

**BOSCAWEN, NEW HAMPSHIRE,
FIRE SERVICE RESOURCE,
TECHNICAL ASSISTANCE AND REVIEW**

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TOWN OF BOSCAWEN, NEW HAMPSHIRE
FIRE SERVICE RESOURCE, TECHNICAL ASSISTANCE AND REVIEW



I. INTRODUCTION

The Town of Boscawen contracted with Municipal Resources, Inc. (MRI) to provide an organizational assessment and review of the manner in which fire and rescue services are provided within the community. Using this as a basis, the MRI team reviewed the organization and delivery of fire services within the community including conducting a target hazard analysis, review of response metrics, and a review of the current facility and apparatus set. Our project team has developed recommendations for improvements that take into consideration the current and future needs of the Town of Boscawen, and recommendations for appropriate modifications to the delivery systems to provide the desired level of fire services to the Town.

MRI has developed this document containing recommendations for improvements to organizational practices, recruitment and retention efforts, infrastructure, quick reaction and on-call staffing. The project team has developed this document which outlines appropriate modifications to the fire and rescue delivery systems to provide optimum service to the entire community. It has also evaluated the efficient use of resources, and whether the current organizational structure is appropriate or should be modified.

A key component of the basis of this report is that the Town of Boscawen is seeking to evaluate the current operations of the Fire Department, to identify the present and future fire service needs of the community and to provide recommendations that will assist the community with decision making for resource allocation and operational planning.

The goal of the technical assistance project is to review and analyze the current resources and staffing, forecast future demands for service, and make recommendations regarding the future need of current resources, staffing, and rank structure to fulfill the Department's mission. Part of the objective is to conduct an analysis of the operation of the Boscawen Fire Department (BFD), with an emphasis on defining the expected service level of the community and identifying the impact of current on-call response participation levels, demographics and projected growth within the response area. The results of this study will be to inform the Town of Boscawen of realistic recommendations for managing and operating the Fire Department efficiently and effectively.

To accomplish that goal, this management letter is divided into nine sections as detailed below:

- I. Introduction
- II: Community Overview
- III: Scope of Work
- IV: Methodology
- V. The Fire Station
- VI: Apparatus and Equipment
- VII: Target Hazards and Water Supply
- VIII: Staffing
- IX: Conclusion and implementing change

II. COMMUNITY OVERVIEW

The Town of Boscawen covers 25.4 square miles in Merrimack County of New Hampshire. The Town sits adjacent to the northern border of the City of Concord and is comprised of 24.7 square miles of land and has .7 square miles (2.71%) of water. There are approximately 1,513 housing units with a density of 148.5 per square mile. According to the New Hampshire Employment Security, the Town has a resident population of 4,026, with a median age of 44.7 years. The population density is 161.9 people per square mile.

III. SCOPE OF WORK

This study required intensive involvement by both the Fire Chief and BFD staff. This project included on site meetings with the Chief and the delivery of a nominal group process with the staff. The study focused on an assessment to determine whether the existing organizational

model, staffing, facilities, apparatus, and equipment of the Town of Boscawen are in line with generally accepted standards and benchmarks, and commensurate with communities of like character. MRI reviewed the background information that impacts the Fire Department and performed a comparative analysis of similar communities. Items that were considered as part of this evaluation included:

- A. Policies that determine staffing levels and types of staffing used
- B. Community population and demographics
- C. Target fire hazards (residential, industrial, educational, and municipal features of the community)
- D. Services provided
- E. Special hazards and risks (i.e., nursing homes, assisted living facilities, lakes, rivers and waterfronts, industrial facilities, hotels, road network, and multi-story buildings)
- F. Budgets

The MRI project team analyzed the information listed below to evaluate the overall operations of the BFD to identify what works and what does not work:

- Analyzed resources and equipment;
- Reviewed budget and expenditures;
- Reviewed practices and policies of the Department;
- Analyzed call volume against the availability of resources;
- Reviewed the hours of the Fire Chief;
- Reviewed organizational structure for appropriateness;
- Assessed the Department's part-time staffing, and recruitment and retention efforts that exist within the community;
- Identified major issues and concerns of the community regarding the operations of the Fire Department;
- Achieved an understanding and appreciation of the values and "personality" of the community and the local government;
- Identified potential areas of risk/liability and made recommendations to reduce those exposures;

Much of this plan of service was completed during three field visits on site at the fire station. Considering the COVID 19 pandemic, research and interviews were also conducted virtually.

The project team spent several hours of time on-site; making observations, inspecting facilities, equipment and records, conducting interviews and touring the community to identify target hazards.

The current BFD facility was evaluated for the requirements necessary to accommodate current and future staffing, as well as facility maintenance, isolation of protective clothing, decontamination areas for protective clothing, EMS equipment, and personnel. This project also considered the general overall condition of the Boscawen Fire Station.

IV. METHODOLOGY

Our team conducted a detailed assessment of the BFD followed by the development of this document. Upon completion of this review, the project team developed recommendations for improvement that take into consideration the following four factors:

1. The current and future sustainability and needs of the Boscawen Fire Department and the mutual aid region;
2. Appropriate modifications to the delivery systems to provide optimum response time and service to the entire town;
3. How current and future needs will impact the location and/or expansion of physical facilities and equipment;
4. If the current fire and rescue staffing is appropriate or should be modified.

Specific items addressed, included but were not limited to, the following:

- A. Identified service needs, based on the characteristics of the community, statutory and regulatory requirements for response and delivery, and comparison with current ability to fulfill the needs and expectations.
- B. Identified the public safety risks and prioritize the level of risk that must be covered based on the data and operations of the fire and EMS operations. The type, frequency, distribution, response times, mutual aid and/or contractor provided services, staffing policies, reporting of emergency and routine responses to all services was included.
- C. Assessed the current staffing plan for deploying the required number of fire officers and supervisors, along with vehicles and apparatus used and recommended cost-effective alternatives based on the type of incident. Evaluated whether there were recommended changes to improve efficiency and delivery of service.

- D. Evaluated the response of personnel, including appropriate operational staffing, supervisors, management, and support staff, starting with the initial call for routine or emergency services, through generating the incident report and findings, and any subsequent proceedings such as court appearances, legal action, or insurance resolution or inspection.
- E. Identified the required staffing levels that meet the needs of the community in the most cost-effective and complete manner including operating costs, personnel impact, and impact on the delivery of service and workload.
- F. Evaluated the current fire facility to determine if it is a functional platform for the Boscawen Fire Department. Identified facility needs in terms of critical operational components. Identified the viability of the facility to provide an effective base of operations for the next five years.
- G. An evaluation of departmental policies and procedures that impact the efficient operations of the Fire Department. Included possible recommendations that may improve the current policies, procedures, training, and delivery of services in the most cost-effective manner.

To accomplish these tasks, our team employed nine work elements. These methodologies are listed below:

1. Reviewed pertinent service demand data
2. Conducted a review of response activity
3. Toured the community and reviewed target hazards
4. Evaluated fire service facilities and equipment
5. Interviewed the Fire Chief
6. Interviewed fire department staff
7. Reviewed various fire department documents and budgets
8. Worked with the Chief to develop many documents to support the department.
9. Developed study report and recommendations

V. THE FIRE STATION

The BFD operates out of a single station located at 15 High Street. This facility consists of approximately 6,900 square feet consisting of a single-story apparatus bay and a two-story addition that houses a function room, kitchen and bathrooms on the 1st floor and a general meeting room with two offices on the second floor.



Figure 1 - Boscawen Fire Station

Our project team toured the facility and has reviewed the **Harriman Report** from February of 2021, The review concluded that there are several space needs and significant deficiencies within the current facility that need to be addressed. Below is a break down and closer look at

some of the highlights that were brought forward by the Harriman Report. Our team concurs with the following:

- *The station lacks a front lobby or reception area*
- *The station lacks a decontamination or dirty utility room*
- *The station lacks laundry facilities*
- *The station lacks dormitories or the ability to house personnel during storm coverage*
- *The station lacks ADA compliance*
- *The station lacks proper fire protections systems*

Apparatus Bays:

The apparatus bays need to be expanded to include additional space for apparatus. This increasing need is highlighted by:

- *Trailers parked outside*
- *New Forestry unit parked outside*
- *Increase in size/needs of apparatus*
- *Need for ambulance*

Electrical Service:

- *Adequate*

Energy Efficiency:

- *Inadequate insulation and poor energy efficiency, reached life expectancy*

Lighting Fixtures:

- *Reached life expectancy*

Emergency Lighting:

- *Not compliant*

Heating, Ventilation and Plumbing:

- *Good condition*

Air Conditioning:

- *Nonexistent*

Fire Alarm System:

- *Not code compliant*

ADA (Accessibility Compliant):

- *Not compliant*

Building Exterior Envelope:

- *Fair condition, some repair needed*

Site:

- *Poor asphalt pavement condition, there is ample room for expansion/addition*

Fire Administration:

- *Offices are not immediately available to the public (located on 2nd floor)*
- *meeting areas are shared spaces*
- *Office space is not ADA compliant with no access for the public to second floor offices*

Operations:

- *Facility does not meet ADA of Life Safety Code requirements*
- *Insufficient areas for EMS equipment decontamination and storage*
- *No proper space for decontamination of fire gear*
- *No proper space for shower facilities*
- *No proper separation for male and female firefighters*
- *No physical fitness training space*
- *No space for maintenance and repairs of apparatus and equipment*
- *Lack of proper separation of apparatus bays and living/training/office area from vehicle exhaust*

Observations:

The current Boscawen Fire Station has reached the end of its useful life. In its present state, this facility is inadequate to provide a suitable platform for modern fire service operations.

Recommendations:

- V-1 Primex should be asked to conduct a site visit to look at potential problems and concerns from an insurance/safety standpoint.***
- V-2 The Town needs to develop a capital plan to allow for follow through with the construction of a new facility. Consideration for public space should be included as outlined in the Harriman Report.***
- V-3 Our team reviewed the options that were presented by Harriman and feel that Option #3 will not only meet the needs of the community today but also for many years to come. It is clearly understood that this will have a financial impact on the town but as a key public safety facility that needs to be able to operate 24 hours a day 7 days a week and houses the apparatus and equipment that the community has invested in.***
- V-4 Expand apparatus space with considerations to include EMS (Penacook Rescue Squad) (If Penacook Rescue leaves Boscawen for another station location it increases response time for all of Boscawen)***

VI. APPARATUS AND EQUIPMENT

The current fire apparatus compliment is adequate to provide the Town with the expected level of service. The addition of the new mini pump to the fleet it positions the department properly with an ideal apparatus set based on the available space in the station and the current staffing model. The apparatus set consists of the following pieces of equipment:



**Figure 2 - Engine 1- 2013 Spartan Metrostar Valley Fire Pumper
1500 GPM 1000 gallon tank**



**Figure 3 - Engine 2 – 2004 E-One Typhoon
Fire Pumper 1500 GPM 1000 gallon tank**



Figure 4 - Forestry 1 – 1953 Dodge Military



Figure 5 - Forestry 2 – 2002 Ford F-250 4 X 4

Recommendations:

VI-1 Develop a 20 year Capital replacement plan that utilizes the following best practices and parameters:

- *Industry standard recommends replacement of apparatus after 20 years of service.*
- *Consider the lease purchase of new pumper in 2024 for 10 years to rollover in 2033 and replace next engine pumper.*
- *Consider acquiring a tanker pumper that carries at least 2,500 gallons of water due to water supply concerns within the Town (see water supply below).*

VI -2 Identify future vehicles needs which should include a planned increase of vehicles.

VI-3 Lease purchase an SUV for command/chief vehicle and a pick up that serves as a utility vehicle and can be rotated into replacement forestry truck

VII. TARGET HAZARDS/WATER SUPPLY

As part of the review of the community we noted that some of the target hazards present significant pre planning and operational challenges to the BFD. These facilities require complex preplanning and emergency response. Considering the staffing levels in Boscawen compared to other communities in the area, combined with the elongated response time of mutual aid further adds to the level of operational challenge and our overall concern.

Example target hazards include:

- **Ross Express North Main Street** – *unknown hazards through the trucking company with chemicals and hazards that are shipped but below the minimum reporting quantities*
- **Vacant Shop/Fabrication Company Village Street Concord City Line** – *single story heavy timber building along the Contoocook River with limited access. Creates a challenge to manage with limited access.*

- **Large Heavy Timber along river that is falling down on Commercial Street** – Again limited access with multi story building that is unsafe and unpredictable under fire conditions.
- **Aristocraft Cabinet Makers High Street** – large wood making facility that has many dust collections systems and wood products that can burn. Sprinklered and alarmed, good system
- **Page Belting Company High Street** – manufactures machine belts for production. Lot to the north is being converted to condo units and a multifamily style building. Void spaces and retrofitting can increase potential void spaces
- **Colby Lumber High Street** – manufacturer of wood products to include wood processing and pallets that again, pose increased risk for fire and spread
- **Elektrisola High Street** – manufacturer of high grade magnetic wire and magnetic products as a worldwide corporation. Very high risk facility with high clearance need to enter.
- **Merrimack County Mens Prison Daniel Webster Highway** – high risk to responders with prisoners that require special consideration and security if and when a fire or emergency occurs
- **Merrimack County Nursing Home** – high concentration of elder population requiring direct supervision and care during an emergency. Facility is multi story with many challenges and concerns.
- **Merrimack River including the Hannah Duston Historic Site** – long continuous river that has thousands of visitors seasonally and present challenges for water rescue. Average is a few responses annually, however 2020 saw a marked increase in use by city residents that traveled and drowned due to inability to swim.

It appears that a water supply problem exists that is unique to Boscawen. The water supply for parts of the town is non-existent. Due to an unstable water supply to support both firefighting needs and public water consumption, hydrants have been painted black to prevent use by the fire department. This water system was originally designed to support firefighting operations, however the water company deemed those hydrants unavailable with no plan in place for replacement. See below pictures:



Figure 6 – Non Usable Hydrants Pictured in Black

The Insurance Service Office (ISO) gave the water supply system in the community 17.6 out of 40 rating. Proper record keeping alone will add 7 points and increasing the water distribution will improve the score from 14.6 out of 30 points.

Recommendations:

VII-1 Review, update and expand the use of automatic aid for target areas. Utilizing Concord and Franklin for an aerial for all reported building fires.

- ***Specific responses for large target hazards to include additional tankers, and manpower to bring in early in the response. Mutual aid resources should be requested upon the report of a structure fire.***
- ***Review and or develop a specific water supply run card for the larger target hazard areas with limited (not sustainable flow needed) or no pressurized hydrants in the area.***

- *Develop a water rescue response alarm card that provides rapid initial and subsequent mutual aid as the situation escalates for the Merrimack River and Hannah Duston Historic Site.*

VII-2 *A complete review of the water distribution system needs to be done. The review should include the current flow of available hydrants as well as a review of fire flow needs. System improvements should be identified and prioritized to increase the available fire protection water supply to the Town.*

VII-3 *Records for annual flow testing and maintenance should be made available to receive any credit for the Public Protection Classification (ISO) rating that is used to set insurance rates. The current report indicates no data available.*

VII-4 *The BFD should develop a pre plan for the target hazards listed, and use these Pre plans as part of training. The department was not able to demonstrate any pre plans and was not given any credit in the ISO evaluation (12 points available).*

VII-5 *The BFD should subscribe to and utilize a mobile, cloud-based records management and preplanning system.*

VIII. STAFFING

Staffing is one of the most important elements of any successful fire department. Having the proper amount of staff with the right training and experience at any incident truly will impact the outcome. The BFD maintains a full roster of 26 people and as of today it is full with two people having interest and waiting for an opening. Although having 26 names on a roster may sound impressive, what truly needs to be evaluated is the participation level of each and every member for levels in both responses and training. The Fire Chief has been working to maintain records for each person to assure that they are active. If he finds the level is not meeting the department standards, he will ask them to step down and they will be replaced by one of the people on the list.

Our team met with individually with BFD Members and the Fire Chief. In addition, we conducted a group meeting with all staff without the Chief present and utilized a nominal group process to identify and prioritize organizational challenges. The discussion at the meetings had many common themes and the vast majority of those ideas/concerns have been reflected in

this document. It will be important that all department members hear from the Select Board and the Fire Chief that this document has taken into account their concerns and ideas and that this input will be considered as a plan is developed.

The team discovered a very dangerous hiring and promotional practice within the BFD. Currently hiring and promotions are governed by a constitution and bylaws of what appears to be an association or company and not based on the judgement of the Fire Chief or any department policy or procedures. Under the current system, promotions and new hires voted on that may or may not have any consideration for credentials etc... and more on personality and relationships.

(Note: When this was discovered and the MRI team explained the potential problems and liability to the officers of the "Company" at a meeting with the staff. MRI developed a set of draft Association Bylaws with a direct purpose and mission that does not conflict with any operations of the department. This was submitted for their consideration. As of this date the staff (not including the Chief) is working to adopted new by-laws to guide them along and to allow the full operation of the Fire Department to fall under the direction of the Chief.)

The current method of compensation is a stipend amount that does not include any recognition or consideration of an individual's level of training, certifications or even the level of emergency response. This stipend is paid to the members in November of each year. The current system is great for some people but does not encourage the most active and highly trained members.

All staff with the exception of the Fire Chief should be paid on an hourly basis for response, training and duty crew coverage. This pay scale should be reviewed and increased on an annual basis and the budget should reflect the increase. A sample of a current pay scale for a similar department is outlined below. It should be noted that in an effort to hire new staff and, more importantly to keep the existing staff, this scale may need to be adjusted up in a short time frame. It is true that people in the fire service do not do the job for money, however it is universally recognized (nationwide) that the on-call pay scale is too low for the level of commitment a person makes coupled with the dangerous job they do as a first responder.

Rank	2021	2022
Entry level or non-certified firefighter Minimum Wage (State Minimum Wage is \$7.25)	\$12.00	\$ 12.50
Firefighter 1	\$2.00	\$ 2.50
Firefighter 2	\$2.00	\$ 2.50
Lieutenant	\$2.00	\$ 2.50
Captain	\$2.00	\$ 2.50
Deputy Chief	\$2.00	\$ 2.50
EMT-Basic, add to base	\$0.50	\$ 1.00
EMT-I/AEMT, add to base	\$1.00	\$ 1.50
EMT-Paramedic, add to base	\$1.50	\$ 2.00
Engineer, add to base	\$1.00	\$ 1.50

Figure 7 - Recommended On-call Wage Rates Reflecting NH Averages.

Note: Wage rates in the table above are cumulative in that in 2021 an individual who is certified as Firefighter one would earn \$14.00 per hour and a Lieutenant would earn \$18.00 per hour.

New Hampshire State Law RSA 275:43 requires that every employer pay all wages due to employees within eight days including Sundays. You may petition the Department of Labor to pay wages less frequently such as bi-weekly for hourly employees and once a month for salaried employees.

New hires should be given a probationary manual that explains all expectations for the first year and beyond as well as training benchmarks for the first year. Each new hire should be assigned a mentor that given a defined amount of training hours by the chief works with the new hire to get them to operate in a safe manner through all of the required activities during the first year.

The current use of certified EMT's on the department should be explored and potentially expanded, to not only utilize the skills they have, but to help provide a quick response to EMS calls in harmony with Penacook Rescue. For certain high level calls the department EMS providers can often be on scene quicker and begin to evaluate and treat a patient sooner. This will require the department to purchase some EMS diagnostic and treatment equipment in order to provide this level of service. The department will also be required to be licensed as a non- transport EMS provider to assure proper quality control and most important treatment protocols and proper documentation. This will be a valuable asset to the residents as the trend for EMS calls is rising and the double call (simultaneous or back to back) are becoming more common.

In discussion with department staff there is a strong desire to have a formal structured ongoing training program that is scheduled and conducted. The need for this was also noted in the ISO ratings with a score of 1.86 out of 9 points. Along with training being conducted it is also key to properly document any and all training in a cloud based, backed up fire service records management system (RMS).

A guide or probationary manual needs to be developed and given to new staff so there is clear expectations for them to understand. Along with the expectations a mentoring program should be set up assigning new members to a seasoned person to shadow and train with. A training program for new hires should also be developed so that all people are trained to the same department standard.

At this time the BFD functions well as a full on-call department. This observation is based on a review of response data including call volume and response time. We recommend that this structure continue and that this model should be complemented by the development of a duty crew. To that end, the Fire Chief should be scheduling a minimum of three people on duty for a determined amount of time for key days, weekends or events. The staffing should be an officer and two firefighters with at least one member being an EMS provider. It will become more and more important to have a dedicated crew on duty for some holidays when staffing will no doubt be very low and the potential for incidents is moderate to high. These people should be paid their hourly rates for the hours worked and no one should be forced to cover any shift.

Based on the call volume and response times (time of dispatch to time of arrival) in the chart below, at this point the transition to a fulltime staffing model is not either fiscally prudent or operationally warranted. In fact as mentioned in this document the rapid development of career staff can have a negative impact of the response on what was previously an on-call organization.

Fire	# Incidents	On Scene
2018	197	9.08
2019	190	6.72
2020	197	7.56
2021	137	7.35
EMS		
2018	591	13.939
2019	601	8.519
2020	617	9.23
2021	380	7.56

**Figure 8 - Incident Volume and Response Times,
2018- 2021**

Note: The data for 2021 is for response up to July 20th only. Also the call volume for EMS is for all Penacook Rescue responses and not solely of the incidents in Boscawen)

It is hard to predict the future of the call volume in any department. As we have found with the COVID 19 pandemic, our world is changing and the fire service is adapting the changes as it goes. One key factor that will need to be monitored on an annual basis is the number of incidents, the actual number of qualified responders to the incidents as well as the response time from time of being toned to arrival on scene. Absent the pandemic, it is our experience that fire service call volume is growing at a rate of approximately five percent pacer year.

RECCOMENDATIONS:

- VIII-1** *Transition the department to a full on call paid department. This is very common practice in New Hampshire and each person is paid on an hourly basis for response to incidents, participation in Department meetings and training. They will be hourly employees of the town.*
- VII-2** *Create an hourly wage rate for all ranks in the department as well as for certification levels. There should be a minimum of one full hour of pay and then payment in 15-minute increments for any time beyond the first hour.*
- VII-3** *Set up a bi-weekly pay system (or a longer time frame the firefighters wish to have and that the Department of Labor will approve.)*

- VII-4** *Use a web based (cloud based RMS) program to track training records, maintenance records, activity levels, payroll etc. The team does not have a recommendation on a particular company as some of the more common ones have recently been sold and are no longer supported. The Chief should reach out to his local peers who are experiencing the same issues and look to share a resource or to collectively purchase a source that will fit their needs.*
- VII-5** *Create and implement a new hire probationary manual, a quarterly written evaluation policy for new hires.*
- VII-6** *Create and implement a written quarterly evaluation tool for all promoted positions.*

During the process that the MRI and the department has been working on there are many items the team has drafted and reviewed with the Chief. This process has worked very well and is allowing the Chief to have a solid foundation to build upon. Some of the items are listed below and a sampling has been provided to the Fire Chief as a resource manual

- 1. *Job Descriptions for each position (total of 6) – (Note: these have been developed to be used for all new hires and for future promotions and not to affect current staffing).***
- 2. *Created a Mission Statement, Vision Statement and Statement of Core Values.***
- 3. *Developed an organizational Chart.***
- 4. *Created a draft set of Rules and Regulations.***
- 5. *Created key Standard Operating Procedures (total of 12). This project will need to continue for the foreseeable future.***
- 6. *Developed a written quarterly evaluation tool for new hires and newly promoted staff.***
- 7. *Developed a probationary manual for new hires. Note this document will need input from the officers of the department to complete.***

The Town of Boscawen will need to decide what level of service it desires based on a risk assessment being conducted. The current staffing model today seems to be working fairly well to provide the service level expected by the Town. The Town and the BFD should recognize that it will take dedication to maintain an on-call organization and even then this model may not be sustainable for more than the next few years.

There are many variables that need to be considered in Boscawen prior to settling on any one model. The first thing to be mindful of is the cost of EMS service that is currently being provided to the Town. Our team has seen other departments faced with a deadline or in some cases an ultimatum where they have had little time to decide the future of EMS, as the private contractors' proposal to serve the community, had a substantial increase in cost or requires a long term commitment. A separate closer review of EMS should be conducted in the next two years coupled with a new fresh look at fire based response levels and times.

Our team was given a copy of an "Blanket Insurance Policy" that is underwritten by the Axis Insurance Company and serviced by Green Insurance Associates, for a sum of \$9,291.00 per year for three years. This policy was reviewed and compared to other policies in other towns with a similar size volunteer/call department. This policy is not a typical Workers Compensation policy and in fact appears to have much better protection benefits to cover firefighters at a reasonable rate. The team would recommend that the town continue the policy for the next three years and re-evaluate in year two based on the status of the staffing model at that time.

Start Small and Grow Over Time

With the volume of work both administrative and operational, the next Chief should be full-time and be available during normal business hours. The potential model of having the station staffed specific days and times will be a good way to evaluate the future. The team has seen this work very well and with a lot of positive elements with it. First is that it keeps the current staff engaged by having them work shifts. Having them train and become more familiar with the equipment while working is a benefit to all. Having people in the station reduces the response time for calls and ultimately reduces the potential damage to structures and property.

The expected level of service within the community should drive the need to provide more in-station shifts. The review team projects the long term need to expand the staffing to having both a fulltime (potentially per diem) staff that will work with the call staff.

The level of service that the Boscawen Fire Department provides is acceptable within the scope of NFPA 1720. However, in the future the communities' expectation relative to a level of service may shift from the response of on-call resources in a reasonable amount of time, to the rapid response of at least a single unit, and then the response of other units as personnel become available. This level of expectation is unattainable considering the staffing challenges facing this organization and would require a transition to a per diem or combination staffing model.

To address this concern the community will need to make a conscious choice relative to service level through budgetary appropriation. Assuming that additional funding is provided to develop a 24/7 quick response force (QRF), MRI does not recommend adding additional career personnel unless all other coverage options have been exhausted. When working with a successful on-call organization such as the BFD, our immediate focus is to develop and support on-call operations. The rapid introduction of career staff on a 24/7 basis changes the on-call function, and relegates on-call personnel to secondary responders; often serving as support personnel and tends to rapidly diminish participation.

Instead of adding additional career personnel over the next three years, MRI suggests scheduling and compensating two on-call personnel that are on the assigned duty crew, to provide coverage from the station at night, to initiate a rapid response, reduce response times and preserve the primary response role of on-call personnel. A program of this type has worked well in many New Hampshire communities. If on-call personnel are not able to fill all the shifts, per diem personnel could be hired, but that should only be once all efforts to schedule on-call members has not produced sufficient coverage. On-call members should have preference to cover these shifts.

IX. CONCLUSIONS AND IMPLEMENTING CHANGE

Based upon the analysis of the current day operations of the BFD, the project team found a department that is well managed and has a good structure for apparatus and equipment replacement.

Having a sense of common vision is important in any organization to ensure that the organization and its personnel are moving in unison toward a common goal(s). Having a

common vision is not only about making sure that all parties are aware that they are in the same boat and rowing, but even more importantly, that they are rowing in the same direction. The impact of not sharing a common vision will be very noticeable in the quality and quantity of work performed, but also with the spirit and passion that the work of the organization is accomplished.

Looking ahead, the Fire Department possesses some definitive positive attributes, most notably the dedication of its core membership group. The most recent ISO evaluation conducted, earned a rating of 6/6X which is commendable for a on-call fire department in a small town, with a limited water supply system. This shows there is a strong foundation upon which to build.

The Department is also facing serious challenges both today, and looking toward the future. The nationwide decline of volunteerism has dramatically reduced the ranks of on-call emergency services personnel. The Town of Boscawen faces the dual challenges of attempting to balance a credible emergency response system, staffed primarily with call members, while simultaneously facing a slowly increasing number of requests for service (emergency and non-emergency).

To that end, MRI proposes the following objectives as a roadmap for initiating the significant change and major rebuilding that needs to be done to the Department.

- 1. The Fire Chief should form a membership/management committee as soon as possible. This committee is designed to enhance communication, construct more positive relationships, and provide a mechanism for members to have an active voice within the organization and begin setting the direction for the future. This committee should consist of as many stakeholders as wish to participate. The chief should hold two meetings per month for the first six months to a year, and then meet monthly for the foreseeable future. Minutes of these meetings should be developed, shared with the Department, the Select Board, and the Town Administrator, as an attachment to the chief's monthly report. If necessary, outside professional assistance is available to assist with facilitating this endeavor.**
- 2. The Fire Chief should immediately begin providing bi weekly e-mail updates to all members of the Boscawen Fire Department. This regular update, should be designed to enhance communications and help to foster a more collaborative group of members.**

3. The BFD's mission statement should be prominently displayed in the station, along with the vision statement and core values.
4. The Town of Boscawen should complete driving records and background checks on all current members of the Fire Department to ensure that they are eligible to be firefighters.
5. Conduct a comprehensive review of existing training records. The Fire Chief should meet individually with each member to review the training file and develop a prescriptive training plan.
6. *Subscribe to a cloud based preplanning and RMS that has mobile data capabilities.*
7. The Fire Chief should begin to identify members of the Department who could possibly possess the skills to be developed into officers, and begin to mentor them and provide appropriate additional training. Part of this development process could include the delegation of certain assignments to these personnel.
8. The Fire Chief should begin work, assisted by a committee of department stakeholders, to continue to develop a comprehensive and up-to-date rules and regulations document. After approval, the document should then be distributed to, and signed for, by each member of the Department. It could then provide an orientation overview, and indoctrination to the Department's behavioral expectations for new personnel.
9. The Fire Chief, assisted by a committee comprised of a cross-section of department stakeholders, should begin to update the Department's standard operations procedures or guidelines (SOP/SOG) manual, starting with mission critical procedures such as, but not limited to: basic engine company and truck company operations, dwelling fires, commercial structure fires, rapid intervention team operations, personnel accountability, gas leaks, hazardous materials incidents, ice rescue, vehicle extrication operations, thermal imaging camera use, and automatic external defibrillator use. The committee should be given whatever support is necessary to complete at least a basic manual within one year.

- 10. Based upon the foundation that currently exists and building upon the results of the recommendations contained in this letter, the Town of Boscawen and the Boscawen Fire Department should develop a formal process for implementing a long-term vision for the Department and developing a strategic plan.**
- 11. Boscawen should enter into discussions with the municipal administrations, and fire department leaderships of its adjacent communities, for the purposes of identifying possible opportunities for shared services, and long-term exploration of the feasibility of a more regional approach to fire protection and EMS delivery systems.**
- 12. The culture of the fire service is very resistant to change. This is not something new and certainly not just within the Boscawen Fire Department. Whatever changes are made to the Department they need to be implemented at a reasonable pace, and most importantly communicated to all members ahead of time.**

In conclusion, the missions performed by the Fire Department are some of the most basic and fundamental functions of government; to ensure the safety and protection of its residents and visitors. The real issue facing the Boscawen Fire Department and the Town of Boscawen then, as it is for every community, is to determine an acceptable level of risk and then define an appropriate level of service for the community. It is the opinion of the assessment team that having a on-call department with a duty crew component and a potentially a core group of per diem staff, is appropriate for the number of incidents and type of calls they respond to. The per diem program will need to be evaluated for effectiveness on an annual basis for at least the first three years. There is no “right” amount of fire protection or EMS delivery in any community. It is a constantly changing level based upon the expressed needs of the community. Determining the appropriate level of service also involves deciding upon the municipalities’ fiscal ability, and willingness, to pay for the desired level of service. These are decisions that the citizens of the Town and the Select Board will ultimately need to make.

It is important that the Town continue to support the Department and to help meet the needs in staffing and equipment, so they may continue to protect and serve when they are called to do so. The Town of Boscawen is very fortunate to have a great core of dedicated members in its Fire and EMS Department. With some strong work the Chief Officers can lead this group

forward to a common set of goals. Maintaining a positive, forward looking orientation that does not dwell on the past is essential to success.

Appendix A

THE PROJECT TEAM

Director of Fire Services

Brian P. Duggan, Director Fire Services Group, retired from the Fire Department in Northampton, Massachusetts, where he instituted substantial changes to modernize and restructure the entire department including equipment, facilities, personnel, and training. In conjunction with his staff, Brian integrated Emergency Medical Services (EMS) into the organization and created a regional Advanced Life Support (ALS) Program that currently serves 18 communities within the Northampton Area. He formerly commanded the Northborough, Massachusetts, Fire Department, and has significant experience with the Massachusetts Department of Fire Services where over three decades, he held several key positions. Following his retirement, Brian has continued his active fire service involvement by serving as both a volunteer chief fire officer and through continuing to develop training and certification programs as a program Coordinator for the Massachusetts Department of Fire Services.

Mr. Duggan developed and directed the Graduate and Undergraduate Fire Science Programs at Anna Maria College in Paxton Massachusetts from 1995 - 2003. Mr. Duggan has a Business Management/Fire Science degree from Providence College and a Master's Degree of Business Administration (MBA) from Nichols College in Dudley, Massachusetts. He is also a graduate of the National Fire Academy Executive Fire Officer Program and the Senior Executive Program for State and Local Leaders at Harvard University. In December 2012, Mr. Duggan received a Master's Degree in Homeland Security through the Naval Post Graduate School based in Monterey, California, where his thesis entitled *"Enhancing Decision-making during the First Operational Period of Surge Events"* was selected as an outstanding thesis. He was one of the first fire service professionals to be designated as a Chief Fire Officer by the Commission on Fire Accreditation International.

Brian led the Massachusetts fire service through his affiliation as Chairman of the Fire Chief Association of Massachusetts Technology Committee and as a Regional Director on the Massachusetts State Fire Mobilization Committee. Mr. Duggan has authored several publications, inclusive of writing Section 7, Chapter 3, Fire Department Information Systems, in the Nineteenth and Twentieth Editions of the National Fire Protection Association's Fire Protection Handbook. Chief Duggan has been affiliated with MRI as a subject matter advisor since 2002 and he has served as Director of Fire Services since 2015. Currently, Mr. Duggan is regarded as an expert specific to fire service response to photovoltaic and battery energy

storage system (BESS) emergencies. He has developed several nationwide training programs providing first responders with new insight on these emerging challenges.

Project Manager

David Houghton is a devoted fire and emergency management professional who has recently retired from the Wayland Massachusetts Fire Department after a distinctive 38-year career from being a call firefighter and rising through the ranks to Fire Chief. Along with dedicating his service to the Town of Wayland, he continues to work for the Massachusetts Department of Fire Services as both an instructor and in the Special Operations Division doing special projects. In 1999 he was given the challenge by the State Fire Marshal to develop and implement what today is known as Special Operations. This development included designing, building and implementing specialized equipment and staffing to respond to Emergency and planned incidents throughout the Commonwealth. This program was a shared vision between David and the Fire Marshal and today has been shared in whole or in part in other areas of the country. David has a B.S. degree in Fire Science, an A.S. Degree in Fire Science and Technology, and has completed a Local Government and Management program with Suffolk University and the Massachusetts Municipal Association. David has a diverse background Firefighting, EMS (ALS and BLS), Dispatch, Fire Prevention, Emergency Management and operations. He is a nationally certified Firefighter, Fire instructor, Fire Inspector, Fire Officer. He is a certified Emergency Medical Technician both at the National Level and in the Commonwealth of Massachusetts.

David has most recently continued his fire service career by being appointed as a call firefighter with the Town of Moultonborough Fire Rescue, and is a certified New Hampshire Emergency Medical Technician. He continues to be active with the Commonwealth of Massachusetts Fire and Ambulance Mobilization team in the continuous updating and redevelopment of the program. Prior to his retirement as Fire Chief, David was an active member in the Massachusetts Fire District 14 where he was a driving force behind the creation of the District Operational budget, an operations manual and the formalizing of the various specialized teams within the district. David was also selected as the Chief overseeing the Fire District communications team and equipment as well as serving on several other progressive programs within the district. He is a member of the Fire Chiefs Association of Massachusetts, and the International Association of Fire Chiefs.

Michael McQuillen currently serves as the Chief of the Littleton Fire Rescue Department in Littleton New Hampshire. Michael started his fire service career in 1993 with the Londonderry Fire Department, rising through the ranks in his 27-year career to Operations Chief. He was one

of the first paramedics in Londonderry participating in the inception of Advanced Life Support and integration of Emergency Medical Services into the fire department. During his tenure in Londonderry, Michael developed a complete fleet replacement plan utilizing a lease purchase program providing a fleet division that is one of the most modern, up to date apparatus programs in New England. Michael identified the need to improve the communication operations infrastructure system, developed a plan to upgrade the system and make it interoperable with law enforcement, highway, fire rescue service and the Manchester-Boston Regional Airport. He was instrumental in obtaining the financing to fund the project. Upon completion, the communications center is P25 capable and brought the use of state-of-the-art equipment to the region for the towns that are dispatched. As a result of the upgrade, Londonderry Communications Center expanded to two additional communities under Michael's leadership.

Michael honed his communication, negotiation and his relationship building skills during many years working on labor/management issues from both perspectives. For over ten years Michael was union president for two different labor unions and then transitioned to a member of the administrative team.

Michael completed his Associate Degree in Fire Science from the New Hampshire Technical College -Laconia in 1992, his Paramedic Certification from Elliot Hospital - Manchester in 1995. In 2017 Michael received his bachelor's degree in public service management and is currently working on his master's degree through Southern New Hampshire University in Emergency Management with completion anticipated in 2022.