

# Boxborough Fire Station Building Committee

## Fire Station Space Needs



April 10, 2025

# Purpose of this Presentation

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Educate FSBC and the public about firehouse space requirements

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Relate space requirements to 72 Stow Road conceptual design

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Connect conceptual plans to current total square footage needs



# Designing a New Firehouse Includes an Assessment of Program Needs and Requirements

Program needs refer to all that is needed to run a smooth and efficient fire station

This includes spaces for:

- Fire and emergency vehicles and equipment
- Firefighters to decontaminate after an incident, including washing their gear
- Administrative functions for the day-to-day operations of the fire station
- Training to allow fire fighters to meet training requirements
- Emergency operations to coordinate across town, state and federal entities during an emergency such as a pandemic or natural disaster
- Dormitory and living quarters for firefighters who live on site during multi-day shifts

# Boxborough Worked with Consultants to Estimate Program Requirements and Size

Program requirements and size assessed three times over past 10 years

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





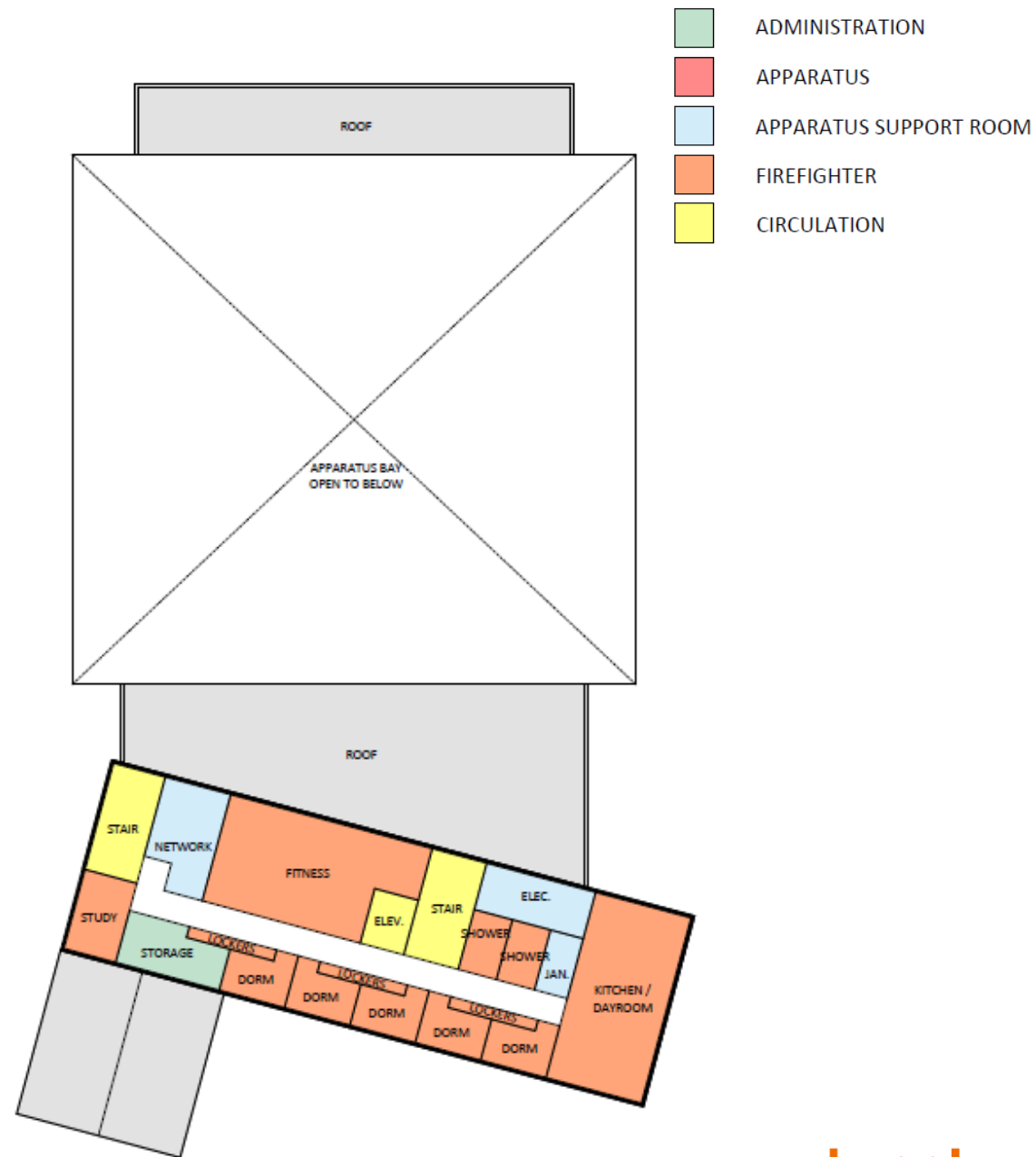
**context**  
ARCHITECTURE

MARCH 18, 2025





72 STOW ROAD - FIRST FLOOR

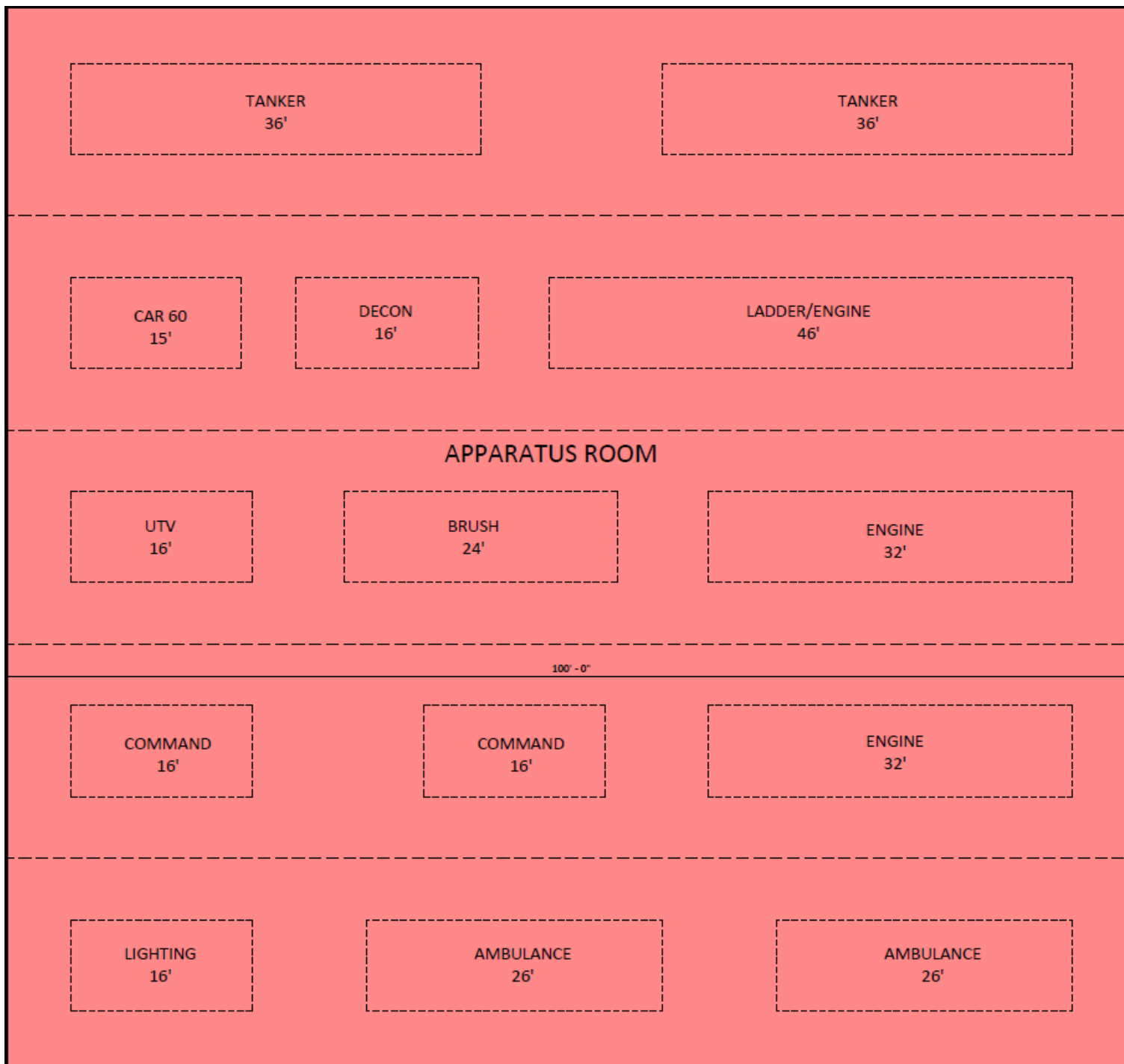


72 STOW ROAD - SECOND FLOOR

- ADMINISTRATION
- APPARATUS
- APPARATUS SUPPORT ROOM
- FIREFIGHTER
- CIRCULATION

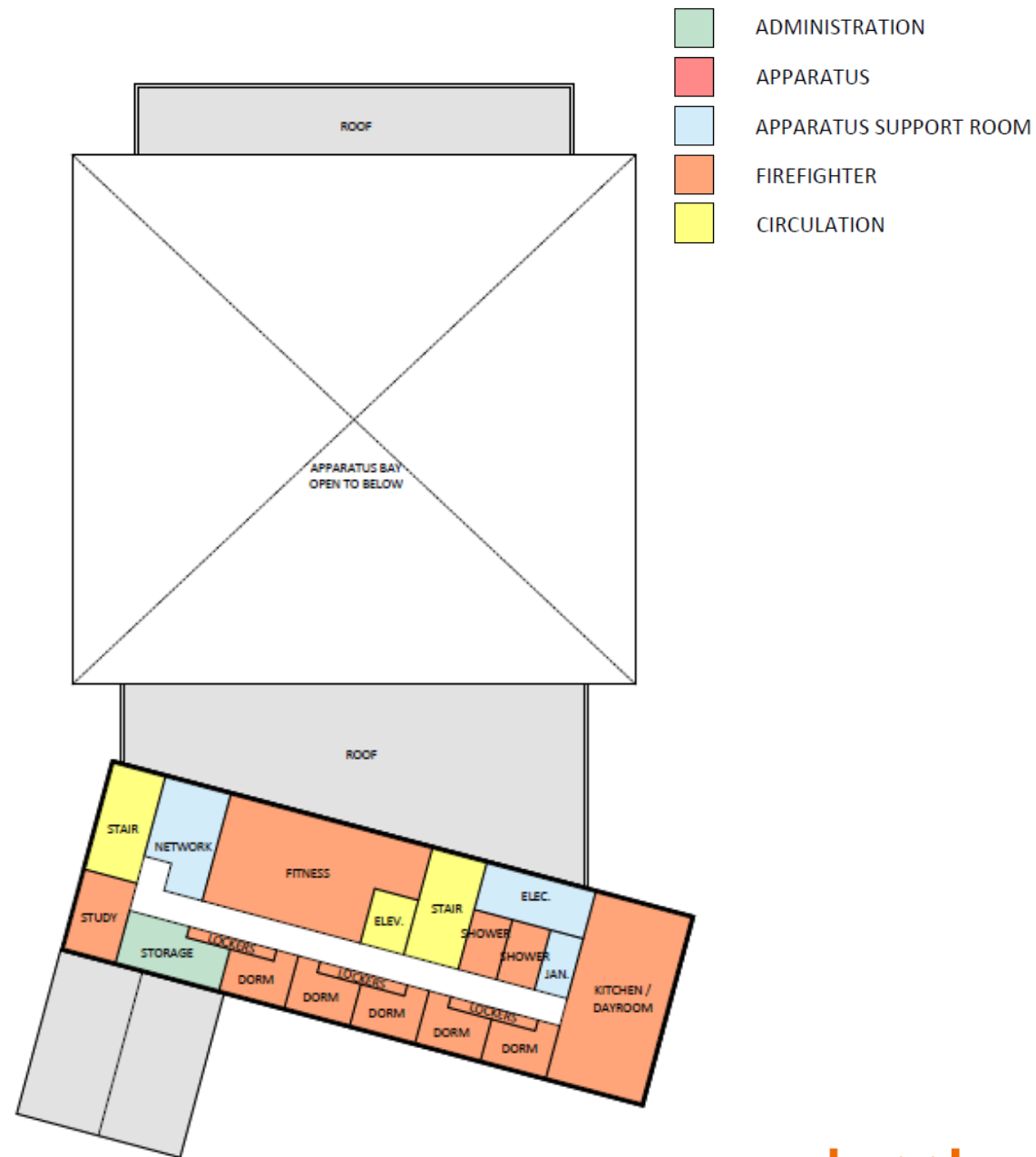
# Apparatus Bay

- Will house 14 vehicles
  - Currently we house 9 vehicles
  - Additionally, 3 vehicles currently stored outside will move into the bay
  - Will continue to have 3 vehicles stored outside
  - Future net growth potential of 2 vehicles
- Designed to provide dual access
- Space between vehicles allows easy movement with equipment and in uniforms, as well as space for exhaust system
- Totals 8,827 sq ft (11,151 sq ft with grossing factor)
- Accounts for 54% of designed space





72 STOW ROAD - FIRST FLOOR



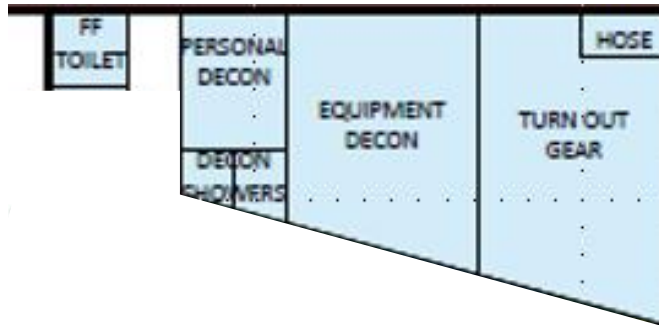
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# Gear Storage and Decontamination

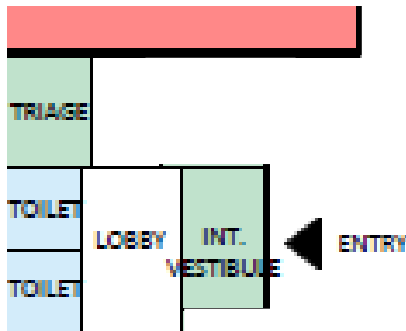
- Safety requirements include personal and equipment decontamination spaces and decontamination showers
- This space also includes space for firefighter turnout gear and a firefighter toilet room
- Totals 1,089 sq ft (1,376 sq ft with grossing factor)
- Accounts for 7% of designed space



72 STOW ROAD - FIRST FLOOR

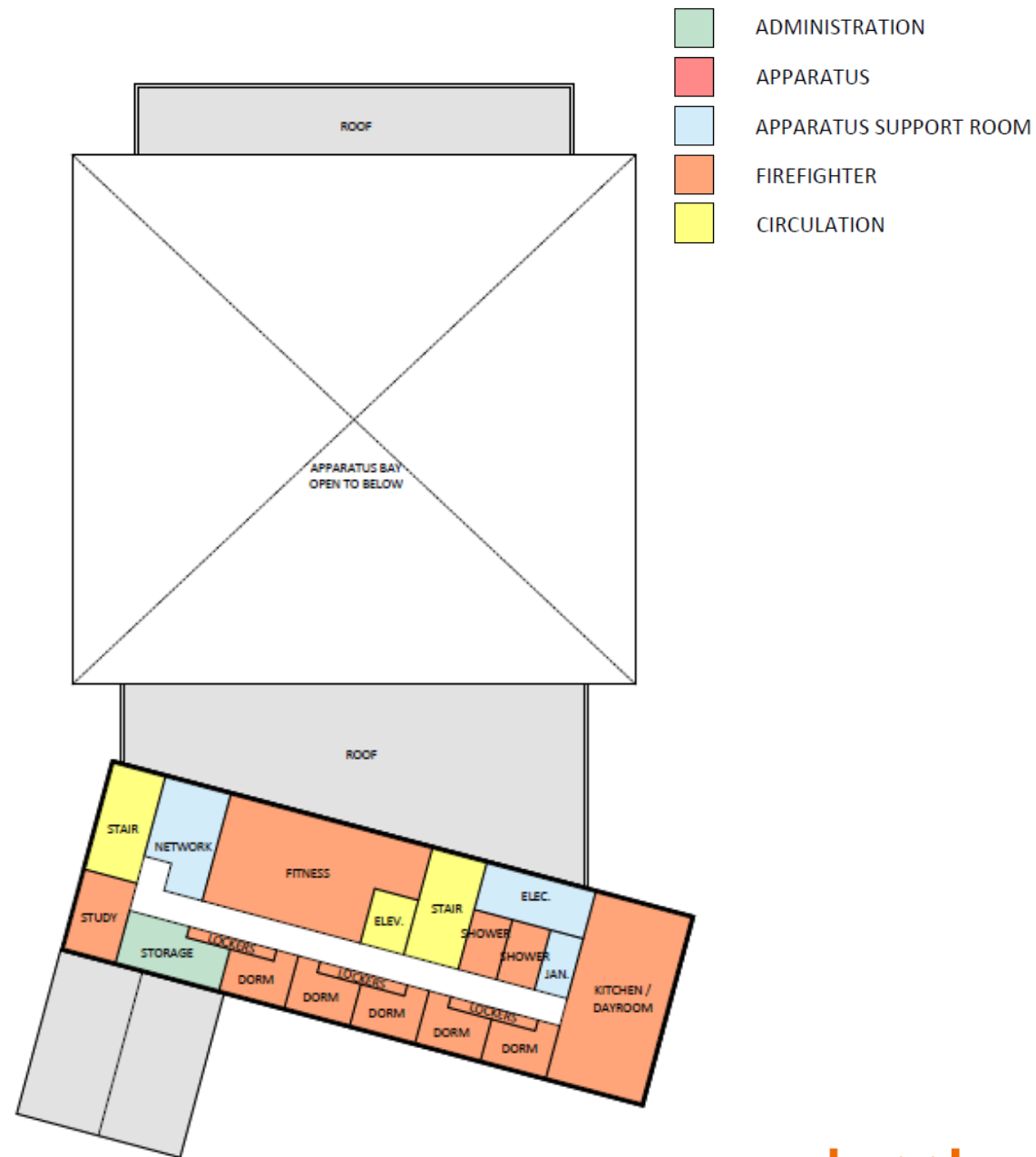
# Public Entry & Triage Space

- Includes:
  - Vestibule
  - Lobby
  - Public toilets
  - Triage room
- Triage room for walk-in medical emergencies – room connects to apparatus bay for easy access to for emergency transport
- Totals 376 sq ft (475 sq ft with grossing factor)
- Accounts for 2% of designed space





72 STOW ROAD - FIRST FLOOR



72 STOW ROAD - SECOND FLOOR

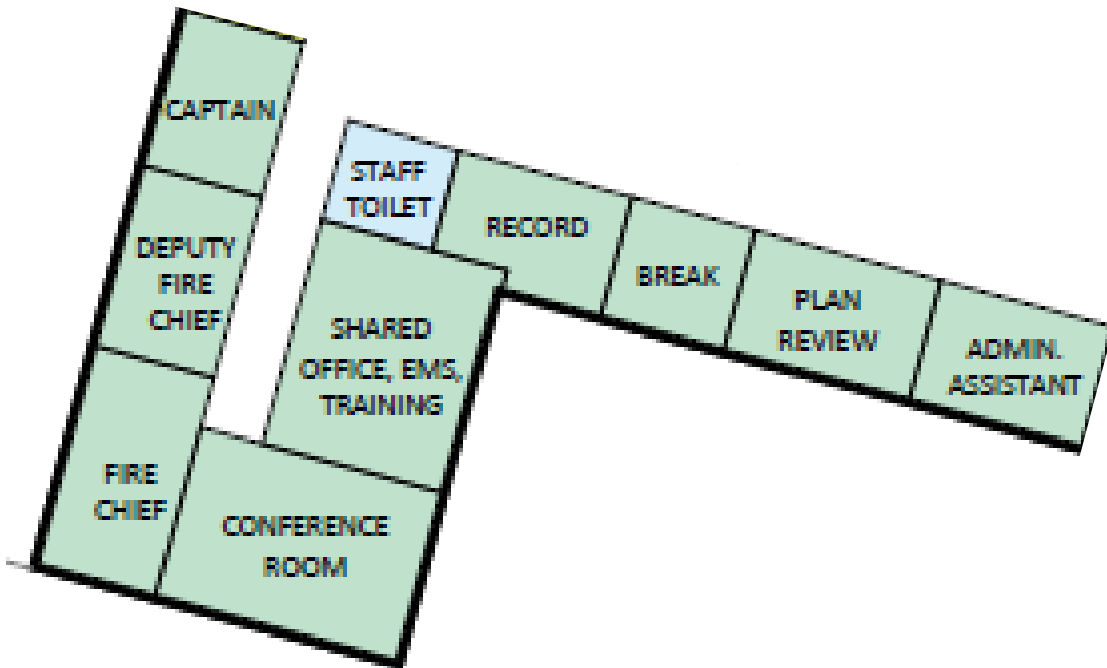
- ADMINISTRATION
- APPARATUS
- APPARATUS SUPPORT ROOM
- FIREFIGHTER
- CIRCULATION



# Office Space & Conference Room

- 6 offices can support up to 11 staff
  - Currently we have 10 FT staff and 30 on call firefighters
  - Future net growth potential of 3 staff
- Offices range from 90 sq ft to 228 sq ft (shared office); average per person office size is 109 sq ft
- Totals 1,343 sq ft (1,697 sq ft with grossing factor)
- Accounts for 8% of designed space

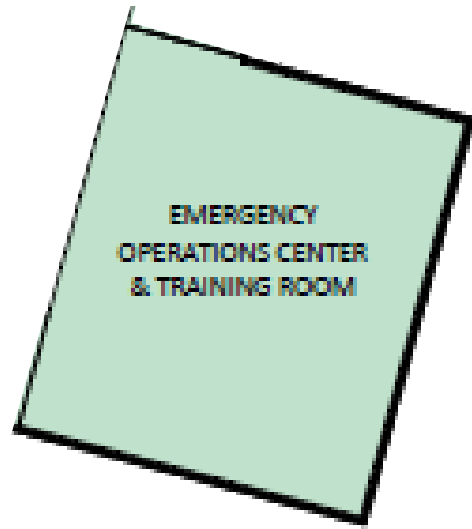
WATCH



72 STOW ROAD - FIRST FLOOR

# Emergency Operations/ Training Room

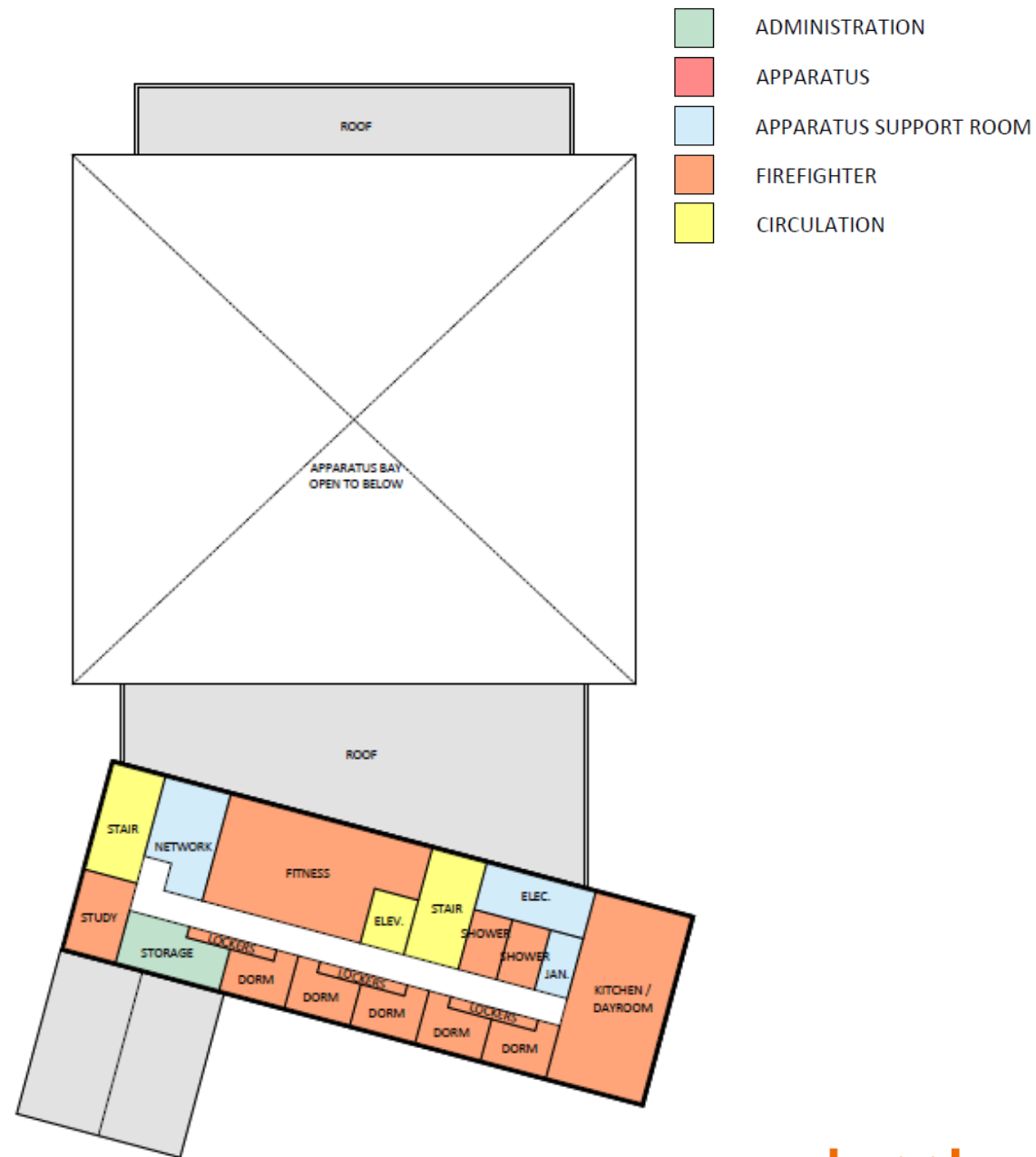
- Offers space for on-site training so firefighters can meet annual training requirements
- Will allow Boxborough to host trainings, which will reduce overtime needed for staff attending trainings in other locations
- Could provide reimbursement when Boxborough is the host training site
- Space can also function as emergency operations center when needed
- Will also offer additional public meeting space in Boxborough
- Totals 896 sq ft (1,132 sq ft with grossing factor)
- Accounts for 5% of designed space



72 STOW ROAD - FIRST FLOOR



72 STOW ROAD - FIRST FLOOR



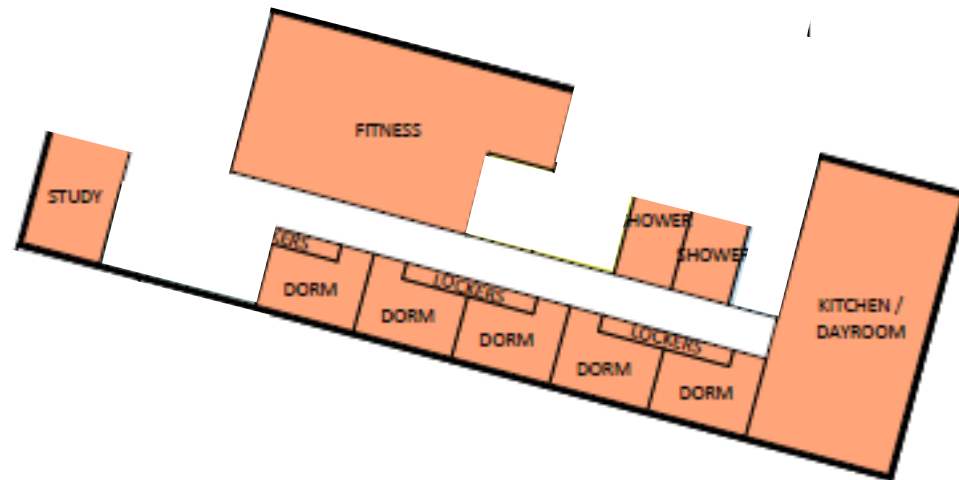
72 STOW ROAD - SECOND FLOOR

- ADMINISTRATION
- APPARATUS
- APPARATUS SUPPORT ROOM
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# Firefighter Living Quarters & Fitness

- Includes:
  - 5 dormitories with lockers in hallway
  - Kitchen/Day room
  - Shared study space
  - 2 bathrooms with showers
  - Fitness room
- Totals 1,789 sq ft (2,271 sq ft with grossing factor)
- Accounts for 11% of designed space



72 STOW ROAD - SECOND FLOOR

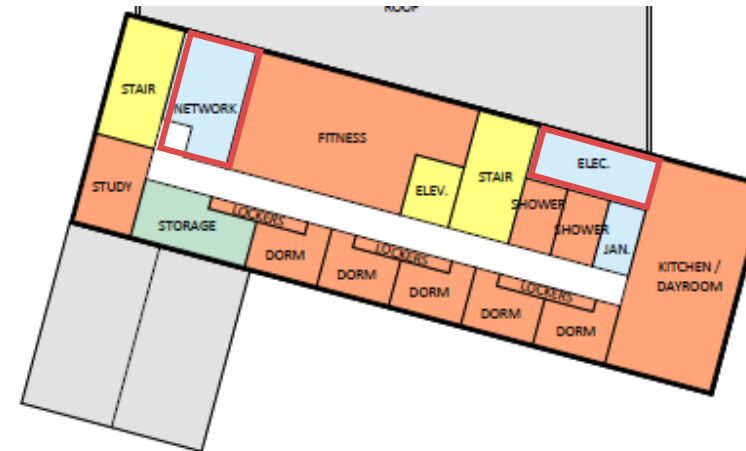
# BERC & Other Storage

- Includes: BERC storage, janitor spaces, public education storage, fire training supply storage, hose storage, equipment storage, SCBA, maintenance workshop, EMS storage, haz mat storage, and bulk and other storage
- Totals 1,410 sq ft (1,781 sq ft with grossing factor)
- Accounts for 8% of designed space



# Building Mechanicals

- Includes: EMR, mechanical room, sprinkler room, ELC, network room, and electrical room
- Totals 726 sq ft (917 sq ft with grossing factor)
- Accounts for 4% of designed space





# Firehouse Conceptual Design Spaces

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