA Key Risks Analysis Outcomes	THIRD LINE OF DEFENCE For consideration within the proposed Emergency Response	CRA Identified Risk Level
Incidents related to power and communications infrastructure results in an average of 20 calls per year on average.	X	Moderate

Operational Recommendation #24: That consideration be given to updating the City's flood plain mapping as part of the next Hazard Identification and Risk Assessment (HIRA) review process.

6.6 Emergency Management Summary and Recommendation

Dillon's review indicates that the City of Sault Ste. Marie recognizes the importance of sustaining its legislative compliance in this area. The review process and staff consultation conducted as part of this fire master planning process did identify a concern related to the ongoing turnover of members of the various emergency planning committees. Staff turnover is not uncommon in a municipal environment;

however it can be a factor impacting the ongoing training of staff in new roles with added emergency management roles and responsibilities. Related concerns were also expressed with the corporate branding or priority emergency management may take in comparison to other initiatives.

Both of these concerns are common to a municipal environment. However, if these concerns are considered in relation to the findings of the 2017 Public Education Program Evaluation they may relate to a more systemic challenge present within the community. The City may want to consider a reorganization of the emergency planning and preparedness functions to remove it from the umbrella of the SSMFS to a standalone function within the corporation, or alternatively associated with another department or function, or reporting directly to the Chief Administrative Officer. A reorganization could help to raise the profile of municipal emergency management within the corporation and by extension within the community.

Our review of the Emergency Management Program has identified the following Council and Operational recommendations for consideration:

Council Recommendation #5: That Council considers a reorganization of the Emergency Management staff resources and functions as referenced within the FMP.

Operational Recommendation #24: That consideration be given to updating the City's flood plain mapping as part of the next Hazard Identification and Risk Assessment (HIRA) review process.

7.0 Training Division

The SSMFS is responsible for ensuring that all personnel, including fire suppression staff, receive the training necessary to meet the legislative requirements of the Ontario *Fire Protection and Prevention Act, 1997* (FPPA) and the *Occupational Health and Safety Act* of Ontario (OHSA). The analysis within this section focuses on the delivery of training to fire suppression staff.

Dillon's experience and knowledge of the Ontario fire service indicates that firefighter training is an area that has come under a high level of scrutiny over the past decade. The results of numerous inquests and investigations have concluded that firefighter training must be considered a priority for municipalities, in their role as employer, as fire service leaders, and as supervisors. The analysis within this section first presents a discussion around training standards and the options fire departments have in providing training. It then presents a discussion of training standards specifically within the context of SSMFS. This is followed by an examination of the processes, programs, and resources currently in place in regards to training. This includes: division organization and staffing, training standards, annual training program, specialized training, live fire training, online training, company officer training and records management.

This fire master planning process has presented the importance of assessing community fire risk as a component of determining the appropriate level of fire protection services to be provided. The information and analysis within this section will present the importance of linking the applicable training requirements for fire suppression staff (firefighters) with the level of fire suppression services to be provided by the SSMFS.

7.1 Firefighter Training Standards in Ontario

In partnership with the Ontario Association of Fire Chiefs, the Office of the Fire Marshal (at the time) and other fire service stakeholders, developed the Ontario Fire Service Standards (OFSS). Together, these competency-based standards were applied in developing a comprehensive provincial fire service training program that included a firefighter curriculum, Fire Prevention Officer Diploma program, Company Officer Diploma program and a Training Officer Diploma program.

In April 2013, the OFMEM announced that the Ontario fire service would be adopting the National Fire Protection Association Professional Qualifications (NFPA Pro-Qual) Standards. In January of 2014, the OFMEM distributed *Communique 2014 – 04* to the Ontario fire service reflecting the grandfathering and transition process to the use of the NFPA Professional Qualifications Standards. Table 13 reflects the OFMEM's determination of concordance between the previous Ontario Fire Service Standards and the representative NFPA Standards.

Table 13: Concordance of Ontario and NFPA Standards

Previous Ontario Standard	New NFPA Standard
Ontario Firefighter Curriculum	NFPA 1001 Standard – Level I and Level II
Company Officer Diploma Program	NFPA 1021 Standard – Level II
Fire Prevention Officer Diploma Program	NFPA 1031 Standard – Fire Inspector Level I
Training Officer Diploma Program	NFPA 1041 Standard – Fire Instructor Level II

The NFPA standards are intended to provide the path to qualification for fire service members to a particular fire discipline described in the standards. The NFPA does not consider certification. Certification is completed by third party organizations such as the International Fire Service Accreditation Congress (IFSAC) or the Fire Service Professional Qualifications System - ProBoard (ProBoard) which provide independent evaluation to measure individual performance as set by the standards. Even with NFPA standards in place, there is currently no requirement for a fire department to train to these standards. In Ontario, the legislation that requires an employer to train its staff is the *Occupational Health and Safety Act*.

To provide the training to attain the qualifications identified within these standards, there are several options available to departments including: Ontario Fire College (OFC) and Regional Training Centres (RTCs), outside or third party training, in-house training and out of province training opportunities.

7.1.1 Ontario Fire College and Regional Training Centres

One option is to enroll staff in training courses at the OFC. The OFC is operated by the Office of the Fire Marshal and Emergency Management under the authority of the Ministry of Community Safety and Correctional Services. Courses are scheduled on an annual basis and offered at the OFC in Gravenhurst and various RTCs across the province. Course fees are affordable, but given high levels of interest by the 449 fire departments in Ontario, it can be challenging to enroll more than a few candidates in each program. This poses challenges for departments requiring training for a large number of candidates. This issue is further compounded as wait lists at the OFC have increased for a variety of reasons in recent years. Courses generally run Monday to Friday, making overtime, travel costs and backfilling position requirements a notable budgetary consideration.

7.1.2 External or Third Party Training Organizations

A further option for training is to hire an external organization or individual qualified to teach a particular NFPA standard to deliver this training to department personnel. Because this training can be offered locally, there is greater scheduling flexibility, reducing overtime and eliminating travel costs.

Recent Coroner jury recommendations involving training exercise fatalities in Point Edward and Hanover, Ontario have identified the need to develop a provincially approved certification process for all

trainers, including private, government and regulatory bodies. As such, municipalities should consider their due diligence in utilizing external organizations or individuals to provide training.

7.1.3 In-House Training

A third option is for the department to train and qualify its own instructing staff to an NFPA standard and then have this staff resource deliver the training in-house. Curriculum development and the work associated with staying current with the standards is time consuming and staff intensive, requiring a level of expertise that may not be available within a fire department. However, the in-house option does provide opportunity for training to incorporate department specific considerations (e.g. OGs, community risks, etc.) as well as greater flexibility with respect to scheduling, reducing the need for overtime, backfilling and eliminating travel time.

Currently, the OFC is exploring an option of approving learning contracts whereby fire services may train using OFC course materials, which provides the benefit of certification ready courses without the cost of course development by the fire service and approval by the OFMEM. However, the audit process for courses delivered under learning contracts is still immature.

7.1.4 Out of Province Training

Out of province learning opportunities provide an additional training option. While travel costs may make this option cost prohibitive, there are some courses that are not yet offered in Ontario (e.g., NFPA 1031 Level III, Plans Examiner I and II, and NFPA 1041 Level III) that may be beneficial for staff.

7.1.5 Certification

Once qualification is obtained using one of options outlined above, the fire department may want to consider certification of their training curriculum. In circumstances where certification is desired, the curriculum must be approved by the OFMEM's Academic Standards and Evaluation (AS&E) section. Curriculum that has been approved by the AS&E can then be used repeatedly to train firefighters in the same or other jurisdictions within the province. In Ontario, a fire department can contact the OFMEM to schedule a certification evaluation to a particular NFPA standard. The certification process is then governed by IFSAC and ProBoard with the OFMEM as the certifying organization in Ontario.

In many cases, successful qualification to an NFPA standard for the knowledge portion requires a 60% score and the ability to satisfactorily demonstrate skills described in the standard. For certification, the knowledge score requirement is typically 70%, making it a more stringent evaluation of training and skills development. Determining the type of training or standards to be used and whether to qualify or certify staff are all considerations for the fire department.

In summary, fire services in Ontario have multiple ways to train and qualify staff, with certification regulated by the Province. It is important to note that while at this point in time neither qualification nor certification are required by legislation, recent inquests involving issues with fire prevention and

firefighter training have highlighted the importance of qualification and certification as industry best practices. It is reasonable to anticipate and prepare for regulation addressing the lack of legislated requirement to train and certify to NFPA standards.

On January 25, 2018, the Ministry of Community Safety and Correctional Services posted a notice of public consultation on the Ontario Regulatory Registry for input on proposed amendments to the *Fire Protection and Prevention Act, 1997.* This amendment includes mandatory training and certification for firefighters and mandatory risk assessments to inform the delivery of fire protection services. These requirements are being proposed to come into force between January 1, 2019 and January 1, 2020.

7.2 SSMFS Firefighter Training Standards

The SSMFS was utilizing the former Ontario Firefighter Curriculum and Company Officer Diploma program prior to the province's transition to the current NFPA Pro-Qual Standards.

In response to OFMEM - *Communique 2014 – 04* announced in 2014, and the provincial transition to the NFPA Pro-Qual Standards the SSMFS initiated and obtained the grandfathering provisions of its active firefighters and Company Officers at that time. This resulted in the firefighters on staff at that time being recognized as qualified to either the NFPA 1001 or 1002 firefighter standards. The SSMFS has since developed an in-house training program utilizing the applicable NFPA training standards for all new firefighters and as the basic training standard for the SSMFS.

7.3 Key Training Functions

The 2017 RFPS stated that "*In general the SSMFS has a robust training program in place"* and concluded that "*staff are receiving the necessary training to perform the expected services and duties for their respective positions within the fire services".*

The training needs of the department are being met and reflective of the duties of a modern fire service, ensuring that programs meet legislated requirements of the *Fire Prevention and Protection Act, 1997 (FPPA)* and the *Occupational Health and Safety Act (OHSA).* The key training functions place emphasis on the safety of the firefighters and the provision of a high standard of service. At a high level, the key training functions include:

- Training firefighters to be fully certified under NFPA standards including program development and curriculum coordination;
- Development of in-service training programs and schedules including identification and coordination of internal and external training and educational opportunities for all SSMFS personnel;
- Development and delivery of specialized training programs for specialized rescues;
- Development and implementation of recruit class training program;

- ü Management and development appropriate promotional requirements, including the classifications of exams for all rankings and divisions and implementing promotional routines;
- ü Provision and/or supervision of in-house training where appropriate (e.g., company officer, instructor, medical, etc.); and
- ü Records management for fire personnel training files and review and update of operating guidelines and procedures as applicable.

7.4 Training Staff Resources

Under the leadership of the Deputy Chief Fire Operations, Training, and Logistics, fire operations staff play a key role in developing and coordinating the delivery of the firefighter training program. These roles include Platoon Chiefs, Captains, Acting Captains and Shift Training Instructors.

7.4.1 Platoon Chiefs

The Platoon Chiefs are directly responsible for ensuring that all firefighters including the Company Officers (Captains) under their command receive the required training to sustain the skills and competencies commensurate with their individual and departmental roles and responsibilities. As part of their assigned duties, Platoon Chiefs are required to review all training records of staff under their command and report any discrepancies to the Deputy Chief Fire Operations, Training, and Logistics.

In consultation with the Company Officers under their command, the Platoon Chiefs are also required to conduct quality control of all training records as per *Department Notice #300-06 – Training Documentation* to ensure the operational efficiency and effectiveness of their respective platoons and as may be required report and additional training requirements to the Deputy Chief Fire Operations, Training, and Logistics.

7.4.2 Company Officers (Captains)

Company Officers are responsible for the direct delivery and documentation of the departments training program to those firefighters under their command. This includes ensuring that all firefighters under their command are familiar with, and well trained on all apparatus, equipment and department Operating Guidelines. Company Officers are also directly responsible as per *Department Notice #300-06 – Training Documentation* to ensure all training is documented as required by the OHSA.

7.4.3 Shift Training Instructors

The use of on duty fire suppression staff is a cost-efficient and operationally effective means of delivering training in a modern fire department. This model provides assistance in delivering on-duty training, particularly in specialized areas such as water rescue, hazardous materials, and confined space rescue. This model has many positive outcomes. It is beneficial for operations staff as it enables professional development, succession planning, and also allows firefighters to share their passion for and knowledge of a specific emergency response scenario. It is also beneficial for the City as it is a cost

effective way to provide training and leverages existing resources within the department. As on duty firefighters they are on the same schedules and platoon that they are training, resulting in the opportunity to provide consistent training to staff.

7.4.4 Training Officer

The *Fire Services Organizational Realignment* report dated October 26th 2015 recommended the implementation of a dedicated Training Officer. Our research indicates that this position has recently been filled by the SSMFS. The primary responsibilities of a dedicated Training Officer should include developing, preparing, delivering, monitoring and evaluation of the department training program to reflect due diligence on behalf of the City.

The SSMFS Training Officer should have core responsibility for the following elements of the departments overall training program:

- Planning and delivery of firefighter training programs and designated training (as determined by SSMFS management);
- Preparing and updating lesson plans and evaluations;
- Acting as in-house trainer for select specialty training programs;
- Preparing other instructional materials as necessary;
- Providing input into the planning of department training and making recommendations into the budgeting process;
- Overseeing all audio visual equipment, teaching aids, training equipment/grounds and demonstration devices generally employed in training programs;
- Handling inquiries regarding fire service qualifications;
- Promoting consistency and effectiveness of training practices by conducting evaluations throughout the department;
- Preparing and maintaining accurate reports, records, summaries and correspondence of the training activities.

In addition, the primary role of the Training Officer should be to coordinate with the Platoon Chiefs and support the Company Officers in delivering the in-service training programs to the crews they are directly responsible for, as well as coordinating the theory-based training packages for distribution.

7.4.5 Existing Training Staff Resource Summary

The process to develop this FMP included consultation with department staff, a review of the department's current training program and the staff resource model. The current staff resource model has worked well for the department in the past. Based on this review, it has been identified that there are increasing workload demands with respect to providing the required firefighter training. This has resulted from a transition to the NFPA qualifications and the increasing number of required firefighter training programs including recruit training, and specialized rescue training. The current workload is negatively affecting the ability of current staff to complete any research and develop new programs including those for speciality training.

Industry best practices indicate that the delivery of basic training programs to firefighters is more appropriately assigned to the Captains who are assigned to each fire operations crew. Based on our experience within the industry, including observations of previous Ministry of Labour investigations, the addition of a dedicated Training Officer (recently implemented) will assist in prioritizing the departments training program development and monitoring training program delivery to ensure the intended performance objectives are being met, and that there is consistency in training delivery across the department.

7.5 Comprehensive Annual Training Program

Developing and delivering a comprehensive annual training program for the Operations Division is a legislated requirement of the City. The annual training program must provide the required training to achieve and sustain the required skills and competencies to provide the Council approved service operations levels, and address an employer's responsibilities as defined by the *Occupational Health and Safety Act*, specifically the Section 21 Guidance Notes for Firefighters.

As referenced in this FMP all levels of service provided by the SSMFS should be clearly defined by Council through an Establishing & Regulating By-law (E&R By-law). In addition to the basic firefighting requirements the By-law should clearly establish service levels for technical rescues which directly influences specialized training programs and related division staff resource needs. As described previously in the Administration section, the existing E & R By-law does not fully reflect the current operations (service levels) of SSMFS.

In addition to responding to relevant standards, curriculum and health and safety requirements, a comprehensive annual training program should include the following core functions:

- ü Identification of training needs in relation to services provided;
- ü Coordination/ scheduling of theoretical and practical training;
- ü Monitoring and evaluation in relation to outcomes achieved;
- ü Ongoing evaluation in relation to industry best practices and legislative requirements;
- ü Oversight of program objectives and records management; and
- ü Ongoing assessment of program delivery for efficiency and effectiveness.

A best practice for ensuring a department is meeting these requirements is through the formulation and monitoring of an annual training plan. The SSMFS currently uses an annual training plan to outline the scheduling of the various platoons and training activities planned for the year. To implement this plan, a monthly plan is issued and provided to each Platoon Chief which outlines all required training for the month including details on scheduling and training record codes to use in the CrySis records management program.

Operational Recommendation #25: That the SSMFS consolidate the current firefighter training initiatives into one Comprehensive Training Program including performance goals and objectives to be defined within a consolidated Operating Guideline.

7.5.1 Technical Rescue Training Programs

In addition to basic firefighting training, the department must also consider the training needs associated with technical rescues services such as automobile extrications. Technical rescues are considered those services that require a higher standard of training and competency in addition to regular firefighter training. Although the frequency of incidents requiring this type of training is lower than that of traditional firefighting, the technical as well as health and safety requirements for firefighters can be much higher. The level of training required should be established through the identified service levels for each technical rescue service approved by Council and included within the Establishing and Regulating By-Law.

Of importance to this fire master planning process and Council's consideration of the specialized rescue services to be provided by the SSMFS is the physical location of the City of Sault Ste. Marie. As the largest urbanized centre within the surrounding Algoma District the City has limited ability to draw upon other fire or emergency services to conduct many of the identified specialized recues. The analysis within this section will present the findings of the Comprehensive Risk Assessment with respect to some of these incidents. However, it should be recognised that while the frequency of many of these types of incidents may be low it should be anticipated that it will be the City that is looked upon to mitigate these incidents.

The three levels of training as established in *NFPA 1670 Standard on Operations and Training for Technical Search and Rescue Incidents* are:

1. Awareness Level – reflecting the minimum capability of organizations;
2. Operational Level – reflecting the capability of organizations to respond, use equipment, and apply techniques to support and perform a technical rescue; and,
3. Technician Level – reflecting the capability of organizations to not only provide the Operational Level services but also to coordinate, perform, and supervise a technical rescue.

Sustaining the high degree of training for all firefighters participating in these responses, including qualifications in order to safely and efficiently provide these specialty technical rescue programs to the City of Sault Ste. Marie, requires a large amount of training resources. This includes proper training equipment, props, and opportunities for a range of services (e.g., vehicles for auto extrication). Required resources also includes that there are personnel available to deliver the specialty programs. In part because of these resource implications are linked to the identified service levels, it is important that service levels for technical rescues are approved by Council and align with community risk.

Currently, SSMFS provides a number of technical rescue services which includes rope rescue, confined space rescue, swift water rescue, ice rescue, trench rescue, hazardous materials response, and vehicle extrication. The current specialized training programs are outlined in Table 14, including the level of training/service currently provided.

Table 14: SSMFS Specialized Rescue Training Programs

Program	Training/Service Level
Rope Rescue	Operations Level
Confined Space Rescue	Operations Level
Trench Rescue	Operations level
Ice Rescue	Operations Level
Hazardous Materials	Operations Level
Swift Water Rescue	Technician Level
Vehicle Rescue/Extrication	Operations Level

The Comprehensive Risk Assessment confirms that vehicle collisions involving vehicle rescue/extrication is the most common type of technical rescue services provided by the SSMFS. Water related technical rescues that may include the need for swift water rescue or ice rescue was identified as the second most common technical rescue service. In our experience the probability of a confined space rescue is typically related to new construction and infrastructure renewal projects.The probability of a rope rescue can be associated with a number of the other technical rescues as well as the large naturalized area of the City. The CRA identified the following key risks related to the need for providing specialized training programs:

CRA Key Risks Analysis Outcomes	THIRD LINE OF DEFENCE	CRA
	For consideration within the proposed Emergency Response Program	Assigned Risk Level
Vehicle collisions account for 59% of rescue calls within the City of Sault Ste. Marie or 79 calls per year on average.	X	Moderate
Of the technical rescue type services, vehicle extrication is the most common type of rescue at an average annual call volume of seven.	X	Moderate
Of the technical rescue type services, water-related rescue (water rescue and water ice rescue) are the second most common type with a total of 23 calls over the five year period, or about five calls annually on average.	X	Moderate

During the consultation process in developing this FMP there was significant discussion regarding two of the current technical rescue services. These included hazardous materials response and ice/swift water rescues. As such a more detailed review of these specific technical rescues is provided.

7.5.1.1 Water Related Technical Rescues

The existing water related technical rescues provided by the SSMFS include swift water rescue and ice rescue. There has been significant attention drawn to the delivery of swift water rescue as a result of a recent Coroner's inquest related to a firefighter training exercise. The recommendations of this May 2017 inquest recommended that all swift water rescue training be put into abeyance until such time as the 15 recommendations of the jury have been addressed. It is our understanding that the SSMFS has put any further swift water rescue training in abeyance, and as such should not be providing this type of service.

The OFMEM emergency response codes do not specifically identify a swift water rescue. As such the CRA did not identify swift water rescue as a key risk. However, it did identify water-related rescue (water rescue and water ice rescue) as the second most common type of technical rescue with a total of 23 calls over the five year period, or approximately five calls annually on average and assigned moderate risk. The majority of these incidents are related to the St. Mary's river. Depending on the season this river presents risks in terms of both water rescue and ice rescue. Historically the SSMFS operated a boat and an air-boat that responded depending on the season and the conditions ice/water. The department's boat was sold several years ago and has not been replaced. The department continues to provide training and operate the air-boat which is most effective on ice rather than in open water.

The findings of a May 2017 Coroner's Inquest highlight the need for stringent training requirements for firefighters to facilitate any type of rescue where water or ice are present. The presence of these elements present conditions that warrant very careful consideration of the services the SSMFS should be providing. Consultation with senior department staff further confirmed that the incidents that do occur on the St. Mary's River are typically related to a breakdown of equipment, and not of a direct life safety nature requiring immediate medical intervention. In incidents like these, time is important but not of the essence.

This review identified several organizations both in the United States and Canada that have the capability to respond on the St. Mary's River with a boat. Examples of these include:

- Canadian Coast Guard;
- Ontario Provincial Police;
- Royal Canadian Mounted Police;
- United States Border Patrol;
- Office of the Ministry of Natural Resources and Forestry; and
- Sault Search and Rescue.

Research also indicates that the mandate of the Canadian Coast Guards (CCG) is to provide search and rescue, response to vessels in distress, and response to environmental emergencies/spills on the St. Mary's River and Lake Superior. The CCG also has a reciprocal agreement in place with the United States

Coast Guard in Sault Ste. Marie Michigan and the Sault Search and Rescue is a recognised auxiliary of the Canadian Coast Guard.

This analysis highlights that the Canadian Coast Guard which has jurisdiction over federally controlled water ways such as those on the St. Mary's River and Lake Superior has the capability and responsibility to respond to water/ice rescue incidents on these waterways. The analysis also highlights that the CCG has contingency plans that do not require the response of the SSMFS.

The City should be prioritizing further consultation with these organizations, and specifically with the Canadian Coast Guard. Subject to the confirmation of the research presented, it is recommended that the SSMFS cease to provide water/ice rescue services on the St. Mary's River and Lake Superior, and revise the technical rescue capabilities of the SSMFS to be shore-based only.

Operational Recommendation #26: That the SSMFS complete additional research and consultation with external organizations to identify options for the delivery of water-related technical rescues as referenced within the FMP.

7.5.1.2 Tiered Response Program

In addition to providing emergency medical services as a contracted agency to the Province of Ontario the SSMFS is a participant in a tiered response agreement. As referenced within the local practice operating guideline the SSMFS is dispatched by the Central Ambulance Communications Centre (CACC) to respond when the following criteria are met:

- *Unconsciousness at any time during the call taking process (this includes active seizure/post ictal states);*
- *Cardiac arrest;*
- *Respiratory arrest;*
- *Choking; and*
- *At the request of responding EMS personnel.*

For the period from January 1st 2012 to October 30st 2017 the SSMFS responded to 4,638 medical calls representing 31% of the total emergency call volume. The CRA identifies the following key risk and key finding related to medical call responses:

CRA Key Risks Analysis Outcomes	THIRD LINE OF DEFENCE	CRA
	For consideration within the proposed Emergency Response Program	Assigned Risk Level
Seizure, Oxygen Administered, Other Medical/Resuscitator and Alcohol Or Drug Related calls accounted for 65% of all medical calls in Sault Ste. Marie between 2012 and 2016.	X	Moderate

CRA Key Findings Analysis Outcomes	THIRD LINE OF DEFENCE For consideration within the proposed Emergency Response Program
The spatial analysis of Medical Calls for the period 2012 to 2016 indicates a higher density of Medical Calls occurring in the in the Downtown with a notable distribution throughout the City primarily within the Urban Settlement Area.	X

The SSMFS response to a medical call requires the deployment of one of the initial responding apparatus (pump) from the closest fire station. Subject to the severity of the medical incident and the arrival of an ambulance the initial responding fire apparatus can be committed at the incident from less than 1 minute to in excess of 15 minutes. This excludes the deployment time including turnout time and travel time to the incident.

This FMP identifies that simultaneous emergency calls such as medical calls at the same time as fire related incidents is one of the existing tactical limitations of the fire suppression capabilities of the SSMFS. Where possible the SSMFS should be seeking to revise the current tiered response criteria to reduce the response of SSMFS fire suppression resources. Council should also recognise that with limited fire suppression resources, participation in non-fire suppression responses such as medical calls results in reducing the tactical fire suppression capabilities of the SSMFS.

Operational Recommendation #27: That the SSMFS conduct a review of the current Tiered Response Agreement for medical calls to ascertain if any revisions can be made to reduce the response of fire suppression staff.

7.5.2 Sault Ste. Marie Airport

The Sault Ste. Marie Airport Development Corporation is an independent, not-for-profit community based entity that operates the airport located in the west of the City's defined rural area adjacent to the shore of Lake Superior. The airport typically operates from 05:45 to 00:30 subject to change as a result of weather and other circumstances.

During operating hours and 15 minutes prior to and following the arrival or departure of a major airline the airport has emergency response staff on duty. Department Notice #0600-13 dated October 22, 2003 describes the SSMFS "Response to Aircraft Incidents at the Airport. This notice references Operating Guideline #0600-12 – Response to Aircraft Incident at the Sault Ste. Marie Airport after Normal Operating Hours, and Operating Guideline #0600-06 – Support Operations for Airport Crash Truck.

Our research indicates that the SSMFS is in the process of updating the departments operating guidelines related to responding to the airport. This review process should ensure that the training

requirements for SSMFS personnel responding to the airport are included within the proposed comprehensive training program.

As referenced within the 2017 RFPS it is also recommended that the SSMFS consolidate all department notices and operating guidelines pertaining to the department's response to the airport. In our view there should be one comprehensive operating guideline for the SSMFS relating to responding to the airport.

Operational Recommendation #28: That the SSMFS develop one comprehensive operating guideline for responses to the Sault Ste. Marie Airport.

7.5.3 Live Fire Training

The purpose of live fire training is to provide realistic fire training simulations under safe and controlled conditions. Live fire training exercises are intended to simulate the actual fire conditions that a firefighter may encounter and simulate heat, humidity, restrict vision and smoke conditions. This type of training is also very beneficial for firefighters, and particularly officers such as Captains to better understand fire behaviour including identifying evolving smoke conditions as they may relate to the potential for fire extension or conditions such as a "flashover".

The department currently provides the theoretical and limited practical training related to live fire training through the use of a "doll house". This prop allows staff to present very limited exposure to the risks and experience of an actual live fire training exercise.

To obtain actual live fire training staff are required to attend the Ontario Fire College or one of the Regional Training Centres with a live fire training capability. The OFMEM also supports the Ontario fire service by providing training on a regional basis. Recently the OFMEM facilitated a rural firefighting course at the Aweres Fire Station in Heydon. This type of training is also available to the SSMFS, however there are no facilities in close proximity to the City that would facilitate live fire training in an appropriate structure. Industry best practices indicates that firefighters should be participating in live fire training exercises at a minimum on an annual basis, and where available as often as possible. This type of hands on training and exposure to heat and smoke conditions should be considered as a mandatory element of a comprehensive training program.

The SSMFS should be considering the development of a Training Centre with the capability to conduct live fire training. The City has a number of pieces of property where this type of facility could be developed including the Regional Emergency Services Centre (Fire Station #4). It is recommended that the SSMFS create a business plan for Council's consideration in developing a Training Centre capable of conducting live fire training. Options within the proposed business plan should include examining partnership opportunities with other emergency services and service providers, and opportunities for revenue generation through renting elements of the proposed Training Centre.

Operational Recommendation #29: That the SSMFS develop a Business Plan for Council's consideration in developing a Training Centre including the capability of "live fire" training as presented within the FMP.

7.5.4 Online Training

Access to online training programs can provide greater flexibility in delivering content within a comprehensive training program. Online programs can be designed to meet varying learning styles and objectives. They also provide flexibility in access from the fire station or at home. Participation can be either individually or in groups. The SSMFS utilizes Target Solutions for online training. The SSMFS is utilizing an effective on-line firefighter training program that should be included as an element of the proposed Comprehensive Annual Training Program.

7.6 Company Officer Training

The fire service is a paramilitary organization that relies on a rank structure to manage the roles and responsibilities of the organization and the operational services it delivers. This structure needs to include an appropriate span of control in order to be efficient and effective.

A sufficient number of Company Officers are also required to ensure the function of incident command can be implemented at all emergency scenes, and depending on the incident action plan, have sufficient additional officers to facilitate other roles such as sectoring of the scene, and Safety Officer.

Municipalities are required to ensure a sufficient number of supervisors (officers) are trained to oversee the workforce. Within the *Occupational Health and Safety Act*, Part III, Duties of Employers and Other persons, Section 12, subsection (2) states that: "*Without limiting the strict duty imposed by subsection (1), an employer shall,"(c) when appointing a supervisor, appoint a competent person;"*

As an employer, the City of Sault Ste. Marie is legislated by this section of the OHSA to ensure that all supervisors, which includes the role of incident commander, be competent.

The OHSA defines a "competent person" to mean a person who:

> *(a) "is qualified because of knowledge, training and experience to organize the work and its performance,*
> *(b) is familiar with this Act and the regulations that apply to the work, and*
> *(c) has knowledge of any potential or actual danger to health or safety in the workplace."*

While the SSMFS recognizes the importance of a sufficient number of company officers, the consultation process in developing this FMP identified a need to enhance the existing Company Officer training program. Company Officer training is currently focused on the promotional process for new Company Officers and Officers advancing through the rank system. Company Officer training does not occur on a regular basis to ensure skills and competencies are retained, and new or advanced training is provided.

Industry best practices reflect that a Company Officer training program should be ongoing as an element of a broader Officer Development Program. This strategy further supports succession planning and career development for future senior officers. The NFPA 1021 - *Standard for Fire Officer Professional Qualifications* is a recognised best practice for this type of training.

Operational Recommendation #30: That the SSMFS further develop the current Company Officer training initiatives into a comprehensive Officer Development Program.

7.7 Incident Command Training

Incident command training is considered a core element of Company Officer Training. Guidance notes to protect the health and safety of firefighters are developed by the Ontario fire service Section 21 Advisory Committee and distributed by the Ministry of Labour. *Firefighters Guidance Note #2-1 – Incident Command* reflects the importance of having an Incident Command System. This guidance note references a number of recognized systems including the *"Phoenix Fireground Command System"* which was developed by Alan V. Brunacini, the former Fire Chief of the Phoenix Fire Department.

Incident Command Systems are designed to positively affect the outcome of an emergency scene operation and the health and safety of firefighters. These systems can have a dramatic effect on the efficiency and effectiveness of the emergency response and safety on the emergency scene. This includes all incidents that the fire department may respond to including the fireground, hazardous materials incidents, automobile extrications, water/ice rescues and any other incident the fire department responds to where emergency responders and apparatus must be coordinated.

Incident command should be established by the first arriving officer and be sustained until the emergency is mitigated. The Incident Commander (officer) is responsible for all aspects of managing the emergency incident including developing an *"Incident Action Plan"* and managing all operations on scene. This includes:

- *Establish immediate priorities, especially the safety of responders, other emergency workers, bystanders, and people involved in the incident.*
- *Stabilize the incident by ensuring life safety and managing resources efficiently and cost effectively.*
- *Determine incident objectives and strategies to achieve the objectives.*
- *Establish and monitor incident organization.*
- *Approve the implementation of the written or oral Incident Action Plan.*
- *Ensure adequate health and safety measures are in place.*

Department operating guideline *OG #0800-01 – Incident Command* and *OG #0800-02 – Incident Command Functions* provide a clear description of the department's incident command system and direction to staff.

As part of developing the proposed Comprehensive Training Program consideration should be given to adopting Blue Card Fire Command standard and the related training program. This training program is based on the work of Fire Chief Brunacini. This program is of one of the most widely utilized programs in the fire service. The program utilizes both on-line and in-class simulation training which focuses primarily on Incident Command training for structural fire responses, but is applicable to all emergency incident responses. In our view the Blue Card Fire Command training system would further enhance the departments training in this area.

Operational Recommendation #31: That the SSMFS consider adoption of the Blue Card Incident Command Training program to enhance its current Incident Command training program.

7.8 Succession Planning

Similar to most medium to large fire full-time fire departments, the current SSMFS approach to succession planning in essentially aligned with the promotional policies outlined in the Collective Agreement to occur annually. Departments across the province are finding that they would benefit from a more proactive approach to succession planning. Such an approach could include developing a clear framework of skills and experience required for each position within the department. To expose staff to these opportunities, formal mentoring programs, job shadowing, cross training, or secondments are all options. In addition, a proactive succession plan helps assure senior staff and elected officials that there are trained and skilled candidates available in the event vacancies occur within the department.

Operational Recommendation #32: That the SSMFS consider developing a defined succession plan to guide the career development of all members of the SSMFS.

7.9 Respiratory Protection Program

The SSMFS has a comprehensive Respiratory Protection Program that includes reference to the applicable *OHSA Section 21 Guidance Note #4-9 Respiratory Protection Program.* The 2017 RFPS identified the following recommendation related to this program.

2017 RFPS Recommendation #15: The Municipal Council of the City of Sault Ste. Marie should ensure that a review of the SSMFS Respiratory Protection Program is conducted, ensuring that it is current and the workplace practices meet the requirements of the program.

The findings of the 2017 RFPS in this area are consistent with many of the findings of this fire master planning process that indicate the opportunity to introduce enhanced due diligence practices in areas such as records management, training, certification and comprehensive operating guidelines. In our view the addition of the new Training Officer will provide the department with an effective resource to lead these types of enhancements.

Operational Recommendation #33: That the SSMFS review and update the Respiratory Protection Program in a comprehensive operating guideline.

7.10 Proposed Training Development Committee

The use of staff committees representing a broad range of skills, competencies, experience and authority is a recognized industry best practice. Of importance to this strategy is the development of clear terms of reference to ensure the mandate of the committee is clear.

The implementation of the new Training Officer position represents a significant step towards prioritizing the training needs of the department. In our experience this step may benefit from also developing a training committee to assist the Training Officer in reviewing and developing the proposed Comprehensive Training Program. The proposed Training Development Committee would include representation from key internal stakeholders including the Platoon Chiefs, Captains and the on shift technical rescue areas. Such a committee can provide an effective resource to the Training Officer in the areas of program development, delivery and ongoing monitoring. A committee such as this would be beneficial in developing and maintaining the required training operating guidelines.

Operational Recommendation #34: That the SSMFS consider developing a Training Development Committee as identified within the proposed FMP.

7.11 Training Division Summary and Recommendations

The need for a dedicated Training Officer was included within the *2015 Fire Services Organizational Realignment.* This position has recently been filled and represents a very positive step forward in responding the ongoing training needs of the SSMFS.

The 2017 RFPS referenced that *"in general, the SSMFS has a robust training program in place".* The fire master planning process is intended to ensure the sustainability of this program, and where possible identify opportunities to further enhance its effectiveness and efficiency.

The development and delivery of a Comprehensive Training program as proposed within this FMP is intended to ensure that the City of Sault Ste. Marie and the SSMFS continue to comply with their legislative responsibilities, and sustain an effective and efficient training program for all members of the SSMFS.

Our review of the Training activities and resources has identified the following Operational recommendations for consideration:

Operational Recommendations:

25. *That the SSMFS consolidate the current firefighter training initiatives into one Comprehensive Training Program including performance goals and objectives to be defined within a consolidated Operating Guideline.*
26. *That the SSMFS complete additional research and consultation with external organizations to identify options for the delivery of water-related technical rescues as referenced within the FMP.*
27. *That the SSMFS conduct a review of the current Tiered Response Agreement for medical calls to ascertain if any revisions can be made to reduce the response of fire suppression staff.*
28. *That the SSMFS develop one comprehensive operating guideline for responses to the Sault Ste. Marie Airport.*
29. *That the SSMFS develop a Business Plan for Council's consideration in developing a Training Centre including the capability of "live fire" training as presented within the FMP.*
30. *That the SSMFS further develop the current Company Officer training initiatives into a comprehensive Officer Development Program.*
31. *That the SSMFS consider adoption of the Blue Card Incident Command Training program to enhance its current Incident Command training program.*
32. *That the SSMFS consider developing a defined succession plan to guide the career development of all members of the SSMFS.*
33. *That the SSMFS review and update the Respiratory Protection Program in a comprehensive operating guideline.*
34. *That the SSMFS consider developing a Training Development Committee as identified within the proposed FMP.*

8.0 Operations (Fire Suppression) Division Overview

Overseen by the Deputy Fire Chief of Operations, Training, and Logistics, the existing SSMFS Operations Division provides full service emergency response to the City of Sault Ste. Marie. This includes fire suppression, emergency medical, technical rescue, motor vehicle collision, and hazardous materials incident responses.

The review of this division is broken down into several sections included within this Fire Master Plan (Section 8 to 14):

- Section 8 – Operations (Fire Suppression) Division Overview
  - Provides an overview of the Fire Services Organizational Alignment approved by Council;
  - Introduces the historic (January 1, 2012 to October 26, 2015) versus existing (post October 26, 2015) staffing; and
  - Outlines existing Operations Division staff resources.
- Section 9 – Current Fire Suppression Guidelines and Standards
  - Presents and discussed applicable industry best practices and performance benchmarks including from: the National Fire Protection Association (NFPA); OFMEM; and the Province of British Columbia.
  - Summarizes the guidelines and standards within the context of the City of Sault Ste. Marie.
- Section 10 – Emergency Response Statistics and Time Assessment
  - Presents an overview of historic workload based on analysis of emergency response calls occurring from January 1, 2012 to October 30, 2017.
  - Presents an overview of historic response times based on analysis of emergency response calls occurring from January 1, 2012 to October 30, 2017.
- Section 11 – Historic / Existing Fire Suppression Performance Assessment
  - Presents an analysis of historical fire suppression capabilities (Pre-October 26, 2015);
  - Presents an analysis of existing fire suppression capabilities (Post-October 26, 2015).
- Section 12 – Existing Fire Suppression Tactical Evaluation
  - Based on the analysis presented in Sections 8 to 11, this section presents the results of a tactical evaluation.
- Section 13 – Tactical Limitations Minimization Strategies
  - Presents high-level strategies that could minimize the tactical limitations identified in Section 12.
- Section 14 – Fire Suppression Staffing and Station Location Model Options
  - Presents three options including revised staffing and station locations.

This chapter begins the review of the Operations Division providing an overview of the Fire Services Organizational Alignment and the existing division staff resources.

8.1 Fire Services Organizational Alignment (October 26th 2015)

The *Fire Services Organizational Alignment* (FSOA) presented to Council on October 26th 2015 represented a planning process to re-align the delivery of Fire and Emergency Medical Services through the implementation of *"a 3 year attrition strategy to better manage the risk and liability under Bill C-45, improve EMS response time, and provide better customer service."*[13] Bill C-45, also known as the Westray Bill, established new legal duties for workplace health and safety, and imposed serious penalties for violations that resulted in injuries or death of a worker.

The FSOA report included analyses of the supervisory challenges within the Emergency Medical Services area at that time, and options for Council's consideration that included reallocating up to 20 firefighters positions through an attrition process. The analyses refers to emergency response requirements for ten firefighters responding to a fire in a residential dwelling and references guidelines authored by the Office of the Fire Marshal and Emergency Management (OFMEM). The report does not reference any specific OFMEM guideline. However, it is our understanding that the report was referencing *PFSG 04-08-12 – Single Family Dwellings.*

PFSG 04-08-12 – Single Family Dwellings provided the fire service with information related to the tactical priorities to be accomplished by responding firefighters to a fire in a single-family dwelling. This included a response objective of 10 firefighters arriving on scene within 10 minutes. At the time this was commonly referred to as "10 in 10" within the fire service.

In our view the FSOA report presented Council with a strategy to manage its fiscal responsibilities with that of its due diligence as an employer. Based on the analyses presented, the recommendation provided a strategy to enhance the delivery of emergency medical care, and respond to specific resource needs of the SSMFS including additional Public Education Officers and a Training Officer.

PFSG 04-08-12 – Single Family Dwellings has been rescinded by the OFMEM as the province and the industry transition towards the application of risk –based methodology. The current industry best practice of applying risk-based analysis is applied within this FMP to assess the historical, existing and proposed fire suppression deployment model.

[13] Fire Services Organizational Realignment, October 26th 2015

On January 25, 2018, the Ministry of Community Safety and Correctional Services posted a notice of public consultation on the Ontario Regulatory Registry for input on proposed amendments to the Fire Protection and Prevention Act, 1997. This amendment includes mandatory training and certification for firefighters and mandatory risk assessments to inform the delivery of fire protection services. These requirements are being proposed to come into force between January 1, 2019 and January 1, 2020. In our view Councils commitment to completing the Comprehensive Risk Assessment and this Fire Master Plan at this time represent Council's continued commitment to providing the most effective and efficient level of fire protection services that provide the most value to the community.

8.2 Historic vs. Existing Staffing

Prior to October 26th 2015 (referred to within this FMP as "historic"), the SSMFS minimum number of firefighters on-duty was sixteen **fi**re**fi**ghters. This excludes one firefighter who was assigned to the Communications Centre (Dispatch) on each of the Platoons for a total minimum Platoon complement of seventeen firefighters. There may have been times when the platoons were at full strength representing an available complement of twenty two firefighters on duty (88 total). However, due to vacation, sickness and other approved absences the minimum number of firefighters on duty at any given time was sixteen **fi**re**fi**ghters. Therefore, the minimum complement of sixteen **fi**re**fi**ghters on duty at all times represented the department's historic fire suppression capabilities prior to October 26th 2015.

The *Fire Services Organizat**i**onal Alignment* resulted in a change to the minimum number of firefighters on duty from the *historical sixteen **fi**re**fi**ghters* to the *exist**i**ng thirteen **fi**re**fi**ghter's* minimum number on duty at all times.

The SSMFS continues to rely on the call back process of off duty firefighters that was in place prior to October 26th 2015 to supplement the minimum number of firefighters on duty.

It is of importance to this fire master planning process to recognize that the department continues to use these processes to supplement the minimum number of firefighters on duty. The department must initiate this process to alert additional firefighters in the event there is a fire in either a high risk or high-rise high risk occupancy. The result is a potential delay in assembling the total number of firefighters on scene as recommended within the applicable fire suppression performance benchmarks (discussed in Sec**ti**on 9.0).

This FMP will present further analysis and options for Council's consideration with regards to how the SSMFS may enhance the efficiency and effectiveness of its fire suppression deployment model. This will include the presentation of proposed fire suppression performance benchmarks for the SSMFS.

8.3 Existing Operations (Fire Suppression) Staff Resources

The Deputy Chief of Operations is directly responsible for this division. The SSMFS Operations Division (fire suppression) consists of 68 staff including 4 Platoon Chiefs, 16 Captains, 44 Firefighters and 4 Communications Operators. It is of importance to this fire master planning process to recognise that the Communications Operators although assigned to the Operations Division and a fire suppression platoon these 4 staff are not available for activity firefighting duties. The primary role of the Communications Operators is to staff the Communications Centre. As such the 4 Communications Operators are not included within the identified fire suppression resources (available number of firefighters) analysis presented within this FMP. The number of available firefighters included within the SSMFS existing fire suppression deployment model assessment is 64 firefighters.

All fire suppression staff are assigned to one of four platoons of 17 staff including 16 firefighters and 1 Communications Operator. The fire suppression staff are assigned to four fire stations illustrated in Figure 6 located within the Urban Settlement Area of the City. Fire suppression staff are assigned to a shift schedule, defined by the Collective Agreement. These staff provide fire suppression services 24 hours per day, seven days per week coverage for 365 days per year. Due to vacation, sick time and approved absences, there must be a minimum of 13 firefighters and 1 Communications Operator on duty at all times. In the event the staffing level drops below the minimum staffing complement of thirteen, the firefighter off-duty overtime call back system is used to maintain this minimum staffing level.

The current on duty staffing per platoon for each station and apparatus is summarized in Table 15.

Table 15: On-Duty Minimum Firefighters per Station and Apparatus

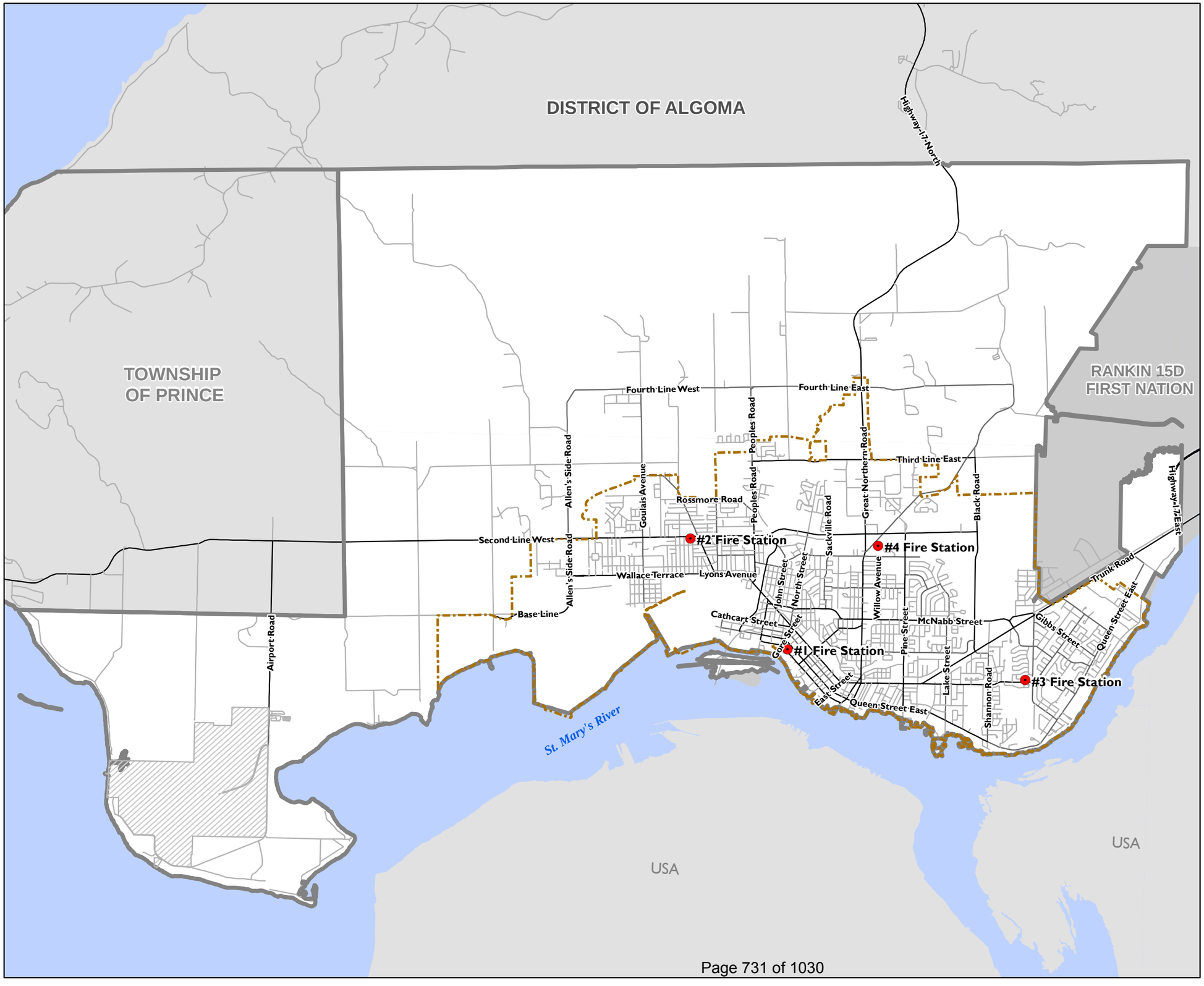
Station	Station Address	Apparatus	Minimum Staffing
1	72 Tancred Street	Platoon Chief	1
		Pump	3
		Aerial	0
		Tanker	0
		Rescue	0
		Utility	0
2	363 Second Line West	Rescue/Pumper	3
3	100 Bennett Boulevard	Rescue/Pumper	3
4	65 Old Garden River Road	Aerial	3
		Minimum On Duty Staffing	13

Historically, municipalities utilizing full-time firefighters have staffed apparatus with a minimum of four firefighters (see Section 9.0 that describes industry best practices and benchmarks) and based on a ratio of 1.25 firefighters per initial response apparatus. This means for every initial response apparatus (e.g.

pump) the SSMFS would require five firefighters or 20 firefighters to sustain a minimum on-duty staff of four firefighters per initial response apparatus across four platoons to cover 24 hours per day seven days per week. For secondary apparatus (e.g. rescue or aerial) with a minimum staffing of two firefighters, the application of this same ratio reflects a complement of 12 firefighters to sustain a minimum on duty staff of two firefighters per secondary apparatus.

The SSMFS is currently operating with a minimum on-duty staffing of thirteen firefighters that with the application of the 1.25 ratio would reflect a need for a total of 65 firefighters. The department currently has a total of 64 firefighters but is not deploying a minimum of four firefighters on each initial response apparatus.

More recently municipalities have been working towards increasing this ratio to 1.33 firefighters per platoon in response to the increasing frequency of long-term injuries, PTSD workers compensation claims, and managing increasing overtime costs.



CITY OF SAULT STE. MARIE
COMPREHENSIVE RISK ASSESSMENT

EXISTING FIRE STATIONS

FIGURE 6

- Existing Fire Station
- Local Road
- Collector Road
- Arterial Road
- Urban Settlement
- Municipal
- First Nation

0 0.5 1 2 km

1:80,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY
CITY OF SAULT STE. MARIE / MNRF

MAP CREATED BY: SMW
MAP CHECKED BY: AJN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\PDF\Misc\Existing Fire Stations.mxd

DILLON CONSULTING

PROJECT: 175984

STATUS: DRAFT

DATE: 2018-01-24

9.0 Current Fire Suppression Guidelines and Standards

The following chapter presents the findings of research into assessing current industry best practices and performance benchmarks that would be considered as applicable to the City of Sault Ste. Marie. This information is relevant to addressing the following recommendation of the 2017 RFPS:

2017 RFPS Recommendation #2: The Municipal Council of the City of Sault Ste. Marie should ensure that an evaluation of the capabilities and limitations associated with fire suppression and fireground tactics is conducted, and with reference to the findings from a comprehensive municipal fire risk assessment.

Within Ontario there is no specific legislated standard that a community must achieve with regard to the type of firefighter (career/part-time/volunteer) or the number of firefighters required to respond to any given incident. The FPPA does require that a municipal Council assess their level of resources based on determining its local "*needs and circumstances*". The information presented within this section is intended to assist Council in understanding the applicable best practices for delivery of fire suppression services within the City of Sault Ste. Marie.

Over the past decade there has been a transition within the fire service industry across North America to the utilization of community risk analysis. Community risk analysis is used to determine the appropriate level of firefighter deployment based on the critical tasks to be performed to effectively, efficiently and safely conduct fire suppression operations. The Council of the City of Sault Ste. Marie has recognized the importance of linking the findings of a Comprehensive Risk Assessment with the strategies and recommendations contained within this FMP. A comprehensive Comprehensive Risk Assessment has been developed as a companion document to this FMP.

Within the Province of Ontario the OFMEM is designated as the agency having responsibility for overseeing the delivery and monitoring of municipal fire protection services. Across North America the NFPA is the organization most highly recognized for developing public education, fire prevention and fire suppression standards. Research into current fire suppression guidelines and standards also references the Structure Firefighters Competency and Training Playbook authored by the Province of British Columbia – Office of the Fire Commissioner.

In our view these agencies cumulatively represent the authorities for identifying the applicable industry best practices for the delivery of fire suppression services for the City of Sault Ste. Marie.
The information within the following sections presents research regarding fire behavior, current fire suppression best practices and tactics including those developed by the National Fire Protection

Association (NFPA), Public Fire Safety Guidelines developed by the Office of the Fire Marshal and Emergency Management, and Structure Firefighters Competency and Training authored by the Province of British Columbia - Office of the Fire Commissioner.

This information is presented to provide Council with the supporting research into defining the appropriate level of fire suppression services to be provided within the City of Sault Ste. Marie.

9.1 Importance of Time with Respect to Fire Growth

Time is a critical component with respect to the growth of a fire and the success of intervention by firefighters. Research conducted by the OFMEM and National Research Council of Canada indicates that a fire in a non-sprinklered residential occupancy can spread from the room where the fire originates in ten minutes or less. Tests have shown that the fire can extend from the room of origin in as little as three minutes, under fast fire growth conditions.

Fire growth rates, defined by the Society of Fire Protection Engineers as slow, medium and fast, are listed in Table 16. The fire growth rates are measured by the time it takes for a fire to reach a one megawatt (MW) fire. This is roughly equivalent to an upholstered chair burning at its peak. A two MW fire is approximately equal to a large upholstered sofa burning at its peak.

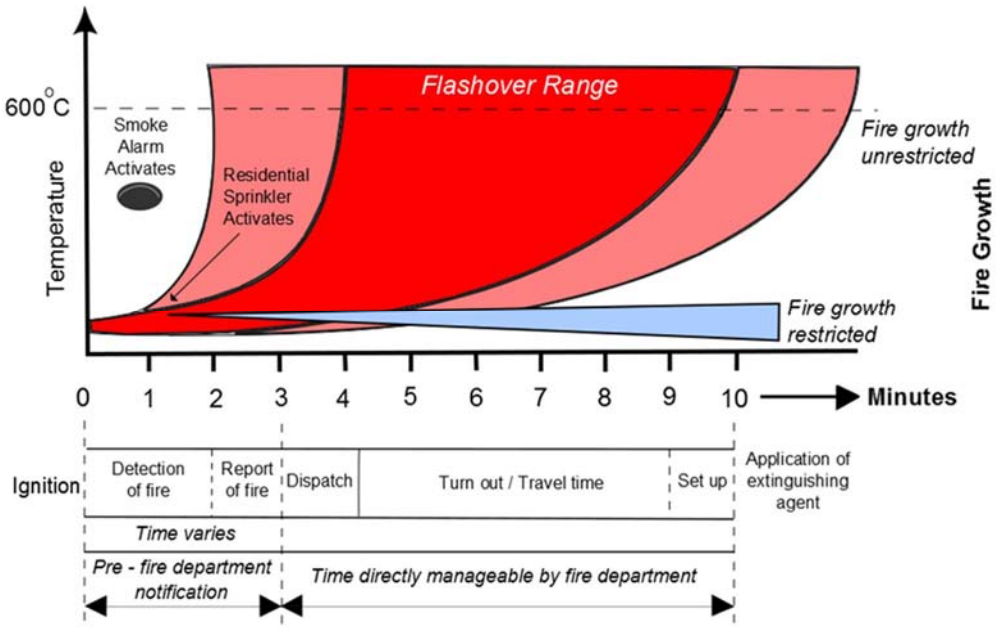
Table 16: Time to Reach 1 MW and 2 MW Fire Growth Rates in the Absence of Fire Suppression

Time to Reach 1 MW and 2 MW Fire Growth Rates in the Absence of Fire Suppression

Fire Growth Rate	Time in Seconds to Reach 1MW	Time in Seconds to Reach 2 MW
Slow	600 seconds	848 seconds
Medium	300 seconds	424 seconds
Fast	150 seconds	212 seconds

(Source: "Operational Planning: An Official Guide to Matching Resource Deployment and Risk", Office of the Fire Marshal and Emergency Management, January 24, 2011, p. 4).

Within the ten-minute time period, flashover conditions can occur. Flashover occurs when the combustible items within a given space reach a temperature that is sufficiently high for them to auto-ignite. The graph in Figure 7 highlights the importance of the first two lines of defence including early detection actions of the occupants. Early detection occupant actions include working smoke alarms, home escape planning, and prompt notification of the fire department. The success of firefighting intervention, given the exponential increase in fire temperature and the potential for loss of property/loss of life with the progression of time, further support the importance of public education and prevention programs.



Reference: *Fire Underwriters Survey "Alternative Water Supplies for Public Fire Protection: An Informative Reference Guide for Use in Fire Insurance Grading" (May 2009) and NFPA "Fire Protection Handbook" (2001)*
Figure 7: Example Fire Propagation Curve

The fire propagation curve reflects the importance of time during the Detection *'detection – report'* stage. This is the time period not impacted by any actions by the fire department. The time period controlled by the fire department begins when the call is initially received by dispatch and includes several other components leading up to the initiation of intervention by fire operations staff.

Understanding factors such as "growth rate" and "time" in terms of how quickly a fire can reach a critical stage such as flashover are important considerations in assessing fire operations performance targets. For example, where areas of the community may have extended response times due to long travel distances, (e.g., in excess of ten minutes), the potential for the fire to have spread from the room of origin or to have already reached a flashover state will be significantly higher.

In these situations, consideration should be given to the first two lines of defence including the provision of more public education and fire prevention activities as a means to inform the public on how to be prepared and react in the event of a fire.

9.2 National Fire Protection Association (NFPA)

The National Fire Protection Association (NFPA) is an international non-profit organization that was established in 1896. The organization's mission is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research,

training, and education. With a membership that includes more than 70,000 individuals from nearly 100 nations, NFPA is recognized as one of the world's leading advocates of fire prevention and an authoritative source on public safety.

NFPA is responsible for 300 codes and standards that are designed to minimize the risk and effects of fire by establishing criteria for building, processing, design, service, and installation in the United States, as well as many other countries. Its more than 200 technical code and standard development committees are comprised of over 6,000 volunteer seats. Members vote on proposals and revisions in a process that is accredited by the American National Standards Institute (ANSI). The following sections provide an overview NFPA 1710 and 1720.

9.3 NFPA 1710 Standard (2016 Edition)

NFPA 1710 *"Standard for the Organization and Deployment of Fire suppression Operations, Emergency medical Operations, and Special Operations to the Public by Career Fire Departments"* provides a resource for determining and evaluating the number of career firefighters required based upon recognized industry best practices.

NFPA 1710 is a standard that is designed for larger municipalities that, as a result of many factors, are operating their fire department utilizing primarily full-time (career) firefighters.

Relevant references from NFPA 1710 include the following:

- This standard applies to the deployment of resources by a fire department to emergency situations when operations can be implemented to save lives and property; and,
- The standard is a benchmark for most common responses and a platform for developing the appropriate plan for deployment of resources for fires in higher hazard occupancies or more complex incidents.

This supports the strategic priority of saving lives and property, as well as recognizing the standard as a "*benchmark*" for determining the appropriate level of resources based on the complexity and level of risk present. This standard identifies the minimum deployment of firefighters based on an "Initial Arriving Company" and an "Initial Full Alarm Assignment."

9.3.1 Initial Response – "Initial Arriving Company"

Initial response is consistently defined in the fire service as the number of firefighters initially deployed to respond to an incident. Fire service leaders and professional regulating bodies have agreed that until a sufficient number of firefighters are assembled on-scene, initiating tactics such as entry into the building to conduct search and rescue, or initiating interior fire suppression operations are not safe practices. If fewer than four firefighters arrive on scene, they must wait until a second vehicle, or additional firefighters arrive on scene to have sufficient staff to commence these activities.

NFPA 1710 refers to the 'Initial Arriving Company' as an 'Engine Company' and further defines the minimum staffing level of an Engine Company as four firefighters whose primary functions are to pump and deliver water and perform basic firefighting at fires, including search and rescue.

An initial response of four firefighters once assembled on-scene is typically assigned the following operational functions: the officer in charge shall assume the role of Incident Commander; one firefighter shall be designated as the pump operator; one firefighter shall complete the task of making the fire hydrant connection; and the fourth firefighter shall prepare an initial fire attack line for operation.

The assembly of four firefighters on the fire scene provides sufficient resources to safely initiate some limited fire suppression operations. This first crew of four firefighters is also able to conduct the strategic operational priority of "size-up" whereby the officer in-charge can evaluate the incident and where necessary, request an additional depth of resources that may not have been dispatched as part of the initial response. Fire scene responsibilities of an initial response are highlighted in Figure 8.

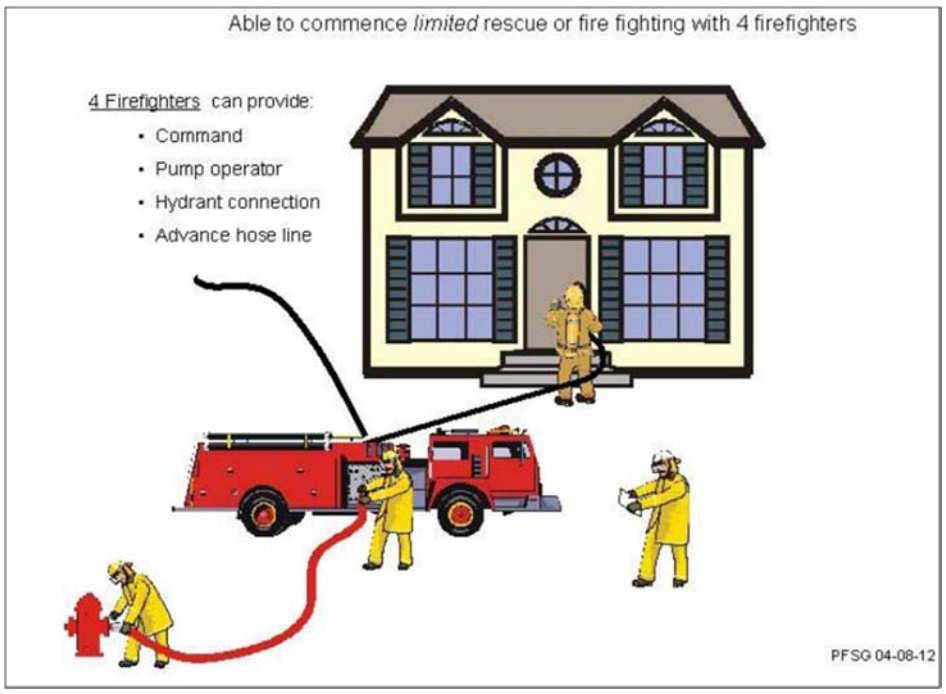


Figure 8: Initial Response Fire Scene Responsibilities

(Office of the Fire Marshal, Ontario, Public Fire Safety Guideline 04-08-12, December, 2001. (Rescinded November 10, 2010))

The NFPA 1710 standard identifies an initial response deployment of four firefighters to effectively, efficiently and safely conduct initial fire suppression operations. As listed in the Fireground Critical Tasks and summarized in Table 19, the critical tasks with four firefighter's on-scene include incident command, pumper operator and an attack line.

9.3.2 Depth of Response – "Initial Full Alarm Assignment"

In comparison to the initial response, the depth of response relates to the total number of firefighters initially assigned (dispatched) to an incident. Depth of response is also commonly referred to as "First Alarm" or "Full Response." For example NFPA 1710 defines "*Initial Full Alarm Assignment"* as *"Those personnel, equipment, and resources ordinarily dispatched upon notification of a structure fire."*

The standard utilizes the example of a fire risk scenario in a 2,000 square foot, two-storey single-family dwelling without a basement and with no exposures present. This represents a typical home of wood frame construction located in a suburban neighbourhood having access to a municipal water supply including fire hydrants. Within this FMP, this occupancy would be classified as a Group C - Residential occupancy (relating to a moderate risk).

It is very important to recognize that depth of response is referring to the total number of firefighters initially assigned to an incident. The total number of firefighters assigned to an incident can vary based on the type of occupancy and the level of risk present. Fires involving occupancies that have been assigned a risk level such as high risk may require a larger number of firefighters as part of the initial depth of response deployment.

The NFPA 1710 standard for depth of response to the fire risk scenario presented is 14 firefighters, 15 if an aerial device is to be used. For reference an example of the NFPA 1710 fire scene responsibilities for depth of response including an aerial are highlighted in Figure 9.

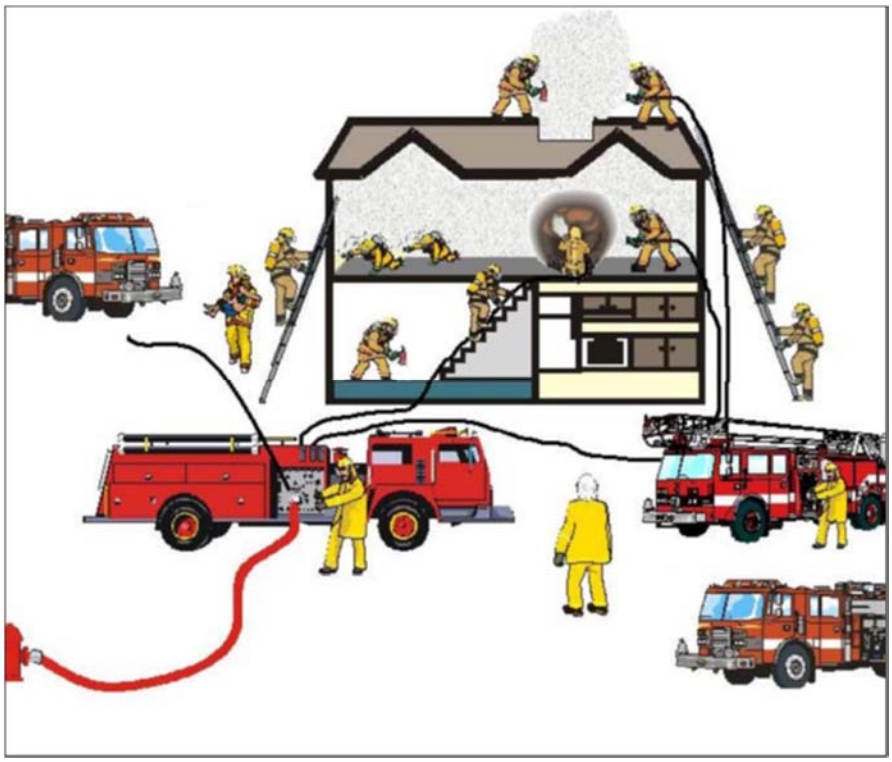


Figure 9: Depth of Response Fire Scene Responsibilities

(Shown including an aerial device – 15 firefighters) Modified from the Office of the Fire Marshal, Ontario, Public Fire Safety Guideline 04-08-12, December, 2001. (Rescinded November 10, 2010).

The NFPA 1710 standard identifies a depth of response deployment of 14 firefighters (one additional firefighter with an aerial on-scene) arriving on scene within an 8 minute travel time to 90% of the fire related incident to effectively, efficiently and safely conduct initial fire suppression operations in a fire risk scenario representing a single-detached dwelling. Within this FMP this occupancy would be classified as a low-rise Group C - Residential occupancy (equivalent to a moderate risk). As listed in the Fireground Critical Tasks and summarized in Table 19, the critical tasks for a moderate level risk include:

- Incident Command / Accountability (1 firefighter)
- Pump Operator (1 firefighter)
- Two Attack Lines (4 firefighters)
- Search and Rescue (2 firefighters)
- Forcible Entry (1 firefighter)
- Water supply (1 firefighter)
- Initial Rapid Intervention Team (2 firefighters)
- Ventilation (2 firefighters)
- Laddering - Aerial – (additional 1 firefighter, optional)

9.3.3 High-Rise Building Fire Suppression

High-rise buildings pose unique risks for fire suppression. The 2016 Edition of the NFPA 1710 standard introduces specific considerations and targets for response time and staffing levels for fire incidents in high-rise buildings. The standard recommends 610 seconds (10 minutes, 10 seconds) or less travel time for the deployment of suppression staff to a high-rise fire incident. Recommended staffing levels are outlined based on critical fire-scene tasks, totaling 37 firefighters for an initial full alarm assignment to a fire suppression incident at a high-rise building. The timelines and staffing levels correspond to the challenges related to vertical response and specific operational requirements for structural firefighting in high-rises.

Prior to the development of this standard, municipalities had begun to create their own guidelines and/or procedures to follow during a high-rise fire. The common guidelines or procedures found revolve around how to ascend a building when the fire service elevators are not working and how long it will take and how many firefighters or apparatuses are required to arrive at high-rise building fires.

9.3.3.1 Vertical Response

High-rise structure fires are unique in the method of fire suppression, as detailed in a publication by the NFPA called *Structural Firefighting: Strategy and Tactics*.[14] When a fire is located above the eighth floor, exterior suppression methods are no longer effective. In these cases, fire suppression is mainly undertaken inside the building. Firefighters create a staging floor – usually two floors below the fire floor. Firefighters will travel to and from the staging area and the fire floor or evacuation floors. The staging area is the location of all safety and suppression equipment needed to combat the fire. Firefighters must get this equipment to the staging area. When fire service access elevators cannot be used firefighters climb the stairs with the equipment. Even in the best conditions climbing the stairs takes time. The average vertical response time – i.e., the average time it takes for a firefighter to climb the stairs – is shown in Table 17. To climb to the tenth floor it would take a firefighter on average three minutes and seven seconds.

[14] Sanders, Russell E. "Chapter 12: High-Rise Buildings." *Structural Firefighting: Strategy and Tactics*. By Bernard J. Klaene. Second ed. Sudbury Massachusetts: Jones and Bartlett, 2008. 297-327. PDF.

Table 17: Vertical Response

Floors	Average Time per Floor in Seconds
1-10	20.8
11-20	27.8
21-30	33.6
31-40	45.9
41-48	59.0

Source: *Structural Firefighting: Strategy and Tactics*[10]

Ascending with equipment can be physically exhausting. When elevators designated for fire department use are not available additional firefighters are required to set-up stairway support to ensure firefighters have enough stamina for fire suppression activities after ascending. Stairway support is a system to carry equipment to the staging area. A firefighter is usually positioned every two floors and ascends two floors with equipment where the next firefighter pick up the equipment. This gives each firefighter a rest period during their two floors of descent.

9.4 NFPA 1720 Standard

NFPA 1720 *"Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments"* provides a resource for determining and evaluating the number of volunteer firefighters required based upon recognized industry best practices.

The NFPA 1720 standard further supports the minimum initial response staffing to include four firefighters including *"Initial firefighting operations shall be organized to ensure that at least four fire fighters are assembled before interior fire suppression operations are initiated in a hazardous area"*. This particular standard recognizes that the four firefighters may not arrive on the same vehicle, but that there must be four on the scene prior to initiating any type of interior firefighting operations.

Within this standard the NFPA identifies five different categories described as "Demand Zones" that relate to the type of risk that may be found within a typical community primarily based on population density. The standard then identifies a minimum level of firefighters that would be recommended for each of these categories.
Table 18 presents the NFPA 1720 standard minimum staffing levels by demand zone.

Table 18: NFPA 1720

Demand Zones	Demographics	Minimum # of Firefighters Responding	Response Time (Turnout + Travel) in Minutes	Performance Objective
Urban Area	>1000 people per square mile	15	9	90%
Suburban Area	500-1000 people per square mile	10	10	80%
Rural Area	<500 people per square mile	6	14	80%
Remote Area	Travel Distance + or – 8 miles	4	Dependent upon travel distance	90%
Special Risks	To be determined by Fire Department	To be determined by Fire Department	To be determined by Fire Department	90%

The NFPA 1720 standard utilizes population density as a factor in evaluating the minimum number of firefighters recommended for depth of response. As a standard primarily for use by volunteer fire departments it recognizes lower population densities are typically found in smaller communities and in rural areas in comparison to higher population densities found within developed and defined urban areas.

The NFPA 1720 standard identifies an initial response deployment of four firefighters to effectively, efficiently and safely conduct initial fire suppression operations.

The NFPA 1720 standard identifies a depth of response deployment range of four to 15 firefighters depending on the risks associated with fire demand zones to effectively, efficiently and safely conduct initial fire suppression operations.

9.5 OFMEM – PFSG 04-08-10 Operational Planning: An Official Guide to Matching Resource Deployment and Risk

PFSG 04-08-10 (Appendix A) was released by the OFMEM in January 2011 and includes a "Critical Task Matrix" to assist municipalities in determining the level of fireground staffing capabilities based upon low, moderate, high and extreme risks. The Critical Task Matrix is defined by the OFMEM as:

> *"The critical Task Matrix is based on the Incident Management System (IMS). It will assist in identifying fireground staffing capabilities based upon low, moderate, high and extreme risk levels within your community. The Office of the Fire Marshal (OFMEM) has identified the critical tasks from the Incident Management System that are used during fireground operations. These tasks are consistent with applicable legislation, industry best practices and the Ontario Fire College Curriculum."*

The matrix further recognizes that within the IMS that:

- Upon arrival and rapid size-up, the incident commander can upgrade or downgrade response;
- Crews can be reassigned to other tasks once original assignments are complete;
- Response protocols can be established with specific risk levels used to assist with pre-planning to obtain more resources based on the escalating nature of the emergency;
- Fire departments perform rescue and building personnel conduct evacuations according to their approved fire safety plans;
- Some tasks will never be assigned based on the tactical approach chosen by the incident commander (offensive versus defensive).

The Critical Task Matrix provides a lower and upper range of the number of firefighters required to respond for each of the four risk levels. The actual number of firefighters within each range is based upon analysis of actual fires, the *Occupational Health and Safety Act Section 21 Guidance Notes* affecting firefighters, and industry best practices. Table 19 reflects the PFSG 04-08-10 (Appendix A) Critical Task Matrix.

The OFMEM Critical Task Matrix indicates that the lower and upper level incident response range to effectively, efficiently and safely conduct fire suppression operations to safely complete the tasks associated with a fire in moderate risk (low-rise Group C - Residential occupancy) would be 16 to 43.

In comparison, the matrix indicates that the lower and upper level incident response range to effectively, efficiently and safely conduct fire suppression operations tasks associated with high risk occupancy (e.g., Group B – Care or Detention occupancy) would be 36 to 83.

Table 19: PFSG 04-08-10 Critical Task Matrix

Fireground Critical Task		Low Risk		Moderate Risk		High Risk		Extreme Risk	
		LERL	UERL	LERL	UERL	LERL	UERL	LERL	UERL
Incident Response (Note: Where zero or no number has been assigned, the task may be performed at the direction of the incident commander.)	Incident Command*	1	1	1	1	1	1	1	1
	Pump Operator	1	1	1	1	1	1	1	1
	Attack Line (Confine & Extinguish)	2	2	2	2	2	2	2	2
	Additional Pump Operator(s)	0	0	0	2	2	4	4	6
	Additional Attack Line Backup	0	0	0	4	4	8	8	12
	Search & Rescue	0	0	2	4	2	6	2	8
	Initial Rapid Intervention Team (IRIT)	0	0	4	6	8	16	12	22
	Ventilation	0	2	2	2	2	4	2	8
	Water Supply – Pressurized	0	1	1	1	1	1	1	2
	Water Supply – Non Pressurized	0	3	1	4	2	6	4	8
	Forcible Entry Team	0	0	0	0	0	1	0	1
	Utilities	0	1	1	1	1	1	1	1
	Laddering (Ground Ladders)	0	2	0	2	0	4	0	6
	Laddering (Aerial or Elevating Device Operator)	0	0	0	2	0	2	0	2
	Exposure Protection			0	4	2	6	2	6
	Incident Safety Officer			0	1	1	1	1	1
	Accountability			1	1	1	1	1	1
	Entry Control			0	2	1	4	1	4
	Rehabilitation			0	1	1	1	1	1
	Salvage			0	2	2	2	2	2
	Lighting					0	2	0	2
	Directing Occupants					0	4	0	4
	Scribe					1	1	1	1
	Sector Officers					1	4	1	4
	Air Management (Air Refilling Station, etc.)							1	2
Other Or Additional Response Considerations	Logistics Officer								
	Administrative and/or Finance Officer								
	Planning Officer								
	Evacuations (Large Scale)								
	Communications (Dispatch)								
	Public Information Officer								
	Overhaul								
	Additional Firefighters								
Summary	Incident Response Range	4	13	16	43	36	83	49	108
	Total Fire Department Including External								
	Fire Call Incident Response Range								

Notes:

- LERL = Lower Effective Response Level
- UERL = Upper Effective Response Level (together form the critical staffing range)
- This tool provides a range of staffing requirements only. Actual numbers may vary depending on the fire risk that exists in the municipality. Tasks performed on fireground based on decisions made by Incident Commander.
- Planning moderate, high and extreme risk occupancies/locations will further validate staffing requirements to ensure the optimum level of protection for the municipality.
- Simultaneous events will require further consideration due to additional personnel requirements beyond the scope of the matrix.
- Incident Command will assume responsibilities for the accountability and entry control tasks when no person has been assigned, or until a person has been assigned the task.

(Source: Ontario Fire Marshal (2011), Operational Planning: An official Guide to Matching Resource Deployment and Risk)

9.6 Province of British Columbia – Structure Firefighters Competency and Training Playbook

The B.C. Playbook describes and establishes three different service levels that are directly linked to the training level of the department. In our view, the most recent addition amended in May of 2015 provides valuable insight into determining the level of fire suppression services to be provided by a municipality including those in Ontario.

In addition to response times, and the number of firefighters responding, the B.C. Playbook links the training qualifications of firefighters to fire suppression service levels. In further support of the OFMEM Public Fire Safety Guidelines and NFPA standards, the B.C. Playbook identifies three specific fire suppression service levels for Council's consideration in developing the City of Sault Ste. Marie fire suppression service levels.

The sections that follow describe the service levels available within the B.C. Playbook.

9.6.1 Exterior Operations Service Level

Fire service firefighters shall not enter any building, vehicle dumpster or other object if an immediately dangerous to life and health (IDLH) atmosphere is present. If an IDLH atmosphere is present, Exterior Operation firefighters shall only engage in external fire suppression activities. Operational Guidelines that restrict them to Exterior Operations must be written and enforced by the department, even though they may possess equipment that would otherwise permit them to respond at a higher level.

On occasion where the department responds to a simple incident and an IDLH atmosphere does not yet exist, it is reasonable to address the issue from inside the structure. However, if an IDLH atmosphere develops or the fire progresses beyond the object of origin, or the environment or structure become compromised in any way, all firefighters must immediately withdraw to the exterior and combat the situation from the outside. Where the IDLH atmosphere no longer exists as a result of fire suppression operations or otherwise, subject always to an appropriate risk assessment by the Incident Commander, it may be appropriate for members of an Exterior Operations Service Level department to enter the structure.

Where there is a potential risk of an IDLH atmosphere developing, or risk from smoke or particulate matter when conducting external operations (including overhaul), Self-Contained Breathing Apparatus (SCBA) must be worn in accordance with WorkSafe BC requirements.

9.6.2 Interior Operations Service Level

Interior Operation Service Level fire departments may engage in internal fire suppression activities within simple structures or objects such as a vehicle, single-family dwelling or other small structure. Interior Operations may also include larger or more complex structures that the authority having jurisdiction has assessed and pre-planned for, such that it determines that structure to be safe for

Internal Operations qualified firefighters. Firefighters must be trained specifically to the risks associated with these structures.

Interior Operations Service Level fire departments shall have written Operational Guidelines enforced by the department that describe advanced training in fire operations activities that allow for a calculated fire attack within permitted structures and objects.

Interior Operations must be undertaken in accordance with the requirements of WorkSafe BC (including, in particular, S. 31.23 of the Occupational Health and Safety Regulation). The Incident Commander must recognize the need, and staff appropriately, for a Rapid Intervention Team (RIT) with trained firefighters following the WorkSafe BC requirements.

9.6.3 Full Service Operations Level

Full Service Operations Level fire departments are equipped and have completed the appropriate training identified in the B.C. Playbook to provide a full spectrum of fire services. These services are based on the competencies included within the NFPA 1001 Firefighter Level II Standard and relevant NFPA Fire Officer Standards.

Full service fire departments will have Operational Guidelines that must be written and enforced by the department that describe advanced training in fire operations activities. These fire departments are organized such that the suppression activities that occur are based on response protocols which include the appropriate staffing levels, and number and type of apparatus on scene.

9.7 Summary of Fire Suppression Guidelines and Standards

The analysis within the preceding sections of this review considers performance benchmark elements for providing fire suppression response services including:

- Applicable Firefighter Suppression Training Benchmarks: Fire suppression service levels including exterior operations, interior operations and full service operations (e.g. B.C. Playbook) determined by firefighter training qualifications; and
- Applicable Fire Suppression Performance Benchmarks: Guidelines and standards relating to the number of firefighters required for both initial response and depth of response including response time (turnout time + travel time) performance benchmarks for deploying firefighters to effectively and safely mitigate a fire situation.

This fire master planning process recognizes that the proposed applicable firefighter suppression training and fire suppression performance benchmarks were not in place prior to this review. However, they will be applied to the historical, existing and proposed fire suppression options presented within this FMP. In our view this strategy is required in order to provide Council with comparable benchmarks

for to assist them in determining the level of fire suppression services to be provided based on an analyses of local *"needs and circumstances"* for the delivery of fire protection services.

9.7.1 Applicable Firefighter Suppression Training

In our view the B.C. Playbook provides valuable insight into current industry best practices that link the importance of matching the required firefighter suppression training level to the fire suppression deployment performance benchmarks being targeted. Our research indicates that the current firefighter training program within the City of Sault Ste. Marie is based on the skills and competencies included within the NFPA 1001 Firefighter Level II Standard and relevant NFPA Fire Officer Standards as referenced within the B.C. Playbook.

This FMP recommends that the SSMFS continue to utilize the NFPA 1001 Firefighter Level II Standard and relevant NFPA Fire Officer Standards as the foundation for the proposed Comprehensive Annual Training Program. As such our findings indicate that the SSMFS is capable of providing the Full Service Operations Level of fire suppression response as defined within the B.C. Playbook.

9.7.2 Applicable Fire Suppression Performance Benchmarks

Defined Rural Area

The Rural Demand Zone fire suppression benchmark included within the NFPA 1720 standard including six firefighters responding within 14 minute travel time to 80% of the fire related incidents is the applicable fire suppression benchmark for the identified rural area of the City of Sault Ste. Marie. The application of the Rural Demand Zone is further supported by the population density of the rural area based on 2016 Census data.

According to Statistics Canada 2016 Census data, the City's Population Centre (as defined by Statistics Canada) is home to 90% of the City's population. This results in a population of 7,055 residents within the rural area outside of the Population Centre in a geographic area of 170 square kilometres (106 square miles). The resulting population density of the rural area (outside of the Population Centre) is 67 people per square mile. It is recognized that the Population Centre boundary defined by Statistics Canada does not perfectly align with the Urban Area boundary defined by the City. However, based on a desktop review of the land uses in the areas that do not align, it is not anticipated that having the exact alignment would result in a population density that is high enough to justify a different demand zone per NFPA 1720 (e.g., Suburban Demand Zone of 500 to 1000 people per square mile).

Defined Urban Area

Within the defined urban boundary of the City, the NFPA 1710 standard provides valuable insight into key benchmarks for consideration that include the number of firefighters responding, travel time, percentile of performance objective and type of risk present. In comparison, PFSG 04-08-10 provides an indication of the range of firefighters that would be required based on the fire risks present. Table 20

presents a comparison of the firefighter deployments reference in NFPA 1710 and PFSG 04-08-10 based on the fire risk present. The NFPA 1710 deployments exclude an aerial device and medic requirements.

Table 20: Comparison of NFPA 1710 and PFSG 04-08-10 Risk Deployment

Defined Urban Area Response Type	NFPA 1710	PFSG 04-08-10
Initial Response – Low Risk	4	4 to 13
Depth of Response – Moderate Risk	14	16 to 43
Depth of Response – High Risk	26	36 to 83
Depth of Response – High-Rise High Risk	39	N/A

The analysis indicates that the NFPA 1710 minimum number of firefighters requirements are typically at the lower range of those identified in PFSG 04-08-10, however the NFPA 1710 standard includes additional performance benchmarks for response time and a 90th percentile performance level not contained within PFSG 04-08-10.

For the purposes of providing Council with the most applicable and consistent assessment of fire suppression performance this FMP has utilized the *NFPA 1710 "Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments"* as the applicable benchmark for assessing the number of firefighters required for initial response and depth of response to fire suppression incidents within the defined urban area of the City. This strategy also aligns with using the NFPA 1720 standard for the defined rural area of the City.

Understanding the relationship between the minimum number of on duty firefighters at all times, and the applicable fire suppression performance benchmarks is a critical element of this fire master planning process. *This is of particular importance to informing Council's decision-making process with respect to assessing the historical, existing and future number of full-time firefighters employed by the SSMFS.*

Table 21 presents the applicable fire suppression deployment benchmarks for the delivery of fire suppression services within the City of Sault Ste. Marie. While the City is served by a full-time department, the Comprehensive Risk Assessment presents that geographically the City has a defined urban area and a defined rural area with different fire risks within those areas. This aligns with the approach of applying different performance benchmarks to the City (urban area and rural area).

Table 21: Applicable Fire Suppression Performance Benchmarks

Response Type	Applicable Fire Suppression Performance Benchmarks
Rural Area Response	Six firefighters arriving on scene within a 14 minute travel time to 80% of the incidents. (NFPA 1720)
Initial Response Defined Urban Area	Four firefighters arriving on scene within a four minute travel time to 90% of fire suppression incidents. (NFPA 1710)
Depth of Response Defined Urban Area – Moderate Risk	Fourteen firefighters arriving on scene within an eight minute travel time to 90% of the moderate risk fire suppression incidents. (NFPA 1710)
Depth of Response Defined Urban Area – High Risk	Twenty six firefighters arriving on scene within an eight minute travel time to 90% of fire high risk suppression incidents. (NFPA 1710)
Depth of Response Defined Urban Area – High-Rise High Risk	Thirty nine firefighters arriving on scene within a 10 minute and 10 second travel time to 90% of the high-rise high risk fire suppression incidents.

10.0 Emergency Response Statistics and Time Assessment

The results of the analysis of emergency response statistics and time assessment (response capabilities) of the SSMFS is presented within this chapter. This analysis is based on incident data collected by the department for the period from January 1, 2012 to October 30, 2017 as provided by the SSMFS.

10.1 Response Statistics (Jan 1. 2012 to Oct. 30, 2017)

The emergency response statistics analysis includes an assessment of emergency call volume, call volume by station, and call volume by incident type. This provides some insight into the workload of the division.[15]

10.1.1 Annual Call Volume

A summary of the total number of emergency calls the SSMFS responded to from January 1st 2012 to October 30th, 2017 is presented within Figure 10. The emergency call volume over this period has remained reletiavly stable with the average being 2,528 calls per year.

It is noted that there are some slight discrepencies between the identified annual call volume in each year and those referenced within the department annual report. These are typically calls involving mutal aid where the department responded outside of the City or incidents that resulted in a second report as a result of exposure damage to an adjacnt occupancy.

[15] A similar analysis is presented in the Comprehensive Risk Assessment based on the years 2012 to 2016. The difference in time periods in the FMP and CRA is in part to provide a larger data set for analysis of the historic (pre-October 26, 2015) and existing (post-October 26, 2015) fire suppression deployment models within the FMP as well as comparable Provincial data not being available for 2017.

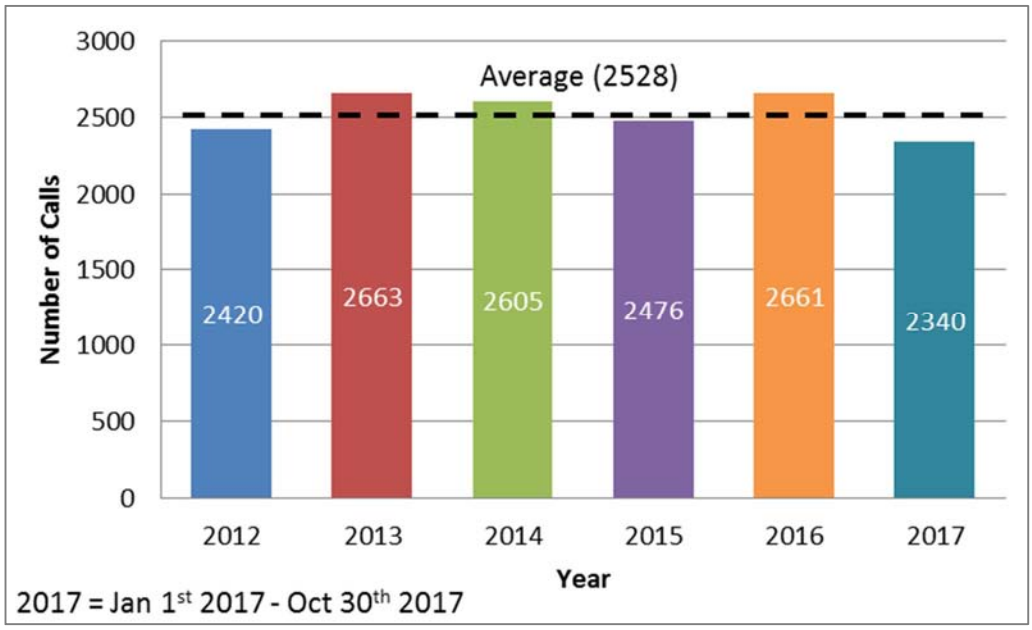


Figure 10: Annual Call Volume

10.1.2 Average Annual Call Volume by Station

Emergency calls result in a specific station being dispatched depending on the location of the call. The spatialized nature of calls results in different call volumes by station. An analysis of call volume by station provides insight into station workloads as well as the volume of incidents in relation to the current initial response station coverage areas. Figure 11 illustrates that for the period from January 1, 2012 to October 30, 2017 the average annual call volume by station was 632. Station 1 located in the downtown area accounted for highest proportion of calls with an average annual volume of 780.

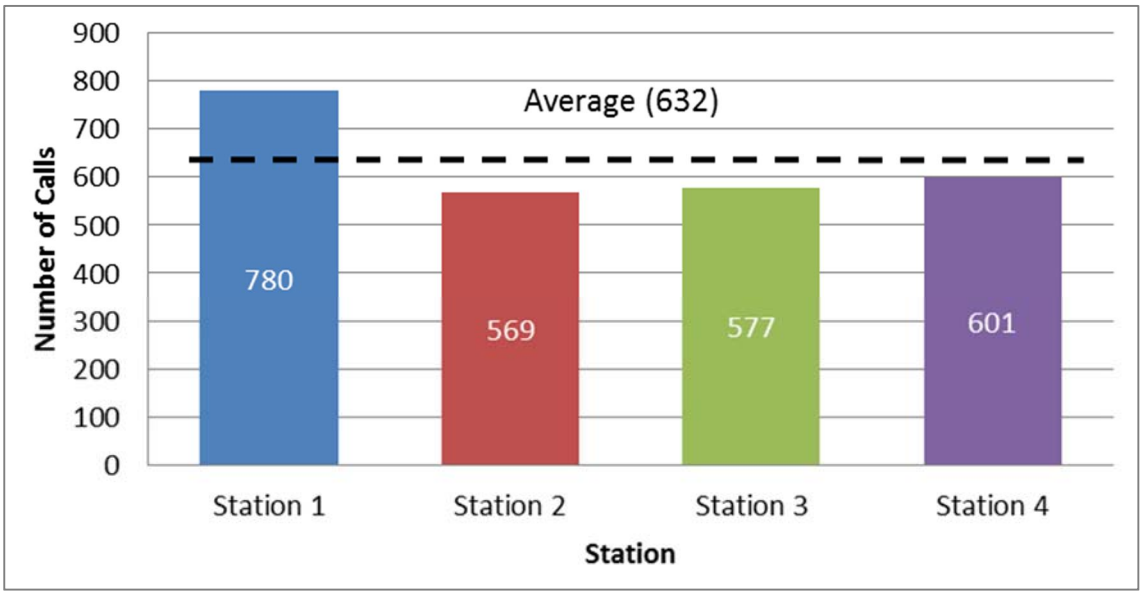


Figure 11: Average Annual Volume by Station

10.1.3 Calls by Emergency Response (Incident) Type

As described in the CRA, each fire department in Ontario must report their calls to the OFMEM annually. The OFMEM requires each call to be identified by an OFMEM emergency response type. The OFMEM-defined response types are used by jurisdictions throughout Ontario for comparative reporting purposes. The SSMFS is similar to many fire departments in Ontario that in addition to the required OFMEM reporting they track more detailed incident response analyses. Table 22 illustrates the relationship between the Sault Ste. Marie Response Type categories and the OFMEM response type categories used in this analysis.

Table 22: Emergency Response Types

Sault Ste. Marie Response Type	OFMEM Response Type
Fire (Structure, Vehicle, and Other)	Property Fires / Explosions
Pre-Fire Conditions	Overpressure Rupture / Explosion (No Fire)
	Pre-Fire Conditions / No Fire
False Alarm	False Fire Call
	CO False Call
	Burning (Controlled)
Medical	Medical / Resuscitator Call
Rescue	Rescues
Public Hazard	Public Hazards
Other (No Fire)	Other Responses

10.1.3.1 Calls by OFMEM Emergency Response Type

A comparison of calls by OFMEM emergency response type was completed between the City and the Province, using the OFMEM response types defined in Table 22. Calls responded to by SSMFS for the period January 1, 2012 to October 30, 2017 are shown in Figure 12 based on the OFMEM Emergency Response Type codes indicated in the incident data provided by SSMFS. Figure 13 shows the proportion of calls across the province based on OFMEM Response Type for 2012 to 2016 (based on data provided by the OFMEM – Ontario Key Facts Emergency calls and Fires).

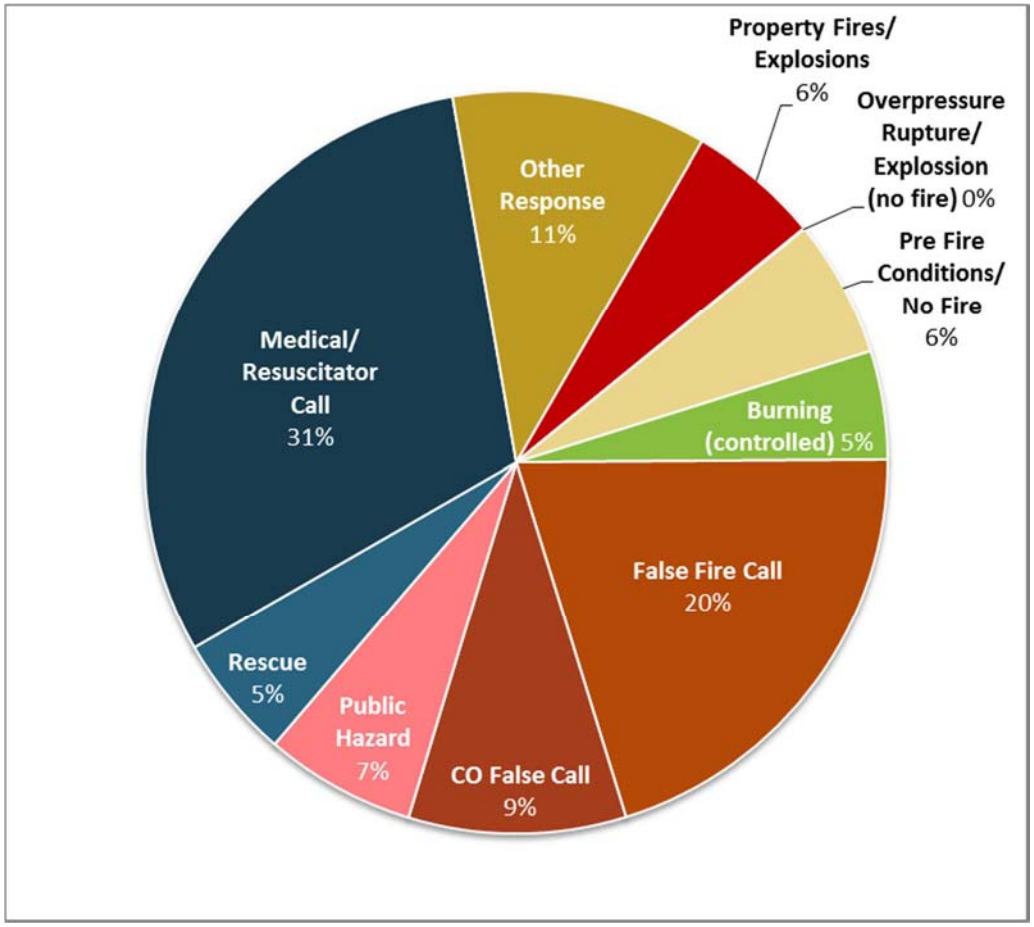


Figure 12: Percentage SSMFS Calls by OFMEM Response Type (2012 to Oct. 30 2017)

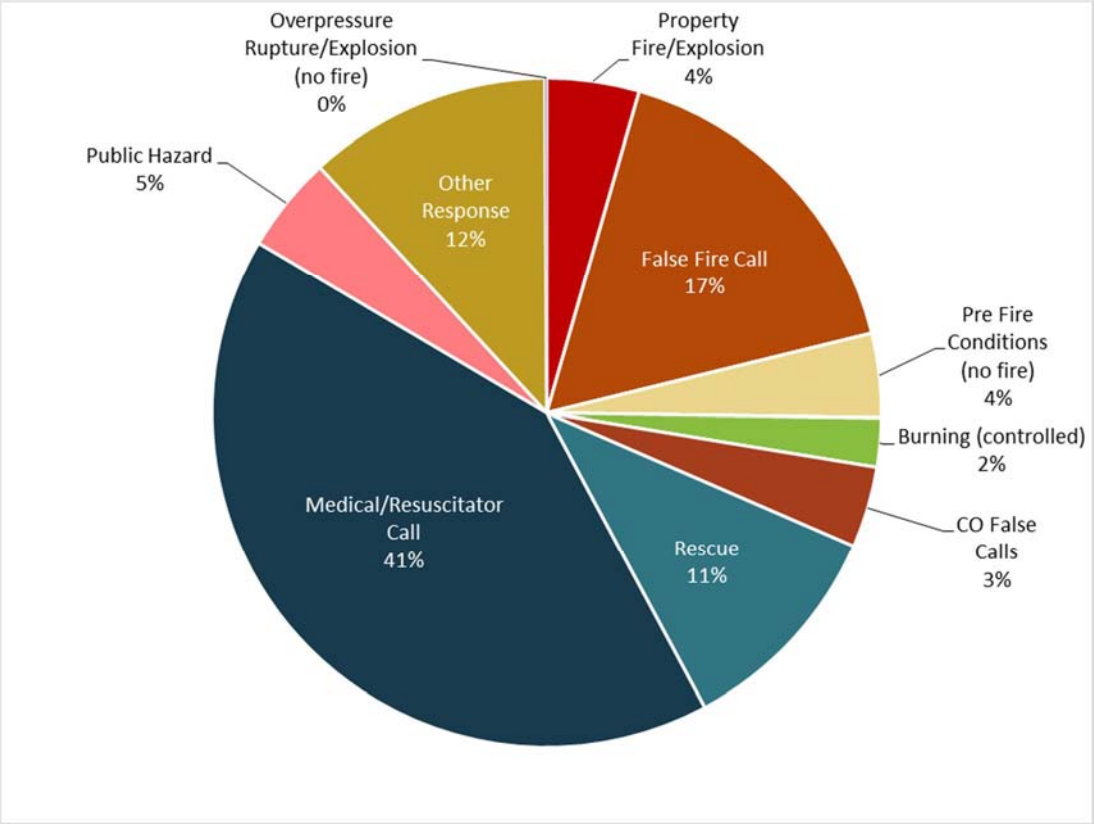


Figure 13: Percentage of Calls in Ontario by OFMEM Response Type (OFMEM Data 2012 to 2016)

At a provincial level, medical calls are the most common response type (41%), followed by false fire calls (17%) and other calls (12%). The SSMFS also historically as a high proportion of medical calls (31%) and false fire calls (20%). The CRA presents additional analysis of the false alarm calls.

10.1.3.2 Call Volume by SSMFS Response Type

Analysis of the historic calls for the period from January 1, 2012 to October 30, 2017 based on SSMFS Response Types (listed in Table 22) is presented in Figure 14. This analysis further defines the type of fire by structural, vehicle and other. As shown, structure fires accounted for only 2% of all emergency calls and false alarms account for 34%. As further explored within the CRA, the False Alarm SSM Response Type includes CO false calls, false fire calls, and burning (controlled). As shown in Figure 14, through the lens of the SSMFS Response Types, the proportion of false alarm calls is greater than medical calls which account for 31% of the call volume over the period identified. Medical calls reflect the second highest emergency call work load.

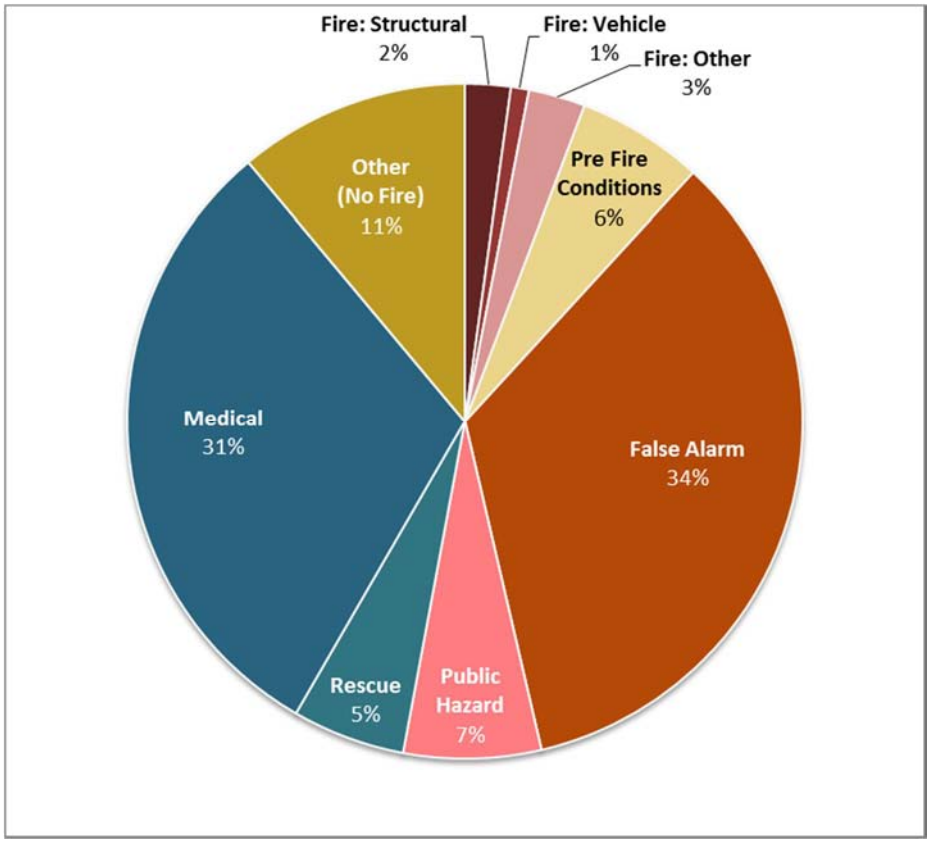


Figure 14: Percentage of Calls by SSMFS Response Type (2012 to Oct. 30 2017)

This analysis further highlights the importance of the proposed strategic priorities identified within this FMP that include:

"The optimization of the first two lines of defence, including public education and fire prevention, and the utilization of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the comprehensive Community Risk Assessment"

Industry best practices indicate that implementing proactive public education, inspection and enforcement strategies as proposed within this FMP can have a positive impact in reducing emergency call volume, and specifically false alarm calls.

10.2 CRA Key Findings

The CRA included an analysis similar to the response statistics presented above for the period of 2012 to 2016. The analysis presented in Section 10.1 suggests that the key findings remain consistent when including 2017 data. These key findings provide valuable insight into the historical volume of emergency calls, types of emergency calls and additional spatial analysis provide more detail information related to

the location of specific emergency call types. These key findings have been utilized to further inform the proposed fire suppression staffing and station location models options. Additional key findings from the geographic profile considered as part of the emergency response (fire suppression) assessment are also listed

CRA Key Findings Analysis Outcomes	THIRD LINE OF DEFENCE
	For consideration within the proposed Emergency Response
Overall, call volumes have increased by 10% from 2012 to 2016, with variability in volume over the five years.	X
Of the four stations, Station 1 responds to the highest proportion of calls annually at 30%.	X
From 2012 to 2016, based on OFMEM Response Types, SSM call volumes are comprised of 5% more CO false calls, 3% more false fire calls, 3% more burning (controlled) calls, 3% more pre fire conditions/no fire calls, 2% more property fires/explosions and 2% more public hazard calls than the provincial total.	X
The spatial analysis of Fire Calls - Structure for the period 2012 to 2016 shows a higher density of structure fire calls occurring in the downtown area around Wellington Street West and Cathcart Street, and with some other pockets east and west of Downtown.	X
The spatial analysis of fire calls for the period 2012 to 2016 indicates a higher density of Fire Calls - Other occurring in the Downtown and west of downtown at the intersection of Lyons Avenue and Korah Road.	X
The spatial analysis of Pre-Fire Calls for the period 2012 to 2016 indicates a higher density of Pre-Fire Calls occurring in the in the Downtown and along the Wellington Road West corridor in the downtown, the Lyons Avenue/Wallace Terrace corridor west of downtown and the Trunk Road corridor to the east of downtown.	X
The spatial analysis of Rescue Calls for the period 2012 to 2016 indicates a higher density of Rescue Calls occurring in the in the Downtown and north of Downtown along Great Northern Road (between McNabb Street and Second Line West) and Second Line West (between Goulais Avenue and Peoples Road).	X
The spatial analysis of Public Hazard Calls for the period 2012 to 2016 indicates a higher density of Public Hazard Calls occurring in the in the Downtown, and north of downtown in the vicinity of Pine Street at McNabb Street.	X
The geographic size of the City with its makeup of urban settlement areas and rural areas results in extended emergency response times to the some areas of the City	X
The road network is a contributor to emergency call volume due to motor vehicle collisions, vehicle extrication, and vehicle fires. Incidents occur on arterial roads. Such incidents, on average by road type length, more commonly occurs on Urban Arterial roads	X
96% of hydrants providing service to the City are found within the Urban Settlement Area.	X

10.3 Time Assessment (Jan 1. 2012 to Oct. 30, 2017)

Response times are measured and analyzed according to percentile ranking (i.e. percentage of responses meeting a specified timeframe). The 90th percentile (i.e. where 90% or 90 out of 100 responses meet a specific response time target) is a common industry best practice for reporting and understanding emergency first responder performance. Fire and emergency services commonly measure and report 90th percentile response time data for system planning and resource deployment purposes.

Within the fire service, *Total Response Time* is calculated by assessing three primary factors that include the following:

Total Response Time = Dispatch Time + Turnout Time + Travel Time

10.3.1 Dispatch Time

The SSMFS operates its own fire emergency call taking (alarm answering) and fire dispatching (alarm processing) centre. The applicable performance benchmarks for assessing these services is contained within the *NFPA 1221 – Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems* (2016) that includes the following (Section 3.3.41):

> "*Emergency Alarm Processing / Dispatching*: *A process by which an alarm answered at the communications centre is transmitted to emergency response facilities (ERFs) or the emergency response units (ERUs) in the field.*"

Identified in Section 7.4.2 of NFPA 1221 Standard, the applicable performance benchmarks for the SSMFS include:

- 90% of emergency alarm processing shall be completed within 64 seconds; and,
- 95% of alarm processing shall be completed within 106 seconds.

Figure 15 presents the analysis of all call types occurring for the period from January 1st 2012 to October 30th 2017 which indicates that the 90th percentile aggregate dispatch times for the SSMFS is 89 seconds (or approximately 1.5 minutes). Over this period the aggregate dispatch time exceeds the NFPA benchmark by 25 seconds. However, there is a notable improvement that occurred in 2015 that has resulted in the department reducing the dispatch times. The analysis suggests that the department has been able to sustain this improvement that indicates current dispatch times (2015, 2016, and part of 2017) are only slightly exceeding the NFPA benchmark of 64 seconds.

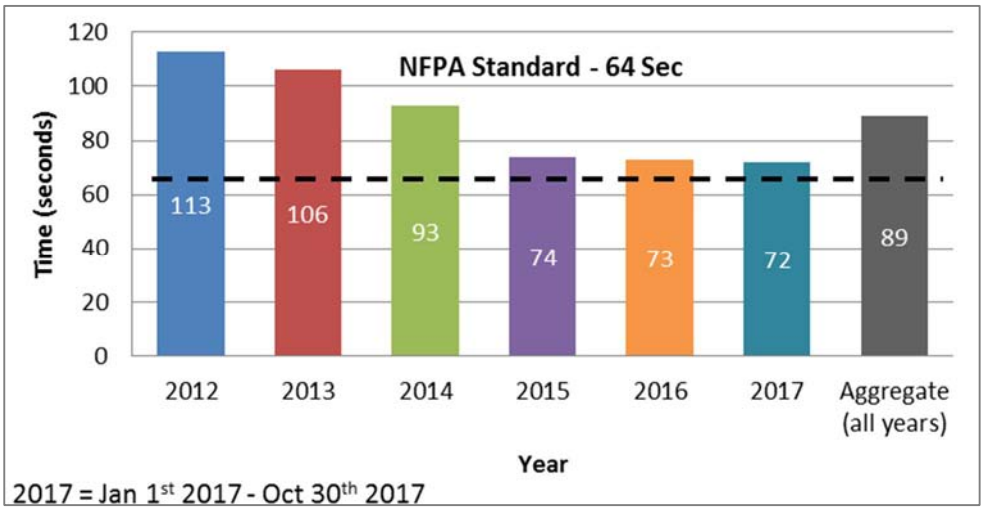


Figure 15: 90th Percentile Dispatch Times (2012 to Oct. 30, 2017)

As shown in Figure 16, the 95th percentile aggregate dispatch times for the SSMFS for period from January 1st 2012 to October 30th 2017 is 116 seconds (or approximately 1.9 minutes) compared to the NFPA Standard of 106 seconds. This analysis shows the same improvement in dispatch time as the 90th percentile analysis with times improving in 2015. This improvement has resulted in the department attaining this benchmark in 2015, 2016, and as of October 30 in 2017).

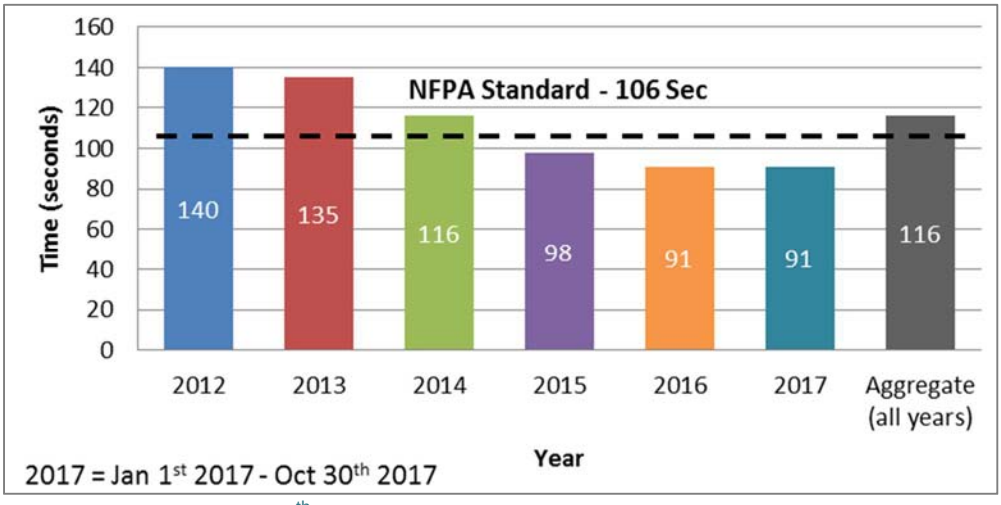


Figure 16: 95th Percentile Dispatch Times (2012 to Oct. 30, 2017)

Overall, this analysis indicates that the SSMFS is working towards attaining the 90th percentile performance benchmark and is now achieving the 95th percentile performances benchmark. This FMP includes a recommendation to include these performance benchmarks within the proposed updated Establishing and Regulating By-law.

10.3.2 Turnout Time

Turnout time is defined within the by the *NFPA 1710 Standard for Organization and Deployment of Fire Suppression Operations by Career Fire Departments* as:

"the time interval that begins when the emergency response facilities (ERFs) and emergency response unit (ERUs) notification process begins by either an audible alarm or visual annunciation of both and ends at the beginning point of travel time."

This standard identifies a benchmark of 80 seconds or less for 90 percent of all fire-related incidents. The general industry definition of firefighter turnout time is defined as the preparation time required between the emergency call being received at the fire station and the time the truck and firefighters leave the station. Figure 17 presents a summary of SSMFS historical turnout times for the period from January 1st 2012 to October 30th 2017 in comparison to the recommended NFPA 1710 performance benchmark of 80 seconds. This includes an assessment of all SSMFS response types except Other (No Fire).

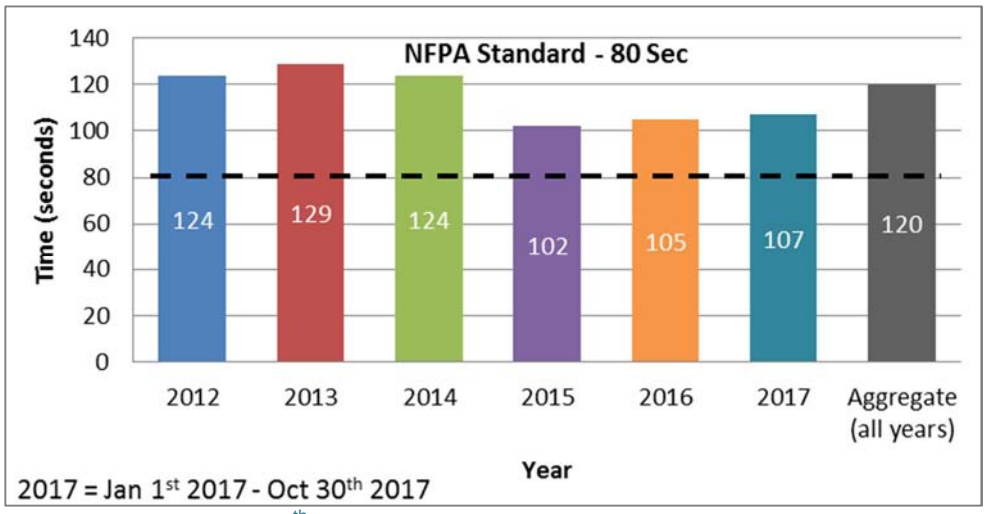


Figure 17: 90th Percentile Turnout Times (2012 to Oct. 30, 2017)

The SSMFS historical aggregate 90th percentile turnout time for the time period was 120 seconds (two minutes). The analysis indicates that there was some improvement in 2015 that resulted in a reduction in the turnout time of the on duty firefighters. However, the department continues to exceed the NFPA benchmark of 80 seconds. Turnout time is one of the three key elements that impact total response time. As such, improving firefighter turnout time should be further emphasised within updated operating guidelines and accountability that includes ongoing monitoring of this performance benchmark.

10.3.3 Travel Time

Travel time is defined within the by the *NFPA 1710 Standard for Organization and Deployment of Fire Suppression Operations by Career Fire Departments* as:

"The time interval that begins when a unit is en route to the emergency incident and ends when the unit arrives at the scene."

The NFPA 1710 performance measure requires meeting a travel time of 240 seconds (four minutes) for the first arriving engine company (four firefighters) on-scene for 90% of calls (90th percentile). Figure 18 presents a summary of historical 90th percentile SSMFS travel times for the first arriving vehicle (initial response) for the period from January 1st 2012 to October 30th 2017. This includes an assessment of all SSMFS response types except Other (No Fire). The historic aggregate 90th percentile initial response travel time of the SSMFS for the initial arriving apparatus was 397 seconds (or approximately 6.6 minutes).

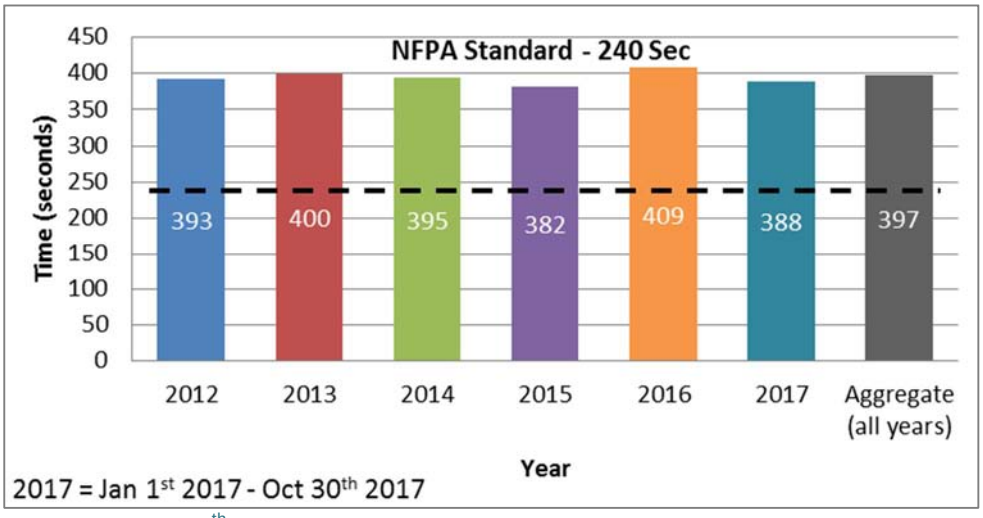


Figure 18: 90th Percentile Initial Response Travel Time (2012 to Oct. 30, 2017)

This analysis indicates that the SSMFS has historically exceeded the 240 second performance benchmark for the initial responding apparatus. This may in part be due to the current geographical location of the fire stations and the presence of large initial response areas that extend into the rural area.

10.3.4 Total Response Time (Initial Response)

Total response time is defined within the by the NFPA 1710 Standard for Organization and Deployment of Fire Suppression Operations by Career Fire Departments as:

"The time interval from the receipt of the alarm at the public safety answering point (PSAP) to when the first emergency response unit is initiating action or intervening to control the incident."

Total response time includes the dispatch time, turnout time and travel time components of an emergency response. Figure 19 presents a summary of historical total response times for the first arriving apparatus. This includes an assessment of all SSMFS response types except Other (No Fire). The total response performance measure for initial response is the total sum of dispatch time, turnout time and travel time. This equates to a 90th percentile aggregate total response time of 521 seconds (8.7 minutes) for the first arriving apparatus. This highlights that each component, whether dispatch time, turnout time or travel time, impacts the total response time. It is important to aim to meet the performance benchmarks for each of these components in order to provide the best level of service for the overall emergency response.

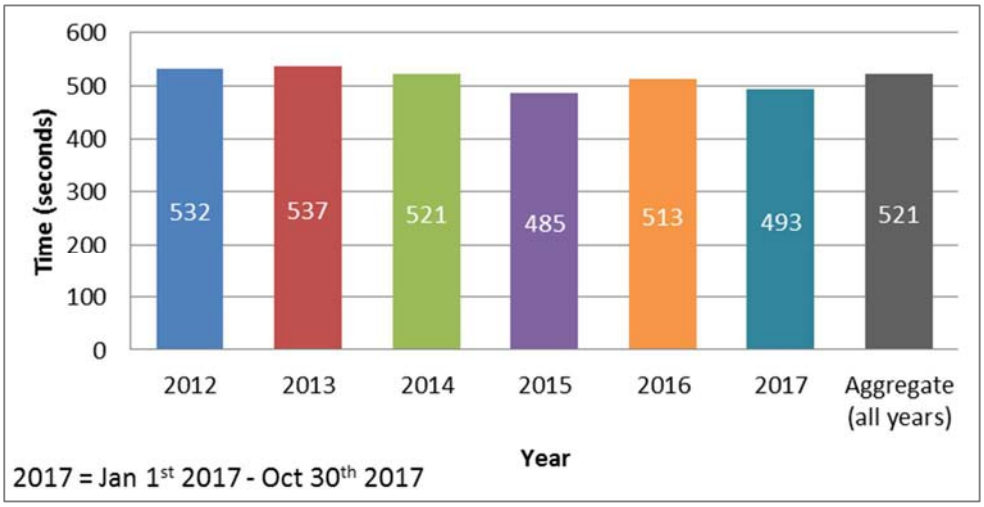


Figure 19: Total Response Time (2012 to Oct 30, 2017)

11.0 Historical/Existing Fire Suppression Performance Assessment

This section presents the assessment of historical (pre 2015) and existing fire suppression response coverage within the City of Sault Ste. Marie. Various modelling scenarios were developed to assess the historical and existing fire suppression response coverage, including initial response, depth of response, rural response capabilities and fire risk coverage.

The historical fire suppression analysis is based upon on the fire suppression deployment model that was in place prior to approval of the Fire Services Organizational Review (Pre-October 26, 2015). Prior to this date the minimum complement of on-duty firefighters was 16.

The existing fire suppression analysis is based upon on the fire suppression deployment model that the department has transitioned to since approval of the Fire Services Organizational Review (Post-October 26, 2015). Since this date the minimum complement of on-duty firefighters has been 13.

This performance assessment is guided by the applicable fire suppression performance benchmarks introduced in Section 9.0 - Current Fire Suppression Guidelines and Standards. For convenience, these performance benchmarks are reiterated, following by an overview of the Geographic Information System (GIS) modelling methodology, followed by the results of the assessment of historic and existing deployment models.

11.1 Applicable Fire Suppression Performance Benchmarks

Section 9.0 includes an analysis of current fire suppression guidelines and industry standards representing industry best practices to identify the applicable performance benchmarks for assessing the fire suppression capabilities of the SSMFS. The proposed fire suppression performance benchmarks presented in Table 23 have been applied to assess the SSMFS historical and existing firefighter deployment models.

Table 23: Applicable Fire Suppression Performance Benchmarks

Response Type	Applicable Fire Suppression Performance Benchmarks
Rural Area Response	Six firefighters arriving on scene within a 14 minute travel time to 80% of the incidents. (NFPA 1720)
Initial Response Defined Urban Area	Four firefighters arriving on scene within a four minute travel time to 90% of fire suppression incidents. (NFPA 1710)
Depth of Response Defined Urban Area – Moderate Risk	Fourteen firefighters arriving on scene within an eight minute travel time to 90% of the moderate risk fire suppression incidents. (NFPA 1710)

Response Type	Applicable Fire Suppression Performance Benchmarks
Depth of Response Defined Urban Area – High Risk	Twenty six firefighters arriving on scene within an eight minute travel time to 90% of fire high risk suppression incidents. (NFPA 1710)

The applicable fire suppression performance benchmarks do not include the *Depth of Response Defined Urban Area – High-Rise High Risk* previously presented within this FMP. An alternative strategy for this performance benchmark will be presented within this FMP.

11.2 Modelling Methodology

Esri's Network Analyst tool was used to create a model of the City's current road network and simulate the fire suppression response coverage of the SSMFS navigating the City's road network. GIS layers were provided by the City for the existing road network. Relevant base road information, such as road length and road classification, was extracted from the GIS data. Within Esri ArcGIS, there are different options for use within the network analyst extension to create a road network. This includes creating turn/stop delays for every intersection or using a point barrier to add specific delays at each intersection.

For the calibration of the road network used in the analysis for this FMP, the road network speed is calibrated based on historical travel times for emergency calls. The historic call locations for structure fires, vehicle fires and medical calls (emergency call) for the period from January 1st 2012 to October 30th 2017 were utilized to calibrate the model. These types of calls represent incidents where the department operating guidelines require the use of all emergency lights and warning systems therefore representing the most consistent and expedited type of responses. These emergency calls were then added to the network and coded based on travel time to reach the call. As part of the calibration, an iterative process was applied to review and adjust the speeds throughout the road network in order to have the network travel speeds reflect the historic travel times of first responding units. Table 24 summarizes the modelled speeds for the existing current road network. The calibrated model is then used to assess the applicable fire suppression performance benchmarks.

Table 24: Model Calibration

Posted Speed Limit (km/hr)	Modelled Speed (km/h)
20	24
30	24
40	32
50	44
60	50
70	60
80	70

The calibrated road network, combined with the station locations, was used to build graphical "service area polygons" around each station. These polygons represent the emergency response coverage each station can provide in the specified amount of time (i.e. initial response coverage). Using the number of staff at each station, the polygon coverage can also represent the number of firefighters able to respond in a set amount of time (i.e. depth of response coverage).

11.3 Historical Fire Suppression Deployment Model

The historical minimum on duty staffing deployment model by station and apparatus is illustrated in Table 25.

Table 25: Historical Minimum Firefighter Deployment Model

Station	Apparatus	Minimum Staffing
1	Platoon Chief	1
	Pump	3
	Aerial	0
	Tanker	0
	Rescue	0
	Utility	1
2	Rescue/Pumper	4
3	Rescue/Pumper	4
4	Aerial	3
Minimum # of Firefighters on Duty		16

11.3.1 Historical Initial Response - Defined Urban Area

Figure 20 shows the Pre-October 26, 2015 historic initial response to the defined urban area (NFPA 1710). The historical initial response coverage of four firefighters arriving on-scene within four minutes of travel time represents 52% of the City's defined urban area and 84% of historical emergency call locations within the urban area. With the exception of Station 4 that had a minimum staffing complement of only three firefighters the coverage of four firefighters within a four minute travel time from the other three stations indicates minimal overlap of coverage between the stations. Minimizing the overlap between the stations is a key element of optimizing the response capabilities of the department. However, as can be seen by the coverage areas of Station 2 and Station 3 where the stations are centralized to a response area, the location of Station 1 in such close proximity to the St. Mary's River results in minimal coverage to the south of the current station location.

The historical initial response analysis also indicates that the SSMFS was able to a deploy four firefighters within four minutes of travel time to 35% of the Comprehensive Risk Assessment identified urban area low risk occupancies, 62% of the moderate risk occupancies and 16% of the high risk occupancies.

11.3.2 Historical Depth of Response – Defined Urban Area

Figure 21 shows the Pre-October 26, 2015 historic depth of response to the defined urban area (NFPA 1710). The depth of response coverage of 14 firefighters arriving on scene within an eight minute travel time represents 13% of the City's defined urban geography and 32% of historic emergency call locations. As a result of the distribution of firefighters within the historical deployment model the performance benchmark of 14 firefighters arriving on scene within eight minutes of travel time is predominantly centred between Station 1 and Station 4.

The historical initial response analysis also indicates that the SSMFS was able to deploy fourteen firefighters within eight minutes of travel time to 8% of the Comprehensive Risk Assessment identified urban area low-risk occupancies, 16% of the moderate-risk occupancies, and 3% of the high-risk occupancies.

This analysis also highlights that when operating with a total minimum staffing deployment model of 16 firefighters on duty the SSMFS does not have the required number of firefighters on duty to achieve the applicable fire suppression performance benchmark of 26 firefighters for the depth of response within the defined urban area to a high-risk occupancy type, or 39 firefighters for a fire in a high-rise, high-risk occupancy such as a residential apartment building in excess of 23 metres in height.

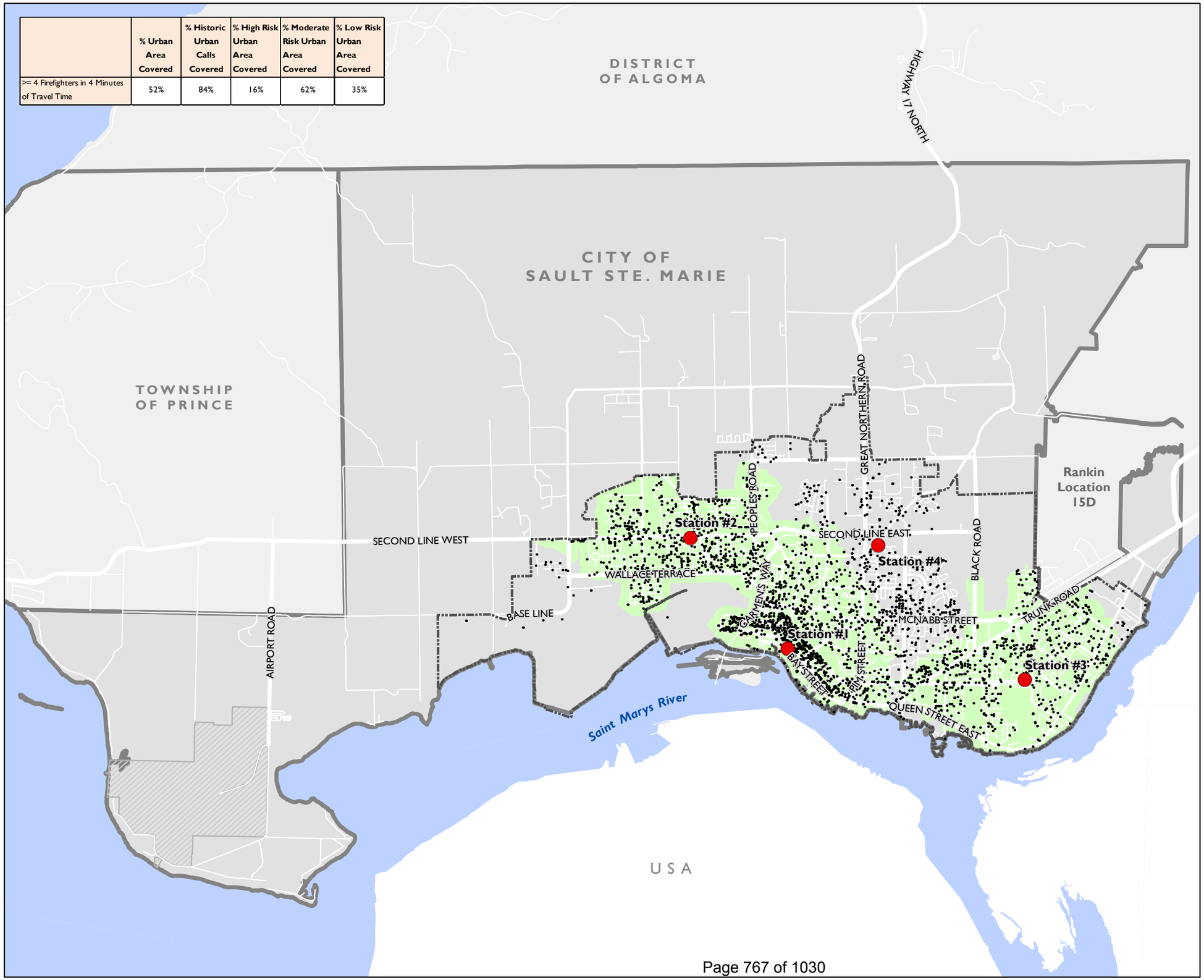
The historical deployment model relied upon the response of senior staff (Chief and/or Deputy Chiefs) and the call back of off duty firefighters to return to work to staff additional apparatus to achieve the applicable fire suppression performance benchmarks for these fire risks.

11.3.3 Historical Rural Response

Figure 22 shows the Pre-October 26, 2015 historic response to the defined rural area (NFPA 1720 Rural Demand Zone) of six firefighters within 14 minutes of response time (turnout time + travel time). The figure shows that the department was able to provide a response of at least six firefighters within 14 minutes of response time to 59% of the rural roads and 69% of the historic emergency call locations.

The historical rural response analysis also indicates that the SSMFS was able to a deploy at least six firefighters within a 14 minute response time (turnout time + travel time) to 23% of the Comprehensive Risk Assessment identified rural area low risk occupancies, 27% of the moderate risk occupancies and 87% of the high risk occupancies.

	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
>= 4 Firefighters in 4 Minutes of Travel Time	52%	84%	16%	62%	35%



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

PRE-OCTOBER 26 2015
NFPA 1710
INITIAL RESPONSE
FIGURE 2 0

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 4 Minutes of Travel Time

- ≥ 4 Firefighters in 4 Minutes of Travel Time

Station	Staffing
1	Pump - 3 Firefighters Aerial - 1 Firefighter Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters
4	Quint - 3 Firefighters

NFPA 1710
Minimum of 4 firefighters responding within 4 minutes, 90% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

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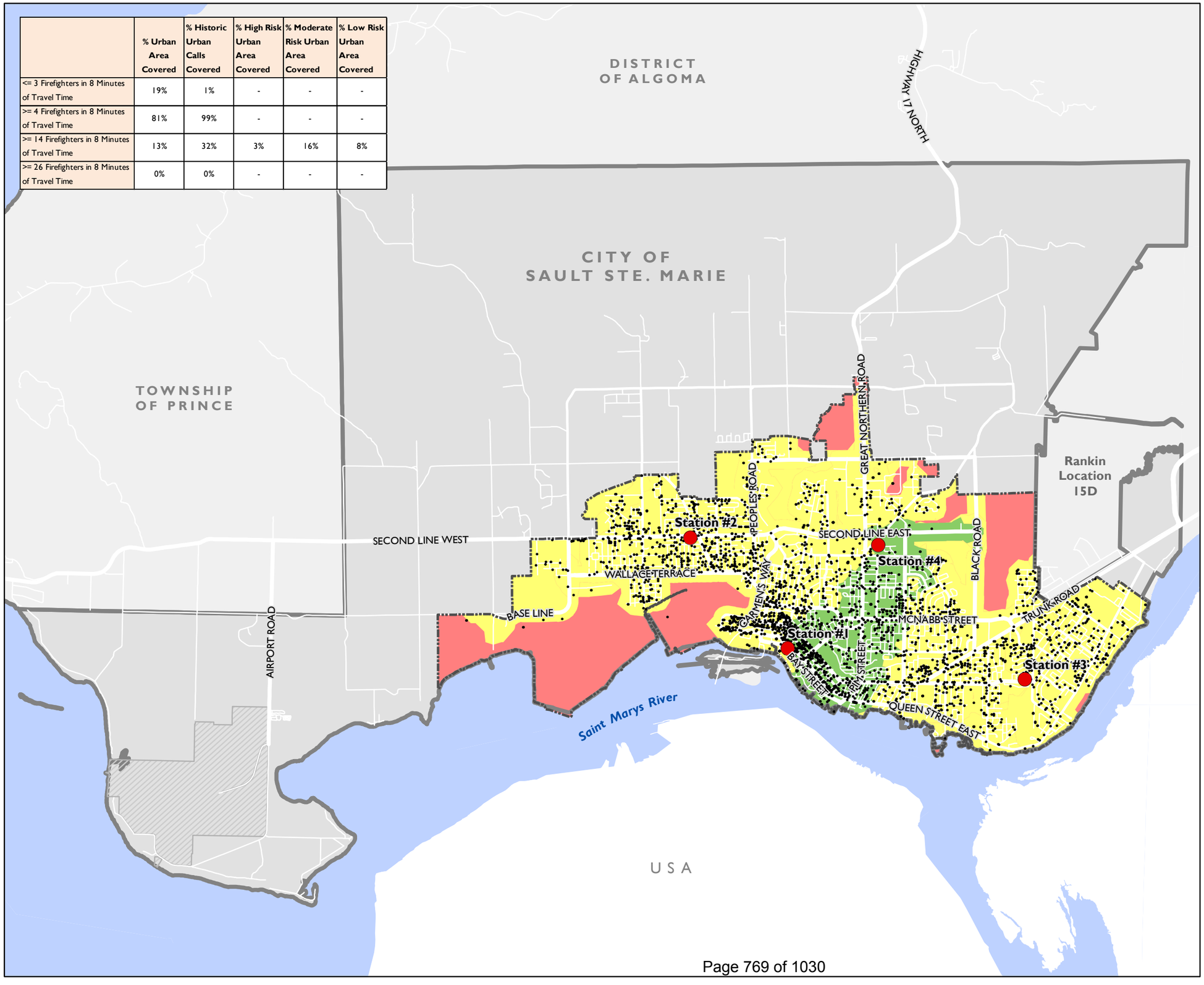
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	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
<= 3 Firefighters in 8 Minutes of Travel Time	19%	1%	-	-	-
>= 4 Firefighters in 8 Minutes of Travel Time	81%	99%	-	-	-
>= 14 Firefighters in 8 Minutes of Travel Time	13%	32%	3%	16%	8%
>= 26 Firefighters in 8 Minutes of Travel Time	0%	0%	-	-	-



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

PRE-OCTOBER 26 2015 (HISTORIC)
NFPA 1710 - DEPTH OF RESPONSE
DEFINED URBAN AREA
FIGURE 2 1

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 8 Minutes of Travel Time

- ≤ 3 Firefighters
- ≥ 4 Firefighters
- ≥ 14 Firefighters
- ≥ 26 Firefighters (not achievable due to staffing levels)

Station	Staffing
1	Pump - 3 Firefighters Aerial - 1 Firefighter Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters
4	Quint - 3 Firefighters

NFPA 1710 Depth of Response
14 Firefighters in 8 minutes of Travel Time, 90% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

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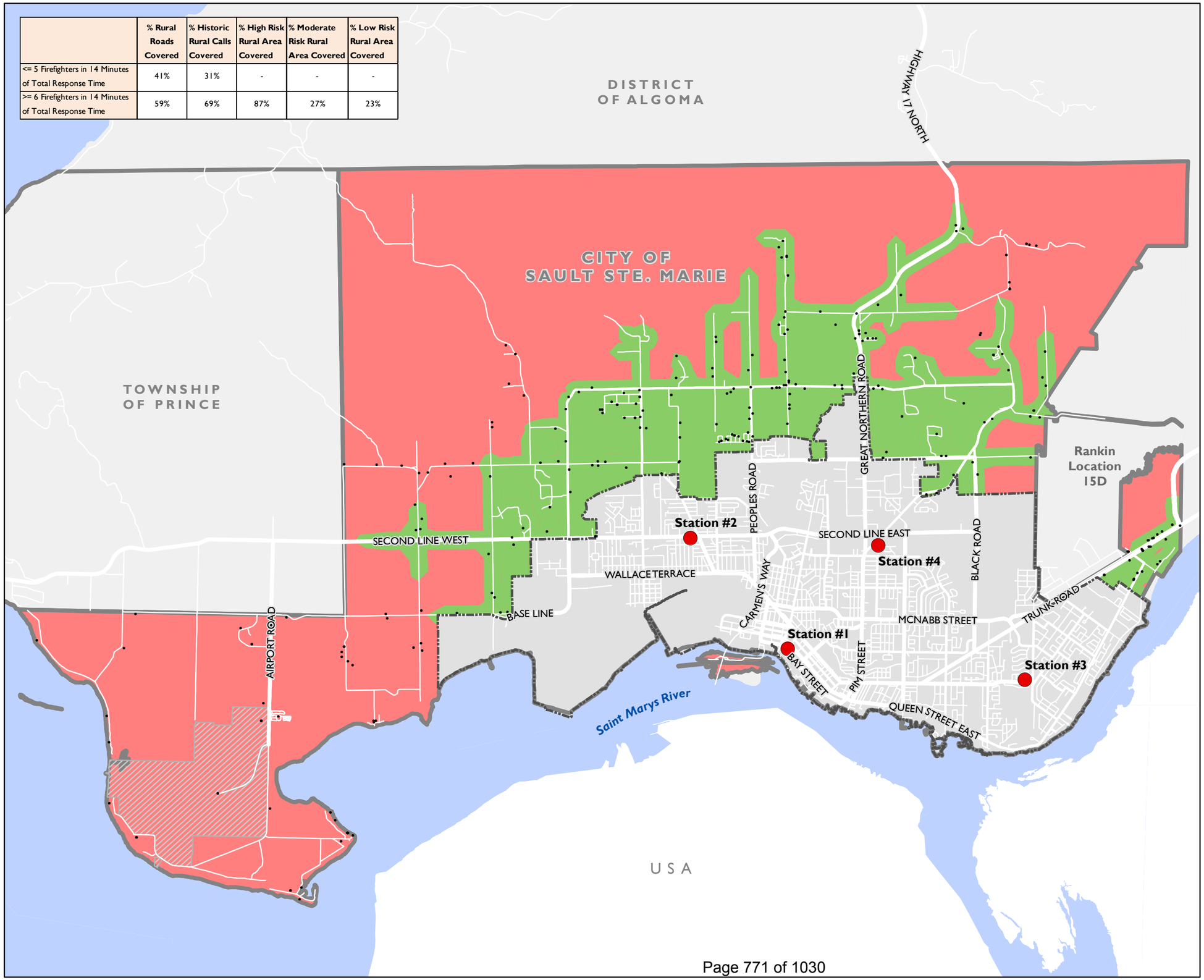
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	% Rural Roads Covered	% Historic Rural Calls Covered	% High Risk Rural Area Covered	% Moderate Risk Rural Area Covered	% Low Risk Rural Area Covered
<= 5 Firefighters in 14 Minutes of Total Response Time	41%	31%	-	-	-
>= 6 Firefighters in 14 Minutes of Total Response Time	59%	69%	87%	27%	23%



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

PRE-OCTOBER 26 2015 (HISTORIC)
NFPA 1720 - RURAL DEMAND ZONE
DEFINED RURAL AREA
FIGURE 2 2

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 14 Minutes of Total Response Time

- ≤ 5 Firefighters
- ≥ 6 Firefighters

Station	Staffing
1	Pump - 3 Firefighters Aerial - 1 Firefighter Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters
4	Quint - 3 Firefighters

NFPA 1720 Rural Demand Zone
6 Firefighters in 14 minutes of Total Response Time, 80% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

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11.3.4 Summary of Historical Fire Suppression Deployment Model

The CRA key findings and the response statistics presented in this FMP indicates that for the period from January 1, 2012 to October 30, 2017, Station 1 responded to the highest percentage of calls. The existing location of Station 1 is in close proximity to the St. Mary's River; while located in the downtown, it is not centralized to its primary response area which has negative impact on its primary response coverage area. In comparison, the other three fire stations have a larger primary response coverage area.

Prior to October 26, 2015 the SSMFS was able to provide an initial response within the defined urban area of four firefighters within a four minute travel time to 84% of historical emergency call locations. This is 6% lower than the applicable initial response fire suppression performance benchmark of 90%. During the same period the SSMFS was able to provide a depth of response of fourteen firefighters arriving on scene within eight minutes of travel time to 32% of historical emergency call locations within the defined urban area.

The analysis within this CRA highlights that 95.4% of the City's occupied property stock is Group C – Residential occupancies, and that there is a high concentration of this occupancy type within the defined urban boundary that were built prior to adoption of the current building and fire codes. This occupancy type is assigned a moderate risk level within the CRA. In response to this type of occupancy and risk, the SSMFS historically provided an initial response of four firefighters within a four minute travel time to 62% the moderate risk occupancies. The historical depth of response capability to the same occupancy type and risk was 16%.

Provincial statistics indicate that, in addition to the assigned moderate risk, the Group C – Residential occupancies are also recognized as the most vulnerable occupancy type for a fire related injury or fatality. The CRA identifies that within the City of Sault Ste. Marie structure fires in Group C – Residential occupancies were the most frequent type of structure fire within the City and they occurred at a higher rate than the Province between 2012 and 2016 (80.4% vs. 73.4%), for a total of 218 fires over the five year period.

In addition to enhancing the delivery of public education and inspection/enforcement programs targeting Group C – Residential occupancies, this FMP will present options to enhance the fire suppression deployment capabilities of the SSMFS in response to moderate risk occupancies, and specifically Group C – Residential occupancies.

Table 26 illustrates the summary of the SSMFS historical (Pre-October 26th 2015) fire suppression deployment model.

Table 26: Pre-October 26, 2015 (Historic) Fire Suppression Deployment Model Results

Applicable Fire Suppression Performance Benchmarks

Deployment Model	Defined Urban Area										Defined Rural Area				
	Initial Response (4 Firefighters in 4 Minutes)					Depth of Response (14 Firefighters in 8 Minutes)					Rural Response (6 Firefighters in 14 Minutes)				
	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Rural Roads Covered	% Rural Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered
Historical Deployment Model	52%	84%	35%	62%	16%	13%	32%	8%	16%	3%	59%	69%	23%	27%	87%

11.4 Existing Fire Suppression Deployment Model

The existing fire suppression analysis is based upon on the fire suppression deployment model that the department has transitioned to since approval of the Fire Services Organizational Review (Post-October 26, 2015). Since this date, the minimum complement of on duty firefighters has been thirteen.

The SSMFS currently has 64 total fire suppression staff including 4 Platoon Chiefs, 16 Captains and 44 firefighters available to maintain the existing minimum on duty staffing of thirteen firefighters at all times. This represents three Platoons with a total complement of seventeen firefighters and one Platoon with sixteen firefighters. The existing minimum on duty staffing deployment model is illustrated in Table 27.

Table 27: Existing Minimum Firefighter Deployment Model

Station	Apparatus	Minimum Staffing
1	Platoon Chief	1
	Pump	3
	Aerial	0
	Tanker	0
	Rescue	0
	Utility	0
2	Rescue/Pumper	3
3	Rescue/Pumper	3
4	Aerial	3
Minimum # of Firefighters on Duty		13

11.4.1 Existing Initial Response - Defined Urban Area

Figure 23 shows the post-October 26, 2015 existing initial response to the defined urban area (NFPA 1710). The existing initial response coverage of four firefighters arriving on-scene within four minutes of travel time represents 18% of the City's defined urban geography and 47% of historic emergency call locations. The existing deployment model does not assign four firefighters to any of the initial responding apparatus (pumps) at any of the stations. The result is that it requires either the on duty Platoon Chief or one of the other initial responding apparatus (pumps) to arrive at the scene in order to assemble the objective of four firefighters arriving.

The existing deployment model of a minimum of 13 firefighters on duty utilizes the same fire station location model as within the historical (Pre-October 26th 2015) firefighter deployment model. As such, there is a similar observation as in the historical model where the coverage areas of Station 2 and Station 3 are centralized to a response area while the location of Station 1 in such close proximity to the St. Mary's River that it results in minimal coverage to the south of the current station location.

The existing initial response analysis also indicates that the SSMFS was able to a deploy four firefighters within four minutes of travel time to 10% of the Comprehensive Risk Assessment identified urban area low risk occupancies, 21% of the moderate risk occupancies and 10% of the high risk occupancies.

11.4.2 Existing Depth of Response – Defined Urban Area

The existing deployment model includes a minimum of 13 **fi**re**fi**ghters on duty at all times. As such the SSMFS is currently not able to achieve any of the applicable depth of response fire suppression performance benchmarks e.g., 14 firefighters (15 with aerial) within eight minutes of travel time).

However, the existing depth of response coverage of 13 **fi**re**fi**ghters arriving on scene within an eight minute travel time is shown in Figure 24 that indicates coverage of 13% of the City's defined urban geography and 32% of historical emergency call locations. The distribution of firefighters within the existing deployment model results in 13 **fi**re**fi**ghters arriving on scene within eight minutes of travel time predominantly centred between Station 1 and Station 4.

The existing depth response analysis indicates that the SSMFS is able to deploy 13 firefighters within eight minutes of travel time to 8% of the defined urban area low risk occupancies, 16% of the moderate risk occupancies and 3% of the high risk occupancies.
This analysis also highlights that when operating with a total minimum staffing deployment model of 13 firefighters on duty the SSMFS does not have the required number of firefighters on duty to achieve the applicable fire suppression performance benchmark of 26 firefighters for the depth of response within the defined urban area to a high-risk occupancy type, or 39 firefighters for a fire in a high-rise, high-risk occupancy such as a residential apartment building in excess of 23 metres in height.

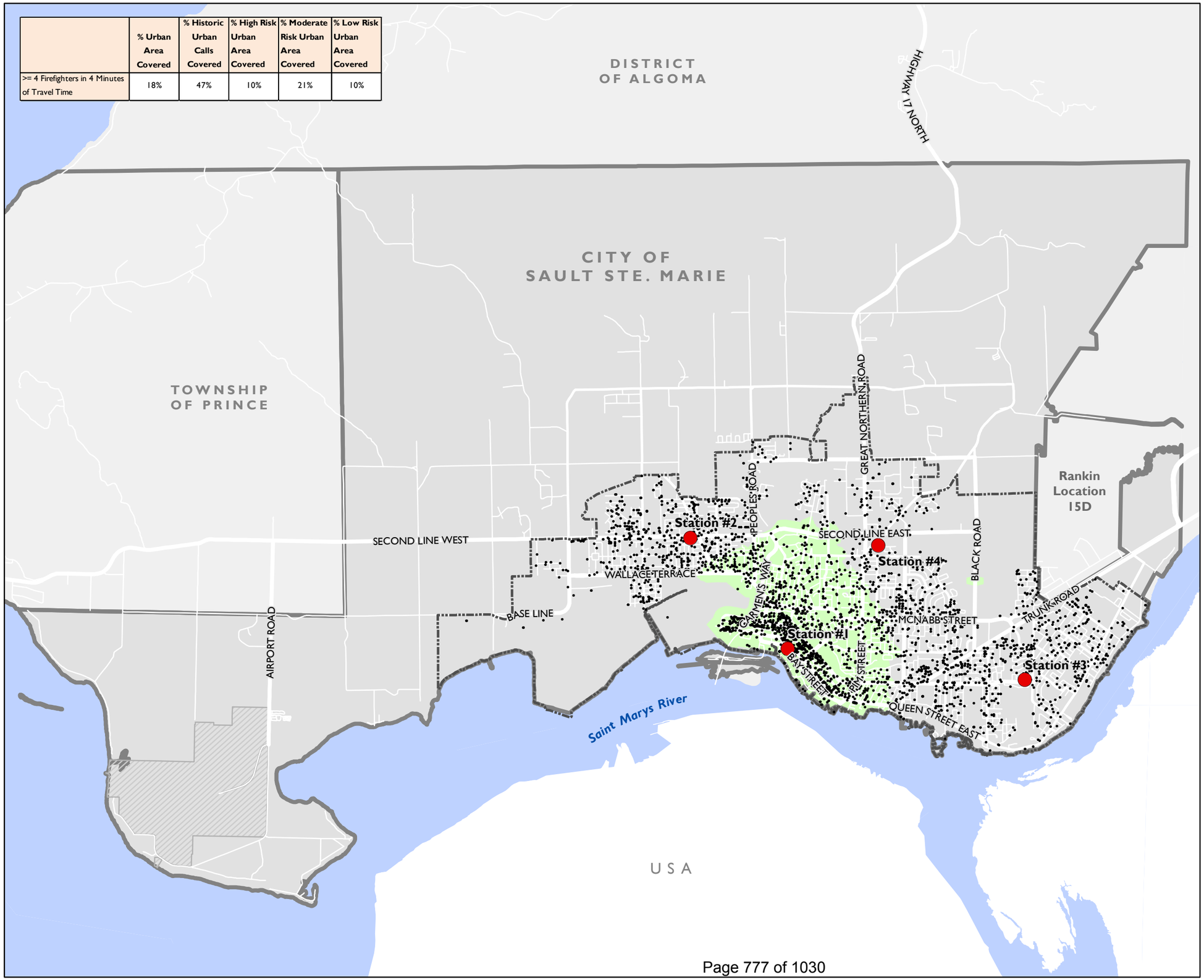
The existing deployment model relies upon the response of senior staff (Chief and/or Deputy Chiefs) and the call back of off duty firefighters to return to work to staff additional apparatus to achieve the applicable fire suppression performance benchmarks for these fire risks.

11.4.3 Existing Rural Response

Figure 25 shows the post-October 26, 2015 existing response to the defined rural area (NFPA 1720 Rural Demand Zone) of six firefighters within 14 minutes of response time (turnout time + travel time). The figure shows that the department is currently able to provide a response of at least six firefighters within 14 minutes of response time (combined turnout time + travel time) to 61% of the rural roads and 69% of the historic emergency call locations.

The existing rural response analysis indicates that the SSMFS is able to a deploy at least six firefighters within a 14 minute response time (turnout time + travel time) to 24% of the Comprehensive Risk Assessment identified rural area low risk occupancies, 27% of the moderate risk occupancies and 87% of the high risk occupancies.

	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
>= 4 Firefighters in 4 Minutes of Travel Time	18%	47%	10%	21%	10%



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

POST-OCTOBER 26 2015 (EXISTING)
NFPA 1710 - INITIAL RESPONSE
DEFINED URBAN AREA
FIGURE 2 3

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 4 Minutes of Travel Time

- ≥ 4 Firefighters in 4 Minutes of Travel Time

Station	Staffing
1	Pump - 3 Firefighters Platoon Chief - 1
2	Pump - 3 Firefighters
3	Pump - 3 Firefighters
4	Quint - 3 Firefighters

NFPA 1710
Minimum of 4 firefighters responding within 4 minutes, 90% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

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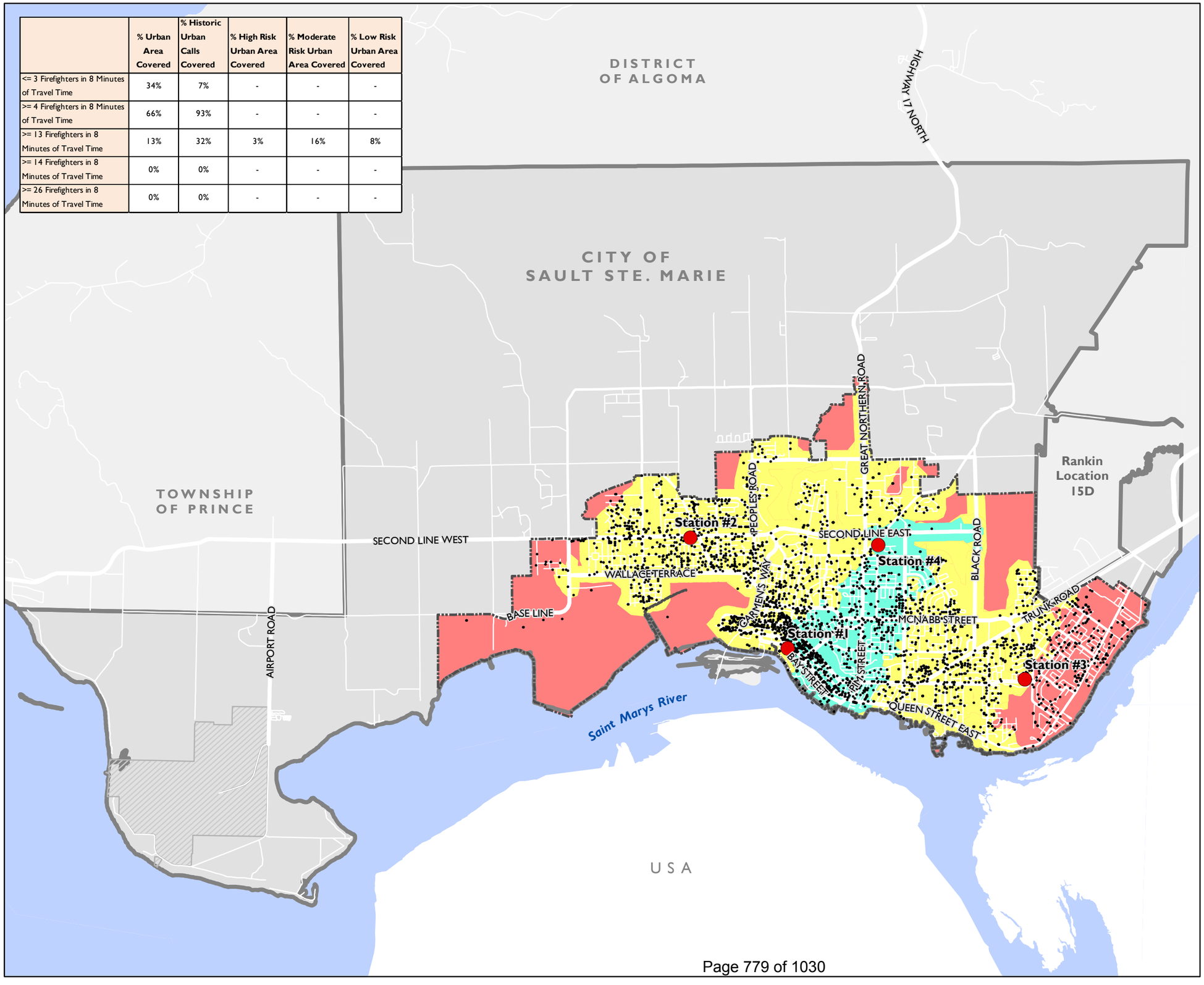
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	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
<= 3 Firefighters in 8 Minutes of Travel Time	34%	7%	-	-	-
>= 4 Firefighters in 8 Minutes of Travel Time	66%	93%	-	-	-
>= 13 Firefighters in 8 Minutes of Travel Time	13%	32%	3%	16%	8%
>= 14 Firefighters in 8 Minutes of Travel Time	0%	0%	-	-	-
>= 26 Firefighters in 8 Minutes of Travel Time	0%	0%	-	-	-



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

POST-OCTOBER 26 2015 (EXISTING) NFPA 1710 - DEPTH OF RESPONSE DEFINED URBAN AREA

FIGURE 2 4

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 8 Minutes of Travel Time

- ≤ 3 Firefighters
- ≥ 4 Firefighters
- ≥ 13 Firefighters
- ≥ 14 Firefighters (not achievable due to staffing levels)
- ≥ 26 Firefighters (not achievable due to staffing levels)

Station	Staffing
1	Pump - 3 Firefighters Platoon Chief - 1
2	Pump - 3 Firefighters
3	Pump - 3 Firefighters
4	Quint - 3 Firefighters

NFPA 1710 Depth of Response
14 Firefighters in 8 minutes of Travel Time, 90% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

N W E S

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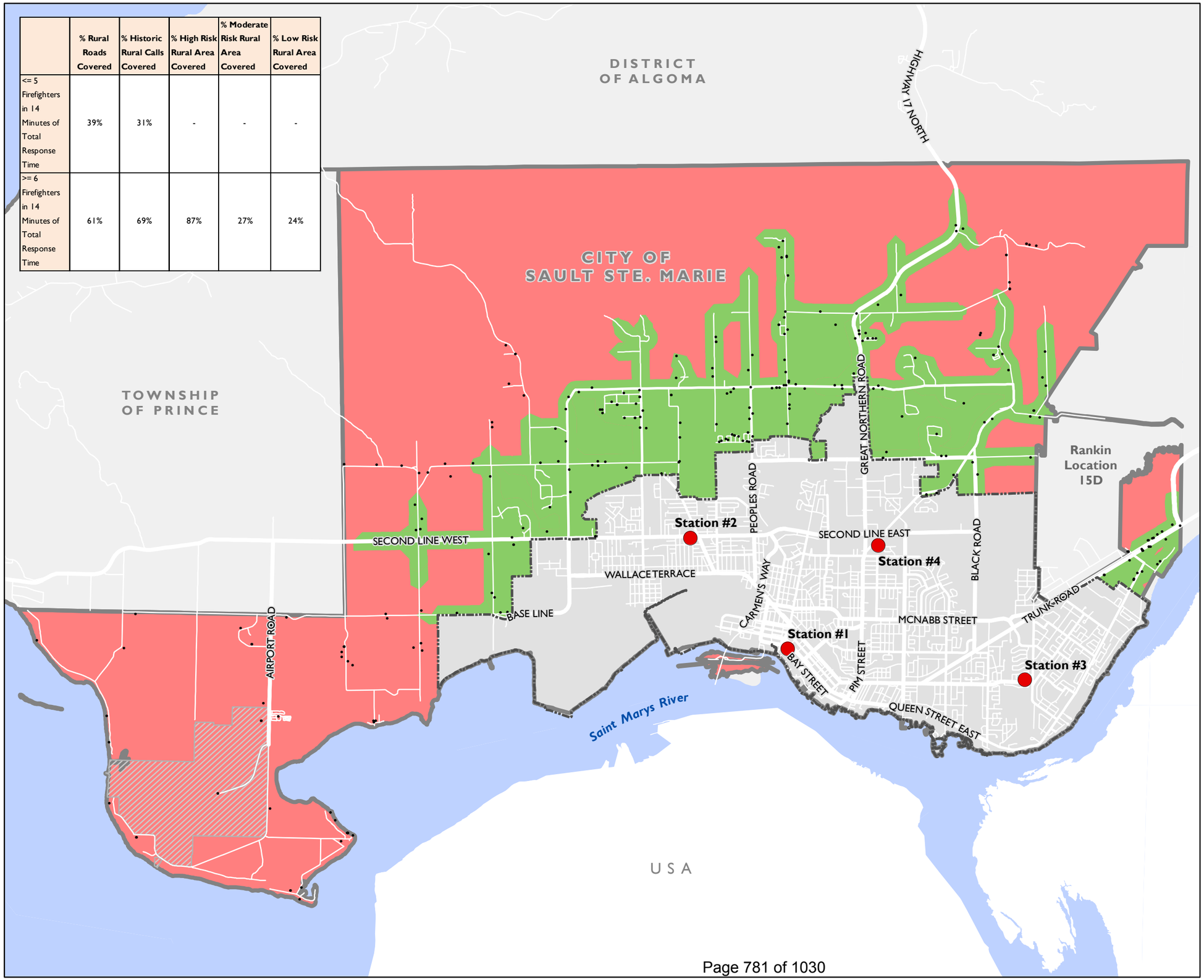
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	% Rural Roads Covered	% Historic Rural Calls Covered	% High Risk Rural Area Covered	% Moderate Risk Rural Area Covered	% Low Risk Rural Area Covered
<= 5 Firefighters in 14 Minutes of Total Response Time	39%	31%	-	-	-
>= 6 Firefighters in 14 Minutes of Total Response Time	61%	69%	87%	27%	24%



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

POST-OCTOBER 26 2015 (EXISTING)
NFPA 1720 - RURAL DEMAND ZONE
DEFINED RURAL AREA
FIGURE 2 5

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 14 Minutes of Total Response Time

- ≤ 5 Firefighters
- ≥ 6 Firefighters

Station	Staffing
1	Pump - 3 Firefighters Platoon Chief - 1
2	Pump - 3 Firefighters
3	Pump - 3 Firefighters
4	Quint - 3 Firefighters

NFPA 1720 Rural Demand Zone
6 Firefighters in 14 minutes of Total Response Time, 80% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

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PROJECT: 175984
STATUS: DRAFT
DATE: 2018-01-25

11.4.4 Summary of Existing Fire Suppression Deployment Model

The 2015 Fire Services Organizational Realignment resulted in a reduction in the minimum number of firefighters on-duty at all times from the historical (Pre-October 26th 2015) minimum of 16 firefighters to the existing (Post-October 26th 2015) minimum of 13 firefighters. As a result the initial response capabilities of the SSMFS have declined from the historical performance of 84% to the existing capability of 47%. Similarly the existing depth of response capability has declined from the historical performance of 32% to the historical emergency call locations within the defined urban area to 0% due to having only 13 firefighters on duty at all times.

The analysis within this FMP has highlighted the importance of both initial response and depth of response to Group C – Residential occupancies. Analysis of the existing fire suppression deployment model identifies a decline in both the initial response and depth of response capabilities of the SSMFS in comparison to the SSMFS historical response capabilities to these moderate risk occupancies.

In addition to enhancing the delivery of public education and inspection/enforcement programs targeting Group C – Residential occupancies this FMP will present options to enhance the fire suppression deployment capabilities of the SSMFS in response to moderate risk occupancies, and specifically Group C – Residential occupancies.

Table 28 illustrates the summary of the SSMFS existing (Post-October 26th 2015) fire suppression deployment model.

Table 28: Post-October 26th 2015 Fire Suppression Deployment Model Results

	Applicable Fire Suppression Performance Benchmarks														
	Defined Urban Area										Defined Rural Area				
	Initial Response (4 Firefighters in 4 Minutes)					Depth of Response (14 Firefighters in 8 Minutes)					Rural Response (6 Firefighters in 14 Minutes)				
Deployment Model	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Rural Roads Covered	% Rural Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered
Existing Deployment Model	18%	47%	10%	21%	10%	0%	0%	0%	0%	0%	61%	69%	24%	27%	87%

12.0 Existing Fire Suppression Tactical Evaluation

As indicated in the 2017 RFPS, it has been recommended by the OFMEM that the City *"ensure that an evaluation of the capabilities and limitations associated with fire suppression and fireground tactics is conducted, and with reference to the findings from a comprehensive municipal fire risk assessment[16]".*

The following sections present the analysis of the existing fire suppression deployment model in comparison to the current industry best practices and the applicable fire suppression performance benchmarks presented within this FMP.

12.1 Existing Initial Response Tactical Capabilities

The existing total minimum staffing deployment model of 13 firefighters on duty at all times results in only three firefighters assigned to each of the initial responding fire apparatus (pump) at each of the four fire stations. The Platoon Chief is also assigned to Station 1; however the Platoon Chief is assigned to another vehicle and does not form part of the assigned complement of firefighters to the initial responding fire apparatus at Station 1. As the senior officer on duty this is a common industry best practice that recognises that the Platoon Chief is required to have access and response capabilities to the entire City that may not require the initial responding fire apparatus (pump) from Station 1.

As a result of the minimum firefighter staffing of three firefighters on each of the initial responding fire apparatus (pump) the tactical capabilities of these apparatus are reduced in comparison to industry best practices. The industry best practices deployment of four firefighters assigned to the initial responding fire apparatus (Pump/Engine) provides for the tactical capabilities of Incident Command, pump operation, fire hydrant connection and initial attack line. Collectively these tactical capabilities support that the initial responding fire apparatus (Pump/Engine) with a staff of four firefighters is able to *"deliver water and perform basic firefighting at fires, including search and rescue"*[17]. As referenced within the B.C. Playbook, with the prerequisite training this would reflect the tactical capabilities to conduct a limited interior attack and/or rescue.

In comparison to industry best practices the SSMFS has an existing initial response tactical limitation. The existing SSMFS minimum firefighter staffing of three firefighters on each of the initial responding fire apparatus (Pump/Engine) results in the need for a second firefighting apparatus including either the Platoon Chief or another pump to arrive on scene before the interior attack and/or rescue can

[16] 2017 RFPS Recommandation #2
[17] NFPA 1710 – 2016 Edition Section 5.2.3.1

commence. As a result, the existing initial response tactical limitation is an extended period of time until interior attack and/or rescue can commence.

12.2 Existing Depth of Response Tactical Capabilities

When operating with a total minimum staffing deployment model of 13 firefighters on duty, the SSMFS does not have the required number of firefighters on duty to achieve the applicable fire suppression performance benchmark of 14 firefighters (15 if an aerial device is required) for the depth of response within the defined urban area to a moderate risk occupancy type. This includes Group C- Residential occupancies representing a typical single-detached dwelling and assigned a moderate risk level within the CRA.[18]

Similarly, when operating with a total minimum staffing deployment model of 13 firefighters on duty the SSMFS does not have the required number of firefighters on duty to achieve the applicable fire suppression performance benchmark of 26 firefighters for the depth of response within the defined urban area to a high-risk occupancy type. This includes Group B – Care or Detention occupancies including vulnerable occupancies assigned a high risk level within the CRA.

The applicable fire suppression performance benchmark identifies that for a fire in a high-rise, high-risk occupancy such as a residential apartment building in excess of 23 metres in height, the SSMFS would require a deployment of 39 firefighters arriving on scene within a 10 minute and 10 second travel time to 90% of the fire suppression incidents. This would require the response of more than 50% of the current total number of fire suppression personnel.

In comparison to industry best practices the SSMFS has an existing depth of response tactical limitation to moderate risk, high risk, and high-rise high risk occupancies. The current deployment model relies upon the response of senior staff (Chief and/or Deputy Chiefs) and the call back of off duty firefighters to return to work to staff additional apparatus to achieve the applicable fire suppression performance benchmarks for these fire risks. As a result, the existing depth of response tactical limitation is an uncertainty in the ability of the SSMFS to deploy a sufficient number of firefighters to respond to a fire situation in a building occupancy assigned with either a moderate, high or high-rise high-risk.

[18] NFPA 1710 – 2016 Edition Section 5.2.4.1

12.3 Simultaneous Responses – Impact on Tactical Capabilities

The analysis within this FMP has identified the applicable fire suppression performance benchmarks for both initial response and depth of response. The analysis also presents a comparison of the SSMFS historical (Pre-October 26, 2015) total minimum staffing of 16 firefighters and the existing (Post-October 26, 2015) total minimum staffing of 13 firefighters.

In addition to the existing tactical limitations identified for the initial and depth of response capabilities, the SSMFS is impacted by the number of simultaneous calls for emergency response services. As referenced within the CRA and further examined within this FMP, for the period from January 1, 2012 to October 30, 2017, fire-related calls including structure fires, vehicle fires and other fires accounted for only 6% of the departments emergency responses. False alarm calls (35%) and medical calls (30%) were the two highest percentages of calls over this period.

Based on an analysis of dispatched front line apparatus, during this period there were 1,404 simultaneous emergency calls, eight of which were related to a mutual aid response to another community. (Each occurrence noted reflects an instance where a subsequent call occurred prior to the end of another call). The data analysis indicates that these emergency calls ranged from less than 10 minutes to in excess of one hour. Data was not available to determine in how many instances the call back process for off duty firefighters was impended, the number of off-duty firefighters that responded, or the time it took for them to assemble at a fire station. Table 29 illustrates the summary of simultaneous emergency calls for the period from January 1, 2012 to December 31, 2016.

Table 29: Simultaneous Emergency Calls (January 1, 2012 to December 31, 2016)

	2012	2013	2014	2015	2016	Total
Number of Simultaneous Calls	232	335	323	259	255	1,404

The existing fire suppression deployment model of the SSMFS is limited to four initial response apparatus with a minimum of three firefighters and the Platoon Chief. The Platoon Chief has very limited emergency response capabilities in the absence of responding with one of the other initial response apparatus. As a result there are currently four initial response apparatus available to the SSMFS to deploy to an emergency incident. Other than the call back process for full-time firefighters to return to work, this FMP has identified that there is minimal capability, capacity, reliability or access to compatible resources available through mutual aid or automatic aid resources to support the delivery of fire suppression services within the City of Sault Ste. Marie.

This analysis highlights that simultaneous calls for emergency response services create a further tactical limitation for the SSMFS. Where possible strategies such as reducing the total number of emergency calls, in particular false alarm calls and medical calls, to reduce the frequency of simultaneous emergency calls should be considered a priority.

13.0 Tactical Limitations Minimization Strategies

The research and consultation completed as part of this fire master planning process has focused on developing strategies for Council's consideration in: responding to the recommendations of the 2017 RFPS; responding to the findings of the Comprehensive Risk Assessment; and developing options for Council's consideration in providing the most effective and efficient delivery of fire protection services that provide the most value to the community. The following sections present strategies for Council's consideration in minimize the identified existing fire suppression tactical limitations of the SSMFS.

13.1 Increase the Minimum Number of Firefighters on Duty

This FMP includes deployment model options for Council's consideration that includes increasing the minimum number of firefighters on-duty at all times as well as revised station location models. It must be recognised that the financial impacts of hiring additional full-time firefighters including salaries and benefits is significant. The potential impact of which must be balanced with the broader needs of the municipal services provided to the community. Assessing these financial impacts is the role of Council in determining the "needs and circumstances" of the community as defined by the FPPA.

Implementing the strategy to hire additional full-time firefighters would result in additional operating (opex) costs including salaries and benefits, and capital (capex) costs including uniforms and protective clothing. The SSMFS utilizes a four platoon system in order to sustain the existing deployment model 24 hours a day 365 days a year. The result is that any increase in the minimum number of firefighters on-duty must be multiplied by four in order to sustain the 24/365 coverage at all times. For the purposes of this fire master planning process the financial impacts have been estimated and are presented in Table 30.

Table 30: Estimated Financial Impacts per Firefighter/per Platoon

Cost Per Firefighter	Operating Cost (opex)	Capital Cost (capex)
One Additional Firefighter	$110,000	$4,500
Cost per Platoon (4 Firefighters)	$440,000	$18,000

In order to provide Council with an estimate of the financial impacts of hiring additional firefighters as a strategy to minimize the existing fire suppression tactical limitations this analysis presents the following scenarios:

- Scenario #1 = Achieve a minimum on duty complement of 17 firefighters;
- Scenario #2 = Achieve a minimum on duty complement of 19 firefighters;
- Scenario #3 = Achieve a minimum on duty complement of 21 firefighters; and

- Scenario #4 = Achieve a minimum on duty complement of 26 firefighters.

The scenarios illustrated in Table 31 also include recognition that at incremental points in the growth of the number of firefighters assigned to any one Platoon, there is a need add additional firefighters to accommodate vacation and other approved absences such as sickness that can impact the ability of a Platoon to sustain the minimum number of firefighters on duty at all times.

Table 31: Additional Firefighter Deployment Scenarios

Station	Apparatus	Existing	Scenario #1	Scenario #2	Scenario #3	Scenario #4
1	Platoon Chief	1	1	1	1	1
	Pump	3	4	4	4	4
	Aerial	0	0	2	2	4
	Tanker	0	0	0	0	0
	Rescue	0	0	0	2	4
	Utility	0	0	0	0	1
2	Rescue/Pumper	3	4	4	4	4
3	Rescue/Pumper	3	4	4	4	4
4	Aerial	3	4	4	4	4
Minimum # of Firefighters on Duty		13	17	19	21	26
Total Number of Firefighters		64	84	96	108	128

The financial impacts related to considering the additional firefighter deployment scenarios are presented in Table 32. These financial estimates provide valuable information for Council in assessing the strategies presented to minimize the existing fire suppression tactical limitations of the SSMFS. This analysis indicates that to implement a minimum on duty firefighter deployment model that would provide the required fire suppression resources to provide the identified *Depth of Response Defined Urban Area – High Risk* deployment requiring 26 firefighters would require an estimated additional investment of $6,710,000 in operating costs and $274,500 in capital costs.

Table 32: Estimated Financial Impacts per Firefighter/per Platoon

Scenario	Minimum Number of Firefighters On Duty	# of Additional Firefighters	Operating Cost (opex)	Capital Cost (capex)
Scenario #1	17	17	$1,870,000	$76,500
Scenario #2	19	29	$3,190,000	$130,500
Scenario #3	21	41	$4,510,000	$184,500
Scenario #4	26	61	$6,710,000	$274,500

In summary, the strategy to increase the number of full-time firefighters on duty at all times would be effective in mitigating the existing fire suppression tactical limitations of the SSMFS; however the financial investment on behalf of the City of Sault Ste. Marie would be significant. As a result, this FMP identifies a range of options for Council's consideration in developing a comprehensive and integrated strategy to minimize the existing fire suppression tactical limitations of the SSMFS. This includes options to increase the minimum number of firefighters on duty and an alternative fire station location model to further inform Council's decision making process.

13.2 Mutual Aid and International Response Agreements

The 2017 RFPS included the following recommendation relating to the use of mutual aid and international agreements:

2017 RFPS Recommendation #8: The Municipal Council of the City of Sault Ste. Marie should consider an assessment of the capability, capacity, reliability and compatibility of resources that may be requested through provincial mutual aid system, through local or regional organizations or through international agreements. Through the assessment, consideration should be given to the need for development and implementation of policies and operating guidelines designed to guide decisions and determine a course of action depending on the needs and circumstances.

The research and consultation to prepare this FMP indicates that the utilization of an automatic, mutual or international aid agreement with a neighbouring fire service to supplement the on duty fire suppression capabilities of the SSMFS would result in very limited additional resources within an extended response time.

This FMP recommends that all of the current automatic, mutual and international aid agreements be reviewed to more clearly define the fire suppression capabilities of those fire departments that may be called upon to support the SSMFS. Specific attention should be given to defining the number of firefighters that would be responding, training qualifications, equipment including compatibility and the predicted response time to the City of Sault Ste. Marie.

Based on the findings of the FMP, it should be recognised that these resources currently have *minimal impact on mitigating the existing fire suppression tactical limitations of the SSMFS*. However, these resources remain a valuable asset in the event of a significant declared community emergency where additional resources will be necessary.

Operational Recommendation #35: That the SSMFS further investigate the existing emergency response capabilities of Mutual Aid and International Response Agreements to define within a

department operating guideline the expected capability, capacity, reliability and compatibility of the participating agencies.

13.3 Call Back Process of Off Duty Firefighters

The 2017 RFPS included the following recommendation relating to the call back system of off duty firefighters:

2017 RFPS Recommendation #4: The Municipal Council of the City of Sault Ste. Marie should ensure that the SSMFS call back system for additional staff required during an emergency is assessed to determine if there are opportunities to improve the efficiency and reliability of the system, and implement changes as required.

The SSMFS has traditionally relied on the call back of off-duty firefighters to supplement the number of on-duty firefighters when required for an emergency. The Fire Protection and Prevention Act[19] states that *"Despite subsections (1) to (6), the fire chief may call in off-duty firefighters if, as a result of a major emergency, the fire department needs the services of more firefighters than are on duty".*

Department Notice #1400-08 – Overtime Call-Out Policy – Fire Suppression Division last updated on October 31, 2015 identifies the process for calling additional firefighters in the event of an emergency situation. This notice states that "*In the event of a major emergency, the above procedure shall not apply and the Platoon Chief shall fill additional staffing requirements immediately as authorized by Senior Fire Management".* The review completed as part of this FMP indicates that there is no written or defined process for initiating the call back process of off duty firefighters should they be required to supplement the response of the on-duty staff. The current call back process when initiated by the on-duty Platoon Chief is facilitated by the on-duty dispatcher. The current process is manual and requires the dispatcher to make individual telephone calls to each off-duty firefighter in seeking there assistance to respond. The result is an extended period of time to contact and confirm that sufficient off duty firefighters will be responding to supplement the on-duty staff. This practice is further complicated by *Department Notice #1400-222 – Personnel Residing Outside of the City Limits.* This policy identifies that full-time firefighters employed by the City of Sault Ste. Marie may reside outside of the City's limits subject to the following:

- *Permission has been granted in writing by the Fire Chief; and*

[19] Part IX, section 43, subsection (7)

- *Personnel granted these privileges are able to reach the fire station and report for duty within (30) minutes from the time they are called.*

Consultation with senior department staff indicates that this policy is not adhered to and may contravene the Collective Agreement[20] with the Sault Ste. Marie Professional Firefighters Association (Local 529). The current Collective Agreement does reference the call back process within the following Article:

Article 5:00 – Hours of Work
5:02 - All employees may be subject to off-shift call back at the discretion of the Chief of the Fire Services. When off-shift employees are called back they will be paid a minimum of three (3) hours pay at the rate of time and one-half.

The SSMFS has no record of the number of times that the call back process was utilized during the period from January 1, 2012 to October 30, 2017. The availability of this type of information would inform the number of firefighters that were called and the time it took for off-duty firefighters to respond to the fire station. Senior staff estimate that it commonly takes in excess of 15 minutes from the time the call back process is initiated until a crew of four off-duty firefighters is assembled at a particular station and are ready to respond. They also estimated that based on their experience it would take in excess of 30 minutes to call back and assemble a second crew of four firefighters who were ready and able to respond from a fire station.

The 2017 RFPS prepared by the OFMEM specifically identified the need to assess the *"efficiency and reliability"* of the current call back system. The analysis within this FMP indicates that in the absence of hiring additional full-time firefighters the call back process of off-duty firefighters is currently the most effective and efficient strategy available to supplement the fire suppression capabilities of the SSMFS.

Responding to the 2017 RFPS recommendation will require an extensive review of the current call back process and should include the development and implementation of performance benchmarks in order to track its *"efficiency and reliability".* The SSMFS has taken a first step to revising the current call back process by investigating the purchase of a new software program that will improve the process for contacting off-duty firefighters as well as a records management process. Performance benchmarks should be identified to define the number of firefighters required and the expected time for the firefighters to respond to the fire station and be available to respond. Following a pre-determined

[20] Agreement between the Corporation of the City of Sault Ste. Marie and Sault Ste. Marie Professional Firefighters Association (Local 529), dated February 1, 2014 to January 31, 2015.

evaluation time period, minimum of 24 months, the new call back process should be evaluated to assess its *"efficiency and reliability"* of providing sufficient additional fire suppression resources.

One benchmark for assessing the *reliability and efficiency* of a revised call back process would be to compare the benchmarks that could be expected within a composite model fire department including volunteer firefighters. Our research indicates that the best practices benchmarks of utilizing volunteer firefighters would be assembling a crew of four volunteer firefighters within a turn out time of 6.5 minutes and a second crew of four firefighters within 10.5 minutes of turn out time.

This analysis highlights that through consultation and collaboration with the Sault Ste. Marie Professional Firefighters Association (Local 529) there may be opportunity to enhance the *reliability and efficiency* of the current call back process for off duty firefighters. In our view this consultation should be considered as an immediate priority for the City.

Operational Recommendation #36: That the SSMFS prioritize the development and implementation of a revised call back process for off-duty firefighters including defined performance benchmarks and record management process, and that the revised call back process be monitored and evaluated to assess its efficiency and reliability as presented within the proposed FMP.

13.4 Composite Fire Department Models

The information presented within this FMP identifies that the City of Sault Ste. Marie is unique in comparison to other similar size municipalities in Ontario. The City's access to the fire suppression resources of other neighbouring fire departments to seek timely assistance through either an automatic, mutual or international agreement is limited. As such, in the absence of developing and implementing a *reliable and efficient* call back process for off duty firefighters, developing a composite fire department model should be considered.

SSMFS is a fire department that utilizes only full-time firefighters who are all members of the Sault Ste. Marie Professional Firefighters Association (Local 529). The current Collective Agreement with SSMPFA contains an Article that may require negotiation with the SSMPFA in order to consider any other operating model for the delivery of fire suppression services.

Article 16:00 – Contracting Out
16:01 - Except to the extent and to the degree agreed upon by the parties, and except in the case of an emergency, no work customarily performed by an employee covered by this agreement shall be performed by another employee or a person who is not an employee of the Corporation.

These following references are not intended to suggest or support any reduction in the current number of full-time firefighters or their use as the primary providers of fire suppression services within the City of Sault Ste. Marie.

13.4.1.1 Town of Deep River - Ontario

The contracting out language within the City of Sault Ste. Marie - Collective Agreement is consistent with most agreements of this nature in Ontario. Similar wording was the basis for an Interest Arbitration between the Corporation of the Town of Deep River and the Deep River Professional Firefighters Association in 2014. At that time the Town of Deep River was seeking to develop a composite fire department. The findings of this Interest Arbitration with respect to the development of a *"Composite Force"* included the following:

> *"Maintain the current no contracting out clause, but subject to the right of the employer to establish a composite force, conditional on maintaining the existing complement of nine (9) firefighters that may, by attrition, be reduced to eight (8) firefighters (with any vacancies to be filled within 60 days). If a composite force is established, there must be a captain (or acting captain receiving acting pay) on duty on all shifts. The Board specifically remains seized to deal with any language or other issues arising in the implementation of this aspect of our award".*

The ruling of this Interest Arbitration provided the Town of Deep River with the approval to transition from an operating model that utilized only full-time firefighters who were members of the Deep River Professional Firefighters Association to an operating model that also included volunteer firefighters. This ruling also provided the Town of Deep River with the approval to reduce the number of full-time firefighters from nine (9) to eight (8).

Presenting a strategy to implement a composite fire department model within the City of Sault Ste. Marie is not intended to suggest or support any reduction in the current number of full-time firefighters. This strategy is intended to present another option for Council's consideration to minimize the existing tactical limitations of the SSMFS in the event a *reliable and efficient* call back process cannot be implemented. The following sections will also present that there may be different options for Council's consideration in developing a composite operating model.

13.4.2 Full-time/Volunteer Composite Operating Model

The full-time/volunteer composite operating model is utilized by many fire departments across Ontario including major urban centres such as Ottawa, Sudbury and Hamilton and numerous smaller communities such as Belleville, Niagara Falls and Clarington. In our view these smaller communities represent comparable examples of existing community fire risk and overall fire protection needs with those found in the City of Sault Ste. Marie.

In our view the implementation of a composite operating model including volunteer firefighters within the City of Sault Ste. Marie would prioritize the following core objectives:

- ü *Form a "pool" of approximately 40 volunteer firefighters fully trained to the applicable NFPA standards;*
- ü *Be available to deploy from one centralized location, preferably Fire Station #1;*
- ü *Utilize a "Four Platoon System" to facilitate the availability of a minimum of 4 volunteer firefighters at all times within a predetermined turnout time of approximately 6.5 minutes, and an additional 4 volunteer firefighters within a predetermined turnout time of approximately 10.5 minutes; and*
- ü *Be utilized to support the full-time firefighters in the delivery of the required fire ground tactical priorities required at an emergency incident.*

One of the primary differences between utilizing the full-time firefighter call back process and developing a volunteer firefighting pool is the ability to require a defined turnout time. As referenced within this FMP the City is unable to require a full-time firefighter to live and or be available within the City to respond back to work while off duty. Within a full-time/volunteer firefighter composite model, the City may be able to establish and enforce these requirements.

The operating costs related to compensating volunteer firefighters can range significantly. The range of compensation models includes simple hour rates, to attendance management driven packages such as a point system. It is estimated that the operating cost (opex) for a complement of 40 volunteer firefighters would range from $4,500 to $8,500 per year per volunteer firefighter. The estimated capital cost (capex) would be the same as for full-time firefighters of $4,500 per volunteer firefighter. Therefore the estimated operating cost (opex) for this operating model is estimated at approximately $180,000 to $340,000 annually and the capital cost (capex) is $180,000.

13.4.3 Alternative Composite Operating Models

In Dillon's experience across Canada, we have consulted with a number of municipalities that have developed alternative composite operating models. The commonality of these operating models is that they provide an added depth of response capability (pool of trained firefighters) to supplement a core of full-time firefighters. Each of these municipalities has a Collective Agreement with its full-time firefighters who are also members of the International Association of Fire Fighters.

13.4.3.1 Town of Canmore - Alberta

The Town of Canmore and the Canmore Fire Fighters - Local 4705 of the International Association of Fire Fighters have a similar Collective Agreement as the City of Sault Ste. Marie and the Sault Ste. Marie Professional Firefighters Association - Local 529 of the International Association of Fire Fighters. This fire

service is an example of an alternative composite model that in addition to full-time firefighters utilizes both "Career Casual Members" and "Paid Response Firefighters".

The career casual firefighters are also members of Local 4705 and form a pool of qualified firefighters who are available to perform the normal duties of a full-time firefighters as well as respond to major incidents to supplement the on duty firefighters. The paid response firefighters are very similar to volunteer firefighters who form a second pool of non-union members who are also qualified firefighters and able to respond and supplement the on duty full-time firefighters.

13.4.3.2 City of Yorkton – Saskatchewan

The Collective Agreement between the City of Yorkton and the Yorkton Professional Firefighters Association, Local 1527 of the International Firefighters Association also recognises another example of an alternative composite model. In addition to full-time firefighters this model identifies both "Temporary Firefighters" and "Auxiliary Firefighters".

Temporary firefighters form a pool of qualified firefighters who are able to fill in for a full-time firefighter in his/her absence. Whereas auxiliary firefighters form a pool of firefighters able to facilitate a supporting function to the full-time firefighters.

Again, these references are also not intended to suggest or support any reduction in the current number of full-time firefighters or their use as the primary providers of fire suppression services within the City of Sault Ste. Marie. They are presented to form context to the opportunity that the City of Sault Ste. Marie and the Sault Ste. Marie Professional Firefighters Association – 529 of the International Association of Fire Fighters may have an opportunity to develop an alternative composite model that may be unique to the City of Sault Ste. Marie.

13.4.4 Composite Fire Department Models Summary

In the absence of developing a call back process that attains the *"efficiency and reliability"* as referenced within the OFMEM 2017 RFPS, and identified as a priority within this FMP to minimize the existing tactical limitations of the SSMFS, the development of a composite fire department model would be considered by the City of Sault Ste. Marie.

The information presented within this FMP presents alternatives for the City and the Sault Ste. Marie Professional Firefighters Association – Local 529 of the International Association of Fire Fighters to either collaboratively develop a strategy to develop a composite model, or alternatively rely on the process for dispute contained within the Collective Agreement.

Operational Recommendation #37: That in the absence of implementing an efficient and reliable call back process for full-time firefighters the SSMFS consider the implementation of a Composite Fire Department model as presented within the FMP.

14.0 Fire Suppression Staffing & Station Location Model Options

In addition to the strategies previously presented within this FMP to minimize the existing tactical limitations of the SSMFS, this section presents further options for Council's consideration in revising the existing firefighter deployment model. These include revisions to the current minimum number of firefighters on duty, and assessing a different fire station location model. These options prioritize enhancing the delivery of fire suppression services in response to the findings of the Comprehensive Risk Assessment, and specifically to the identified moderate risk occupancies including:

- ü *95.4% of the City's property stock is Group C – Residential occupancies identified as moderate risk; and*
- ü *Within the Urban Settlement Area Boundary, there is a high concentration of Group C-Residential occupancies built prior to any provincial codes being in effect.*

As such, the options identified prioritize the core objectives of enhancing the identified existing tactical limitations of the SSMFS including:

- ü *Initial response tactical capabilities including the provision of four firefighters on all initial responding apparatus; and*
- ü *Depth of response tactical capabilities including a total minimum complement of fifteen firefighters on duty at all times.*

The firefighter deployment and station location model options presented do not provide the required minimum total number of firefighters on duty to deploy twenty six firefighters required for the *Depth of Response Defined Urban Area – High Risk* or the thirty nine firefighters required for the *Depth of Response – Defined Urban Area – High-Rise High Risk* fire suppression performance benchmarks. These options continue to rely upon the response of senior officers (Chief and Deputy Chiefs) and the call back process of off duty firefighters.

As a result, it is recommended that the SSMFS prioritize the utilization of the first two lines of defence including enhanced public education and fire inspection/enforcement programs to enhance the delivery of fire protection services to identified high risk and high-rise high risk occupancies within the City of Sault Ste. Marie.

Operational Recommendation #38: That the SSMFS optimize the recognised "Three lines of Defence" fire protection model in prioritizing the delivery of public education, fire prevention and enforcement programs within occupancy types assigned as high risk and high-rise high risk within the Comprehensive Risk Assessment.

14.1 Option 1 – Minimum Staffing of 15 (Existing 4 Station Model)

Fire suppression model Option 1 includes increasing minimum number of firefighters on duty at all times from the existing thirteen firefighters to fifteen firefighters. Option 1 sustains the current fire station location model.

The Option 1 deployment model is illustrated in Table 33 and includes recognition that at incremental points in the growth of the number of firefighters assigned to any one Platoon there is a need to add additional firefighters to accommodate vacation and other approved absences such as sickness that can impact the ability of a Platoon to sustain the minimum number of firefighters on duty at all times.

Table 33: Option 1 - Firefighter Deployment Model

Station	Apparatus	Existing	Option 1
1	Platoon Chief	1	1
	Pump	3	4
	Aerial	0	0
	Tanker	0	0
	Rescue	0	0
	Utility	0	0
2	Rescue/Pumper	3	4
3	Rescue/Pumper	3	3
4	Aerial	3	3
Minimum # of Firefighters on Duty		13	15
Total Number of Firefighters		64	72

14.1.1 Option 1 - Initial Response - Defined Urban Area

Figure 26 shows the Option 1 initial response coverage of four firefighters arriving on-scene within four minutes of travel time. The Option 1 initial response coverage represents 32% of the City's defined urban geography and 63% of historic urban emergency call locations. This option attains the initial response tactical capabilities including the provision of four firefighters on the initial responding apparatus at Stations 1 and 2. This option does not achieve this core objective at Stations 3 and 4. As a result, the initial response coverage area including four firefighters arriving on scene within 4 minutes of travel time is centered on the areas surrounding Stations 1 and 2.

The Option 1 initial response analysis indicates that the SSMFS would be able to a deploy four firefighters within four minutes of travel time to 24% of the defined urban area low risk occupancies, 36% of the moderate risk occupancies and 15% of the high risk occupancies.

14.1.2 Option 1 - Depth of Response – Defined Urban Area

Figure 27 shows the Option 1 depth of response to the defined urban area (NFPA 1710). The Option 1 deployment model includes a minimum total staffing of fifteen firefighters on duty at all times to enhance the depth of response tactical capabilities of the SSMFS in responding to Group C – Residential occupancies identified as a moderate risk.

The Option 1 depth of response coverage of fourteen firefighters arriving on scene within an eight minute travel time shown in Figure 27 indicates coverage of 13% of the City's defined urban geography and 32% of historical emergency call locations. As a result of the distribution of firefighters within the proposed Option 1 deployment model the performance benchmark of fourteen firefighters arriving on scene within eight minutes of travel time remains predominantly centred between Station 1 and Station 4.

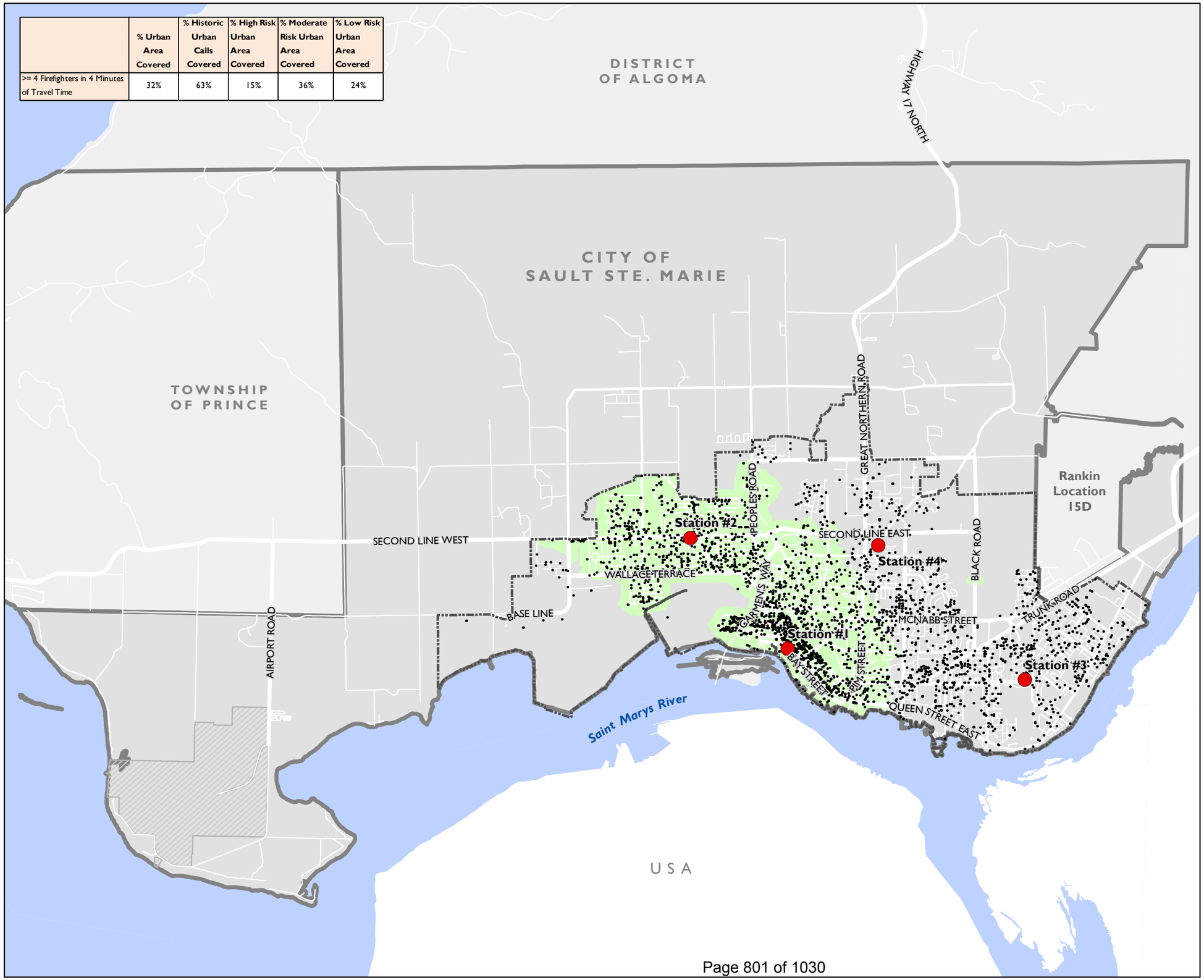
The Option 1 depth of response analysis indicates that the SSMFS would be able to deploy fourteen firefighters within eight minutes of travel time to 8% of the defined urban area low risk occupancies, 16% of the moderate risk occupancies and 3% of the high risk occupancies.

14.1.3 Option 1 - Rural Response

Figure 28 shows the Option 1 response to the defined rural area (NFPA 1720 Rural Demand Zone) of six firefighters within 14 minutes of response time (turnout time + travel time). This figure shows that the department would be able to provide a response of at least six firefighters within 14 minutes of response time to 61% of the rural roads and 69% of the historic emergency call locations.

The Option 1 rural response analysis indicates that the SSMFS would be able to a deploy at least six firefighters within a fourteen minute response time (turnout time + travel time) to 24% of the Comprehensive Risk Assessment identified rural area low risk occupancies, 27% of the moderate risk occupancies and 87% of the high risk occupancies.

	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
>= 4 Firefighters in 4 Minutes of Travel Time	32%	63%	15%	36%	24%



CITY OF SAULT STE. MARIE

FIRE MASTER PLAN

OPTION 1 - MINIMUM STAFFING 15
NFPA 1710 - INITIAL RESPONSE
DEFINED URBAN AREA

FIGURE 2 6

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 4 Minutes of Travel Time

- ≥ 4 Firefighters in 4 Minutes of Travel Time

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 3 Firefighters
4	Pump - 3 Firefighters

NFPA 1710
Minimum of 4 firefighters responding within 4 minutes, 90% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000

0 0.5 1 2 km

N W E S

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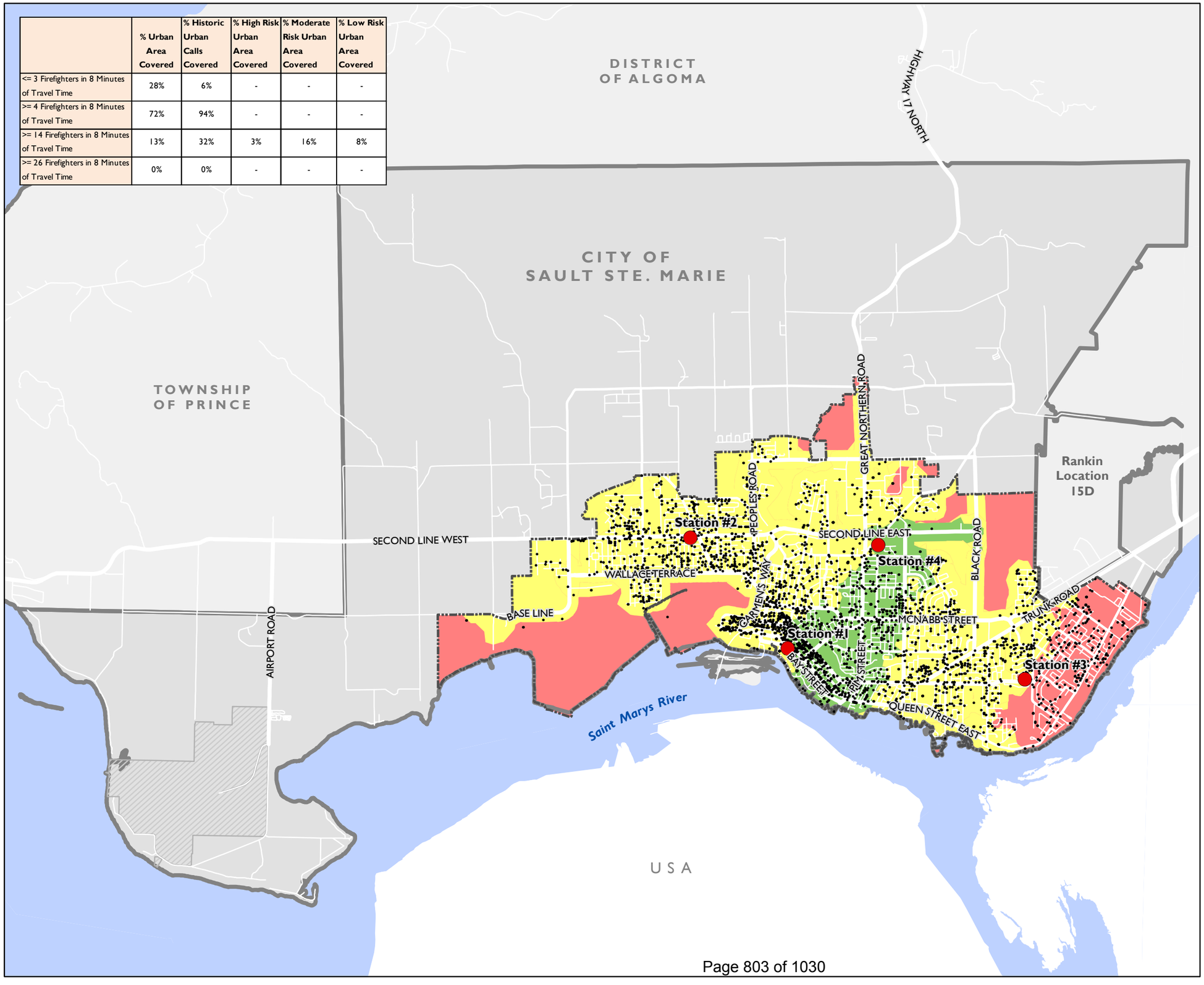
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	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
<= 3 Firefighters in 8 Minutes of Travel Time	28%	6%	-	-	-
>= 4 Firefighters in 8 Minutes of Travel Time	72%	94%	-	-	-
>= 14 Firefighters in 8 Minutes of Travel Time	13%	32%	3%	16%	8%
>= 26 Firefighters in 8 Minutes of Travel Time	0%	0%	-	-	-



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

OPTION 1 - MINIMUM STAFFING 15
NFPA 1710 - DEPTH OF RESPONSE
DEFINED URBAN AREA
FIGURE 2 7

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 8 Minutes of Travel Time

- ≤ 3 Firefighters
- ≥ 4 Firefighters
- ≥ 14 Firefighters
- ≥ 26 Firefighters (not achievable due to staffing levels)

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 3 Firefighters
4	Pump - 3 Firefighters

NFPA 1710 Depth of Response
14 Firefighters in 8 minutes of Travel Time, 90% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

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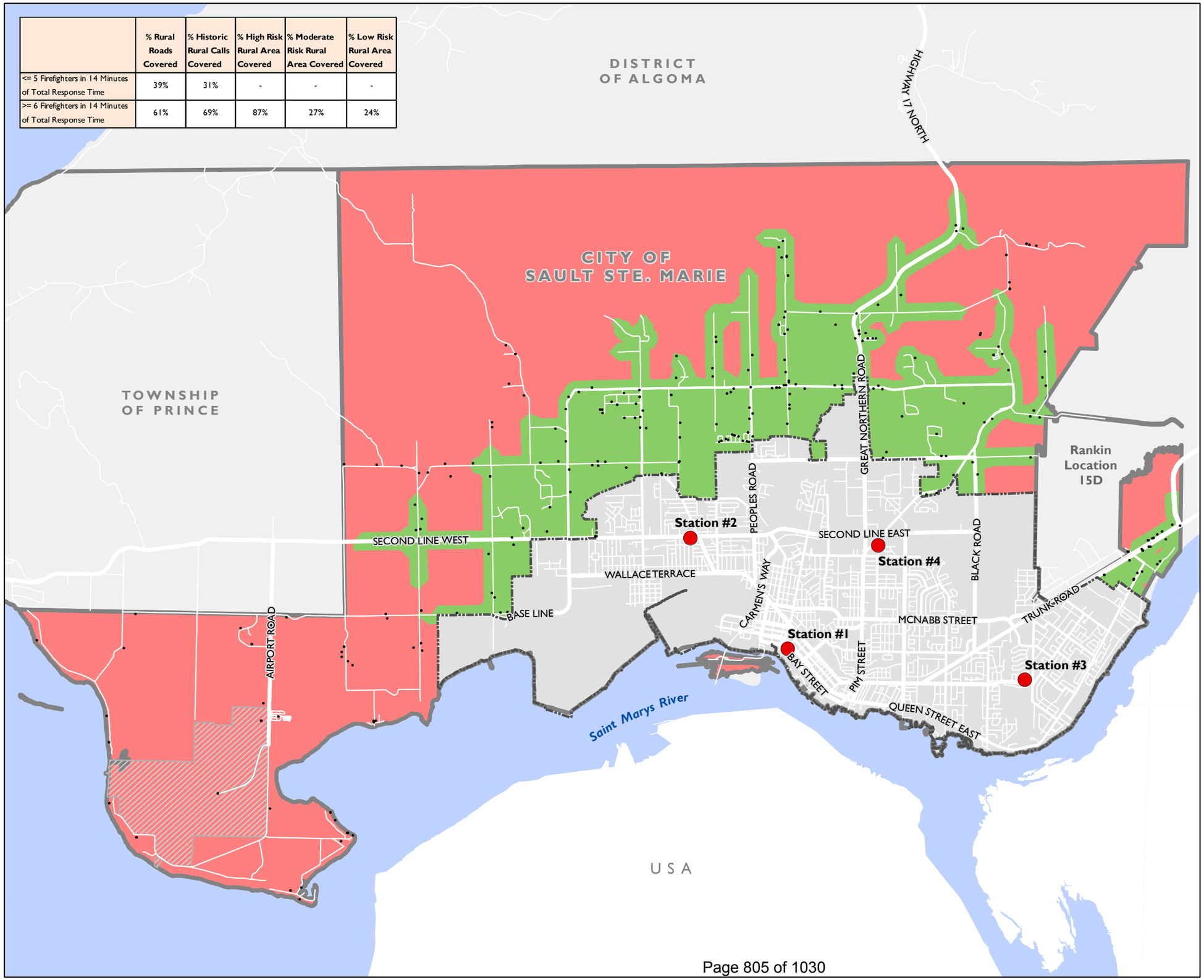
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PROJECT: 175984
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DATE: 2018-01-25

	% Rural Roads Covered	% Historic Rural Calls Covered	% High Risk Rural Area Covered	% Moderate Risk Rural Area Covered	% Low Risk Rural Area Covered
<= 5 Firefighters in 14 Minutes of Total Response Time	39%	31%	-	-	-
>= 6 Firefighters in 14 Minutes of Total Response Time	61%	69%	87%	27%	24%



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

OPTION 1 - MINIMUM STAFFING 15
NFPA 1720 RURAL DEMAND ZONE
DEFINED RURAL AREA
FIGURE 2 8

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 14 Minutes of Total Response Time
- ≤ 5 Firefighters
- ≥ 6 Firefighters

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 3 Firefighters
4	Pump - 3 Firefighters

NFPA 1720 Rural Demand Zone
6 Firefighters in 14 minutes of Total Response Time, 80% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

N W E S

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14.1.4 Option 1 – Estimated Financial Impact

The estimated financial impact of implementing Option 1 includes the cost of hiring 8 additional full-time firefighters and the capital costs associated with these new positions. The estimated financial impacts of Option 1 are presented in Table 34.

Table 34: Option 1 – Estimated Financial Impacts

Scenario	# of Additional Firefighters	Operating Cost for Firefighters (opex)	Capital Cost for Firefighters (capex)	Capital Cost for Fire Stations (capex)
Option 1	8	$880,000	$36,000	$0

14.1.5 Option 1 - Summary

Analysis of the Option 1 fire suppression deployment model indicates an improvement in the initial response coverage within the defined urban area of four firefighters arriving on scene within four minutes of travel time from the existing coverage of 47% to 63%. This is largely due to the increased minimum staffing on the pumps at Station 1 and 2 to four firefighters.

The depth of response coverage within the defined urban area of fourteen firefighters arriving on scene within eight minutes of travel time improved from the existing coverage of 0% to 32%. This is due to the total minimum staffing being increased from thirteen to fifteen firefighters.

The rural response coverage of at least six firefighters arriving on scene within 14 minutes of response time (combined turnout time + travel time) remained the same as the existing coverage of 69%.

Table 35 summarizes the Option 1 fire suppression deployment model results.

Table 35: Fire Suppression Deployment Model Results – Option 1

Deployment Model	Applicable Fire Suppression Performance Benchmarks														
	Defined Urban Area										Defined Rural Area				
	Initial Response (4 Firefighters in 4 Minutes)					Depth of Response (14 Firefighters in 8 Minutes)					Rural Response (6 Firefighters in 14 Minutes)				
	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Rural Roads Covered	% Rural Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered
Option 1	32%	63%	24%	36%	15%	13%	32%	8%	16%	3%	61%	69%	24%	27%	87%

14.2 Option 2 – Three Station Model (Existing Minimum Staffing 13)

The Option 2 model is based on reducing the number of fire stations from four to three. This includes relocating Station 1 to the area of Bruce Street and Gladstone Avenue, decommissioning the current Station 1 and repurposing or selling this property. This model also includes removing fire suppression staff from operating at Station 4 and utilizing Station 4 as a centralized land ambulance, maintenance and training centre.

This option proposes sustaining the existing minimum number of thirteen firefighters on duty at all times. The Option 2 deployment model is illustrated in Table 36.

Table 36: Option 2 - Firefighter Deployment Model

Station	Apparatus	Existing	Option 2
1	Platoon Chief	1	1
	Pump	3	4
	Aerial	0	0
	Tanker	0	0
	Rescue	0	0
	Utility	0	0
2	Rescue/Pumper	3	4
3	Rescue/Pumper	3	4
Minimum # of Firefighters on Duty		13	13
Total Number of Firefighters		64	64

14.2.1 Option 2 - Initial Response - Defined Urban Area

Figure 29 shows the Option 2 initial response coverage of four firefighters arriving on-scene within four minutes of travel time. The Option 2 initial response coverage of four firefighters arriving on-scene within four minutes of travel time represents 58% of the City's defined urban geography and 92% of historic emergency call locations. This option attains the initial response tactical capabilities including the provision of four firefighters on the initial responding apparatus at all 3 stations.

The implementation of this option would minimize the existing initial response tactical limitations of the SSMFS, and is predicted to achieve the applicable performance benchmark of four firefighters arriving on scene within a four minute travel time to 90% of fire suppression incidents.

The Option 2 initial response analysis indicates that the SSMFS would be able to deploy four firefighters within four minutes of travel time to 38% of the defined urban area low risk occupancies, 72% of the moderate risk occupancies and 8% of the high risk occupancies.

14.2.2 Option 2 - Depth of Response – Defined Urban Area

The Option 2 deployment model includes a minimum of thirteen firefighters on duty at all times. As such there would be no change to the existing depth of response tactical capabilities of the SSMFS.

The depth of response coverage of thirteen firefighters arriving on scene within an eight minute travel time is shown in Figure 30 would remain the same as the existing four station deployment model that indicates coverage of 13% of the City's defined urban geography and 32% of historical emergency call locations. The depth of response coverage area would remain very similar to that of the existing deployment model that predominantly centred between the existing Stations 1 and Station 4.

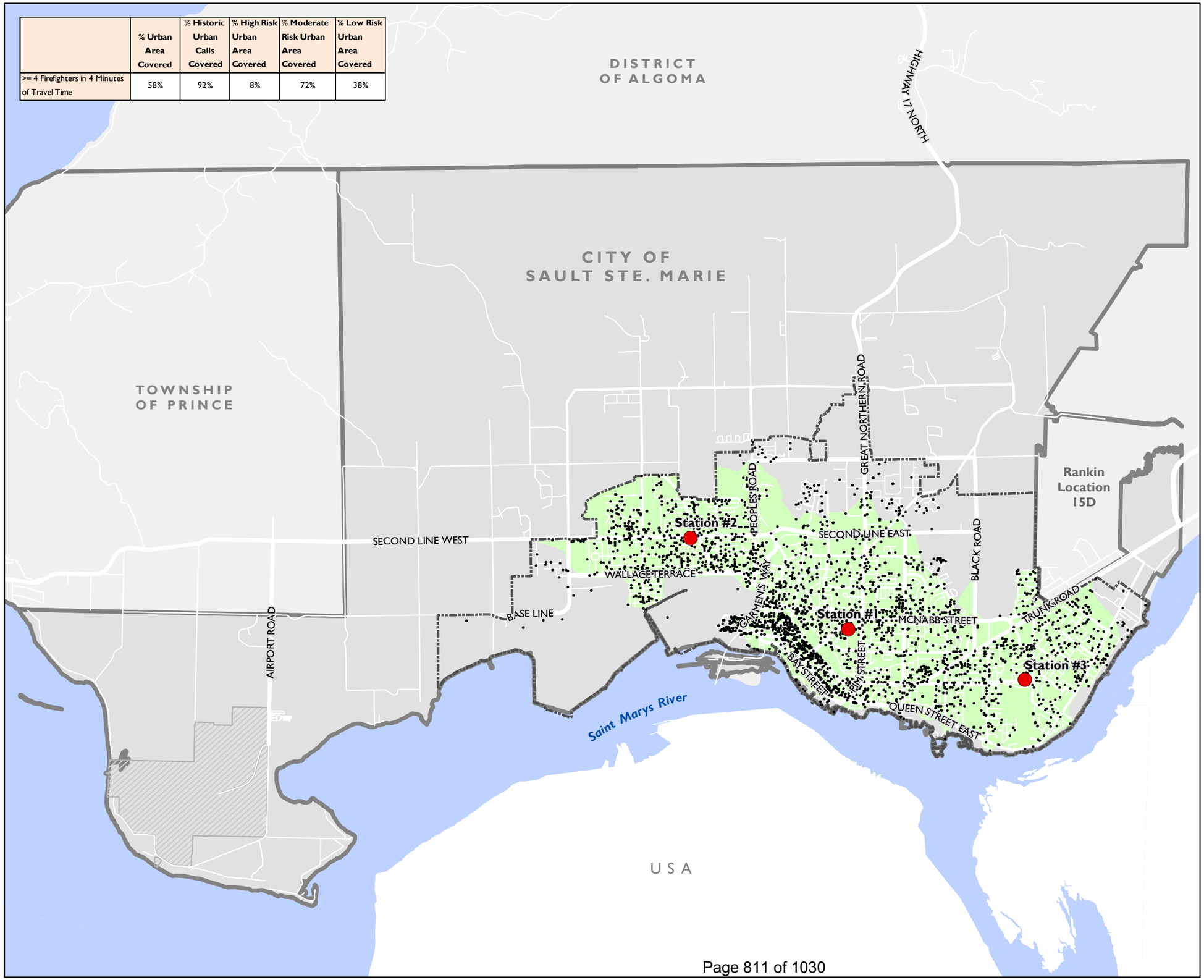
The Option 2 depth response analysis indicates that the SSMFS would be able to deploy thirteen firefighters within eight minutes of travel time to similar risks as presented within the analyses of the historical depth of response that included 9% of the defined urban area low risk occupancies, 16% of the moderate risk occupancies and 3% of the high risk occupancies.

14.2.3 Option 2 - Rural Response

Figure 31 shows the Option 2 response to the defined rural area (NFPA 1720 Rural Demand Zone) of six firefighters within 14 minutes of response time (turnout time + travel time). This figure shows that the department would be able to provide a response of at least six firefighters within 14 minutes of response time to 55% of the rural roads and 66% of the historic emergency call locations.

The Option 2 rural response analysis indicates that the SSMFS would be able to a deploy at least six firefighters within a fourteen minute response time (turnout time + travel time) to 30% of the Comprehensive Risk Assessment identified rural area low risk occupancies, 26% of the moderate risk occupancies and 87% of the high risk occupancies.

	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
>= 4 Firefighters in 4 Minutes of Travel Time	58%	92%	8%	72%	38%



CITY OF SAULT STE. MARIE

FIRE MASTER PLAN

OPTION 2 - THREE STATION MODEL
NFPA 1710 - INITIAL RESPONSE
DEFINED URBAN AREA
FIGURE 2 9

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 4 Minutes of Travel Time

- ≥ 4 Firefighters in 4 Minutes of Travel Time

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters

NFPA 1710
Minimum of 4 firefighters responding within 4 minutes, 90% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

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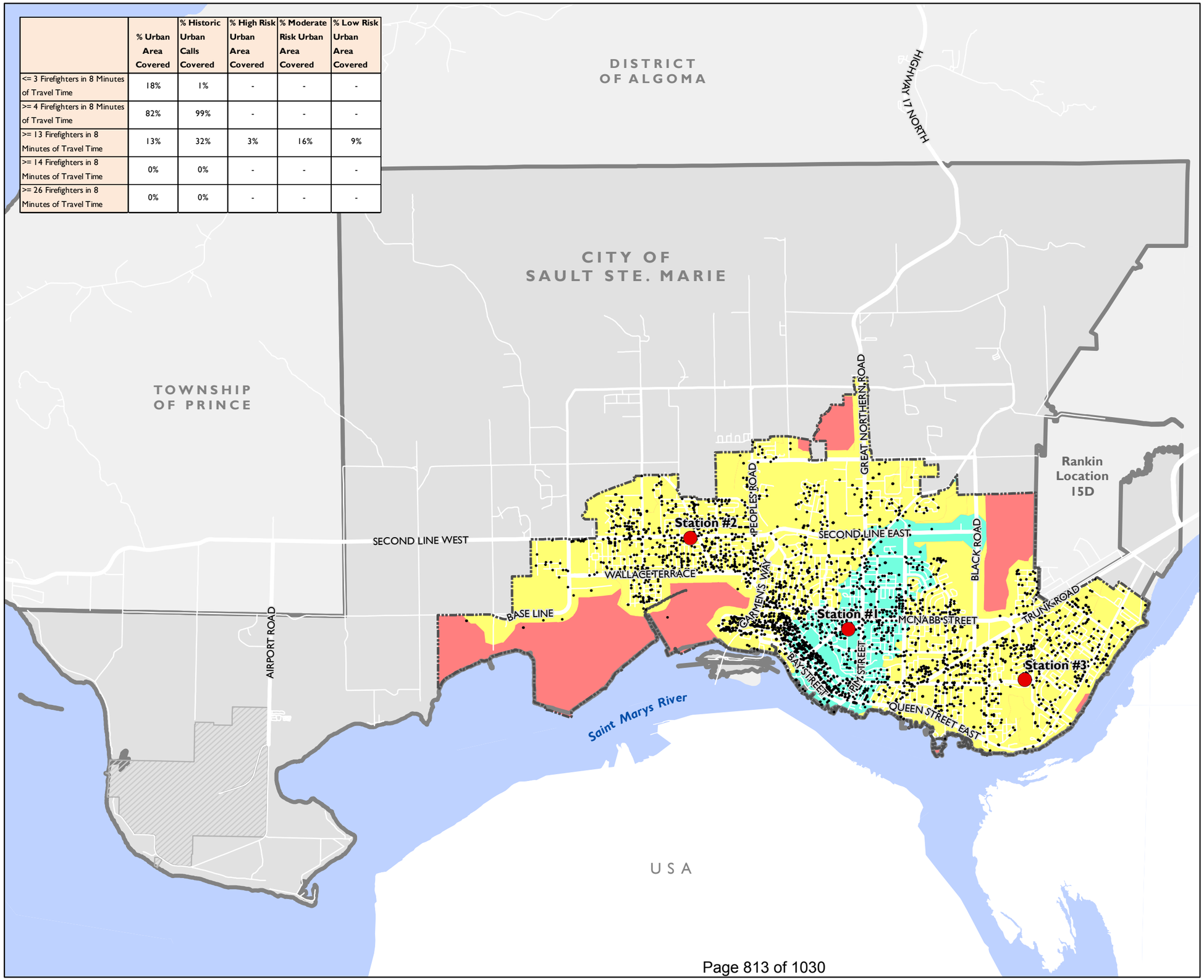
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	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
<= 3 Firefighters in 8 Minutes of Travel Time	18%	1%	-	-	-
>= 4 Firefighters in 8 Minutes of Travel Time	82%	99%	-	-	-
>= 13 Firefighters in 8 Minutes of Travel Time	13%	32%	3%	16%	9%
>= 14 Firefighters in 8 Minutes of Travel Time	0%	0%	-	-	-
>= 26 Firefighters in 8 Minutes of Travel Time	0%	0%	-	-	-



CITY OF SAULT STE. MARIE

FIRE MASTER PLAN

OPTION 2 - THREE STATION MODEL
NFPA 1710 - DEPTH OF RESPONSE
DEFINED URBAN AREEA

FIGURE 3 0

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 8 Minutes of Travel Time

- ≤ 3 Firefighters
- ≥ 4 Firefighters
- ≥ 13 Firefighters
- ≥ 14 Firefighters (not achievable due to staffing levels)
- ≥ 26 Firefighters (not achievable due to staffing levels)

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters

NFPA 1710 Depth of Response
14 Firefighters in 8 minutes of Travel Time, 90% of the time.

* Call types include Structure Fires,Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

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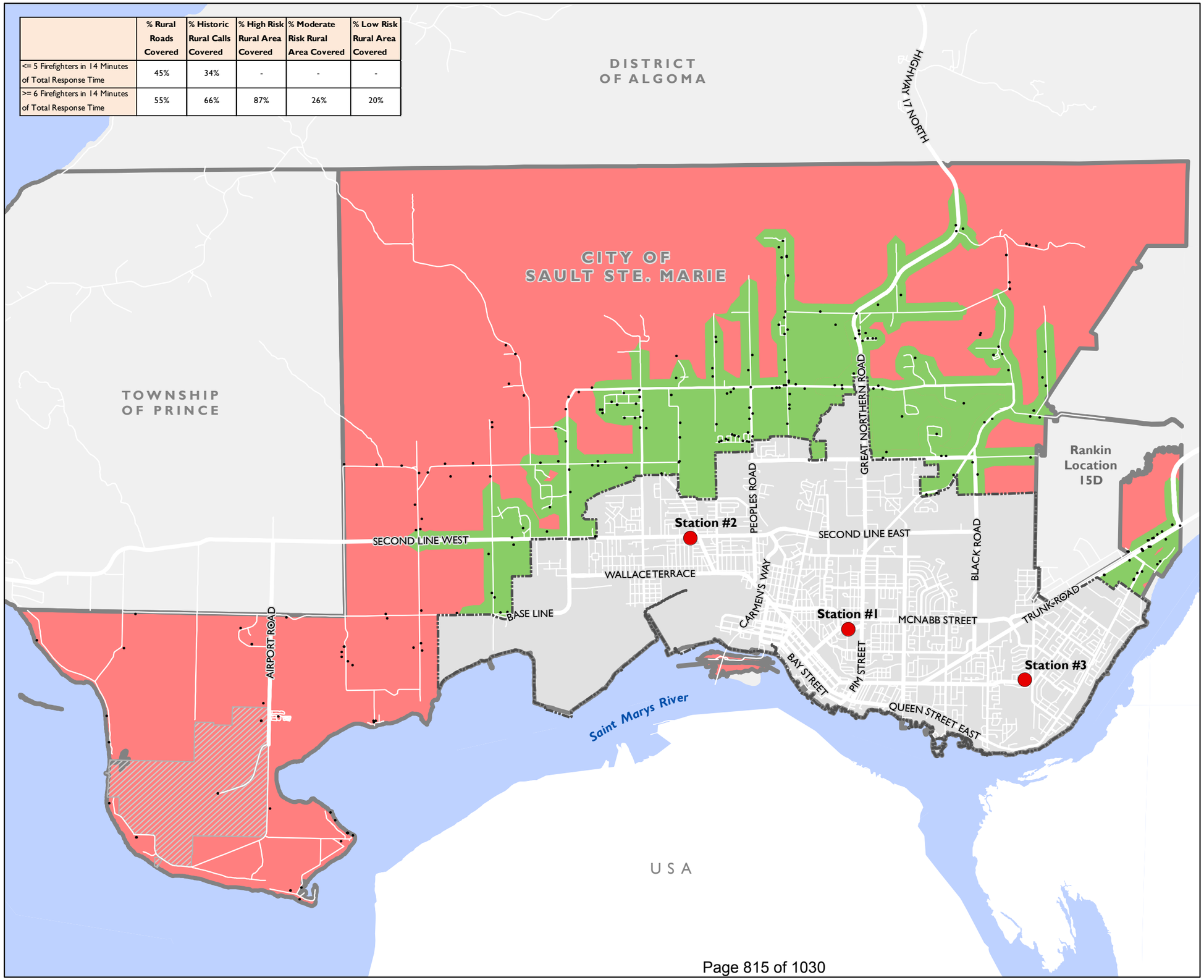
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DATE: 2018-01-25

	% Rural Roads Covered	% Historic Rural Calls Covered	% High Risk Rural Area Covered	% Moderate Risk Rural Area Covered	% Low Risk Rural Area Covered
<= 5 Firefighters in 14 Minutes of Total Response Time	45%	34%	-	-	-
>= 6 Firefighters in 14 Minutes of Total Response Time	55%	66%	87%	26%	20%



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

OPTION 2 - THREE STATION MODEL
NFPA 1720 - RURAL DEMAND ZONE
DEFINED RURAL AREA

FIGURE 3 1

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 14 Minutes of Total Response Time

- ≤ 5 Firefighters
- ≥ 6 Firefighters

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters

NFPA 1720 Rural Demand Zone
6 Firefighters in 14 minutes of Total Response Time, 80% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

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14.2.4 Option 2 – Estimated Financial Impact

The estimated financial impacts Option 2 are directly related to the purchasing of property and building a new Fire Station 1 to be located in the area of the intersection Bruce Street and Gladstone Avenue, and decommissioning the existing Station 1 as a fire station. The City may choose to repurpose this building for some other municipal use, or alternatively sell the building and property to offset the cost of relocating this fire station. We are unable to estimate the current value of the Fire Station 1 property and building. For the purposes of this fire master planning process it is assumed that the SSMFS would replace the existing Fire Station 1 with a new Headquarters fire station with the capabilities to house all of its administrative functions in addition to the operations of the identified fire suppression staff. In our experience this could result in a building of approximately 13,000 square feet. The estimated cost of construction of this building based on a range of $350 to $425 per square foot would be approximately $4,550,000 to $5,525,000 excluding land purchase and professional fees such as architectural services. The estimated financial impacts of the proposed Option 2 are presented in Table 37.

Table 37: Option 2 - Estimated Financial Impacts

Scenario	# of Additional Firefighters	Operating Cost for Firefighters (opex)	Capital Cost for Firefighters (capex)	Capital Cost for Fire Stations (capex)
Option 2	0	$0	$0	$4.55 m to $5.53 m

14.2.5 Option 2 - Summary

Analysis of the Option 2 fire suppression deployment model indicates a significant improvement in the initial response coverage within the defined urban area of four firefighters arriving on scene within four minutes of travel time from the existing coverage of 47% to 92%. This is predicted to result in the SSMFS being able to achieve the applicable performance benchmark for initial response.

Option 2 sustains the same minimum on duty staffing as the existing fire suppression deployment of thirteen firefighters on duty. The result is that the SSMFS would not be able to attain any of the applicable depth of response performance benchmarks.

The rural response coverage of at least six firefighters arriving on scene within 14 minutes of response time (combined turnout time + travel time) is 66% which is slightly lower than the existing coverage of 69%.

Table 38 summarizes the Option 2 fire suppression deployment model results.

Table 38: Fire Suppression Deployment Model Results – Option 2

Deployment Model	Applicable Fire Suppression Performance Benchmarks														
	Defined Urban Area										Defined Rural Area				
	Initial Response (4 Firefighters in 4 Minutes)					Depth of Response (14 Firefighters in 8 Minutes)					Rural Response (6 Firefighters in 14 Minutes)				
	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Rural Roads Covered	% Rural Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered
Option 2	58%	92%	38%	72%	8%	0%	0%	0%	0%	0%	55%	66%	20%	26%	87%

14.3 Option 3 – Three Station Model, Minimum Staffing 15

Fire suppression model Option 3 combines the strategies presented in Option 1 and 2 – a three station model with a minimum staffing of 15. The reduction of the number of stations from four to three includes relocating Station 1 to the area of Bruce Street and Gladstone Avenue and decommissioning the current Station 1 and repurposing or selling this property. This model also includes removing fire suppression staff from operating at Station 4 and utilizing Station 4 as a centralized land ambulance, maintenance and training centre.

This option includes a proposed increase in the minimum number of firefighters on duty at all times to fifteen firefighters. The proposed Option 3 deployment model is illustrated in Table 39.

Table 39: Option 3 - Firefighter Deployment Model

Station	Apparatus	Existing	Option 3
1	Platoon Chief	1	1
	Pump	3	4
	Aerial	0	2
	Tanker	0	0
	Rescue	0	0
	Utility	0	0
2	Rescue/Pumper	3	4
3	Rescue/Pumper	3	4
Minimum # of Firefighters on Duty		13	15
Total Number of Firefighters		64	72

14.3.1 Option 3 - Initial Response - Defined Urban Area

Figure 32 shows the Option 3 initial response coverage of four firefighters arriving on-scene within four minutes of travel time. The Option 3 initial response coverage of four firefighters arriving on-scene within four minutes of travel time represents 58% of the City's defined urban geography and 92% of historic emergency call locations. This option implements the industry best practices deployment of a minimum of four firefighters on all of the initial responding apparatus (Pump) at each of the three fire stations. The implementation of this option would minimize the existing initial response tactical limitations of the SSMFS, and is predicted to achieve the applicable performance benchmark of four firefighters arriving on scene within a four minute travel time to 90% of fire suppression incidents.

The Option 3 initial response analysis indicates that the SSMFS would be able to deploy four firefighters within four minutes of travel time to 38% of the defined urban area low risk occupancies, 72% of the moderate risk occupancies and 8% of the high risk occupancies.

14.3.2 Option 3 - Depth of Response – Defined Urban Area

The Option 3 deployment model includes a minimum of **fif**teen **fi**re**fi**ghters on duty at all times. As such the SSMFS would enhance its ability to achieve the applicable depth of response fire suppression performance benchmarks.

The Option 3 depth of response coverage of fourteen **fi**re**fi**ghters arriving on scene within an eight minute travel time is shown in Figure 33 and indicates coverage of 13% of the City's defined urban geography and 32% of historical emergency call locations. As a result of the distribution of firefighters within the proposed Option 3 deployment model, the performance benchmark of fourteen **fi**re**fi**ghters arriving on scene within eight minutes of travel time remains predominantly located around the proposed Station 1 location, and the Downtown area.

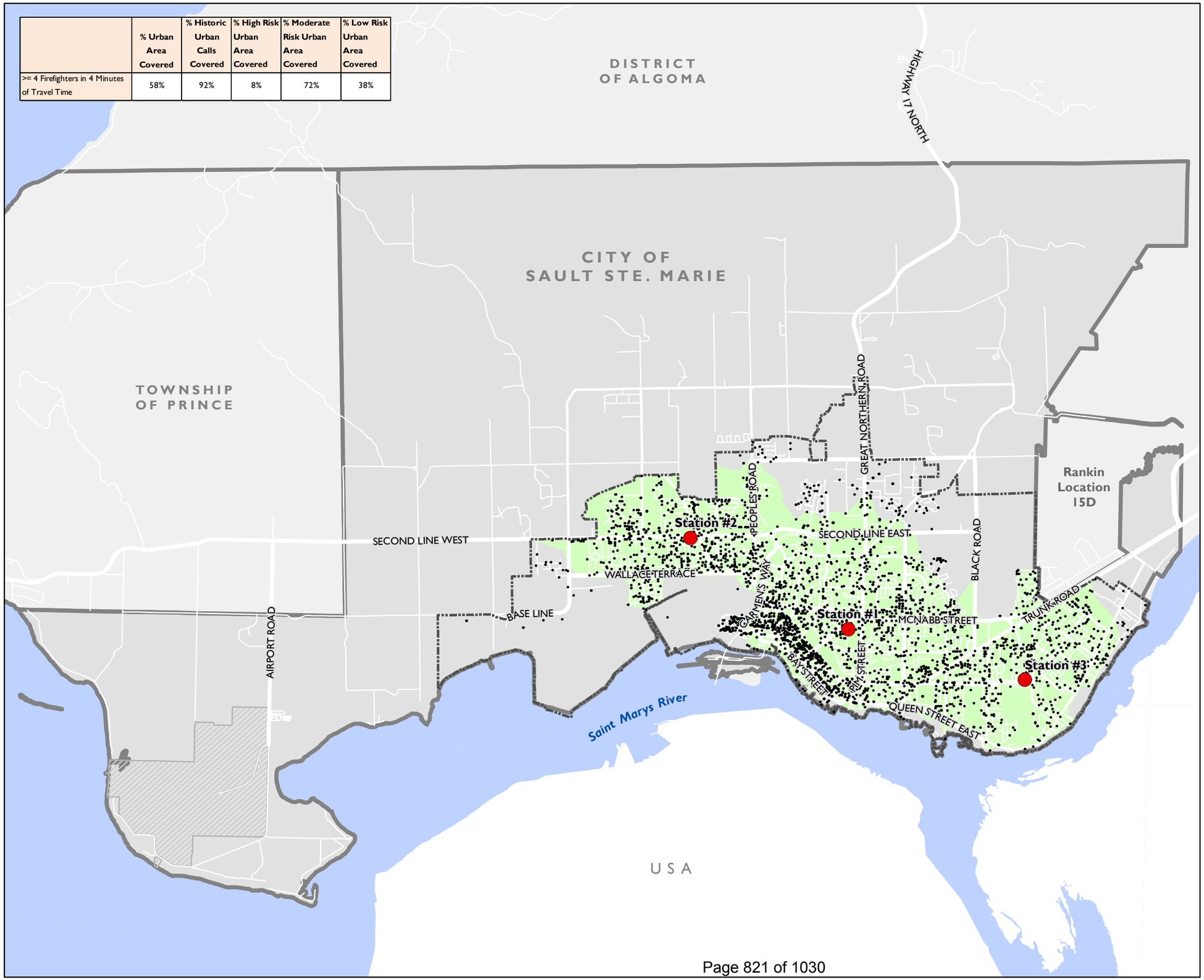
The Option 3 depth of response analysis indicates that the SSMFS would be able to deploy fourteen firefighters within eight minutes of travel time to 1% of the defined urban area low risk occupancies, 16% of the moderate risk occupancies and 3% of the high risk occupancies.

14.3.3 Option 3 - Rural Response

Figure 34 shows the Option 3 response to the defined rural area (NFPA 1720 Rural Demand Zone) of six firefighters within 14 minutes of response time (turnout time + travel time). This figure shows that the department would be able to provide a response of at least six firefighters within 14 minutes of response time to 57% of the rural roads and 69% of the historic emergency call locations.

The Option 3 rural response analysis indicates that the SSMFS would be able to a deploy at least six firefighters within a fourteen minute response time (turnout time + travel time) to 23% of the Comprehensive Risk Assessment identified rural area low risk occupancies, 27% of the moderate risk occupancies and 87% of the high risk occupancies.

	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
>= 4 Firefighters in 4 Minutes of Travel Time	58%	92%	8%	72%	38%



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

OPTION 3 - 3 STN MODEL, MIN STAFFING 15
NFPA 1710 - INIITIAL RESPONSE
DEFINED URBAN AREA
FIGURE 3 2

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 4 Minutes of Travel Time

- ≥ 4 Firefighters in 4 Minutes of Travel Time

Station	Staffing
1	Pump - 4 Firefighters Aerial/Rescue - 2 Firefighters Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters

NFPA 1710
Minimum of 4 firefighters responding within 4 minutes, 90% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

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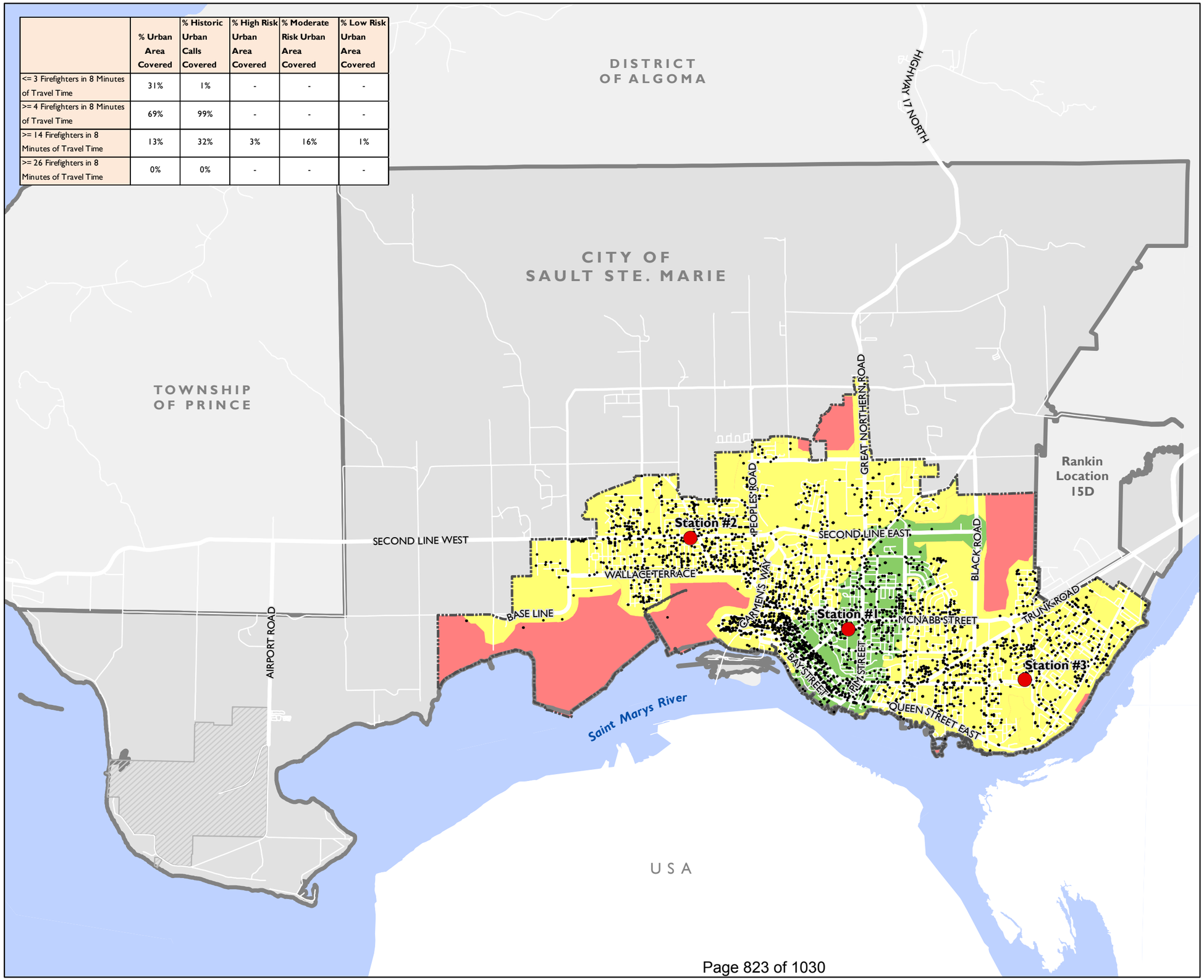
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	% Urban Area Covered	% Historic Urban Calls Covered	% High Risk Urban Area Covered	% Moderate Risk Urban Area Covered	% Low Risk Urban Area Covered
<= 3 Firefighters in 8 Minutes of Travel Time	31%	1%	-	-	-
>= 4 Firefighters in 8 Minutes of Travel Time	69%	99%	-	-	-
>= 14 Firefighters in 8 Minutes of Travel Time	13%	32%	3%	16%	1%
>= 26 Firefighters in 8 Minutes of Travel Time	0%	0%	-	-	-



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

OPTION 3 - 3 STN MODEL, MIN STAFFING 15
NFPA 1710 - DEPTH OF RESPONSE
DEFINED URBAN AREA
FIGURE 3 3

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 8 Minutes of Travel Time

- ≤ 3 Firefighters
- ≥ 4 Firefighters
- ≥ 14 Firefighters
- ≥ 26 Firefighters (not achievable due to staffing levels)

Station	Staffing
1	Pump - 4 Firefighters Aerial/Rescue - 2 Firefighters Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters

NFPA 1710 Depth of Response
14 Firefighters in 8 minutes of Travel Time, 90% of the time.

* Call types include Structure Fires,Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

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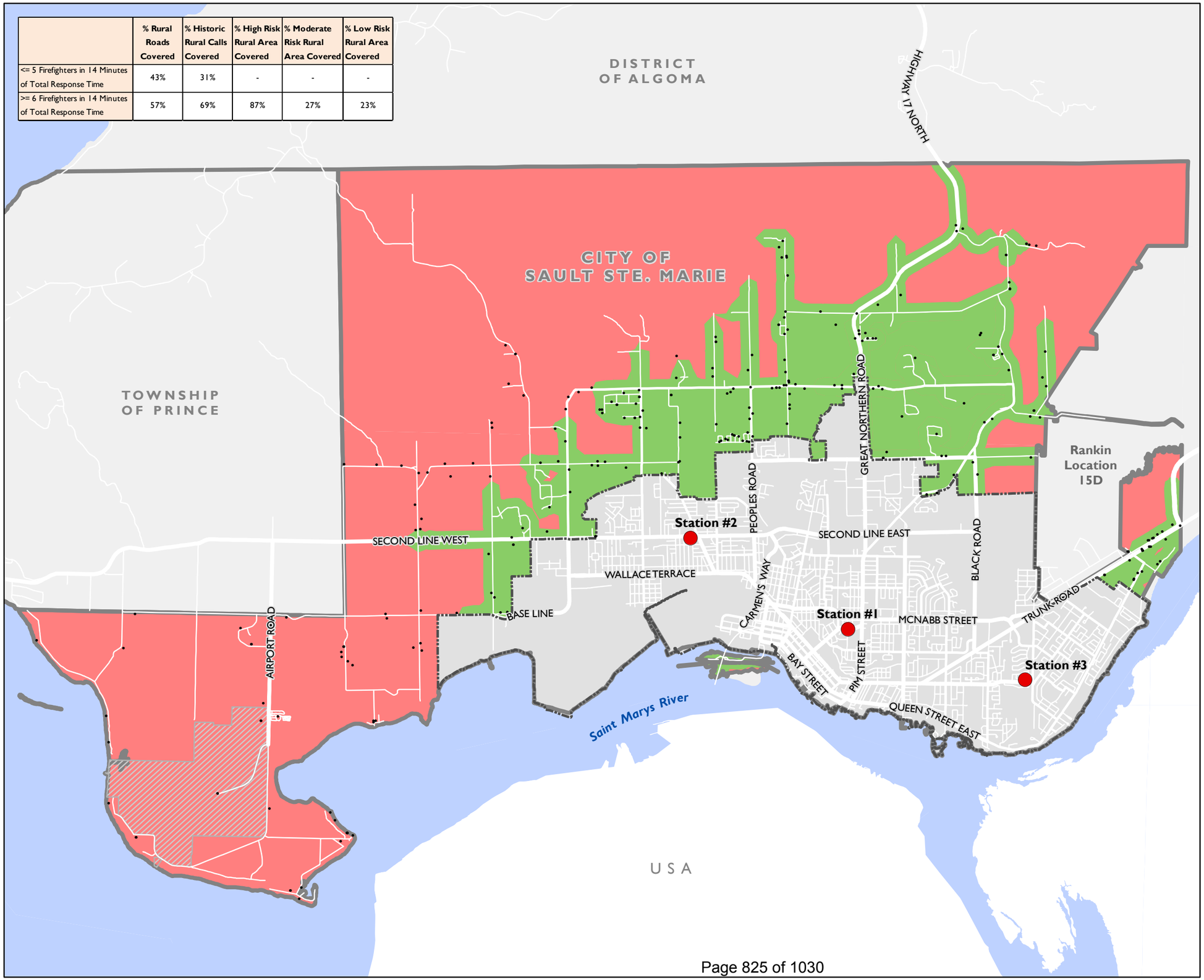
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DILLON CONSULTING

PROJECT: 175984
STATUS: DRAFT
DATE: 2018-01-25

	% Rural Roads Covered	% Historic Rural Calls Covered	% High Risk Rural Area Covered	% Moderate Risk Rural Area Covered	% Low Risk Rural Area Covered
<= 5 Firefighters in 14 Minutes of Total Response Time	43%	31%	-	-	-
>= 6 Firefighters in 14 Minutes of Total Response Time	57%	69%	87%	27%	23%



CITY OF SAULT STE. MARIE
FIRE MASTER PLAN

OPTION 3 - 3 STN MODEL, MIN STAFFING 15
NFPA 1720 - RURAL DEMAND ZONE
DEFINED RURAL AREA
FIGURE 3 4

- Fire Station
- Historic Call 2012-2017*
- Urban Settlement Area
- Airport
- Municipal Boundary

Number of Staff on Scene within 14 Minutes of Total Response Time

- ≤ 5 Firefighters
- ≥ 6 Firefighters

Station	Staffing
1	Pump - 4 Firefighters Aerial/Rescue - 2 Firefighters Platoon Chief - 1
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters

NFPA 1720 Rural Demand Zone
6 Firefighters in 14 minutes of Total Response Time, 80% of the time.

* Call types include Structure Fires, Vehicle Fires, and Medical

1:80,000
0 0.5 1 2 km

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY THE CITY OF SAULT STE. MARIE/MNRF

MAP CREATED BY: GM
MAP CHECKED BY: AN
MAP PROJECTION: NAD 1983 UTM Zone 16N

FILE LOCATION: I:\GIS\175984 - Sault Ste. Marie Comprehensive Risk Assessment\MXD\Operational Review\Proposed Deployment Model Rural Demand Zone 1720.mxd

DILLON CONSULTING

PROJECT: 175984
STATUS: DRAFT
DATE: 2018-01-25

14.3.4 Option 3 – Estimated Financial Impact

The estimated financial impact of implementing Option 3 includes the cost of hiring 8 additional full-time firefighters and the capital costs associated with these new positions. The financial impacts also include the purchasing of property and building a new Fire Station 1 to be located in the area of the intersection Bruce Street and Gladstone Avenue, and decommissioning the existing Station 1 as a fire station. The City may choose to repurpose this building for some other municipal use, or alternatively sell the building and property to offset the cost of relocating this fire station. We are unable to estimate the current value of the Fire Station 1 property and building. For the purposes of this fire master planning process it is assumed that the SSMFS would replace the existing Fire Station 1 with a new Headquarters fire station with the capabilities to house all of its administrative functions in addition to the operations of the identified fire suppression staff. In experience this would result in a building of approximately 13,000 square feet. The estimated cost of construction of this building based on a range of $350 to $425 per square foot would be approximately $4,550,000 to $5,525,000 excluding land purchase and professional fees such as architectural services.

The estimated financial impacts of the Option 3 are presented in Table 40.

Table 40: Option 3 - Estimated Financial Impacts

Scenario	# of Additional Firefighters	Operating Cost for Firefighters (opex)	Capital Cost for Firefighters (capex)	Capital Cost for Fire Stations (capex)
Option 3	8	$880,000	$36,000	$4.55 m to $5.53 m

14.3.5 Option 3 - Summary

Analysis of the Option 3 fire suppression deployment model indicate a significant improvement in the initial response coverage within the defined urban area of four firefighters arriving on scene within four minutes of travel time from the existing coverage of 47% to 92%. This is predicted to result in the SSMFS being able to achieve the applicable performance benchmark for initial response.

The depth of response coverage within the defined urban area of fourteen firefighters arriving on scene within eight minutes of travel time improved from the existing coverage of 0% to 32%. This is due to the total minimum staffing being increased from thirteen to fifteen.

The rural response coverage of at least six firefighters arriving on scene within 14 minutes of response time (combined turnout time + travel time) is 69% which is the same as the existing coverage of 69%.

Table 41 summarizes the Option 3 fire suppression deployment model results.

Table 41: Fire Suppression Deployment Model Results – Option 3

Deployment Model	Applicable Fire Suppression Performance Benchmarks														
	Defined Urban Area										Defined Rural Area				
	Initial Response (4 Firefighters in 4 Minutes)					Depth of Response (14 Firefighters in 8 Minutes)					Rural Response (6 Firefighters in 14 Minutes)				
	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Rural Roads Covered	% Rural Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered
Option 3	58%	92%	38%	72%	8%	13%	32%	1%	16%	3%	57%	69%	23%	27%	87%

14.4 Comparison of Fire Suppression Staffing & Station Location Model Options

The analysis of fire suppression staffing and fire station location models is intended to provide Council with further information to inform their identification of local *"needs and circumstances"* as defined by the FPPA, and in response to the recommendations of the 2017 RFPS conducted by the OFMEM.

14.4.1 Applicable Fire Suppression Performance Benchmarks

Table 42 summarizes the fire suppression deployment models results for Options 1, 2, and 3 as well as the historic and existing fire suppression performance assessment. As shown in the table, comparison of the historical fire suppression deployment model (minimum staffing of 15 firefighters) with the existing deployment model (minimum staffing of 13 firefighters) identifies a reduction of the initial response percent urban calls covered from 84% in the historical model to 47% in the existing model. Similarly, there has been a reduction in the depth of response percent urban calls covered from the historical 32% to 0% in the existing model.

Option 3 as presented includes an increase in the minimum on duty staffing complement to 15 firefighters (from 13), and a reduction in the number of fire stations from the existing four to three including a relocation of Station 1. The result is the highest percent urban calls covered of 92% which exceeds the historical model by 8% and the existing model by 45%. Option 3 is also predicted to achieve the applicable fire suppression performance benchmark for initial response of 90%.

Option 3 provides the same depth of response capability as the historical model for percent urban calls covered of 32% and the same rural response percent rural calls covered of 69%.

Table 42: Summary of All Fire Suppression Deployment Model Results

Deployment Model	Applicable Fire Suppression Performance Benchmarks														
	Defined Urban Area										Defined Rural Area				
	Initial Response (4 Firefighters in 4 Minutes)					Depth of Response (14 Firefighters in 8 Minutes)					Rural Response (6 Firefighters in 14 Minutes)				
	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Urban Area Covered	% Urban Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered	% Rural Roads Covered	% Rural Calls Covered	% Low Risk Area Covered	% Moderate Risk Covered	% High Risk Covered
Historical Deployment Model	52%	84%	35%	62%	16%	13%	32%	8%	16%	3%	59%	69%	23%	27%	87%
Existing Deployment Model	18%	47%	10%	21%	10%	0%	0%	0%	0%	0%	61%	69%	24%	27%	87%
Option 1	32%	63%	24%	36%	15%	13%	32%	8%	16%	3%	61%	69%	24%	27%	87%
Option 2	58%	92%	38%	72%	8%	0%	0%	0%	0%	0%	55%	66%	20%	26%	87%
Option 3	58%	92%	38%	72%	8%	13%	32%	1%	16%	3%	57%	69%	23%	27%	87%

Option 3 illustrates that with an increase in the minimum number of firefighters on duty at all times from the existing thirteen to the proposed fifteen and implementing a revised three station model, the SSMFS would attain and/or exceed the historical fire suppression capabilities of the SSMFS for both initial response and depth of response. This option provides an initial response capability of four firefighters on each of the proposed three initial responding apparatus (pumps) in order to enhance the initial response tactical capabilities including the provision of four firefighters on all initial responding apparatus.

This option also enhances the depth of response tactical capabilities of the SSMFS by including a total minimum complement of fifteen firefighters on duty at all times. This provides the SSMFS with the ability to deploy the industry best practices initial depth of response deployment to a moderate risk occupancy (single-detached dwelling) of fourteen firefighters and fifteen if an aerial device is required.

14.4.2 Proposed Three Station Model

The fire suppression staffing and location model options include considering a three fire station model. This proposed model includes relocating Station 1 to the area of Bruce Street and Gladstone Avenue, decommissioning the current Station 1 and repurposing or selling this property.

This option considers the relocation of Station 1 further north from the downtown core area in order to seek further optimization of the available fire suppression resources. The impacts of this relocation include relocating Station 1 north of the Huron Central rail line that connects to the Algoma Steel (former ESSAR) facility.

Within the current four station model, with Station 1 located south of this rail line, there is the possibility that fire suppression staff responding from Station 1 in its current location may be delayed in responding to the area north of the rail line due to at-grade rail crossings. This possibility would be reversed if Station 1 was to be located north of the at-grade crossing. Specific details of the frequency of trains utilizing this rail line could not be confirmed by senior department staff. However, existing contingency plans were discussed with senior department staff indicating that currently fire suppression staff may be required to use either the Tancred Street at-grade crossing or alternatively the Pim Street at-grade crossing to respond north of this rail line. As such, subject to Council's consideration of this location, it is recommend that an alternative response protocol be clearly defined within an operating guideline to simultaneously deploy either Station 2 or 3 in addition to Station 1 to areas of the downtown core south of the Huron Central rail line.

14.4.3 Estimated Financial Impact

A comparison of the estimated financial impacts for the three options is presented in Table 43. The information presented within this FMP has identified the potential financial impacts of increasing the minimum number of firefighters on duty at all times from the existing number of thirteen firefighters up to a total of twenty six firefighters. The FFPA identifies that it is Council's responsibility to determine the level of fire protection services to be provided through analysis of local *"needs and circumstances"* of which assessing the financial impact is a key objective.

The previous sections have presented a comparison of three different options to enhance the delivery of fire suppression services provided by the SSMFS. The findings of this analysis indicate that the implementation of Option 3 including increasing the minimum number of firefighters on duty to fifteen and implementing a revised three station model the SSMFS would attain and/or exceed the historical fire suppression capabilities of the SSMFS for both initial response and depth of response.

Table 43: Estimated Financial Impacts – All Options

Scenario	# of Additional Firefighters	Operating Cost for Firefighters (opex)	Capital Cost for Firefighters (capex)	Capital Cost for Fire Stations (capex)
Option 1	8	$880,000	$36,000	$0
Option 2	0	$0	$0	$4.55 m to $5.53 m
Option 3	8	$880,000	$36,000	$4.55 m to $5.53 m

14.4.4 Proposed Fire Suppression Deployment Option

Subject to Council's review and consideration of the analysis presented within the Comprehensive Risk Assessment and this Fire Master Plan it is our view that Council should approve the Fire Suppression Model – Option 3 as the preferred operating model for the SSMFS including a minimum of fifteen firefighters on duty at all times and the proposed three fire station location model.

Council Recommendation #6: That the Council of the City of Sault Ste. Marie approve the Fire Suppression Model – Option 3 included within the proposed Fire Master Plan as the preferred operating model for the SSMFS including a minimum of fifteen firefighters on duty at all times and the proposed three fire station location model.

14.4.5 Proposed Fire Suppression Performance Objectives

The 2017 RFPS conducted by the OFMEM recommended that Council *"should ensure that core services and level of services for fire protection services provided by the SSMFS are developed, approved and implemented*[21] *".* The analysis within this FMP has presented the applicable fire suppression performance benchmarks for the delivery of fire suppression services within the City of Sault Ste. Marie.

Based on the analysis presented within this Fire Master Plan it is recommended that Council consider the fire suppression performance benchmarks listed in
Table 44 for the delivery of fire suppression services within the City of Sault Ste. Marie.

Table 44: Proposed Fire Suppression Performance Benchmarks

Response Type	Proposed Fire Suppression Performance Benchmarks
Rural Area Response	The Sault Ste. Marie Fire Services will strive to achieve a deployment of six firefighters arriving on scene within a 14 minute travel time to all structural fires within the defined rural area of the City.
Initial Response	The Sault Ste. Marie Fire Services will strive to achieve an initial

[21] 2017 Review of Fire Protection Services – Recommendation #17

Response Type	Proposed Fire Suppression Performance Benchmarks
Defined Urban Area	deployment of four firefighters arriving on scene within a four minute travel time to all structural fires within the defined urban area of the City.
Depth of Response Defined Urban Area – Moderate Risk	The Sault Ste. Marie Fire Services will strive to achieve an initial depth of response deployment of fourteen firefighters arriving on scene within an eight minute travel time to all structural fires occurring within identified moderate risk occupancies located in the defined urban area of the City.

Subject to Council's consideration and approval of the proposed fire suppression performance benchmarks it is recommended that these performance benchmarks be monitored on an ongoing basis and reported to Council and the community though the SSMFS Annual Report.

Council Recommendation #7: That the proposed Fire Suppression Performance Benchmarks included within the Fire Master Plan be approved including:

I. *The Sault Ste. Marie Fire Services will strive to achieve a deployment of six firefighters arriving on scene within a 14 minute travel time to all structural fires within the defined rural area of the City;*
II. *The Sault Ste. Marie Fire Services will strive to achieve an initial deployment of four firefighters arriving on scene within a four minute travel time to all structural fires within the defined urban area of the City; and*

III. *The Sault Ste. Marie Fire Services will strive to achieve an initial depth of response deployment of 14 firefighters arriving on scene within an eight minute travel time to all structural fires occurring within identified moderate risk occupancies located in the defined urban area of the City.*

Operational Recommendation #39: That the SSMFS develop an ongoing process for tracking and reporting all proposed fire suppression performance benchmarks for inclusion within the Annual Report to Council.

14.5 Operations (Fire Suppression) Summary and Recommendations

The analysis of the historical and existing operations (fire suppression) capabilities of the SSMFS in comparison to the applicable fire suppression performance benchmarks indicates the presence of three tactical limitations. These tactical limitations were present prior to the *Fire Services Organizational Realignment* and remain within the existing fire suppression deployment model. These tactical limitations relate to the SSMFS initial response capabilities of assigning a minimum of 4 firefighters on all initial responding apparatus; deploying a minimum of 14 firefighters and 15 if an aerial device is

required to Group C - Residential occupancies (single-family dwelling) identified by the CRA as moderate risk; and the potential impacts of simultaneous emergency calls.

In addition to the identified tactical limitations the analysis presented within this FMP indicates that within the historical (pre-October 26th 2015) and existing (post October 26th 2015) fire suppression deployment model the SSMFS must rely on the call back of off duty firefighters to deploy the applicable fire suppression response deployment to a fire in both high risk and high-rise high risk occupancies. The information presented within this FMP highlights the significant financial impact that would be required to increase the number of firefighters on duty at all times to provide this level of service within are presented by the applicable performance benchmarks. As a result, this FMP recommends that the SSMFS optimize the use of the first two lines of defence including public education, and inspection/enforcement programs within these type of occupancies.

This FMP also recommends a number of strategies to minimize the current tactical limitations of the SSMFS including increasing the minimum number of firefighters on duty at all times, improving the call back process of off duty firefighters and in the absence of implementing an effective and reliable call back process consider implementing a composite fire department model.

The options presented to enhance the initial response capabilities of the SMFS include increasing the minimum number of firefighters on duty at all times from the existing 13 to 15 firefighters. These options also present an alternative three fire station model that is projected to enhance both the initial response and depth of response capabilities of the SSMFS, specifically for Group C- Residential occupancies that represent 95.4% of the occupied property stock within the City.

Our review of the Operation (fire suppression) activities and resources has identified the following Council and Operational recommendations for consideration:

Council Recommendations:

6. *That the Council of the City of Sault Ste. Marie approve the Fire Suppression Model – Option 3 included within the proposed Fire Master Plan as the preferred operating model for the SSMFS including a minimum of fifteen firefighters on duty at all times and the proposed three fire station location model.*
7. *That the proposed Fire Suppression Performance Benchmarks included within the Fire Master Plan be approved including:*

    IV. The Sault Ste. Marie Fire Services will strive to achieve a deployment of six firefighters arriving on scene within a 14 minute travel time to all structural fires within the defined rural area of the City;

V. *The Sault Ste. Marie Fire Services will strive to achieve an initial deployment of four firefighters arriving on scene within a four minute travel time to all structural fires within the defined urban area of the City; and*

VI. *The Sault Ste. Marie Fire Services will strive to achieve an initial depth of response deployment of 14 firefighters arriving on scene within an eight minute travel time to all structural fires occurring within identified moderate risk occupancies located in the defined urban area of the City.*

Operational Recommendations:

35. *That the SSMFS further investigate the existing emergency response capabilities of Mutual Aid and International Response Agreements to define within a department operating guideline the expected capability, capacity, reliability and compatibility of the participating agencies.*
36. *That the SSMFS prioritize the development and implementation of a revised call back process for off-duty firefighters including defined performance benchmarks and record management process, and that the revised call back process be monitored and evaluated to assess its efficiency and reliability as presented within the proposed FMP.*
37. *That in the absence of implementing an efficient and reliable call back process for full-time firefighters the SSMFS consider the implementation of a Composite Fire Department model as presented within the FMP.*
38. *That the SSMFS optimize the recognised "Three lines of Defence" fire protection model in prioritizing the delivery of public education, fire prevention and enforcement programs within occupancy types assigned as high risk and high-rise high risk within the Comprehensive Risk Assessment.*
39. *That the SSMFS develop an ongoing process for tracking and reporting all proposed fire suppression performance benchmarks for inclusion within the Annual Report to Council.*

15.0 Apparatus, Equipment, and Stations

The Assistant Chief Support Services is responsible for overseeing the purchasing, preventative maintenance and repairs, and replacement of all major apparatus and light vehicles, fire stations and all fire suppression small equipment.

The SSMFS has two qualified mechanics that report to a Mechanical Officer who is also a qualified mechanic. The Mechanical Officer reports directly to the Assistant Chief Support Services and is primarily responsible for overseeing all preventative maintenance and repairs on the SSMFS apparatus and equipment. All apparatus and equipment repairs are completed at the department's mechanical repair area located in the same building as Fire Station 4. Depending on the nature of required repairs the mechanics has access to outsourcing of major or specific repairs of fire suppression and rescue equipment to external qualified technicians.

15.1 Operating Procedures

The SSMFS has an extensive list of Standard Operating Procedures to ensure compliance with the *Ontario Highway Traffic Act (2015)* and *OHSA Section 21 Guidance Notes*. The department also utilizes the standards provided by the National Fire Protection Association (NFPA) to guide the repair, replacement and purchasing of major fire apparatus.

As indicated throughout this FMP maintaining applicable operating guidelines is a challenging task within the fire service and particularly within the SSMFS. The SSMFS has an extensive number of documents within this Division to guide compliance with the required legislation. However, in some instances these documents are not reviewed and updated regularly to reflect changes within the industry.

15.2 Training and Qualifications

The department's current mechanics are all licensed by Ontario Ministry of Colleges & Trades and have automotive truck licenses. The mechanics participate in ongoing training courses related to new diagnostics and electronic devices. On a rotational basis, they also attend seminars provided by Spartan Motors to maintain the department's service delivery accreditation.

This FMP highlights the importance of qualifications and certifications for all fire services personnel and has highlighted recent information from the province referencing proposed mandatory qualifications and certifications for the fire service. In our view the SSMFS should be preparing for this by implementing qualifications and certifications strategies for all personal including the mechanics. For mechanics this includes Emergency Vehicle Technician Certification (EVT).

Operational Recommendation#40: That the SSMFS consider adopting the Emergency Vehicle Technician Certification (EVT) for all Mechanical Division staff.

15.3 Types of Major Fire Apparatus

PFSG 04-07-12 *Types of Fire Apparatus and Equipment* was developed to provide communities with options to follow in determining the level of fire suppression and types of fire apparatus and equipment that should be available within the community. PFSG 04-07-12 provides the following information for consideration:

- *Demands on municipal resources force all communities to re-evaluate the level and nature of services they provide;*
- *Traditional approaches to the delivery of fire suppression with full-size triple combination pumpers may not necessarily be the most appropriate way to deliver this component of community fire safety, particularly in small communities with limited availability of firefighting personnel;*
- *The primary mission of all fire departments should be to ensure that the community is provided with an optimal level of fire protection in a cost effective and efficient manner. This optimal level may require a much greater emphasis on fire prevention and public education activities - with residents being responsible for protection within their own residences;*
- *New technology provide options;*
- *Must be appropriate to the fire suppression needs of the community;*
- *Dependent upon availability of human resources needs to work closely with neighbouring communities; and,*
- *Focus must still be on community fire safety initiatives.*

PFSG 04-07-12 refers to the NFPA 1901 *Standard for Automotive Fire Apparatus* (2009 Edition) as a reference for the standards that should be considered in determining the appropriate apparatus for a community. NFPA 1901 provides the following definitions of major fire apparatus:

Pumper/Engine: Fire apparatus with a permanently mounted fire pump of at least 750 gpm (3000L/min) capacity, water tank and hose body whose primary purpose is to combat structural and associated fires.

Initial Attack Apparatus: Fire apparatus with a fire pump of at least 250 gpm (1000L/min) capacity, water tank, and hose body whose primary purpose is to initiate a fire suppression attack on structural, vehicular, or vegetation fires and to support associated fire department operations.

Mobile Water Supply Apparatus (Tanker): A vehicle designed primarily for transporting (pick-up, transporting, and delivering) water to fire emergency scenes to be applied by other vehicles or pumping equipment.

Quint: Fire apparatus with a permanently mounted fire pump, a water tank, a hose storage area, an aerial ladder or elevating platform with a permanently mounted waterway, and a complement of ground ladders.

Special Services Fire Apparatus: A multipurpose vehicle that primarily provides support services at emergency scenes.

Rescue: A vehicle specifically designed for the purposes of transporting specialized rescue equipment such as vehicle extrication equipment, water/ice rescue equipment, hazardous materials equipment, and additional fire suppression support equipment such as additional self-contained breathing apparatus.

Rescue/Pumper: A vehicle that combines the traditional functions of a pumper and a rescue apparatus into one multi-functional apparatus.

Aerial Device: A vehicle equipped with an aerial device, elevating platform, or water tower that is designed and equipped to support firefighting and rescue operations by positioning personnel, handling materials, providing continuous egress, or discharging water at positions elevated from the ground.

15.4 Current Major Apparatus Fleet

Review conducted as part of this FMP indicates that the SSMFS places significant emphasis on the state of repair and condition of all apparatus and equipment. The SSMFS operates a major apparatus fleet that reflects a current, and modern firefighting fleet of major apparatus and equipment that reflects the size and types of major apparatus that would be expected based on the fire risks present. Annual Ministry of Transportation (MTO) safety inspections are completed on all vehicles that are rated as having a 3/4 ton or greater load capacity including the Emergency Medical fleet as required by the MTO.

The department has a preventative maintenance program for all major apparatus and small vehicles. On duty fire suppression staff (firefighters) conduct daily vehicle inspections as referenced in *Department Notice #0400-10 Check of Vehicle, Equipment and Sign-**Off** Sheets*, and report any deficiencies to the Mechanical Officer. Regular maintenance is completed based on the number of hours of operation for major apparatus and the percentage or remaining oil life for small vehicles. The department retains a third party to conduct required inspections such as non-destructive testing for aerial apparatus, air quality management, and self-contained breathing apparatus flow checks and fire extinguisher testing.

The current life cycle replacement planning for the SSMFS major apparatus fleet indicates 15 years for pumps, 20 years for aerials, and 25 years for the tanker. The condition of each major apparatus is then assessed in consideration of extending the life cycle as part of the department's reserve major apparatus plan. The current life cycle planning of major apparatus reflects that of industry best practices

and recognizes the potential costs of increasing mechanical repairs and dependency of older major apparatus.

Table 45 summarizes the current SSMFS major apparatus.

Table 45: Major Apparatus

Station	Apparatus #	Model Year	Vehicle Type	Assignment
1	Pump 1	2015	Smeal Rescue/Pumper	Front Line
	Aerial 1	2003	Smeal 100' Aerial Platform	Service Ready
	Rescue 1	1999	Freightliner Rescue Truck	Service Ready
	Tanker 1	1994	Ford 1600 Gallon Tanker	Service Ready
2	Rescue/Pump 2	2009	Smeal Rescue/Pumper	Front Line
3	Rescue/Pump 3	2010	Smeal Rescue/Pumper	Front Line
4	Aerial 4	2014	Smeal 75' Aerial	Front Line
	Pump 5	2000	Freightliner Pump (Reserve)	Service Ready

15.5 Major Apparatus Replacement Strategy

In addition to the NFPA standards, major apparatus replacement guidelines are provided to the fire service by the Fire Underwriters Survey™ (FUS), a national organization administered by SCM Risk Management Services Inc. (formerly CGI Insurance Business Services, formerly the Insurers' Advisory Organization and Canadian Underwriters Organization). For example, the FUS Dwelling Protection Grade 3B rating requires a minimum pump capacity of 3000 (LPM). FUS also requires fire apparatus to meet either the ULC-S515 - 04 or the NFPA 1901 *Standard for Firefighting Apparatus Construction, Equipment and Testing*. The following schedule is used as a guideline for apparatus replacement as part of the FUS survey process:

- *Major cities, 12 – 15 years, with an additional five years in reserve*
- *Medium size cities, 15 years, with additional five years as back up, and five years in reserve*
- *Small municipalities, 20 years, with an additional five years in reserve*

In our experience, the City of Sault Ste. Marie would be recognized as a major City in response to major apparatus replacement schedules including 12 to 15 years for front-line (primary use) life cycle with an additional five years (reserve) life cycle. It should be noted that FUS also requires additional annual testing and inspection for fire apparatus that are maintained in service for longer than 20 years. The City should be considering a 12 to 15 year replacement schedule for all major apparatus including the pump/rescues, rescue and aerials.

Operational Recommendation #41: That the SSMFS considers transitioning to the major apparatus replacement cycle presented within the Fire Master Plan.

15.6 Service Ready Major Apparatus

Maintaining reserve major apparatus through extending the planned replacement cycle provides the SSMFS with additional major apparatus capacity to conduct regular preventative maintenance or in the event of a major breakdown. Service ready apparatus provide the flexibility to replace front-line apparatus without reducing the operational capabilities of the department. They also provide the flexibility to staff additional major apparatus with off-duty firefighters in the event of a major incident.

Depending on the timing of the replacement cycle the number of major apparatus available for service ready status can vary. At the time of this review the SSMFS had four service ready major apparatus including Aerial 1, Rescue 1, Tanker 1 and Pump 4. The department should sustain the current complement of service ready major apparatus at all times.

Operational Recommendation #42: That the SSMFS sustain its current complement of service ready apparatus at all times.

15.7 Light Vehicles

The SSFMS operates a fleet of light vehicles to support the operational needs of the various Divisions including Administration, Prevention, Training and Operations. The vehicles are replaced on a 10-year life cycle that is consistent with the City's policies and procedures for replacing light vehicles. The current light vehicles are shown in Table 46.

Table 46: SSMFS Light Vehicles

Station	Unit #	Model Year	Vehicle Type
1	C-1	2012	GMC Acadia
	PC-1	2011	GMC Pick Up
	UT-1	2004	GMC Pick Up
	TR-1	2008	Hyundai Sante Fe
	EM-1	2017	Hyundai Tuscon
	HM-1	2017	Ford Pick Up
	FP-1	2014	Chevrolet Equinox
	FP-2	2008	Honda Civic
	FP-3	2008	Honda Civic
	FP-4	2008	Toyota Corolla

Station	Unit #	Model Year	Vehicle Type
	FP-5	2008	Honda Civic
	FP-6	2017	Ford Pick Up
4	C-2	2017	Kia Sorrento
	S-1	2009	Chevrolet Uplander
	S-2	2011	Ford Pick Up
	EOC -1	2008	Toyota Corolla

15.8 Equipment

This FMP included a high level assessment of the current fire suppression equipment used by the SSMFS including the following:

- *Self-Contained Breathing Apparatuses (SCBA)*
- *Personal Protective Clothing (PPE or Bunker Gear);*
- *Rescue Equipment; and,*
- *Hose and Nozzles.*

These items were visually assessed in relation to the current level of services provided by the SSMFS and our experience with regard to firefighting equipment best practices. Industry best practices recognize the importance of a life cycle replacement planning for all fire suppression equipment, and specifically the items that were visually assessed.

The department has practices in place to ensure the firefighters protective clothing (bunker gear) is clean as required and repaired if damaged. The OHSA Section 21 *Guidance Note #4-8 - Care, Maintenance, Inspection and Replacement of Structural Firefighting Personnel Protective Equipment* identifies the importance of life cycle replacement based on factors such as the amount of use, exposure and manufacturers recommendations. This review indicates that many of the bunker gear sets are beginning to show evidence of wear and reaching their life expectancy. Consultation with senior department staff indicates that the department is seeking to replace all of the bunker gear in 2018 and implement a five-year replacement cycle. Research supports this replacement plan strategy and suggests that consideration should be given to developing a cache of spare bunker gear for use when assigned gear is out of service for cleaning or repair.

Many of the current self-contained breathing apparatus (SCBA) utilized by the department have reached their life expectancy. The visual inspection indicates that the current SCBA are older models that are requiring a high degree of maintenance and repair. The current SCBA are also of a vintage that does not include many the technologies available to further ensure the life safety of firefighters including longer duration with higher pressure and visual readings. Our research indicates that the department is also

pursuing a replacement plan for all SCBA in 2018. This strategy is also supported and should be extended to include the system utilized to fill the air bottles for SCBA (air compressor and filling station).

The visual review of rescue equipment and the hose and firefighting nozzles utilized by the SSMFS indicated similar findings. The equipment is consistent with standard firefighting practices; however many pieces have, or are reaching their expected life cycle.

Operational Recommendation #43: That the SSMFS develop a life cycle replacement plan for all major equipment such as self-contained breathing apparatus and protective clothing including manufacturers recommended life cycles.

15.9 Emergency Medical Apparatus

In addition to the identified major apparatus and small vehicle utilized by the fire service personnel the SSMFS also oversees the purchasing, preventative maintenance and repair of all emergency medical vehicles. This includes 10 ambulances, 2 emergency response vehicles, 1 administrative vehicle and 1 emergency response trailer.

All emergency medical apparatus are maintained to the same quality of standards as the fire department apparatus. It should however be noted that the mechanics and Mechanical Officer are all members of the Sault Ste. Marie Professional Firefighters Association. The repair and maintenance of all emergency medical apparatus is part of the contracted services the City provides to the province. In the event the City was to discontinue this contract a review of the SSMFS mechanical division required resources would be recommended.

15.10 Fire Stations

Sault Ste. Marie Fire Services currently operates from four fire stations located within the urban area of the City. The sections that follow provide a description of the existing stations. All Sault Ste. Marie fire stations have back-up power generators and are equipped with Expert Live by CriSys and two stations include training rooms. Fire suppression staff utilize the Expert Live by CriSys to respond and identify emergency calls locations and available services such as hydrants. All stations are also equipped with essential components to a fire station which include dormitories, bays, kitchen and washrooms.

15.10.1 Fire Station #1 – 72 Tancred Street (Headquarters)

In addition to housing the assigned fire suppression apparatus and firefighters, Station #1 is also the Headquarters of the SSMFS. This includes housing the administrative and support services staff required for communications (dispatching), public areas (issuing burn permits), public education and fire prevention and administration.



Administrative office spaces are assigned for the Fire Chef, Deputy Fire Chiefs, Deputy Chief of EMS, EMS Administrator and four prevention cubicles. There is limited storage space for records retention public education and fire prevention materials and general office storage. There is limited space to accommodate staff/public meetings and matters of any confidential interest.

This station includes five apparatus bays, four of which are drive-thru bays. All apparatus bays and assigned apparatus are equipped with vehicle diesel exhaust extraction devices. The importance of reducing exposure to diesel exhaust is referenced in *OHSA Section 21 Guidance Note #3-1*. The station is equipped with male and female washrooms and showers, a large day room, training room, kitchen, dormitory and small gymnasium. Firefighters bunker gear is stored in a separate room when not being utilized by on duty firefighters. The importance of proper storage of firefighters bunker gear is referenced in *OHSA Section 21 Guidance Note #4-8.*

This review has identified that this building is currently not compliant with the *Accessibility for Ontarians with Disabilities Act*, 2005, S.O. 2005, c.11 (AODA).

15.10.2 Fire Station #2 – 363 Second Line West



Fire Station #2 includes two apparatus bays that are not drive through. As a result, fire suppression apparatus must be backed into the building. All apparatus bays and assigned apparatus are equipped with vehicle diesel exhaust extraction devices.

The administrative/living area for fire suppression staff includes one office for the Captain on duty, male and female washrooms and showers, kitchen, day room, dormitory and a small exercise room. Firefighters bunker gear is stored on racks in the apparatus room when not being utilized by on duty firefighters. As a result bunker gear can be exposed to elevated temperatures (i.e. from the sun).

15.10.3 Fire Station #3 – 100 Bennett Blvd.



Fire Station #3 was designed and constructed as a twin to Fire Station #2. The station includes two apparatus bays that are not drive through. As a result, fire suppression apparatus must be backed into the building. All apparatus bays and assigned apparatus are equipped with vehicle diesel exhaust extraction devices.

The administrative/living area for fire suppression staff includes one office for the Captain on duty, male and female washrooms and showers, kitchen, day room, dormitory and a small exercise room. Firefighters bunker gear is stored on racks in the apparatus room when not being utilized by on duty firefighters. As a result bunker gear can be exposed to elevated temperatures (i.e. from the sun).

15.10.4 Fire Station #4 - 65 Old Garden River Road (RESC)



In addition to housing the assigned fire suppression staff this station/building also houses the Emergency Medical Care Division, Emergency Management staff and the Mechanical Division.

The fire suppression area includes one apparatus bay that does not have drive through capabilities. As a result, fire suppression apparatus must be backed into the building. The apparatus bay is equipped with vehicle diesel exhaust extraction devices.

The administrative/living area for fire suppression staff includes one office for the Captain on duty, male and female washrooms and showers, kitchen, day room, dormitory and a small exercise room. Firefighters bunker gear is stored on racks in the apparatus area when not being utilized by on duty firefighters. As a result bunker gear can be exposed to elevated temperatures (i.e. from the sun).

15.11 Apparatus, Equipment and Fire Station Summary and Recommendations

Review of the apparatus, equipment and stations of the SSMFS indicates that the department places a high degree of importance on preventative maintenance, life cycle planning, and research into the most efficient and effective solutions to the department's needs in these areas.

Our review of the major apparatus and equipment used by the SSMFS reflects that of a well-equipped and maintained fire department. The recommendations of this FMP support continuing this commitment to strategies that sustain this high degree of commitment to these areas.

The Apparatus, Equipment and Fire Stations review has identified the following Operational recommendations for consideration:

Operational Recommendations:

40. *That the SSMFS consider adopting the Emergency Vehicle Technician Certification (EVT) for all Mechanical Division staff.*
41. *That the SSMFS considers transitioning to the major apparatus replacement cycle presented within the Fire Master Plan.*
42. *That the SSMFS sustain its current complement of service ready apparatus at all times.*
43. *That the SSMFS develop a life cycle replacement plan for all major equipment such as self-contained breathing apparatus and protective clothing including manufacturers recommended life cycles.*

16.0 Communications Centre (Dispatch)

The Assistant Chief of Support Services is responsible for overseeing the operations of the communications centre. This facility is located in Station # 1 at 72 Tancred Street. In addition to providing emergency call taking and dispatching for the SSMFS, the communications centre also provides emergency call taking and alerting of the Prince Township Fire Department.

16.1 Communications Centre Staffing

The SSMFS utilizes a historical strategy of assigning the most junior firefighters to operate the communications centre. When a new recruit firefighter is hired by the SSMFS they are initially assigned to the communications centre for a period of approximately two weeks. During this period each recruit is trained by the on-duty dispatcher (dispatcher/firefighter) in the roles and responsibilities of a dispatcher. Once this training is completed each recruit is the subject to a process of testing to ensure they have a thorough knowledge of the use of the CrySis Computer Aided Dispatch system and telephone system. They are then assigned to a platoon as the on-duty dispatcher/firefighter. On each of the four fire suppression platoons, the most junior firefighter is assigned the role of dispatcher/firefighter and assigned to the communications centre.

16.2 Communications Centre Performance Benchmarks

The applicable performance benchmarks for emergency call taking (alarm answering) and fire dispatching (alarm processing) for the SSMFS are identified in Section 10.3 of this FMP. This FMP assesses these functions in comparison to *"NFPA 1221* [22]*– Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems".* This includes the performance benchmarks to complete 90% of emergency alarm processing within 64 seconds, and 95% of all alarm processing within 106 seconds.

The analysis with Section 10.3 indicates that the communications centre is slightly exceeding the NFPA benchmark of 64 seconds for the 90% benchmark, and over the past three years has been achieving the 106 seconds benchmark for the 95% benchmark. This indicates that there is high degree of competency exhibited in the current emergency call taking and fire dispatching process.

[22] NFPA 1221 2016 Edition was referenced within this report

16.3 Training and Qualifications

The applicable requirements for a communications centre operator (fire dispatcher) are contained within *the NFPA 1061 - Standard for Professional Qualifications for Public Safety Telecommunications Personnel*. Current industry best practices reflects that at a minimum a communications centre operator (fire dispatcher) should be trained and qualified to "Level I" of this standard.

The importance of training and qualifications for a communications centre operator (fire dispatcher) was highlighted in a recent communication from the *Ministry of Community Safety and Correctional Services (MCSCS)* that requested *"Public consultation on proposed regulations for mandatory training and certification and conducting community risk assessments".* The current direction of the province is to revise the FFPA to require mandatory training and certification for fire dispatchers to be implemented by January 1st 2019.

The proposed mandatory training and certification for fire dispatchers, or anyone conducting these functions such as another on duty firefighter will present a significant challenge to the current communications centre staffing practice of the SSMFS.

16.4 Radio System

The SSMFS utilizes a Motorola Duplex VHF radio system for all emergency radio communications within the department and contact with the Prince Township Fire Department. The current radio system includes a base station, repeater and communications tower (aerial) located at Station #4, mobile radios located on each major fire apparatus and supporting smaller vehicles as required. Portable radios are also assigned to specific apparatus. Communications towers (aerials) are located on all three of the other fire stations.

The current radio system has the capability to accommodate a range of frequencies to enhance the tactical capabilities of the department and communication with other emergency services. The capability also includes "repeater" use and "talk around" functions that support strengthen the radio signal in situations such as a high-rise building when radio communications may be interrupted by the structure of the building. The department is seeking to enhance the use of the repeater function by installing a mobile repeater on the Platoon Chief's vehicle. This is a recognized strategy within the industry to improve radio coverage and should be considered a priority for the SSMFS.

The current radio system is reaching its life expectancy and should be considered for replacement in the near future. To inform the timing of the replacement and the infrastructure requirements it is recommended that the City commission a comprehensive review of the SSMFS radio communications needs.

Council Recommendation #8: That the City of Sault Ste. Marie conduct a comprehensive review of the radio system infrastructure replacement requirements of the SSMFS.

16.5 Computer Aided Dispatch System

The SSMFS utilizes the CriSys – Expert System computer aided dispatch (CAD) system initially installed in 1998. This system is predominantly utilized to inform the deployment of all responding fire apparatus to emergency incidents. The system provides the ability to locate and address within the City and assign a predetermined emergency response as informed by information submitted by the dispatcher.

The CrySis system also acts as the department's records management system for all emergency response reporting. The system does provide some other records management capabilities for the department but currently these are limited due to integration capabilities with other software solutions. The CrySis system is updated regularly including having a 3-year hardware replacement contract in place with the supplier including 24 hour repair service.

16.6 Telephone System

The SSMFS utilizes a Nortel BCM series telephone system that has exceeded its life expectancy. Bell Canada has informed the department that this equipment is no longer supported and if repairs are required they would depend on the availability of parts and billed on an hourly rate. Our understanding is that the City is currently reviewing the replacement of the corporate telephone system and that the SSMFS telephone system is included within this review.

Operational Recommendation #44: That the City of Sault Ste. Marie prioritizes the replacement of the SSMFS telephone system.

16.7 Prince Township Dispatch Agreement

The City of Sault Ste. Marie and the Corporation of the Township of Prince are parties to an agreement whereby the SSMFS provide emergency call taking (alarm answering) and fire dispatching (alarm processing) to alert the Prince Township Fire Department (PTFD). Once the PTFD is alerted they assume responsibility for the emergency incident radio communications and record keeping. This is a common type of agreement between a larger municipality and smaller community to provide a specific service on a cost recovery basis.

16.8 Communications Centre Summary and Recommendations

Review of the current communications staffing model and infrastructure including the radio system, CAD and telephone system has identified some significant impending challenges for the SSMFS. Our understanding is that the renewal/replacement of the current telephone system is included within a corporate replacement strategy and as such not specific to the operation of the communications centre.

However, two impending items including the proposed mandatory requirements for training and certification of all fire dispatchers, and replacement of the radio system including the communications centre base station will present significant financial and operational challenges to sustaining the current operating model.

Based on these findings it is recommended that the City of Sault Ste. Marie conduct a comprehensive review of the costs associated with sustaining the current communications centre operating model in comparison to contracting these services from another agency. This review should be considered as a priority for the City recognizing the potential requirements for mandatory certification of all fire dispatchers as of January 1st 2019.

Council Recommendation #9: That the City of Sault Ste. Marie conduct a comprehensive review of the costs associated with sustaining the current communications centre operating model in comparison to contracting these services from another agency.

Our review of the Communications Centre (Dispatch) has identified the following Council and Operational recommendations for consideration:

Council Recommendation:

8. *That the City of Sault Ste. Marie conduct a comprehensive review of the radio system infrastructure replacement requirements of the SSMFS.*
9. *That the City of Sault Ste. Marie conduct a comprehensive review of the costs associated with sustaining the current communications centre operating model in comparison to contracting these services from another agency.*

Operational Recommendation:

44. *That the City of Sault Ste. Marie prioritize the replacement of the SSMFS telephone system.*

17.0 Implementation Schedule

This implementation schedule outlines how each of the 2017 RFPS recommendations are addressed within this FMP in addition to a high-level implementation schedule for identified Council Recommendations, and Operational Recommendations.

17.1 2017 RFPS Implementation

The 2017 RFPS included a recommendation to develop an implementation schedule for the OFMEM recommendations including:

2017 RFPS Recommendation #18: The Municipal Council of the City of Sault Ste. Marie develop an implementation schedule for the OFMEM recommendations contained in this report.

Table 47 summarizes the recommendations of the 2017 RFPS conducted by the OFMEM and how each one will be addressed by this Fire Master Plan.

Table 47: 2017 RFPS Implementation Schedule

OFMEM Recommendation	Recommendation	Schedule
1	*The Municipal Council of the City of Sault Ste. Marie should ensure that a comprehensive municipal fire risk assessment is completed. Subsequent to the review, the OFMEM has been advised that the Municipal Council of the City of sault Ste. Mari is conducting a comprehensive municipal fire risk assessment. Therefore, it is anticipated that the compressive risk assessment is completed and the findings applied to further enhance the understanding and advance the decision-making process related to the management of municipal fire risks and associated resources.*	Complete, subject to presentation of CRA and FMP to Council.
2	*The Municipal Council of the City of Sault Ste. Marie should ensure that an evaluation of the capabilities and limitations associated with fire suppression and fireground tactics is conducted, and with reference to the findings from a comprehensive municipal fire risk assessment.*	Complete, subject to presentation of the FMP to Council.
3	*The Municipal Council of the City of Sault Ste. Marie should ensure that service levels for fire protection services are clearly described, documented, implemented and monitored on a regular basis.*	FMP Recommendation #7
4	*The Municipal Council of the City of Sault Ste. Marie should ensure that the SSMFS call back system for additional staff required during an emergency is assessed to determine if there are opportunities to improve the efficiency and reliability of the system, and implement changes as required.*	FMP Recommendation #36
5	*The Municipal Council of the City of Sault Ste. Marie should ensure that the Establishing and Regulating By-law is kept current by reviewing and updating as necessary.*	FMP Recommendation #7

OFMEM Recommendation	Recommendation	Schedule
6	*The Municipal Council of the City of Sault Ste. Marie should review all fire related by-laws to ensure accuracy, are approved, and that they remain in effect.*	FMP Recommendation #8
7	*The Municipal Council of the City of Sault Ste. Marie should consider having in place documents that set out the current reporting relationships, duties, roles and responsibilities for all positions within the SSMFS.*	FMP Recommendation #1,3 & 5
8	*The Municipal Council of the City of Sault Ste. Marie should consider an assessment of the capability, capacity, reliability and compatibility of resources that may be requested through provincial mutual aid system, through local or regional organizations of through international agreements.* *Through assessment consideration should be given to the need for the development and implementation of policies and operating guidelines designed to guide decisions and determine a course of action depending on the needs and circumstances.*	FMP Recommendation #35
9	*The Municipal Council of the City of Sault Ste. Marie should ensure the consolidation of notices, operating guidelines, applicable memorandums and similar type documents into one set of guidelines for the SSMFS.*	FMP Recommendation #10
10	*The Municipal Council of the City of Sault Ste. Marie should ensure the development of a fire prevention policy that describes the components of the public fire safety education efforts for identified risks.*	FMP Recommendation #15
11	*The Municipal Council of the City of Sault Ste. Marie is encouraged to maintain and enhance an already good program be developing a comprehensive program that includes the smoke alarm program, home escape planning and carbon monoxide alarm program, in addition to goals, objectives, performance measurers as well as evaluation and assessment processes.*	FMP Recommendation #17
12	*The Municipal Council of the City of Sault Ste. Marie should consider the development and implementation of operating guidelines for the SSMFS that address:* *1. Internal communications processes and the management of occurrences of multiple false alarms at the same address.* *2. Assessment and determination of the need for conducting a fire safety inspection when a complaint or a request is received.*	FMP Recommendation #22
13	*The Municipal Council of the City of Sault Ste. Marie must ensure SSMFS Fire Prevention Officers take the training necessary to approve Fire safety Plans (FSP) for Vulnerable Occupancies (VO), if they are to continue to do so. Any VO FSP's approved post December 31, 2016 in the absence of the required training need to be reviewed and approved by personnel that have the required training.*	Complete subject to presentation of the FMP to Council.
14	*The Municipal Council of the City of Sault Ste. Marie should ensure the development of an operating guideline for pre-incident planning and include the enhancement opportunities noted above, that will further strengthen the program.*	FMP Recommendation #16
15	*The Municipal Council of the City of Sault Ste. Marie should ensure that a review of the SSMFS Respiratory Protection Program is conducted, ensuring that it is current and the workplace practices meet the requirements of the program.*	FMP Recommendation #33
16	*The Municipal Council of the City of Sault Ste. Marie should continue the planning process for the SMFS and work towards completing the requirements for the development of a consolidated strategic plan and supporting operational plans for the SSMFS.*	Complete subject to presentation of the FMP to Council.
17	*The Municipal Council of the City of Sault Ste. Marie should ensure that core services and levels of service for fire protection services provided by the SSMFS are developed, approved and implemented.*	FMP Recommendation #7

OFMEM Recommendation	Recommendation	Schedule
18	*The Municipal Council of the City of Sault Ste. Marie develop an implementation schedule for the OFMEM recommendations contained in this report.*	Complete subject to presentation of the FMP to Council.

17.2 Council Recommendations

Table 48 summarizes the recommendations of the FMP identified as *Council Recommendations*. These include recommendations that require the consideration and approval of Council related to a potential operating or capital financing impact or to inform a municipal policy decision including setting a municipal service level or where further direction to corporate staff may be needed. The proposed implementation schedule includes a range of timelines including *immediate term* (0 to 12 months) *short-term* (12 to 24 months) and *mid-term* (24 to 48 months).

Table 48: FMP Council Recommendations

FMP Council Recommendation No.	2017 RFPS Recommendation No.	Recommendation	Schedule
1	N/A	*That that the strategic priorities identified within the proposed Fire Service Master Plan be adopted to form the strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie including:* *i. The utilization of a Comprehensive Risk Assessment in determining the level of existing fire safety risks within the municipality as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services;* *ii. The optimization of the first two lines of defence, including public education and fire prevention, and the utilization of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Comprehensive Risk Assessment; and,* *iii. Emphasis on strategies that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services resulting in the best value for the community.*	Immediate Term

FMP Council Recommendation No.	2017 RFPS Recommendation No.	Recommendation	Schedule
2	17	*That the proposed public fire safety education activities and program cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.*	Immediate Term
3	17	*That the proposed fire inspection cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.*	Immediate Term
4	N/A	*That the proposed Fire Prevention and Public Education staff resource plan presented within the proposed FMP be considered for implementation.*	Short-term
5	N/A	*That Council consider a reorganization of the Emergency Management staff resources and functions as referenced within the FMP.*	Short-term
6	N/A	*That the Council of the City of Sault Ste. Marie approve the Fire Suppression Model – Option 3 included within the proposed Fire Master Plan as the preferred operating model for the SSMFS including a minimum of fifteen firefighters on duty at all times and the proposed three fire station location model.*	Mid-term
7	17	*That the proposed Fire Suppression Performance Benchmarks included within the Fire Master Plan be approved including:* *I. The Sault Ste. Marie Fire Services will strive to achieve a deployment of six firefighters arriving on scene within a 14 minute travel time to all structural fires within the defined rural area of the City;* *II. The Sault Ste. Marie Fire Services will strive to achieve an initial deployment of four firefighters arriving on scene within a four minute travel time to all structural fires within the defined urban area of the City; and* *III. The Sault Ste. Marie Fire Services will strive to achieve an initial depth of response deployment of 14 firefighters arriving on scene within an eight minute travel time to all structural fires occurring within identified moderate risk occupancies located in the defined urban area of the City.*	Immediate Term
8	N/A	*That the City of Sault Ste. Marie conduct a comprehensive review of the radio system infrastructure replacement requirements of the SSMFS.*	Immediate Term
9	N/A	*That the City of Sault Ste. Marie conduct a comprehensive review of the costs associated with sustaining the current communications centre operating model in comparison to contracting these services from another agency.*	Immediate Term

17.3 Operational Recommendations

Table 49 summarizes the recommendations of the FMP identified as *Operational Recommendations.* These include recommendations that can be administered and implemented within the current authority assigned to the Fire Chief. In some cases this may require the Fire Chief to prepare further documentation and internal reporting to Council for approval. An example of this is updating the current Establishing and Regulating By-law. This is a process that can be led by the Fire Chief, and senior corporate staff and through normal reporting be brought to Council for consideration and approval. The proposed implementation schedule includes a range of timelines including *immediate term* (0 to 12 months) *short-term* (12 to 24 months) and *mid-term* (24 to 48 months).

Table 49: FMP Operational Recommendations

FMP Operational Recommendation No.	2017 RFPS Recommendation No.	Recommendation	Schedule
1	7	*That the current job description for the Fire Chief be reviewed and updated as referenced in the proposed Fire Master Plan.*	Immediate Term
2	N/A	*That an appointment by-law for the current Deputy Chief Fire Operations, Training and Logistics be developed and presented to Council for consideration and approval.*	Immediate Term
3	7	*That the current job description for the Deputy Chief Fire Operations, Training and Logistics be reviewed and updated as referenced in the proposed Fire Master Plan.*	Immediate Term
4	N/A	*That an appointment by-law for the current Deputy Chief- Education/Prevention and Emergency Management be developed and presented to Council for consideration and approval.*	Immediate Term
5	7	*That the current job description for the Deputy Chief – Education/Prevention and Emergency Management be reviewed and updated as referenced in the proposed Fire Master Plan.*	Immediate Term
6	N/A	*That consideration be given to improving the administrative work space as identified within the proposed Fire Master Plan.*	Mid-Term
7	3, 5, 17	*That subject to Council's consideration and approval of the proposed Fire Master Plan that the Establishing and Regulating By-law be updated and presented to Council for approval.*	Immediate Term
8	N/A	*That the Fire Chief be directed to implement a regular process for the review of all applicable fire protection services by-laws.*	Immediate Term
9	6	*That the Fire Chief be directed to review the current user Fee and Service Charge By-law #2016-180 and provide additional information for Councils consideration to expand the scope of services included.*	Immediate Term
10	9	*That the SSMFS implement the framework for the utilization of department policies, operating guidelines and department memorandums referenced within the proposed Fire Master Plan.*	Immediate Term
11	N/A	*That the SSMFS implement the proposed Operating Guideline Committee referenced within the proposed Fire Master Plan.*	Short-Term
12	N/A	*That By-law #90-90 - To Establish the Retention Period of Documents and Records of the Corporation be reviewed and updated including revisions to Schedule 20 regarding the SSMFS.*	Immediate Term
13	N/A	*That the SSMFS continue to present an Annual Report to Council and the community including the findings of an annual review of the Comprehensive Risk Assessment.*	Short-Term
14	N/A	*That the SSMFS replace the current Simplified Risk Assessment with the framework of the comprehensive risk analyses model.*	Short-Term
15	10	*That the draft Fire Prevention Policy be updated and presented to Council for consideration and inclusion within the proposed Establishing and Regulating By-law as an appendix.*	Immediate Term
16	14	*That department Notice #300-01 – Pre-Fire Plans be replaced with a comprehensive operating guideline informed by the findings of the Fire Master Plan and Comprehensive Risk Assessment*	Immediate Term

FMP Operational Recommendation No.	2017 RFPS Recommendation No.	Recommendation	Schedule
17	11	*That an Operating Guideline be developed for the SSMFS home smoke alarm, carbon monoxide alarm and home escape planning program, and that this program be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.*	Immediate Term
18	N/A	*That the SSMFS develop an operating guideline to define the process of tracking all public fire safety information distributed to the public in response to legislative requirements of the FPPA and for inclusion within the Annual Report.*	Immediate Term
19	N/A	*That the SSMFS continue to prioritize the delivery of seniors (aged 65 and over) public education programs as referenced within the proposed Fire Master Plan.*	Short-Term
20	N/A	*That the proposed public fire safety education activities and program cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.*	Immediate Term
21	N/A	*That the SSMFS develop a consolidated Operating Guideline containing the goals and objectives for all services related to vulnerable occupancies within the City.*	Short-Term
22	N/A	*That the SSMFS develop a comprehensive strategy for managing false alarm calls that includes additional public education, enhanced routine fire inspections and the implementation of user fees as referenced within the proposed FMP, and further that cost recovery be included in the Establishing and Regulating By-law.*	Short-Term
23	12	*That the SSMFS develop a department Operating Guideline for responding to requests and complaints as referenced within the proposed FMP.*	Immediate Term
24	N/A	*That consideration be given to updating the City's flood plain mapping as part of the next Hazard Identification and Risk Assessment (HIRA) review process.*	Mid-Term
25	N/A	*That the SSMFS consolidate the current firefighter training initiatives into one Comprehensive Training Program including performance goals and objectives to be defined within a consolidated Operating Guideline.*	Immediate Term
26	N/A	*That the SSMFS complete additional research and consultation with external organizations to identify options for the delivery of water-related technical rescues as referenced within the FMP.*	Short-Term
27	N/A	*That the SSMFS conduct a review of the current Tiered Response Agreement for medical calls to ascertain if any revisions can be made to reduce the response of fire suppression staff.*	Short-Term
28	N/A	*That the SSMFS develop one comprehensive operating guideline for responses to the Sault Ste. Marie Airport.*	Immediate Term
29	N/A	*That the SSMFS develop a Business Plan for Council's consideration in developing a Training Centre including the capability of "live fire" training as presented within the FMP.*	Short-Term
30	N/A	*That the SSMFS further develop the current Company Officer training initiatives into a comprehensive Officer Development Program.*	Short-Term
31	N/A	*That the SSMFS consider adoption of the Blue Card Incident Command Training program to enhance its current Incident Command training program.*	Short-Term
32	N/A	*That the SSMFS consider developing a defined succession plan to guide the career development of all members of the SSMFS.*	Short-Term
33	15	*That the SSMFS review and update the Respiratory Protection Program in a comprehensive operating guideline.*	Immediate Term

FMP Operational Recommendation No.	2017 RFPS Recommendation No.	Recommendation	Schedule
34	N/A	*That the SSMFS consider developing a Training Development Committee as identified within the proposed FMP.*	Immediate Term
35	8	*That the SSMFS further investigate the existing emergency response capabilities of Mutual Aid and International Response Agreements to define within a department operating guideline the expected capability, capacity, reliability and compatibility of the participating agencies.*	Immediate Term
36	4	*That the SSMFS prioritize the development and implementation of a revised call back process for off-duty firefighters including defined performance benchmarks and record management process, and that the revised call back process be monitored and evaluated to assess its efficiency and reliability as presented within the proposed FMP.*	Immediate Term
37	N/A	*That in the absence of implementing an efficient and reliable call back process for full-time firefighters the SSMFS consider the implementation of a Composite Fire Department model as presented within the FMP.*	Mid-term
38	N/A	*That the SSMFS optimize the recognised "Three lines of Defence" fire protection model in prioritizing the delivery of public education, fire prevention and enforcement programs within occupancy types assigned as high risk and high-rise high risk within the Comprehensive Risk Assessment.*	Immediate Term
39	N/A	*That the SSMFS develop an ongoing process for tracking and reporting all proposed fire suppression performance benchmarks for inclusion within the Annual Report to Council.*	Short-Term
40	N/A	*That the SSMFS consider adopting the Emergency Vehicle Technician Certification (EVT) for all Mechanical Division staff.*	Short-Term
41	N/A	*That the SSMFS considers transitioning to the major apparatus replacement cycle presented within the Fire Master Plan.*	Mid-term
42	N/A	*That the SSMFS sustain its current complement of service ready apparatus at all times.*	Immediate Term
43	N/A	*That the SSMFS develop a life cycle replacement plan for all major equipment such as self-contained breathing apparatus and protective clothing including manufacturers recommended life cycles.*	Short-Term
44	N/A	*That the City of Sault Ste. Marie prioritize the replacement of the SSMFS telephone system.*	Immediate Term

Appendix A

Public Fire Safety Guidelines

Public Fire Safety Guidelines

Throughout the FMP, several Public Fire Safety Guidelines are referenced to support the analysis, strategic direction, recommendations, and options presented. This appendix contains the PFSGs referenced which are found on the OFMEM website. The PFSGs as provided in this appendix are shown in the table below.

Public Fire Safety Guidelines in this Appendix	
PFSG 00-00-01	Framework for Setting Guidelines within a Provincial-Municipal Relationship
PFSG 01-01-01	Fire Protection Review Process
PFSG 01-02-01	Comprehensive Fire Safety Effectiveness Model
PFSG 01-03-12	Sample Establishing and Regulating By-law
PFSG 03-02-13	Master Planning Process for Fire Protection
PFSG 04-05-12	Mutual Aid
PFSG 04-07-12	Types of Apparatus and Equipment
PFSG 04-08-10	Operational Planning: An Official Guide to Matching Resource Deployment and Risk
PFSG 04-40-03	Selection of Appropriate Fire Prevention Programs
PFSG 04-40A-03	Simplified Risk Assessment
PFSG 04-40A-12	Simplified Risk Assessment
PFSG 04-40B-03	Smoke Alarm
PFSG 04-40B-12	Smoke Alarm Program and Home Escape Planning
PFSG 04-40C-03	Distribution of Public Fire Safety Education Materials
PFSG 04-40D-03	Inspections Upon Request of Complaint
PFSG 04-40D-12	Inspections Upon Request or Complaint (Fire Code)
PFSG 04-45-12	Fire Prevention Policy
PFSG 04-60-12	Records Management
PFSG 04-69-13	Co-ordination, Development, Approval, and Distribution of Standard Operating Guidelines for Various Disciplines

Framework For Setting Guidelines Within A Provincial-Municipal Relationship

Public Fire Safety Guidelines	**Subject Coding** **PFSG 00-00-01**
Section **General**	Date **January 1998**
Framework For Setting Guidelines Within A Provincial-Municipal Relationship	Page

Under Review

Purpose

To assist municipalities in making informed choices for providing public fire protection through objective and innovative approaches. Guidelines will be developed for municipal councilors and senior officials as well as municipal fire departments.

Background

The Fire Protection and Prevention Act places new responsibilities on municipalities. The Office of the Fire Marshal has a mandate to assist municipalities to fulfill these responsibilities by providing information which will enable municipalities to make informed choices based on an objective analysis. Municipalities are compelled to establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention. The act also states that municipalities are responsible for arranging such other fire protection services as they determine may be necessary according to their own needs and circumstances. The relationship between the province and municipalities is based on the principle that municipalities are responsible for arranging fire protection services according to their own needs and circumstances. The primary roles of the province are to provide leadership and support to municipalities in the exercise of this responsibility, and to ensure public safety is not compromised. Guidelines, developed by the Office of the Fire Marshal in consultation with municipalities, the fire service and others, will be a key vehicle for fulfilling the provincial role to support municipalities. This consultation process will continue on an ongoing basis to ensure the guidelines change and evolve to reflect trends, changing circumstances and new technology. To be useful, the guidelines must remain current, and must have the support and acceptance of municipalities. The province will retain an interest in the development of guidelines and monitoring of their application. However, day-to-day management and delivery will be municipal responsibilities.

Principles

The key principles which will be used to develop the guidelines are as follows:

- Municipal councils are directly accountable to their constituents and municipalities are also accountable to the province.
- There will be opportunities for appropriate stakeholder involvement and consultation during the development stages.

- Local needs and circumstances vary widely across the province. Therefore, the measures required to address these needs and conditions will also vary.
- There are many ways in which individual needs and circumstances can be addressed. Therefore, municipalities require flexibility to employ different strategies to achieve similar objectives.
- Local council, in consultation with the fire chief, will determine the extent to which their needs and circumstances will be addressed. Some may choose to address specific risks more comprehensively than others. Provided serious threats to public safety are addressed, this is a reasonable and legitimate exercise of municipal responsibility.

Content and Implementation

The guidelines will provide:

- The key concepts of risk assessment and risk management
- The factors that affect the level of fire protection in any community
- The options municipalities may wish pursue in addressing risks
- The information required to evaluate those options

Municipalities will be able to use the guidelines in a variety of ways:

- They can assign knowledgeable local officials to gather the necessary data and conduct appropriate cost/benefit analysis internally.
- They can commission independent reviews of their fire protection activities and use the guidelines to monitor the consultant's activities and evaluate its conclusions.
- Staff of the OFM will continue to be available to assist municipalities in the use of the guidelines.

In addition, the OFM will be re-focusing its training and education services to provide municipal and fire department officials with the skills needed to utilize the guidelines effectively.

Basis of Development

The guidelines will be based on the Comprehensive Fire Protection Effectiveness Model. Fire protection in any community is determined by:

1. The risk of a fire occurring
2. The impact a fire may have on the community
3. Public attitude toward fire
4. The effectiveness of its fire prevention activities
5. The deployment of automatic fire detection systems
6. The deployment of automatic fire suppression systems
7. The effectiveness of its fire department's suppression activities
8. The time period between when the fire starts and when the fire department begins suppression activity

The level of fire protection in a given community will reflect an appropriate balance of all of these factors. Changes in any one factor will affect the overall level of protection.

For example, if the general public is complacent about the risk of fire, there will be a greater risk of a fire occurring in the community. A municipality may choose to address the risk by enhancing its fire suppression capability, by deploying more automatic detection and suppression systems, or a combination of any or all of the other factors affecting fire protection. It may also choose to address the issue head on - by raising awareness of public fire safety through effective public education. In short, there are many valid ways of addressing a problem of poor public attitude

toward fire. The guidelines will not make value judgments on which course of action is the best, but they will help municipalities evaluate the efficiency and effectiveness of each option, and choose a course of action that suits its needs.

The guidelines will also serve as a tool for improving the overall efficiency and effectiveness of a municipality's fire protection system. If a municipality is generally satisfied with the overall level of protection it provides, the model can help it improve efficiency by demonstrating that there are alternatives which may cost less, while achieving a similar level of protection. For example, it may find that through effective public education, it can reduce the number of fire code violations that persist throughout the community. This may lead to a reduction in the cost of inspecting properties and prosecuting offenders.

The guidelines will also help municipalities to make adjustments to existing services to improve effectiveness and reduce costs. By thoroughly analyzing costs and benefits, municipalities can initiate new work assignments with confidence. For example, fire departments with full-time fire suppression staff can reduce the workload of the fire prevention division by conducting in-service fire safety inspections. Without objective tools for analyzing such innovations, those opposed can prevent change by appealing to public fears and misapprehensions.

The guidelines will also facilitate fire department reorganization and restructuring on a much broader scale. Many smaller municipalities focus almost exclusively on fire suppression. This is often based on limited availability of volunteers' time to carry out prevention activities. The guidelines will help municipalities to see areas where resources can be shared and services can be provided over broader geographic areas. Inter-municipal co-operation will ensure that effective fire prevention and public education are both viable and affordable.

Collectively, these measures can improve public fire safety while, at the same time, stabilizing or reducing costs.

The guidelines are designed to provide municipalities with a new way of thinking about public fire protection. It will encourage them to consider all aspects of fire safety and not just fire stations, fire trucks and firefighters. Each guideline will assist municipalities to apply the Comprehensive Model by expanding further on each concept, outlining decision-points and indicating the information they will require to analyze their options.

Municipalities will have the means to make objective choices about public fire protection, and implement significant changes with confidence.

Overall Strategy

The guidelines represent one component of the strategy the Ministry is proposing for public fire protection in Ontario. This strategy includes:

- Clarifying municipal responsibility for local fire protection, while protecting the provincial interest in public fire safety.
- Removing remaining legislative barriers which forestall the restructuring and reorganization of municipal fire services.
- Facilitating a shift in focus which places priority on fire prevention and public education as opposed to fire suppression.
- Providing municipalities with decision-making tools to help them provide services according to their own needs and circumstances.

- Facilitating more active involvement of the private sector and other community groups in fire prevention and public education through the Fire Marshals Public Safety Council.

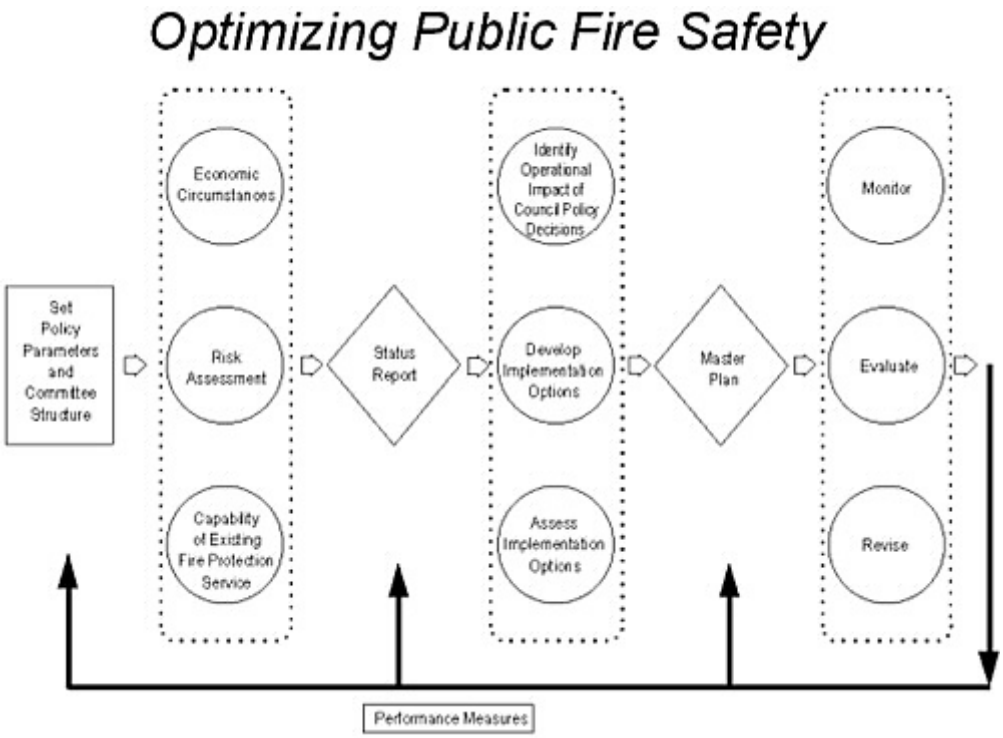
This strategy recognizes that municipalities, with the aid of appropriate tools and support, are fully capable of ensuring adequate fire protection for their communities.

At the same time, this strategy recognizes that the provincial interest would not be met if the level of service provided by a municipality jeopardized public fire safety.

- The guidelines will provide the means for municipalities to make informed choices about public fire protection - responsible choices that will not compromise public safety.
- They are the foundation for measuring and determining adequate fire protection.
- Provincial regulatory authority would be exercised only where there was a clear and identifiable threat to public safety that a municipality or municipalities fail to address.
- Good guidelines, and responsible local government, will ensure that this authority need not be exercised.

Application Options

The model - "Optimizing Public Fire Safety" is intended to be a companion to the guidelines. Its intended use is to provide consistency in application and to ensure all aspects are considered when applying the guidelines.



Fire Protection Review Process

Public Fire Safety Guidelines	**Subject Coding** **PFSG 01-01-01**
Section **General**	Date **January 1998**
Subject **Fire Protection Review Process**	Page

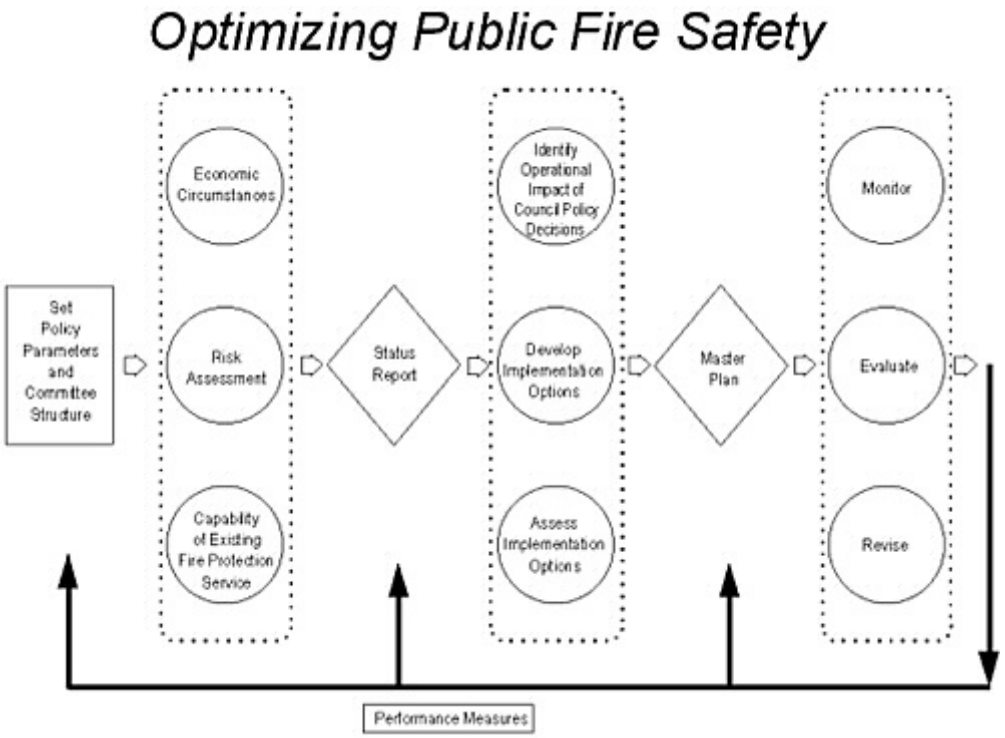
Under Review

Purpose

To provide a description of a simple and practicable system to enable decision makers to make informed choices.
It ensures formal interaction between council with its policy setting responsibilities, the municipality with its corporate management objectives, and the fire department with its operational expertise.

Introduction

- The overall objective of any fire protection program is to provide the optimum level of protection to the community, in keeping with local needs and circumstances.
- Extensive research has demonstrated that there are a variety of factors that will have an impact on the fire department's capacity to fulfil this objective.
- Conversely, there are many different options that a municipality may pursue to improve the efficiency and effectiveness of its fire protection system.
- Local circumstances will have a profound effect on which factors are most important for any one municipality, and what options are available for its fire protection system.
- Selecting among these options is an extremely complex task.
- Success will require a combination of specialized expertise in fire protection, and a thorough appreciation of your municipality's economic, social and political circumstances.



Overview

Stage 1: Set Policy Parameters
Stage 2: Determine Local Circumstances
Stage 3: Status Report
Stage 4: Determine Fire Protection Strategy
Stage 5: Develop Master Fire Plan
Stage 6: Monitor, Evaluate and Revise
Stage 7: Performance Measures

- Every municipality operates under a specific set of policy parameters -- basic tenets that define the role of the municipal government in the community.
- In essence, it is the political philosophy of the municipality.
- These parameters reflect the culture of the local community and will have a profound impact on the fire protection strategy that you develop.
- Policy parameters include, for example:
    - *Public Expectations* -- does the public expect the municipality to address its needs or is there a fairly high level of personal self reliance?
    - *Service Delivery Strategy* -- how open is your community to alternate forms of service delivery and financing such as out-sourcing or fee-for-service?
    - *Level of Satisfaction* -- are you satisfied with the level of fire protection in your community, and the efficiency and effectiveness of the fire protection system?
    - *Funding Policies* -- what impacts do your funding policies and practices have on the services you deliver? How do you account for capital expenditures? Are you prepared to issue debentures?
    - *Competing Priorities* -- what priority does public fire safety have in your community in comparison to the other services that you provide?
    - *Receptiveness to Change* -- does the public recognize the need for change, and would they accept the implications of such change?

- It is extremely important that you work through these questions from a fire protection perspective, and that you include all of the key participants in the process.
- It need not be an excessively formal process, but everyone involved in the review should have an opportunity to discuss the broader context within which the fire department must operate.
- The results of this discussion should be reflected in the "terms of reference" for the review.
- It will help to ensure that the review remains focused.

It will also encourage participants to be open to innovations, and conversely, it will help to ensure that staff involved in the review do not spend unnecessary time and resources analyzing options that are not viable.

Stage 2:
Analyse Local Circumstances

Separate guidelines are available that address each of the three main issues that define the local circumstances of a municipality:

- Assessing Economic Circumstances from a Fire Protection Perspective (PFSG 02-03-01)
- Assessing Fire Risk (PFSG 02-02-12)
- Assessing the Existing Fire Protection Services (PFSG 02-04-01)

The following is an overview of the issues that these three guidelines address.

Economic Circumstances

- What are your expectations for economic growth?
- How much development do you expect to occur?
- What type of development do you expect?
- How is your population changing? (Demographics)
- If the fire department receives the bulk of its financing from the tax base;
    - is the tax base increasing, shrinking, or relatively steady?
    - is the tax base shifting?
- Describe the assessment
- A review of your economic circumstances should involve more than just an assessment of future demand and available resources:
- A growing community creates new demand for emergency services, but the type of growth you are experiencing may require a very different kind of response. For example, growth resulting from an in-migration of newly retired residents will create very different demands than growth resulting from the recovery of the local resource industry.
- There are many more ways in which your fire protection system can address new residential development than there are for older neighbourhoods. An initial investment in sprinkler and/or detection systems when new developments are being planned can reduce the need for new fire stations in the future.
- Economic development and expansion may have a significant impact on the availability of resources for fire protection. It tends to be easier to attract volunteers in a self-contained community than in a similar-sized area that serves as a bedroom community for a large city. Is the make-up of your community changing?
- This stage of the review is the first opportunity for you to co-ordinate your planning strategy with your fire protection strategy. Accordingly, it is very important for both fire and planning

officials to work closely together on this aspect of the review, perhaps by way of a sub-committee

Fire Risk

The Fire Risk in your community is a function of:

- *Potential for Loss*, which depends on the extent to which buildings comply with relevant fire and building codes, how buildings are used, the public's attitude toward fire, and the use of special measures such as automatic detection and/or suppression systems.
- *Consequences of Fire*, such as the effect of a fire at a major industry on local employment, assessment and economic activity. This also includes social impacts resulting from the loss of an historic or recreational facility, or the impact of fire on a sensitive environmental area.
- *Local Infrastructure,* such as water supply, communications, the quality of roads, and physical barriers such as rivers or railroads.
- *Building Stock*, including the age of buildings, the density and type of construction, their height, and the mix of commercial, industrial and residential uses.
- Since there are so many factors that affect fire risk, it tends to vary considerably from location to location. In fact, fire risk in one part of a municipality will often be very different from in another, particularly in rural areas. Accordingly, there is no need for the fire department to provide a uniform level of service throughout the municipality. The service you provide should be tailored to the risks faced.

A thorough risk assessment can also avoid invalid comparisons between your fire department and others. A municipality with a similar population may have very different fire risks, and therefore very different fire protection needs. A good risk assessment will ensure that such comparisons are valid. By providing a valid basis for comparison, a good risk assessment can also provide confidence that innovations introduced elsewhere can be successfully applied in your municipality.

Existing Fire Protection System

- Examining the existing fire protection system is perhaps the most time consuming component of the assessment process. The objective is to obtain a clear picture of the nature of the fire protection system as it exists today. The following broad areas should be examined:

Role and Mandate -- What range and scope of services is the department expected to provide (fire suppression, rescue, hazmat, etc)? How does it relate to neighbouring fire departments (mutual-aid, automatic aid)? How does it relate to other sections of the municipality?

Structure and Organization -- What type of department is it (full-time, composite, volunteer)? What is its total staff, facilities, apparatus and equipment? How many layers of management?

Services and Support -- Briefly describe the services provided by the various functional sections of the fire department and describe the support mechanisms for these services.

Emergency Operations -- Describe the types and extent of emergency operations conducted by the fire department and include such things as incident command systems and operational support.

Financial & Resource Analysis -- Describe in detail the funding, budgeting and resource allocation of the fire department, including the individual functional divisions.

Fire Protection and Prevention Act - indicate whether or not the department/municipality is in compliance with this Act.

Stage 3:
Status Report

- The purpose of this stage is to assist in the preparation of a report to council outlining the findings of the analysis of the following:
- economic circumstances
- risk assessment
- capabilities of existing fire protection service
- The report will include details of the existing circumstances
- The report will also include and identify strengths, limitations, threats and opportunities respecting the existing fire protection services.
- The purpose of the report is also to elicit the expectations of the decision makers, and confirm their commitment to proceeding to the master planning process.

Stage 4:

Determine Fire Protection Strategy

- This stage of the process involves a review team assisting council in making a determination of the future fire protection strategy.
- The procedure involves analyzing economic circumstances, risk assessment and the capabilities of the existing fire protection service (including core services). This is accomplished in three levels, as follows:
    - council considerations
    - administrative considerations
    - fire department considerations
- Your review should consider, and perhaps emphasize the need for residents, industry and others to accept increased responsibility for the improvement of public safety.
- The review must look beyond the fire department's fire fighting capability in fulfilling its responsibility to provide for public safety.
- Today's economic conditions - evidenced by reduced budgets, revenues, hiring freezes, reductions in staffing levels through attrition or otherwise, delayed apparatus and equipment purchases - forces the making of hard decisions about the resources required for local fire protection.
- Options and alternatives are therefore essential. For example, it may be considered appropriate to re-focus on developing fire prevention and public education programs rather than expanding fire fighting forces, or consider resources in surrounding communities and how those resources might be utilized to meet your needs.
- Determining the future fire protection strategy of your municipality is accomplished by way of providing options for the consideration of council.
- For this process to be successful, it is imperative that there be full and open consultation with all of the stakeholders.
- Stakeholders are the people and organizations with an interest in the fire service, including:
- fire department staff and management
- municipal staff and management

- municipal administrators
- council
- residents
- business
- industry
- planning and co-ordinating agencies and organizations
- provincial government ministries
- county/district/regional organizations
- other municipalities
    - Schematic diagram of the model: Optimizing Public Fire Safety highlighting Stage 3.
    - police
    - ambulance
- other umbrella organizations:
    - firefighter associations (full time and volunteer)
    - AMO
    - OAFC
    - CAFC
- Consultation with stakeholders during the development, assessment and operational impact of various options is necessary for three reasons.
- First the review team will obtain expert advice on key elements of the various options.

Obtaining expert advice from all stakeholders ensures that all parties to the process:

- fully appreciate why the process is being carried out
- clearly understand the strategy, initiative or option that will be evaluated
- participate in identifying potential evaluation questions or issues, and
- help shape the options
- Second, it will help ensure a surprise-free environment for all parties to the review process.

Ensuring a surprise-free environment is necessary for the review team facilitator(s) to create a receptive, productive environment for the option evaluation process. Except in extremely rare cases, stakeholders should be aware of the option evaluation process. Nothing is more damaging to such a process than to spring it on stakeholders. They will usually react suspiciously and defensively, see the process as an intrusion, find fault with it, and actively lobby to circumvent its recommendations.

- Finally, the stakeholders will use the consultation as an opportunity to market the various options.

Marketing the various options and their potential is essential if it is expected that they will lead to program or service changes, particularly significant ones. Change is not an event, but a process, and usually a slow process, and conditions generally needs to be cultivated. Like a building, the foundation for change needs to be laid well in advance of its construction. Stakeholders must accept the need to change before it can occur. For the review team and its facilitator(s), creating this comfort level is an essential ingredient of success.

- The review team and facilitator(s) usually consult with the stakeholders through established committees. Primary discussions between the facilitators and the stakeholders are usually conducted on an individual basis, with the committee acting as a clearinghouse. Facilitators,

who almost always shun formal committees and attempt to consult by **only** using individual or team interviews, enjoy limited success. While individual consultation may provide a more direct and confidential input into the process, this practice has drawbacks. It often results in stakeholders seeing the process as the product and possession of the facilitator. Stakeholders often feel that they have not participated fully and equally in planning the study. And, there is the chance they can complain that the facilitators have filtered their concerns

- This review process will result in alternatives for your existing fire protection services, and options and considerations for council's vision of the future of the fire service.
- All options will be prioritized, assessed, costed where appropriate and clearly indicate the operational impact.
- Then council will be in a position to make better informed decisions for creation of your master fire plan.

Stage 5:

Develop Master Fire Protection Plan

- Master fire plans, properly introduced, are a valuable tool in identifying management options for providing desired fire protection levels to a community. Ultimately, a good plan will lead to a more fire safe community.
- A master plan, pared to its essentials, presents the programs or projects, the costs, and the schedules for developing and maintaining the fire protection system that has been accepted and approved by council on behalf of the community, based on a price which the public can afford.
- Master planning itself is not a new concept. Many municipalities are involved in the process with varying degrees of success.
- Master planning for fire protection allows each community to determine the best allocation of resources to achieve an acceptable level of fire protection.
- An appropriate plan can only be developed under the following conditions.
- Schematic diagram of the model: Optimizing Public Fire Safety highlighting Stage 5.
- The plan forms the basis for the fire protection budget, through identification and description of time-phased programs and projects to be implemented throughout the planning period.
- The plan considers the following factors.

    • The current and future fire protection environment by establishing and maintaining a comprehensive data base.

    • The acceptable life and property risks by setting goals and objectives.

    • The fire protection system that provides the level of service commensurate with the level of accepted risk.

    • The funding required to implement the plan.

    • The assignment of authority and responsibility.

    • The procedures for carrying out and updating the plan.

    • The master fire plan defines the community fire problem and provides the future direction of the delivery of fire protection services.

    • The plan will require continuous updating to provide a current picture of the needs of the community.

- There are several benefits to developing a master fire plan.

- Supports the risk management program by identifying programs and levels of service.
- Improves public relations and promotes interest and direct involvement within the community.
- Sets standards of service the fire department is capable of providing.
- Potentially decreases costs, for fire protection and/or insurance coverage.
- Contributes to a reduction in the number of fires, fire deaths, fire injuries and property loss.
- Makes best use of available resources.

Defines by policy of council the types, level and quality of fire protection services to be provided to the community.

Stage 6:

Monitor, Evaluate & Revise

Introduction:

This stage of the municipal fire protection review process involves three parts:

- Monitor
- Evaluate
- Revise
- Just as the type and level of fire services provided are a municipal responsibility, so are the evaluation, monitoring and revision of such services a municipal responsibility.
- They **may,** however, be subject to outside scrutiny.

Objectives:

- The objectives of the municipality, as mirrored in the fire department master plan, are the starting point for any evaluation.
- These objectives should be consistent with the review process mission statement and express what the process is to accomplish.
- The objectives should be both specific and measurable.

Activities:

- The activities are the operational aspects of the identified objectives.
- Activities should be logically related to objectives.
- **Immediate Outcomes** are the effects that are expected to occur as a direct result of activities. These outcomes may include changes that affect people or processes. For example, an immediate outcome might be the improved delivery of a specific service.
- **Ultimate Outcomes** include the larger societal level changes that are expected from the activities. An example would be an expected improvement in compliance with the Fire Code. Ultimate outcomes are often dependant on immediate outcomes. In this example, success might be dependent on providing an appropriate public education program.

Monitor:

- Notwithstanding it is considered prudent for municipalities to monitor programs, services and activities, the Fire Protection and Prevention Act includes the following:

    - **PART II (7)** "The Fire Marshal may monitor and review the fire protection services provided by municipalities to ensure that municipalities have met their responsibilities under this section and, if the Fire Marshal is of the opinion that, as a result of a

municipality failing to comply with its responsibilities under subsection (1), a serious threat to public safety exists in the municipality, he or she may make recommendations to the council of the municipality with respect to possible measures the municipality may take to remedy or reduce the threat to public safety." and,

- **PART III FIRE MARSHAL 9**. (1) The Fire Marshal has the power, (a) to monitor, review and advise municipalities respecting the provision of fire protection services and to make recommendations to municipal councils for improving the efficiency and effectiveness of the services.".

- Program monitoring is a systematic attempt to measure both of the following:

  a. program effectiveness -- are the programs and services reaching their intended marks?, and

- Program delivery -- does the service being provided match what was intended to be delivered? Program monitoring need not always be complicated and complex, as it often can be as simple as keeping track of the activities involved
- Program monitoring concentrates on program service outputs rather than program outcomes

Evaluate:

- Programs adopted and implemented through the master fire plan should have built-in evaluation procedures
- Evaluations are not simply the responsibility of municipal politicians and or administrators, but additionally, is an administrative function of the fire department.

Internal Evaluators

- as employees of the fire department, internal evaluators have intimate knowledge of the department's policies, procedures, politics and people
- they know both the formal and informal channels for communicating and accomplishing tasks.
- this knowledge permits them to select methods that fit the unique situation of the department
- internal evaluators long term commitment to the fire department can lend credibility to their efforts and help forge positive working relationships with managers and staff
- they can build trust over time that helps reduce the anxiety normally associated with evaluation activities
- because they are employees, internal evaluators are available as an on going corporate resource
- this puts internal evaluators in an excellent position to communicate relevant information in a timely fashion
- it also permits internal evaluators to participate actively in long-range planning by making crucial evaluative information available for strategic planning and policy decisions
- it affords internal evaluators the opportunity to consult with and provide information to various management levels within the organization, enabling them to enhance the utilization of evaluation information
- internal evaluators are often responsible for correcting problems and advocating change rather than only identifying difficulties and making recommendations
- the focus of internal evaluation often includes not only program outcomes and processes, but also the factors that influence program performance, such as structure, operations and management
- the use of internal evaluators, some of whom could conceivably be part of the problem, then can become part of the solution

External Evaluators

- are usually perceived as being more objective because they are not fire department employees and are therefore not subject to all of the pressures of organizational life
- Internal evaluators now often work in partnership with external evaluators to obtain the external evaluators' specialized skill and objectivity while retaining the internal evaluators' knowledge of the department
- All evaluators, whether internal or external, have their biases.

Revise:

- Consider the benefits and results of the foregoing monitoring and evaluation processes to assist in determining if any revisions are necessary.
- Some of the principal benefits are:
- any gap between goals and performance
- cost effectiveness and efficiency of the program/service
- how is the program operating/functioning?
- issues that could jeopardize the program/service
- program/services strengths
- program/services weaknesses
- to what extent are the citizens being served
- whether desired and/or undesired outcomes have taken place
- This information is useful for:
    - clarifying the mission, purpose and goals
    - describing the programs and services
    - facilitating the refinement and modification of program or service activities
    - fulfilling accountability requirements
    - guiding allocation of resources and personnel
    - maintaining quality of services and programs
    - program decision making, such as continue, cancel, cut back, change, expand
    - setting priorities
    - weighing costs and benefits of alternatives

Stage 7:
Performance Measures
Purpose

- The purpose of this section of the guideline is to assist in developing and using performance measures.
- The guide answers the following questions:
    - What are performance measures?
    - How can they be used
    - What is the best way of doing this?

- Where does one start?

Introduction

- Data and information collected and used by managers in the public sector usually pertain to inputs, outputs and processes.
- Examples of these measures are as follows:

INPUTS :

Amount of money spent on training
Number of staff assigned to fire prevention
Number of staff assigned to training

PROCESS

Number of firefighters at O.F.C.
Number of days to complete a project
Length of time to conduct an inspection

OUTPUTS

Number of training manuals produced
Number of inspections completed
Number of plans reviewed
Number of emergency responses

- Many managers judge their effectiveness by counting and tabulating these inputs, processes and outputs.
- These are measurements of the ***process*** rather than the measurement of ***performance***
- They measure what was done, rather than the impact of the action.

Without meaningful performance measures that directly link the impact of your actions to clear goals and objectives, it may be difficult, if not impossible, to provide a sound and supportable justification for the continued existence of your program or service

Goals and Objectives:

- It is imperative that there is a clearly stated goal and objective for every program, service, and activity.
- Once the goals are clarified in a meaningful way, specific objectives can then be made to operationalize the program.
- For example, the vague goal of improved fire safety can be made more meaningful and specific as follows:
    - ***"Increased number of working smoke alarms in the home"***
- With the goal specifically defined, it provides direction and guidance as to what objectives must be achieved in order to reach this goal. For example:

Goal

Increased number of working smoke alarms in the home

Objectives

Public awareness of the value of smoke alarms through media advertising
Promotional campaign as part of Fire Prevention Week
Provide quality smoke alarms to the public at a reduced price

Measuring Performance

- There is merit in linking the results of programs, services and activities to clearly defined objectives.
- It is not sufficient that the goal be achieved; it is necessary to show that the activities of the program were responsible for the achievement of the goal by establishing cause and effect.
- The key questions to determine the **impact** of actions are:

Do you have the resources to achieve the goal?
Why are you doing this?
Are you achieving what you are supposed to be doing?
How do you know? "

- Managers must develop meaningful performance measures and report on their success by measuring performance.
- Decisions on program direction can then be made based on this information

What are Performance Measures?

- The quantitative and qualitative measures which assess the effectiveness and efficiency of a product, service or process
- They are the key indicators of success.
- Performance measures generally fall into six primary categories:

  • Time

  • Effectiveness

  • Quality

  • Efficiency

  • Costs and

  • Productivity Safety

  To clarify these six categories of performance measures, each is defined on the following page.
  Time :

  • Time it takes to complete a process (cycle time) or deliver a service or product

  • Effectiveness: Doing the right things, meeting corporate objectives and strategic directions

  • Quality: A measure of the extent to which a thing or experience (service) meets a need, solves a problem or adds value for someone (client, stakeholder, taxpayer)

  • Efficiency: Outputs relative to inputs; doing things right every time

• Costs & Productivity: Cost to provide a product or service; the relationships among costs, inputs and outputs

• Safety: The extent to which important assets (personnel, property, records) are safeguarded so that the organization is protected from danger of losses that could threaten its success, credibility, continuity, etc.

Why

Why do you use performance measures?

- To demonstrate success
- To identify problems
- To evaluate goal achievement
- To determine whether or not there is performance improvement

Codes, Standards and Best Practices

Codes, Standards and Best Practices available to assist in establishing local policy on the delivery of this service are listed below. All are available at **http://www.mcscs.jus.gov.on.ca/.**. Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.

See also

02-04-01 & **23** Capabilities of Existing Fire Protection Services
02-03-01 Economic Circumstances
02-02-12 & **03** Fire Risk Assessment
03-01-13 Preparation of Draft Report
04-39-12 Fire Prevention Effectiveness Model

Comprehensive Fire Safety Effectiveness Model Considerations

Public Fire Safety Guidelines	**Subject Coding** **PFSG 01-02-01**
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Under Review

Comprehensive Fire Safety Effectiveness Model Considerations For Fire Protection & Prevention In Your Community



Fire Protection & Prevention In Your Community

Every day, local elected leaders, managers and fire chiefs are faced with decisions relating to the provision of fire and other related emergency services for their community. Now, more than ever there are constant pressures of doing "more with less". Many government officials are hard-pressed to justify any increase in expenditures unless they can be attributed directly to improved or expanded service delivery in the community. This effort has often been hampered by the lack of criteria by which a community can determine the level and quality of fire and other related emergency services it provides to its residents. The *Comprehensive Fire Safety Effectiveness Model* is a document which can assist communities in evaluating their level of fire safety.

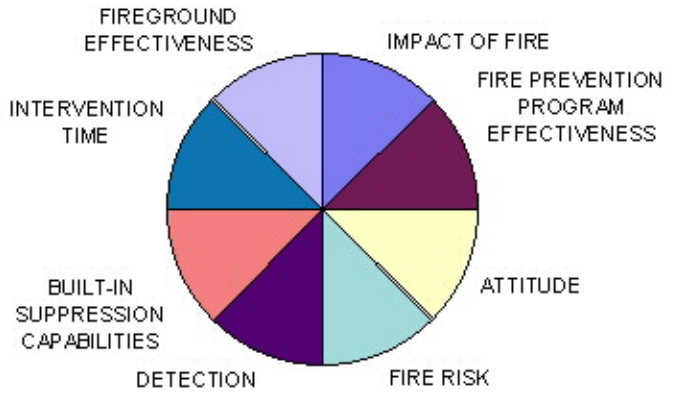
The provision of fire protection in Ontario is a municipal responsibility. The level and amount of fire protection provided is determined by the residents of the community through decisions made by and support provided by the local municipal council. Due to a wide variety of factors, the Ontario fire service finds itself in a period of change. Increased community expectations coupled

with reduced financial resources are forcing all communities to critically assess their fire protection needs and to develop new and innovative ways of providing the most cost effective level of service. A refocus on fire protection priorities is providing progressive fire departments and communities throughout Ontario with an exciting opportunity to enhance community fire safety. There is more to providing fire protection than trucks, stations, firefighters and equipment.

The Office of the Fire Marshal has developed the *Comprehensive Fire Safety Effectiveness Model* which can be used as a basis for evaluating fire safety effectiveness in your community. This model looks at community fire protection as the sum of eight key components, all of which impact on the fire safety of the community. Deficiencies in one of the components can be offset by enhancements in another component or components.

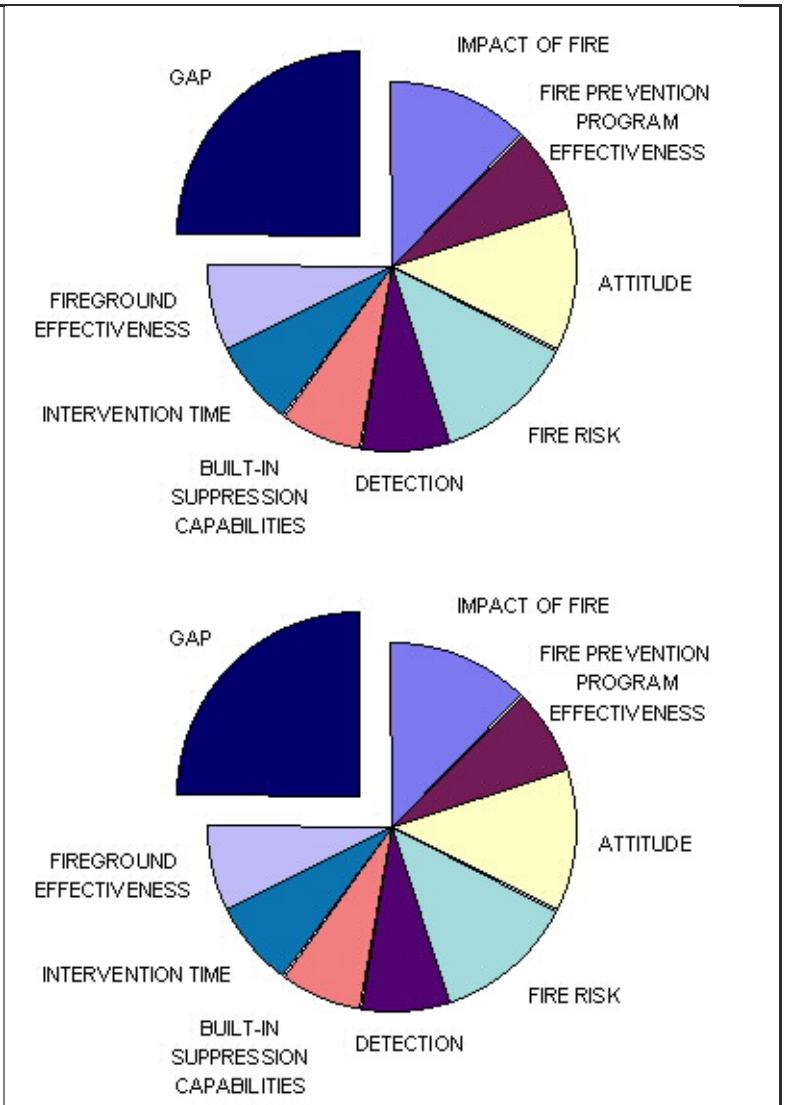
Community Master Fire Protection Plan

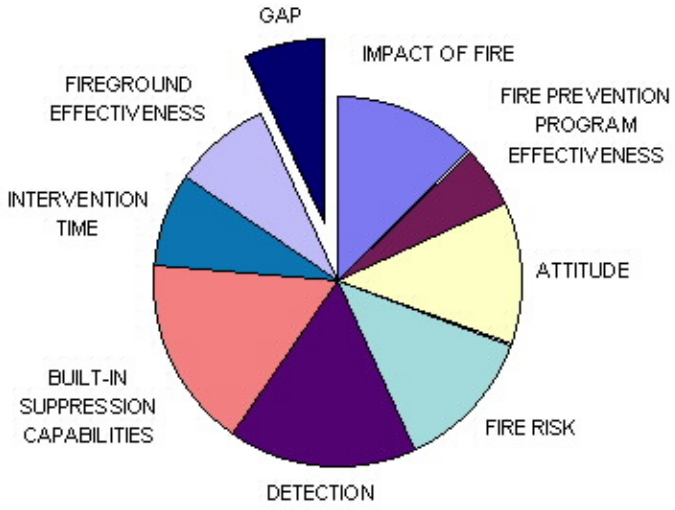
Every fire department should be guided by a master or strategic plan. This *Community Master Fire Protection Plan* traditionally focused on the identification of fire hazards and planning an appropriate suppression force response. Today, hazard or risk assessment has expanded well beyond the fire problem in the community to include emergency medical incidents, hazardous materials incidents and many other emergency situations. Paradigms are being shifted to emphasize the concept of fire prevention and control systems as communities attempt to effectively reduce losses experienced. This document should include plans for human resources and program financial support as well as the many external influences that impact on the fire service. The information contained with the *Community Master Fire Protection Plan* should provide a clear and concise overview of the most recently adopted organizational goals and objectives, budgetary commitments, mission statements and assessments of organizational activity. The document should cover a long range planning period of five to ten years.



This chart shows each of the factors which make up the comprehensive model. Although the chart is divided equally, each factor will in reality contribute differently to the total level of protection provided to a community.

This chart shows how the comprehensive model can be applied to a typical fire department. The "gap" depicts the difference between the existing level of protection and the ideal.





This chart shows how the "gap" can be reduced by strengthening a number of factors in order to increase the overall level of protection provided to the community.

It is critical that the fire department be guided by a written philosophy, general goals and specific objectives which are consistent with the legal mission of the department and are appropriate for the community it serves. These should all be integral components of the Community Master Fire Protection Plan.

Application of the Comprehensive Fire Safety Effectiveness Model will enable municipalities to make informed choices by providing an objective and innovative approach to public fire protection - a new way of thinking. Communities are able to determine if the level of service provided matches the risk in the community.

1. **Impact Of Fire:**

The impact of fire in any community can be significant with far reaching consequences. Not only do fires result in deaths and personal injuries but they also cause substantial property and environmental loss. Often overlooked are factors such as the historical value of unique local properties as well as the potential for lost tax assessment. There are many communities in Ontario where the loss of a particular occupancy will have a serious impact on the local economy. Involvement in fire often has a negative psychological impact on those affected.

Every community should carefully assess the total impact of fire. This assessment should be used as a basis for a Community Master Fire Protection Plan that addresses all areas of community fire safety including fire prevention and life safety as well as the delivery of suppression and rescue services.

- Does your community have a property whose loss would result in a significant financial burden to the community?
- Does your community have a property whose loss would result in a significant impact of local employment?
- Does your community have a property which if involved in fire would pose a significant environment risk?
- Does the master fire protection plan adequately consider the impact of a major fire?

2. **Fire Prevention Program Effectiveness:**

- Perhaps the most important component of and community's fire protection services is the effectiveness of it's fire prevention program. Legislation, regulations and standards pertaining to fire safety focus primarily on fire prevention. Enforcement of these codes is one of the most effective ways of reducing the loss of life and property due to fire. In addition, public fire safety education programs have the potential to substantially reduce the loss of life and property due to fire.

  Every community should strive to provide an adequate, effective and efficient program directed toward fire prevention, life safety, risk reduction of hazards, the detection, reporting of fire and other emergencies, the provision of occupant safety and exiting and the provisions for first aid firefighting equipment.

- Does your community have a fire prevention and public education policy that adequately addresses:

  - inspections?
  - public education?
  - code enforcement?
  - investigation?

- Does your community provide inspections upon request?
- Does the fire department respond to complaints?
- Does your community's fire prevention program address public life safety in structures from pre-construction planning until demolition through application of the Building Code and Fire Code?

3. **Public Attitude:**

North Americans tend to be more complacent about fires and the resulting losses than other parts of the industrialized world. Communities often accept the consequences of fire and provide community support. Comprehensive insurance packages are available to mitigate damages.

Communities need to assess the resident's attitudes toward fire to determine what role it plays in determining the extent of fire losses. Properly designed public fire safety education programs will significantly improve public attitudes toward the prevention of fire. This will result in lower fire losses.

Every community should assess public attitudes toward fire and life safety issues. This assessment should be used to develop and deliver public fire safety education programs to enhance community fire safety.

- Do the residents of your community demonstrate an interest in public fire safety?
- Is there a general awareness of fire safety in your community?
- Is there a sense of personal responsibility for one's own safety within the community?

4. **Fire Risk:**

The characteristics of your community affect the level of fire risk that needs to be protected against. Older buildings pose a different set of problems than newer buildings constructed to current construction codes. High rise, commercial and industrial occupancies each present unique factors which must be considered. Construction, occupancy type, water supply, exposure risks, furnishings and the risk which the combination of these factors pose to the occupants must be assessed. The presence of effective built-in suppression and/or protection measures can reduce the fire risk.

36% of all structural fire alarms and 46% of all structural fire deaths in Ontario during the period 1990-1994 occurred in single family, detached, residential occupancies.

Every community should carefully assess its fire risk. The results of this risk assessment should be used as a basis for determining the level, type and amount of fire protection provided and should be a critical factor in the development of the community master fire protection plan.

- Has your community assessed the fire risk?
- Does your community have a master fire protection plan which takes into account the results of your fire risk analysis?
- Has the fire department identified all the possible actions it could take to reduce the number of fire incidents that occur in the community?
- Does your community planning process consider the impact of new developments and industries on the fire department?

5. **Detection Capabilities:**

The presence of early warning detection capabilities notifies occupants and allows them sufficient time to escape. It also allows for earlier notification of the fire department. Communities who encourage the widespread use of early warning detection systems have the potential of significantly reducing notification time, which, when coupled with effective fire department suppression, results in a corresponding reduction of loss of life, injuries and damage to property from fire.

Every community should develop and implement programs that promote the use of early warning detection systems in all occupancies. These programs should be a fire protection priority.

- Does your community have a program to ensure that all occupancies are provided with adequate early warning detection devices?
- Does your community have a program to ensure that residents are familiar with the importance and proper maintenance of early warning detection devices?
- Does your community promote the use of direct connect early warning detection devices in residential as well as commercial, industrial and assembly occupancies.

6. **Built-In Suppression Capabilities:**

Traditionally, the use of built-in suppression has been limited to fixed fire protection systems associated with assembly, commercial, industrial and manufacturing occupancies. Application of this concept has been limited in the residential environment. These systems, particularly the use of automatic sprinkler systems play an important role in minimizing the effects of fire by controlling its spread and growth. This enables the fire department to extinguish the fire more quickly and easily.

Although effective in newer buildings, it is often difficult if not impossible to provide for built-in suppression systems that effectively control fires in wall cavities and concealed spaces associated with certain older types of construction or reconstruction.

The use of built-in suppression systems should be a fire safety priority in all communities. Programs should be developed and delivered that promote the advantages of built-in suppression systems for residential, commercial, industrial and assembly occupancies.

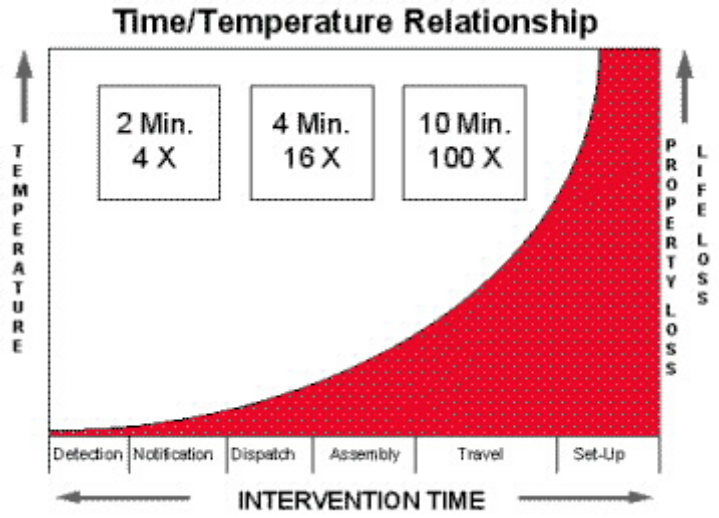
- Does your community promote the use of built-in suppression devices in all types of occupancies
    - residential?
    - commercial?
    - industrial?
    - assembly?
    - institutional?
- Does your community consider built-in suppression devices and early warning detection as an alternative to traditional concepts of fire protection?

7. **Intervention Time:**

This is the time from ignition until effective firefighting streams can be applied to the fire. There are many factors influencing this component of the model:

- the time required to detect the fire
- notification time from the public
- notification time to the firefighters
- preparation time for the firefighters to leave the station
- the distance between the fire station and the response location
- the layout of the community
- impediments such as weather, construction, traffic jams, lack of roads, etc.
- set-up time

Fire department intervention time is crucial in determining the consequences of a fire in terms of deaths, injuries and loss of property and damage to the environment. Effective fire prevention and public education programs can reduce intervention time which will result in increased fire department effectiveness.



Every community should develop and implement a range of programs and initiatives that reduce intervention time. These programs and initiatives should address all aspects of intervention time from the time required to detect the fire to the set-up time of the fire department.

- Are all occupancies in your community equipped with suitable smoke alarms and provided with fire emergency escape plans?
- Do all residents in your community know how to report a fire or other emergency?
- Does your community have a common fire emergency reporting number?
- Is the fire department dispatched by an appropriate dispatch facility?
- Does the community's master fire protection plan consider the different turn-out times for volunteer and/or full-time firefighters?
- Has the department instituted an appropriate fire department training and education program?
- Are all structures within the community clearly identified using an accepted numbering system?
- Has the department instituted a policy of having the closest fire department respond even though that fire department may be from another municipality?

8. Fireground Effectiveness:

The fireground effectiveness of the fire department has a wide range of benefits for your community. Not only does the fire department's performance affect the degree of damage to the environment and property, it also has a direct relationship to personal injury and death from fire. Many factors influence the effectiveness of any fire department. Included in these factors are:

- fire department organization
- community support of fire department
- firefighter availability
- firefighter and fire officer training
- adequate resources which are properly maintained
- time effective response to emergency incidents

The fire department should strive to provide an adequate, effective and efficient fire suppression program designed to control/extinguish fires for the purpose of protecting people from injury, death or property loss.

- Does your fire department have a comprehensive training program and evaluation system for all positions?
- Does the fire department have a system to ensure that an adequate number of trained personnel respond to all emergencies within a reasonable time period?
- Is your fire department provided with adequate resources to safely and effectively handle the risks it will be called upon to mitigate?
- Does the fire department use standard operating guidelines to define expected fire department actions for the wide variety of situations it might encounter?
- Does your fire department have automatic response agreements to guarantee an adequate level of personnel at all times?

The answers to the questions in this document will provide you with some indication of the level of fire safety in your community, however this is only the start. Application of the OFM Comprehensive Fire Safety Effectiveness Model will permit you to develop a plan for the safe, effective and economical delivery of fire protection services in your community.

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Further assistance is available from your local OFM representative

Sample Establishing and Regulating By-law

Public Fire Safety Guidelines	**Subject Coding** **PFSG 01-03-12**
Section **General**	Date **March 2000**
Subject **Sample Establishing and Regulating By-law**	Page

Under Review

Purpose: To assist in the preparation of a by-law, which will provide clear and accurate policy direction reflecting how council wants their fire department services to function and operate.

Introduction: A municipality has responsibility to determine the types and extent of fire protection services necessary to meet their specific needs and circumstances. It is not practical to produce a sample that identifies the needs of every municipality..

Development: An analysis must be made to determine if each clause is appropriate for the particular municipality. Unless otherwise noted in the margin, the OFM regards each clause as a necessary component for a complete by-law.
In preparing by-laws, consideration must be given to the provisions of any collective agreement formulated under the Fire Protection and Prevention Act that supersedes establishing and regulating by-laws.
The municipal solicitor, prior to enactment, should review any draft by-laws prepared by council.

Related Functions: The primary issues addressed in an establishing and regulating by-law may include policy direction in these areas:

- general functions and services to be provided
- the goals and objectives of the department
- general responsibilities of members
- method of appointment to the department
- method of regulating the conduct of members
- procedures for termination from the department
- authority to proceed beyond established response areas
- authority to effect necessary department operations

Codes, Standards and Best Practices: Codes, Standards, and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **www.ontario.ca/firemarshal**
Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.
See also PFSG
02-02-12 Fire Risk Assessment
02-03-01 Economic Circumstances
04-01-12 Selecting a Fire Suppression Capability
04-02-01 Service Delivery Considerations

fire department

SAMPLE ESTABLISHING AND REGULATING BY-LAW

corporation of the Town of Anywhere
By-Law No.

Whereas the Municipal Act, R.S.O. 1990 c., as amended, and the Fire Protection and Prevention Act, 1997, S.O. 1997, c.4 as amended, permits the council to enact a by-law to establish and regulate a *fire department*;
BE IT THEREFORE ENACTED by the Municipal council of the corporation of the Town of Anywhere, as follows:

1. In this by-law, unless the context otherwise requires,

   a. **approved**
   means approved by the council
   b. **chief administrative officer**
   means the person appointed by council to act

Definitions: define any terms or positions which may be of concern to users of the by law

as chief administrative officer for the corporation

c. **corporation**
means the Corporation of the Town of Anywhere

d. **council**
means the council of the Town of Anywhere

e. **deputy chief**
means the person appointed by council to act on behalf of the fire chief of the fire department in the case of an absence or a vacancy in the office of fire chief

f. **fire chief**
means the person appointed by council to act as fire chief for the corporation and is ultimately responsible to council as defined in the Fire Protection and Prevention Act

g. **fire department**
means the Town of Anywhere fire department

h. **fire protection services**
includes fire suppression, fire prevention, fire safety education, communication, training of persons involved in the provision of fire protection services, rescue and emergency services and the delivery of all those services

i. **member**
means any persons employed in, or appointed to, a fire department and assigned to undertake fire protection services, and includes officers, full time, part time and volunteer firefighters

j. **volunteer firefighter**
means a firefighter who provides fire protection services either voluntarily or for a nominal consideration, honorarium, training or activity allowance

2. A fire department for the Town of Anywhere to be known as the Town of Anywhere Fire Department is hereby established and the head of the fire department shall be known as the fire chief.

3. The *fire department* shall be structured in conformance with the *approved* Organizational Chart, **Appendix A**, forming part of this by law.

Approved Organizational Chart

4. In addition to the fire chief, the council shall appoint a deputy chief and such number of other officers and members as may be deemed necessary by the council	***Identifies appointment of other officers and members without listing all specifically***
5. The *fire chief* may recommend to the *council* the appointment of any qualified person as a *member* of the *fire department*, subject to the *approved* hiring policies of the Town of Anywhere	***Appointment via approved Hiring Policy***
6. Persons appointed as *members* of the *fire department* to provide *fire protection services* shall be on probation for a period of 12 months, during which period they shall take such special training and examination as may be required by the *fire chief*.	***Probationary Members***
7. If a probationary member appointed to provide *fire protection services* fails any such examinations, the *fire chief* may recommend to the *council* that he/she be dismissed.	
8. The remuneration of the volunteer members shall be as determined by the *council*.	***Remuneration and working conditions***
9. Working conditions and remuneration for all firefighters defined in Part IX of the Fire Protection and Prevention Act shall be determined by *council* in accordance with the provisions of Part IX of the Fire Protection and Prevention Act.	
10. If a medical examiner finds a member is physically unfit to perform assigned duties and such condition is attributed to, and a result of employment in the *fire department*, *council* may assign the member to another position in the *fire department* or may retire him/her. *council* may provide retirement allowances to members, subject to the Municipal Act.	***Other employment, retirement options and/or allowances***
11. The *fire chief* is ultimately responsible to *council*, through the (insert appropriate position for the municipality) for proper administration and operation of the *fire department* including the delivery of *fire protection services*.	***Chief ultimately responsible to council through FPPA (via chief administrative officer, clerk, fire committee or specify appropriate position)***

12. The *fire chief* shall implement all *approved* policies and shall develop such standard operating procedures and guidelines, general orders and departmental rules as necessary to implement the *approved* policies and to ensure the appropriate care and protection of all *fire department* personnel and *fire department* equipment. ***Developing SOP's, guidelines, rules and regulations***

13. The *fire chief* shall review periodically all policies, orders, rules and operating procedures of the *fire department* and may establish an advisory committee consisting of such members of the *fire department* as the *fire chief* may determine from time to time to assist in these duties. ***Advisory Committee***

14. The *fire chief* shall submit to the (insert appropriate position) and *council* for approval, the annual budget estimates for the *fire department*; an annual report and any other specific reports requested by the (insert appropriate position) or *council*. ***Budgets and reports***

15. Each division of the *fire department* is the responsibility of the *fire chief* and is under the direction of the *fire chief* or a member designated by the *fire chief*. Designated members shall report to the *fire chief* on divisions and activities under their supervision and shall carry out all orders of the *fire chief*. ***Divisional responsibilities designated by chief***

16. Where the *fire chief* designates a member to act in the place of an officer in the *fire department*, such member, when so acting, has all of the powers and shall perform all duties of the officer replaced.

17. The *fire chief* may reprimand, suspend or recommend dismissal of any member for infraction of any provisions of this by law, policies, general orders and departmental rules that, in the opinion of the *fire chief*, would be detrimental to discipline or the efficiency of the *fire department*. ***Discipline***

18. Following the suspension of a member, the *fire chief* shall immediately report, in writing, the suspension and recommendation to the (insert as appropriate) and *council.* ***Suspension of members***

19. The procedures for termination of employment prescribed in Part IX of the Fire Protection and Prevention Act shall apply to all firefighters defined in Part IX of the Fire Protection and Prevention Act. ***Termination procedures***

20. A volunteer firefighter shall not be dismissed without the opportunity for a review of termination, if he/she makes a written request for such a review within seven working days after receiving notification of the proposed dismissal. A person appointed by the municipality, who is not employed in the *fire department*, shall conduct the review. ***Provides volunteers with the same opportunity for review as full-time members***

21. The *fire chief* shall take all proper measures for the prevention, control and extinguishment of fires and the protection of life and property and shall exercise all powers mandated by the Fire Protection and Prevention Act, and the *fire chief* shall be empowered to authorize: ***Prevention, control and extinguishing fires***

    a. pulling down or demolishing any building or structure to prevent the spread of fire ***Pulling down structures***

    b. all necessary actions which may include boarding up or barricading of buildings or property to guard against fire or other danger, risk or accident, when unable to contact the property owner ***Boarding up or barricading***

    c. recovery of expenses incurred by such necessary actions for the *corporation* in the manner provided through the Municipal Act and the Fire Protection and Prevention Act ***Recovery of expenses***

22. The *fire department* shall not respond to a call with respect to a fire or emergency outside the limits of the municipality except with respect to a fire or emergency:

    a. that, in the opinion of the *fire chief* or designate of the *fire department*, threatens property in the municipality or property situated outside the municipality that is owned or occupied by the municipality ***Authority to leave municipal limits***

    b. in a municipality with which an *approved* agreement has been entered into to provide *fire protection services* which may include *automatic aid*

    c. on property with which an *approved* agreement has been entered into with any person or *corporation* to provide *fire protection services*

d. at the discretion of the *fire chief*, to a municipality authorized to participate in any *county, district or regional* mutual aid plan established by a fire co-ordinator appointed by the fire marshal or any other similar reciprocal plan or program

e. on property beyond the municipal boundary where the *fire chief* or designate determines immediate action is necessary to preserve life or property and the appropriate department is notified to respond and assume command or establish alternative measures, acceptable to the *fire chief* or designate

AN APPROVED ORGANIZATIONAL CHART FORMS PART of THIS BY LAW AS Appendix A

Goals and objectives of the fire department may also be added as an appendix to the By-law

This by-law comes into effect the day it is passed by council, in the manner appropriate to the municipality.

Master Planning Process for Fire Protection Services

Public Fire Safety Guidelines	**Subject Coding** **PFSG 03-02-13**
Section **General**	Date **March, 2000**
Subject **Master Planning Process for Fire Protection Services**	Page

Under Review

Purpose:

To outline a process and identify the components that may be used in the development and preparation of an effective master fire plan for approval by council and implementation by appropriate persons.

Introduction:

This guideline is a framework for municipal decision making which should link council policy setting responsibility and the fire service operational expertise to accommodate short, medium or long term planning.

Principles:

Goal:

The master fire plan is a strategic blueprint for fire protection that addresses all local needs and circumstances based upon costs the community can afford

Guiding Principles:

- The residents of any community are entitled to the most effective, efficient and safe fire services possible
- The content of existing collective agreements will be respected and the collective bargaining process will be recognized as the appropriate channel for resolving labour relations issues under collective agreements and the Fire Protection and Prevention Act
- Collective bargaining issues affecting public safety will be identified
- Those responsible must work within these parameters in making recommendations for improving municipal fire services

Process:

The master fire plan is a component of the optimizing public fire safety model and the master fire plan process should generate the following:

- a stated council commitment sanctioning development and preparation of the plan

- identification of council approved fire protection options and the operational impacts of the policy decisions on providing services
- identification of persons responsible for preparation of the draft plan for council approval with appropriate time lines

Components:

The master fire plan components should include:

- the mission statement, values and roles of the department
- the necessary programs or projects approved by council
- projected expenditures that the public can afford
- schedules for developing, implementing and maintaining appropriate services

Are the RESULTS what we wanted?
NOTE: See **PFSG #01-01-01** for the complete Optimizing Model

Codes, Standards, Best Practices:

Codes, Standards, and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **www.ontario.ca/firemarshal**. Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.

See also PFSG
01-01-01 Fire Protection Review Process
02-04-01 & **23** Capabilities of Existing Fire Protection Services
02-03-01 Economic Circumstances
02-02-12 & **03** Risk Assessment
03-01-13 Report on Existing Fire Protection Services
04-39-12 Fire Prevention Effectiveness Model

Mutual Aid

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-05-12**
Section **Emergency Response**	Date **March 2000**
Subject **Mutual Aid**	Page

Under Review

Purpose:

To describe requirements for fire department participation in a county, district or regional mutual aid plan.

What:

- Mutual aid plans allow a participating fire department to request assistance from a neighbouring fire department authorized to participate in a plan approved by the Fire Marshal.
- Mutual aid is not immediately available for areas that receive fire protection under an agreement. The municipality purchasing fire protection is responsible for arranging an acceptable response for back-up fire protection services. In those cases where the emergency requirements exceed those available through the purchase agreement **and** the back up service provider, the mutual aid plan can be activated for the agreement area.

When:

- A fire department may ask for mutual aid assistance when it is at the scene or has information that immediate assistance is required.
- Fire departments may immediately request a simultaneous response from a participating fire department where distance and/or conditions dictate.

How:

- Generally, the requirements for participation in county, district or regional mutual aid plans include the following:
    - participating municipalities or agencies must own, or operate fire departments, adequate to meet their day to day fire protection obligations
    - fire departments must be established by by-law or agreement
    - fire chiefs of participating fire departments must be appointed by by-law or similar acceptable authorization
    - participating municipalities or agencies must pass by-laws or similar authorization permitting fire departments to leave their jurisdiction to participate in the mutual aid plan

- responding fire departments must meet the requirements of the Occupational Health and Safety Act
- fire departments have a first obligation to emergencies in their municipality or jurisdiction, a second obligation to mutual aid calls, and then to calls in areas covered by fire protection agreements
- the fire chief or designate of the municipality or jurisdiction in which the emergency occurs, has responsibility for managing the emergency
- the fire co-ordinator and the fire chiefs participating in the plan in consultation with the Office of the Fire Marshal shall assess suitability of participating fire departments
- the mutual aid plan may stipulate that the departments provide or receive assistance through
    - additional or specialized vehicles and/or equipment
    - additional or specialized personnel
    - specialized advice and/or command assistance

- fire departments must adhere to the accepted response, reporting and other provisions of the mutual aid plan

Cost:

Assistance is reciprocal with no fees involved for mutual aid

Related Functions:

Click on the related function below to view that function:

- automatic aid
- fire protection agreements

Codes, Standards and Best Practices:

Codes, Standards and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **http://www.mcscs.jus.gov.on.ca .** Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.
See also PFSG
04-04-12 Automatic Aid
04-09-12 Fire Protection Agreements

Types of Apparatus & Equipment

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-07-12**
Section **Emergency Responses**	Date **January 1998**
Subject **Types of Apparatus & Equipment**	Page

Under Review

Purpose:

To provide options for **small municipalities** to follow in determining the level of fire suppression and the types of apparatus and equipment that will be provided in the community.

Introduction:

• Demands on municipal resources force all communities to re-evaluate the level and nature of services they provide.

• Traditional approaches to the delivery of fire suppression with full-size triple combination pumpers may not necessarily be the most appropriate way to deliver this component of community fire safety, particularly in small communities with limited availability of firefighting personnel.

• The primary mission of all fire departments should be to ensure that the community is provided with an optimal level of fire protection in a cost effective and efficient manner. This optimal level may require a much greater emphasis on fire prevention and public education activities - with residents being responsible for protection within their own residences.

• new technology provides options

• must be appropriate to the fire suppression needs of the community

• dependent upon availability of human resources
need to work closely with neighbouring communities

• focus must still be on community fire safety initiatives

Service Delivery Options:

There are many fire protection options available to small communities in Ontario.

• The amount, type and capacities of firefighting apparatus will vary with the intended service of the vehicle.

• Pump size and amount of water, hose and equipment carried will vary with the intended type of service such as urban, suburban or rural. The total pumper capacity should not be less than the required fire flows of the community.

• The basic firefighting vehicle used in Ontario is the pumper which carries a wide variety of equipment and tools for firefighting and rescue. This basic equipment is designed to make these vehicles self-sustaining firefighting units and includes:

o pump

o hose

o water tank
ladders

o wide selection of portable tools and appliances

• Other types of apparatus used by the Ontario fire service include:

o aerial ladders

o elevating platforms and aerial towers

o specialised support vehicles

§ rescue trucks

§ hazmat

§ lighting

§ air supply

§ command

o mobile water supply apparatus

o boats

o pumper/rescues

o support vehicles

• It is not reasonable to expect that a single vehicle will provide all of the operational capabilities needed on the fireground. In those areas requiring aerial devices, a pumper/ladder combination may be used as initial attack fire apparatus. Good staffing is needed for effective use of such combination apparatus even if personnel are assigned to supporting apparatus.

• Where a single vehicle is provided for both types of service, it should carry a minimum amount of both types of equipment because of space and load limitations. An overloaded piece of apparatus, or one with inadequate hose carrying capability must be avoided.

Option	Considerations	Staffing	Package Cost[1]
Portable Pumps	• limited flow rates • limited structural capability - normally used for exterior / wildland fire suppression only • dependent upon static water sources • no insurance reduction incentive	minimal (at least 4)	$30,000[2]
Skid Mount Firefighting Packages	• limited flow rates • limited structural capability - normally used for exterior / wildland fire suppression only[3] • limited water supply on vehicle • normally restricted to exterior firefighting and limited rescue • no insurance reduction incentive	minimal (at least 4) highly dependent on type of fire attack see fireground staffing guideline	$75,000[4]
Initial Attack / Rescue Mini-pumper	• increased flow rates • basic level for structural firefighting capability • greater range of equipment • recognized for insurance reduction	highly dependent on type of fire attack see fireground staffing guideline	$140,000[5]
Tanker	• supplements pumper • no insurance reduction incentive	minimal when used as water shuttle	$75,000

Triple Combination Pumper	• basic level of equipment for structural firefighting / rescue • greater flow rate • increased water capacity • additional equipment • mobility provides flexible utilization • recognized for insurance reduction	highly dependent on type of fire attack see fireground staffing guideline	$225,000

[1] None of the costs reflect equipment accommodation, insurance, workers compensation, or annual operating costs.
[2] Estimate reflects cost of pump, firefighter protective clothing, hose, nozzles. etc.
[3] The capability of this type of unit is to a large extent dependent upon its design. Skid mount units with compressed air class A foam provide greater flexibility than units using water only.
[4] Estimate reflects the cost of vehicle, pumping equipment, protective clothing, hose, nozzles, etc.
[5] Estimate reflects cost of pump, firefighter protective clothing, hose, nozzles. etc.

Service Delivery Implications:

• Firefighting apparatus and equipment are the tools for the provision of fire suppression and other emergency services and are a critical component of

• departments must have access to appropriate tools and must have the knowledge and skills to use these tools if they are to be successful.
A relatively high percentage of fire calls are handled successfully by the first arriving suppression vehicle, provided it arrives quickly, has an adequate crew and does not have to perform multiple duties such as search and rescue or laddering as well as extinguishment.

Quality and Performance Measures:

• Adequate water supply for firefighting is established by determining minimum rates of fire flow needed to control potential fires in representative structures and exposures in the fire area

• the fire flow rates are based on estimates of the number of hose streams needed to control potential fires

• includes demand for hose streams together with water for automatic fire sprinkler systems

o significant reductions in needed fire flow often can be achieved by the installation of an approved automatic fire sprinkler system throughout the building

• fire department should predetermine fire flow needs for proposed projects

• need to co-ordinate with Building Department and Building Code requirements

o satisfactory water flows should be a condition of issuing a building permit

• see **OFM Communiqué 96-022** re water supply requirements and the Ontario Building Code

Codes, Standards, and Best Practices

• Apparatus should be designed and powered adequately for the service to be carried out and the territory in which it is used.

• Pumper

o CAN/ULC-S515, *Standard for Automobile Firefighting Apparatus*

o CAN/ULC-S523, *Standard for Light Attack Firefighting Apparatus*

o NFPA 1901, *Standard For Pumper Fire Apparatus*

o NFPA 1902, *Standard For Initial Attack Fire Apparatus*

• Aerial Ladders & Elevating Platforms

o CAN/ULC-S515, *Standard for Automobile Firefighting Apparatus*

o NFPA 1904, *Standard For Aerial Ladder and Elevating Platform Fire Apparatus*

o NFPA 1914, *Standard For Testing Fire Department Aerial Devices*

• Portable Pumps

NFPA 1921, *Standard For Fire Department Portable Pumping Units*

• Ladders

o NFPA 1931, *Standard For Fire Department Ground Ladders*

o NFPA 1932, *Standard on Use, Maintenance and Service Testing of Fire Department Ground Ladders*

• Hose

o NFPA 1961, *Standard for Fire Hose*

o NFPA 1962, S*tandard for the Care, Use, and Maintenance of Fire Hose, Including Connections and Nozzles*

o NFPA 1963, *Standards for Screw Threads and Gaskets for Fire Hose Connections*

o CAN4-S543 *Standard for Quick Connect Internal Lug Couplings For Fire Hose*

o ULC-S513 S*tandard for 1.5" and 2.5" Threaded Fire Hose Couplings*

o CAN/ULC-S522 *Standard for Fire Extinguisher and Booster Hose*

o ULC-S511 *Standard For Rubber Lined Fire Hose*

• Water Supply

o NFPA 1903, *Mobile Water Supply Fire Apparatus*

o NFPA 1231, *Standard on Water Supplies for Suburban and Rural Firefighting*

Codes, Standards, and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **http://www.ofm.gov.on.ca.** Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.
See also PFSG **04-01-12** Selecting Fire Suppression Capability

Definitions:

• Pumper

o A vehicle equipped with a permanently mounted fire pump of 625 gpm (3000 L/min) rated capacity or greater, a water tank of at least 500 gal. 2300 litres), and a hose body that meet or exceed the requirements of ULC-S515. The primary purpose of this type of apparatus is to combat structural or associated fires.

• Mobile Water Supply Apparatus (Tanker, Tender)

o A vehicle equipped with a water tank of at least 1000 gal. (3800 litres) and designed primarily for transporting (pickup, transporting and delivering) water to fire emergency scenes to be applied by other vehicles or pumping equipment.

• Initial Attack Fire Apparatus

o A vehicle equipped with an attack pump [(250 through 750 gpm, 950 through 2650 L/min)], a water tank, and minimum hose and equipment that is designed primarily for rapid response and initiating fire attack on structural, vehicular, or vegetation fires and supporting associated fire department operations.

• Aerial Ladder & Elevating Platform Fire Apparatus

o A vehicle equipped with a permanently mounted, power operated aerial ladder or with a passenger carrying platform attached to the uppermost boom of a series of telescoping and/or articulating booms and designed to provide rescue capability from elevated positions, and the positioning of firefighters and elevated master streams for fire suppression tasks.

Operational Planning: An Official Guide to Matching Resource Deployment and Risk

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-08-10**
Section **Emergency Response**	Date **January 2011**
Operational Planning: An Official Guide to Matching Resource Deployment and Risk	

Under Review

1.0 Purpose

1.1 Municipalities are responsible for the funding and delivery of fire protection services in accordance with Section 2 of the *Fire Protection and Prevention Act, 1997* (FPPA).
In order to meet the intent of Section 2 of the FPPA, municipalities are expected to implement a risk management program.
The evaluation tool ***Operational Planning: An Official Guide to Matching Resource Deployment and Risk***, found in the Appendix, is to be used as part of a risk management program. The purpose of this guideline is to encourage municipalities and fire departments to use this tool so that they can make informed decisions regarding the delivery of fire suppression services.

2.0 Scope

2.1 This g**u**ideline applies to all municipalities.

3.0 Risk Management

3.1 In order to be in compliance with clause 2.(1)(a) of the FPPA, a fire department must have completed a simplified risk assessment, one of the four key minimum requirements for fire protection services. It is expected that this assessment be reviewed and updated periodically to support informed decision making and evaluation of program delivery.

4.0 Legislation

4.1 This guideline is issued under the authority of clause 9.(1)(d) of the FPPA.

4.2 Municipal Council, obligated by the FPPA to provide fire protection services, must

• establish levels of service commensurate with needs and circumstances; and

• provide fiscal resources for staffing, apparatus and equipment to support the established level of service.

4.3 Fire Chief
Person appointed by the council of a municipality, responsible for the delivery of fire protection services, and accountable to the council.

4.4 Fire Department
The fire department delivers the services as approved by municipal council and at the direction of the fire chief.
Operational Planning: An Official Guide to Matching Resource Deployment and Risk can help fire departments to

- assess and analyze fire risk;
- determine current capabilities: staffing, apparatus, equipment, etc.;
- find gaps; and
- work out options, develop recommendations and present them to municipal council using a standardized format.

4.5 Clause 2.(1)(b)
Every municipality shall provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances

4.6 Subsection 2.(7)
The Fire Marshal may monitor and review the fire protection services provided by municipalities to ensure that municipalities have met their responsibilities under this section and, if the Fire Marshal is of the opinion that, as a result of a municipality failing to comply with its responsibilities under subsection (1), a serious threat to public safety exists in the municipality, he or she may make recommendations to the council of the municipality with respect to possible measures the municipality may take to remedy or reduce the threat to public safety

4.7 Subsection 5.(1)
A fire department shall provide fire suppression services and may provide other fire protection services in a municipality, group of municipalities or in territory without municipal organization.

4.8 Clause 9.(1)(a)
The Fire Marshal has the power to monitor, review and advise municipalities respecting the provision of fire protection services and to make recommendations to municipal councils for improving the efficiency and effectiveness of those services.

4.9 Clause 9.(2)(b)
It is the duty of the Fire Marshal to advise municipalities in the interpretation and enforcement of this Act and the regulations.

4.10 Clause 9.(2)(d)
It is the duty of the Fire Marshal to develop training programs and evaluation systems for persons involved in the provision of fire protection services and to provide programs to improve practices relating to fire protection services.

5.0 References

OFM documents, programs and courses

- Comprehensive Fire Safety Effectiveness Model
- Public Fire Safety Guidelines
- Shaping Fire Safe Communities – Phases 1 and 2
- Essentials for Municipal Decision Makers [course]
- Essentials for Fire Service Leaders [course]

National Fire Protection Association standards

- NFPA 1710 and NFPA 1720

6.0 Appendix

Evaluation tool:
Operational Planning: An Official Guide to Matching Resource Deployment and Risk.

Workbook
(Guidelines PDF version available on request at **AskOFM**)
HTML version

Selection of Appropriate Fire Prevention Programs

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-40-03**
Section **Fire Prevention and Public Fire Safety Education**	Date **March 2001**
Subject **Selection of Appropriate Fire Prevention Programs**	Page

Under Review

Purpose:

To assist in developing or selecting programs to meet the four minimum fire prevention and public education requirements of the Fire Protection and Prevention Act.

Introduction:

Municipalities must develop a fire prevention and fire safety education program that addresses their needs and circumstances, as determined by the application of sound risk management principles.

Minimum Required Services:

Section 2. (1) of the Fire Protection and Prevention Act states:
(1) Every municipality shall,

1. establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and
2. provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.

Therefore, as a minimum acceptable model municipalities must provide the services listed below. The simplified risk assessment should identify the extent to which additional services may be required to meet the local needs and circumstances of specific municipalities.
Municipalities may develop a different model for fire prevention and public education services provided they are able to demonstrate that their model meets the mandated requirements of the community's local needs.

3. Simplified risk assessment
4. A smoke alarm program
5. Fire safety education material distributed to residents/occupants
6. Inspections upon complaint or when requested to assist with code compliance

Simplified Risk Assessment:

A simplified risk assessment must be done for the community to determine the needs and circumstances of the municipality and to establish the level of fire prevention and public fire safety education required. Any significant risks identified through the analysis should be addressed. For example; if the risk assessment indicates a significant life or fire loss in multi-unit residential buildings, a program that will adequately improve their fire safety - such as routine inspections - would be appropriate to address the specific need of the community.
The scope and extent of the remaining three required programs can be determined by the results of the simplified risk assessment.

Smoke Alarm Program:

The objective of a smoke alarm program is the provision and maintenance of working smoke alarms and home escape planning activities for all residential occupancies in the municipality. The activities associated with the program may include any combination of the following:

- community surveys
- distribution of pamphlets or other education material
- instruction to residents regarding smoke alarms
- providing smoke alarms at reduced or no cost
- installation of smoke alarms
- inspecting premises to determine compliance with the smoke alarm provisions of the Fire Code.

Fire Safety Material:

Fire safety education material may be distributed to residents and/or occupants consistent with the community's needs and circumstances by any combination of the following activities:

- distribution of pamphlets or other education material
- public service announcements utilizing the available media
- instruction to residents/occupants on fire safety matters
- presentations to resident groups
- attendance at public events

Fire safety education material addresses such issues as preventing fire occurrence, the value of smoke alarms, planning escape from fire, and being prepared to deal with a fire incident. The OFM Regional Office can provide assistance with fire safety education material for the public. Fire safety education material may also be found on the OFM website.

Public Fire Safety Education:

For public fire safety education, the following should be established:

- the audience to be targeted
- the message that needs to be delivered to improve the fire safety situation must be determined.
- an inventory of the available or required resources and programming.
- the most appropriate method of delivering the message.
- the duration or frequency of the message delivery.

Inspections:

Inspections of properties must be done, or arranged for, by the municipality when:

- a complaint is received regarding the fire safety of a property
- a request is made to assist a property owner or occupant to comply with the Fire Code and the involvement of the Chief Fire Official is required by the Ontario Fire Code

Any inspection conducted must include notification of the property owner or responsible person and appropriate follow-up with enforcement, if necessary.

Inspection Program Considerations:

For inspections, the following factors should be considered:

- The type of inspections to be conducted and the buildings to be inspected. For example: routine inspections of all multi-unit residential buildings, new construction inspections of all buildings, smoke alarm checks of single family residential buildings.
- The methods of inspection appropriate for the circumstance. This will have implications for the amount of time required to inspect, as more comprehensive inspections require more time.
- The category of buildings being inspected and the skills and knowledge required to inspect them. The more complicated the building, the more skill and knowledge required.
- The frequency that the properties will be subject to inspection

Program Selection:

IIn addition to the minimum services outlined above, programs need to be selected, developed and implemented that address any risks identified through needs analysis. Programs being considered need to be effective for the type of concerns identified. For example; a routine inspection program would be effective to address concerns for the fire safety of a group of buildings that demonstrate poor performance during fire incidents. Similarly, a public fire safety education program such as Older and Wiser would be effective where there is a lack of knowledge of fire safety behaviour by the elderly and this lack causes them to suffer significant fire losses.
Each area of program activity has a number of factors which need to be considered.

Service Delivery Options:

The Fire Prevention Effectiveness Model may also assist with informed decision making about fire prevention and public education programs. Once the needs analysis component of the model has been completed, fire department managers can decide what programs are appropriate to address their identified local risks.
There are a number of options for delivery of selected fire prevention programs. They can be provided by fire department staff - personnel dedicated to fire prevention and/or fire suppression staff. Other persons in the community may be used. Agreements with other communities may be made for provision of services. The OFM provides assistance in delivery of fire prevention programs through the Assist Program.

Policy Requirements and Other Relevant Issues:

Any selected/mandated programs must have sufficient resources, human and others, to be effectively delivered.
Persons assigned responsibility for delivering programs must be adequately trained.
Policy decisions must be made with appropriate authority and records made of the level of service decreed.
Appropriate program guidelines must be established for each program to be delivered.
Any fees for services should be discussed and decided upon at the policy level.

Legal counsel should be consulted regarding any changes to the delivery of services to the community.

Codes, Standards, and Best Practices:

Codes, Standards and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **http://www.mcscs.jus.gov.on.ca/ .** Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.

See also PFSG
01-02-01 Comprehensive Fire Safety Effectiveness Model
04-12-13 Core Services
04-40A-03 Simplified Risk Assessments
04-40B-12 Smoke Alarm Programs
04-40C-12 Public Education Programs
04-40D-12 Inspection Programs

Public Fire Safety Guidelines

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-40A-03**
Section **Fire Prevention and Public Fire Safety Education**	Date **January 2006**
Subject **Simplified Risk Assessment**	Page

Under Review

Purpose:

Municipalities have a legislated responsibility under the Fire Protection and Prevention Act (FPPA) to provide public education with respect to fire safety and certain components of fire prevention. Conducting a simplified risk assessment is the first step towards compliance with these requirements and is intended to identify information required by a municipality to make informed decisions about the programs and activities necessary to effectively manage the community fire risk based upon local needs and circumstances.
In general terms, needs and circumstances relate to a municipality's economic situation, geography, population, building profiles and service delivery system, e.g., volunteer fire department.

Simplified Risk Assessment:

Conducting a simplified risk assessment is a practical information gathering and analyzing exercise intended to create a community fire profile that will aid in identifying appropriate programs or activities that can be implemented to effectively address the community's fire safety needs.
The simplified risk assessment is designed to serve the needs of smaller municipalities and should also be used as a first step (basic foundation) for larger municipalities that face more complex fire safety challenges within their communities. It is recommended that larger municipalities then apply the OFM Fire Prevention Effectiveness Model to develop a more comprehensive fire profile and to identify and address their public education and fire prevention needs. Reference can be made to Public Fire Safety Guideline **04-39-12** for further details.
As a minimum requirement, a community fire safety program must include:

- a simplified risk assessment
- a smoke alarm program
- distribution of fire safety education materials, and
- participating in inspections upon complaint or when requested to assist with Fire Code compliance.

(Refer to **PFSG 04-40-12** in respect of public education and fire prevention services.)
As each community is different, the simplified risk assessment and ensuing fire concern profile will assist in identifying the degree to which these activities are required in accordance with local needs and circumstances. The simplified risk assessment is made up of the following components:

- demographic profile
- building stock profile
- local and provincial fire loss profiles
- information analysis and evaluation
- priority setting for compliance
- implementing solutions

Reference can be made to the Sample Simplified Risk Assessment located on the OFM website **www.ofm.gov.on.ca**, under the Fire Service heading.
The following information, sample templates and worksheets may be used to help compile and analyse the data gathered for the simplified risk assessment.

DATA COLLECTION COMPONENT

DEMOGRAPHIC PROFILE

It is important to examine local demographic data to determine the following:

- population makeup, based on age groupings
- vulnerable individuals or occupancies
- cultural differences such as language and customs
- seasonal population shifts in tourist areas such as cottages, mobile homes, trailer parks, student influx in university/college locales
- other considerations specific to certain municipalities

You may be able to obtain data about your population from your local planning office or town clerk. Other excellent sources of information include: Statistics Canada **www.statcan.ca** (800) 263-1136; Municipal Financial Information Return **http://www.oraweb.mah.gov.on.ca/fir/welcome.htm**; and Financial Demographic Information **www.fin.gov.on.ca**.
It may be helpful to obtain provincial demographic data at the same time so you can compare your local data with provincial data.

Demographic Profile

This demographic is based on the 2001 Census. (PDF version available on request at **AskOFM**)

Ages of population	**Number**	**% of Total Population**
0-14		
15-64		
65 and over		
Total Population		

Vulnerable groups / individuals	**Population fluctuation**
Barriers to Public Education	

Information Analysis and Evaluation

Demographic Profile Commentary

Demographic Profile Concerns

BUILDING STOCK PROFILE

Occupancy Classification		**# of Occupancies**
Group A	Assembly	
Group B	Institutional	
Group C	Single family	
	Multi-unit residential	
	Hotel / Motel	
	Mobile Homes & Trailers	
	Other	
Groups D & E	Commercial	
Group F	Industrial	
Other occupancies not classified in OBC such as farm buildings.		

Totals	
Total # of mixed occupancy buildings	

Building Stock Profile Commentary

Building Stock Profile Concerns

MUNICIPAL FIRE LOSS PROFILE

TABLE 1 - Municipal Fire Deaths and Injuries								
Occupancy Classification		**2003**		**2004**		**2005**		**Total Deaths+Injuries (2003-2005)**
		Deaths	**Injuries**	**Deaths**	**Injuries**	**Deaths**	**Injuries**	
Group A	Assembly							
Group B	Institutional							
Group C	Residential							
Groups D & E	Commercial							
Group F	Industrial							
Mobile Homes & Trailers								
Other								
Total Dollar Loss								

Municipal Property Dollar Loss

TABLE 2 - Municipal Property Dollar Loss								
Classification Occupancy		**2003**		**2004**		**2005**		**% of Total Dollar Loss (2003-2005)**
		# of Fires	**$**	**# of Fires**	**$**	**# of Fires**	**$**	
Group A	Assembly							
Group B	Institutional							
Group C	Residential							
Groups D & E	Commercial							
Group F	Industrial							

Mobile Homes & Trailers								
Other								
Total Dollar Loss								

TABLE 3 - Fire Cause			
Incident type	**2003**	**2004**	**2005**
Smoking Articles			
Chimney fires/woodstove			
Open air fires/grass/brush			
Mischief / Arson			
Electrical			
Accidental			
Other / undetermined			
Total			

Information Analysis and Evaluation

Municipal Fire Loss Profile Commentary

Municipal Fire Loss Profile Concerns

Codes, Standards, and Best Practices

Codes, Standards and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **http://www.mcscs.jus.gov.on.ca/ .** Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.

See also PFSG
01-02-01 Comprehensive Fire Safety Effectiveness Model
02-02-12 &
02-02-03 Fire Risk Assessment
02-03-01 Economic Circumstances
04-12-13 Core Services
04-40-12 & **03** Selection of Appropriate Fire Prevention Programs
04-40A-12 Simplified Risk Assessment
04-45-12 Fire Prevention Policy
04-56-12 Use of Fire Related Statistics

Simplified Risk Assessment

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-40A-12**
Section **Fire Prevention and Public Fire Safety Education**	Date **March 2001**
Subject **Simplified Risk Assessment**	Page

Under Review

Purpose:

Municipalities have a legislated responsibility under the Fire Protection and Prevention Act (FPPA) to provide public education with respect to fire safety and certain components of fire prevention. Conducting a simplified risk assessment is the first step towards compliance with these requirements and is intended to identify information required by a municipality to make informed decisions about the programs and activities necessary to effectively manage the community fire risk based upon local needs and circumstances.

Simplified Risk Assessment:

Conducting a simplified risk assessment is a practical information-gathering and analysing exercise intended to create a community fire profile that will aid in identifying appropriate programs or activities that can be implemented to effectively address the community's fire safety needs.
As a minimum, a community fire safety program must include:

- a smoke alarm program,
- distribution of fire safety education materials, and
- participating in inspections upon complaint or when requested to assist with Fire Code compliance.

(Refer to PFSG **04-40-12** in respect of public education and fire prevention services.)
As each community is different, the simplified risk assessment will indicate the degree to which these activities take place in accordance with its local needs and circumstances.

Assessment Components and Risk Considerations:

The following categories of information are important to consider when gathering data and developing a community fire profile through a simplified risk assessment.

Community Demographic Profile

- Population makeup, based on age groupings
- Vulnerable individuals or occupancies
- Cultural differences, such as language and customs
- Seasonal population shifts in tourist areas, mobile homes, trailer parks, university/college locales, etc.
- Other considerations specific to certain municipalities

Building Stock Profile

- Breakdown by Ontario Building Code occupancy classification
- Building density (core areas)
- Age of building stock
- Potential high fire risk occupancies (industrial, commercial, residential)
- Potential high life safety risk occupancies (hospitals, nursing homes, detention centres, group homes, residential care, retirement homes)
- Potential economic/employment/environmental impact

Municipal Fire Loss Profile

- Deaths/injuries
- Dollar loss
- Breakdown by occupancy classification
- The information gathered in each of the 3 categories must be examined, evaluated and analysed to identify the community fire profile and to identify potential fire concerns.

Provincial Fire Loss Profile

To assist municipalities in interpreting and understanding the significance of their municipal fire loss data, provincial data is provided in the following areas:

- fires by property type
- fire deaths by property type
- fire deaths by age of victim
- fire loss ($) by property type
- smoke alarm status in fatal fires

Examining, Evaluating and Analysing the Information:

Municipalities are encouraged to compare these provincial statistics with their municipal fire loss profile. When insufficient municipal data exists in this regard, it is recommended that the provincial profile data be used to establish program and resource priorities.

Priority Setting for Compliance

By reviewing the information gathered in the areas of demographics, building stock and fire loss experience, fire safety concerns can be identified and prioritised. No two communities will have the same fire profile, as local needs and circumstances vary.

Selecting and Implementing Options:

Once the community risks have been identified and prioritised, while at the same time taking into consideration resources and other factors, an implementation strategy would be developed. The strategy would involve:

- Council approval of activities
- Resource allocation
- Assignment of responsibilities
- Development of program operational guidelines

Ongoing program assessment

Codes, Standards, and Best Practices:

Codes, Standards, and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **http://www.ofm.gov.on.ca**. Please feel free to copy and distribute these documents. We ask that these documents not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.

See also the following Public Fire Safety Guidelines:

01-02-01 Comprehensive Fire Safety Effectiveness Model
02-02-12 & 03 Risk Assessment
02-03-01 Economic Circumstances
04-12-13 Core Services
04-40-03 Selection of Appropriate Fire Prevention Programs
04-40A-03 Simplified Risk Assessment
04-45-12 Fire Prevention Policy
04-56-12 Use of Fire Related Statistics

Smoke Alarm Program and Home Escape Planning

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-40B-03**
Section **Fire Prevention and Public Fire Safety Education**	Date **September 2004**
Subject **Smoke Alarm Program**	Page

Under Review

Purpose:

To assist municipalities to develop, implement and evaluate effective smoke alarm programs in accordance with the minimum acceptable model for the provision of fire prevention and fire safety education under section 2 (1)(a) of the **Fire Protection and Prevention Act, 1997**. (FFPA)

Introduction

Fire statistics show that having a working smoke alarm in the home will increase the chances of surviving a fire. Most fatal fires occur in the home while occupants are asleep. Fire deaths and injuries could be reduced significantly if every home had working smoke alarms and a home fire escape plan.

An effective smoke alarm program will help fire department staff protect residents from fire. Implementing a smoke alarm program will help:

- Ensure that owners have properly installed working smoke alarms in all residential occupancies
- Reduce fire deaths, injuries and property losses
- Educate residents about the importance of installing and maintaining smoke alarms
- Assist residents to develop and practice an effective home fire escape plan
- Assists the municipality in meeting its legislative requirements under the FPPA
- Create positive public relations between the community and the fire department

Identification

Local needs should be identified through a risk assessment that involves a review of demographics, residential building stock, residential fire losses, residential smoke alarm surveys and fire service experience. The risk assessment will assist the fire department staff in designing a smoke alarm program focusing on high-risk areas identified through analysis. Communities may also take advantage of various public fire safety programs that incorporate smoke alarm related elements.

Selection and Design

The objective of an effective smoke alarm program is to verify the provision, installation and maintenance of smoke alarms and the adoption of home fire escape planning activities in all residential occupancies. Fire department staff should develop operational guidelines for the smoke alarm programs consistent with the municipality's fire prevention policy. The activities associated with a smoke alarm program should include any combination or all of the following:

- Providing smoke alarm and home fire escape planning information
- Promoting regular testing and maintenance of smoke alarms
- Providing or replacing smoke alarms and/or batteries
- Encouraging residents to regularly maintain their smoke alarms
- Educating residents about the legal requirements for smoke alarms
- Enforcement of all legislation relating to smoke alarms
  Effectively tracking and evaluating your smoke alarm program
- Modifying the program where necessary to ensure success

Many municipalities may already be involved in a smoke alarm program. However, in some instances, the current program may not be meeting the specific needs of the community. The revised Alarmed for Life program provides some ideas and suggestions on developing, organizing and implementing an effective smoke alarm program in your community. The program design stage should take into consideration how the program will be tracked, measured and evaluated. This enables one to demonstrate the results of the program in an objective manner.

Implementation

Implementing a smoke alarm program must involve careful planning and development of appropriate operational guidelines. A smoke alarm program can be implemented in a variety of ways within the community including:

- Comprehensive training of firefighters involved in the delivery of the program, including public educators and/or community members on the selection, proper installation, maintenance and testing of smoke alarms and enforcement of the smoke alarm legislation
- Fire officials may wish to consider recruiting sponsors and partners in fire safety from local community organizations that share a vested interest in the fire safety of the community
- Providing public service announcements to local media such as newspapers, community cable television stations or local radio stations, including success stories
- Activities during fire prevention week or specific community events
- Programs such as Risk Watch, Older and Wiser, Kitchen Safety, Babysitting, Heroes or TAPP-C
- Networking with other community agencies which advocate life safety skills such as your community health unit
- Fire safety houses which teach community members fire safety skills including home escape planning
- Use of volunteers, such as retired school teachers or firefighters to assist with smoke alarm initiatives
- Media days
- Smoke alarm checks following emergency responses
- Door to door awareness activities

Evaluations

Evaluation of every smoke alarm program is essential to ensure the most appropriate use of the community's resources and to determine the impact of the program. Evaluation should be on going and will provide valuable information to measure the program's effectiveness and assist in determining where to focus program activities. The evaluation will also assist in determining the costs of developing and implementing the program. Evaluation criteria and information will be helpful, should the community wish to develop partnerships and acquire program sponsorship.
To evaluate your programs, measures of effectiveness and efficiency need to be established. This can be accomplished in a variety of ways, such as:

- Analysing responses to surveys from community members
- Tracking the number of households reached by the program
- Comparing fire loss statistics using the Standard Incident Report (SIR)
- Comparing fire deaths or injuries
- Recording success stories within your community
- Reviewing smoke alarm status at emergency responses
- Obtaining feedback from all those delivering the program
- Establishing a baseline to use as a benchmark

A smoke alarm tracking form may be helpful for documenting activities associated with the program, including such things as the number of smoke alarms distributed and installed, smoke alarms tested, batteries provided/replaced, etc.
Program evaluation results will determine success or identify the need to modify the program to ensure success and desired goals are achieved.
A sample tracking form is included as an appendix to this guideline. (PDF version available on request at **AskOFM**) / **HTML**)

Codes, Standards and Best Practices:

Codes, Standards and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **http://www.mcscs.jus.gov.on.ca/ .**
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See also;
CAN/ULC-S553 M86 Standard for the Installation of Smoke Alarms
OFM-TG-01-2000 Fire Safety Enforcement
OFM-TG-04-98 Maintenance of Smoke Alarms
01-01-01 Fire Protection Review Process
04-40-12 & **03** Selection of Appropriate Fire Prevention Programs
04-40A-12 Simplified Risk Assessments
04-40B-12 Smoke Alarm Program
04-40C-12 &
04-40C-03 Distribution of Public Fire Safety Education Materials
04-40D-12 Inspections upon Request or Complaint
04-60-12 Records Management
Alarmed for Life! Program Information
For further information about *Alarmed for Life* contact your Regional OFM office or your local Fire Protection Adviser

Smoke Alarm Program

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-40B-12**
Section **Fire Prevention and Public Fire Safety Education**	Date **March 2001**
Subject **Smoke Alarm Program and Home Escape Planning**	Page

Under Review

Purpose:

To assist municipalities in developing smoke alarm programs required to meet the minimum requirements of the Fire Protection and Prevention Act.

Introduction:

The loss of life and property in Ontario due to fire has continued to decrease since the introduction and widespread use of smoke alarms listed by an accredited agency such as ULC.

Development:

All municipalities are required to implement a smoke alarm program that meets local needs and circumstances. Local needs may be identified through a simplified risk assessment, a review of emergency response data, residential surveys and fire service experience. Municipalities may also take advantage of various smoke alarm initiatives that take place throughout the province sponsored by the Fire Marshal's Public Fire Safety Council.

Related Functions:

The objective of a smoke alarm program is the provision, locating, installation and maintenance of working smoke alarms and home escape planning activities for all residential occupancies in the municipality. The activities associated with the program may include any combination of the following:

- community surveys
- distribution of pamphlets or other education material
- instruction to residents regarding smoke alarms
- providing smoke alarms and batteries
- installation of smoke alarms
- inspecting premises to determine and ensure compliance with the smoke alarm provisions of the Fire Code
- departmental programs to evaluate smoke alarm usage and effectiveness in the community

Codes, Standards, and Best Practices:

Codes, Standards and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **http://www.mcscs.jus.gov.on.ca/ .** Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.

See also;
PFSG
04-40-12 & **03** Selection of Appropriate Fire Prevention Programs
04-40A-12 Simplified Risk Assessments
04-40C-12 Distribution of Public Fire Safety Education Materials
04-40D-12 Inspections upon Request or Complaint

Distribution of Public Fire Safety Education Materials

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-40C-03**
Section **Fire Prevention and Public Fire Safety Education**	Date **September 2004**
Subject **Distribution of Public Fire Safety Education Materials**	Page

Under Review

Purpose:

To assist municipalities in developing strategies for the distribution of public fire safety educational materials in accordance with the minimum acceptable model for the provision of fire prevention and fire safety education under section 2 (1)(a) of the Fire Protection and Prevention Act, 1997.

Introduction

The FPPA recognizes the importance of implementing three lines of defense (Public Education, Fire Safety Standards and Enforcement and Emergency Response) to achieve an acceptable level of fire safety within communities. Distribution of public fire safety education materials fall under the first line of defense.
The loss of life and property in Ontario due to fire has continued to drop for several years. Changing public attitude and improved public knowledge of fire safety can help account for this decrease.

Selection

Public fire safety education materials can vary between communities depending on each community's needs and circumstances as determined by the risk assessment process.
The methods of delivery of these materials to the public can also vary greatly depending on the types of information being disseminated and the audience being targeted (e.g. children, seniors, specific cultural communities and overcoming language barriers, etc.)
Local needs should be identified through a risk assessment, which includes a review of emergency response data, residential surveys and fire service experience. A risk assessment will assist the fire department in identifying high-risk groups and activities so that effective strategies can be developed to successfully distribute appropriate public fire safety education materials to those at highest risk of fire.
Community needs may also be identified through the use of fire safety surveys and focus groups. These may help to determine the community's knowledge and attitudes regarding fire safety as well as providing insight into the type of fire safety information that is needed in a community. Surveys are also helpful to gauge the impact of fire safety information that has been distributed.
Fire safety education materials focus on fire prevention, detection and escape. These materials and messages will change depending upon the target audience.

Implementation

Fire safety education materials may be distributed to residents in one or more of the following ways:

- Distributing pamphlets or other educational material (e.g. through mailings, on a web site, by a resident calling a phone number to request information, by making materials available in municipal buildings, distributing material to critical contact organizations, through door to door campaigns, etc.)
- Distributing public service announcements utilizing available media resources (television, print and radio)
- Providing instruction to residents/occupants on fire safety planning and related fire safety matters
- Presenting to groups such as seniors, children or special interest groups like girl guides/boy scouts, business or professional associations
- Using effective training aids such as the safety villages, fire safety trailers, videos, articles and photos related to actual fires
- Participating in displays and public events
- Providing fire safety messages on municipal vehicles and on sign boards throughout the community
- Providing training and resources to target group contacts (e.g. a community leader, homecare worker, seniors' events coordinator, building manager, etc.)
- And other methods

Fire officials should identify the most effective means for their residents who are most at risk. Responsibility should be assigned to ensure materials are delivered. Accurate records should be kept
of the materials distributed.
Fire officials may wish to consider recruiting sponsors and partners in fire safety, from local community organizations that share a vested interest in the fire safety of the community.
Other communities may have excellent public fire safety education program materials and resources already in place. Consider contacting them for suggestions and additional information, which may be available. For information on ordering OFM or Fire Marshal Public Fire Safety Council (FMPFSC) materials contact the OFM
Regional Office. For enquiries about appropriate materials for your programs, contact your local fire protection adviser. Fire safety education materials may also be found on the OFM website, **http://www.mcscs.jus.gov.on.ca/ .** or through the Fire Marshal's Public Fire Safety Council Distribution Centre, **www.safecommunities.com**.
It is important for fire officials to track the distribution of materials for evaluation purposes. Fire officials may wish to review relevant chapters of the *IFSTA Fire and Life Safety Educator*, as a resource for the evaluation process of educational materials. As a minimum, the number of target residents reached should be recorded.

Resources

Resources and additional information that will assist in establishing local policies and appropriate programs, are listed below. All are available at **http://www.mcscs.jus.gov.on.ca/ .** Please feel free to copy and distribute this document. We ask that the document not be altered in any way,

that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.
Public Education Activity Form (**html**)

Resource Material & Codes Standards & Best Practices

Public Fire and Life Safety Educator Course
PFSG **04-40-12** & **03** Selection of Appropriate Fire Prevention Programs Fire Marshal's Public Fire Safety Council @ **www.firesafetycouncil.com**
OFM website – **www.ofm.gov.on.ca** for the following links:
Fire Prevention: Fire Marshal's Public Fire Safety Council

- Resource Catalogue
- Public Education Programs
- Media Information

Fire Prevention Week:

- Information and resource kits for fire prevention week activities

Fire Safety Information:

- Pamphlets
- Public Service Announcements

Publications:

- News Releases
- Risk Guardian
- Fire Statistics
- Ontario Fire Services Messenger
- OFM Communiqus

National Fire Protection Association materials (**www.nfpa.org**)
Neighbouring communities and their fire departments/services.

Inspections Upon Request or Complaint

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-40D-03**
Section **Fire Prevention and Public Fire Safety Education**	Date **September 2004** Revision Date **February 2014**
Subject **Inspections Upon Request or Complaint**	Page

Under Review

1.0 Purpose:

To assist fire departments with the development and implementation of a process to ensure fire safety inspections are conducted upon complaint, request and as necessary to meet the mandatory requirements of the ***Fire Protection and Prevention Act, 1997*** (FPPA) and associated regulations.

2.0 Introduction

The FPPA recognizes the importance of implementing three lines of defence (Public Education, Fire Safety Standards and Enforcement and Emergency Response) to achieve an acceptable level of fire safety within communities. Inspections upon request and complaint fall under the second line of defence.

Buildings maintained in accordance with the provisions of the Fire Code are more fire safe for the occupants and the responding fire fighters. While building owners are responsible for carrying out the provisions of the Fire Code, fire services have a public safety interest in ensuring that buildings are maintained in accordance with the provisions of the Fire Code.

Inspections of properties must be conducted, or arranged for, by the municipality when:

- A complaint is received regarding the fire safety of a property;
- A request is made by a property owner or occupant for assistance to comply with the Fire Code where the involvement of the Chief Fire Official is required; and
- The fire department becomes aware of Fire Code violations and/or other fire hazards at a particular property.

3.0 Ontario Regulation 365/13 – Mandatory Assessment of Complaints and Requests for Approval

Ontario Regulation 365/13 requires that fire safety assessments and inspections, if necessary, be undertaken as directed by the Fire Marshal for:

(1) every building or property for which a fire safety complaint is received; and

(2) every building or property for which a request for assistance to comply with the Fire Code is received and the involvement of the Chief Fire Official is required.

4.0 Ontario Regulation 364/13 – Mandatory Inspection – Fire Drill in Vulnerable Occupancy

Ontario Regulation 364/13 requires that fire safety inspections be undertaken, as directed by the Fire Marshal, for every care occupancy, care and treatment occupancy and retirement home for which an annual fire drill is required by Sentence 2.8.3.2.(2.1) of Division B of the Fire Code.

5.0 Integration with OFMEM Guidelines and Directives

This guideline is intended to be used as part of an overall municipal fire risk management program – therefore all other OFMEM guidelines are intended to be utilized when applicable.

Clause 9(1)(b) of the *Fire Protection and Prevention Act, 1997* (FPPA) states:

The Fire Marshal has the power to issue directives to assistants to the Fire Marshal respecting matters relating to this Act and the regulations.

And further

Clause 11 (1) states:

The following persons are assistants to the Fire Marshal and shall follow the Fire Marshal's directives in carrying out this Act,

(a) the fire chief of every fire department;

(b) the clerk of every municipality that does not have a fire department;

(c) any member of a fire prevention bureau established by a municipality; and

(d) every person designated by the Fire Marshal as an assistant to the Fire Marshal

The following directives have been created in conjunction with this Guideline to assist Municipalities in understanding and complying with their responsibilities as set out in O. Reg. 213/07 as amended by O. Reg. 150/13, and with O. Reg. 364/13 and O. Reg. 365/13.

- Fire Marshal Directive 2014-001, Registry of Vulnerable Occupancies
- Fire Marshal Directive 2014-002, Vulnerable Occupancies – Fire Drill Scenarios, Fire Drill Observations, Fire Safety Inspections
- Fire Marshal Directive 2014-003, Inspections of All Buildings

This guideline is intended to be used as part of an overall municipal fire risk management program, therefore it is expected that all other OFMEM guidelines will be utilized where applicable.

6.0 Inspection Program

The fire department's fire prevention policy and operational guidelines should contain criteria to determine how quickly and in what manner a complaint/request is addressed as well as appropriate follow-up with enforcement, as necessary, to ensure corrective action has been taken to ensure Fire Code compliance. Technical Guideline TG-01-2012 "Fire Safety Inspections and Enforcement" will assist in the process of inspection through to

enforcement. Appropriate follow-up with enforcement, as necessary, must be conducted to ensure corrective action has been taken to eliminate any identified violations and/or hazards.

The following factors should be considered when developing Fire Department Operational Guidelines and Policies:

- The type of inspections to be conducted and the buildings to be inspected.
- The methods of inspection appropriate for the circumstance. This will have implications for the amount of time required to inspect, as more comprehensive inspections require more time.
- The classification of buildings being inspected and the skills and knowledge required to inspect them. The more complicated the building, the more skill and knowledge required.
- Technical assistance required to assist with conducting the inspection, e.g. Electrical Safety Authority, Professional Engineer.
- The seriousness of the complaint received.
- Records management policies (Inspection history of the building including non-compliance or Inspection Orders issued).

6.1 Request Inspections

In order to meet the obligations set out in Section 2(1)(a) of the *Fire Protection and Prevention Act, 1997* (FPPA), fire departments are expected to respond to requests to assist owners to comply with fire safety legislation in accordance with Directive 2014-003. Certain provisions of the Fire Code require the approval of the Chief Fire Official (e.g. fire safety planning), where the property owner cannot comply with the Fire Code without the assistance of the Chief Fire Official. This type of activity assists in improving the fire safety of properties in the community. It also allows the property owner to propose alternate means for compliance for certain Fire Code requirements.

Request inspections referred to in this guideline do not include inspections for licensing, property resale, insurance letters or other similar purposes. These inspections may be conducted at the discretion of council, however, should not take priority over inspections that are considered as mandatory to meet the requirements of the FPPA.

6.2 Complaint Inspections

A complaint may be received from a number of sources including: the public, fire suppression crews, outside agencies or government ministries. Complaints are often initiated as a result of a dispute. Therefore it is important that the inspector must demonstrate impartiality and remain focused on the fire safety concern that has been raised. Conducting complaint inspections will assist communities and their fire departments to mitigate liability concerns.

The review of the complaint determines if the complaint is justified. Any fire code violations or other fire and/or life safety hazards identified during the inspection must be reported to the property owner or other person having responsibility for the property.

Note: This type of inspection may not address every hazard on the property.

6.3 Inspections Where The Fire Department Becomes Aware of a Fire Code Violation or Other Fire Safety Hazard at a Property

When a fire department becomes aware of a Fire Code violation or other fire and/or life safety hazard at a property, it is necessary to conduct an inspection to confirm the violation or hazard, and steps are taken to ensure the owner corrects the violation or eliminates the hazard.

When an owner is unwilling to comply with the Fire Code or correct a fire and/or life safety hazard voluntarily, the fire official should exercise their enforcement authority provided by the FPPA. Refer to Technical Guideline TG-01-2012 "Fire Safety Inspections and Enforcement". Failure to do so could expose the municipality to potential liability for failing to exercise due diligence.

6.4 Inspections identified in the Community's Simplified Risk Assessment

Utilization of the Simplified Risk Assessment Tool may identify a number of high risk properties in a community. Code enforcement inspections of high risk properties are strongly encouraged. Ensuring the fire safety of these properties is a vital component of the overall fire protection of a community. High risk properties include:

- Properties where a fire would have a significant impact on the community, (employment, social, environmental impact);
- Assembly occupancies;
- Multi-unit residential occupancies;
- Industrial occupancies;
- Older buildings in downtown core;
- Care and treatment occupancies;
- Care occupancies; and
- Retirement homes.

Once a community's fire risks have been identified, inspection programs, which are most likely to address these risks, should be implemented. Inspection priority should be based on the degree of risk. The frequency of the inspections will depend on the resources provided by the municipality or as regulated.

The skills necessary to conduct some of these inspections may not be available in the community and it may be necessary to arrange for assistance from other sources such as a neighbouring fire department or OFMEM staff.

The Office of the Fire Marshal and Emergency Management offers an "Inspection Assist Program" to communities and fire departments that may require advice and/or assistance with a particular inspection. This assistance can be arranged through the local Fire Protection Adviser or OFMEM regional office.

7.0 Fire Safety Inspections and Enforcement – OFMEM TG 01-2012

OFMEM Technical Guideline TG-01-2012 "Fire Safety Inspections and Enforcement" assists municipalities and their fire services in meeting their fire safety inspection and enforcement responsibilities in the most effective and efficient way possible, as provided by the FPPA. To ensure efficient and effective fire safety inspections are carried out, the technical guideline provides compliance options. The option(s) selected should ensure that the Fire Code contraventions are dealt with in the most expeditious manner. Any inspection conducted must include appropriate follow-up and enforcement, as necessary. These inspections should be conducted within a short timeframe, relevant to the seriousness of the complaint.

8.0 Records, Documentation and Forms

Samples of records management, documentation and forms may be found in **Technical Guideline TG-01-2012 "Fire Safety Inspection and Enforcement"**. This document will assist you in the process of inspection through to enforcement.

The benefits of a good record keeping system include assisting with:

- Needs assessment;
- Resource planning;
- Program evaluation;
- Effective prosecutions;
- Inspection planning; and
- Mitigating liability concerns.

There are three attachments provided which may be used to assist in record management:

- Request Tracking Form (**html**, PDF version available on request at **AskOFM**)
- Complaint Tracking Form (**html**, PDF version available on request at **AskOFM**)
- Inspection Tracking Form (**html** PDF version available on request at **AskOFM**)

9.0 Codes, Standards and Best Practices:

Codes, Standards and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at the **Ministry of Community Safety and Correctional Services OFMEM Home page http://www.mcscs.jus.gov.on.ca/**.

04-38-15 Role of Assistant to the Fire Marshal

04-39-12 Fire Prevention Effectiveness Model

04-40-12 & **03** Selection of Appropriate Fire Prevention Programs

04-40A-12 & **03** Simplified Risk Assessment

04-40B-12 & **03** Smoke Alarm Program

04-40C-12 & **03** Distribution of Public Fire Safety Education Materials

04-40D-12 & 03 Inspections Upon Request of Complaint (Fire Code)

04-41-12 Community Fire Safety Officer/Team

04-41A-13 Community Fire Safety Program

04-45-12 & **03** Fire Prevention Policy

04-47-12 Development of Fire Prevention By-laws

04-48-12 Liaison With Building Department

04-49-12 Liaison With Other Government Agencies and Individuals

04-50-12 Fire Safety Inspection Practices

04-52-12 & **03** Fire Investigation Practices

04-60-12 Records Management

04-80-01 & **23** Fees for Services

OFMEM TG-01-2012 - Fire Safety Inspections and Enforcement

10.0 Legal Disclaimer – Use of this Guideline

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Inspections Upon Request or Complaint (Fire Code)

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-40D-12**
Section **Fire Prevention and Public Fire Safety Education**	Date **March 2001**
Subject **Inspections Upon Request or Complaint (Fire Code)**	Page

Under Review

Purpose:

To assist fire services in developing procedures to ensure that fire safety inspections are conducted, pursuant to the Fire Code, upon request or complaint and to meet minimum requirement of the Fire Protection and Prevention Act.

Introduction:

Buildings maintained in accordance with the provisions of the Fire Code perform well during fire incidents. While building owners are responsible for carrying out the provisions of the Fire Code, fire services have a public safety interest in ensuring that buildings are maintained in accordance with the Fire Code.

Development:

Inspections of properties must be done, or arranged for, by the municipality when:

- a complaint is received regarding the fire safety of a property
- a request is made to assist a property owner or occupant to comply with the Fire Code and the involvement of the Chief Fire Official is required to ensure the owner remains in compliance with the Ontario Fire Code.
- the fire department is aware of violations in a particular property

Related Functions:

Any inspection conducted must include notification of the property owner or responsible person and appropriate follow-up with enforcement, if necessary. It is imperative that these inspections be conducted within a short timeframe, befitting the seriousness of the complaint.
For inspections, the following factors should be considered:

- The type of inspections to be conducted and the buildings to be inspected. For example: routine inspections of all multi-unit residential buildings, new construction inspections of all buildings, smoke alarm checks of single family residential buildings.
- The methods of inspection appropriate for the circumstance. This will have implications for the amount of time required to inspect, as more comprehensive inspections require more time.

- The category of buildings being inspected and the skills and knowledge required to inspect them. The more complicated the building, the more skill and knowledge required.
- The frequency that the properties will be subject to inspection should be identified in the fire department fire prevention policy.

Codes, Standards, and Best Practices:

Codes, Standards and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **http://www.mcscs.jus.gov.on.ca/.** Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.

See also;
04-40-12 & **04-40-03** Selection of Appropriate Fire Prevention Programs
Fire Marshal's Public Fire Safety Council

Fire Prevention Policy

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-45-12**
Section **Fire Prevention and Public Education**	Date **August 1998**
Subject **Fire Prevention Policy**	Page

Under Review

Purpose:

To identify essential considerations for the development of a municipal fire prevention policy.

Service Delivery Implications:

- Fire prevention includes public fire safety education.
  Fire prevention is an integral part of overall fire protection.
  2(1) Fire Protection and Prevention Act
  Every municipality shall,
  (a) establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention
- the fire department establishing and regulating by-law provides direction from council and sets out the principal fire prevention responsibilities
- specific policy should be developed to establish:
- level of service
- types of activities and programs
- responsibilities of personnel

Policy Requirements:

Policy statement should reflect the following fire prevention activities:

- inspection
- code enforcement
- fire and life safety education
- fire investigation and cause determination
- fire loss statistics
- Fire department operational guidelines will dictate how, when and where activities will be conducted.

Quality and Performance Measures:

The policy should:

- encourage the participation of all fire department personnel in prevention and fire and life safety education.
- provide clear direction from council to the chief, members of the department and the public.

Related Functions/ Considerations:

The fire prevention policy should describe:

- public fire and life safety education programs such as: *Learn Not To Burn; Older & Wiser; Alarmed For Life; The Arson Prevention Program For Children; and Risk Watch.*
- inspections, code enforcement programs such as: routine inspections; home safety checks; complaint inspections; request inspections; open air burning regulation; new construction inspection; and plans examination
- fire investigation / fire origin and cause determination - liaison with appropriate agencies

Codes, Standards, and Best Practices:

Codes, Standards and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **http://www.mcscs.jus.gov.on.ca/ .** Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.

See also PFSG
01-02-01 Comprehensive Fire Safety Effectiveness Model
02-02-12 & **03** Fire Risk Assessment
02-03-01 Economic Circumstances
02-04-01 & **02-04-23** Capabilities of Existing Fire Protection Services
04-12-13 Core Services
04-39-12 Fire Prevention Effectiveness Model
04-40-12 & **04-40-03** Selection of Appropriate Fire Prevention Programs
04-41-12 Community Fire Safety Officer/Team

Records Management

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-60-12**
Section **Fire Administration**	Date **September 2004**
Subject **Records Management**	Page

Under Review

Purpose:

To assist fire departments in developing a records management system which will assist with the effective and efficient management of the fire department and meets the requirements of the Municipal Act.

Introduction

Management of fire department records is critical to meeting its core business needs. Effective record keeping is also required to meet the requirements of the Ministry of Labour Firefighters Guidance Notes. Fire department records are contained in written documents, computer systems and other formats.
Information is a key resource that:

- Enables effective program and service delivery
- Enables informed decision making, tracks performance, sets benchmarks and identifies areas for improvement
- Provides a record of fire department decisions and actions essential for fire department accountability, and demonstrating due diligence

Fire department records are municipal records, and therefore subject to the Municipal Act and the Municipal Freedom of Information and Protection of Privacy Act. Legal advice is recommended to ensure compliance with these acts and with any required records management and retention schedules within your municipality. Under the Municipal Act municipalities have a legislated responsibility to have a records management program, which would include fire department records. Municipal staff may be available to assist in developing or enhancing a records management system specific to the needs of the fire department, and to ensure compliance with applicable legislation.

Records Management Systems

The development of a records management system can be based on the main divisions or functional areas of the fire department. These functions include:

- Administration;
- Communications;
- Apparatus and Equipment;
- Fire Prevention and Public Education;
  Training; and
- Fire Suppression and Rescue.

Data should be sorted into groups that can be managed and retrieved efficiently. For example records can be organized by:

- Year;
- Address of property;
- Subject (with further sub components as required); and
- Other appropriate means.

Records having short-term value can be filed separately, so that they can be disposed of sooner, in accordance with an established records retention schedule.
Any system from the most basic paper based record system to an advanced computer based record system should:

- Allow for the progressive assignment of file numbers to subjects as they are arranged within logical groups;
- Allow for expansion of the system as required to meet new record requirements; and
- Assist the user in filing and retrieving records in a timely manner.

Record Types

Fire department records can come in all forms. This can include but not be limited to the following: letters, maps, plans, drawings, reports, forms, memos, films, micro-fiche, videotapes, photographs, personal computers, disks, 911 recordings, and recorded radio communications.

Record Retention Schedules

A records retention schedule is a binding agreement that stipulates how long records are kept and whether they are eventually transferred to an archival facility. Records retention schedules require the approval of the municipal auditor, therefore fire departments are advised to ensure that their records are retained in accordance with an approved retention schedule. If a records retention schedule does not exist then the fire department is advised to develop one. In developing a records management program you should consult within your municipality to ensure compliance with the Municipal Act.
Records and data should only be retained as long as they have value. Once they have outlived their value they should be disposed of in accordance with a records retention schedule. For example, active files may be kept for a specified period of time and inactive files may be retained for a specified period of time and then sent for final disposition. (Archives or destruction)
Records Retention schedules:

- Identify and describe recorded information holdings
- Indicate where, how long, and in what medium recorded information is retained

- Designate records' final disposition when no longer required for fire department programs and operations. (either destruction or transfer to an archival facility)

Quality of Records

Proper records management supports the business function of the fire department. Records should identify the originator, the date the document was created and why the document was created. Quality assurance of records is required to ensure that records maintained by the fire department are:

- Complete;
- Accurate;
- Relevant;
- Authentic;
- Authoritative;
- Reliable;
- Audited; and
- Maintained according to a records management system.

Security and Integrity of Recorded Information

- Protection of recorded information in your fire department's custody is everyone's responsibility. Records should be protected from unauthorized access, alteration, removal or destruction. By taking the following steps and developing guidelines the security and integrity of recorded information can be enhanced:
- Developing and adhering to a records retention schedule
- Protecting access
- Anticipating disaster (e.g., flood, fire)
- Organization/back-up of information

Electronic Records

The use of electronic records can improve the efficiency of a fire department. However, their ease of use and rapidly changing technologies present ever evolving challenges including:

- Accidental or arbitrary deletion;
- Unstable storage media;
- Security threats; and
- Incompatible systems.
- As a minimum electronic records should be backed up and securely stored.

These challenges and others become particularly critical for electronic records of long-term or permanent value which may require that special steps be taken to ensure their ongoing accessibility and integrity. It is imperative that steps be taken to ensure system compatibility so that previously recorded information can still be retrieved.

Codes, Standards and Best Practices:

Codes, Standards and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **http://www.mcscs.jus.gov.on.ca/ .**
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Municipal Act, 2001
Municipal Freedom of Information and Protection of Privacy Act, 1990

Co-ordination, Development, Approval and Distribution of Standard Operating Guidelines for Various Disciplines

Public Fire Safety Guidelines	**Subject Coding** **PFSG 04-69-13**
Section **Fire Administration**	Date **March 2000**
Subject **Co-ordination, Development, Approval and Distribution of Standard Operating Guidelines for Various Disciplines**	Page

Under Review

Purpose:

The purpose of this guideline is to assist fire departments to develop written operational guidelines.

Guideline:

A statement written to guide the performance or behaviour of departmental staff, whether functioning alone or in groups.
These guidelines;

- enhance safety
- increase individual and team effectiveness
- allow for easier training and better entry level orientation
- improve risk management practices
- help to avoid litigation
- form the basis of objective post incident evaluations
- permit flexibility in decision making

Co-ordination:

- Fire department managers may consider creating and empowering a committee to research, develop, and draft operational guidelines.
- Committees should involve the members directly affected by various guidelines; examples include;
    - training personnel for live fire training guidelines,
    - fire Prevention personnel for inspection procedures, active firefighters for laying hose or taking hydrants.
    - two or three firefighters, two or three company officers and possibly a senior officer.
- The committee should select its own chair and establish a regular meeting schedule.

- The committee could become permanent, with membership assigned, as required, to assist the fire chief with the continuous improvement process demanded of modern fire departments.
- The permanent committee could also be comprised of all company or senior officers with the SOG's as part of the monthly officers meeting agendas.

Development:

- The order of developing procedures will be driven by local needs.
- Activities that impact on firefighter safety, the department's most common emergency operations, or high risk operation should be top priority.
- Each operational guideline should deal with a single objective and must describe what is to be accomplished, but not necessarily how to do the task.
- When the subject matter has been decided upon, the committee will begin to gather the resources needed to prepare the guideline.
- Each guideline can be broken into five basic components: purpose, scope, responsibility, performance and references.

Approval:

- Specific items should be assigned to each committee member by the chairperson for review.
- Each committee member will present a synopsis of the item at a future meeting for review, revision and refinement of the guideline.
- A written draft of the operational guideline should be prepared next.
- The draft should be posted for input from other department members. .

Distribution:

- A copy should be provided to each member of the department.
- Each of the guidelines should be printed on a standard form. An introductory statement should be developed for the operational guideline manual. Key information offered:
    - why the guidelines have been developed
    - why they are called guidelines
    - definition of the term "guidelines"

Responsibility:

- Guidelines, that have been finalized and approved by the fire chief, should be implemented by the staff members who are responsible for training.

DRAFT SOG #101: STATEMENT of INTENT

ISSUE DATE:

REVISION DATE:

PURPOSE:

Standard operating guidelines **(SOG)** have been developed to provide information to all members of the fire department in a prompt and consistent manner.

SCOPE:

These guidelines are to be followed by all members of the department.

Every member has a responsibility to learn and understand what is required in performance of their duties and to stay current with information provided in standard operating guidelines. Direction will be provided from officers and senior staff, as required.

POLICY:

Standard operating guidelines allow administrators to accurately predict how their resources will be mobilized when called upon under emergency circumstances.
Standard operating guidelines also act as a guide for officers to follow when assigning routine activities as well as emergency responses.
Standard operating guidelines will be reviewed annually by the fire chief and all officers, updated or amended as required to improve fire protection and will be circulated for all members to reference.
Please reference SOG #102: DISTRIBUTION and SOG #103: DEVELOPING STANDARD OPERATING GUIDELINES.

NOTE:

These guidelines have been developed to be consistent with those recommended by various evaluating agencies of fire protection in the province and for the safety of firefighters and residents while endeavouring to protect life and property from fire.

DRAFT SOG #102: DISTRIBUTION O STANDARD OPERATING GUIDELINES

ISSUE DATE:

REVISION DATE:

PURPOSE:

To implement a standard procedure for consistent transfer of information to all members of the fire department.

SCOPE:

These guidelines are to be followed by all members of the department.
Every member has a responsibility to learn and understand what is required in performance of their duties and to stay current with information provided in standard operating guidelines with direction from officers and senior staff, as required.

POLICY:

New and revised standard operating guidelines will be circulated to all members through the shift and station officers in charge.
At the **beginning** of their tour of duty, shift officers will read or summarize the content of a new or revised SOG, which has been issued for all on-duty personnel. Where necessary, the SOG will be discussed with on-duty persons to ensure understanding and methods of implementation.
At the **beginning** of the first scheduled training or meeting night, volunteer station officers will read or summarize the content of a new or revised SOG which has been issued for all on-duty personnel. Where necessary, the SOG will be discussed with on-duty persons to ensure understanding and methods of implementation.

The SOG will then be circulated and each member will read and sign the acknowledgement log book maintained by the shift or station officer.
Shift and station officers will review the acknowledgement log book monthly and every three months will provide the training officer with a list of persons and the SOG numbers they have not acknowledged.
Shift and station officers will also post a notice of receipt for a new or revised SOG on the station bulletin board for persons not present when the SOG is initially circulated.

DRAFT SOG #103: DEVELOPING & REVISING STANDARD OPERATING GUIDELINES

ISSUE DATE:

REVISION DATE:

PURPOSE:

To implement a consistent method of developing new standard operating guidelines and revising existing guidelines to improve fire protection services.

SCOPE:

These guidelines are to be followed by all members of the department.

POLICY:

All standard operating guidelines will be reviewed annually by the fire chief and all officers for necessary updates or amendments.
Where any officer or member of the department identifies a procedure or operation which may require new or revised standard instructions for end users, the person will notify the shift or station officer in charge as soon as possible following this recognition.
The shift or station officer will first review existing SOGs for content that may apply to the reported need and discuss their findings with other on-duty officers and members.
The officer in charge will notify the chief or deputy by written memo on the same or next business day of any immediate action taken and if a new or revised procedure is recommended.
Where safety of firefighters or potential damage to department equipment is imminent, the fire chief or deputy will issue interim written guidelines until the normal process for developing or revising SOGs is initiated.
Where interim written guidelines are temporary or not necessary for safety or damage to fire department equipment, the following process will be followed:

1. The fire chief or deputy will circulate draft SOGs to each shift and station officer to discuss with all available members for their suggestions as end users,

2. shift or station officers will add appropriate comments and return the draft to the training officer within the specified time,

3. all draft SOGs will be discussed at the next scheduled officers meeting for final approval of the fire chief and/or deputy, and,

4. approved standard operating guidelines, replacing interim guidelines, will be circulated as described in SOG #102: DISTRIBUTION.

Codes, Standards and Best Practices:

Codes, Standards and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at **http://www.mcscs.jus.gov.on.ca/ .** Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.

See also;
Health and Safety Guidelines for Ontario's Fire Services
Additional Reference:
Standard Operating Procedures and Guidelines, Cook, John Lee Jr., Saddle Brook NJ: PenWell Pub. Co. 1998

The Corporation of the
City of Sault Ste. Marie

C O U N C I L R E P O R T

March 19, 2018

TO: **Mayor Christian Provenzano and Members of City Council**

AUTHOR: **Nuala Kenny, City Solicitor**

DEPARTMENT: **Legal Department**

RE: **Closing and Conveyance of Peer Street**

PURPOSE

The purpose of this report is to advise Council of the objection received to the closing and conveyance of Peer Street.

ATTACHMENT

Attached as Schedule “A” is a copy of the objection received.

BACKGROUND

The Legal Department received a request from Mr. Wayne Chorney, solicitor for Mr. Daniel Fremlin, to close and convey Peer Street.

On January 22, 2018 By-law 2018-18 was presented to Council for First and Second reading. By-law 2018-18 is a by-law to stop up, close and authorize the conveyance of Peer Street and a 0.30m Reserve on the Easterly limit of Peer Street.

As per the City’s procedure, Notice of the Proposed Street Closing was published in the Sault Star and on the City’s website on March 3, 2018. The Notice advised written objections could be delivered to the Legal Department prior to the Third reading of the by-law.

The attached objection was received from Mr. Dan Flint of 4075 Queen Street East on Thursday, March 15, 2018. 4075 Queen Street East abuts the south side of Peer Street.

ANALYSIS

Not applicable.

FINANCIAL IMPLICATIONS
The current use of the Subject Property is exempt from property taxation. Upon sale of the Subject Property it may be assessable depending upon its ultimate use.

STRATEGIC PLAN / POLICY IMPACT
Not applicable.

RECOMMENDATION
It is therefore recommended that Council take the following action:

The Legal Department recommends this matter be postponed to the April 23, 2018 Council Meeting.

Respectfully submitted,



Nuala Kenny
City Solicitor

NK/mw
Attachment

\\citydata\LegalDept\Legal\Staff\COUNCIL\REPORTS\2018\Closing and Conveyance of Peer Street.docx

Schedule "A"

Nuala Kenny

From: dan flint [redacted]
Sent: Thursday, March 15, 2018 6:58 PM
To: Nuala Kenny
Subject: Fwd: Peer st sale

Sent from my iPhone

Begin forwarded message:

From: dan flint <[redacted]
Date: March 15, 2018 at 12:47:40 PM EDT
To: n.kenny@cityssm.ont.ca
Subject: Peer st sale

As per our conversation this morning.I object to the sale of peer st .I am out of country until the first week of April and would like to address this mater on my return.I would like to purchase a portion of peer st.
Dan flint. 4075 queen st east SSM ont
Sent from my iPad

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW 2018-45

SUBDIVISION CONTROL: (PR6) A by-law to deem not registered for purposes of subdivision control certain lots in the Harris and Buckley Subdivision, pursuant to section 50(4) of the *Planning Act*.

WHEREAS section 50(4) of the *Planning Act* authorizes the Council of a municipality to designate by a by-law any plan of subdivision or part thereof that has been registered for 8 years or more as not being a plan of subdivision for subdivision control purposes; and

WHEREAS a plan of the Harris and Buckley Subdivision was registered in the Land Titles Division on May 22, 1901 as Plan M30; and

WHEREAS it is deemed expedient that a by-law be enacted pursuant to the said section 50(4) to designate part of the Harris and Buckley Subdivision as being not a registered plan of subdivision;

NOW THEREFORE THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to section 50(4) of the *Planning Act*, R.S.O. 1990, Chapter P.13 and amendments thereto, **ENACTS** as follows:

1. **PART OF HARRIS AND BUCKLEY SUBDIVISION DEEMED NOT REGISTERED**

   Lots 282 and 283 Plan M30, Harris and Buckley Subdivision, registered in the Land Titles Division for the District of Algoma are hereby designated to be part of a plan of subdivision which shall be deemed not to be a registered plan of subdivision pursuant to section 50(4) of the *Planning Act.* The said lots together are hereby designated an area of subdivision control. A map showing the above-described property as “Subject Property” is attached as Schedule “A”.

2. **EXECUTION OF DOCUMENTS**

   The Mayor and City Clerk are hereby authorized for and in the name of the Corporation to execute and to affix the seal of the Corporation to all documents required to give effect to this by-law.

3. **SCHEDULE “A”**

   Schedule “A” hereto forms part of this by-law.

4. **EFFECTIVE DATE**

This by-law takes effect on the day that this by-law is registered in the Land Titles system pursuant to section 50(28) of the *Planning Act*.

PASSED in open Council this 19th day of March, 2018.

MAYOR – CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

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Schedule "A"
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364
354
348
316
Douglas Street
SUBJECT PROPERTY
Fifth Avenue
Sixth Avenue
Korah Road
327
331
2
379
306
359
357
351
349
345
302

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW 2018-46

AGREEMENT: (PR1.89(6)) A by-law to authorize the execution of the Agreement between the City and the Canadian Motor Hotel Inc. to permit the City access to the property in order to complete certain drainage improvements and storm water management works pursuant to the Revised McNabb Street to Pim Street Drainage Improvements

THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to section 9 of the *Municipal Act, 2001*, S.O. 2001, c. 25, **ENACTS** as follows:

1. **EXECUTION OF DOCUMENT**

The Mayor and City Clerk are hereby authorized for and in the name of the Corporation to execute and affix the seal of the Corporation to the Agreement dated March 19, 2018 between the City and the Canadian Motor Hotel Inc., a copy of which is attached as Schedule “A” hereto. This Agreement is to permit the City access to the property in order to complete certain drainage improvements and storm water management works pursuant to the Revised McNabb to Pim Street Drainage Improvements.

2. **SCHEDULE "A"**

Schedule "A" forms part of this by-law.

3. **EFFECTIVE DATE**

This by-law takes effect on the day of its final passing.

PASSED in open Council this 19th day of March, 2018.

MAYOR - CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

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ACCESS AGREEMENT

THIS AGREEMENT made this 19th day of March, 2018.

BETWEEN:

THE CORPORATION OF THE CITY OF SAULT STE. MARIE
hereinafter referred to as the "City"

- and -

CANADIAN MOTOR HOTEL INC.
hereinafter referred to as the "Owner"

WHEREAS the Owner is the registered owner in fee simple in possession of lands known municipally as 410 Pim Street, Sault Ste. Marie, ON and legally described as LT 53-56 PL 52496 ST. MARY’S; PT LANE PL 52496 ST. MARY’S CLOSED BY T26048; PT BLK B PL 52431 ST. MARY’S; PT LT 23-24 PL H496 ST. MARY’S PT 1 TO 15 AR641; S/T T99572, T99573, T99574, T99575; SAULT STE. MARIE, PIN 31535-0215 (LT) (the “Lands”);

AND WHEREAS the City shall be completing certain drainage improvements and storm water management works on a portion of properties from McNabb Street to Gladstone Avenue (the “Project”), which Project includes the installation and perpetual maintenance of a new storm sewer;

AND WHEREAS a portion of the proposed storm sewer shall be installed on the Lands, at the location marked on the Tulloch Engineering drawing attached as Schedule “A” to this Agreement (the “Subject Lands”);

AND WHEREAS the City has expressed to the Owner its interest in acquiring an easement over the Subject Lands to facilitate the construction and ongoing maintenance of the storm sewer and has further requested access to the Subject Lands to construct the storm sewer pending the necessary Reference Plan of the Subject Lands;

AND WHEREAS the Owner is prepared to grant such access, subject to the terms and conditions set forth herein;

NOW THEREFORE in consideration of the rents, covenants and agreements herein contained and hereby assumed, the parties for themselves and their respective successors and assigns do hereby covenant and agree with one another as follows:

1. The Owner hereby grants the City and its directors, officers, employees, consultants, contractors, subcontractors, agents or other persons for which it is responsible in law or any of them permission to enter onto the Lands for the purpose of constructing the storm sewer on the Subject Lands in accordance with the Tulloch Engineering Drawings appended as Schedule “A” hereto commencing

July 15, 2017 and ending at such time as the easement has been registered on the Subject Lands (the "Term").

2. The City undertakes to have prepared and delivered to the Owner a Reference Plan denoting the Subject Lands, and thereafter prepare an Easement Agreement with the terms outlined in Schedule "B" hereto for execution by both parties. The Owner further covenants to affect the Easement Agreement as soon as is practicable.

3. Throughout the Term, the City shall, at its sole cost, liability and expense assume full responsibility for any and all matters related to the construction and installation of the aforesaid storm sewer on the Subject Lands.

4. At the conclusion of the Term, the City shall promptly return the Lands to a condition which is at least as good as on the date of the commencement of the Term at the City's sole liability and expense. A list of the full scope of work to be completed by the City on the Lands is attached as Schedule "C" to this Agreement; and a drawing depicting the said work is attached as Schedule "D".

5. The City further covenants to make the following improvements to the Lands at its sole liability and expense during or within a reasonable time of the Project:

    a. Replacement of the existing sewer line;
    b. Replace the existing pavement along the south side of the Lands; and
    c. Add one additional light pole at the south side of the Lands.

    The additional work will be completed in 2017 if time permits; otherwise the additional work will be completed in 2018.

6. The City agrees to indemnify the Owner from any actions, causes of actions, claims, demands, interest, damages, expenses, liens, losses, costs, charges and other proceedings made or brought against or suffered by or imposed upon the Owner or their respective property in respect of any loss or damage to property, personal injury or death or any other losses of any nature or other relief to any person or property directly or indirectly arising out of or resulting from or sustained by reason of any act, error, default, failure, fault, neglect, negligence, omission or wrong doing of the City, its directors, officers, employees, consultants, contractors, subcontractors, agents or other persons for which it is responsible in law or any of them including but not limited the construction and installation of the storm sewer on the Subject Lands and any matters related directly or indirectly to this Agreement.

7. The parties shall not assign, transfer or make any other disposition of this Agreement or of the rights conferred thereby, without the prior written consent of the other party.

8. The parties hereto acknowledge and agree that should the City require any of the Owner's structures to be relocated as a result of the construction of the sidewalk on the Subject Lands, the City shall reimburse the costs associated with having this work completed.

9. This Agreement constitutes the entire agreement of the parties and supercedes all prior representations, proposals, discussions, and communications, whether oral or in writing. This Agreement may be modified only by written instrument signed by both parties.

10. The provisions of this Agreement shall be binding upon, and enure to the benefit of the parties and

their respective successors and (where applicable) permitted assigns.

11. This Agreement shall be exclusively governed by, and construed in accordance with, the laws of the Province of Ontario, and the federal laws of Canada applicable therein.

SIGNED, SEALED AND DELIVERED)

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THE CANADIAN MOTOR HOTEL INC.

_____

NAME:

TITLE:

I have authority to bind the Corporation.

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

_____

MAYOR – CHRISTIAN PROVENZANO

_____

DEPUTY CITY CLERK – RACHEL TYCZINSKI

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW NO. 2018-48

PARKING: (P3.9(4)) A by-law to appoint by-law enforcement officers to enforce the by-laws of The Corporation of the City of Sault Ste. Marie.

WHEREAS from time to time persons have been appointed by-law enforcement officers;

THEREFORE the Council of the Corporation of the City of Sault Ste. Marie pursuant to section 15 of the *Police Services Act*, R.S.O. 1990, chapter p. 15 and amendments thereto, **ENACTS** as follows:

1. **SCHEDULE "A" TO BY-LAW 93-165 REPEALED**

   Schedule "A" to By-law 93-165 is hereby repealed and replaced with Schedule "A" attached to this by-law.

2. **EFFECTIVE DATE**

   This by-law takes effect on the day of its final passing.

PASSED in open Council this 19th day of March, 2018.

MAYOR – CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

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SCHEDULE "A"

Sam Piraino	**3**
David Etchells	**51**
Frank Jolicoeur	**72**
Alan Smith	**81**
Dave Devoe	**84**
Edward Pigeau	**89**
George Robinson	**94**
Bill Long	**96**
Edmund Badu	**100**
Jason Levesque	**101**
Sylvia Hendriks	**102**
Timothy Lanthier	**103**

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW 2018-50

AGREEMENT: (AG122) A by-law to authorize the execution of a Licence of Occupation Agreement between the City and Maria A. Rossi to permit a monument to be placed on a portion of Plaintree Drive boulevard in front of 166 Plaintree Drive and to repeal By-law 2014-35.

THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to section 9 of the *Municipal Act, 2001*, S.O. 2001, c. 25, **ENACTS** as follows:

1. **EXECUTION OF DOCUMENT**

The Mayor and City Clerk are hereby authorized for and in the name of the Corporation to execute and affix the seal of the Corporation to the Agreement dated February 20, 2018 between the City and Maria A. Rossi, a copy of which is attached as Schedule “A” hereto. This Agreement is to permit a monument to be placed on a portion of Plaintree Drive boulevard in front of Plaintree Drive.

2. **SCHEDULE "A"**

Schedule "A" forms part of this by-law.

3. **BY-LAW 2014-35 REPEALED**

By-law 2014-35 is hereby repealed.

4. **EFFECTIVE DATE**

This by-law takes effect on the day of its final passing.

PASSED in open Council this 19th day of March, 2018.

MAYOR - CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

Schedule "A"

AG-122

LICENCE TO OCCUPY CITY PROPERTY

THIS LICENCE made in duplicate this 20th day of February, 2018.

B E T W E E N:

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

(herein referred to as the "City")

- and -

MARIA A. ROSSI

(herein referred to as the "Licencee")

The City grants to the Licencee the right to occupy a portion of the property of the City identified as follows: a portion of the road allowance next to 166 Plaintree Drive, Sault Ste. Marie, ON, specifically as shown and identified as "Monument Area" on Schedule "A" attached to this Licence to Occupy City Property (the "Licence"). A current photograph of the Monument Area is attached as Schedule "B" to this Licence.

This Licence is subject to the conditions set out in Schedule "C" attached, which to the extent each condition is or becomes applicable, the Licencee covenants to observe for the period of one (1) year commencing on February 20, 2018 and thereafter from year to year until the Licence is terminated in accordance with Schedule "C".

In this Licence, the "City" means the "Council" of the City of Sault Ste. Marie and any person authorized to act on its behalf.

This Licence shall enure to the benefit of and be binding upon the parties hereto, their heirs, successors and assigns.

In witness thereof the parties hereto have affixed their hands and seals on the date written above.

SIGNED, SEALED AND DELIVERED)

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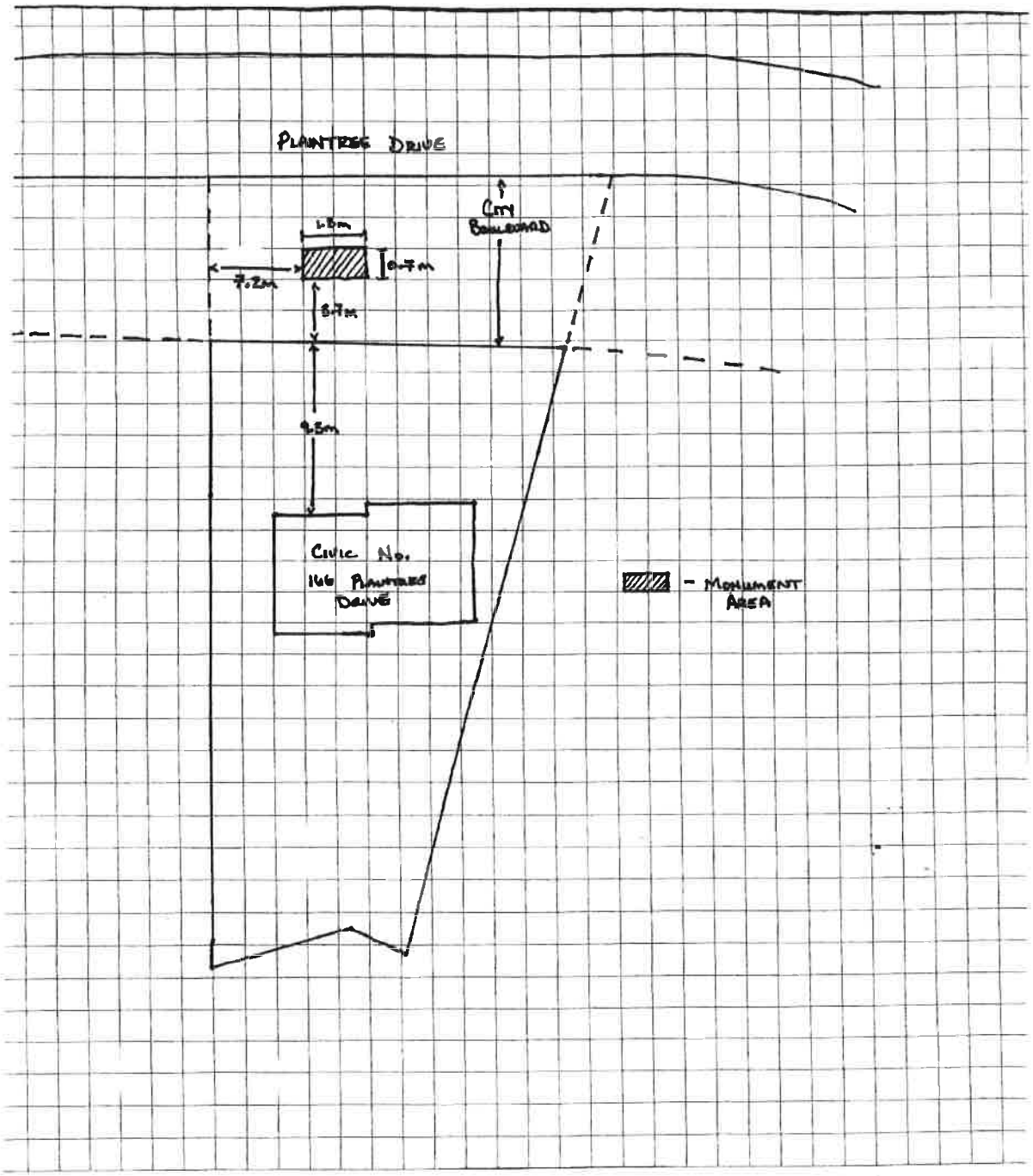
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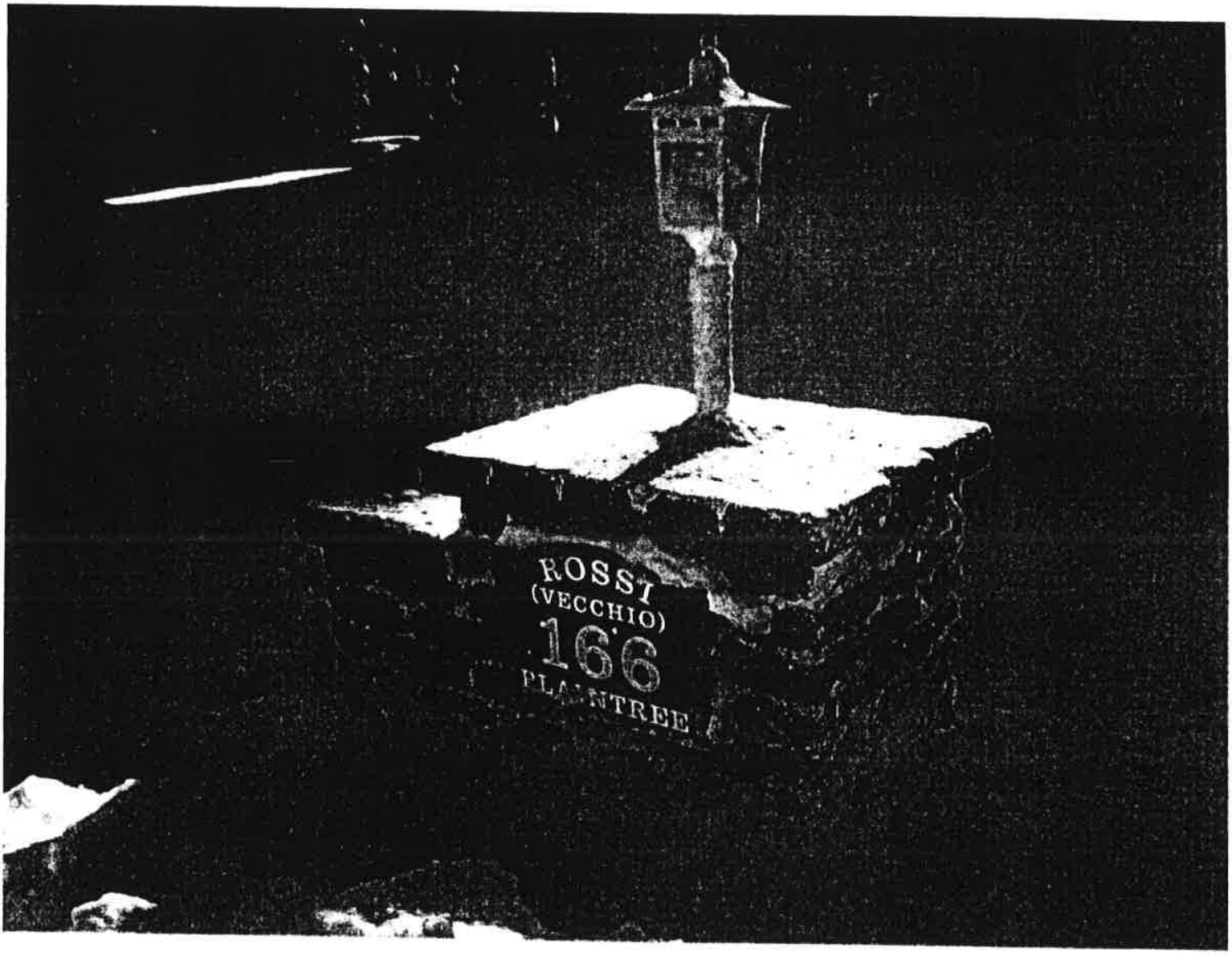
SCHEDULE "A" TO
LICENCE TO OCCUPY CITY PROPERTY

City Property

The City grants the Licencee the right to occupy that portion of the Plaintree Drive Boulevard directly in front of 166 Plaintree Drive in Sault Ste. Marie, Ontario, in the location as indicated on the following map, and subject to the conditions outlined in Schedule "C":



SCHEDULE "B" TO
LICENCE TO OCCUPY CITY PROPERTY



SCHEDULE "C" TO
LICENCE TO OCCUPY CITY PROPERTY

This Licence is subject to the following conditions:

1. The City hereby grants the Licencee permission to construct and maintain a monument (the "Monument"), for a period of one (1) year commencing on February 20, 2018 and thereafter from year to year until terminated (the "Term"), on the City Property described, marked and identified as "Monument Area" in Schedule "A" to this Licence (the "City Property").

2. A PIN search of the property known municipally as Civic No. 166 Plaintree Drive (the "Rossi Property") confirms that Maria A. Rossi is the registered owner of the Rossi Property.

3. The City or the Licencee may cancel this Licence on giving three (3) months' written notice to the other party of their intention to do so. Notices shall be deemed given if deposited in the mail with postage charges prepaid and addressed to the party for whom intended at such party's address herein specified:

CITY
City Solicitor
The Corporation of the City of Sault Ste. Marie
99 Foster Drive, P.O. Box 580
Sault Ste. Marie, Ontario
P6A 5N1

LICENCEE
Maria A. Rossi
166 Plaintree Drive
Sault Ste. Marie, Ontario
P6B 5H3

4. At no time shall the City be responsible for constructing, maintaining, inspecting removing or otherwise dealing with the Monument, nor shall the City be responsible for any matters relating to the use of the Monument. The Licencee shall be responsible for all costs, expenses and liabilities relating to the construction, presence, use and removal of the Monument located on the City Property. The Licencee shall indemnify and save harmless the City from any costs and expenses of any nature or kind incurred by the City that may result from the construction, maintenance, inspection, removal, and use of the Monument and any other matters arising directly or indirectly from this Agreement.

5. The Licencee agrees that all construction, maintenance, inspection, removal or otherwise dealing with the Monument shall be done above ground, and that no digging in excess of six (6") inches for any reason shall take place without the written consent of the City's Engineering Department.

6. The Licencee shall ensure that a four (4') foot buffer zone be extended back from the curb onto the City Property.

7. The Licencee shall comply with all Laws, By-Laws, Rules and Regulations of any governing body respecting the construction of the Monument and the use of the City Property during the Term, and shall save harmless and fully indemnify the City from and against all losses, costs, damages and expenses, of every kind or nature which the City may suffer, be at or be put to by reason of or in consequence of the noncompliance by the Licencee with such Laws, By-Laws, Rules and Regulations.

8. The Licencee shall be liable for all taxes, permits, licences or assessments of every nature and kind whatsoever, in any way arising from the use of the City Property during the Term.

9. The Licencee shall indemnify and save harmless the City from all costs, liabilities and expenses caused to or incurred by the City and from all claims and demands, awards, losses, costs, damages, actions, suits or other proceedings, by whomsoever made, brought or prosecuted, in any manner based upon, arising out of or connected with, the Licencee's construction, maintenance, inspection, removal and use of the Monument on City Property, the intent being that the City shall be at no risk or expense to which it would not have been put had this Agreement not been entered into.

10. The Licencee shall not assign, transfer or make any other disposition of the Licence, or of the rights conferred thereby, without the prior written consent of the City.

11. If, at the sole discretion of the City and/or emergency personnel, the City and/or emergency personnel requires access to any portion of the City Property, such that the removal of any portion of the Monument located on the City Property is required, the Licencee shall in no way restrict such access and/or removal of a portion or the entirety of the Monument, and the City and/or emergency personnel shall in no way be responsible for restoring the Monument to its condition prior to such access and/or removal of the Monument by the City and/or emergency personnel.

12. The Public Utilities Commission, Union Gas, Algoma Power Incorporated, Great Lakes Power, Bell Canada, and Shaw Communications Incorporated shall be hereafter referred to as the "Utility Companies". If, at the sole discretion of a Utility Company, the Utility Company requires access to any portion of the City Property, such that the removal of any portion of the Monument located on the City Property is required, the Licencee shall in no way restrict such access and/or removal of a portion or the entirety of the Monument, and the Utility Company shall in no way be responsible for restoring the Monument to its condition prior to such access and/or removal of the Monument by the Utility Company.

13. The Licencee shall not use or permit the use of the City Property for any purpose other than the purpose herein set out. The Licencee shall not erect any buildings or structures on the City Property other than those herein set out. The Licencee shall not alter the Monument in any way from its current appearance without the express written consent of the City's Engineering Department. The Monument's current appearance is shown in Schedule "B" to this Licence, and is described as a brick structure, with a granite faceplate

indicating the owners and the address of the Rossi Property, with a short light post extending from the top.

14. In the event that this Licence is terminated in accordance with paragraph 3, the provisions of paragraphs 4-13 inclusive of this Licence shall survive the termination of this Licence. Upon the termination of this Licence, the Licencee shall forthwith remove the Monument from the City Property at the Licencee's sole liability and expense. In the event that the Monument is not removed from the City Property to the satisfaction of the City within thirty (30) days of the termination of this Licence, the City may do such work to remove the Monument as it deems necessary at the expense and risk of the Licencee.

15. The Licencee shall keep in force during the term hereof liability insurance against claims for bodily injury, personal injury or property damage occurring on the City Property in an amount not less than Five Million ($5,000,000.00) Dollars and the Licencee shall have the City listed as an "Additional Insured". Proof of said insurance shall be filed with the Legal Department of the City of Sault Ste. Marie.

16. Any predecessor to this Licence, specifically the Licence to Occupy City Property Agreement dated February 14, 2014, is hereby void and replaced in its entirety by this Licence.

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW 2018-51

MEMORANDUM OF SETTLEMENT: (H1.13) A by-law to authorize the approval of the Memorandum of Settlement between the City and Steelworkers Local 2251.

THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to section 9 of the *Municipal Act, 2001*, S.O. 2001, c. 25, **ENACTS** as follows:

1. **APPROVAL OF DOCUMENT**

The Mayor and City Clerk are hereby authorized for and in the name of the Corporation to approve and affix the seal of the Corporation to the Memorandum of Settlement dated February 23, 2018 between the City and Steelworkers Local 2251, a copy of which is attached as Schedule "A" hereto.

2. **SCHEDULE "A"**

Schedule "A" forms part of this by-law.

3. **EFFECTIVE DATE**

This by-law takes effect on the day of its final passing.

PASSED in open Council this 19th day of March, 2018.

MAYOR - CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

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Schedule "A"

MEMORANDUM OF SETTLEMENT

THE CORPORATION OF THE CITY OF SAULT STE. MARIE
&
STEELWORKERS LOCAL 2251

1. **The parties herein agree to the terms of the memorandum as constituting full and final settlement of all matters in dispute.**

2. **The undersigned representatives of the parties do hereby agree to recommend complete acceptance of all the terms of this memorandum to their respective principals.**

3. **The parties herein agree that the term of the collective agreement shall be from February 1, 2018 to January 31, 2019.**

4. **The parties herein agree that the said collective agreement shall include the terms of the previous collective agreement which expired on January 31, 2018 provided, however, that the following amendments are incorporated in Appendix 1.** DB 98 DB 98. 23 RO February

Signed this ~~15th~~ day of ~~December~~, 2018.

For the Union

Dan Cooper

Don Byham

Mike Vanderloo

For the Employer

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

APPENDIX 1

Collective Bargaining

City of Sault Ste. Marie

&

Local 2251 Steelworkers
Transit Mechanics

Agreed to Articles – Sign-off sheet #1

Housekeeping

1. Replace 5:02, 5:03, 5:04, and 5:05 with;

5:02 All dues, initiation fees and assessments shall be remitted to the Union forthwith and in any event no later than fifteen days following the last day of the month in which the remittance was deducted. The remittance shall be sent to the International Secretary Treasurer of the United Steelworkers AFL-CIO-CLC, P.O. Box ~~13083~~ 9083 Commerce Court Postal Station ~~'A',~~ Toronto Ontario M5W 1V7 in such form as shall be directed by the Union to the Company along with a completed Dues Remittance Form R-115 will also be sent to the Union office at 209 - 68 Dennis Street, Sault St. Marie, Ontario, P6A 2W9. The remittance and the R-115 form shall be accompanied by a statement containing the following information:

a. A list of names of all employees from whom dues were deducted and the amount of dues deducted;

b. A list of all bargaining unit employees from whom no deductions have been made and reasons;

c. This information shall be sent to both Union addresses identified in article 5.02 in such form as shall be directed by the Union to the Company.

The Union shall indemnify and save the Company harmless against all claims or other forms of liability that may arise out of any actions taken by the Company in compliance with this article.

The Company, when preparing T-4 slips for the employees, will enter the amount of union dues paid by the employee during the previous year.

ARTICLE 6:02 – GRIEVANCE PROCEDURE

6:02 In the settlement of any dispute, or grievance, the following procedure shall apply:

(1) The employee shall first take the grievance up with his Supervisor within forty-eight (48) hours of his knowledge of the event, and the employee shall have the right to be accompanied by a representative of the Union. The Supervisor shall give a decision within forty-eight (48) hours.

STEP 1 Failing a satisfactory answer, the employee shall put his grievance in writing to the Grievance Committee who may within 5 working days of the reply from the Supervisor, request a hearing by the Manager of Transit & Parking.

The Manager of Transit & Parking shall render a decision within 5 working days of the hearing.

STEP 2 ***If the Union considers that a satisfactory settlement was not reached at Step 1, it may within 5 working days of the receipt of the Step 1 reply, request a hearing by the Director of Human Resources. The Director of Human Resources shall render a decision within 5 working days of the hearing.***

STEP 3 ***If the Union considers that a satisfactory settlement was not reached at Step 2, it may within 5 working days of the receipt of the Step 2 reply, request a hearing by the Deputy Chief Administrative Officer Community Development & Enterprise Services (CDES). The Deputy Chief Administrative Officer CDES shall render a decision within 5 working days of the hearing.***

STEP 4 If the Union considers that a satisfactory settlement was not reached at Step 3, it may within 5 working days of the Step 3 reply, refer the matter to arbitration in accordance with the provisions of the Labour Relations Act.

Balance of article remains unchanged

ARTICLE 11:00

11:06 The City agrees to supply employees in the Mechanics classification with access to *eight (8)* coveralls in every two (2) week period.

15:13 New

Employees that are required to work on statutory holidays may choose to take a substitute day off with pay in lieu of being paid the statutory holiday pay for the actual day of stat. Requests for lieu time off will be made to the Maintenance supervisor and will be considered on an individual basis at the time of request, and granted based on operational requirements, they must be taken within 12 months from the statutory holiday.

ARTICLE 15:00
MENTAL HEALTH IN THE WORKPLACE

Training;

15:01The Employer *will consider to* provide employees with training as it becomes available on dealing with Mental Illnesses in the Workplace.

Recognition, Awareness & Return To Work;

15:02The parties recognize that mental *and physical* health issues can be cause of disability.

Where *and when* possible without incurring undue hardship, the Employer will facilitate the return to work of such persons, where medically indicated/*substantiated.*

Re-number articles beyond Article 15, current article 15 will be 16 and so on.

CITY PROPOSAL:

17:02 (3) Senior Lead Hand premium to be paid to an employee for hours worked when assigned to the Senior Lead Hand function. The premium shall be:

Effective the 1st of the month following ratification of the Memorandum of Settlement by the parties $1.35 per hour.

Note: This change means that the current practice of paying one (1) hour per week at overtime rate plus the Lead Hand rate to one individual ceases.

Change to:

(3) Senior Lead Hand premium to be paid to an employee for hours worked when assigned to the Senior Lead Hand function. The premium shall be $1.35 per hour.

Balance of article remains unchanged

Article 17:04

$14.00 flat rate for all students.

CITY PROPOSAL:

Article 18:02

18:02 Green Shield Extended Health Care Plan, including Drug Plan Card System - $6.00 deductible (increase to $7.00 Drug Card effective February 1, 2013) and Vision Care (increase to $375.00 every two years effective the first of the month following ratification of the Memorandum of Settlement by the parties). (Note: This amount can be used for laser eye surgery.)

- Pharmacy dispensing fees capped at $10.00 and increase to $11.00 effective February 1, 2013 per prescription.
- No O.T.C. drug coverage with the exception of those deemed by the insurer to be "life sustaining".
- Eye Examination – One (1) eye examination by a licensed ophthalmologist or optometrist every twenty four (24) consecutive months.
- Reimbursement will be made for standard hearing aids, repairs or replacement parts up to a lifetime maximum of $500. Batteries are not eligible.

Change to

18:02 ***Green Shield Extended Health Care Plan, including Drug Plan Card System - $8.00 deductible first of the following month of ratification and Vision Care (increase to $400.00 every two years effective the first of the month following ratification of the Memorandum of Settlement by the parties). (Note: This amount can be used for laser eye surgery.)***

- ***Pharmacy dispensing fees capped at $12.00.***
- No O.T.C. drug coverage with the exception of those deemed by the insurer to be "life sustaining".
- Eye Examination – One (1) eye examination by a licensed ophthalmologist or optometrist every twenty four (24) consecutive months.
- Reimbursement will be made for standard hearing aids, repairs or replacement parts up to a lifetime maximum of $500. Batteries are not eligible.

Balance of article remains unchanged

LETTER #1

LETTER OF UNDERSTANDING

BETWEEN

THE CITY OF SAULT STE. MARIE

AND

UNITED STEELWORKERS LOCAL 2251 (TRANSIT)

INTERPRETATION OF ARTICLE 9:00 - SENIORITY

The parties recognize and agree that the provisions of clauses 9:01 (second paragraph), 9:03 (4) (iii) and 9:03 (5) (iii) must be interpreted and applied in a manner consistent with the provisions of the Ontario Human Rights Code.

Signed this 10th day of January, 2018

FOR THE UNION

Dan Cooper

Don Byham

Mike Vanderloo

FOR THE CITY

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Renew Letter #2

LETTER #2

LETTER OF UNDERSTANDING

BETWEEN

THE CITY OF SAULT STE. MARIE

AND

UNITED STEELWORKERS LOCAL 2251 (TRANSIT)

WELFARE BENEFITS

The parties agree to meet during the term of the collective agreement to discuss the cost of welfare benefits and methods by which to contain the escalating cost of these benefits.

Signed this 10th day of January, 2018

FOR THE UNION

Dan Cooper

Don Byham

Mike Vanderloo

FOR THE CITY

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Signed this 10th day of January, 2018 at Sault Ste. Marie

For the Union

Dan Cooper

Don Byham

Mike Vanderloo

For the City

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Collective Bargaining

City of Sault Ste. Marie

&

Local 2251 Steelworkers
Transit Mechanics

Agreed to Articles – Sign-off sheet #2

11:07 The City agrees to provide all permanent employees with an annual allowance of *one hundred and ninety ($190)* for the life of the agreement effective for payment the second pay in February per Article 17:01 for the purchase of one (1) pair of C.S.A. approved safety boots.

17:01 ***Mechanics Tool Allowance - Mechanics I and II shall receive a tool allowance of two hundred dollars ($275.00) effective the 1st of the month following ratification of the memorandum of settlement by the parties.***

The City agrees to process the payment of Boot and Tool Allowance by the first pay in March pending the parties have reached a settlement, if not then the first pay following ratification

NEW

2:02

One Union Representative will be provided with the opportunity to provide a two (2) hour Union introduction/orientation program on paid time to new employees who are hired, *at a time mutually agreed to by Maintenance Supervisor.*

Signed this 10th day of January, 2018 at Sault Ste. Marie

For the Union

Dan Cooper

Don Byham

Mike Vanderloo

For the City

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Collective Bargaining

City of Sault Ste. Marie

&

Local 2251 Steelworkers
Transit Mechanics

Agreed to Articles – Sign-off sheet #3

CITY PROPOSAL:

17:03 Apprentice

(a) Apprentices shall advance on the following basis to the Automotive Mechanics Rate.

Starting rate shall be the Handyman - Labour rate as specified in the collective agreement.

Apprentices shall advance every 1040 hours as certified by the Ministry of Colleges and Universities, until 9,000 hours are completed.

Example:

0 to 1040 hours - Base Rate
1041 to 2080 hours - 84% of Mechanic Rate
2081 to 3120 hours - 86% of Mechanic Rate
3121 to 4160 hours - 88% of Mechanic Rate
4161 to 5200 hours - 90% of Mechanic Rate
5201 to 6240 hours - 92% of Mechanic Rate
6241 to 7280 hours - 94% of Mechanic Rate
7281 to 8320 hours - 96% of Mechanic Rate
8321 to 9000 hours - 98% of Mechanic Rate
9000 - 100% of Mechanic Rate

Change to

17:03 Apprentices

Starting rate shall be at Base Rate $19.00 per hour.

Level 1 – $19.00 until 240 hours of in class is completed.
Level 2 – $21.00 until an additional 240 hours of in class is completed.
Level 3 – $23.00 until a further 240 hours of in class is completed.

An apprentice mechanic will stay at $23.00 until which time they successfully challenge the required Ministry testing to become a Truck and Coach Mechanic at which time they will go to Mechanic I Rate.

In extenuating circumstance and on a case by case basis the City and the Union will consider moving someone to next level without completing the in class portion and within a certain time-frame upon agreement from the union and the City

Signed this 10th day of January, 2018 at Sault Ste. Marie

For the Union

Dan Cooper

Don Byham

Mike Vanderloo

For the City

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Collective Bargaining

City of Sault Ste. Marie

&

Local 2251 Steelworkers
Transit Mechanics

Agreed to Articles – Sign-off sheet #4

Article 17:00 WAGE RATES

1.50% as of February 1, 2018 until expiration of contract at January 31, 2019.

Signed this 15th day of January, 2018 at Sault Ste. Marie

For the Union

Dan Cooper

Don Byham

Mike Vanderloo

For the City

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

Collective Bargaining

City of Sault Ste. Marie

&

Local 2251 Steelworkers
Transit Mechanics

Agreed to Articles – Sign-off sheet #4

Article 17:00 WAGE RATES

1.75% as of February 1, 2018 until expiration of contract at January 31, 2019.

Signed this 23rd day of February, 2018 at Sault Ste. Marie (After Conciliation)

For the Union

Dan Cooper

Don Byham

Mike Vanderloo

For the City

Ida Bruno

Tom Vair

Sam Piraino

Bob Camirand

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW 2018-52

AGREEMENT: (C3) A by-law to authorize the execution of the Agreement between the City and The Kiwanis Club of Lakeshore for the donation of Forty-Two Thousand Five Hundred ($42,500.00) Dollars for the purchase and construction of a shelter adjacent to the splash pad at Bellevue Park.

THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to section 9 of the *Municipal Act, 2001*, S.O. 2001, c. 25, **ENACTS** as follows:

1. **EXECUTION OF DOCUMENT**

The Mayor and City Clerk are hereby authorized for and in the name of the Corporation to execute and affix the seal of the Corporation to the Agreement dated March 5, 2018 between the City and The Kiwanis Club of Lakeshore, a copy of which is attached as Schedule “A” hereto. This Agreement is for the donation of Forty-Two Thousand Five Hundred ($42,500.00) Dollars for the purchase and construction of a shelter adjacent to the splash pad at Bellevue Park.

2. **SCHEDULE "A"**

Schedule "A" forms part of this by-law.

3. **EFFECTIVE DATE**

This by-law takes effect on the day of its final passing.

PASSED in open Council this 19th day of March, 2018.

MAYOR - CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

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DONATION AGREEMENT

This Donation Agreement made this 5th day of March 2018

BETWEEN:

THE KIWANIS CLUB OF LAKESHORE

(hereinafter referred to as the “Kiwanis Club of Lakeshore”)

- and –

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

(hereinafter referred to as the “City”)

“WHEREAS the City is the registered owner of parkland in the City of Sault Ste. Marie known as Bellevue Park, which includes a portion of property legally described as (insert property description from PIN) PIN 31521-0056 (LT), Sault Ste. Marie, ON hereinafter referred to as “Bellevue Park”;

AND WHEREAS the City is building a new shelter within a portion of Bellevue Park which will be located next to the Splash Pad development:

AND WHEREAS the Kiwanis Club of Lakeshore is a volunteer organization with a commitment to community service;

AND WHEREAS the Kiwanis Club of Lakeshore has agreed to assist the City in the acquisition of materials to build the shelter by donating funds to the City for that purpose.

NOW THEREFORE the parties hereto agree as follows:

1. **DONATION**

   The Kiwanis Club of Lakeshore agrees to donate funds in the amount of Forty-Two Thousand and Five Hundred ($42,500.00) Dollars to the City for the exclusive purpose of the purchase and build the shelter at Bellevue Park.

   The City acknowledges having received the said funds as referred in Section 1 of this agreement from the Kiwanis Club of Lakeshore and will purchase the materials for and build the shelter with said funds.

2. USE OF DONATION FUNDS

The City covenants and agrees that the donation of funds provided to it by the Kiwanis Club of Lakeshore shall be used solely towards the cost of purchasing materials for and building the shelter at Bellevue Park and for no other purpose.

The City acknowledges that the Kiwanis Club of Lakeshore makes the said donation of funds towards purchasing materials for and building the shelter at Bellevue Park and the Kiwanis Club of Lakeshore does not make any representations or warranties as to the safety of said shelter or its appropriateness for use by any members of the public.

3. INSTALLATION & MAINTENANCE

The City acknowledges and agrees that the purchase of materials for and building of the shelter shall be the sole responsibility of the City.

The City acknowledges and agrees that all necessary maintenance of the shelter shall be the sole responsibility of the City.

The City shall indemnify and save harmless the Kiwanis Club of Lakeshore however caused, or costs incurred from defending action arising out of the installation, maintenance or the use of the shelter by any person or persons who may take claim against the Kiwanis Club of Lakeshore.

The parties hereto acknowledge and agree that if at any point in the future the shelter becomes unfit for use, the City may remove and/or replace it at its sole discretion and expense.

4. APPRECIATION

The City agrees to purchase, install and maintain a plaque/sign at the shelter Bellevue Park of which material, design and word composition is to the approval of the Kiwanis Club of Lakeshore acknowledging the generous donation of the Kiwanis Club of Lakeshore.

5. DEFAULT

(1) In the event that the City breaches any provision of this Donation Agreement, the Kiwanis Club of Lakeshore shall notify the City in writing of the nature of said breach, and the City shall be given thirty (30) days to remedy the violation. If the City has not remedied the violation to the satisfaction of the Kiwanis Club of Lakeshore at the expiration of thirty (30) days from such notification, the Kiwanis Club of Lakeshore may:

(a) Waive the breach;
(b) Make any other mutually agreeable arrangement with the City; or

(c) Terminate this Donation Agreement and provide the City with written notice of same.

IN WITNESS WHEREOF the parties hereto have affixed their hands and seals this 5th day of March 2018.

THE KIWANIS CLUB OF LAKESHORE

Per: _____
PRESIDENT – Mary Hewgill

Per: _____
VICE-PRESIDENT – David Shier

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

Per: _____
MAYOR – CHRISTIAN PROVENZANO

Per: _____
DEPUTY CITY CLERK – RACHEL TYCZINSKI

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW 2018-53

AGREEMENT: (C3) A by-law to authorize the execution of the Agreement between the City and The Kiwanis Club of Lakeshore Foundation for the donation of Forty-Two Thousand Five Hundred ($42,500.00) Dollars for the purchase and construction of a shelter adjacent to the splash pad at Bellevue Park.

THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to section 9 of the *Municipal Act, 2001*, S.O. 2001, c. 25, **ENACTS** as follows:

1. **EXECUTION OF DOCUMENT**

The Mayor and City Clerk are hereby authorized for and in the name of the Corporation to execute and affix the seal of the Corporation to the Agreement dated March 5, 2018 between the City and The Kiwanis Club of Lakeshore Foundation, a copy of which is attached as Schedule “A” hereto. This Agreement is for the donation of Forty-Two Thousand Five Hundred ($42,500.00) Dollars for the purchase and construction of a shelter adjacent to the splash pad at Bellevue Park.

2. **SCHEDULE "A"**

Schedule "A" forms part of this by-law.

3. **EFFECTIVE DATE**

This by-law takes effect on the day of its final passing.

PASSED in open Council this 19th day of March, 2018.

MAYOR - CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

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Schedule “A”

DONATION AGREEMENT

This Donation Agreement made this 5th day of March 2018

BETWEEN:

THE KIWANIS CLUB OF LAKESHORE FOUNDATION

(hereinafter referred to as the “Kiwanis Club of Lakeshore Foundation”)

- and -

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

(hereinafter referred to as the “City”)

“WHEREAS the City is the registered owner of parkland in the City of Sault Ste. Marie known as Bellevue Park, which includes a portion of property legally described as (insert property description from PIN) PIN 31521-0056 (LT), Sault Ste. Marie, ON hereinafter referred to as “Bellevue Park”;

AND WHEREAS the City is building a new shelter within a portion of Bellevue Park which will be located next to the Splash Pad development;

AND WHEREAS the Kiwanis Club of Lakeshore Foundation has agreed to assist the City in the acquisition of materials to build the shelter by donating funds to the City for that purpose.

NOW THEREFORE the parties hereto agree as follows:

1. **DONATION**

   The Kiwanis Club of Lakeshore Foundation agrees to donate funds in the amount of Forty-Two Thousand and Five Hundred ($42,500.00) Dollars to the City for the exclusive purpose of purchasing materials for and building the shelter at Bellevue Park.

   The City acknowledges having received the said funds as referred in Section 1 of this agreement from the Kiwanis Club of Lakeshore Foundation and will purchase the materials for and build the shelter with said funds.

2. USE OF DONATION FUNDS

The City covenants and agrees that the donation of funds provided to it by the Kiwanis Club of Lakeshore Foundation shall be used solely towards the cost of purchasing materials for and building the shelter at Bellevue Park and for no other purpose.

The City acknowledges that the Kiwanis Club of Lakeshore Foundation makes the said donation of funds towards purchasing materials for and building the shelter at Bellevue Park and the Kiwanis Club of Lakeshore Foundation does not make any representations or warranties as to the safety of said shelter or its appropriateness for use by any members of the public.

3. INSTALLATION & MAINTENANCE

The City acknowledges and agrees that the purchase of materials for and building of the shelter shall be the sole responsibility of the City.

The City acknowledges and agrees that all necessary maintenance of the shelter shall be the sole responsibility of the City.

The City shall indemnify and save harmless the Kiwanis Club of Lakeshore Foundation however caused, or costs incurred from defending action arising out of the installation, maintenance or the use of the shelter by any person or persons who may take claim against the Kiwanis Club of Lakeshore Foundation.

The parties hereto acknowledge and agree that if at any point in the future the shelter becomes unfit for use, the City may remove and/or replace it at its sole discretion and expense.

4. APPRECIATION

The City agrees to purchase, install and maintain a plaque/sign at the shelter Bellevue Park of which material, design and word composition is to the approval of the Kiwanis Club of Lakeshore Foundation acknowledging the generous donation of the Kiwanis Club of Lakeshore Foundation.

5. DEFAULT

(1) In the event that the City breaches any provision of this Donation Agreement, the Kiwanis Club of Lakeshore Foundation shall notify the City in writing of the nature of said breach, and the City shall be given thirty (30) days to remedy the violation. If the City has not remedied the violation to the satisfaction of the Kiwanis Club of Lakeshore Foundation at the expiration of thirty (30) days from such notification, the Kiwanis Club of Lakeshore Foundation may:

(a) Waive the breach;
(b) Make any other mutually agreeable arrangement with the City; or
(c) Terminate this Donation Agreement and provide the City with written notice of same.

IN WITNESS WHEREOF the parties hereto have affixed their hands and seals this 5th day of March 2018.

THE KIWANIS CLUB OF LAKESHORE FOUNDATION

Per: _____
PRESIDENT – David Shier

Per: _____
VICE-PRESIDENT–Terry-Lou Legros

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

Per: _____
MAYOR – CHRISTIAN PROVENZANO

Per: _____
DEPUTY CITY CLERK – RACHEL TYCZINSKI

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW 2018-54

AGREEMENT: (P5) A by-law to authorize the execution of the Agreement between the City and Brink's Canada Limited/Brink's Canada Limitée for Armoured Car Service for the secure transportation of cash receipts to the City's bank.

THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to section 9 of the *Municipal Act, 2001*, S.O. 2001, c. 25, **ENACTS** as follows:

1. **EXECUTION OF DOCUMENT**

The Mayor and City Clerk are hereby authorized for and in the name of the Corporation to execute and affix the seal of the Corporation to the Agreement dated April 1, 2018 between the City and Brink's Canada Limited/Brink's Canada Limitée, a copy of which is attached as Schedule "A" hereto. This Agreement is for Armoured Car Service for the secure transportation of cash receipts to the City's bank.

2. **SCHEDULE "A"**

Schedule "A" forms part of this by-law.

3. **EFFECTIVE DATE**

This by-law takes effect on the day of its final passing.

PASSED in open Council this 19th day of March, 2018.

MAYOR - CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

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Schedule "A"

BRINKS

Customer Name: The Corporation of the City of Sault Ste. Marie

Agreement #: CA16954
File #: 677 42 10020

ARMOURED TRANSPORTATION SERVICE AGREEMENT

THIS AGREEMENT IS MADE BY AND BETWEEN

BRINK'S CANADA LIMITED / BRINKS CANADA LIMITÉE

(Hereinafter referred as BRINK'S)

and

The Corporation of the City of Sault Ste. Marie

(Hereinafter referred as CUSTOMER)

With offices located at:

P.O Box 580

Sault Ste. Marie, ON Canada

P6A 5N1

IS ENTERED INTO THIS 1st day of April 2018

BRINK'S AGREES TO PROVIDE ARMOURED TRANSPORTATION SERVICES IN ACCORDANCE WITH THE TERMS AND CONDITIONS STATED HEREIN AND ON FOLLOWING PAGES.

SCHEDULE

	SERVICE		DAY OR DATE	MAXIMUM LIABILITY
(A)	CALL AT	Customer's location(s) listed on Exhibit A	As per Exhibit A	$75,000.00
	DELIVER TO:	Customer's designated Financial Institution	Same day or following business	

FRAGILE PROPERTY: Yes ___ No X

RIDER EXECUTED CONTEMPORANEOUSLY WITH AGREEMENT AND INCORPORATED HEREIN BY REFERENCE Yes X No ___

CHARGES FOR THE SERVICES PROVIDED HEREIN SHALL BE THOSE SPECIFIED IN A SEPARATE RATE SCHEDULE INCORPORATED HEREIN BY REFERENCE.

SERVICE: Armoured Transportation X Change Fund ___ Chest Service ___ Safe Control ___

Coin Processing ___ Currency Processing ___ Consolidation ___

EFFECTIVE DATE OF AGREEMENT: 1st day of April 2018

AND SHALL CONTINUE UNTIL: 31st day of March 2023 (the "Initial Term")

AND THEREAFTER FROM YEAR TO YEAR UNTIL CANCELLED BY EITHER PARTY ON THIRTY (30) DAYS WRITTEN NOTICE PRIOR TO ANY ANNIVERSARY DATE HEREOF.

ACCEPTED:

The Corporation of the City of Sault Ste. Marie

By: _____

Title: Mayor - Christian Provenzano

Date: March 19, 2018

By: _____

Title: Deputy City Clerk - Rachel Tyczinski

Date: March 19, 2018

Supersedes and Cancels Agreement dated
NEW CONTRACT

BRINK'S CANADA LIMITED

_____
President

Countersigned:

By: _____

Date: _____

BRINKS

Customer Name: The Corporation of the City of Sault Ste. Marie **Agreement #: CA16954**

RIDER #1

This Rider effective this date 1st day of April 2018
and incorporated by reference into the Agreement dated
1st day of April 2018 between
BRINK'S CANADA LIMITED / BRINKS CANADA LIMITÉE
("BRINK'S") and
The Corporation of the City of Sault Ste. Marie
("CUSTOMER")

The Following Schedules and or Exhibits shall be made a part hereof and incorporated herein by reference:

Exhibit or Schedule	Description of Service or Modification	C=Changed/New Exhibit, R=Removed
RATE SCHEDULE	See RATE SCHEDULE	C
Exhibit A	Listing of Service Locations - Exhibit A	C

CHARGES FOR THE SERVICES DESCRIBED HEREIN SHALL BE THOSE AS SPECIFIED IN A SEPARATE RATE SCHEDULE MADE A PART HEREOF AND INCORPORATED HEREIN BY REFERENCE.

Any capitalized terms in this Rider or any of the referenced Exhibits shall have the same meaning as defined in the Agreement, unless otherwise specified in the applicable Exhibits.

Services - Listed below are Services, which, when stated above, shall be performed by Brink's in accordance with the provisions set forth in the respective Exhibit(s) applicable to such Services.

Listing of Service Locations - Exhibit A
Cheque Reconstruction - Exhibit B
Change Fund Service - Exhibit C
Consolidation Service - Exhibit D
Safe Control Service - Exhibit E
Coin Processing Service - Exhibit F
Currency Processing Service - Exhibit G
Chest Service - Exhibit H
Extended Service Schedule

Agreement Modifications - In addition to the Services listed above, this Rider may amend an Agreement in any one or more of the following items:

__ Change of Name __ Add Item(s) of Service X Term Extension
__ Rate Revision __ Delete Item(s) of Service

ACCEPTED:

The Corporation of the City of Sault Ste. Marie

By: _____

Title: Mayor - Christian Provenzano

Date: March 19, 2018

By: _____

Title: Deputy City Clerk - Rachel Tyczinski

Date: March 19, 2018

BRINK'S CANADA LIMITED

_____
President

Countersigned:

By: _____

Date: _____

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW 2018-55

DELEGATION TO CITY SOLICITOR: (PR1) A by-law to authorize the City Solicitor, in the name of the Corporation to execute and affix the seal of the Corporation to all documents required to complete acquisitions and transfers of property, including Teraview (electronic documentation) once the transaction has been authorized by City Council by Council Report and/or By-law.

THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to Section 23.1(1) of the *Municipal Act, 2001*, S.O. 2001, c. 25, **ENACTS** as follows:

1. **AUTHORITY TO SIGN DOCUMENTS DELEGATED**

   City Council hereby delegates to the City Solicitor, the authority in the name of the Corporation to execute and affix the seal of the Corporation to all documents required to complete acquisitions and transfers of property, including Teraview (electronic documentation) once the transaction has been authorized by City Council by Council Report and/or By-law.

2. **EXECUTION OF DOCUMENTS**

   The powers delegated to the City Solicitor and her/his designate, under Section 1 of this by-law include the power to execute all documents required to complete acquisitions and transfers of property, including Teraview (electronic documentation) once the transaction has been authorized by City Council by by-law or resolution.

3. **EFFECTIVE DATE**

   This by-law takes effect on the day of its final passing.

PASSED in open Council this 19th day of March, 2018.

_____

MAYOR – CHRISTIAN PROVENZANO

_____

DEPUTY CITY CLERK – RACHEL TYCZINSKI

da LEGAL\STAFF\COUNCIL\BY-LAWS\2018\2018-55 DELEGATION OF SIGNING AUTHORITY CITY SOLICITOR SIGN DOCUMENTS ACQUISITION AND TRANSFER PROPERTY.DOC

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW 2018-56

PARKING: (P3.9(3)) A by-law to appoint Municipal Law Enforcement Officers to enforce the by-laws on various private properties and to amend Schedule "A" to By-law 90-305.

THE COUNCIL of the Corporation of the City of Sault Ste. Marie pursuant to Section 15 of the *Police Services Act,* R.S.O. 1990, chapter P.15 and amendments thereto, **ENACTS** as follows**:**

1. **SCHEDULE "A" TO BY-LAW 90-305 AMENDED**

   Schedule "A" to By-law 90-305 is hereby repealed and replaced with Schedule "A" attached to this by-law.

2. **EFFECTIVE DATE**

   This by-law takes effect on the day of its final passing.

PASSED in open Council this 19th day of March, 2018.

MAYOR - CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

da legal\Staff\COUNCIL\BY-LAWS\2018\2018-56 Municipal Law Enforcement Officers.doc

BADGE	SPECIAL CONSTABLE	EMPLOYER	PROPERTY LOCATION
SCHEDULE "A"			
26	MCLEOD,ROD	FLEMING & SMITH	378 QUEEN ST E & APARTMENTS & 27 KING ST
30	RENDELL,VERN	ALGOMA CENTRAL PROP	STATION MALL/STATION 49/STATION TOWER
151	PARR,DEREK	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
153	TASSONE,VITO	TASSONE CHIROPRATIC	673 QUEEN ST E
163	BUMBACCO,PHILIP	ALGOMA CENTRAL PROP	STATION MALL/STATION 49/STATION TOWER
196	MCGRAYNE,LAURA LEE	ALGOMA CENTRAL PROP	STATION MALL/STATION 49/STATION TOWER
241	COGHILL,ROBIN	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
253	TRAVSON,TERRANCE	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
267	CORBIERE,JOHN(TED)	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
276	SMITH,DENNIS,ROBERT	G4S SECURE SOLUTIONS	SAULT HOSPITAL
321	LORENZO,COREY	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
334	MILLER,BRADLEY	CITY OF SAULT STE MARIE	TRANSIT SERVICE AREA
344	HARPE,KEN	HOLIDAY INN	320 BAY ST
346	HAZLETON,MARGARET	CITY OF SAULT STE MARIE	BELLUVUE MARINA &PARK/ BONDAR MARINE & PARK/STRATHCLAIR DOG PARK&SPORTS COMPLEX/QE SPORTS COMPLEX
366	TROINOW,VICTORIA	G4S SECURE SOLUTIONS	SAULT HOSPITAL
370	HANSEN,LOUIS	ONT FINNISH HOME ASS	725 NORTH ST
372	BENOIT,ALAIN	ONT FINNISH HOME ASS	725 NORTH ST
374	TAAVEL,ANDRE	CITY OF SAULT STE MARIE	TRANSIT SERVICE AREA
391	MCLEOD,HEATHER	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
397	LAFRAMBOISE,YVON	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
410	POYNER,HAROLD	G4S SECURE SOLUTIONS	SAULT HOSPITAL
411	MOORE,ROBERT	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
420	FABIANO,ANTONIO	G4S SECURE SOLUTIONS	SAULT HOSPITAL
435	TRAMBLE,GEORGE	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
441	WILSON,DAVID	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
442	MACCLENNAN,MATTHEW	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
443	MARCIL,MARK	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
446	HALLIDAY,DANA	SAULT COLLEGE	443 NORTHERN AVE
456	CONEYBEARE,KEVIN	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
459	SLEEMAN,RAY	G4S SECURE SOLUTIONS	SAULT HOSPITAL
460	BOUGIE,DAN	G4S SECURE SOLUTIONS	SAULT HOSPITAL
463	MORIN,ALEX	CORPS OF COMM	
464	DITOMMASO,RYAN	2220917 ONT INC	489 BAY ST/535 QUEEN ST E
465	DELAVALLE,DON	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
484	MCLEOD,VIRIGINIA	CITY OF SAULT STE MARIE	BELLUVUE MARINA &PARK/ BONDAR MARINE & PARK/STRATHCLAIR DOG PARK&SPORTS COMPLEX/QE SPORTS COMPLEX
486	LONGO,NADIA	GT NORTH RETIREMENT	760 NORTHERN RD
487	ROUGEAU,MARISA	GT NORTH RETIREMENT	760 NORTHERN RD
488	LEFLEUR,MARILYN	GT NORTH RETIREMENT	760 NORTHERN RD
489	MCQUEEN, WANDA	GT NORTH RETIREMENT	760 NORTHERN RD
490	LUXTON,JEFF	GT NORTH RETIREMENT	760 NORTHERN RD
493	BROWN,FRASER	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
516	GAY,JAMES	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
517	ROY,BRENDA	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
523	MCBRIDE,GUY	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
526	JOHNSTON,CORY	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
537	GRAWBARGER,KYLE	G4S SECURE SOLUTIONS	SAULT HOSPITAL
541	DIMMA,WILLIAM	ALGOMA CENTRAL PROP	STATION MALL/STATION 49/STATION TOWER
547	LIEPA,MATTHEW	ALGOMA CENTRAL PROP	STATION MALL/STATION 49/STATION TOWER
548	CARON,ROGER	CITY OF SAULT STE MARIE	99 FOSTER DR (CIVC CENTRE)
556	ARCAND,SCOTT	G4S SECURE SOLUTIONS	SAULT HOSPITAL
565	LISCUMB,GERALD	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
566	SWEET,WILLARD	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
568	PICK,DENNY	CORPS OF COMM	SAULT AIRPORT
574	BOUCHARD,DARYL	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
587	GIULETTI,MATTHEW	G4S SECURE SOLUTIONS	SAULT AIRPORT / HOSPITAL
599	BUMBACCO,CARL	CB HOME INSTALLTIONS	321 JOHN ST /342,346 ST GEORGE'S AVE
601	HART,JASON	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
602	GREENWOOD,LESLIE	GREENWOOD HARDWARD	41 ALBERT ST W
603	LAMMING,DAVE	CITY OF SAULT STE MARIE	TRANSIT SERVICE AREA
607	FROST,CHRISTIAN	CITY OF SAULT STE MARIE	TRANSIT SERVICE AREA
608	ALISAT,THOMAS	ALISATS RUST PROOFING	24 QUEEN ST W
609	ROBINSON,SHAWN	ALISATS RUST PROOFING	24 QUEEN ST W
611	MIZZI,PRESTON	WENDY'S	1 QUEEN ST W
617	SAVAGE,SAMUEL	G4S SECURITY	SAULT HOSPITAL
619	BERTO,DEBORAH	GATEVIEW REALTY INC	304-310 ALBERT ST/420A&B MCNABB/715 DOUGLAS/67 ELGIN/47 PRINCESS/18 FERGUSON
622	PROULX,PATRICK	CITY OF SAULT STE MARIE	JOHN RHODES/ESSAR CENTREMCMEKKEN CENTRE/NORTHERN COMMUNITY CENTRE
623	AYTON,BENJAMIN	CITY OF SAULT STE MARIE	JOHN RHODES/ESSAR CENTREMCMEKKEN CENTRE/NORTHERN COMMUNITY CENTRE
624	MIHAILIUK,JASON	CITY OF SAULT STE MARIE	JOHN RHODES/ESSAR CENTREMCMEKKEN CENTRE/NORTHERN COMMUNITY CENTRE
626	CHARRON,ROBERT	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
627	BAKER,WILLIAM	STANDARD PARKING	ONTARIO REALITY CORP/ROBERTA BONDAR PLACE/426 QUEEN ST E/BREWERY BLOCK
632	SAVAGE,MATT	G4S SECURITY	SAULT HOSPITAL
633	HILL,MICHAEL	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
634	TIBBLES,COLLEEN	STANDARD PARKING	ONTARIO REALITY CORP/ROBERTA BONDAR PLACE/426 QUEEN ST E/BREWERY BLOCK
637	TOMASONE,LUIGI	LOU'S AUTOMOTIVE	317 ALBERT ST E

638	SICOLY,TERESA	AIRPORT	1-475 AIRPORT RD
639	PANITTILA,KIM	NORPROP SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
643	SHAW,KEVIN	CITY OF SAULT STE MARIE	BELLUVUE MARINA &PARK/ BONDAR MARINE & PARK/STRATHCLAIR DOG PARK&SPORTS COMPLEX/QE SPORTS COMPLEX
644	SANTA MARIE,ROBERT	CITY OF SAULT STE MARIE	JOHN RHODES/ESSAR CENTREMCMEKKEN CENTRE/NORTHERN COMMUNITY CENTRE
646	BOOTH,ABBY	CITY OF SAULT STE MARIE	JOHN RHODES/ESSAR CENTREMCMEKKEN CENTRE/NORTHERN COMMUNITY CENTRE
647	DAFOE,TRUDY	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
648	ELWGREN,STEPHEN	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
649	GRAHAM,STEVEN	FENGATE PROPERTY	248 NORTHERN AVE
650	LANG,RICHARD	G4S SECURITY	SAULT HOSPITAL
651	HUTCHINSON, HILLARY	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
653	BIOCCHI,CHRISTOPHER	AIRPORT	1-475 AIRPORT RD
659	MARCIL,BONNIE	STRICTLY CONFIDENTIAL INC	RJ'S MARKET
664	HAMMERSTEDT,ERIC	STRICTLY CONFIDENTIAL INC	RJ'S MARKET
665	MATTHEWS,SUANNE	NORTHLAND ANIMAL HOSP	695 TRUNK RD
666	AITKEN,ANDREW	G4S SECURITY	SAULT HOSPITAL
667	MCLAUGHIN,RYAN	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
669	BOREAN,RICK	CITY OF SAULT STE MARIE	BELLUVUE MARINA &PARK/ BONDAR MARINE & PARK/STRATHCLAIR DOG PARK&SPORTS COMPLEX/QE SPORTS COMPLEX
670	MCGUIRE,STEVE	REGENT PROPERTY	402/302 BAY ST/390 BAY/RIVERSEDGE CONDOS
671	MCGUIRE,PATRICK	REGENT PROPERTY	402/302 BAY ST/390 BAY/RIVERSEDGE CONDOS
672	LEWIS,RYAN	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
674	DERASP,RICHARD	CORPS OF COMM	SAULT AIRPORT
675	KELLY,MATTHEW	G4S SECURITY	SAULT HOSPITAL
676	THOMPSON,JOHN	CORPS OF COMM	SAULT AIRPORT
677	MACMILLAN,TYLER	CORPS OF COMM	SAULT AIRPORT
678	PERRON,JENNIFER	CORPS OF COMM	SAULT AIRPORT
679	CHATEAUNEUF,YVON	CORPS OF COMM	SAULT AIRPORT
680	MACGREGOR,CHRIS	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
681	SCHMIDT,KEATON	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
682	HALFORD,KEVIN	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
683	SEMENYEI, ADAM	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
684	RICKARD,EVAN	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
685	HORNBY,BRANDON	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
686	ASH,KEITH	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
687	POSSAMAI,MIKE	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
688	KING,MICHAEL	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
689	SUBRAMANIAM,DASA	DAYS INN	332 BAY ST
690	VANDERKLIFT, RENE	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
691	ADDISON, ERIN	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
692	RHEAUME, DANIEL	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
693	O'SHAUGHNESSY, CONOF	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
694	LIPPE, ANDREW	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
695	LAURICELLA, DIEGO	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
696	CLARIDA, JEFF	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
697	OLAR, GREG	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
698	DEPLONTY, HERBERT	CITY OF SAULT STE MARIE	PUBLIC WORKS PLOWING AREAS
699	QUARELL, ROBERT	SKYLINE LIVING	621, 627, 631 MACDONALD AVE
700	FORD, BRIAN	G4S SECURITY	SAULT HOSPITAL
701	CHIMFWEMBE, CHILUFYA	NORTH EAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
702	CARRICATO, CHELSEA	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
703	DIAS, CODY	G4S SECURITY	SAULT HOSPITAL
704	GLOVER, LAURA	G4S SECURITY	SAULT HOSPITAL
705	DEGILIO, JOEY	G4S SECURITY	SAULT HOSPITAL
706	GAGNON, JACQUES	G4S SECURITY	SAULT HOSPITAL
708	POWLEY, CHAD	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
709	SCHMIDT, ALEX	CITY OF SAULT STE MARIE	BELLUVUE MARINA &PARK/ BONDAR MARINE & PARK/STRATHCLAIR DOG PARK&SPORTS COMPLEX/QE SPORTS COMPLEX
710	HOTCHKISS, ROBERT	Riversedge Developments	503 BAY ST
711	MASON, STEPHEN	Riversedge Developments	503 BAY ST
712	KOOSTACHIN, ANDREW	Ontario Finnish Resthome	725 North St
713	Cho, Linda	Jennex Cho Enterprises	129 Second Line West
714	DESANDO, ALEXANDER	G4S SECURITY	SAULT HOSPITAL
715	MITCHELL, SPENCER	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
716	MALLINGER, FRANCES	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
717	GUY, AMY	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
718	SCOTLAND, KEVIN	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
719	JENKINSON, MICHAEL	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
720	LORENZO, COREY	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
721	MACNEIL, ALICIA	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
722	MACTYRE, ANDREW	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
723	ROCCA, ANTHONY	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
724	ROULEAU, MICHEAL	CORPS OF COMM	SAULT AIRPORT
725	PAAT, EMMA LEE	AIRPORT	SAULT AIRPORT
726	DIVECHA, HARRISON	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
727	CLARK, DYLAN	G4S SECURITY	SAULT AREA HOSPITAL
728	BRANDOW, TRACY	NORTH 44 PROPERTY MGM	844 QUEEN ST E/ 524-536A GOULAIS AVE
729	DOUCHAMIE, CHELSEY	G4S SECURITY	SAULT AREA HOSPITAL
730	THOMPSON, JOSIAH	NORPRO SECURITY	DAVEY HOME/QUEENSCENTRE/HURON ST PROPERITES/ALGOMA PUBLIC HEALTH/556 QUEEN STRATHCLAIR DOG& SPORTS/QE ECOMPLEX/JOHN RHODES/726 QUEEN ST
731	NOTT, REGINALD	CORPS OF COMM	SAULT AIRPORT
732	MAKI, BRANDON	NORTHEAST SECURITY	S COLLEGE/A UNIVERSITY & RES /ESSAR CENTRE/GHC/CAMBRIAN MALL/TENARIS/JOHN RHODES/QE SPORTS COMPLEX
733	GREGORCHUK, CATHERIN	REAL ESTATE STOP INC	2 QUEEN STREET WEST

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW NO. 2018-57

ZONING: (P1.1(1)) A by-law to amend Sault Ste. Marie Zoning By-law 2005-150 concerning lands located at 145 McNabb Street (Infrastructure Ontario).

THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to section 34 of the *Planning Act*, R.S.O. 1990, c. P.13 and amendments thereto, **ENACTS** as follows:

1. **145 MCNABB STREET; LOCATED ON THE SOUTH SIDE OF MCNABB STREET APPROXIMATELY 81M WEST OF ITS INTERSECTION WITH PIM STREET; CHANGE FROM C4 TO C4.H**

   The zone designation on the lands having civic address 145 McNabb Street shown as "Subject Property" on the map attached to this by-law, which property is shown on Map 27/1-30 of Schedule "A" to By-law 2005-150 is changed from C4 (Commercial General) zone to C4.H (Commercial General) zone with a Holding Provision.

   Pursuant to Section 36 of the Planning Act, no site grading, excavation or building demolition may occur upon the subject property, without further archaeological assessment, prepared by a qualified Archaeologist, which either identifies the burial sites or determines that the area is clear of archaeological concern.

2. **SCHEDULE "A"**

   Schedule "A" hereto forms a part of this by-law.

3. **CERTIFICATE OF CONFORMITY**

   It is hereby certified that this by-law is in conformity with the Official Plan for the City of Sault Ste. Marie authorized and in force on the day of the passing of this by-law.

PASSED in open Council this 19th day of March, 2018.

MAYOR – CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

LEGAL\STAFF\LEGAL\ZONING\2018\2018-57(Z) 145 MCNABB STREET\2018-57.DOCX



Document Path: G:\Applications (2017 - Present)\2018\Zoning\A-4-18-Z - 145 McNabb Street - Infrastructure Ontario\A-4-18-Z_SubjectPropertyMap_Feb2018_8x11_V1_Legal.mxd

Application Map Series

☑ Subject Property ☐ Official Plan Landuse
☐ Existing Zoning ☐ Aerial Image
☐ Official Plan Amendment

Legal Department Reference

Schedule "A"

Property Information

Civic Address: 145 McNabb Street
Roll No.: 020029001000000
Map No.: 27/1-30
Application No.: A-4-18-Z
Date Created: February 01, 2018

Legend

Subject Property: 145 McNabb Street
Parcel Fabric

City of Sault Ste. Marie
Planning and Enterprise Services
Community Development and Enterprise Services Department
99 Foster Drive, Sault Ste Marie, ON P6A 5X6
saultstemarie.ca | 705-759-5368 | planning@cityssm.on.ca

This map is for general reference only
Orthophoto: None
Projection Details:
NAD 1983 UTM Zone 16N
GCS North American 1983

0 5 10 20 Meters
1:1,500

N

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW NO. 2018-58

ZONING: (P1.1(1)) A by-law to amend Sault Ste. Marie Zoning By-laws 2005-150 and 2005-151 concerning lands located at 531 and 535 Trunk Road (Your Neighbourhood Credit Union (LTD)).

THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to section 34 of the *Planning Act*, R.S.O. 1990, c. P.13 and amendments thereto, **ENACTS** as follows:

1. **531 AND 535 TRUNK ROAD; LOCATED ON THE SOUTH SIDE OF TRUNK ROAD, APPROXIMATELY 100M WEST OF ITS INTERSECTION WITH SOUTH MARKET STREET**

   The zone designation on the lands described in section 2 of this by-law, which lands are shown on Map 31/1-34 of Schedule "A" to By-law 2005-150, is changed from C4 (General Commercial) zone to R4.S-144 (Medium Density Residential) zone with an amended "Special Exception".

2. **BY-LAW 2005-151 AMENDED**

   Section 2 of By-law 2005-151 is amended by amending section 2(144) and adding the following to subsection 2(144) as follows:

   "2(144) 531 and 535 Trunk Road

   Despite the provisions of By-law 2005-150, the zone designation on the southern 33m of the lands located on the south side of Trunk Road, approximately 100m west of its intersection with South Market Street and being parts of civic numbers 531 and 535 Trunk Road and outlined and marked "Subject Property" on the map attached as Schedule "A" hereto is changed from C4 (General Commercial) zone to R4.S-144 (Medium Density Residential) zone with an amended "Special Exception", adding the following special condition:

   1. that the subject property may be developed with semi-detached, multiple attached and apartment dwelling, or any combination thereof.

3. **SCHEDULE "A"**

Schedule "A" hereto forms a part of this by-law.

4. **CERTIFICATE OF CONFORMITY**

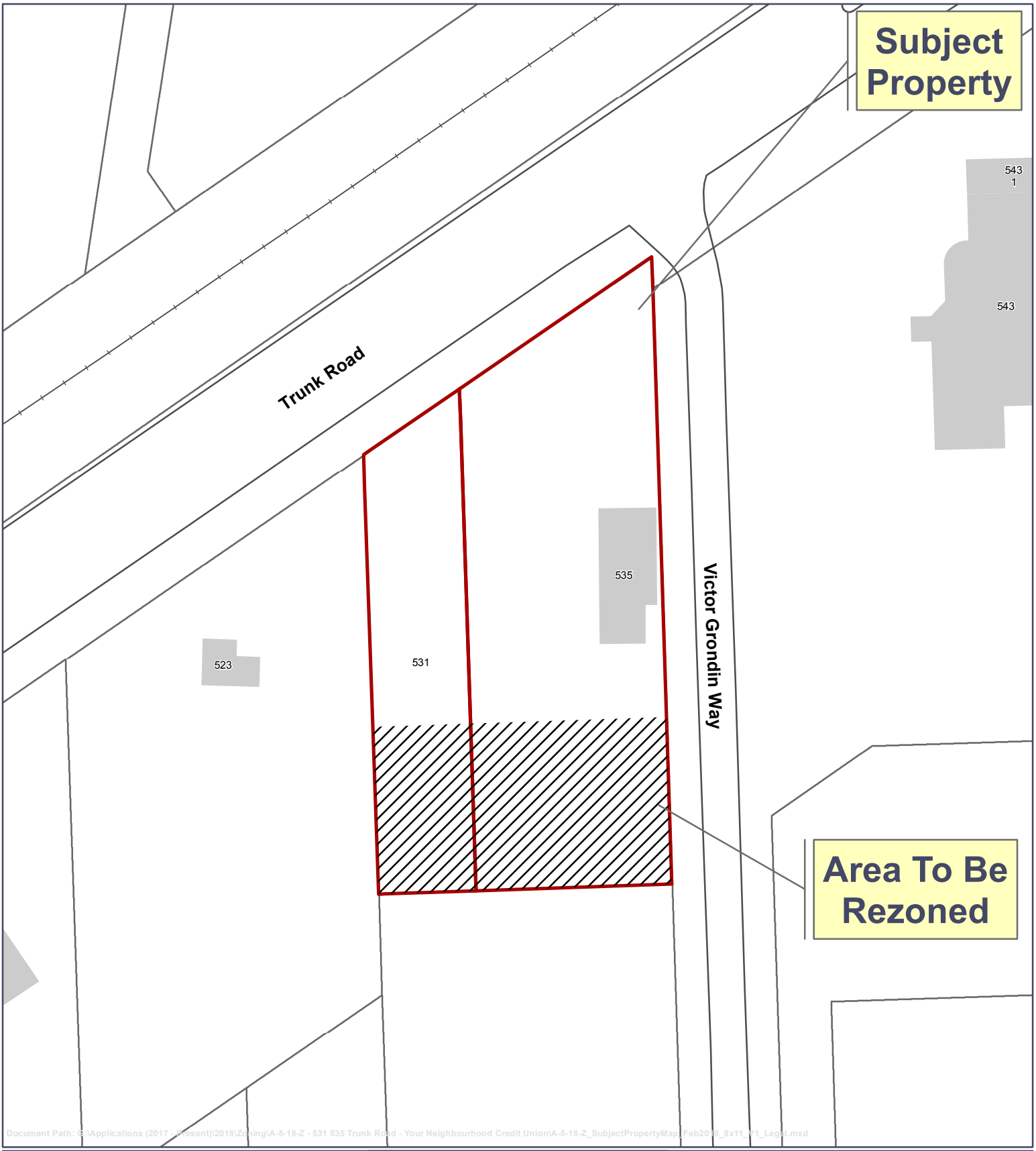
It is hereby certified that this by-law is in conformity with the Official Plan for the City of Sault Ste. Marie authorized and in force on the day of the passing of this by-law.

PASSED in open Council this 8th day of March, 2018.

MAYOR – CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

da LEGAL\STAFF\LEGAL\ZONING\2018\2018-58(Z) 531 AND 535 TRUNK ROAD\2018-58 AMEND SPECIAL EXCEPTION 144.DOC



Application Map Series

☑ Subject Property ☐ Official Plan Landuse
☐ Existing Zoning ☐ Aerial Image
☐ Official Plan Amendment

Legal Department Reference

Schedule "A"
to By-law 2018-58 and
Schedule 144 to By-law 2005-151

Property Information

Civic Address: 531, 535 Trunk Road
Roll No.: 010018036000000
Map No.: 31/1-34
Application No.: A-5-18-Z
Date Created: February 05, 2018

Legend

Subject Property: 531, 535 Trunk Road
Area To Be Rezoned
Parcel Fabric

City of Sault Ste. Marie
Planning and Enterprise Services
Community Development and Enterprise Services Department
99 Foster Drive, Sault Ste Marie, ON P6A 5X6
saultstemarie.ca | 705-759-5368 | planning@cityssm.on.ca

This map is for general reference only
Orthophoto: None
Projection Details:
NAD 1983 UTM Zone 16N
GCS North American 1983

0 5 10 20 Meters
1:1,000

N

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW NO. 2018-59

PROPERTY: (PR1.100) A by-law to declare the City owned property legally described as PIN 31566-0037 (LT) PT LT 1 PL H518 KORAH AS IN T164389; SAULT STE. MARIE as surplus to the City's needs and to authorize the disposition of the said property.

THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to the *Municipal Act, 2001*, S.0. 2001, c. 25, **ENACTS** as follows:

1. **LANDS DECLARED SURPLUS**

   The lands more particularly described in Schedule "A" to this by-law are surplus to the requirements of the municipality.

2. **SALE AUTHORIZED**

   The Corporation of the City of Sault Ste. Marie shall sell the lands more particularly described in Schedule "A" hereto.

3. **SCHEDULE "A"**

   Schedule "A" hereto forms part of this by-law.

4. **EFFECTIVE DATE**

   This by-law takes effect on the day of its final passing.

PASSED in open Council this 19th day of March, 2018.

_____

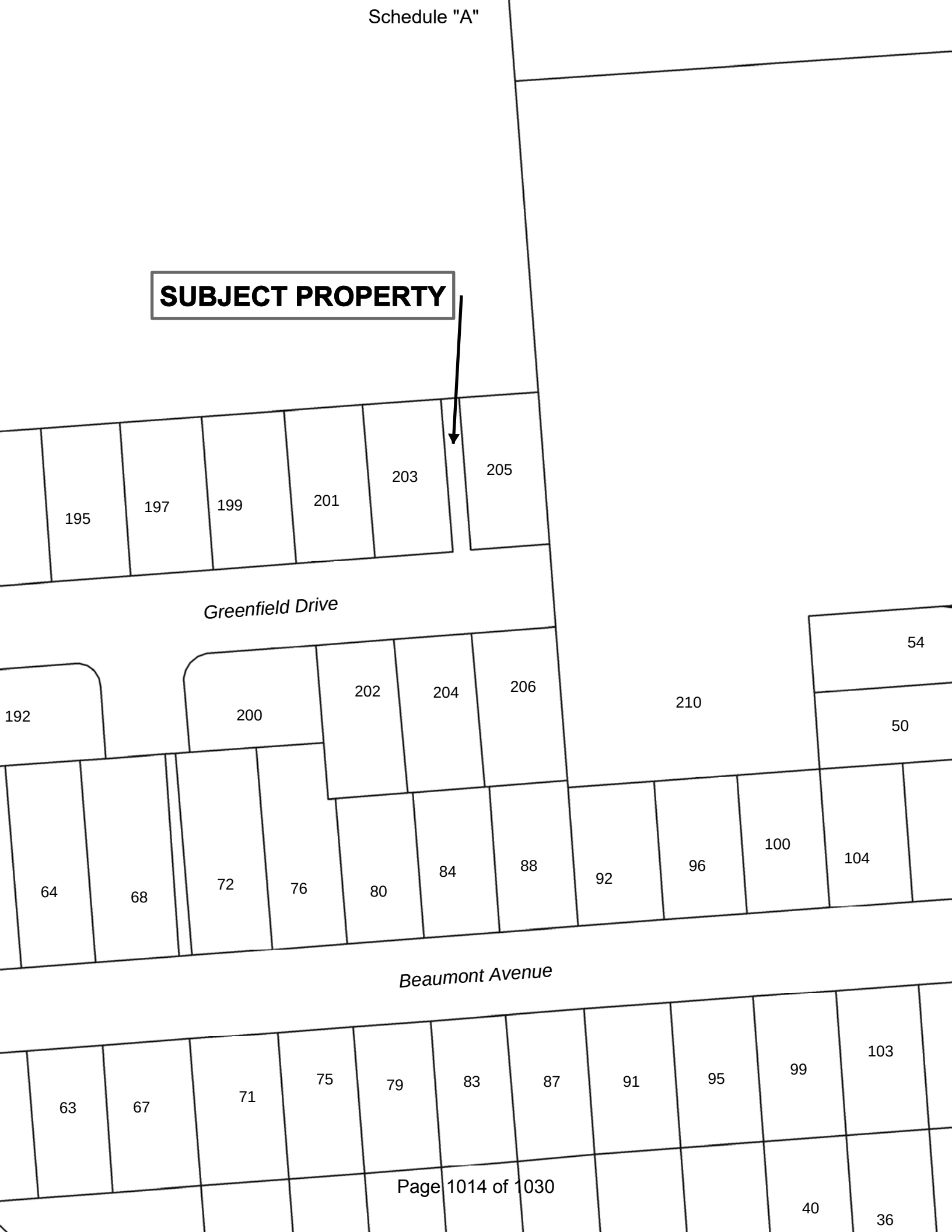
MAYOR - CHRISTIAN PROVENZANO

_____

DEPUTY CITY CLERK – RACHEL TYCZINSKI

mw \\citydata\LegalDept\Legal\Staff\COUNCIL\BY-LAWS\2018\2018-59 - Declare Surplus Walkway Greenfield Drive.docx

Schedule "A"


SUBJECT PROPERTY
195
197
199
201
203
205
Greenfield Drive
192
200
202
204
206
210
54
50
64
68
72
76
80
84
88
92
96
100
104
Beaumont Avenue
63
67
71
75
79
83
87
91
95
99
103
40
36

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW NO. 2018-14

LOCAL IMPROVEMENT: (L2.1) A by-law to authorize the construction of sanitary sewer, private drain connection and Class "A" pavement on Bruce Street from Queen Street East to Wellington Street East under Section 3 of the *Municipal Act, 2001*, Ontario Regulation 586/06 and to repeal By-law 2017-219.

WHEREAS notice of the intention of the Council to undertake the works hereinafter described was duly published and served more than one month prior to the passing of this by-law; and

WHEREAS the Council has received the reports, estimates and statements required for undertaking the said works;

THEREFORE the Council of The Corporation of the City of Sault Ste. Marie **ENACTS** as follows:

1. The Corporation shall construct the work described in Schedule "A" and Schedule "B" hereto as a local improvement under the said Act and in accordance with plans and specifications furnished by the Commissioner of Engineering/Planning.

2. The Commissioner of Engineering/Planning shall forthwith make such plans, profiles and specifications and furnish such information as may be necessary for the construction and completion of the said work.

3. The construction and completion of the said work shall be performed under the superintendence and in accordance with the directions and orders of the Commissioner of Engineering/Planning.

4. The Commissioner of Finance/Treasurer may agree with any bank or person for temporary borrowing of money to meet the cost of the works pending completion thereof.

5. The sum of $30.50 per metre frontage shall be specially assessed upon the lots abutting directly on the said sanitary sewers, according to the extent of their respective frontages thereon, and the sum of $304.00 shall be specially assessed upon each of such lots served by a private drain connection from any of such sanitary sewers to the street line and the remainder of the cost of the work shall be borne by the Corporation.

6. The sum of $79.50 per metre frontage shall be specially assessed upon the lots abutting directly on the Class "A" pavement according to the extent of their respective frontages thereon and the remainder of the cost of the works shall by borne by the City.

7. The special assessments shall be paid in one payment by December 31st of the current year or in the alternative by ten equal annual installments.

8. The debentures to be issued for the loan to be effected to pay the cost of the work when completed shall bear interest at such rate as the Council may determine and be made payable within ten years on the installment plan.

9. Any person whose lot is specially assessed may commute for a payment in cash in accordance with By-law 69-436 the special rates imposed on such lot.

10. The said Schedule "A" and Schedule "B" form a part of this by-law.

11. This by-law comes into force on the day of its final passing.

12. **BY-LAW 2017-219 REPEALED**

By-law 2017-219 is hereby repealed.

Read the **FIRST** and **SECOND** time in open Council this 22nd day of January, 2018.

MAYOR – CHRISTIAN PROVENZANO

~~**CITY CLERK – MALCOLM WHITE**~~
Deputy City Clerk - Rachel Tyczinski

da LEGAL/STAFF/COUNCIL/BY-LAWS/2018/2018-14 LOCAL IMPROVEMENT - BRUCE STREET.DOC

Read the **THIRD** time in open Council and passed this 19th day of March, 2018.

MAYOR - CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

THE CORPORATION OF THE CITY OF SAULT STE. MARIE
Civic Centre
99 Foster Drive
P.O. Box 580
Sault Ste. Marie, ON P6A 5N1

LOCAL IMPROVEMENT CONSTRUCTION BY-LAW 2018-14, SECTION 3
REGULATION 586-06 MUNICIPAL ACT
ENGINEER'S REPORT

2018 01 22

Nature of Work (Construction of):	Sanitary sewer, private drain connection and Class "A" pavement	
On:	Bruce Street	
From:	Queen Street East	
To:	Wellington Street East	
Estimated Cost of Work:	$2,591,000.00	
Estimated Assessable Abutting Frontage:	262.4m	Sanitary Sewer
	190.2m	Class "A" Pavement
Estimated Cost to be Borne by Assessable Abutting Property:	$14,082.05	Sanitary Sewer
	$15,123.22	Class "A" Pavement
Estimated Cost to be Borne by The Corporation:	$2,561,794.73	
Special Rate per Metre Frontage:	$30.50	Sanitary Sewer
	$79.50	Class "A" Pavement
Special Rate per Private Drain Connection:	$304.00	
Estimated Interest Rate Term:	3.70%	
	10 years	
Estimated Annual Rate per Metre Frontage:	$3.70	Sanitary Sewer
	$9.66	Class "A" Pavement
Estimated Annual Rate per Private Drain Connection:	$36.92	
Estimated Lifetime of the Work:	20 years	

Respectfully submitted,

Carl Rumiel, P. Eng.
Design & Construction Engineer
Attachments

THE CORPORATION OF THE CITY OF SAULT STE. MARIE
SANITARY SEWER AND PRIVATE DRAIN CONNECTIONS-SECTION 3

SCHEDULE "A" **BY-LAW 2018-14**

JOB NUMBER	STREET	FROM	TO	LENGTH	SIZE	# OF P.D.C.	ASSESSABLE FRONTAGE	ESTIMATED COST
A-2017-5-02	Bruce	Queen St. East	Wellington St. East	280m	600mm	24	262.4m	$14,082.05

LOCAL IMPROVEMENT CONSTRUCTION BY-LAW 2018-14, SECTION 3

THE CORPORATION OF THE CITY OF SAULT STE. MARIE
CLASS "A" PAVEMENT-SECTION 3

SCHEDULE "B" **BY-LAW 2018-14**

JOB NUMBER	STREET	FROM	TO	LENGTH	WIDTH	# OF P.D.C.	ASSESSABLE FRONTAGE	ESTIMATED COST
A-2017-7-02	Bruce	Queen St. East	Wellington Street East	280m	14m	n/a	190.2m	$15,123.22

LOCAL IMPROVEMENT CONSTRUCTION BY-LAW 2018-14, SECTION 3

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW NO. 2018-16

LOCAL IMPROVEMENT: (L2.1) A by-law to authorize the construction of sanitary sewer, private drain connection and Class "A" pavement on Simpson Street from Wellington Street East to Queen Street East under Section 3 of the *Municipal Act, 2001*, Ontario Regulation 586/06 and to repeal By-law 2017-220.

WHEREAS notice of the intention of the Council to undertake the works hereinafter described was duly published and served more than one month prior to the passing of this by-law; and

WHEREAS the Council has received the reports, estimates and statements required for undertaking the said works;

THEREFORE the Council of The Corporation of the City of Sault Ste. Marie **ENACTS** as follows:

1. The Corporation shall construct the work described in Schedule "A" and Schedule "B" hereto as a local improvement under the said Act and in accordance with plans and specifications furnished by the Commissioner of Engineering/Planning.

2. The Commissioner of Engineering/Planning shall forthwith make such plans, profiles and specifications and furnish such information as may be necessary for the construction and completion of the said work.

3. The construction and completion of the said work shall be performed under the superintendence and in accordance with the directions and orders of the Commissioner of Engineering/Planning.

4. The Commissioner of Finance/Treasurer may agree with any bank or person for temporary borrowing of money to meet the cost of the works pending completion thereof.

5. The sum of $30.50 per metre frontage shall be specially assessed upon the lots abutting directly on the said sanitary sewers, according to the extent of their respective frontages thereon, and the sum of $304.00 shall be specially assessed upon each of such lots served by a private drain connection from any of such sanitary sewers to the street line and the remainder of the cost of the work shall be borne by the Corporation.

6. The sum of $79.50 per metre frontage shall be specially assessed upon the lots abutting directly on the Class "A" pavement according to the extent of their respective frontages thereon and the remainder of the cost of the works shall by borne by the City.

7. The special assessments shall be paid in one payment by December 31st of the current year or in the alternative by ten equal annual installments.

8. The debentures to be issued for the loan to be effected to pay the cost of the work when completed shall bear interest at such rate as the Council may determine and be made payable within ten years on the installment plan.

9. Any person whose lot is specially assessed may commute for a payment in cash in accordance with By-law 69-436 the special rates imposed on such lot.

10. The said Schedule "A" and Schedule "B" form a part of this by-law.

11. This by-law comes into force on the day of its final passing.

12. **BY-LAW 2017-220 REPEALED**

By-law 2017-220 is hereby repealed.

Read the **FIRST** and **SECOND** time in open Council this 22nd day of January, 2018.

MAYOR – CHRISTIAN PROVENZANO

~~CITY CLERK – MALCOLM WHITE~~

Deputy City Clerk - Rachel Tyczinski

da LEGAL\STAFF\COUNCIL\BY-LAWS\2018\2018-16 LOCAL IMPROVEMENT - SIMPSON STREET.DOC

Read the **THIRD** time in open Council and passed this 19th day of March, 2018.

MAYOR - CHRISTIAN PROVENZANO

DEPUTY CITY CLERK – RACHEL TYCZINSKI

BY-LAW 2018-16

THE CORPORATION OF THE CITY OF SAULT STE. MARIE
Civic Centre
99 Foster Drive
P.O. Box 580
Sault Ste. Marie, ON P6A 5N1

LOCAL IMPROVEMENT CONSTRUCTION BY-LAW 2018-16, SECTION 3
REGULATION 586-06 MUNICIPAL ACT
ENGINEER'S REPORT

2018 01 22

Nature of Work (Construction of):	Sanitary sewer, private drain connection and Class "A" pavement	
On:	Simpson Street	
From:	Wellington Street East	
To:	Queen Street East	
Estimated Cost of Work:	$2,572,000.00	
Estimated Assessable Abutting Frontage:	729.7m	Sanitary Sewer
	685.7m	Class "A" Pavement
Estimated Cost to be Borne by Assessable Abutting Property:	$31,574.05	Sanitary Sewer
	$61,127.98	Class "A" Pavement
Estimated Cost to be Borne by The Corporation:	$2,479,297.97	
Special Rate per Metre Frontage:	$30.50	Sanitary Sewer
	$79.50	Class "A" Pavement
Special Rate per Private Drain Connection:	$304.00	
Estimated Interest Rate Term:	3.70%	
	10 years	
Estimated Annual Rate per Metre Frontage:	$3.70	Sanitary Sewer
	$9.66	Class "A" Pavement
Estimated Annual Rate per Private Drain Connection:	$36.92	
Estimated Lifetime of the Work:	20 years	

Respectfully submitted,

Carl Rumiel, P. Eng.
Design & Construction Engineer
Attachments

THE CORPORATION OF THE CITY OF SAULT STE. MARIE
SANITARY SEWER AND PRIVATE DRAIN CONNECTIONS-SECTION 3

SCHEDULE "A" **BY-LAW 2018-16**

JOB NUMBER	STREET	FROM	TO	LENGTH	SIZE	# OF P.D.C.	ASSESSABLE FRONTAGE	ESTIMATED COST
A-2017-5-01	Simpson	Wellington Street East	Queen Street East	480m	250mm	39	729.7m	$31,574.05

LOCAL IMPROVEMENT CONSTRUCTION BY-LAW 2018-16, SECTION 3

2018 01 22

THE CORPORATION OF THE CITY OF SAULT STE. MARIE
CLASS "A" PAVEMENT-SECTION 3

SCHEDULE "B"

BY-LAW 2018-16

JOB NUMBER	STREET	FROM	TO	LENGTH	WIDTH	# OF P.D.C.	ASSESSABLE FRONTAGE	ESTIMATED COST
A-2017-7-01	Simpson	Wellington Street East	Queen Street East	480m	10m	n/a	685.7m	$61,127.98

LOCAL IMPROVEMENT CONSTRUCTION BY-LAW 2018-16, SECTION 3

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW NO 2018-18

STREET CLOSING & CONVEYANCE: (MAP 67) A by-law to stop up, close and authorize the conveyance of Peer Street and a 0.30m Reserve on the Easterly limit of Peer Street in the Peer Subdivision, Plan 1M448.

WHEREAS the street more particularly described as Peer Street described as PIN 31486-0010 (LT) PCL STREETS-1 SEC 1M448; PEER ST PL 1M448 RANKIN LOCATION; SAULT STE. MARIE and 0.30m Reserve on the Easterly limit of Peer Street described as PIN 31486-0009 (LT) PCL 9-1 SEC 1M448; BLK 9 PL 1M448 RANKIN LOCATION; SAULT STE. MARIE, in the Peer Subdivision, Plan 1M448 was established as a public street and assumed for public use by By-law 2018-17;

NOW THEREFORE THE COUNCIL of The Corporation of the City of Sault Ste. Marie, pursuant to *the Municipal Act, 2001*, S.O. 2001, **ENACTS** as follows:

1. **STREET CLOSED, DECLARED SURPLUS AND CONVEYANCE AUTHORIZED**

   The street more particularly described as Peer Street described as PIN 31486-0010 (LT) PCL STREETS-1 SEC 1M448; PEER ST PL 1M448 RANKIN LOCATION; SAULT STE. MARIE and 0.30m Reserve on the Easterly limit of Peer Street described as PIN 31486-0009 (LT) PCL 9-1 SEC 1M448; BLK 9 PL 1M448 RANKIN LOCATION; SAULT STE. MARIE, in the Peer Subdivision, Plan 1M448, having been assumed by the Corporation for public use, is hereby stopped up, closed, declared surplus to the requirements of the Municipality and the conveyance of same is authorized.

2. **EXECUTION OF DOCUMENTS**

   The Mayor and City Clerk are hereby authorized for and in the name of the Corporation to execute and to affix the seal of the Corporation to all documents required to give effect to this by-law.

3. **EASEMENTS TO BE RETAINED**

   The street is subject to the retention of easements if required.

4. **EFFECTIVE DATE**

This by-law takes effect on the day of its final passing.

READ the **FIRST** and **SECOND** time in open Council this 22nd day of January, 2018.

_____

MAYOR - CHRISTIAN PROVENZANO

_____

CITY CLERK - MALCOLM WHITE

mw \\citydata\LegalDept\Legal\Staff\COUNCIL\BY-LAWS\2018\2018-18 - Close and Convey Peer Street.docx

Read the **THIRD** time in open Council and passed this 19th day of March, 2018.

_____

MAYOR - CHRISTIAN PROVENZANO

_____

DEPUTY CITY CLERK – RACHEL TYCZINSKI

THIS DRAWING DOES NOT FORM PART OF THE BY-LAW. IT IS FOR INFORMATION PURPOSES ONLY.

