

Boxborough Fire Station Building Committee

Boxborough Firehouse Needs



April/May, 2025

This Presentation Will Discuss:

Why does Boxborough need a new firehouse?

How did the Town decide on the location for the new firehouse?

How did the Town determine the size of the new firehouse?

What will we vote on for the new firehouse at the May 2025 Town Meeting?

What will be the financial request at the 2026 Town Meeting?

Why should Boxborough build a new firehouse now?

Why Does Boxborough Need a New Firehouse?

Current Firehouse, Built from 1958-1962, is 63+ Years Old & Does Not Meet Fire Department's Requirements

We have grown from a small volunteer force to:

- 10 full-time employees and 30 per diem employees
- 24/7 staffing

Our Fire Department services include:

- Fire suppression
- Emergency medical services
- Hazardous materials mitigation
- Fire prevention
- Public education
- Other emergency services

The current space does not meet our needs:

- Our apparatus bay cannot house all of our expensive equipment
- Due to lack of public water we must use and house pumper trucks, which tend to be larger
- The dormitories do not separate men's and women's spaces
- We do not meet current code, standards and best practices



Water Issues on Site

The firehouse apparatus bay floor drain receives water and critters from the wetlands behind the building. The water backs up into the firehouse rather than draining out of building

Safety Concerns for Staff

The firehouse main stairwell presents an obvious head hazard due to intruding structural elements



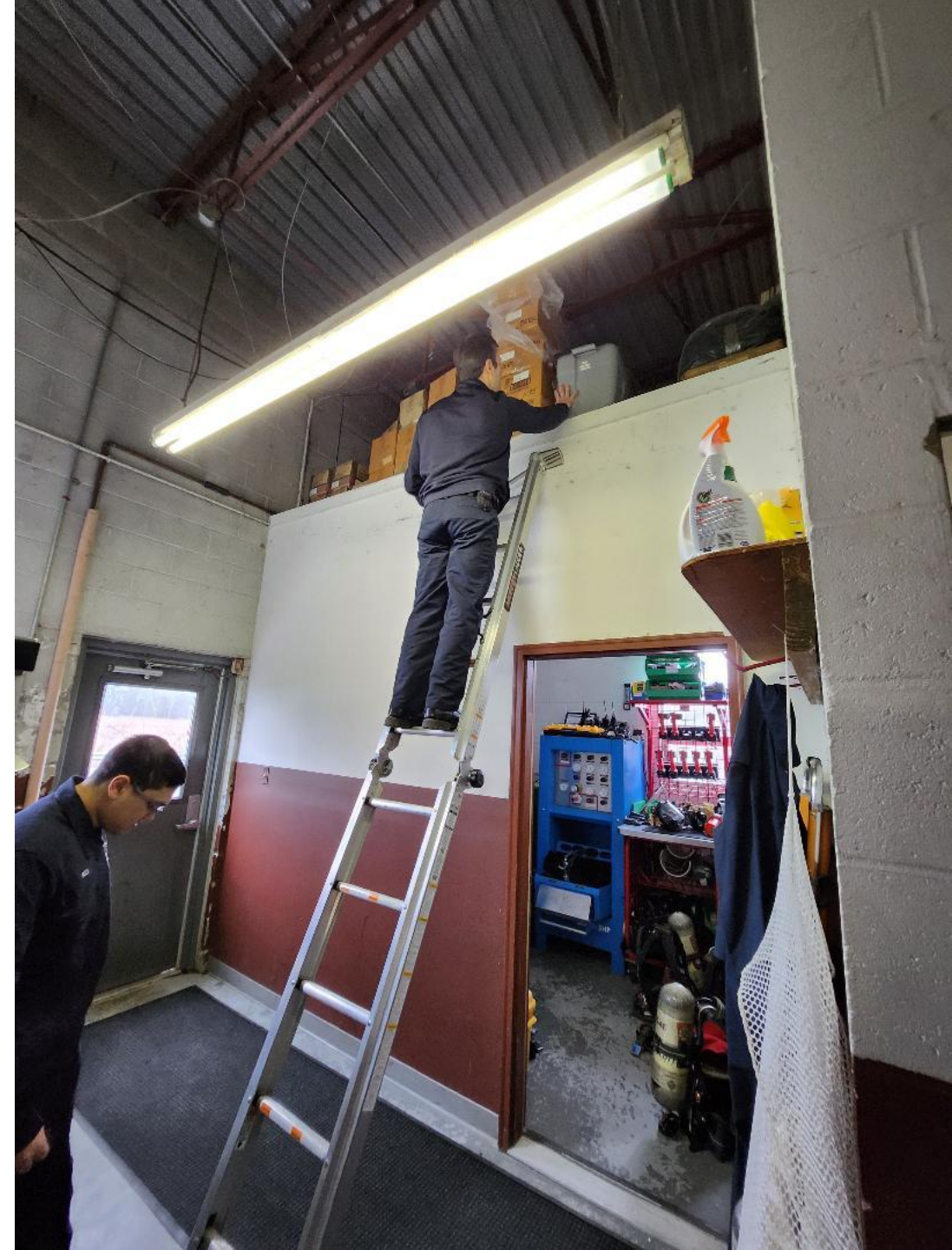
Safety Concerns for Staff



The firehouse main stairwell is also blocked when the door at the bottom is open

Safety Concerns for Staff

A storage area that is used frequently can only be accessed by putting up a ladder and blocking an aisle and passageway during use



Privacy Concerns for Staff



Firehouse
bunk
room has
no proper
separation
between
genders
except for
a hanging
sheet

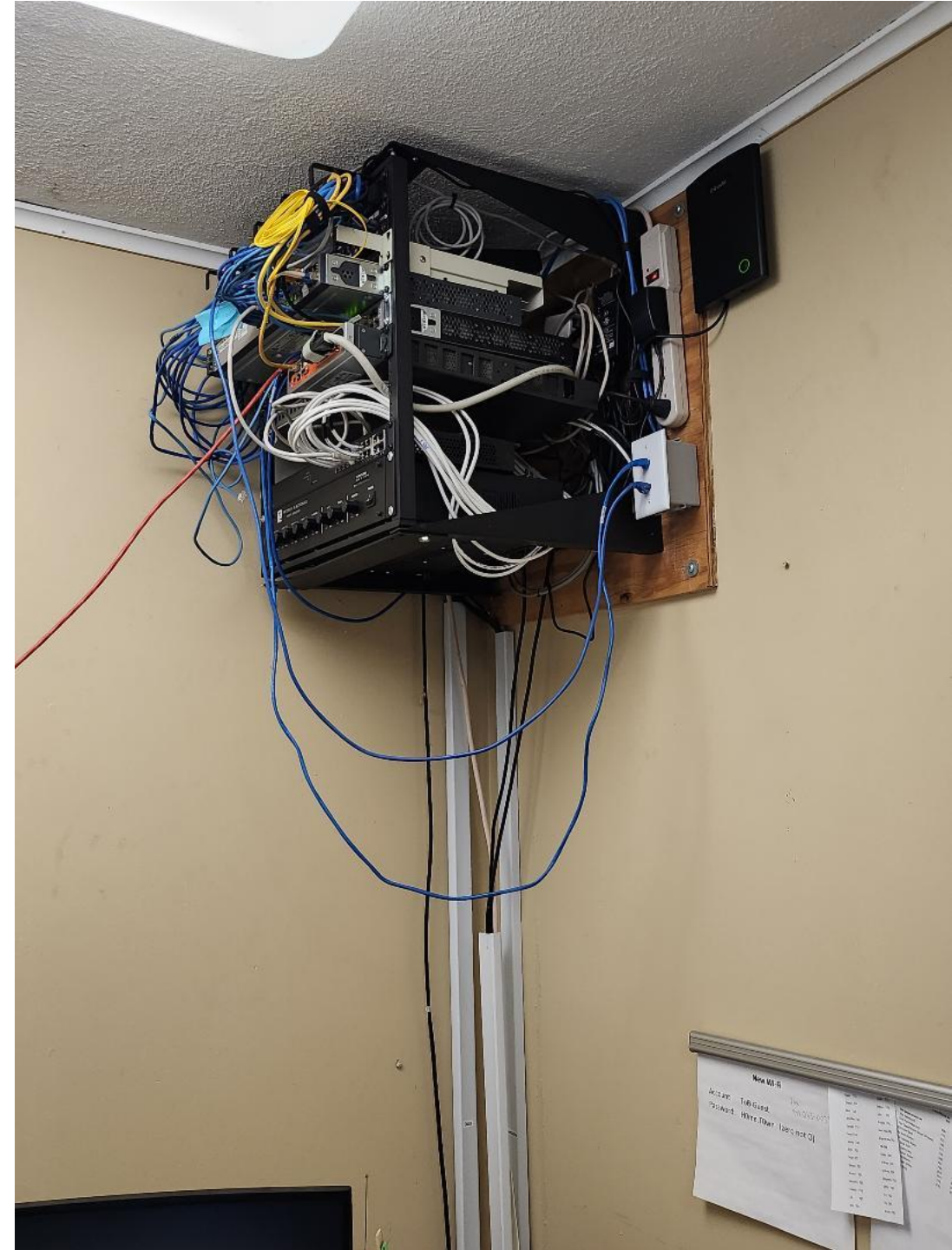


Equipment Safety Concerns

The firehouse main electrical panel sits in an open room with exposed cables, wiring and related equipment. The equipment is unsecured, with no electrical vault or cabinet

Equipment Safety Concerns

The department file server and network equipment sits out in the open in the firehouse administrative office, with no security or other protections





Equipment Safety Concerns

The firehouse building allows easy access to birds, rodents and other critters due to incomplete weather proofing and sealing of access points

Equipment Safety Concerns



The critical self-contained breathing apparatus recharge equipment is not protected in a separate designated room, but stored in the radio service area and with the Boxborough Emergency Reserve Corps equipment

Apparatus Bay Space Concerns

The firehouse apparatus bay is so cramped that two firefighters cannot even pass by each other during an emergency. Also, vehicles are so close to important support equipment storage that it's difficult to access the equipment



Apparatus Bay Space Concerns



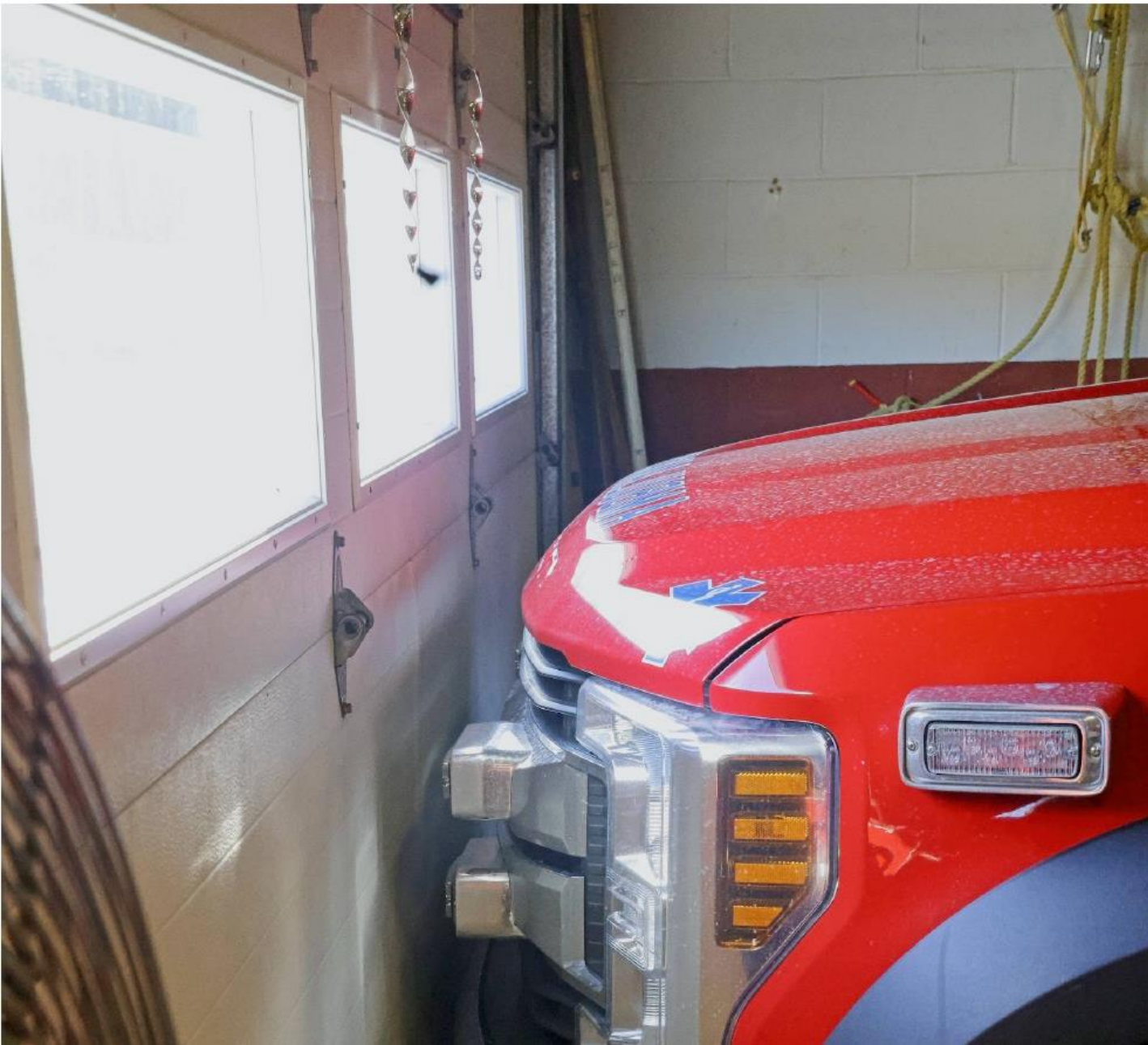
Here we see the challenge of even one firefighter walking between equipment, and this person is not in full gear and is not carrying any equipment



Apparatus Bay Space Concerns

The firehouse apparatus bay is so cramped that access to the vehicle equipment storage hatch cannot be opened fully

Apparatus Bay Space Concerns



Firehouse is so cramped that apparatus must park essentially touching garage door with no way for firefighters to walk in front of parked apparatus

Apparatus Bay Space Concerns

Firehouse apparatus bay is so undersized that an extension is needed to enclose certain apparatus that otherwise won't fit in the garage bay



Additional Space Concerns


Firefighters have limited training space in our current facility and often use the parking lot or move equipment out of the apparatus bay for training space

To decontaminate after emergency calls, firefighters walk out of the apparatus bay to the main office and use the shared bathroom, potentially contaminating all of the work space


How Did the Town Decide on the
Location for the New Firehouse?

Boxborough Select Board Appointed a 7-Member Committee to Select the Best Site

Fire Station Building Committee (FSBC) worked with an architecture firm (Context) and Owner's Project Manager (OPM) (Vertex) to study potential sites



FSBC reviewed 10 sites studied by previous Boxborough Building Committee and agreed to drop these sites due to extensive limitations



FSBC focused on 5 sites in two phases to identify the best option

502 Mass Ave
(current firehouse site)

72 Stow Rd

700 Mass Ave

975 Mass Ave

1320 Mass Ave

FSBC Studied Key Characteristics of Sites in 2 Phases

- Phase 1 included features such as how well a firehouse could fit on the lot and support the needs of the fire department, topography, sight lines, land acquisition costs, and proximity to neighbors
- Based on these criteria, FSBC voted to move 502 Mass Ave and 72 Stow Rd to the Phase 2 assessment
 - 1320 Massachusetts Ave was dropped from consideration as the property owner was not willing to sell under conditions acceptable to the Town
 - 975 Massachusetts Ave fell out of consideration due to the high cost of purchase and issues of ledge, wetlands and a creek on the property
 - 700 Massachusetts Ave was not moved to Phase II because of wetlands, well and zoning setbacks, topography, and a zoning bylaw for Town Center zoning that restricts the size of a building to less than 15,000 sq ft and the risk and challenge, including delays, that the Town could face in getting a variance for the proposed firehouse, which is greater than 15K sq ft

Phase 2 Assessment

	502 Mass Ave	72 Stow Rd
Criteria	Weighted Score	Weighted Score
Well Water	25	15
Percolation Test for Septic	40	50
Response Time	50	40
Supports FD Program	30	50
Conceptual Estimated Total Cost	10	50
Wetlands	16	40
Sustainability	16	32
Special Site Conditions	15	20
Zoning	15	5
Communications	10	8
Tied Items	126	126
Total Score	353	436

FSBC Unanimously Selected 72 Stow Rd for the New Firehouse

The total estimated conceptual cost of the project at 72 Stow Rd was more than \$6 million less than at 502 Mass Ave

The FSBC felt that the \$3.9 million needed for temporary space during building at 502 Mass Ave had no long-term value for the town

The \$1.2 million purchase cost for 72 Stow Rd was seen as an investment in the Town since this payment would be used for affordable housing in town

The FSBC was concerned about encroaching wetlands on the 502 Mass Ave site

The 72 Stow Rd site would better support the functions of the Fire Department

Building 502 Mass Ave we would have impacted any future expansion for the police department

How Did the Town Determine the
Size of the New Firehouse?

Town Worked with Consultants to Estimate Program Requirements and Size

- Program requirements and size assessed three times over past 10 years – came within 2% of each other
- Program requirements considered:
 - Current and future staffing needs
 - Equipment and storage needs
 - Space for staff training, emergency operations and large group meetings
 - Boxborough has only one station that must meet all needs; many other communities have a central headquarters and substations
 - Parking requirements
- Needs assessment suggested need for a 24,000 GSF Firehouse
- Conceptual design work has space down to 20,800 GSF (13% reduction)
- More specific design could reduce size further

Firehouse Conceptual Design Spaces

Firehouse Spaces	Concept Design GSF	% of Design
Apparatus Bays	8,827	54%
Gear Storage and Decontamination	1,089	7%
BERC Storage	243	1%
Equipment and Other Storage	1,167	7%
Building Mechanicals	726	4%
FD Office Space	1,121	7%
FD Staff Conference Room	222	1%
Public Entry & Triage Space	376	2%
Emergency Operations Center/Training Room	896	5%
Firefighter Living Quarters	1,208	7%
Fitness Room	590	4%
Net Sq. Feet	16,465	
Grossing Factor	26.33%	
Gross Sq. Feet	20,800	

What Will We Vote On for the
New Firehouse at the May 2025
Town Meeting?

Article 2:

72 Stow Road Firehouse Design & Bid Funding

Requesting \$2,622,445

For the firehouse at 72 Stow Road, funds will allow us to:

- Design (3 phases: Schematic Design, Design Development, Construction Documents)
- Prepare construction drawings and specifications
- Prepare additional cost estimates
- Pre-qualify general contractors and filed subcontractors, as required per MGL Ch 149 when construction estimate is \$10M or more
- Bid the construction in accordance with MGL Ch 149 requirements
- Determine the lowest responsible general bid for a new firehouse prior to Spring 2026 Town Meeting

Firehouse Design & Bid Funding

- Article 2 would be funded through a short-term Bond Anticipation Note (BAN)
- If Fire station construction funds approved in 2026, the BAN would roll into the full project Bond
- Cost would be paid over 30-year period
- Tax impact estimated below

	FY26	FY27	FY28
Fire Station Design Cost	\$ -	\$ 108,000	\$ 187,138
Town Value*	\$ 1,863,847,043	\$ 1,957,039,395	\$ 2,054,891,365
Tax per \$1,000	\$ -	\$ 0.06	\$ 0.09
Avg house value*	\$ 940,472	\$ 987,496	\$ 1,036,871
Tax per average house	\$ -	\$ 54	\$ 94
* estimate			

What Will be the Financial
Request at the 2026 Town
Meeting?

We Anticipate a Final Request at 2026 Town Meeting

Estimated request at this time is \$31,110,726 based on conceptual design (excluding any tariff impacts)

Estimate will be revised based on the architectural design and actual bids received

Funds will allow us to build a new firehouse at 72 Stow Road

If Town Meeting and the subsequent debt exclusion ballot votes pass, we anticipate starting the build July 1, 2026 and completing it by January 2028

Firehouse Construction Funding

- Firehouse construction would be funded through a 30-year bond
- Tax impact estimated below – ranges provided until Town decides on bonding strategy in FY 2026

	FY27	FY28	FY29
Firehouse Construction Cost			
Yearly Debt Service	\$675,000	\$1,354,888 to \$2,327,500	\$1,853,188 to \$2,282,500
Town Value*	\$1,863,847,043	\$1,957,039,395	\$2,054,891,365
Tax per \$1,000	\$0.36	\$0.73 to \$1.25	\$0.99 to \$1.22
Avg house value*	\$940,472	\$987,496	\$1,036,871
Tax per average house	\$341	\$684 to \$1,174	\$935 to \$1,152
* estimate			

Why Should Boxborough Build a
New Firehouse Now?

Need is Clear and Costs Only Escalate

- Need for a new firehouse was identified in 2013-2015
- Boxborough Select Board has been working on this for more than 10 years
- Building costs typically escalate 4% to 5% per year (see side table from Vertex)
- Example:
 - In 2015 Westwood built a new firehouse and construction costs were \$579 per square foot
 - In 2027 (when we will build), the same construction would be \$1,034 per square foot
 - Over twelve years, this is a 178% increase

Actual Construction Escalation 2016 to 2025	
Year	Escalation Factor
2016	4.8% (from 2015)
2017	5.0%
2018	5.6%
2019	5.5%
2020	1.8%
2021	1.9%
2022	8.0%
2023	6.0%
2024	6.0%
2025	5.0%
Avg	5.0%

Need More Information?

For questions please contact the Fire Station Building Committee at fsbc@boxborough-ma.gov

For more information please go to:

<https://www.boxborough-ma.gov/727/Fire-Station-Building-Committee>