

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY23 FALL TOWN MEETING REQUEST FORM**

Department: #220 Fire	Priority #: 2
Project Title and Description: Replace and Equip 1996 75' Ladder (Quint)	Total Project Cost: \$1,496,853.00

Department/Division Head: Chief Neil Foley

Check if project is: New Resubmitted **Cost estimate was developed:** Internally Externally

For project re-submittals, list prior year(s): _____

List any funding sources and amounts already granted:
_None_____

Basis of Estimated Costs (attach additional information if available)			If project has impact on 5 Year Plan and future operating budgets, insert estimated amounts.		
Capital:	Cost	Comments	Fiscal Year:	Capital	Operations & Maintenance
<i>Planning and Design</i>			FY22		
<i>Labor and Materials</i>			FY23		
<i>Administration</i>			FY24		
<i>Land Acquisition</i>			FY25		
<i>Equipment</i>	\$1,496,853.00		FY26		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	\$1,496,853.00				

Project Justification and Objective: Ladder 2 has been in service for over 25 years, was refurbished in 2013 and is currently in service at the Manomet Station. This truck has become difficult and expensive to repair, with parts nearly impossible to find. Ladder 2 lacks the modern safety enhancements and NFPA requirements that are now industry standards. This truck has already exceeded the NFPA 25-year maximum life expectancy. The New Ladder will have a 25-foot longer reach, allowing better access to the growing number of large residential structures and have a much better turning radius. Normally our manufacturers could deliver a new Ladder Truck in 12 to 14 months from the order date. Today, a Ladder Truck is averaging over 20 to 24 months before we can expect delivery. Because of this delay, I am requesting this expenditure so we can submit our order and reserve our place in line with the manufacturer.

For Capital Project Requests:

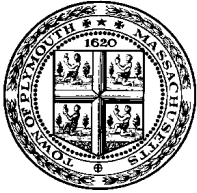
Will this project be phased over more than one fiscal year? If yes, enter it on the 5-Year Plan Yes No
 Can this project be phased over more than one fiscal year? Yes No

For Capital Equipment Requests:

Check if equipment requested is replacement and enter the year, make & model, VIN and present condition of existing equipment

1996 LTI 75 Foot Aerial Quint, 1,500 GPM pump, VIN 1S91K71J4T1020089. Good to Fair 36,127 odometer miles, 5,105 engine hours

What is the expected lifespan of this new/replacement equipment: 20 Years



Town of Plymouth
Fire Department
114 Sandwich Street
Plymouth, Massachusetts 02360
508-830-4213
Fax 508-830-4174

Date: August 16, 2022

To: Select Board
Advisory and Finance Committee
Capital Improvement Committee

Cc: Lynne Barrett, Finance Director
Derek Brindisi, Town Manager
Brad Brothers, Asst. Town Manager

From: Neil Foley, Chief of Department

Re: FY23 Capital Request

Fire Department Request to Replace and Equip 1996 75' Ladder (Quint) \$1,496,853.00

At this Fall Annual Town Meeting, the Department is requesting \$1,496,853.00 to replace our Ladder 2, a 1996 LTI 75 Foot Aerial Quint with a 1,500 GPM pump. Ma. Registration MF 6091.

Ladder 2 has been in service for over 25 years, currently responding out of Station 5 in Manomet. Ladder 2 is the only ladder truck located south of the Pinehills and is critical to the department's ability to effectively respond to fires and other emergencies in South Plymouth. In addition, recent trends in building construction have resulted in large mixed-use and residential construction projects throughout our community, including several in Ladder 2's response area. Without a ladder truck in this area, firefighters may be unable to reach the higher levels of these buildings or make multiple rescues due to the limited number and types of ladders carried on pumping engines.

The Department is requesting this replacement due to the age, current condition and lack of current safety design and features of this apparatus. Ladder 2 is over 25 years old and many critical components are no longer supported by the manufacturer. As a result, repairs to this truck are becoming nearly impossible and costly both financially and operationally. In addition, ladder 2 lacks the modern safety enhancements that are now standard National Fire Protection Agency (NFPA) requirements, such as rollover control, enhanced braking controls and improved steering and suspension to name a few. Finally, due to age, this truck has now exceeded the [NFPA 1911: Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles](#) for maximum life expectancy. Therefore, it will have to be removed from service should it fail any of the mandated NFPA safety inspections for any apparatus 20 years old or older.

Our repair division has performed all recommended preventative maintenance throughout the life of this truck. Additionally, a comprehensive rehab was funded and completed in 2013 extending the serviceable life an additional ten years. In August of 2020, during a routine NFPA non-destructive test, certified technicians found metal fatigue and other defects requiring major repair work to the rear outrigger assemblies and corrosion of the aerial ladder “K” braces. These outriggers are the devices that keep the aerial ladder from tipping over when subjected to the demands of firefighting. Requiring a reserve fund transfer and having to custom manufacture parts that no longer available resulted in this ladder being out of service for several months. Our goal is to keep this Ladder in service while we wait for replacement, but this is becoming challenging and may not be possible.

Before the pandemic, fire truck manufacturers could build and deliver a new Ladder Truck in about 12 months from the order date. Today, a Ladder is averaging 20 to 24 months. Due to unprecedented manufacturing delays and the current age and condition of Ladder 2, the department is making this request at the Fall Town Meeting to reserve our place in line and locking in the final cost before additional increases.

The National Fire Protection Agency (NFPA) and the Insurance Service Organization (ISO) stipulate that ladder trucks are to be strategically located and able to respond as part of a full alarm assignment within 480 seconds. Due to Plymouth's size and road systems, this standard is already challenging and would be impossible without Ladder 2. While life safety and property preservation is our goal, these standards are also used to rate a community's risk for insurance rates. Significant past expenditures on equipment and staffing have improved our ISO rating and lowered insurance rates for property owners. Without Ladder 2 in service, our communities ISO rating will likely decrease and negatively affect insurance costs.