



# CAPITAL IMPROVEMENT PLAN

Fiscal Year 2014

January 2014

**Franklin Fire Department  
Capital Improvement Program  
Fiscal Year 2014**

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INTRODUCTION

The Capital Improvement Program for the fire department is intended to assure timely replacement of capital assets to insure the safest delivery of professional services to the citizens of Franklin. This year the department has requested the replacement of vehicles and equipment totaling \$ 270,000. This amount also includes funding for a replacement of aging staff vehicles, the purchase of protective body armor to protect our employees in today's quickly changing environment, and beginning savings for ultimately replacing the department's cache of self contained breathing apparatus.



For your convenience we have provided a brief definition for each type of asset referenced in the CIP. Further we have included a brief description of the needs for requested funding and the department's methodology for vehicle replacement and rotation.

Thank you for your continued support in aiding the safe and efficient delivery of emergency services to the citizens of Franklin.



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<b>Item</b>	<b>Item description</b>
<i>Pumper</i>	Also known as a fire engine is supplied with a water tank of 750 gallons and a 1250-gallon per minute water pump.
<i>Rehab Unit</i>	This unit is used to bring portable generators to the scene of large incidents. In addition it contains a cascade system, which is used to supply breathing air to provide site service for self contained breathing apparatus at the scene of emergencies. The present vehicle is an old smaller school bus and provides
<i>Aerial</i>	This vehicle provides for access to upper stories of buildings with a 100-foot hydraulic ladder. Additionally, the vehicle carries the majority of the department's heavy tools and supplies to facilitate building ventilation.
<i>Brush fire 4x4</i>	This vehicle is used to wild land fires and is provided with 4-wheel drive to facilitate off-road use. The vehicle is primarily a heavy-duty puck-up style truck with a 150-gallon water tank and small fire pump.
<i>Rescue Ambulance</i>	An ambulance licensed by the Department of Public Health. All ambulances are licensed at the Advanced Life Support Level and are purchased and maintained in accordance with the requirements of the Commonwealth of Massachusetts.
<i>Staff vehicles</i>	These are basically regular passenger vehicles with enhanced drive train capacities to accommodate emergency response service. Each station and the Deputy Fire Chief is provided with a 4-wheeled drive to facilitate better winter response capabilities. The Fire Chief and fire prevention vehicle are sedan type vehicles.
<i>Pick-up Truck</i>	Standard pickup truck used to transport various equipment and appliances for department business as well as hose and other equipment during fire emergencies.
<i>Copy Machine</i>	Standard office photo-copying machines
<i>Self Contained Breathing Apparatus</i>	Individual appliances used by fire fighters to breath clean air in toxic environments.
<i>Thermal Imaging Cameras</i>	Devices used by fire personnel to identify hidden fire as well as trapped victims in fire conditions.
<i>Building Roofs</i>	Replacement of roofing materials at department facilities.
<i>HVAC Systems</i>	Replacement and major repair of the heating, ventilation and air conditioning system at department buildings.
<i>Alarm Transceiver</i>	The receiving device for the Town's municipal fire alarm system.

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<b>Item</b>	<b>Item description</b>
<i>Breathing Air Compressor</i>	The unit used to fill reservoir bottles for the department's self contained breathing apparatus.
<i>Cardiac Defibrillator</i>	Portable electric cardiac devices used for cardiac monitoring and defibrillation by department paramedics.
<i>Computer Technology</i>	The replacement and enhancement of various computer peripheral devices such as monitors, printers, work stations, etc. This also includes the periodic replacement of the computer network hub controller for the department's computer system.
<i>Non Disposable Medical Equipment</i>	Various items used in conjunction with providing Emergency Medical Services (e.g. splints, backboards, stair chairs, etc.) which periodically wear out and require replacement.
<i>Base Station Radio</i>	Radio units at each of the department building that allow for communications with mobile and portable units.
<i>Radio Comparator</i>	This device is an integral part of the department's radio system which acts as a router among the various repeater sites throughout the Town. The comparator electronically selects the strongest repeater site and sends it to the receiver/transmitter device for broadcast throughout the system.
<i>Radio Repeater</i>	This device forms the core of the department's radio system which allows for proper coverage throughout the entire Town. Each of 3 repeater sites tends to boost the radio signal from mobile units for transmission to other mobile units or our base station.
<i>Portable Radios</i>	Hand-held radios used by personnel at emergency incidents.
<i>Radio Pagers</i>	Paging units used to recall off-duty personnel for larger emergency incidents and station coverage.
<i>Station Fixtures and Furnishing</i>	This includes various items such as furnishings, larger pieces of office furniture (e.g. desks, filing systems, etc.)
<i>Miscellaneous Equipment</i>	To identify every piece of equipment within the department would be prohibited. Thus we have created a miscellaneous grouping to provide for infrequent incidental equipment purchases/replacements. Examples of this type of equipment include ground ladders, ventilation fans, hand tools and equipment for testing and maintaining emergency supplies.
<i>Protective Clothing</i>	This category includes both structural firefighting and emergency medical service garments necessary to protect our personnel. Typically the life expectancy of these garments is 5 to 7 years.

**Traffic Pre Emption  
Devices**

This equipment is actually installed in the controllers of the traffic lights throughout the community and intended to allow emergency vehicles to more safely navigate through intersections. Each emergency vehicle is fitted with a transmitter – when within range of the traffic signal, the traffic signal in the direction of the emergency changes to green with all opposing traffic receiving a red signal. This clears the path for emergency vehicles and ensures opposing traffic remains stopped.

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**REPLACEMENT ROTATION**

Over the past several fiscal years the department has developed a vehicle rotation program in an attempt to keep capital costs reasonable and insure citizens and fire fighters have access to the best technology available. Although this rotation strategy is consistent with all fleet vehicles, there are slight variations depending upon the type of vehicle within the fleet. For the sake of clarity, we will address vehicle rotation in terms of Fire attack vehicles, Emergency Medical Vehicles and Staff and Support vehicles. Forest Fire Vehicles are not included in a rotation process as they are retired upon replacement.

**FIRE ATTACK VEHICLES**

Of this classification of vehicle, the Pumper and (Rescue-Pumper) are the vehicles typically subject to rotation. Within the rotation program are three positions, the first is active duty; the department presently has two active duty pumpers – one at Headquarters and one at Station #2. The goal of the rotation program is to insure that active duty pumpers are not more than 10 years of age, with no pumper more than 20 years old.

The next position within the rotation program is known as an active reserve vehicle. This vehicle is placed into service when one of the active duty vehicles are not available for service due to mechanical problems or used by returning off duty personnel during times of multiple calls or major emergencies and housed at the King Street Fire Station. The goal of the rotation program is to provide one active reserve vehicle ranging in age between 10 and 15 years old.

The last position within the rotation cycle is known as non-active reserve. This vehicle is placed into active service only if multiple vehicles are out of service due to mechanical problems and may be placed into service at major incidents. The key difference between the non-active reserve and active reserve vehicles is the amount of equipment typically stowed on the vehicles. The active reserve vehicle is provided with a full complement of equipment and capable of instantaneous assignment. The non-active reserve vehicle is not as well stocked with equipment and must receive equipment, transferred from another vehicle, before being placed into active duty.



#### EMERGENCY MEDICAL VEHICLES

The department presently operates three Rescue Ambulances. Each vehicle is licensed through the Commonwealth of Massachusetts Department of Emergency Medical Services. With the present level of staffing, the department currently operates two rescues as active duty units providing daily transport services to the citizens of Franklin, with one unit at each fire station. The last is an active reserve unit, housed at the King Street Station, is placed into service when one of the active duty units is unavailable or placed into service during special events (e.g. 4<sup>th</sup> of July Celebration, football games, etc.).

In previous years, the department used a seven year active life cycle for each rescue ambulance. Over the recent past however this rotation has not met our goal of insuring that active duty ambulances are technologically advanced vehicles maintained in a cost effective manner.

In order to address this concern we propose to implement a program of purchasing replacement ambulances every second year rather than every third year. This will reduce the active duty life cycle from five years to four years as well as reduce the age and previous wear on the active reserve unit which would be available when an active duty vehicle is out of service or at special events. We believe this slight acceleration in the replacement cycle will insure that vehicles enable our personnel to provide quality patient care in a cost effective fashion.

#### STAFF AND SUPPORT VEHICLES

The department uses staff and support vehicles for various functions including emergency response. Each station has a Ford Expedition which is used to conduct routine operations such as alarm disconnects as well as responding to emergency calls. The department also provides the Deputy Fire Chief and Fire Chief with vehicles to complete their responsibilities. Presently the Deputy Fire Chief is provided with a Ford Expedition, with the Fire Chief provided with a Ford Crown Victoria. The Deputy Fire Chief's vehicle is provided with 4-wheel drive to assist him in safe response to emergencies in all kinds driving conditions. The Fire Chief's vehicle is a sedan vehicle which is commensurate with the administrative functions of his role.

Additionally, the department maintains one vehicle used by the department's fire prevention officer for routine inspections, as well as one pickup truck used for the transport of various pieces of equipment. The fire prevention vehicle is replaced through rotation of vehicles from other positions (e.g. Station Cars or Chiefs Cars).

The department has developed a replacement program which exceeds the recommendations published by the National Association of Fleet Managers (NAFM).

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Vehicle Type	NAFM Age Standard	FFD Age Standard	NAFM Mileage Standard	FFD Mileage Standard
Sedan	5.5 years	10 years	88,000 miles	100,000
Vans	7.5 years	10 years	88,000 miles	100,000
Pick-up Trucks	7.5 years	10 years	92,000 miles	100,000

The department attempts to replace staff and support vehicles as they approach the NAFM mileage standard, and then rotates the vehicle to the fire prevention role (non-emergency response) until the vehicle reaches the 100,000 mile standard. The fire prevention vehicle does not typically respond at an emergency rate during routine functions. In light of its primary non emergency role we attempt to extend the mileage beyond that recommended by NAFM. We do not however believe it prudent or safe to use any vehicle with more than 100,000 albeit for limited emergency response.

Additionally, research on vehicle replacement programs throughout the country reveal that municipal best practice is to replace vehicles when mileage exceeds between 75,000 and 85,000 miles.

FISCAL YEAR 2014 REPLACEMENT REQUESTS

**Staff Vehicle Replacement**



**Shift Commanders Vehicle** - This year we are requesting funds to allow for the rotation of the current 2006 Shift Commander's vehicle (Car 3) to the fire prevention officer and retire the current 1997 pick-up truck used by the fire prevention officer. This pickup truck designated as Squad 7 was initially purchased in 1997 as a utility vehicle to carry various supplies and equipment for the department. Since that time, it has been placed into everyday service, as the vehicle for the fire prevention officer. The current Shift Commander's vehicle has

56,242 miles and will serve the balance of its service life in fire prevention. The current fire prevention vehicle has more than 73,000 miles of service. Although the mileage of the vehicle is relatively low, it has been experiencing various mechanical issues which relate to the on-going safe operations. First, during the routine safety inspection in July, the inspector indicated the vehicle's undercarriage was in an advanced stage of decay due to corrosion. Additionally, in the last 500 miles, the vehicle has been experiencing transmission problems, with slippage during normal driving conditions and sticking in gear while at low speeds.

With our vehicle rotation plan, Squad 7 will be removed from the fleet and replaced with the current Shift Supervisor's - a 2006 Ford Expedition. The replacement vehicle is be a Ford Explorer which continues the process of reducing the size of the staff vehicles operated in the department's fleet of vehicles.

Amount Requested - \$ 34,500

**Station Car** - Over the past several years it has become apparent that the department is in need of a car for personnel to attend various education sessions - specifically at Milford Regional Hospital. Until 2 years ago, Hospital Physicians came to the department to provide case review and continuing education sessions. They have since stopped coming to Franklin and now hold required educational sessions at the Hospital. Currently, station cars are used in the emergency response system and personnel are required to use their own vehicles when on-duty and attending educational sessions at the Hospital.

We are seeking a used vehicle, possibly a reconditioned police cruiser that may be outfitted with a radio and small contingent of emergency devices so, in the event that on-duty personnel are attending Hospital sessions and need to return to Town, they can do so in a prudent manner.

Amount Requested - \$ 15,000

## **Equipment**

**Ballistic Vest - Body Armor** - This year we are requesting funds to provide employees with a ballistic vest for protection during active shooter incidents. As we all know through the media, active shooter incidents are on the increase throughout the country. Although we have not experienced a mass shooting event in Franklin, we have experienced shooting events which require the response for emergency medical services (EMS).



National best practices within the fire service now suggest that EMS personnel who are required to operate within an active shooter environment be provided with ballistic protection. Further, ballistic vests are sized to the individual for proper fits. That being said, the frequency of use for this protective devices is low and there is very little data nationally on ballistic protection in a fire-



rescue setting; thus, this year have requested funds to procure 20 ballistic vests of various sizes for deployment throughout various department vehicles.

For further information on the emerging issue of dealing with Fire-rescue agencies need for body armor please click onto the following links.

[http://www.nytimes.com/2013/12/08/us/in-mass-attacks-new-advice-lets-medics-rush-in.html?\\_r=1&adxnnl=1&adxnnlx=1387372253-sxPe5d3ZbwJJNO/PBYc4uQ](http://www.nytimes.com/2013/12/08/us/in-mass-attacks-new-advice-lets-medics-rush-in.html?_r=1&adxnnl=1&adxnnlx=1387372253-sxPe5d3ZbwJJNO/PBYc4uQ)

<http://www.dailydispatch.com/StateNews/CA/2013/December/22/Los.Angeles.Fire.Department.dramatically.overhauls.response.to.shootings.aspx>

[http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=print\\_display&article\\_id=3198&issue\\_id=122013](http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=print_display&article_id=3198&issue_id=122013)

Amount Requested - \$ 16,500

**Replacement Portable Radios** – This year we are seeking funding to complete the replacement of our current cache' of portable radios. The department current maintains a cache' of 55 portable radios. This allows for each employee to have a portable radio with a small ready available reserve. Last year funding allowed the department to replace 30 radios. This year's funding request will allows us to replace the remaining 25 units and purchase a small cache' of replacement batteries. These devices are important safety devices for our employees.



Amount Requested - \$ 84,000

**Replacement of EMS Jackets** – This year funding is being requested to replace the current cadre of outerwear jackets wore predominately to emergency medical services (EMS) calls. The use of these jackets provides the department protective clothing needs while operating at EMS calls and provides an alternative to wearing structural firefighting clothing into residents and buildings during these events. the current garments were purchased in 2001 and have reached the end of their serviceable life. the new garments will also meet ANSI standards for reflectivity for operations adjacent to roadways

Amount Requested: \$ 14,000

**Self Contained Breathing Apparatus** – This year is scheduled for the replacement of the department's complement of Self Contained Breathing Apparatus (SCBA). The total replacement cost for all 40 units and various attachments is \$ 360,000. This year we are requesting funding for one-fourth of the amount and next year will request the remaining amount (\$ 270,000) for purchase at that time. We believe this approach is prudent for 2 reasons; first, spreading such a large purchase over 2 capital years will have a lesser impact on the overall capital request. Next, the standards for SCBA have just been updated in 2013. Thus we believe it prudent to wait to purchase replacement to allow the "bugs" to be worked out of the changes in the new standard.

Amount Requested: \$ 90,000

**Non Disposable Medical Equipment** – These funds are requested to replace miscellaneous non disposable medical equipment. This year's request will be used to replace spine immobilization boards and I/O Intravenous kits.

Amount Requested: \$ 5,000

**Replacement Copy Machine – HQ** - These funds have been requested to replace the aging copier/network printer serving our Headquarters building. The current device was purchased in 2007 and is becoming worn and currently experiencing frequent calls for service due to jamming and other types of malfunctions.

Amount Requested: \$ 11,000

**Items Needed but not Requested**

**Water Rescue Craft** – This year we are requesting funds to replace a severely out dated and ineffective boat used for water rescue which has been taken out of service. That boat was not constructed for rescue operations and is a hazard to rescuers and victims alike. The vehicle we are seeking funding for was designed for water rescue operations to include a forward platform to allow for easy exit and access during water operations and provides an extremely stable platform for water rescue operations.

Although we do not have frequent water rescue calls, those we have are typically life threatening and involve extremely time sensitive. Thus it is important to maintain apparatus for firefighters to use in water rescue emergencies.

Amount Requested: \$ 21,000

**Traffic Pre Emption** - This year we are requesting funds to provide traffic pre emption for the traffic signal at East Central and King Streets.

Amount Requested - \$ 21,000

**Paramedic Training Simulators** - We are requesting funds to purchase training simulators to maintain skill levels for the Department's Paramedics. The funds requested will allow for the purchase of one adult simulation and one infant simulation. Both devices are computer driven and capable of simulating various medical scenarios Paramedics will face in the field. Once faced with these scenarios personnel will be required to provide actual treatment protocols and can then be evaluated by our training staff. This type of scenario will prove to be invaluable in maintaining paramedic skill level and is at the forefront of paramedic continuing education.

Amount Requested - \$ 30,000

**MCI Trailer** – This year we are requesting funds to purchase a small trailer and to store and carry stockpiled medical equipment for multiple casualty incidents. The need for this type of vehicle was brought to light this year with the crash of the MBTA commuter rail at the Fisher Street Crossing. With the funds requested we anticipate purchasing a 12 foot trailer and fill the trailer with sufficient supplies to manage 200 patients.

Amount Requested: \$ 20,000

**Town of Franklin**  
**Capital Improvement Plan**  
**Fiscal Year 2014**

**Department Fire**

Project #	Asset/Project Name	Funding Priority	Life Expectancy	Annual	Assets/ Project Costs	Needed/not requested
				Operating Expenses		
Request #1	Replace Shift Commander's Vehicle	1	10 Years	\$ 800	\$ 34,500	
Request #2	Ballistic Vest - Body Armor	1	5 years	\$ -	\$ 16,500	
Request #3	Replacement Portable Radios	2	7 years	\$ -	\$ 84,000	
Request #4	Replacement of EMS Jackets	2	8 years	\$ -	\$ 14,000	
Request #5	Self Contained Breathing Apparatus	2	10 years	\$ 5,000	\$ 90,000	
Request #6	Station Car	2	5 years	\$ 800	\$ 15,000	
Request #7	Non Disposable Medical Equipment - Replacement	2		\$ -	\$ 5,000	
Request #8	Replacement Copy Machine - HQ	4	10 years	\$ -	\$ 11,000	
Request #9	Traffic Pre-emption Devices	1	years	\$ -		\$ 29,000
Request #10	Rescue Boat	1	10 years	\$ 100.00		\$ 21,000
Request #11	Multiple Casualty Trailer - New Purchase	2	10 years	\$ -		\$ 20,000
Request #12	Paramedic Training Simulators - New Purchase	5	years	\$ -		\$ 30,000
<b>Total Capital Improvement Request</b>					\$ 270,000	\$ 100,000

**Priority Coding**

- 1 - Threat to Citizens or Employees health, safety or property
- 2 - Maintenance - operational necessity
- 3 - Requirement of State or Federal Law or Regulation
- 4 - Improvement of Infrastructure
- 5 - Improved productivity
- 6 - Alleviation of an overtred/overburdened situation

Department **Fire**1/5/2014