



**Township of
Faraday
Fire Department
Service Review**

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Executive Summary

The Township of Faraday Fire Department Service Review intends to provide current information from which township council (Council) and the Township of Faraday Fire Department (Department) management team can draw in order to make better-informed decisions regarding services, for both now and in the future. The Department provides services to residents, businesses, and visitors to the community. The Department's goals should be to build upon the existing policies, procedures, and structure, and improve efficiencies to serve the community in the most cost-efficient manner available. There are many factors to consider when conducting a Fire Department Service Review. Each municipality and fire department is unique: differences can vary considerably in community makeup, economic conditions, population, demographics, building stock, and fire and emergency service delivery and capabilities.

Providing emergency services is considered an essential service for the Township of Faraday (Township), and due to the nature of this work, workers' safety and lives are at higher risk of being endangered than that of workers in many other service-type occupations. It is therefore vital to protect the volunteer firefighters in smaller communities by ensuring they have access to all the appropriate and safe equipment that is required for them to perform their roles, and to ensure that this equipment is kept available for service 24 hours a day, seven days a week, should Township residents, businesses, or visitors require its immediate service.

The project scope included a review of the:

- Establishing and Regulation Bylaw
- Extent to which the Department and firefighters are following the rules and regulations as set out by the Ontario Fire Marshal's Office
- Fire station facility conditions
- Equipment and maintenance procedures
- Responses
- Capital assets

The Review also considered possible cost savings and improved efficiencies within the Department. Unfortunately, no easy solution will reduce costs meaningfully while still maintaining sufficient protection from fires and other emergencies for the residents and properties. There are, however, opportunities to adjust and revise components of the Department to improve effectiveness and cost efficiencies and help to reduce potential liability issues for the Township.

Twenty recommendations stemmed from the Review. These recommendations are based upon analyses of several factors, including current legislation, suggestions for updates to bylaws, agreements, and providing a better process for documentation. The

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recommendations also include changes to the current capital asset, station upgrades, and health and safety policies.

Council, the clerk-treasurer, the fire chief, officers, and firefighters can all be proud of the service they provide to the community. In the coming years, and with a few necessary changes, they will continue a strong tradition of providing an essential service to the community, doing so in the most cost-effective manner available to them.

The Review was successful due to the support of several key individuals: Councillor Murray Bowers, Clerk-Treasurer Dawn Switzer, Fire Chief Brian Sears (Fire Chief), and the officers and firefighters of the Township.

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1.0 Summary of Recommendations

IM: Immediate (0-2yr), ST: Short Term (3-5 yrs.), LT: Long Term (6-10 yrs.),

OG: Ongoing



Mandatory



Term



Council Approval



Budget Impact

Legislation and Bylaws Recommendations				
1. The Department utilizes the records management program to electronically document all legislative requirements for better documentation and retention of statistics and to reduce liability.	✓	IM		✓
2. The Establishing and Regulation Bylaw be updated to reflect the current needs and circumstances of the Township and then be presented to Council for consideration and approval.	✓	IM	✓	
3. The Township complete a community risk assessment before the 2024 legislation comes into effect to comply with the FPPA.	✓	ST	✓	✓
4. The Fire Chief updates the Smoke Alarm Program to include CO alarms, as per the legislation, and then present the update(s) to Council for consideration and approval.	✓	IM	✓	
5. The Department formalizes a Joint Health and Safety Committee as per the Occupational Health and Safety Act to promote health and safety.		IM		
6. The Fire Chief works with the officers to develop a training program for the Department that educates the firefighters on the Occupational Health & Safety Act and the Ministry of Labor Section 21 Guidance Notes.	✓	IM		

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7. The Fire Chief works with the officers to develop a personal protective equipment (PPE) management program that meets cleaning and testing best practices and standards.	✓	IM		✓
8. The Fire Chief relocates or fastens all equipment in the passenger compartments of the fire apparatus, including separating the passengers and equipment compartment in the equipment van.	✓	IM		✓
9. The Fire Chief and the officers review the SWOT results and determine if any of the suggestions from the analysis will be incorporated into the Department's strategic plan.	✓	IM		
10. All officer and firefighter training data, including the instructor's name, length of time and type of training, is entered into the record management program.	✓	IM		
11. The Department establishes a standard lesson plan to ensure the training is applicable and meets recognized standards.	✓	ST		
12. A training schedule is developed and communicated to all firefighters in advance of the training.		IM		
13. The Township considers an Automatic Aid Agreement with the Town of Bancroft and the Municipality of Hastings-Highlands to provide the first response for structure and wildland fires in areas where either fire departments can arrive quickly at the scene.		ST	✓	✓
14. The Fire Chief begins submitting cost recovery for provincial highway response to the MTO and is retroactive of all 2021 responses.	✓	IM		✓
15. The Fire Chief utilizes the records management program to record all maintenance, testing, and repairs completed on all equipment and fire apparatus.		IM		

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16. The Fire Chief and Council consider replacing Station Two's pumper and tanker with a new pumper/tanker.	✓	IM	✓	✓
17. Both fire stations need general cleaning and reorganizing to maximize available space at each station.		IM		
18. The hazardous materials explosive-proof cabinets are moved from the main entrance of Station One and relocate to the apparatus floor area.	✓	IM		
19. An energy audit and feasibility study be undertaken on both fire stations to determine if the buildings are still viable investments for the Township.		ST	✓	✓
20. The Fire Chief explores possible grants for upgrading the fire stations.	✓	IM		✓

2.0 Introduction

The Review provides a framework for Council and the Fire Chief to make policy, organizational, capital, and operational changes and decisions that will affect the Department in the immediate-term (0-2 years), short-term (3-5 years) and long-term (6-10 years).

The Review is based on the requirements of the Fire Protection and Prevention Act, 1997 (FPPA, 1997) and other regulations and standards, including the Occupational Health and Safety Act, Section 21 Guidance Notes, National Fire Protection Standards and the Fire Underwriters Survey and Ontario Fire Marshal's Public Fire Safety Guidelines.

Section 2 of the FPPA identifies the responsibility for fire protection services as follows:

"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."

Furthermore, the FPPA also defines the Fire Chief's responsibility to Council in Section 2.6.3 as follows:

"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 Council is the body that determines the type and level of fire protection services. The Fire Chief's responsibility is to ensure the delivery of these services and to provide recommendations to Council for ways to keep these services compliant with the required regulations and standards, while having the services continue to meet the community's needs.

As a third-party consultant, The Loomex Group has made recommendations based on consultations with the fire representative from Council, the clerk-treasurer, the Fire Chief and the officers and firefighters; these consultations were made in tandem with a review of applicable legislation, standards, and best practices. The role of a third-party consultant is to provide comments and suggestions on issues that may or may not be supported by the Fire Chief, some of which may require additional study and consideration.

Council and community residents expect their fire service to run effectively, efficiently, and cost-effectively. Council and community residents also need to know the fire service's capabilities and limitations, given the resources provided to the Department.

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The Review looked at each primary function of the Department and the interaction with other municipal departments. Each section of the report reviews factors and specific Department operations, changes that have taken place, and recommendations on changes or improvements, if applicable. A summary of recommendations stemming from the Review begins on page 5 of this document, following the Executive Summary.

3.0 Approach and Methodology

The Loomex Group brought together a project team expressly suited to complete the Review for the Township. The project team included experts with direct experience managing volunteer emergency and fire services departments, conducting organizational reviews, and developing strategic plans.

The Loomex Group's approach and methodology to the scope of the work for this Review included a background review of documents and maps, direct observation of the environment, and Department and Township staff engagement. While this approach is essential, firefighter engagement was also an instrumental component of the Review. The following list outlines the steps that led to the development of the final document.

1. Start-up Meeting to Establish Terms of Reference
2. Key Stakeholder Engagement Sessions
3. Firefighter Strengths, Weaknesses, Opportunities and Threat (SWOT) Analysis
4. Data Collection, Review and Analysis
5. Development of Review Document

Figure 1: Review Process



Establish Terms of Reference

The Loomex Group met with the clerk-treasurer and the Fire Chief to review the scope of work and establish the terms of reference for the project. It is critical to ensure that everyone understands the scope of work, timelines, and deliverables at the beginning of the project. The project team developed a framework to meet the requirements of a review, approved by the Fire Chief.

Key Stakeholder Engagement Sessions

Key stakeholder engagement sessions were ongoing throughout the review process. Several meetings also took place with both the clerk-treasurer and the Fire Chief throughout the review process. In addition, a session was held with the fire representative for Council and the clerk-treasurer.

Strengths, Weaknesses, Opportunities and Threat (SWOT) Analysis

Another vital part of the work scope and analysis was the SWOT sessions with the Department's officers and firefighters. The project lead met with officers and firefighters to ask a series of questions relating to the Department's strengths, weaknesses, opportunities, and threats.

Data Collection, Review and Analysis

Working with the clerk-treasurer and the Fire Chief, the project team reviewed numerous documents that provided relevant and historical information about the Department. It is essential to understand the development and current operations of the Department in order to make informed recommendations for the Department to implement going forward.

The documents reviewed included:

- Applicable bylaws
- Response protocols
- Operating and capital budget
- Firefighter compensation
- Applicable agreements
- Organizational structure
- Station locations and response data
- Simplified risk assessments (SRAs)

The project team maintained an open-minded approach during the data assessment when reviewing how the Department conducts business. Using this approach, the project team identified synergies and determined opportunities for shared services and cost-savings and/or cost avoidance recommendations. The areas of analysis included:

- Governance and applicable legislation and bylaws
- Operation and capital budgets and purchasing
- Administration
- Firefighter Training and Education Program
- Fire stations, apparatus, and equipment
- Fleet and equipment maintenance
- Fire prevention programs (public education and code enforcement)
- Fire suppression

In addition to data collection and stakeholder engagement, the project team spent time in the community to observe and review, first-hand, all areas and aspects of the Township.

Department Review Document

The Loomex Group held regular meetings with the clerk-treasurer and the Fire Chief to review the development of the report. The Loomex Group created a working draft of the report that was shared with the clerk-treasurer and the Fire Chief for their review. The comments and suggestions made by both parties were incorporated into the final report prepared by The Loomex Group and issued to the Fire Chief.

4.0 Legislation and Bylaws

4.1 Legislation

The Department's operations are guided by provincial legislation, industry standards (best practices), municipal bylaws, agreements, and policies. The following is a list of the primary legislation and standards:

- Fire Prevention and Protection Act, 1997 (FPPA, 1997)
- Ontario Fire Marshal's Public Safety Guidelines
- Emergency Management and Civil Protection Act (R.S.O. 1990)
- Ontario building and fire codes
- National Fire Protection Association (NFPA) Standards
- Occupational Health and Safety Act (OH&S) and Section 21 Committee Guidelines
- Municipal bylaws
- Corporate policies and guidelines
- Department policies and standard operating guidelines
- Highway Traffic Act
- Municipal Act
- Municipal Freedom of Information and Protection of Privacy Act (MFIPPA)

One of the primary legislations with which the Township must comply is FPPA. This Act outlines and mandates minimum standards that must be adhered to for providing life safety systems to a municipality. The minimum standard requirements are:

1. A simplified risk assessment.
2. A smoke alarm program.
3. Distribution of fire safety education materials.
4. Participation in inspections upon complaint, or when requested to assist with fire code compliance.
5. A vulnerable occupancy program that meets provincial regulations.

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Based on the information provided by the Fire Chief, Table 1 illustrates the Township's compliance with the Act.

Table 1: Township Compliance with FPPA

Description	Compliant	Comments
Simplified Risk Assessment (SRA)	No	The Township has an SRA from 2006, but, due to its age, this SRA would not be considered current or necessarily applicable. Rather than update the SRA, the Township should consider completing the new community risk assessment, as now required to be completed by all departments by 2024.
Smoke Alarm Program	Yes	Before the COVID-19 pandemic, the Department ran a smoke alarm campaign one night of the month for most of the year. The campaign requires better documentation on when residents are visited and if batteries or smoke alarms were provided during the visit. The Smoke Alarm Program developed in 2012 should be updated to include CO alarms, and then be submitted to Council for consideration and adoption.
Distribution of Fire Safety Education Material	Yes	Before the COVID-19 pandemic, the Department participated in many community events and distributed fire safety education material through the Smoke Alarm Program. However, better documentation of when these events occur is required. A formal public education program should be developed and adopted by Council in the Establishing and Regulation Bylaw.
Complete Inspections on Complaint or Request	Yes	The Fire Chief completes inspections based on complaints or requests, but better documentation is required.
Vulnerable Occupancies	N/A	The Township has no vulnerable occupancies.

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Overall, the Fire Chief and the Department are aware of applicable legislation, like the FPPA, and are working hard to meet the Act's minimum standards. As with many smaller volunteer departments, this is a challenging endeavour, but it is also a necessity under the legislation.

The Department must address the issue of better documentation to help reduce liability for the Township and Fire Chief. The Department currently retains hard copy files, but the storing of files in hard copy is not best for today's environment. The Department currently utilizes a records management program for their standard incident reporting for the Province of Ontario but are not using any of the program's other modules for records retention.

Utilizing this program to document and track public education and smoke/CO alarm installations and inspections would reduce the amount of paper that would require storage, as well as reduce the time required to retain the records. Furthermore, by using the records management program, the Fire Chief can produce reports quickly for strategic planning, or in the case of a lawsuit or challenge to the Department.

4.2 Bylaws

Based on the chief fire official's recommendations, each Council approves, through an Establishing and Regulating (E&R) Bylaw, the established level of service for residents, businesses, and visitors. The Township's E&R Bylaw is No. 13-2013.

As per the current E&R Bylaw, Council approved the following core services for the Department to provide:

- Structural firefighting with limited internal rescue and fire attack
- Emergency response to water access properties based on safe travel and environmental conditions
- Emergency response to properties via private roads, lanes or driveways based on roadway conditions
- Vehicle firefighting
- Grass/brush firefighting
- Marine firefighting (defensive only)
- Basic medical assist and defibrillation
- Hazardous materials at the Awareness Levels
- Transportation incidents involving vehicles and watercraft
- Water and ice rescue (shore-based)
- Public assistance
- Other agency response(s)
- Mutual Aid
- Automatic Aid
- Participation in the community emergency plan

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- Fire protection agreements
- Joint service agreements

A review of the current core services, conducted with the Fire Chief's involvement, found that changes are required to better reflect the services provided by the Department. It must be noted that making any changes would require Council approval and an updating of the E&R Bylaw.

Bylaw 13-2015 also requires updates to regulate the setting of open-air fires; although the Bylaw remains applicable, it needs an update with the cost recovery logistics. For example, the cost recovery rates in Schedule C of the Bylaw for the vehicles and firefighters are far below the best practices of most of the other departments in Ontario. Most departments use the recognized Ministry of Transportation (MTO) rates when setting cost recovery rates. In addition, a means of recovering costs through the Bylaw rather than through the Provincial Offences Act ensures recovered funds go directly to the Township, instead of the upper-tier government.

Overall, the Bylaw should remain flexible enough for the Fire Chief to use his discretion as to when to recover costs or not.

4.3 Recommendations

From the review and assessment of the Legislation, Bylaws, and Agreement, it is recommended that:

1. The Department utilizes the records management program to electronically document all legislative requirements for better documentation and retention of statistics and reduce liability.
2. The Establishing and Regulation Bylaw be updated to reflect the current needs and circumstances of the Township and then be presented to Council for consideration and approval.
3. The Township completes a community risk assessment before the 2024 legislation comes into effect to comply with the FPPA.
4. The Fire Chief updates the Smoke Alarm Program to include CO alarms, as per the legislation, and then present the update(s) to Council for consideration and approval.

5.0 Occupational Health & Safety

The Department is governed under the Ontario Occupational Health and Safety Act (OHSA) (Ministry of Labour, 2020), known as the Green Book, and the Ministry of Labour (MOL) Ontario Fire Service Health and Safety Advisory Committee, formed under Section 21 of the OHSA.

In addition to meeting the applicable OHSA requirements, the Department's operations must align with the MOL Section 21 Guidance Notes. Recognizing that the nature of firefighting work can put a worker at risk of injury, illness, or death, in 1989, the MOL established an Ontario Fire Service Health and Safety Advisory Committee to handle health and safety issues specific to the Fire Service. The objective of the Committee is to make safety recommendations for firefighters across Ontario. To date, the Committee has made over 70 best practice recommendations to reduce the risk to firefighters. The intent is to integrate these recommendations into training programs and procedures for fire scenes or stations and include recommended equipment.

5.1 Health & Safety Committee

Currently, the Department does not have a Joint Health and Safety Committee; such a group is not a requirement by legislation due to the total number of firefighters on the Department roster. However, due to the inherent risk of firefighting, the type of equipment, and the stations, it would be beneficial for the Department to be proactive and form a Health & Safety Committee based on a Joint Health & Safety Committee OHSA. This Committee could also support the Fire Chief in enhancing health and safety culture and assist in developing the Department's policies and procedures to ensure compliance with the Act.

5.2 Section 21 Guidance Notes

There is a lack of knowledge at the officer and firefighter levels regarding the Section 21 Guidance Notes and how they apply to the Department and the operating policies and guidelines. It would be beneficial to have a training session for the Department that explains the Health and Safety Act and the Section 21 Guidance Notes.

5.3 Personal Protective Equipment (PPE)

The Review looked at the PPE for the firefighters, including their helmets, boots, gloves, and bunker gear. The Department has made great strides in ensuring that all PPE meets current legislation and Section 21 Guidance Notes, including the 10-year shelf life for the bunker gear. At the time of the Review, all firefighters had current bunker gear, but, while undertaking the physical tours of the stations and vehicles, bunker gear older than ten years was identified in Station 1 and the equipment van. This older gear should be clearly labelled as “Training Gear Only” and stored in such a place that would avoid it being mistakenly used for firefighting purposes.

Other identified areas that require enhancement are the PPE cleaning procedures and the annual testing of bunker gear by an authorized vendor. Currently, the Department shares resources with Hastings-Highlands to clean PPE when it becomes contaminated, which is a good use of a shared resource between the two departments, however, at this time, the bunker gear is not being tested annually, as per the standards.

Awareness that firefighters are exposed to hazardous chemicals that cause cancers has increased over the last decade. Legislation and best practices have been put in place to reduce the risk to firefighter's health and WSIB liability for a municipality. The best practices to meet the standards include having a program for managing PPE that has become contaminated at a fire scene – thereby protecting the firefighters and their families – and ensures the annual washing and testing of the bunker gear.

A program for addressing firefighter wellness is another need recognized over the last several years. Many departments have initiated a Firefighter Wellness Program that promotes fitness, nutrition, and health awareness. Such a program should also include information about cancer awareness and prevention (due to the high risk for firefighter exposure), critical incident stress management (CISM), and post-traumatic stress disorder (PTSD) awareness. These programs assist in promoting firefighter wellness and reduce WSIB liability for the Township. Future consideration should be given to developing and promoting wellness programs for the Department.

5.4 Vehicle Safety

Firefighter safety during a response was reviewed with the Fire Chief and involved examining the response vehicles for any health and safety issues.

The Fire Chief and the Department have made great strides to ensure the safety of the responding firefighters, but a couple of changes are needed to reduce firefighter injury and liability on the Township.

Loose equipment stored in the passenger compartments of responding vehicles must be either relocated or fastened, and separation should be added in the equipment van between the passenger and equipment compartments. If a sudden evasive action or an accident with a fire apparatus occurs, the Department must have taken appropriate measures beforehand to help ensure that a firefighter does not get injured by unsecured equipment.

Figure 2 illustrates the lack of separation between the passenger and equipment compartments in the equipment vehicle.

Figure 3 illustrates loose equipment in the passenger compartment in Truck 18.



Figure 2: Lack of separation between passenger and equipment compartments

5.5 Recommendations

From the review and assessment of the Occupational Health and Safety, it is recommended that:

1. The Department formalizes a Joint Health and Safety Committee, as per the Occupational Health and Safety Act, to promote health and safety.
2. The Fire Chief works with the officers to develop a training program for the Department that educates the firefighters on the Occupational Health & Safety Act and the Ministry of Labor Section 21 Guidance Notes.
3. The Fire Chief works with the officers to develop a PPE management program that meets cleaning and testing best practices and standards.
4. The Fire Chief relocates or fastens all equipment in the passenger compartment(s) of the fire apparatus, including separating the passenger and equipment compartments in the equipment van.



Figure 3: Loose equipment in passenger compartment

6.0 Firefighter Engagement

A Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis formed part of the review. A SWOT analysis is a structured planning method that evaluates an organization's strengths, weaknesses, opportunities, and threats. The results provide internal and external information concerning helpful and harmful factors for achieving the Departments' objectives.

The analysis included facilitated engagement sessions, compliant with the COVID-19 restrictions, with the officers and firefighters at Station 1. Overall, participation in the session was good.

The group was asked seven questions to stimulate discussion on the Department, the past and present history of their stations, and the future of their stations and the Department. The results demonstrated that all members are very dedicated and care about serving their community. The following is a list of common themes that were evident from the SWOT analysis.

- Overall, the officers and firefighters are very dedicated and forthcoming about providing a high quality of service to the community. They see their role as helping people in need, whether residents or people travelling through the community.
- Officers and firefighters are committed to attending community events, hosting open houses at the fire station, and raising funds to help the Township purchase some required equipment.
- Generally, the feeling was that communications within the Department could be improved.
- Generally, the officers and firefighters are happy with the equipment supplied to them to perform their tasks, but they feel some fire apparatus need updates.
- Officers and firefighters are committed to attending and participating in training but would like to see a schedule distributed in advance that outlines the type of training that will be provided. In addition, they would like to see more options for outside training, and additional training props and equipment.
- The Health and Safety Program needs updates and improvements to include firefighter wellness and PTSD programs.
- Overall, the officers and firefighters would like to see upgrades to both stations to accommodate the vehicles and operations required for today's fire services.

6.1 Recommendation

From the review and assessment of the Firefighter Engagement Sessions, it is recommended that:

1. The Fire Chief and the officers review the SWOT analysis results and determine if any of the suggestions from the analysis will be incorporated into the Department's strategic plan.

7.0 Training

Training is mandatory for safe and effective fire department operations and is an ongoing requirement to maintain skill levels. In addition, employers are obligated under the Occupational Health and Safety Act to provide training to their employees.

The Act states the duty of the employer is to ensure that:

- Equipment, materials, and protective devices as prescribed are provided.
- Equipment, materials, and protective devices provided by the employer are maintained in good condition.
- Measures and procedures prescribed are carried out in the workplace.
- Without limiting the strict duty imposed in the above bullets, an employer shall provide information, instruction, and supervision to a worker to protect the worker's health or safety.

Additional required training mandated by the Province of Ontario Regulations includes:

- Incident Management System for Emergency Management
- Accessibility for Ontarians with Disabilities Act (AODA)
- Workplace Harassment
- Workplace Hazardous Materials Information System (WHMIS)
- Ontario Health and Safety Act (OH&S)

The Review showed that the Department's training program for all its members is based on the National Fire Protection Association (NFPA) standards; however, the Department is not completing most of the additional provincial training.

Adopting the NFPA standard for training is challenging for most departments but is even more challenging for small volunteer services. In addition, the time commitment that is required by volunteer firefighters to obtain the training and become certified will often drive them away from the service.

The Department has done a great job of converting to the NFPA standard. The Fire Chief and the firefighters deserve a lot of credit for meeting the NFPA standard and obtaining certification. Most of the Department, including recruits, are certified, or grandfathered, to Firefighter Level 1 and 2 and HazMat Awareness. Moreover, officers' training extends to NFPA 1021, and although not all officers are trained to this level, the Department is making great strides in achieving this standard.

7.1 In-Service Training

The Fire Chief organizes in-service training, or regular weekly training, based on the firefighters' comments on what they believe is needed. This training includes all aspects of firefighting, first aid and CPR. Managing the Training Program is a time-consuming task for the Fire Chief and officers. The Department currently meets every week: allocating two weeks a month for training, one night for a general meeting, and, in good weather, one night to conduct home inspections and smoke/CO alarm checks.

Identified during the Department SWOT analysis was the need for a training schedule to be prepared in advance. It would be advantageous for the officers and firefighters to know beforehand what the training will be on any given night.

In-service training does not currently include any established annual firefighter mandatory subjects, though the Department does complete the annual mandatory provincial topics. The Department should develop several topics or themes for yearly training based on firefighter health and safety and standard type responses. When the training outline is complete, it should become the mandatory annual training for every firefighter.

7.2 Documentation

The Review identified a potential issue with documentation of the training program: much of the documentation is either in print-form or is entered into the records management program, but the information in the system is not complete enough to prevent possible challenges from the Ministry of Labor or litigation.

Better documentation is a must and should include all training completed by an officer or firefighter, the length of the training, and the instructor's name. In addition, each training session should have a set standard that includes a recognized lesson plan that coincides with the training.

A concentrated effort to establish the lesson plans and data entry of all training information into the Department's record management program is necessary. It is a time-consuming process, but, if not complete, it is one of the most significant exposures for the Department and the Township regarding health and safety and litigation.

7.3 Recommendations

From the review and assessment of the Training, it is recommended that:

1. All officer and firefighter training data, including the instructor's name, length of time and type of training, is entered into the record management program.
2. The Department establishes a standard lesson plan to ensure the training is applicable and meets recognized standards.
3. A training schedule is developed and communicated to all firefighters in advance of the training.

8.0 Response

Reviewing the response for the Department showed that responses in 2020 more than doubled from 2019. This increase is partly attributed to the COVID-19 pandemic, which saw more residents working or staying at home.

Figure 4 illustrates the total service calls from 2017-2020. Figure 5 shows a breakdown of the types of service calls for the same period. At over 19%, calls relating to open-air burning (authorized or unauthorized) are the highest response call. It would be beneficial for the Fire Chief to review this response and determine ways to reduce the response call numbers. A few solutions could include public education on open-air burning, or possible fines.

Figure 4: Response calls from 2017-2020

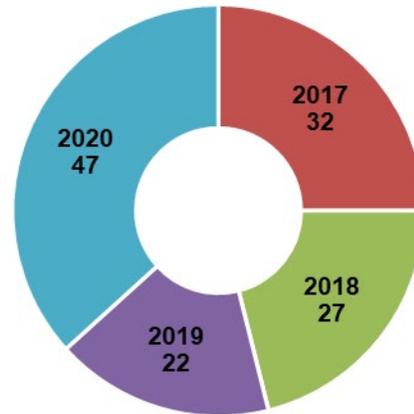
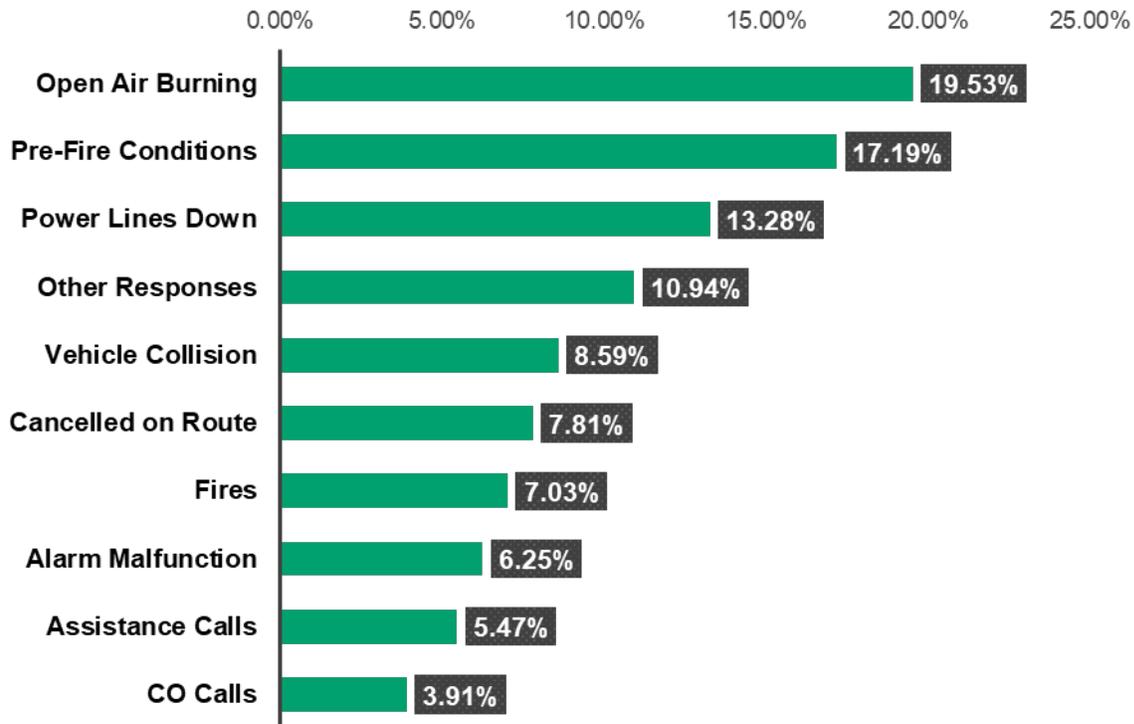


Figure 5: Service call by type, 2017-2020



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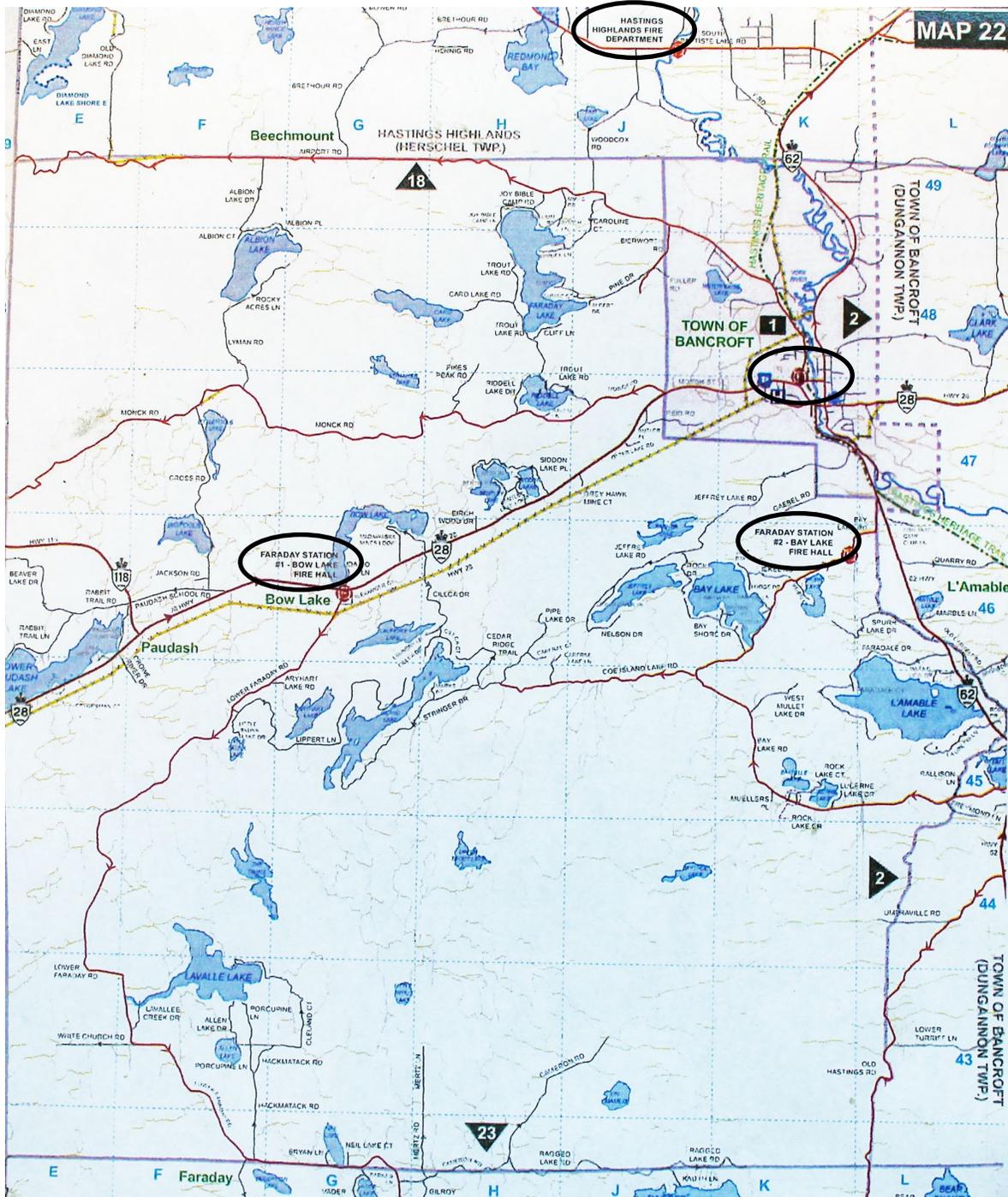
Response calls that require fire apparatus are paged to both Station One and Station Two simultaneously. Based on their location at the time of the page, firefighters respond in the apparatus from either station. Other firefighters go directly to the emergency scene and wait for their PPE to arrive in the equipment van.

The Review showed that the Department, as with most volunteer fire departments, has trouble providing enough firefighters for the initial response during the daytime hours. The Department utilizes Hastings County's Mutual Aid System to access additional firefighters for the more serious calls, such as structure fires.

Another area of improvement relating to response for the south and northeast areas of the Township is to consider an Automatic Aid Agreement with the Town of Bancroft or the Municipality of Hastings-Highlands. While this approach would apply to all calls for service, it should be considered for significant incidents, such as structure and wildland fires. Stations from a neighbouring municipality can respond as fast as either of the primary stations or, in some cases, faster than Station One. In some cases, the responding apparatus from either department's stations drive by a station located in Bancroft. This approach would still see the Faraday Stations respond, and the decision of which department will remain on the scene is made once the first apparatus arrives, providing a better level of service with little investment on the part of the Township.

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Figure 6: Map of Faraday and neighbouring departments' fire stations



Provincial highways run through the Township and result in several responses by the Department each year. The Ministry of Transportation Ontario (MTO) has set rates and a well-established system for departments to submit claims to offset highway response costs, which has become a best practice in the industry. A review with the Fire Chief of the Department's service responses on provincial roads determined that the Department has not submitted cost recovery to the Ministry of Transportation Ontario (MTO) for these responses.

8.1 Recommendations

From the review and assessment of Responses, it is recommended that:

1. The Township considers an Automatic Aid Agreement with the Town of Bancroft and the Municipality of Hastings-Highlands to provide the first response for structure and wildland fires in areas where either fire departments can arrive quickly at the scene.
2. The Fire Chief begins submitting cost recovery for provincial highway response to the MTO and is retroactive of all 2021 responses.

9.0 Fire Apparatus and Equipment

Fire departments deliver emergency services to Township residents and businesses using fire apparatus (pumpers, tankers, rescues, equipment vans, etc.), often referred to as fire trucks; firefighters and a properly equipped apparatus are essential to help control or mitigate an emergency. The fire apparatus represents a significant investment for any municipality. Maintaining and replacing apparatus to ensure a reliable and modern fleet is an integral part of managing and planning fire service delivery.

Fire service apparatus have evolved over the years, and there are increasingly demanding standards to follow when purchasing an apparatus. These standards include the Ontario Health and Safety Act, National Fire Protection Association Standard 1901 – Standard for Automotive Fire Apparatus, and/or ULC – S515-04 – Automotive Fire Fighting Apparatus. Due to the continual changes in safety requirements, construction materials, and operating practices, older fire apparatus do not have many of the features that are now mandated. The most important of these features are Anti-lock Brake Systems (ABS) and Roll Stability Control (RSC), which help minimize accidents by improving steering and braking control.

Other factors that impact determining when to replace an apparatus is the Fire Underwriters Survey (FUS) and reviewing if the age of the apparatus is acceptable for insurance grading purposes. In smaller communities, the FUS will only recognize an apparatus that is no more than 20 years old. These factors emphasize the importance of planning and budgeting well in advance of the replacement of older apparatus, to reduce the risk to the Township and its firefighters.

9.1 Apparatus Inspection, Testing, and Maintenance

Each fire apparatus must be maintained so that it can withstand a high level of scrutiny, ensuring the apparatus can start and operate any time an emergency incident occurs. This requires a robust system of weekly and annual inspections, tests, and maintenance. In addition to routine maintenance, such as checking and adjusting brakes, lubrication and oil changes, the apparatus must have an annual Ministry of Transportation (MTO) inspection, pump tests, and non-destructive testing on ladders. As a result of this routine maintenance, each vehicle will be out of service for several days each year while the scheduled work is being completed.

As noted above, standards are more demanding and complex in recent years, due to the introduction of new safety systems, pollution control, and engine and driveline systems using computer interfaces. In the past, many components on the fire apparatus could be repaired or maintained by mechanically skilled firefighters or a local garage. Much of this work now requires mechanics with specialized training, along with a computer-performed diagnostic of system faults. As a result of this advanced

maintenance work, some apparatus may be taken out of service for more extended periods of time while repairs are being completed.

The Review showed that the Department is meeting the current standards for testing and maintaining the fire apparatus, as per the legislation. The vehicles are repaired quickly (when required), MTO safeties are completed yearly, and annual testing of the fire pumps and ladders occurs.

The Fire Chief is currently working on a system to have the emergency vehicle technician complete maintenance and repair work for the fire apparatus at the fire station, rather than take the vehicle to a major center. This solution reduces the downtime of vehicles, reduces the wear and tear on the vehicle, and presents cost savings for staff by limiting the time spent driving the vehicle to considerable distances for service or repairs.

9.2 Fleet Renewal and Rationalization

As previously stated, fire apparatus renewal and rationalization is a considerable cost for any municipality. The Township has done a substantial job supporting the updating of the fleet bases on a limited tax base. The challenge for current and future Councils is the financial, budgetary pressures of replacement, as vehicle costs continue to rise.

As with other review sections, the biggest challenge is the documentation of repairs to the fire apparatus. Documentation of all repairs should be entered into the records management program for better retention and quick reference, should the information ever be required from either the MTO or litigation. Moreover, better documentation provides an accurate picture to the Fire Chief regarding the actual cost for maintaining a vehicle, and this information can be used to make better-informed recommendations on apparatus disposal to Council.

The Review showed that no established fire apparatus disposal plan has been adopted by Council. Setting standards-based legislation, establishing the need, understanding circumstances, and finding the means to make capital purchases will help the Council and the Fire Chief forecast future large capital purchases of fire apparatus. A plan also provides the Fire Chief with the opportunity to reduce the impact of large capital purchases on the Township budgets by building up reserves.

Table 2 illustrates the Department's fire apparatus, the purchase year, and the proposed disposal year based on a 25-year service life for large vehicles and a 12-year service life for small vehicles, which is considered best practice for many smaller volunteer departments in Ontario.

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Table 2: Current Fleet and Proposed Replace Dates

Type of Fleet	Location	Description	Purchase Year	Proposed Replacement Year (25)
Pumper/Tanker	Station One	2016 Freightliner	2016	2041
Pumper	Station Two	1990 Spartan	2013	2015
Tanker	Station Two	1990 GMC Top Kick	1990	2015
Equipment Van	Station One	2013 GMC	2013	2038
Equipment/Forestry Truck	Station One	1999 Ford F350	1999	2024
Utility Truck	Station One	2018 Ford F150	2018	2030

Table 2 shows that, based on a 25-year disposal plan, both the pumper and tanker at Station Two were due for replacement in 2015. Even if it were a 30-year disposal plan, both vehicles are due for replacement. Replacing both vehicles is a significant expense for the Township, upwards of \$800 thousand to \$1 million dollars. Therefore, before committing to the investment, a review of the needs and circumstances is required.

Based on the needs and circumstances of Station Two, The Loomex Group recommends disposing of both the pumper and tanker and purchasing a new pumper/tanker like the new vehicle at Station One. It is more appropriate, given the staffing levels at Station Two, and can potentially present cost-savings of \$300 to \$400 thousand dollars for the Township. In addition, the reduction of Station Two vehicles opens a space to relocate a smaller vehicle from Station One, reducing pressure for an area to house Station One fire apparatus.

The concept of a pumper/tanker apparatus is common in many departments and provides the dual operations of a pumper and tanker. Figure 7 illustrates the pumper/tanker currently in service at Station One.

Figure 7: Station One pumper/tanker



9.3 Equipment

There is a large variety of fire and emergency equipment used by the Fire Service. Personal protective equipment (PPE) includes bunker gear (firefighting coats and pants), helmets, flash hoods, gloves, and boots, all of which must meet NFPA standards to comply with Occupational Health and Safety regulations identified in Section 5.0.

Self-contained breathing apparatus (SCBA) is required anytime a toxic atmosphere is present or suspected, such as with fires, carbon monoxide calls, and hazmat spills. The Department utilizes SCBA and ensures it is tested at regular intervals. Council should be aware that the SCBA for an interior structural firefighter is not in compliance and requires upgrades if changes are to be implemented to the core services.

The Department also has a large inventory of other equipment, including fire hoses, nozzles and fittings, ladders, generators and lighting, ventilation fans, portable pumps, saws, and many types of hand tools. This equipment must be maintained and replaced as required. The challenge for Council and the Department is to properly budget to replace this equipment through an approved life cycle program. Most equipment used by the Fire Service is expensive and has a set lifespan. Due to the known lifespans of this equipment, the Fire Chief must budget and plan carefully in order to replace the equipment cost-effectively when replacements become required.

The Review showed that equipment is maintained regularly, with a lot of the work done by the Fire Chief or volunteer firefighters. As with many other Department areas, repairs and maintenance should be documented in the records management program.

9.4 Recommendations

From a review of the Apparatus Inspection, Testing and Maintenance section, it is recommended that:

1. The Fire Chief utilizes the records management program to record all maintenance, testing, and repairs completed on all equipment and fire apparatus.
2. The Fire Chief and Council consider replacing Station Two's pumper and tanker with a pumper/tanker.

10.0 Fire Stations

The Township's fire services operate out of two stations with a simultaneous response: Station One, at 13 Lower Faraday Road, and Station 2, at 2107 Bay Lake Road.

Constructed in the late 1970s, Station One addressed the function and needs of the community at that time. The original station was a two-bay fire hall with an administrative area. A community hall was added to the end of the station in the early 1980s. In the mid-1980s, another hall was added to house a fire response vehicle.

Today, the station houses four response vehicles, equipment storage, a workshop and a training room, the Fire Chief's office, and a single washroom facility. The Township community hall is still attached to the fire station.

Station Two was constructed in the early 1980s and, like Station One, was built to meet the community's needs at that time. Today, the fire station houses two response vehicles and a single washroom.

Over the last 30+ years, both the need for a fire station to service the community and the Fire Service itself have changed, as have codes and standards for municipal buildings.

Figure 8: Station One, constructed in the late 1970s



Figure 9: Station Two, constructed in the early 1980s



10.1 Station One

A high-level assessment of Station One was conducted as part of the Review. The first observation was the amount of equipment, gear, and other fire-related materials stored in every unused area of the fire station. Hazardous materials explosive-proof cabinets are located at the station's public and firefighter entrance, as illustrated in Figure 10. It also appears to be an area that is convenient for dropping clothing and other items. With the lack of dedicated storage space, the entire fire station itself has become a de facto storage space, where every available open area has something stored, with no clear organizational system in place.

Figure 11 shows the Fire Chief's office, additional workstations, and a small training room. Creating storage space in a separate area to house and organize equipment and other items would help solve storage issues and make the facility safer for the public and firefighters. In addition, the hazardous materials explosive-proof cabinets should be relocated from the main entrance to the workshop/apparatus floor area, but that cannot be done at this time due to lack of space on the apparatus floor area.

In addition to the lack of dedicated storage areas, the apparatus floor space does not meet the current fleet requirements. Figure 12 illustrates three trucks parked on an apparatus floor designed for only two vehicles. Figures 12 and 13 show the proximity of the fire apparatus parked beside each other and how close the pumper

Figure 10: Front entrance of Fire Station One



Figure 11: Fire Chief's office and training area



Figure 12: Three trucks parked on apparatus floor



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Figure 13: Fire apparatus parking and proximity to each other



Figure 14: Rear of pumper in proximity to a small storage area



truck is to a small storage area. This creates a hazard as the fire vehicles leave for the response to a call and as potential firefighters come into the fire station. There is also the potential for damage to the fire apparatus if it is consistently manoeuvring such tight spaces.

Figure 14 illustrates the single bay that was added to the fire station in the mid-1980s. At the time of its construction, the bay housed apparatus from the 1980s and earlier, and it served its purpose for several years. Unfortunately, as has been noted, both the community's needs and the size of the fire apparatus have changed. As a result, the bay is no longer sufficient in either length or height for vehicles as they are currently built, or for the size they will likely become in the future.

Figure 15 illustrates how the apparatus must be parked in the smaller apparatus bay in order to get the overhead door closed. During the review, visual damage was noted on the rear wall of the apparatus bay.

Figure 14: Single-bay addition



Figure 15: Apparatus parked in bay



10.2 Station Two

Station Two is similar to Station One. At present, the station houses two apparatus and lacks storage for additional equipment or other items. As a satellite location, it requires little storage, but the length of the station is a major issue. Figure 16 illustrates the available space at both the back wall of the station and the front overhead door when the pumper is parked in the station. Damage was evident on the pumper from where the vehicle hit the rear wall as it was being parked.

Station Two also has water issues caused by pipes that freeze in the winter and are not operational in the summer. Further investigation is required to ensure water is available in the municipal building for cleaning and washroom facilities.

Overall, Station Two requires cleaning and repairs to the insulation and interior wall cladding to ensure energy efficiency.

Figure 16: Front and rear of parked pumper at Station Two



10.3 Considerations for Improvement

Council and the Fire Chief's challenge is to determine the best solution for the stations, for both now and in the future, and to find the necessary funds to upgrade or replace the stations. The following are some considerations for Council regarding the fire stations.

- Complete an in-depth study on the fire stations that looks at energy efficiency, compliance with current building codes, and a complete cost analysis of renovating the existing structure versus building a new structure.
- Provided the study supports renovating Station One, extend the roofline of the small apparatus bay to meet the original fire station, thereby providing more height for current and new apparatus. Figure 16 illustrates the difference in the roof lines.
- Upgrade all lighting to more efficient LED lighting.
- Extend the small apparatus bay towards the north to provide more length for the bay for current and new apparatus.
- When extending the small apparatus bay, extend it enough to create a storage area that can house all equipment and items in one place, providing more space in the rest of the station.
- Provided the study supports the renovation of Station Two, fix all areas where the interior walls are breached, paint the interior, and upgrade all lighting to more efficient LED lighting.
- Fix Station Two's water system to ensure running water year-round.
- If Council adopts the recommendation in Section 9.0, Fire Apparatus and Equipment, and replaces the pumper and tanker housed at Station Two with a new pumper/tanker, explore the possibility of obtaining a vehicle that will fit in the current fire station.
- Relocate one of the smaller vehicles from Station One to Station Two to help alleviate the pressures of housing four vehicles in the three bays at Station One.

Figure 16: Difference in the station roof lines



10.4 Recommendations

From the review and assessment of the Fire Stations, it is recommended that:

1. Both fire stations need general cleaning and reorganizing to maximize available space at each station.
2. The hazardous materials explosive-proof cabinets are moved from the main entrance of Station One and relocated to the apparatus floor area.
3. An energy audit and feasibility study be undertaken on both fire stations to determine if the buildings are still viable investments for the Township.
4. The Fire Chief explores possible grants for upgrading the fire stations.

11.0 References

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