



BEDFORD VILLAGE FIRE DISTRICT

Serving Our Community Since 1923

Proposed New Headquarters

September 2018

Purpose of Meeting

- Introduction of Team Members
- Overview of the Department and Fire District
- Discuss Challenges and Solutions
- Discuss Proposed Design
- Costs
- Timeline
- Questions/Comments

Bedford Village Fire District Board of Fire Commissioners

Kyle Carleton, Chairman (2020)
Heather Feldman, Co-Chair (2018)
Robert Mazurak (2021)
Keith Branche (2022)
John Barry (2019)

Joseph Perez, Treasurer
Susan Clark, Secretary

Dan Hollis, Attorney

New Firehouse Committee Members

Lt. James Best, Co-Chairman
Asst. Chief Andrew Klein, Co-Chairman
Lt. Heather Feldman, District Liaison

Ex Chief Peter Aquilino	FF/EMT Donna Orrico
FF/EMT Gail Carmody	FF Joe Perez
FF/EMT Kyle Carleton	LT. Danny Powell
Chief Shawn Carmody	Ex Chief Jason Siemers
Ex Chief Joseph Iantorno	FF Duane Torlish
Ex Chief Peter Lazaro	

Professional Partners

H2M architects + engineers

Joseph M. Mottola, AIA, Executive Vice President, COO
Patrick Stone, RA, Deputy Director | Emergency Services

Naderman Land Planning & Engineering

Barry G. Naderman, P.E. | President

IQ Landscape Architects PC

John Imbiano | Principal

Maser Consultants - Traffic Engineering

John Collins | Principal

Formation of the Fire Department

The Bedford Fire Department was organized on Monday, January 8, 1923, by John Kinkel, George McCabe, Sr. and a small group of dedicated local residents. These individuals recognized the need for a fire department to serve the Bedford Village area. Previously, fires and other emergencies were dealt with by neighboring fire departments or by hastily arranged groups of neighbors

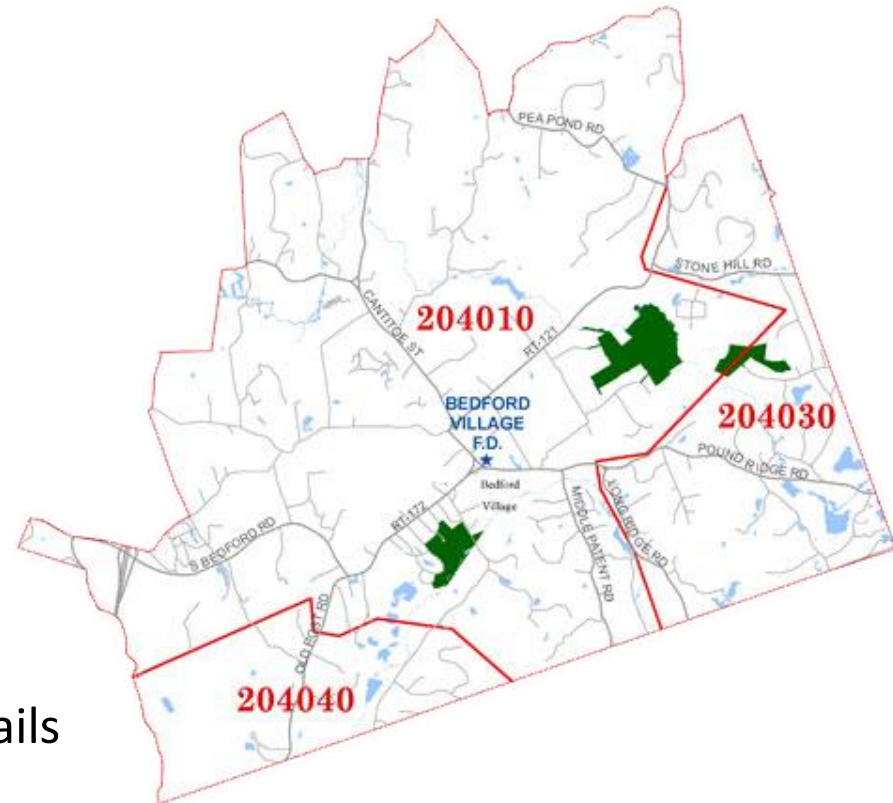
Our Mission

The department's primary mission is responding to fire and medical emergencies 24 / 7 - no exceptions. Since 1923, the Department responded to over 20,000 emergencies in the community. These have included structure fires, medical emergencies, auto accidents, horseback riding accidents, lost children and sports injuries, among others. The nature of the calls has changed over the decades from barn and brush fires to house fires, automobile accidents, automatic fire/carbon monoxide alarms and medical emergencies

The Bedford Fire Department has thrived over the years thanks to its volunteers and to the support of the community

District Service Area

- 16.1 Sq. Miles
- 70.7 Miles of Roadway/Highway
- 8 Schools, Approximately 3,520 Daily Students
- 4 Group Homes
- 4 Church and Temples
- 1045 Acres – Nature Preserves
- 1 Reservoir, numerous lakes & rivers
- 4 Large Horse Farms and numerous trails



Department Responsibilities

(Volunteer Fire Department)

Base Services

- Fire Protection Service
- Motor Vehicle Accidents (MVA)
- Hazardous conditions(wires down, gas leaks, carbon monoxide alarms)
- Emergency Standby & Response
 - Weather (Nor'easters, Snowstorms, Hurricanes)
 - Assistance for neighboring Departments (Mutual Aid)
- Emergency Medical Services
- Fire Safety Education
- Events Standbys (Horse shows, sports, fireworks)
- Number of calls 2017 **621** / Year to date **572** (9/27)

Department Responsibilities

(Volunteer Fire Department)

Additional Services

- Fire Prevention Programs
(Touch-a-Truck, School Visits, etc.)
- CPR and First Aid Classes
- Public Awareness / Open House
- Food Drives
- Defensive Driving
- Support Community Organizations / Events
911 Memorial Ceremony and Memorial Day Ceremony

District Responsibilities

- The Board of Fire Commissioners (BOFC) is made up of five (5) publicly elected residents of the fire district
- BOFC acts as liaison between the 100% volunteer Fire Department, the community members and the Town of Bedford
- BOFC is responsible for fiscal needs of the District and the Department
- BOFC is responsible for regulatory compliance (PESH, OSHA, NFPA, DOH) and record keeping management
- BOFC is responsible to ensure facilities and equipment are in working condition and maintenance is preformed as needed

Fire Horn

We will NOT have a horn that sounds with every call



Current Horn Notification



Proposed Mass Notification System

A Mass Notification (Voice/Siren) System will only be utilized during natural disasters (Ex. Tornado, Hurricane or Major Threat) or should we have a complete failure of our pager alert system



Current Pull Box for Emergency Assistance (3 rounds of 5 blast)



Proposed Call Box for Emergency assistance (will dial 911)

Current pull box operates our horn and the proposed will be a telephone line to 911

Our Challenge

- The Bedford Village Fire Department, formed in 1923, has served the community for 95 years
- The existing Fire House was built in 1929 and is currently 89 years old. It has exceeded its useful life
 - Last renovation/addition-1957 (61 years ago)
- The proposed facility is a critical and a necessity for safety, functionality, and efficiency
- In recent years, the Bedford Village Fire District has researched its options for upgrading, replacing, or adding to their existing facility
- It has been determined that utilizing the existing facility moving forward is no longer an option

Forming the Building Committee

- The BOFC, with input from the Dept. Chiefs & Members prioritized a list of concerns and building deficiencies within the existing firehouse
- The BOFC purchased land at 550 Old Post in July 2012 - 10.07 Acres
- The BOFC made the decision to hire an Architecture and Engineering firm (***H2M architects + engineers***) to help shape and propose solutions to those issues deemed most significant
- Meetings have been conducted over the past 3 years to evaluate and plan
- The team sought to outline a project that would best address all of the concerns raised during this assessment phase
- Alternatives were investigated throughout the past several years and during this phase and it was confirmed that a new station would be most effective, and fiscally responsible

Committee Consideration/Goals

Provide a project that promotes the following:

- Provide a safe, functional and properly designed layout for responders
 - Vehicle clearances / truck layout
 - Improved bunker gear access / areas
 - Lighting
 - Ventilation
- Efficient response to calls
- Appropriate space for existing and future replacement apparatus
- Adequate facilities for Department meetings and training exercises
- Adequate facilities for administration requirements of the Department and District
- Adequate Parking

Existing Firehouse

The existing building does not meet the following:

- ADA Regulations
 - Overall accessibility
- OSHA Regulations
 - Firehouse safety – clearances and access
- NFPA Recommendations
 - Bunker gear storage – proper and safe clearances
 - Firefighter Health and Safety Guidelines (NFPA 1500)
 - Decontamination standards (NFPA 1583)
 - Training and Education – dedicated areas for classroom training
 - Facility Safety – clearances and access
 - Fire Department Administration – policy, records and committees

Existing Firehouse

- Existing apparatus bay depth is too shallow to permit safe access around vehicles
- A clearance of 5 feet is recommended (OSHA/Best Practice) for safe ingress and egress of responders



Apparatus front to back (zero clearance)



Apparatus against rear wall (zero clearance)

Existing Firehouse

- Existing Apparatus bays do not have a dedicated area to properly store and don turnout gear
- It is recommended that a separate area is dedicated, off of the apparatus room floor for safety and cleanliness



Members are required to don gear directly next to apparatus that can be pulling in or out



Firemen are forced to don gear in direct contact with fumes, oils and other contaminants from the apparatus

Existing Firehouse

- Existing Apparatus bays are not large enough to allow vehicle doors to open.
- Equipment can not be inspected or cleaned properly, and responders cannot mount the apparatus safely



Not enough space to open vehicle doors



Not enough space to open equipment and maintain/clean properly

Existing Firehouse

- Additional images indicating lack of space within the existing apparatus bays



Members must navigate between apparatus in an unsafe manor



Lack of space creates hazards throughout the bays

Existing Firehouse

- The existing bay doors are not tall enough to accommodate modern fire apparatus. An extremely unsafe condition is created at this pinch point



Fire District is limited to custom apparatus that increase costs in order to fit within existing building



This pinch point is extremely dangerous, as anything/anyone on top of apparatus will hit the building and cause damage or severe injury

Existing Firehouse

Existing building does not meet all ADA and NFPA regulations.

All governmental buildings must comply with the American with Disabilities Act (Title II) which protects qualified individuals from discrimination on the basis of disability in services, programs and activities provided by state and local government entities.

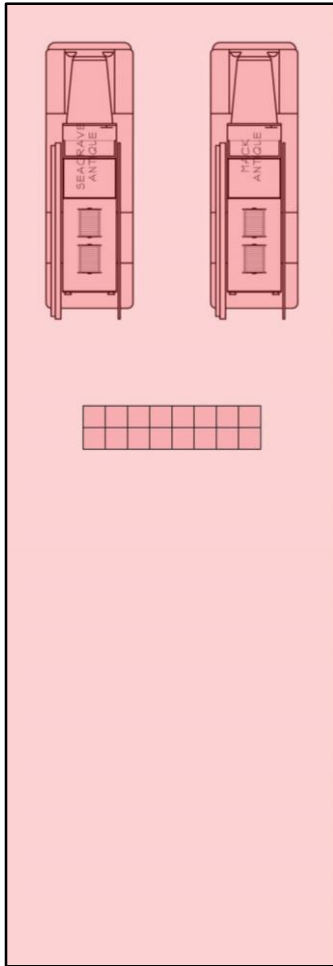


Provisions have been made to bring the antiquated firehouse up to code, but still do not satisfy all requirements

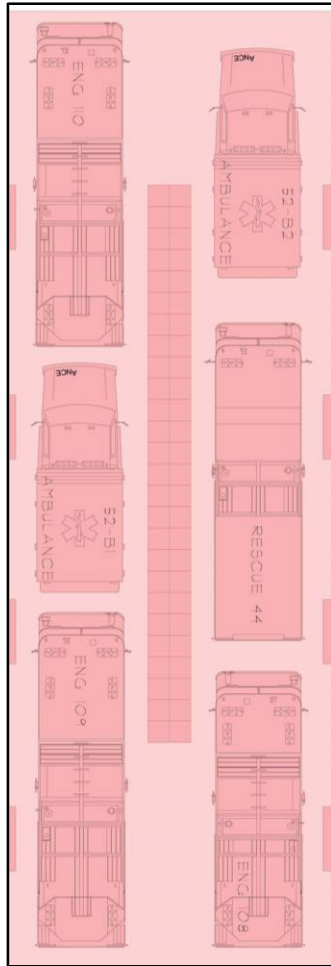


NFPA requires separate decontamination areas and separation of ice for consumption and areas classified as contaminated

Existing Firehouse



1929



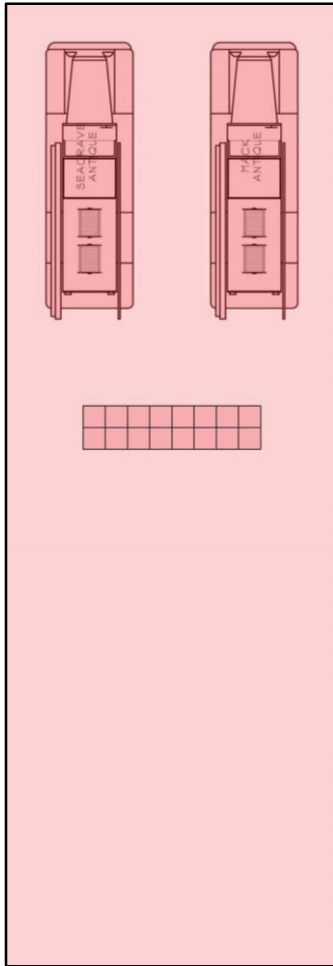
Today

The fire station has experienced lots of change over the years. The diagrams on the left represent the evolution through the years

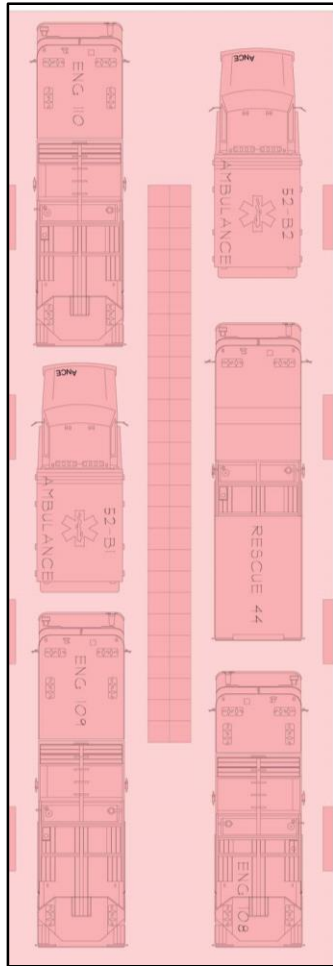
- In 1950, an engine required 280 sf
- Today, an engine requires **715 sf**

Safe travel paths are critical in a fire station. Injuries within the apparatus bay often are a result of narrow aisles, not enough space to open doors and compartments properly and not having room to properly store or don PPE

Existing Firehouse



1929



Today

The fire station has experienced lots of change over the years. The diagrams on the left represent the evolution through the years

- In 1950, an engine required 280 sf
- Today, an engine requires **715 sf**



Existing Firehouse

Existing building does not meet have a Vehicle Exhaust Extraction (VEX) System
Diesel Exhaust was identified as an occupational carcinogen by the Center for Disease Control in 1988. Immediate action needs to be taken to mitigate the exposure of known carcinogens to firefighters and First Responders



Diesel exhaust is released within 2' of where Firefighters don their turnout gear



Exhaust particulates cover every surface within the station, causing an extremely unsafe condition

Firefighters and Cancer

*“Firefighting is a dangerous profession, and a growing body of research and data shows the contributions that job-related exposures have in chronic illnesses, such as cancer and heart disease. The National Institute for Occupational Safety and Health (NIOSH) recently undertook two large studies focused on firefighter cancer and concluded that **firefighters face a 9 percent increase in cancer diagnoses, and a 14 percent increase in cancer-related deaths**, compared to the general population in the U.S.”*

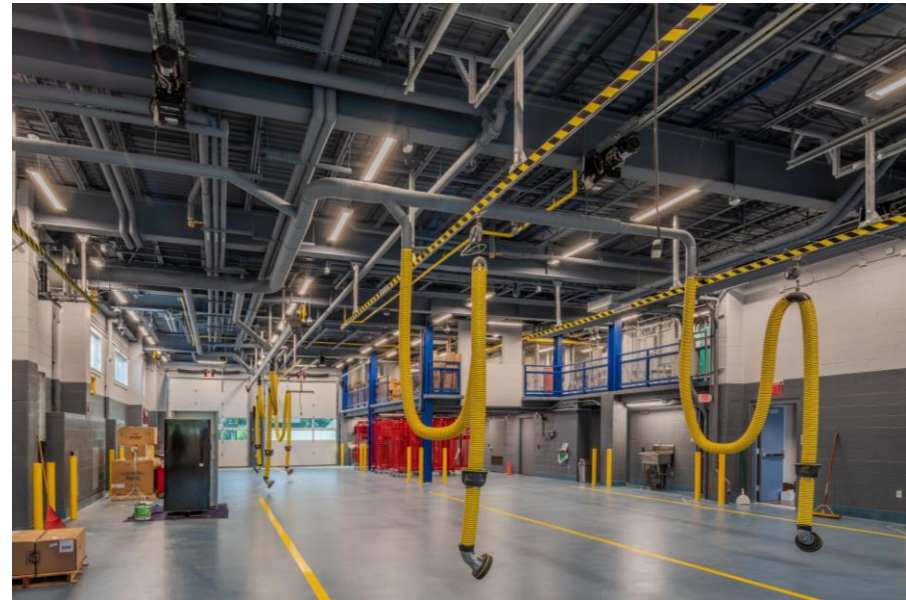


Solution

The proposed Fire Station will be equipped with a Vehicle Exhaust Extraction (VEX) System that will mitigate the release of harmful carcinogens into the apparatus bays



Direct Source Capture Systems will be utilized within the new facility to mitigate exhaust fumes



A new "Hose and Rail" system is shown here

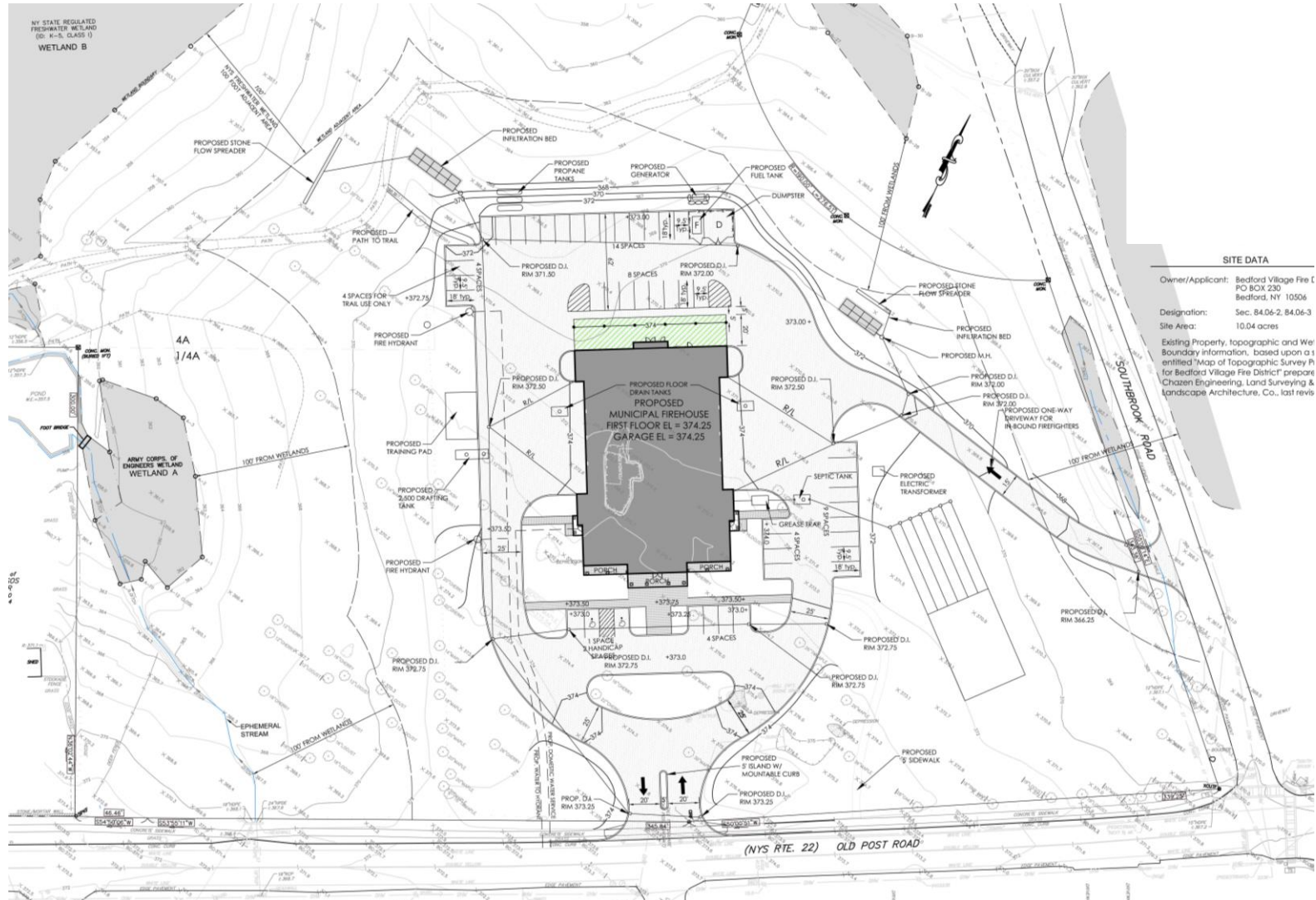
Aerial View



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BEDFORD VILLAGE FIRE DISTRICT

Proposed Site Plan



BEDFORD VILLAGE FIRE DISTRICT

Aerial View



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Firehouses of today

- Typically built to last 50-75 years
- Accommodate current and future needs
- Be resilient to withstand the kind of use and daily service they will be subjected to over the decades they are in service for
- They are meant to stay in operation during any type of event (weather, blackout, or crisis) as these buildings are considered essential to the community
- Adequate storage of equipment and files for mandatory training, vehicle maintenance, gear maintenance, etc. which are documented, tracked, maintained, and stored on site
- Be efficient, but also sustainable for current and future generations

Creating a Sustainable Facility

- Sustainable design is development that meets the needs of the present without compromising the ability of future generations to meet their own needs
- Use of **construction materials or methodologies** that are more efficient, are environmentally friendly and promote sustainability
- Incorporate the use of **local and regional renewable/recycled materials** throughout the facility
- Minimize **Volatile Organic Compounds (VOC's)** and other contaminants that negatively impact the Indoor Air Quality (IAQ) and the occupants
- Incorporate **smart control systems, highly efficient mechanical and electrical systems** to minimize operating costs, minimize paved areas and be mindful of exterior paving and site elements (**use permeable surfaces**)

Proposed Fire Headquarters

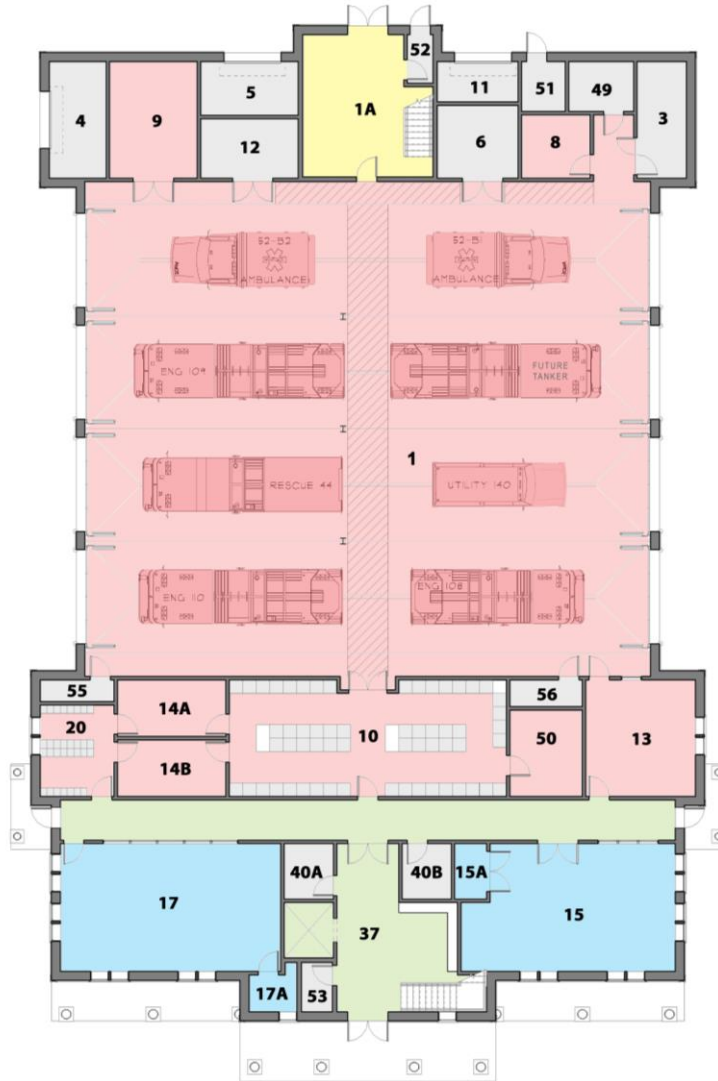
PROPOSED BUILDING AREA

First Floor	12,932 SF
Training Mezzanine	2,075 SF
Second Floor	9,208 SF
Tower	463 SF
Total Building Area:	24,678 SF

PROPOSED BUILDING COVERAGE

First Floor	12,932 SF
Exterior Porch(s)	678 SF
Total Building Coverage:	13,610 SF

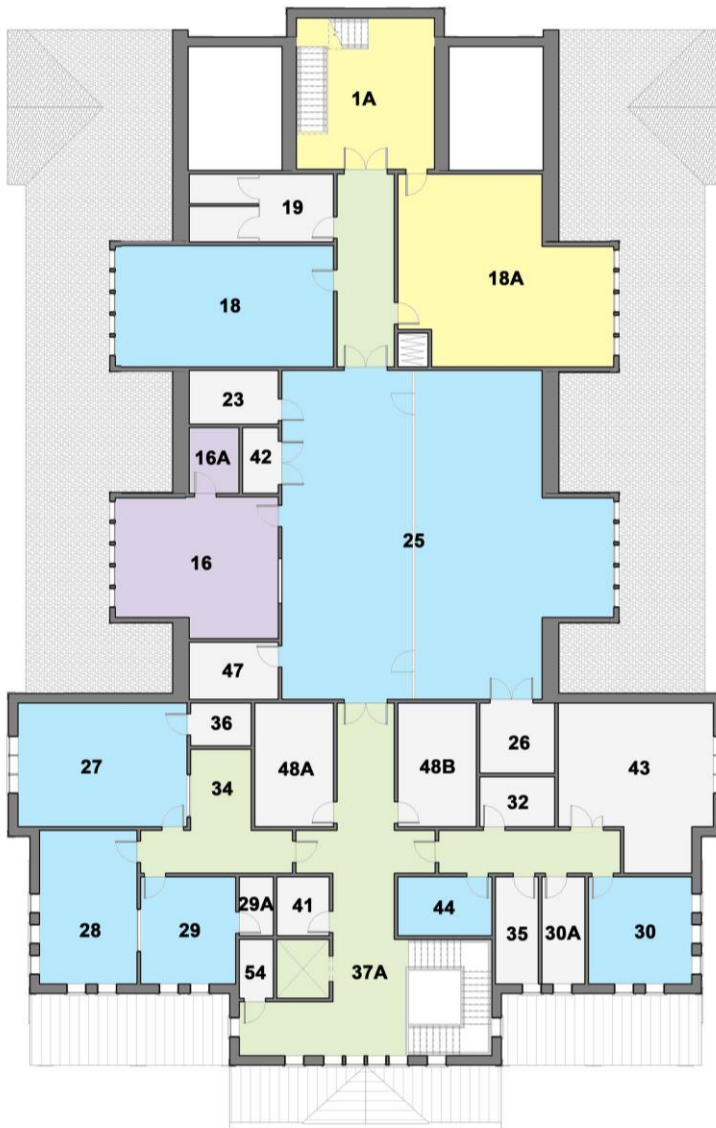
First Floor Plan



First Floor Plan Legend

- 1 APPARATUS BAY
- 1A TOWER
- 3 STORAGE
- 4 OUTDOOR STORAGE
- 5 CHAIN MAT STORAGE
- 6 WORK ROOM
- 8 EMS STORAGE
- 9 SCBA - REFILLING, CLEANING, SCBA A.C.
- 10 GEAR ROOM
- 11 HOSE WASHER
- 12 JANITORS CLOSET
- 13 RADIO ROOM/DISPATCH
- 14A MALE DECONTAMINATION
- 14B FEMALE DECONTAMINATION
- 15 DAY ROOM
- 15A CLOSET
- 17 EXERCISE ROOM
- 17A CLOSET
- 20 LOCKERS
- 37 LOBBY
- 40A TOILET
- 40B TOILET
- 49 TOILET ROOM
- 50 LAUNDRY
- 51 GAS STORAGE
- 52 DELIVERIES
- 53 JANITORS CLOSET
- 55 MECHANICAL
- 56 ELECTRICAL ROOM

Second Floor Plan



Second Floor Plan Legend

1A	TOWER
16	KITCHEN
16A	PANTRY
18	BUNK ROOM
18A	TRAINING
19	BATHROOM
23	LINEN
25	MEETING ROOM
26	MEETING ROOM STORAGE
27	CONFERENCE ROOM/CLASSROOM
28	CHIEF'S OFFICE
29	LINE OFFICERS
29A	CLOSET
30	DISTRICT OFFICE
30A	DISTRICT RECORDS STORAGE
32	F.O.G.
34	PRINTER AREA
35	DEPARTMENT RECORD STORAGE
36	NETWORK/IT
37A	LOBBY
41	FAMILY RESTROOM
42	JANITORS CLOSET
43	MECHANICAL/ELECTRICAL ROOM
44	QUARTERMASTER
47	OFFICERS SUPPLY
48A	MEN'S RESTROOM
48B	WOMEN'S RESTROOM
54	JANITORS CLOSET

Front Elevation



BEDFORD VILLAGE
FIRE DISTRICT

Public Entrance



BEDFORD VILLAGE
FIRE DISTRICT

Apparatus Bays



BEDFORD VILLAGE
FIRE DISTRICT

Entry From Old Post Road



BEDFORD VILLAGE
FIRE DISTRICT

Preliminary Cost Projections

TYPICAL HARD COSTS

Construction Materials

Bricks and Mortar

Labor

Trade Labor for all work on-site

Site Work

All work related to the preparation of the existing site

Contingencies

Design Contingency

Escalation Contingency

Construction Phase Contingency

Preliminary Cost Projections

TYPICAL SOFTS COSTS

Land

- Topographic Survey
- Geotechnical Reports
- Drainage Reports
- Various Environmental Reports

Professional Fees

- Architect & Engineers
- Attorney
- Zoning and Planning Support
- Construction Manager

Preliminary Cost Projections

TYPICAL SOFT COSTS (continued)

Furniture, Fixtures & Equipment (FF&E)

Furniture

A/V, Computers, Phones, Security & Cabling

Siren, Communication Tower, Radio Room Equipment

Office Equipment

Security, Telephone, PA System

Exercise Equipment

Firematic Equipment (Gear Lockers, Hose Racks, SCBA, etc.)

Preliminary Cost Projections

TYPICAL SOFT COSTS (continued)

Bond Costs

- Bond Counsel
- Fiscal Advisors
- Publications
- Bond Fee's
- Other Misc. Costs

Miscellaneous

- Insurance
- Miscellaneous Administrative Costs (Bid Advertising, Printing)
- Moving Costs

Preliminary Cost Projections

HARD COSTS

Proposed Headquarters	\$ 9,000,000
Site Work	\$ 1,500,000
Projected Hard Cost:	\$10,500,000

CONTINGENCIES

Design Contingency @ ~10%	\$ 1,000,000
Escalation Contingency @ ~5%	\$ 500,000
Construction Contingency @ ~5%	\$ 500,000
Projected Contingencies	\$ 2,000,000

SUB-TOTAL HARD COST & CONTINGENCIES	\$ 12,500,000
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Preliminary Cost Projections

SOFT COSTS

As described on previous slides (@ ~20%)	\$ 2,500,000
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Projected Soft Cost:	\$ 2,500,000
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TOTAL PROJECT COST

\$ 15,000,000

(includes Hard, Soft and Contingencies)

Current Tax Information for Town of Bedford Fire Departments

	Bedford Village Fire District (Fire and EMS)	Katonah Fire District (Fire Only)	Bedford Hills Fire District (Fire Only)
2018 Fire District Tax Rate (per \$1,000 assessed value)	\$4.27	\$7.63	\$12.36
2018 Fire Tax	\$983,850	\$1,306,500	\$2,170,066

- Bedford Village Fire District has never borrowed money in the past
- Proposed Bond information is still being analyzed
- True Bond costs will be presented at our November 28th Public Meeting

Preliminary Cost Projections

Amount of Bond (millions)	Estimated Tax Rate Increase/\$1000	Estimated \$ Increase For a House Assessed at \$650,000/Year
\$15,000,000	\$3.54	\$235.62

- Proposed Term: 30 years
- Proposed Bond Rating: AA
- Proposed Interest Rate: 3.5%
- Avg. Proposed Increase per month: \$19.64
- Avg. Proposed Increase per day: \$ 0.65
- Projected increases for each household will be available after the presentation

Preliminary Cost Projections

Bedford Village Fire District

Existing rate:	\$4.27 per \$1,000
Bond Increase Rate:	\$3.54 per \$1,000
Total Adjusted Rate:	\$7.80 per \$1,000

The Current Firehouse

Currently

- The property has been surveyed
- Appraisal process underway

Next Steps

- Legal requirements for sale of Fire District Building from Counsel
- Update will be provided at the November 28th Public Meeting

Timeline

Public Meeting #2

Wednesday, November 28th, 2018

Bedford Fire House

34 Village Green

Bedford, NY

Planning Board Approvals

October - January

Proposed Public Bond Vote

March 2019

Questions/Comments