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## CITY OF GARDNER MASSACHUSETTS 01440-2630

OFFICE OF THE CITY COUNCIL



September 14, 2022

#### **CITY COUNCIL INFORMAL MEETING**

Date:Monday, September 19, 2022Time:6:30 P.M.Location:City Council Chambers, Room 219, City Hall

### **AGENDA**

**10779** – A Notification from the Mayor Regarding the Fire Department Operations Audit. (*In the City Council and Referred to Committee of the Whole 9/7/2022*)

> CITY COUNCIL OF GARDNER *Elizabeth J. Kazinskas* Elizabeth J. Kazinskas

ELIZABETH J. KAZINSKAS Council President

NOTICE: Items listed on the Council Calendar are those reasonably anticipated by the Council President to be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.



City of Gardner - Executive Department

Mayor Michael J. Nicholson

August 25, 2022

Hon. Elizabeth J. Kazinskas, Council President And City Councilors Gardner City Hall, Rm 121 95 Pleasant St Gardner, MA 01440

**RE: Fire Department Operations Audit** 

Dear Madam President and Councilors,

Attached, please find the Operations Audit of the Gardner Fire and Ambulance Departments conducted by John Parow Consulting & Associates.

Ret. Chief Parow has stated that if the Council wishes, he would gladly present his findings to the City Council in a meeting as well.

The report outlines the current financial surplus generated by the City Ambulance Service, the positive outcomes of our agreement with Woods Ambulance, civil service, staffing level, facilities conditions, and other topics related to the operations of these departments.

**Respectfully Submitted,** 

Michael J. Nicholson Mayor, City of Gardner

CC: Finance Committee Public Safety Committee

# **City of Gardner Fire Department**

Emergency Medical System Review Overview of Facility Needs Civil Service - Pros and Cons Review Current Staffing Model

Conducted By:

## John Parow Consulting & Associates

32 School Street Chelmsford, MA. 01863 978.490.4736 John Parow@comcast.net Parowconsulting.com

# July 2022

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#### Project Overview

#### **Scope of Work**

- 1. Conduct an overview of the Emergency Medical Response system at the 5-year mark
- 2. Examine the department facilities and needs
- 3. Review how the MA Civil Service System works for the department and if improvements can be made
- 4. Review the current department staffing model against industry standards and comparison departments in the Commonwealth of MA.

#### Methodology

- 1. Conducted multiple site visits to become familiar with operations of the Gardner Fire Department and the Community included:
  - a. Fire/EMS operations
  - b. Department's organizational structure
  - c. Current staffing model
  - d. Deployment patterns
  - e. Review of Facilities
  - f. Future needs
  - g. Community demographics, etc.
- 2. Multiple requests for supporting information from the Fire Department via
  - a. Email
  - b. Phone Conversations
- 3. Gathered statistical department data to determine current and trending activity
  - a. This data requested and provided by the department and/or City
    - i. Fire/EMS statistics over the last five years
    - ii. EMS Collections City Auditor
    - iii. Past studies or reports
    - iv. Civil Service history
- 4. Gather statistical data from comparison departments
  - a. Electronic Surveys
  - b. Phone Conversations
- 5. Review and Compare National Fire and Emergency Medical Services Best Practices

#### **Emergency Medical System Review**

#### **The Edward Collins Center Study 2015**

The Edward Collins Center completed a study, in early 2015, regarding the Gardner Fire Department running 1 Basic Life Support (BLS) for the City of Gardner. The study had the following projections and advantages of Gardner Fire Department staffing an in-house BLS ambulance:

- 1. One Gardner Fire Department BLS ambulance would transport an estimated 75% of all emergency medical patients;
- 2. Additional staffing at fires and emergency situations ("more boots on the ground");
- 3. Additional funding to offset costs of maintaining a busy fire department;
- 4. Additional services to residents, property owners and businesses with no increase in taxes.

#### General Overview of the Current Fire/Ambulance System

#### Moving forward with Gardner Fire Department BLS Ambulance in 2016

In 2016 the city decided to move forward with the fire based in-house BLS ambulance service. They hired an additional seven dual role firefighter/EMTs in October of 2016. The purpose of the dual role Firefighter/EMTs is to staff the ambulance and/or respond to fires or emergency calls ("more boots on the ground"). The concept of a dual role firefighter/EMT is that when they are not out on an ambulance call they are available to supplement the fire and emergency response staffing in the City. In the Fire Service this system of dual role responsibilities has proven to be a very efficient use of personnel.

In order to get the BLS ambulance system off the ground, the Fire Department needed to acquire a fully equipped ambulance. They purchased a used 2007 ambulance from the Town of Westminster for \$8,000.00, Rescue 2. In 2018 the department purchase a new 2018, state of the art, ambulance to run as the primary ambulance for \$235,000.00, Rescue 3, and retired Rescue 2 to the position of the reserve or back-up ambulance.

#### **Relationship with Wood's Ambulance**

Gardner Fire Department has a very interesting relationship with Wood's Ambulance Company. Wood's Ambulance provides two ALS ambulances to the city on a 24/7 basis and operates out of Gardner Fire Department Headquarters, Station 2. The interesting part of this relationship is that when the Gardner Fire Department ambulance is tied up on a call, Wood's will respond to all secondary calls. Additionally, Wood's provides for all the Advance Life Support (ALS) needs in support of the Gardner Fire Department BLS ambulance.

An example of how an ALS call would be handled, Gardner Fire Department Rescue 3 and one of Wood's ambulances would respond to a call deemed "ALS" by the response matrix. When they arrive on scene, and if it is further determined the patient's needs is "ALS" the Gardner Fire Department Rescue 3 would transport the patient to the hospital with the Wood's Paramedic and the Gardner Fire Department EMT providing care to the patient in the back of the ambulance.

The other advantage of having Wood's Ambulance providing secondary coverage for the city, is that it fully supports the dual role firefighter/EMT model. For example, if Gardner Fire Department receives a

call for a fire in the city the two firefighter/EMTs assigned to the ambulance respond immediately to the fire call. This provides two additional firefighters on the fireground that were not available prior to Gardner Fire Department running the BLS ambulance system. In these situations, Wood's two ambulances would provide primary ambulance coverage for the city.

(Note that the first 18 months of the program were with Med-Star and the arrangement was different with Gardner Fire Department only transporting BLS patients)

#### Cost for the Additional Dual/Role Firefighter/EMTs

Gardner Fire Department has a very unique budgeting system for their fire and ambulance operations. While most fire departments would include all firefighter costs in a single budget, Gardner Fire Department separates the two and has all ambulance related expenses, including personnel, broken out in a separate budget area. The advantage of this type of budgeting is that it makes it very easy to monitor the ambulance service, and to assure that it is paying for itself and what additional revenue are being generated for the city.

# Evaluate the Current Ambulance System over the last Five Years and Against the Original Edward Collins Center Study:

# 1. One Gardner Fire BLS ambulance would transport an estimated 75% of all emergency medical patients in the City.

It was difficult to pull this data because neither Gardner Fire Department's or Wood's Ambulance's reporting software specifically track this data. However, after the data was pulled manually, we were able to compile a 21-month period of data ranging between June 2020 through February 2022 which was sufficient to make this evaluation.

During this 21-month period there were a total of 4,840 ambulance transports, 3,692 were transported by Gardner Fire Department and 1,148 transported by Wood's Ambulance.

Total Transports	Trans GFD	Trans Wood's	
4840	3,692	1,148	
Percent	76%	24%	
			Figure 1

As noted in Figure 1 above Gardner Fire Department transported 76% of the emergency medical patients and Wood's transported 24%. Over this 21-month period Gardner Fire Department met and slightly exceeded the estimate in the Collin's Study of 75%. A number we were not able to capture was mutual aid and 3<sup>rd</sup> or 4<sup>th</sup> ambulance calls.

Moving forward, we feel that this data should be collected on an annual basis and reviewed to ensure this benchmark is being met or exceeded.

#### 2. Additional staffing at fires and emergency situations ("more boots on the ground")

Bringing the Ambulance in-house has increased the staffing of Gardner Fire Department by 33%. This is based on simple math, before the in-house system six firefighters were assign to each shift, after the in-house system, eight firefighters are assigned to each shift. The additional two dual role firefighter/EMTs,

per shift, are available to respond to non-related ambulance calls (fires and other emergencies) when not out on an ambulance call.

We did an analysis to see what percentage of the time the dual role firefighter/EMTs were unavailable on ambulance calls and what their availability was to work in a firefighter role. The analysis first took the number of transports the Gardner Fire Department ambulance did per year and divided that by 365 to get the average number of times they were out on an ambulance call per day. We then calculated the average time they were committed on the call. This included response time to the call, time on scene and the time of transport to the hospital and until back in service. The primary hospital is Heywood, and there are very few secondary destinations. We used the average of the response and return time to Haywood based on the data, response to the incident and average time on scene. It breaks out to a 4minute response to the call, 20 minutes on scene and 45 minutes to and from the hospital and back in service. This gives us an approximate of 1 hour and 10 minutes per ambulance call.

	Transports/yr	Transports/day	Hours/day tied up on Amb	Hours/day for non Amb calls
FY/18	1,509	4	4 hrs, 40 minutes	19 hrs, 20 minutes
FY/19	2,187	6	7 hrs	17 hrs
FY/20	2,112	6	7 hrs	17 hrs
FY/21	2,091	6	7 hrs	17 hrs
FY/22	2,164	6	7 hrs	17 hrs Figure 2

If we look at the high side of this data, in Figure 2, we can see that the dual role firefighter/EMTs are tied up performing ambulance duties 7 hours per day, on average, using the average of 1 hour and 10 minutes of time being tied up on each ambulance call. This gives the city the availability of the firefighter/EMT for fire and other non-ambulance calls an average of 17 hours per day, "more boots on the ground".

#### 3. Additional funding to offset costs of maintaining a busy fire department.

#### **Ambulance Activity, Cost and Revenues**

Gardner Fire Department BLS ambulance bills for all its ambulance transports to the hospital at 2.5 times the Medicare rate. Additionally, Gardner Fire Department bills when they transport ALS patients with Wood's Ambulance paramedic onboard providing the ALS level of care. The revenue collect from these calls are split 50/50 between Gardner Fire Department and Woods Ambulance.

On the very rare occasion that Gardner Fire Department's ambulance and the two Wood's ambulances are tied up at the same time and another medical call comes in a Woods backup ambulance from their base on Main Street would respond.

Gardner Fire Department, contracts with Coastal Billing, an ambulance billing Company, to do the actual billing for its ambulance services. Coastal Billing charges a fee of 3% for all revenue collected as per the contract negotiated with the City (this figure has been reduce to 2.5% starting in FY/23). Using a third-party billing company is very typical with municipal fire/EMS departments across the Commonwealth. Additionally, Gardner Fire Department uses First Financial Resources to pursue unpaid bills.

					Net
	Calls	Transports	Collections	Collection/Expense	Income
FY/18	2278	1509	572574	54375	518199
FY/19	2961	2187	871137	203764	667372
FY/20	2751	2112	1004272	308789	695483
FY/21	2715	2091	1184798	306901	877897
FY/22	2858	2164	1265787	289029	976758
			1		Figure 3

Figure 3 shows activity and collections for FY/18 through FY/22:

Calls = total emergency medical calls for the fiscal year. Transports = total transports by GFD Ambulance

Collections = total money collected by Coastal Billing

Collections Expense = total cost for collections

Net Income = total income for the fiscal year after other costs

For FY/21 and FY/22 Gardner Fire Department participated in the Medicare CPE Reimbursement Program. The program was instituted by the Commonwealth up to help Cities and Towns offset the very low Medicare and Medicaid reimbursement currently allowed. Gardner Fire Department has successfully applied for this reimbursement over the last two years:

FY/21 - \$210,026.00 received 6/30/2021

FY/22 - \$234,407.00 project to be received 6/30/2022

It is recommended that Gardner Fire Department continues to apply for these offset revenues, from the Commonwealth, on an annual basis.

#### **Ambulance Costs**

The cost for running the ambulance service has been broken out in the Gardner Fire Department budget, this is a practice that should continue and makes it very easy to monitor the direct budget costs. The cost breakdown FY/18 through FY/22 are as follows:

#### 12231 Ambulance

		FY/18	FY/19	FY/20	FY/21	FY/22
51013	Salaries/wages	311674.19	330153.15	353284.97	365327.75	360096.4
51030	Overtime	83847.55	76623.64	102317.94	112894.53	107106.5
51050	Holiday Pay	29434.77	29173.38	33761.52	38876.02	38839.81
51090	Clothing/Uniforms	9000	9000	7875	9000	9000
51101	College Credits	0	2000	0	0	0
51102	Collateral jobs	23721.63	35283.09	39989.2	37134.27	40225.01
51103	Education incentive	0	0	112.34	0	0
51415	AMB Service Stipend	16929	17025	17396	17667	17469.52
52030	Repair and Maint	9606.79	9566.8	4452.27	14979.39	6465.92
52037	AMB Supplies	11546.81	19293.89	14975.81	21109.89	16670.78
52040	Information Tech	0	0	5855.13	2730.99	6500
52041	Lic Renewals/Fees	5729.86	3291.8	6381.83	5622.69	6940.32
52050	Minor Equipment	1683.01	3303	0	0	0

52151	Telecommunications	979.47	1280.33	1620.61	2518.01	2645.85
52170	Prof. Dev & Travel	320.4	413.7	3334.25	3619.68	2764.23
52190	Prof. Services	54375.19	203764.45	308788.81	306901.25	289382.4
52230	Office Supplies	0	0	368.46	471.38	243.75
52240	Vehicle Supplies	741.71	2512.6	2709.1	1846.22	3542.01
55090	New Vehicle	254997.53	0	0	0	
	Total Ambulance	814587.91	742684.83	903223.24	940699.07	907892.4
		FY/18	FY/19	FY/20	FY/21 Figure 4	FY/22

On the budget sheet, most of the line items are self-explanatory. Professional services are also included in Figure 2 and are the cost for the billing company and the Private split with Wood's Ambulance.

As we look at total expenses versus revenues for FY/18 through FY/22 we see the following:

	Collections	Medicare CPE	Budget cost	Revenue +/-	
FY/18	572,574		814,588	-242,014	** new Amb purchase
FY/19	871,137		742,685	128,452	
FY/20	1,004,272		903,223	101,049	
FY/21	974,772	210,026	940,699	244,099	
FY/22	1,031,391	234,407	907,892	357,906	
					Figure 5

In the first full year of operation, FY/18, the ambulance budget ran a deficit of \$242,014.00. This deficit was directly related to the purchase of a new ambulance in the amount of \$254,998.00. In the following years, FY/19 though FY/22 a significant amount of revenue was generated, FY/19 \$128,452.00, FY/20 \$101,049.00, FY/21 \$244,099.00 and FY/22 \$357,906.00.

It is clear, that the current ambulance system with the Medicare CPE reimbursement is now generating significant revenues back into the City's general fund beyond the cost of maintaining the ambulance service and additional firefighters.

#### Ambulance Replacement

Gardner Fire Department should continue to keep two ambulances available for service, one as the primary response ambulance (currently Rescue 3, a Ford F550/Horton) and a reserve or back-up ambulance (currently Rescue 2, a Ford F350/Horton). What this system allows for is the newer and most up-to date ambulance, Rescue 3, to respond to calls on a routine basis and the reserve ambulance, Rescue 2, to be put in service whenever Rescue 3 is out of service for routine maintenance, service, or inspections.

An ambulance replacement schedule should be put in place to assure reliability of the BLS service and reasonable maintenance costs over the life of the ambulances. The life expectancy of the primary Gardner Fire Department ambulance is five years. This is based on the current level of use and past history.

The reserve or back-up ambulance will have a total life of ten years, five as the primary ambulance and five as the reserve or back-up. By creating this ten-year cycle it makes the cost of an ambulance very reasonable over its life span. For example, Rescue 3 was purchased, in 2018, for \$255,000.00. Over ten years the annual cost for the ambulance is \$25,500.00, similar to the cost of a police cruiser.

A five-year replacement plan for Gardner Fire Department would look like this.

GDF Ambulance 5/yr Capital Replacement Plan

		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
ł	Primary Ambulance					Replace					Replace
1	Rescue 3 2018					New Rescue 2					New Rescue 3
1	Reserve Ambulance					Re assign					Re assign
۱	Rescue 2 2007					Rescue 3 to Reserve					Rescue 2 to Reserve
											Figure 6

Gardner Fire Department is in the process of ordering a new ambulance with a replacement cost of \$290,500.00, which will be paid for with ARPA\*\* funds, no cost to the city. This replacement will keep the primary ambulance on a five-year replacement schedule. The current ambulance, Rescue 3 will go into a reserve or back-up status for the next five years.

\*\* Under the American Rescue Plan Act, passed by the federal government in March 2021. State, county, tribal and local entities will receive federal aid to respond to the public health and economic impacts of the public health emergency created by the COVID-19 pandemic.

#### 4. Additional services to residents, property owners and businesses with no increase in taxes

The additional Fire Department services realized by the current ambulance system to the city, with no increase in taxes, mostly revolves around the addition of two firefighters on duty to respond to emergency calls throughout the city. As noted earlier, the dual role firefighter/EMT is available an average of 17 hours per day to respond to these "other" emergencies. In general terms, this figure to approximately a 25% increase in response capabilities to these "other" emergencies at no additional cost to the city. In fact, and as shown above, the ambulance system, with 2 firefighter/EMTs, generates a positive revenue source for the city and provides revenues to offset fire department costs.

#### **Recommendations:**

- 1. Stay with the hybrid system of having GFD provide the primary BLS with Wood's (or some private) to provide both back-up and ALS services.
- 2. GFD should continue to apply for offset revenues, from the Medicare CPE Reimbursement Program, on an annual basis.
- GFD should continue to keep two ambulances available for service, a primary and a reserve and follow a five-year replacement plan to assure reliability and reduce unnecessary maintenance costs.
- 4. Budget for the capital expense of a new ambulance every five years. With inflation it is assumed a new ambulance in 2028 will cost around \$350,000.00. Putting aside \$70,000.00 from the revenues each year would cover this capital expense in 2028.
- 5. The ratio of transport, Gardner Fire Department/Wood's Ambulance should be collected on an annual basis and reviewed to ensure this benchmark is being met or exceeded.

#### **Overview and Recommendations for Gardner Fire Department Facilities**

A fire station supports the needs of the fire department and the community in which it is located. It must accommodate extremely diverse functions, including housing, recreation, administration, training, community education, equipment and vehicle storage, equipment and vehicle maintenance, and hazardous materials storage. While it is usually only occupied by trained personnel, the facility may also need to accommodate the general public for community education or outreach programs. Major fire station functional areas include the following:

- Apparatus bay(s): This is where the firefighting and emergency response vehicles are stored.
- Apparatus bay support and vehicle maintenance: These industrial spaces are where the vehicles and other firefighting equipment are cleaned, maintained, and stored.
- Administrative and training areas: These include offices, dispatch facilities, and training and conference rooms.
- Residential areas: These include the dorm rooms, day room/kitchen, and residential support areas such as bathrooms and fitness spaces.

#### **Apparatus Bays**

Sizing the apparatus bay is critical, and it should be designed to accommodate variable vehicle sizes. Typically, the entire room is sized based on the bay size for the largest vehicle in the fleet or the largest anticipated vehicle. Bays also include vehicle exhaust removal systems, compressed air and power drop lines, and hot and cold-water connections. Bay doors must also accommodate the largest vehicle and include a manual means to open in case of power failure. Ideally, the site will accommodate drivethrough bays.

#### Apparatus Bay Support and Vehicle Maintenance

Apparatus bay support functions include cleaning and maintenance areas for the firefighter's selfcontained breathing apparatus (SCBA), protective clothing, fire extinguishers, and other equipment. It also includes storage areas for firefighting gear and equipment and secure storage for medical supplies. Some of these areas are specialized spaces for disinfecting protective equipment and for maintaining and recharging the SCBA in a clean environment.

Agent storage including gasoline, degreasers, pure oxygen, and other potentially dangerous materials are typically stored in a single-story structure separate from the fire station building. It should be located along the driveway leading into the Apparatus Bay for ease of loading and unloading of firefighting agents. In some cases, it may be attached to the main structure.

A vehicle maintenance bay may also be included in a fire station. It is a dedicated maintenance area for the firefighting apparatus and includes a heavy-duty lift and all utility connections required for large vehicle maintenance.

#### Administrative and Training Areas

Administrative areas include standard offices and conference and training rooms. The area will also likely include additional specialized spaces such as the chief's office and computer training/testing facilities for firefighter continuing education. Some stations may include a highly specialized dispatch room for receiving emergency calls from the public.

#### **Residential Areas**

Fire stations are occupied 24 hours a day, seven days a week by personnel in continuous 24-hour shifts. Therefore, ensuring a comfortable living environment for the firefighters is paramount.

The day room accommodates kitchen, dining, and living/recreation functions. It is often separated into subspaces for these three functions, but an open design may also be effective to encourage interaction between the spaces. The dining space may also double as training or meeting space and might include provisions for audiovisual equipment.

Dorm room design can vary widely and provide each firefighter with a place to sleep, work, and store personal items. Typically, each room is shared between firefighters of different crews/shifts so that the room is never occupied simultaneously. Individual lockers are provided for each firefighter. A bed, nightstand, and desk are shared.

Other residential areas include a laundry room, a physical fitness room, bathrooms and showers.

#### Maintain a Safe and Healthy Environment

Due to the continuous occupation of the facility by firefighters and the presence of hazardous materials, special attention must be given to designing the facility to accommodate equipment and operational strategies to both protect the occupants and maintain a healthy environment. Consider the following critical elements:

- Provide a secure facility for both personnel and materials such as controlled medical supplies and hazardous fire suppression agents.
- Ensure good indoor air quality and abundant natural light in the residential and administrative areas.
- Ensure good ventilation of industrial areas such as the apparatus bay and prevent contamination
  of clean spaces such as the SCBA maintenance areas.

Garner Fire Department facilities consist of 3 buildings:

Station 1, built in 1935 and located at East Broadway and Prospect Street is used for reserve apparatus and equipment storage.



Station 2, built in 1978 located at 70 City Hall Avenue serves a Fire Headquarter in which all operations of the department are located.





Annex Building, located next to Fire Headquarters is used to store the Reserve Ambulance and some equipment.



During a site visit we noted many limitations that these facilities present to Fire Department operations and current needs of the department. The top ten issues are as follows:

1. There is a major roof leak both at the front and rear of the apparatus bay running the entire length of the bays. This leak has damaged the sheetrock covering the ceiling and has saturated the roof insulation. It seems to be related to an interior roof gutter system and should be repaired as soon as possible.



2. Lack of space for apparatus. Currently the front-line apparatus and the 2 ambulances from Wood's Ambulance occupy the entire apparatus floor area. The Reserve Engine and Reserve Ambulance are housed in Station 1 and the Annex Building, respectfully. Additionally, response trailers are stored outside and exposed to the elements. Storing and housing apparatus and trailers in this manner does not meet the needs of the Fire Department.



3. When Station 2 was built there was no consideration given to mixed gender use of facilities. There is only 1 bathroom and gang shower facility for both male and female members to use. Additionally, the 2 sleeping areas are open dorm style, giving little privacy between genders. Adding an additional bathroom and shower room in the current footprint of Headquarters is most likely not possible. Providing private sleeping rooms in the 2 current dorm rooms is a possibility in the current layout.



4. There is a lack of adequate lockers/storage/proper ventilation for turnout gear. Research, testing and evaluation of PPE tells us that there are several things that can have an adverse impact on the life cycle of firefighting PPE, particularly the integrity of the PPE fabric, including deteriorating UV light and surface contamination.

Over the past decade, the Fire Service has become more active regarding the storage of our PPE. This is based on science and studies regarding firefighters and their exposure to toxic materials and carcinogens during structural firefighting activities. Furthermore, this contamination can be brought back to the fire station and spread throughout the station by "off gassing". Because of this, in modern

fire stations, all structural firefighting gear is prohibited from living areas of the building and all gear is stored in a properly vented structural firefighter gear storage room.

At Headquarters firefighters are forced to store their second set of structural firefighting gear on the 2<sup>nd</sup> floor living area (picture bottom right). Although this gear is required to be cleaned and bagged before it is brought to the 2<sup>nd</sup> floor hallway area it is not a good practice. The size and configuration of the building give fire department management no real option for proper storage.



5. There is no dedicated decontamination area for Fire & EMS equipment.

6. Fire Headquarters needs a proper building air handling system for ventilation and air purification. This is needed to keep the contaminates created and stored in the apparatus bay area of the station out of the residential side of the building.

7. There is an absence of adequate storage space at headquarters. Currently, apparatus, equipment and gear are stored between 3 buildings of which only 1 is occupied. Currently the Reserve Ambulance is stored in the Annex Building. This Reserve Ambulance, Rescue 2, will be replaced by the current front-line ambulance, Rescue 3, in the next year when a new ambulance is purchased. Rescue 3 (when it becomes the Reserve) will not fit in the Annex Building.

Additionally, in the administrative area there is very limited room for department files and records storage and the department has been forced to store these in the stairwells of the fire station. The need for adequate firefighting gear and locker storage has been addressed above in Item 4.

8. Office space is very limited and does not meet the current needs of the department. In today's fire service office space is needed for Administration, Administration Support, Fire Prevention, EMS Officer, Training Officer, Apparatus/equipment maintenance person and 4 Shift Officers.



9. Similar to the lack of gender specific bathrooms and showers, separate locker rooms, for male and female are needed. However, under the current footprint of the building this is not possible.

10. Training is the backbone of any fire department. Hands on training produces well-prepared firefighters that through repetitive basic training increases the speed of an operation and enhances proper execution while reducing injuries. Although GFD has an area to use for classroom training it does not have an area, facilities or props dedicated to hands on training as pictured below.



The 10 issues addressed above are not uncommon for a fire facility that was built 44 years ago. However, the operations and services of today's fire service have changed dramatically.

#### **Recommendations:**

1. The city should investigate the needs for a new or substantially remodeled Fire Headquarters to meet current and future needs.

#### Review of the Civil Service system and if improvements can be made in hiring Firefighter/EMTs

Civil Service, as a government agency, was designed to provide fairness in the public sector, in entry level hiring, promotions, (including bypass in rank), demotions, (layoffs) and discipline (which includes suspensions and terminations). The Civil Service website under Mass.gov states that Civil Service strives to recruit a qualified diverse labor force and evaluate current and potential employees desiring a career in public safety, to fill jobs in agencies and municipalities across the Commonwealth.

The Commonwealth is made up of 39 cities and 312 towns. Out of these 351 cities and towns, 103 Fire Departments are currently under Civil Service, and 11 have opted out of Civil Service in recent years: Acushnet, Athol, Franklin, Greenfield, Mansfield, Marlborough, North Attleborough, Plainville, Swampscott, Wellesley, and Westwood.

The remainder of Fire Departments in the Commonwealth are not under Civil Service.

Some Civil Service key points on hiring and promoting:

- Children of firefighters killed in the line of duty go to the top of the Civil Service eligibility list.
- Children of firefighters permanently disabled in the line of duty go to the top of the Civil Service eligibility list.
- Disabled Veterans and Veterans with residence preference are next on the Civil Service eligibility list. Military personnel deployed at the time the test is scheduled, can make up the test at another time.
- People with residency can have preference if the city or town requests (Civil Service requires a person to have lived 1 year in a city or town they claim residency in).
- Civil Service provides for all testing both entry and promotions. Tests are generically written with the same questions Statewide.
- Hiring candidates through the civil service system is designed to remove Nepotism within the department and collusion with applicants.
- If a candidate is bypassed for employment or promotion, Civil Service provides a means for that applicant appeal the bypass and has a right to a hearing on why they were not hired.
- Civil Service allows for cities and towns to request a selective certification under Personnel Administration Rule (PAR).08, i.e., a selective certification based on gender, a specific language fluency or EMT can be requested.
- Civil Service protects firefighters that are laid off, with those officers being placed on a Lay Off List and have preference to work for another Civil Service city or town that has an opening in their department. The individual laid off has the first right to the job they were laid off from when or if it becomes open.

Recently, many police agencies and 9 fire agencies have chosen to leave Civil Service. Additionally, and over the past 30 years or so, many cities and towns have decided to take their police chiefs and fire chiefs out of Civil Service.

The communities that have left Civil Service have cited many of the following reason and or advantages in their decision to leave:

- Their minimal entrance and promotional standards are a high school education or GED, Mass driver's license.
- Absolute preferences are given to disabled veterans, veterans and children of deceased or severely injured officers.
- Leaving Civil Service allows for greater flexibility within the hiring and promotional process.
- Departments would not be required to hire from an existing lay off list.
- The department can determine the expiration date of the hiring and promotional lists.
- The police/fire department can set minimum eligibility guidelines not allowed under Civil Service such as higher education levels.
- The department can determine what hiring preferences they want to acknowledge (residency, military experience, Paramedic/EMT certifications, language proficiency, prior academy training).
- Instead of the candidate ratio of (2N+1) departments would have a much larger candidate pool to select from.
- Departments can diversify their workforce without jumping through the hurdles Civil Service presents when asking for a specialized certification.
- Flexibility to hire lateral transfers or reinstatements.
  - Ability to incorporate community and department specific criteria into promotional exams.
    - Ability to offer promotional exams that more accurately gauge an officer's suitability to become a supervisor.
    - Attributes beyond test score, such as work productivity, contribution to the community and performance evaluations would factor into promotions.
    - Ability to mandate a probationary period for promotions.

#### As with any hiring or promotional system there are Pros and Cons.

First and foremost, there are collective bargaining issues with the Firefighters' Union that will need to be overcome if you leave Civil Service. Many of the key points under Civil Service offer various levels of protection for Union members. Furthermore, they view the independent Civil Service system as testing on an even playing field which can help to keep local politics and favoritism to a minimum.

The Civil Service testing system is independent of the city or town and requires little effort for the community in the process. They develop the tests for both entry and promotion and administer them. When you need to fill a vacancy or position, they send you a list of eligible candidates based on the established ratio of 2N+1 (2 names for every open position plus 1 additional candidate). For example, if you have 1 opening you get 2 names plus 1 for a total of 3, if you have 2 openings you get 4 names plus 1 for a total of 5.

The argument against using this system, on the management side, is that the test(s) is based on statewide questions and not unique to the specific community and that you are very limited to the candidate pool you can choose from. Additionally, Civil Service sets minimal entrance and promotional standards, only requiring a high school education or GED and a Massachusetts driver's license.

When a city or town leaves Civil Service, the entrance testing and promotional process now becomes the responsibility of the community. Depending how the city or town chooses to develop and administer the testing and promotional process there could be an additional cost. The positive side to a city or town when conducting its own testing process is they can develop it specifically for the needs of that community. There are many companies and consultants in Massachusetts that provide entrance exam testing and promotional services, but it is typically at a cost to the community.

In recent years, fire departments trying to hire certified Emergency Medical Technicians (EMT) and Paramedics off the civil service "new hire" list have been very disappointed because the "new hire" list with this type of candidate is exhausted very quickly, leaving the city or town with no candidates to hire until the next civil service entrance exam is given. Recently, civil service has changed its entrance testing cycle from once every two years to once every year. It is not known at this time if this change will improve the number of available candidates in the EMT or Paramedic pool.

#### **Recent experience at Gardner Fire Department**

The City of Gardner only hires off the civil service EMT list. Recently, Chief Lagoy tried to hire four firefighter/EMTs. He was sent a list with 180 names, 11 signed the list, 6 came for an interview, 3 withdrew when they found out they had to live within 10 miles of the city (a Civil Service requirement), 1 did not pass the background check, leaving Chief Lagoy with 2 candidates, which he hired. At this point the fire department must wait for the next Civil Service entrance exam before they can fill the two vacant positions. This can lead to additional overtime cost and potentially fatigue to department members. It is our understanding that Chief Lagoy is experiencing these difficulties, once again, with his most recent round of hiring.

If the fire department is looking to hire trained and certified firefighter/EMTs from other communities, under Civil Service, you are restricted to hire from only other Civil Service departments. This greatly reduces the pool of potential candidates, especially in the Gardner area where many of the area fire departments are non-Civil Service.

As originally stated, there are Pros and Cons in being a Civil Service department or not. The Gardner Police Department has partitioned the State to leave Civil Service and to our understanding was recently granted permission the leave. We would suggest that if remaining in the Civil Service system is inhibiting the fire department from meeting its mission, leaving Civil Service should be explored.

In either case, we believe that there are ways to increase the pool for potential local candidates. Reaching out to the local high school is a great resource for potential candidates by participating in career days and/or offering internships. Additionally, working with the schools to provide CPR and first aid classes can give the fire department an opportunity to reach the student population. Teenagers are making decisions about what their adult lives might be like and can process substantial information about a possible career in the fire service. Firefighters can talk honestly with this group about what it is really like to be a firefighter and what opportunities exist.

Marketing local colleges are also a good resource for potential candidates. Two very local colleges, Quinsigamond Community College, and Anna Maria College both offer fire science programs, including Emergency Medical Technician training. The use of media outreach, and social media, is a particularly helpful tool to make potential candidates aware of job openings and dates of upcoming Civil Service entrance exams and can include information on how to register for these exams.

#### **Recommendations:**

- Review the success of the upcoming hiring process to see if it yields sufficient qualified firefighter/EMT candidates. If it does not meet these needs and it is clear that remaining in the Civil Service system is inhibiting the fire department from meeting its mission, leaving Civil Service should be explored.
- 2. Whether the fire department remains in or leaves Civil Service, we would recommend that a proactive recruitment program be established to assist in providing qualified firefighter/EMT candidates for the Gardner Fire Department, into the future.

#### <u>Review the current department staffing model against industry standards and comparison</u> <u>departments in the Commonwealth of Massachusetts</u>

Fire Departments across the Commonwealth vary greatly in size and scope due to size, economics, incident volume, traditions and needs of the communities they serve. No matter the size or community served, all successful fire departments share certain principles of organization for effective and safe function. These performance principles include:

- Chain of command. An established command hierarchy from the lowest to the highest department level, ensuring that each subordinate reports to one supervisor. The chain of command not only establishes accountability, it lays out a company's lines of authority and decision-making power. This chain of command is used for organizational day to day functions and for emergency incidents.
- Supervisory limits or span of control. This refers to the number of individuals or resources that
  one supervisor can manage effectively in emergency and non-emergency situations. Although
  the number can vary according to circumstance the Fire Chief's Handbook, 7<sup>th</sup> ed. uses a general
  guideline for fire service company supervision of up to five or six firefighters per one supervisor.
- Division of labor. Ensures that all responsibilities are assigned and prevents the duplication of efforts. Additionally, the process divides large jobs into smaller jobs to make them more manageable, equalize workloads, and increase efficiency.
- **Discipline and regulations**. Written policies, procedures, and guidelines to set boundaries and enforcement for expected individual and departmental performance.

To meet these expectations and achieve these principles, fire departments must be structured, organized, and staffed properly.

We looked at 10 fire departments in the Commonwealth that were either small cities or similar size departments and looked at the call volume, staffing and command structure.

	Population	calls	calls	total	# Stations	AMB
		other	EMS	calls		
Agawam	28,613	1104	5254	6358	2	3 ALS
Amesbury	17,532	1106	1844	2950	1	1 BLS
Bridgewater	27,619	2500	3600	6100	2	2/ALS/2 res.
Foxborough	16,700	1300	2900	4200	1	3/ALS
Gardner	20,683	1938	3477	5415	1	1 BLS
Greenfield	17,258	1305	1763	3068	1	BLS/BU
Leominster	41,581	2728	5728	8495	3	2 BLS
Melrose	28,016	1798	2480	4278	3	ALS
Southbridge	16,878	764	3690	4454	1	3 ALS
Wilmington	22,325	2424	2332	4756	1	3 BLS
Winthrop	18,544	1061	2132	3193	2	No AMB

Figure # 7

ALS = Advanced Life Support, BLS = Basic Life Support, BU = Back Up Ambulance

Each department provided us with an Organizational Chart (see Appendix A).

What we noticed with the current Gardner Fire Department staffing model were two things, the lack of a Deputy Fire Chief and that the standard span of control for a fire department of five or six firefighters to one supervisor is exceeded on each Group.

We would recommend the city looks at making a nonunion (confidential) Deputy Fire Chief's position. The Deputy Fire Chief would serve as second in command of a fire department. The Deputy Fire Chief would manage day-to-day operations, direct and coordinate activities of personnel under their command, collaborating with internal and external stakeholders. This person may also act as a department head in the absence of the Fire Chief and assist in succession planning. This position will include a combination of administrative work and time spent in the field to keep operations running efficiently in the fire department.

Currently, all the positions below Fire Chief are union positions. This leaves the Fire Chief without a confidential employee on the department to assist and act in a confidential capacity when formulating, determining, and effectuating management policies and dealing with disciplinary issues. Additionally, it puts the current 2nd in command, the Fire Captain, in a very difficult position as he or she tries to balance their high-level management position and being a union member.

The current "Group" span of control in the Gardner Fire Department is eight firefighters to one supervisor, exceeding the recommended span of control for a fire department. Exceeding the span of control in this fashion becomes more apparent and potentially dangerous during emergency operations with the potential that the span of control can become unmanageable. Maintaining a manageable span of control is particularly important at incidents where safety and accountability are a top priority.

Because of this large span of control, we would recommend the city looks at creating a Captain's position on each Group in addition to the current Group Lieutenant. This would bring the span of control to four firefighters to one supervisor. This can be done with little impact to the budget by continuing the current staffing level of nine on the Group and promoting one of the nine members to the newly created position of "Group" Fire Captain. The budget cost would be the difference between a Firefighter/EMT's rate and that of a Fire Captain.

The Fire Captain would manage the Group and run the day-to-day operations on that Group including managing duties surrounding firefighting, training, accountability, emergency care, hazardous materials, etc.

The Fire Lieutenant would act in a supervisory/foreman type position and assist the Captain in day-today operations and oversee a company at emergency scenes.

Both these positions would add to successful succession planning for the department moving forward.

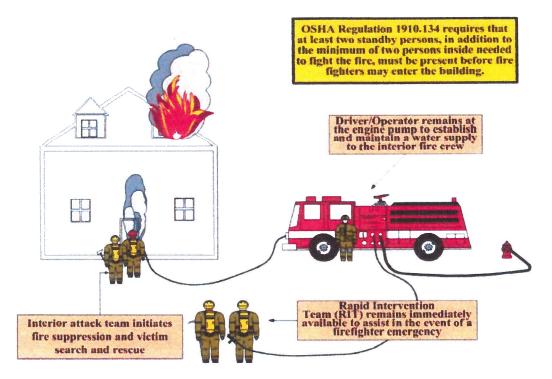
#### OSHA 2in/2out law and NFPA Standard 1710 for Career Fire Departments

The report would be incomplete if we did not address the current OSHA 29 CFR 1910.134 law "2in-2out" and the NFPA Standard 1710 for Career Fire Departments.

The "2 in-to-out" law was designed for the safety of firefighters engaged in interior structural firefighting and is the major focus of paragraph (g)(4) of the OSHA Respiratory Protection standard. This provision

requires that at least two firefighters enter the Immediately Dangerous to Life or Health (IDLH) atmosphere and remain in visual or voice contact with each other at all times. It also requires that at least two others be located outside the IDLH atmosphere, thus the term, "two in/two out". This assures that the "two in" can monitor each other and assist with equipment failure or entrapment or other hazards, and the "two out" can monitor those in the building, initiate rescue, or call for back-up. One of the "two out" can be assigned another role such as incident commander. I am pleased to say that we found that Gardner Fire Department complies this law under normal response conditions.

#### OSHA '2 In/2 Out' Illustrated



Credit: Fairview Fire District

NFPA 1710 Standard for Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments (see appendix B).

Appropriate staffing levels deliver effective and efficient deployment for fire suppression operations, emergency medical operations, and special operations to the public. NFPA 1710 is a standard/guideline for an all-career fire department to help protect citizens and provide for the occupational safety and health of its fire department employees. Provisions of 1710 cover functions and objectives of fire department emergency service delivery, response capabilities, and resources, including staffing levels, response times, and levels of service. General criteria for managing resources and systems, such as health and safety, incident management, training, communications, and pre-incident planning are also provided in NFPA 1710.

NFPA guidelines are based on research performed by trained members of the association. Scientific research, such as fire behavior in different environments and how different synthetic materials affect the burn process, are used in part to establish these guidelines.

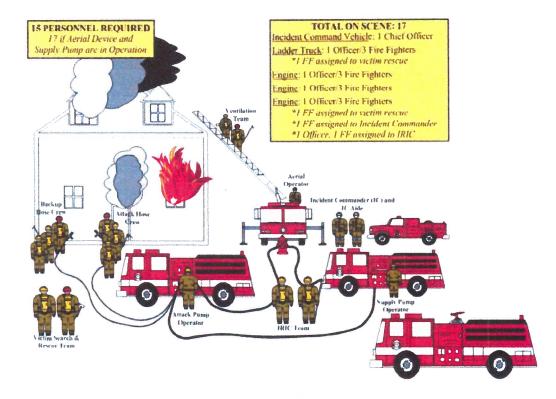
NFPA 1710 addresses the structure and operation of organizations providing such services, which include fire suppression and other assigned emergency response responsibilities such as EMS and special operations.

The requirements intend to provide effective, efficient, and safe protective services to help prevent fires, reduce risk to lives and property, deal with incidents that occur, and help prepare for anticipated incidents.

The requirements are listed in NFPA 1710 for fire department service deployment based on the type of occupancy, along with the appropriate response staffing levels for each. The minimum staffing level for a single-family dwelling according to the standard is:

Occupancy Type: Single-Family Dwelling Deployment: Minimum of 15 members or 17 if aerial device is used.

The initial full alarm assignment to a structure fire in a typical 2000 sq/ft two-story, single-family dwelling without a basement and with no exposures must provide for a minimum of 15 members (17 if an aerial device is used).



#### NFPA 1710 Illustrated

Credit: Peoria Fire Department

Additionally, NFPA 1710 provides essential benchmarks, fire departments often measure baseline performance in terms of total response time, which is the time it takes from the call to be received at the Public Safety Answering Point (PSAP) until the first unit arrives on the scene of the emergency

incident. Total response time should be measured and reported for all first-due units *and* the effective response force (ERF) assembly. Total response time is composed of call-processing time, turnout time and travel time:

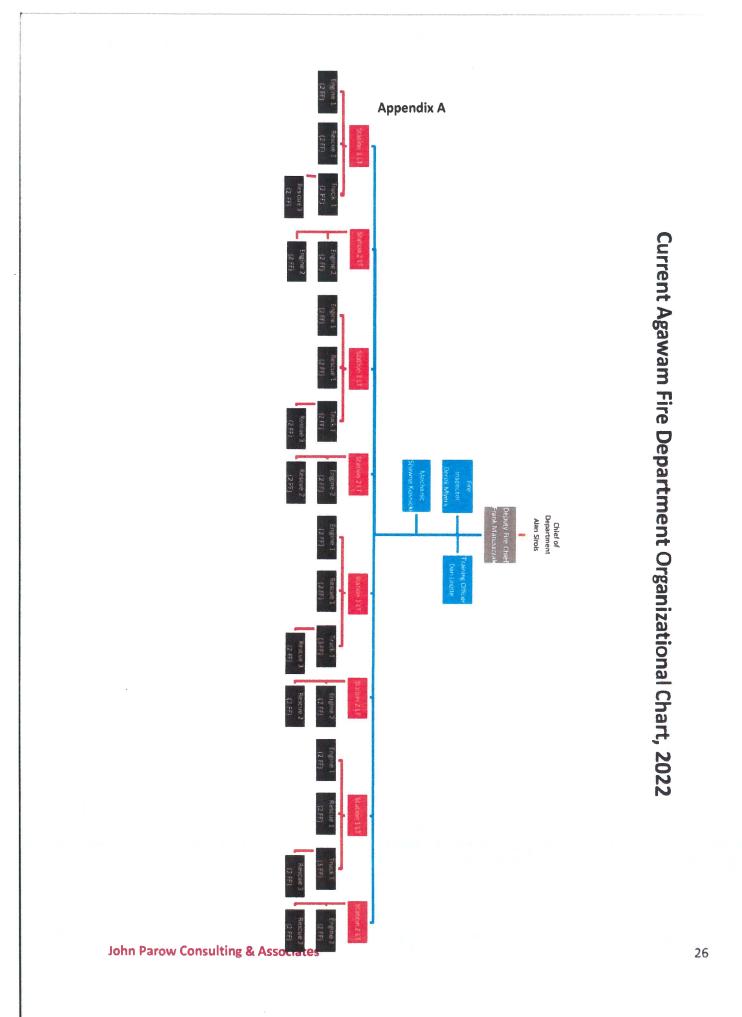
- Alarm Answering Time: 15 seconds for 95% of calls; 40 seconds for 99% of calls
- Alarm Processing Time: 64 seconds for 90% of calls; 106 seconds for 95% of calls
- Turnout Time: 60 seconds for EMS responses; 80 seconds for fire responses
- First Engine Arrive on Scene Time: 240 sec (4 minutes) for 90% of responses with a minimum staffing of 4 personnel
- Second Company Arrive on Scene Time: 360 seconds (6 minutes) for 90% of responses with a minimum staffing of 4 personnel
- Initial Full Alarm Low and Medium Hazard Assembly Time: 480 seconds (8 minutes) on 90% of responses
- Initial Full Alarm High Hazard/High-Rise Assembly Time: 610 seconds (10 minutes 10 seconds) on 90% of responses

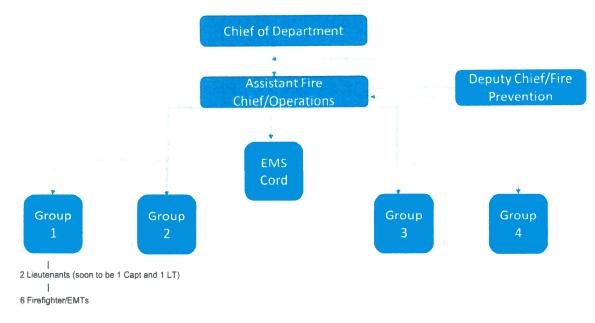
As stated earlier, NFPA Standards are guidelines for fire departments to be aware of and hopefully work towards implementing. There are many ways to move towards compliance with NFPA 1710 such as automatic aid, mutual aid with other neighboring communities, pre-fire plans, etc. It is suggested that Gardner Fire Department work towards meeting the guidelines of NFPA 1710 over time.

Taking this into account and after reviewing the organizational structures and shift manning of other Fire Departments in the study we would recommend adding a non-union Deputy Fire Chief's position and a Fire Captain to each group to be the Group Commander to solve the span of control issue.

#### **Recommendations:**

- 1. The city looks at making a nonunion (confidential) Deputy Fire Chief's position. The Deputy Fire Chief would serve as second in command of a fire department
- 2. The city looks at creating a Captain's position on each Group to be the Group Commander. This would be within the current Group staffing of nine and in addition to the current Group Lieutenant to bring the span of control to 4 firefighters to 1 supervisor.
- 3. That Gardner Fire Department should work towards meeting the guidelines of NFPA 1710, over time.







## Bridgewater FD

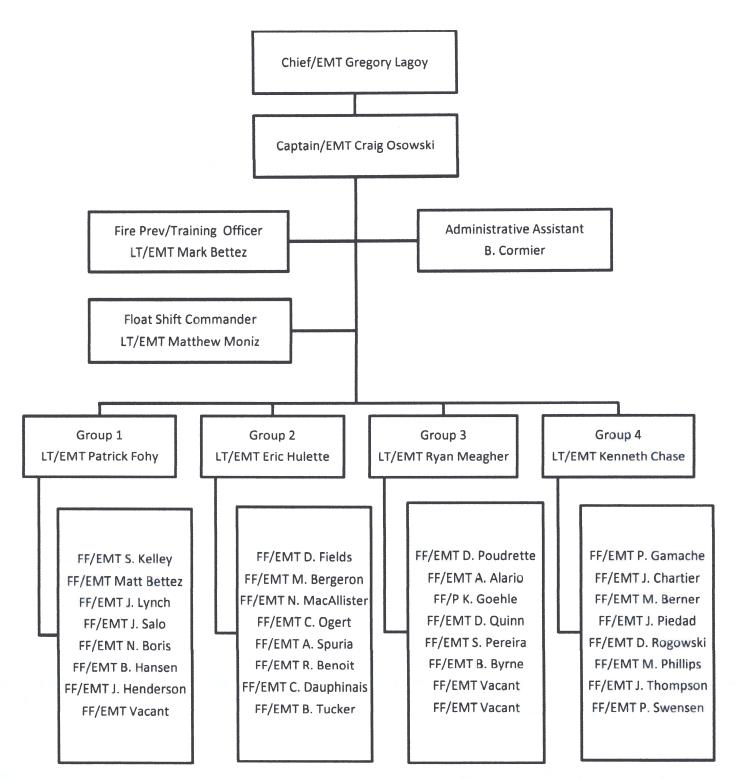
		Chief	
		2 Admin Assist	
		Deputy Chief	
	Training Captain	FP LT	EMS LT
Capt.	Capt.	Capt.	Capt.
LT.	LT.	LT.	LT.
10 FF	10 FF	10 FF	10 FF

Rev. 10/5/2021

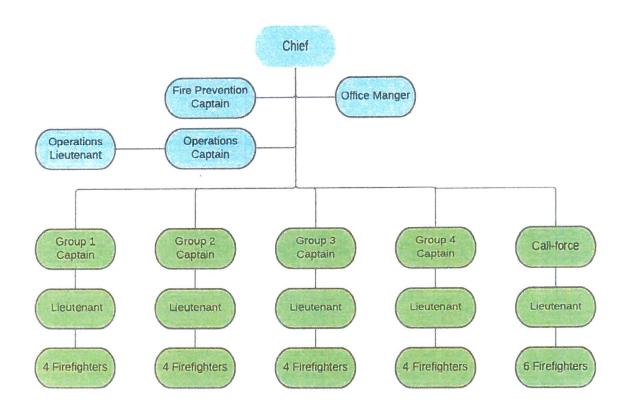
## TOWN OF FOXBOROUGH DEPARTMENT OF FIRE, RESCUE & EMERGENCY SERVICES



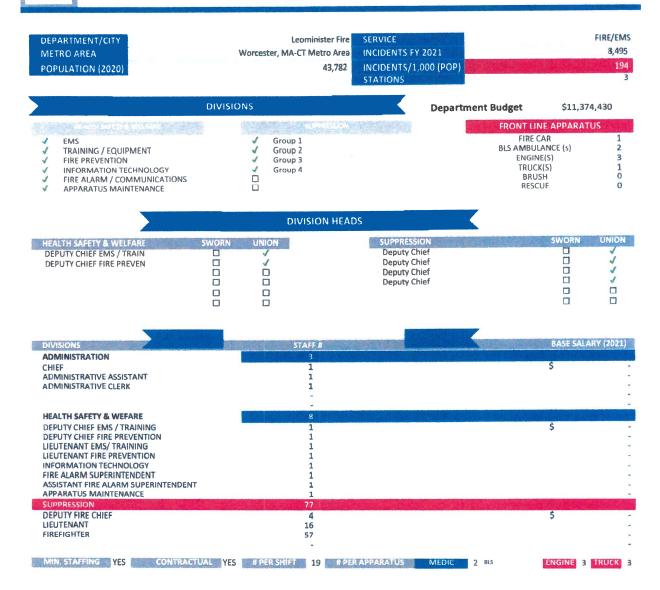
# GARDNER FIRE - RESCUE 2022 ORGANIZATIONAL CHART



#### Greenfield Fire Department

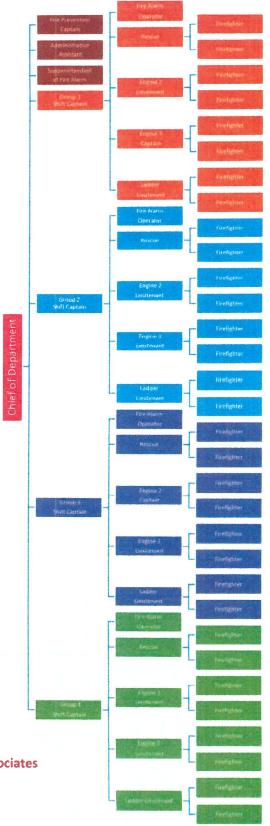


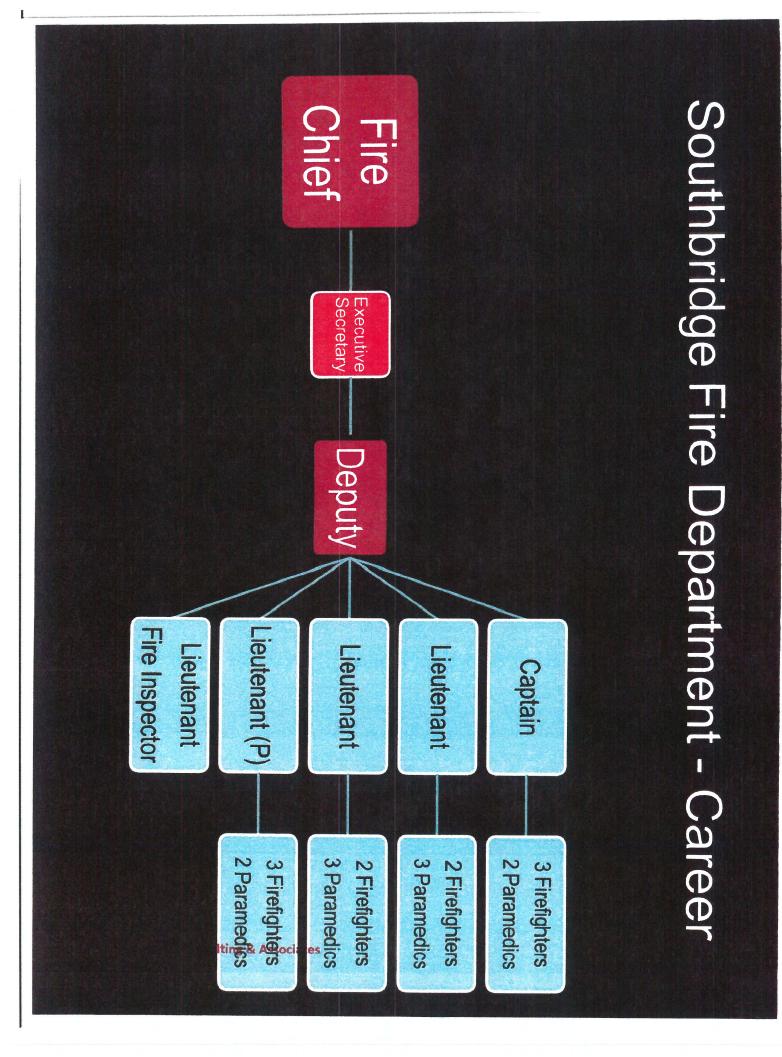
# FIRE/EMS DEPARTMENT STAFFING SURVEY

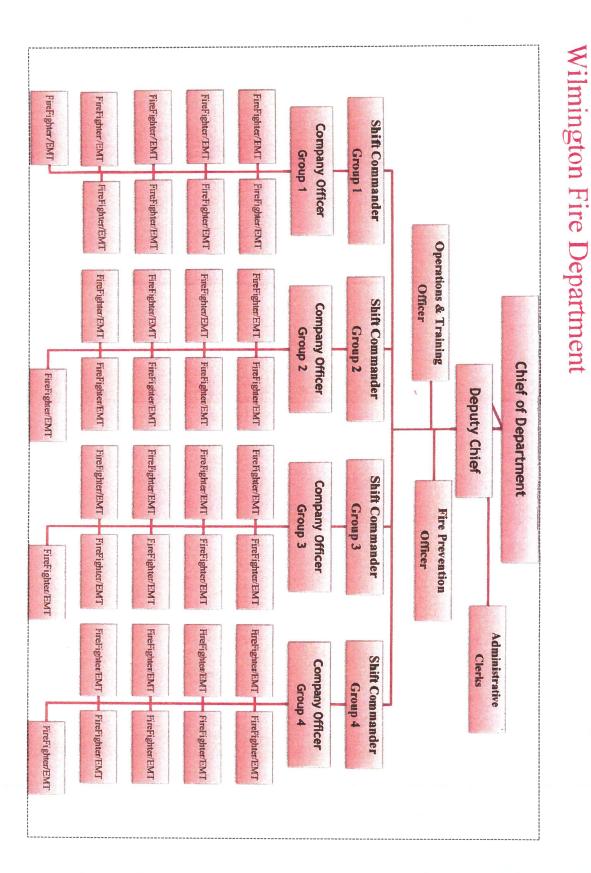


# Melrose Fire Department Organizational Chart <sup>4 Staff Positions</sup>

56 Line Firefighters







John Parow Consulting & Associates

## Winthrop Fire Department

#### Chief

----- Admin Assist

#### Administrative Officer (Captain) Fire Prevention

Captain	Captain	Captain	Captain
LT	LT	LT	LT
6 FF	6 FF	6 FF	6 FF

#### Appendix B

# NFPA Standard 1710

Organization and Deployment of Fire Suppression Operations, EMS and Special Operations in Career Fire Departments

#### **History and Purpose**

- The 1710 Standard for was originally released in 2001. Following, there have been three revisions (2004, 2010, 2016) with the most recent released in September 2016.
- The standard is applicable to substantially all CAREER fire departments and provides the MINIMUM requirements for resource deployment for fire suppression, EMS and Special Operations while also addressing fire fighter occupational health and safety.
- The 1710 Standard addresses structure fire in three hazard levels. These included low hazard (residential single-family dwellings), medium hazard (three story garden apartments or strip malls), and high hazard structures (high-rise buildings).
- The Standard addresses fire suppression, EMS, Aircraft Rescue and Firefighting, Marine Rescue and Firefighting, Wildland Firefighting, and Mutual and Auto Aid.

#### Fire Suppression and Special Operations Provisions

- "Company" is defined as:
  - · Group of members under direct supervision
  - · Trained and equipped to perform assigned tasks
  - Organized and identified as engine, ladder, rescue, squad or multi-functional companies
  - · Group of members who arrive at scene and operate with one apparatus
- EXCEPTION to company arriving on one apparatus:
  - · Multiple apparatuses are assigned, dispatched and arrive together
  - <u>Continuously operate</u> together
  - Managed by a single officer

- An Initial Alarm is personnel, equipment and resources originally dispatched upon notification of a structure fire.
- Performance Objectives
  - Alarm Answering Time
    - \* 15 sec 95%
    - 40 sec 99%
  - Alarm Processing Time
    - 64 sec 90%
      106 sec 95%
    - 100 300 3
  - Turnout Time =
    - \* 60 sec EMS
    - 80 sec Fire
  - First Engine Arrive on Scene Time
     240 sec (4 min)
  - Initial Full Alarm (Low and Medium Hazard) Time
     480 sec (8 min)
  - Initial Full Alarm High Hazard/ High-Rise Time
     610 sec (10 min 10 sec)
- Fire departments shall set forth criteria for various types of incidents to which they are required/expected to respond. These types of incidents should include but not be limited to the following:
  - Natural disaster
  - · Acts of terrorism
  - WMD
  - Large-scale mass casualty





- Given expected firefighting conditions, the number of on-duty members shall be determined through task analysis considering the following criteria:
  - · Life hazard protected population
  - Safe and effective performance
  - · Potential property loss
  - Hazard levels of properties
  - Fireground tactics employed
- Company Staffing (Crew Size)
  - Engine = minimum 4 on duty
    - High volume/geographic restrictions = 5 minimum on duty
    - Tactical hazards dense urban area = 6 minimum on duty
  - Truck = minimum 4 on duty
    - High volume/geographic restrictions = 5 minimum on duty
    - \* Tactical hazards dense urban area = 6 minimum on duty
- Initial Alarm Deployment (\*number of fire fighters including officers)
  - Low hazard = 15 Fire fighters
  - Medium hazard = 28 Fire fighters
  - High hazard = 43 Fire fighters

#### **EMS Provisions**

The fire department shall clearly document its role, responsibilities, functions and objectives for the delivery of EMS. EMS operations shall be organized to ensure the fire department's capability and includes members, equipment and resources to deploy the initial arriving company and additional alarm assignments.

- EMS Treatment Levels include:
  - · First Responder
  - Basic Life Support (BLS)
  - Advanced Life Support (ALS)
- MINIMUM EMS Provision = First responder/AED
- Authority-Having Jurisdiction (AHJ) should determine if Fire Department provides BLS, ALS services, and/or transport. Patient treatment associated with each level of EMS should be determined by the AHJ based on requirements and licensing within each state/province.
- On-duty EMS units shall be staffed with the <u>minimum members necessary</u> for emergency medical care <u>relative to the level</u> of EMS provided by the fire department.
- Personnel deployed to ALS emergency responses shall include:
  - A minimum of two members trained at the emergency medical technician—paramedic level
  - <u>AND two members</u> trained at the BLS level arriving on scene within the established travel time.
- All fire departments with ALS services shall have a named medical director with the responsibility to <u>pversee and ensure quality medical care</u> in accordance with state or provincial laws or regulations and must have a mechanism for <u>immediate communication</u> with EMS supervision and medical oversight.

