

TOWN OF HADDAM



FACILITY ASESMENT REPORT

Six Town Buildings

Haddam, Connecticut

April 1, 2024



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 - 8.1. Options and Recommendations

2.0

Use and Reliance Restrictions

2.1 Use and Reliance Restrictions

Six Town Buildings Facility Assessment

Antinozzi Associates, PC, Consulting Engineering Services (CES), and Michael Horton Associates, Inc., hereinafter referred to as the “Assessment Team”, have produced the content of this document under agreements between Antinozzi Associates, PC and the Town of Haddam. All terms and conditions of that agreement are included within this document by reference. Other than to the Town of Haddam, the Assessment Team disclaims any obligations to any other person with respect to any material presented in this document, and no person may rely upon this document without advance and express written consent from Antinozzi Associates, PC and such person’s written agreement is to be bound by the limitations, qualifications, terms, conditions, and indemnities to Antinozzi Associates PC set forth in that agreement.

The assessment Team specifically states that their review of the property in question is subject to monetary and time restraints, as well as scope limitations. Given those restraints and limitations, they have made what is in their opinion a reasonable investigation. The materials presented in this document shall be considered “to the best of the Assessment Team’s collective professional knowledge”. This phrase means materials presented reflect the Assessment Team’s actual knowledge of the subject matter after such inquiry the Assessment Team considered reasonable given the constraints and limitations upon the contracted scope of work.

The extent of the physical observation for the production of this assessment has been limited to “walk-around” visual inspections of the buildings and properties. Assumptions regarding the overall condition of the property have been developed based upon observation of representative areas of the building. As such, the development of schematic methods and associated costs for the correction of identified deficiencies is based upon the overview observation and is also limited with respect to completeness.

3.0 Executive Summary

Introduction

Antinozzi Associates was commissioned to conduct a Facility Assessment Study for six Town buildings in the Town of Haddam. This assessment is twofold: 1) to provide the Town of Haddam an overview of the conditions of the six buildings, and 2) to determine the space needs for the Town departments and developing a potential renovation plan for the buildings.

The buildings evaluated as part of the assessment are as follows:

- Haddam Town Office Building
- Haddam Old Town Hall
- Haddam Community Center
- Haddam Senior Center
- Haddam Municipal Annex
- Haddam Elementary School

Study Scope

The assessment of the buildings included a field survey to investigate and evaluate the current conditions of the facility, as well as to identify and prioritize elements requiring repairs and restoration.

The survey included the following elements:

- Architectural Systems
- Structural Systems
- Plumbing Systems
- Mechanical/HVAC Systems
- Electrical Systems

The above noted procedure has limitations, as some elements of the facility are concealed from view and cannot be inspected without selective demolition. Our procedures did not include removal of the building fabric or destruction of finishes in order to view concealed items. Unless specifically noted within this report, no engineering calculations, disassembly of building components, or material testing was completed by the Study Team for this Facility Assessment, including a detailed review of the possible presence of any hazardous materials. This report describes the condition of the building and site components at the time of the observations in November of 2023. The report of an item functioning at the time of the observation should not be taken as a guarantee. This report provides no guarantee or warranty, either expressed or implied.

3.1 Executive Summary

Six Town Buildings Facility Assessment

In the cost estimate component of the report, certain assumptions were made that must be considered when interpreting the cost figures associated with each line item. The cost listed is specific to the identified activity and does not include costs associated with disruption to operations, temporary accommodations for anyone affected by work in a certain area, moving expenses to accommodate construction, finance or bonding costs, permits, Furniture, Fixtures & Equipment (except where noted), “historic” renovation principles, A/E fees, and other soft costs. The costs listed do however include some “General Requirements” provisions. Examples include removal and restoration, testing and normal certifications, and temporary accommodations for construction (lifts, scaffolding, etc.).

Regular maintenance cost is not included in this line-item report. The report assumes the Town will allocate maintenance cost for each of the buildings, following the implementation of certain line-item scopes of work.

Study Team

The list of firms and individuals below are collectively responsible for the work that resulted in the development of this facility assessment report.

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4.0 Existing Facility Survey

4.1 Haddam Town Office Building

Architectural Conditions Analysis.....4.1.1
Mechanical, Electrical, and Plumbing Conditions4.1.2
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4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis

Existing Building The Haddam Town Office Building, located at 30 Field Park Drive, is a Colonial Revival style structure built in 1967 constructed to provide sufficient office space for the town. The two-story brick veneer building accommodates major Town Departments including the Board of Selectman, Building Department, and Planning and Zoning, among several others.



Exterior – East Elevation



Exterior – South Elevation



Exterior – North Elevation

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

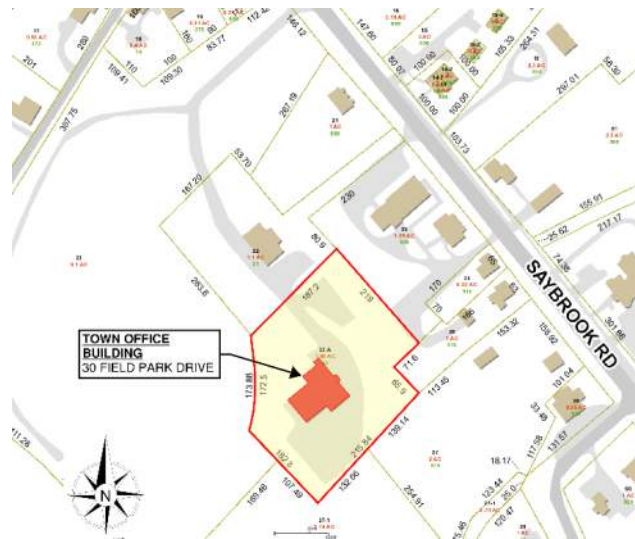
HADDAM TOWN OFFICE BUILDING

4.1.1 Architectural Conditions Analysis

The Town Office Building shares its site with the Old Town Hall on a hill off Saybrook Road. Parking is provided at the front and rear of the building.



Aerial view



Site Plan

This report includes descriptions of the various systems, the areas they serve, system capacities, existing conditions, areas of concern, and recommendations for each system. Existing Code-related items and issues are reviewed for conformance with building codes presently in effect at the time of this Study.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis

Building Profile	Haddam Town Office Building 30 Field Park Drive Haddam, CT 06438
Original Construction:	1967
Lot Size:	1.66 acres
Zoning:	R2A
Number of Parking Spaces:	Upper Lot - 18 spaces, incl. two (2) ADA spaces Lower Lot – 7 spaces
Building Façade:	Masonry
Roof Construction:	Asphalt Shingles
Occupancy Classification:	B, Business
Construction Type:	Unknown
Fire Protection System:	No
Emergency Generator:	Yes
Handicap Accessible:	Yes
Number of Floors:	Two Floors
Existing Total Floor Area:	5,690 SF (gross area)

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis

Building Site

Site Conditions

The Town Office Building, situated on approximately 1.66 acres, sits on atop a hill shared with the Old Town Hall. Signage indicating the Town Offices and Old Town Hall is clear from Saybrook Road.



View looking south



View looking north

There are two parking lots for the Town Office Building; a lower lot at the main building entrance, and an upper lot, to the south of the building. The lower parking lot provides 7 spaces. The upper parking lot provides 18 spaces, of which, two are ADA accessible. Spaces are clearly indicated with signage and striping, however there is no indication that ADA access is provided at the upper lot.



Entrance to lower parking lot



Parking lot



ADA accessible parking

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis

Landscaping at the Town Office Building consists mostly of several shrubs, flowers and a moderate sized conifer along the east elevation of the building. Stone retaining walls at the south and north side of the structure hold back the sloping grade. Walls and plantings appear to be in good condition, however there were some areas of missing mortar at the stone walls, as well as some staining. This missing mortar can become a hazard with water infiltration and should be repaired.



Shrubs at East Elevation



Retaining wall at South Elevation



Retaining wall at North Elevation



Missing mortar

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis

Building Envelope Building Envelope – Exterior Walls

The exterior walls of the Town Office Building are brick masonry and appear to be in good condition. Although there was no major cracking, spalling, or issues with mortar joints, there were several areas where some minor cracking is occurring in the masonry. This is typically near downspout locations.



East Elevation



North Elevation



West Elevation



South Elevation

Staining was observed at retaining wall near the north entrance.



Cracking at masonry near down spout



Staining on masonry

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis

Gabled ends over the primary entrances are vinyl clad appear to be in good condition, however, require cleaning.



Vinyl sided gabled ends

Building Envelope – Roofs, Gutters, & Chimneys

The Town Office Building roof is a low hipped structure with asphalt shingles. The shingles appear to be in good condition, however there are areas on the north west roof that have organic growth, indicating signs of excess moisture. The age of the shingles could not be concluded, however if the installation was 20 or more years ago, replacement should be considered. A copper roofed cupola tops the building and appears to be in good condition, with no apparent damage or fading.



Aerial view of roof



Hipped roof and cupola

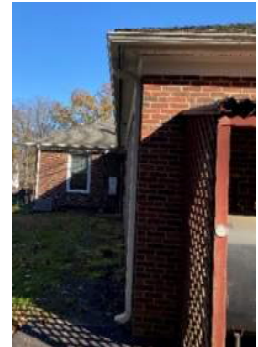


Moss on roof

K-style gutters wrap the perimeter of the hipped roof, with downspouts at each of the Town Office Building corners. Downspouts typically discharge to daylight, except at the accessible ramp on the south elevation. Leaders here run to underground piping.



View of roof eaves, gutters, and downspouts.



4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis

Building Envelope – Exterior Doors

There are two primary entrances to the Town Office Building, one off the east elevation, and the other, an accessible entrance off the south elevation. Three other exterior doors can be found on the west elevation.

The glass storefront double door entrance of the east elevation provides central access to the Town Office Building; however, it does not allow for ADA access. The entry opens directly to a split-level stair case leading to the lower basement floor and to the upper 1st Floor. The door and hardware appear to be in excellent condition, as do the glass sidelights and transom.

The glass storefront door on the south elevation allows for ADA access to the Town Offices. The single door provides entrance to the 1st Floor. The door, hardware, glass and sidelight are in excellent condition. A handicap push plate is provided both inside and out.



East Entry door, exterior



East Entry door, interior



South accessible entrance, exterior



Interior

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis

The north entrance to the lower level provides direct entry to the Building Department. It is necessary to navigate several steps from grade down to this entry point. Stair railings are lacking handrail extensions.

Two more sets of exterior doors can be found at the west elevation. The 3-panel, steel clad, double doors located off the main corridor provide a second form of egress from the 1st floor. And a single 6-panel door allows access to the Furnace Room. Both doors are in fair condition, however, neither is provided with ADA compliant hardware and both are in need of cleaning and painting.



North entrance to lower-level



West entrances to 1st Floor



Building Envelope – Windows

The windows at the Town Office Building are vinyl, double-hung, with insulated glass and simulated divided lites. The larger windows of the 1st Floor are typically 12 lites over 12, while the smaller lower level windows are 8 lites over 8. The age windows of the windows could not be determined, however, they appear to be in good condition with no obvious broken glass, cracks, or defects. Steel lintels above the windows are showing signs of rust and should be cleaned and re-painted.



Typical 12/12 double hung Window, exterior



Typical 8/8 double hung at basement level



Typical 12/12 double hung 1st Floor

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis

Building Envelope – Porches, Steps, and Ramps

The four columned portico at the east entrance provides an area of shelter from the elements as you exit the Town Office Building. It appears to be in good condition. As noted earlier, steps lead to the north entrance to the Building Department. The steps are in fine condition; however, the handrails do not meet today’s codes, lacking handrail extensions.

An ADA accessible ramp provides access to the south elevation entrance to the 1st Floor. Handrails and ramp slope meet current codes.



Front entry porch



Steps at north lower level entry



ADA accessible ramp

Building Interior

Building Interior – Basement Offices

The basement of the Town Office Building houses the Building Department, conference rooms, storage and mechanical space. The spaces appear to be in good condition with no significant areas of concern, other than items that are covered in this report.



Basement conference room



Typical office



Building department

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM TOWN OFFICE BUILDING

4.1.1 Architectural Conditions Analysis



Basement storage



Basement electrical panels



Basement HVAC

Building Interior – 1st Floor

The 1st Floor of the Town Office Building is occupied by the Town Assessor, Clerk, and Selectmen, among other Town Departments. The office spaces all appear to be in good condition and are comfortable, however, work space is limited and there is little room for any expansion.



1st Floor office



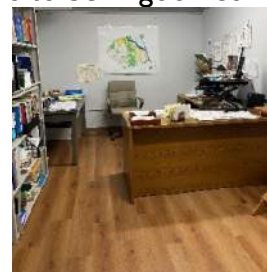
1st Floor Conference Room

Building Interior – Flooring

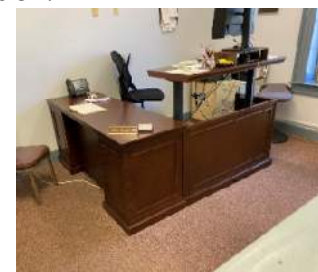
The flooring for the Town Office Building varies throughout. Floors in the basement storage/mechanical spaces are bare concrete. Office spaces are typically carpeted on the 1st Floor. LVT hardwood flooring is installed in the Lower Basement Building Department. Corridors are VCT. Most flooring appears to be in good condition.



Typical VCT in corridors



LVT in basement offices



Carpet in 1st Floor offices

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis



Typical 1st Floor carpet



Typical 2nd floor carpet

Building Interior – Walls

The interior walls of the Town Office Building are a typically painted gypsum board and are good condition. Walls appear freshly painted and clean, and no visible signs of cracking.



Typical basement corridor walls



Typical office walls

Building Interior – Ceiling

The ceilings throughout are gypsum board and are overall in good condition, however there are several areas on the lower floor that show signs of water damage and cracking.



Basement corridor ceiling with water stains



Cracking corridor ceiling

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis



Ceiling fan and lights



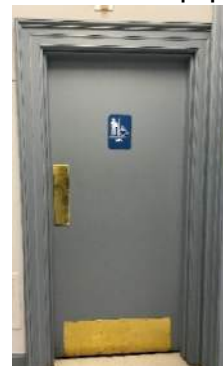
Typical office ceiling

Building Interior – Doors and Hardware

The typical doors throughout the Town Office Building are flush panel doors and appear to be in good condition. Door handles are generally door knobs and are not ADA compliant. Several specialty doors can be found including Dutch doors for Clerk's offices and louvered doors for spaces that house mechanical equipment.



Typical door



Toilet room door



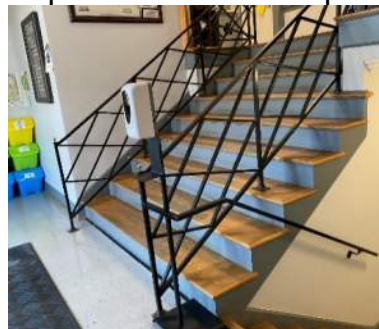
Clerk's office door



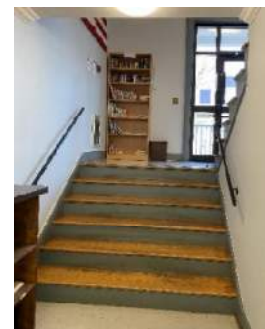
Mechanical closet door

Building Interior – Stairs and Lifts

The primary stair in the Town Office Building can be found at the main entrance providing access to the lower basement level and the upper 1st Floor. Treads, risers, and railings are in good condition. The risers are 7 ½", per current Building Code, they should be 7". Wood treads should be provided with non-slip tread surface.



Stairs to 1st Floor



4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.1 Architectural Conditions Analysis

A lift is provided to allow for ADA access from the lower basement level to the 1st Floor.



Basement lift door



Lift at 1st Floor

Building Interior – Kitchenettes

Cabinets, countertops, and fixtures all appear to be in good condition, however they are not ADA compliant. Cabinets are not the proper height, nor do they provide knee space at the sink for wheelchair access.



Kitchenette



Kitchenette

Building Interior – Toilet Rooms

Toilet Rooms are provided for on the 1st Floors. Fixtures and finishes are in good condition.



Typical toilet room



Typical toilet room

RECOMMENDATIONS

The scope of work presented here for the Haddam Town Office Building is in an effort to create a structure that will provide the Town of Haddam a structure that is Building Code and ADA compliant, with newer finishes and equipment, and provide spaces for multiple activities:

Refer to the Structural and MEP reports for recommendations regarding structural and mechanical concerns.

1. Site
 - a. Clean & repoint stone retaining wall
 - b. Provide signage indicating upper lot allows for ADA access
2. Exterior
 - a. Clean vinyl clapboard siding in gable ends
 - b. Repair, re-point, replace damaged masonry
 - c. Clean and re-seal brick veneer
 - d. New 30-year architectural asphalt shingles
3. Doors
 - a. Update door hardware to ADA standards at all doors, interior and exterior
4. Windows
 - a. Clean lintels of all rust. Paint.
5. Ceilings
 - a. Verify areas of possible water leaks for pipe damage. Repair any damaged plumbing and repair damaged sheetrock ceiling.
6. Kitchen
 - a. Provide kitchen cabinets, fixtures, and appliances that are ADA compliant

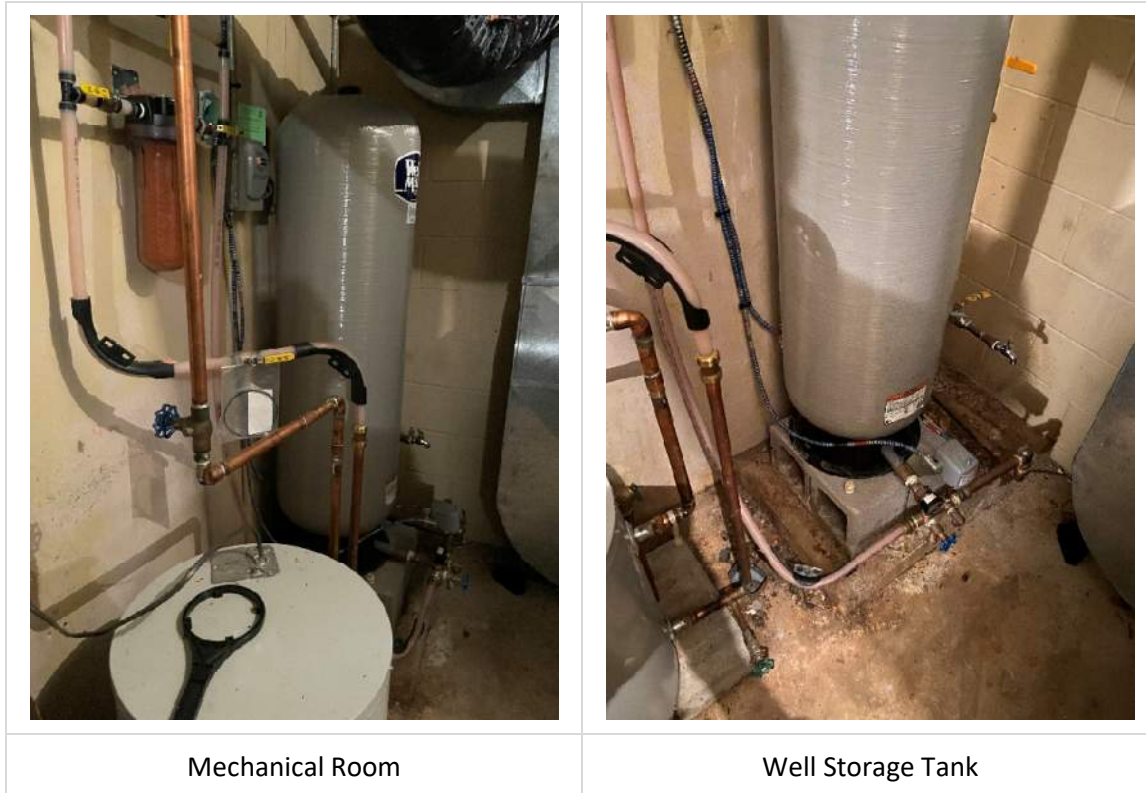
4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING

4.1.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Plumbing

Domestic Water

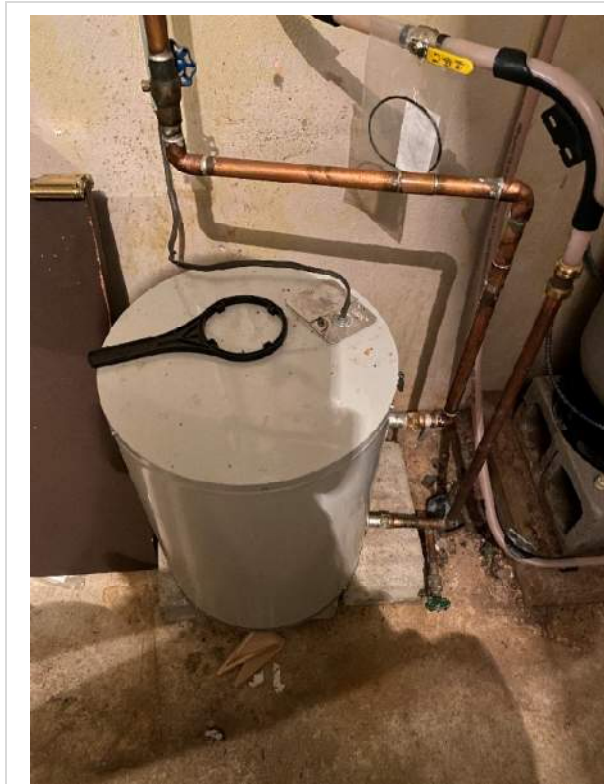
The buildings domestic water is supplied from an on-site well water system. There is a 40-gallon well storage tank located inside the building mechanical room. Domestic cold water piping is mostly copper with soldered fittings. Piping is currently un-insulated. Recommend installing low flow plumbing fixtures to reduce water consumption.



4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING

4.1.2 Mechanical, Plumbing, and Electrical Conditions Analysis
Domestic Hot Water Plant

The buildings domestic hot water is generated by a 19-gallon electric storage tank water heater. Domestic hot water piping is copper with soldered fittings. Piping is currently un-insulated. Inlet/outlet piping connections to the water heater are corroding. Recommend replacing the existing water heater. Recommend insulating all domestic hot and cold water to reduce heat loss and energy loss.



Water Heater



Water Heater Outlet Connection

4.1.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Mechanical

Heating and Cooling

The building is heated and cooled with multiple Air Handling Units (AHU). AHU's provide heating via hot water heating coils and cooling via DX cooling coils. There is no mechanical ventilation/outdoor air to the AHU's. There are (2) two AHU's that serve the lower level. The upper level is served by (5) five AHU's located in the attic. There are a total of five units located in the attic. (7) seven air cooled condensing units located on grade. Condensing unit ages vary but most are in good condition. Hot water is provided via an oil fired boiler. The boiler distributes hot water to the AHU's with (7) seven zone pumps. The boiler appears to be in fair condition. The pumps are in good condition. In general there is limited insulation at the hot water piping throughout the building. There appears to be minimal mechanical ventilation air in the building. In most cases the operable windows are used to satisfy ventilation requirements.

The building does not have a central Building Management System (BMS), all AHU's are controlled via programmable stand alone local thermostats.

Recommendations:

Ensure programmable thermostats are set for night set back and set back for unoccupied hours. For enhanced indoor air quality an Energy Recovery Unit can be added to the attic and paired with the AHU's located in the attic. Provide insulation at all heating hot water piping.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING

4.1.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Typical Vertical AHU on Lower Level



Typical Horizontal AHU in attic

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING

4.1.2 Mechanical, Plumbing, and Electrical Conditions Analysis



(5) Condensing unit located on Grade at back of building



Condensing unit located on grade



Oil Fired Boiler



Heating Hot Water Zone Pumps

4.1.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Electrical

Electrical Service and Distribution

The building is fed by a 400Amp, 208/120V, 3-phase, 4-wire service via overhead lines from a utility pole mounted transformer.

The main electrical room contains the main service disconnect and distribution panelboards feeding the building's various mechanical, lighting, and receptacle loads. The electrical service is fed via an optional standby Automatic Transfer Switch (ATS) rated at 400Amp, 208/120V, 3-phase, 4-wire, which provides full building backup. The ATS is connected to a 100kW pad mounted diesel generator located on the exterior of the building.

The room housing the main electrical distribution equipment is currently being used as storage. Boxes were observed partially blocking equipment and working clearances.

Lighting

Lighting in the building consists of surface round, linear, or square fixtures. The kitchen area contains pendant and wall mounted fixtures. The lamp type or style of fixtures vary by location (CFL or LED retrofit). Controls consist primarily of single pole toggle switches. Wall switches with integral occupancy sensors were observed in a couple of locations. Exterior building mounted lighting is controlled via timeclock and photocell.

Emergency lighting consists of combination exit sign or stand-alone self-contained battery units. Code compliant coverage was observed in the corridors. Emergency lighting in the public bathrooms consists of units plugged into a power receptacle. This method of coverage is not recommended.

Fire Alarm

The building contains an addressable horn-strobe fire alarm system by Fire Lite. The fire alarm control panel is located in the main electrical room, connected to a cellular wireless communicator by Starlink. The building is protected by smoke detectors and manual pull stations at the points of egress. Visual and/or sound notification appliances were observed at required locations.

Telecommunications & Security

The building is served by telecommunication equipment located in the main electrical room. A small wall-attached rack holds fiber demarcation equipment, switches, and patch panels. A wall section contains punch down blocks for cooper, and security cabinets for intrusion detection and access control.

Security consists of video Surveillance cameras around the building perimeter, the main entrance lobby, and the records storage room. Intrusion detection consists of door and motion sensors, and security keypads.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING

4.1.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Recommendations:

1. Retrofitting existing lamps to LED and installation of localized standalone vacancy/occupancy sensors is recommended for additional energy savings in areas lacking these devices.
2. Replacing the plug-in emergency light device in one of the bathrooms is recommended.
3. Removing the items located in front of electrical equipment in the main utility closet is recommended. Its current condition represents a code violation.



Main electrical service equipment



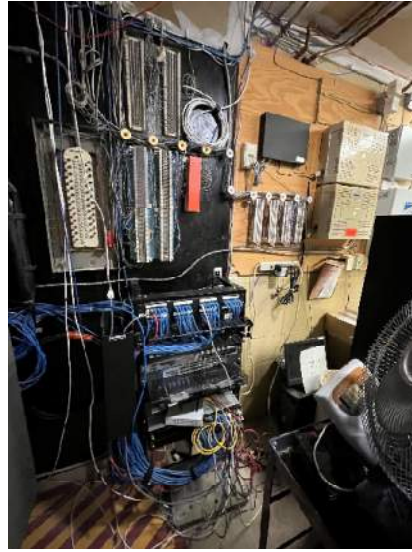
Automatic Transfer Switch (ATS)

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING

4.1.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Fire Alarm Control Panel



Telecommunication Rack and demarc



Self-contained emergency light



Plug in emergency light

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING

4.1.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Typical surface linear light fixture



Main Lobby video surveillance camera



Security touch keypad



Diesel generator

4.1.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Recommendations

Summary

1. Replace plumbing fixtures (i.e. faucets, toilets) with low-flow water saving plumbing fixtures.
2. Insulate all domestic cold and domestic hot water piping.
3. Replace existing domestic water heater.
4. Ensure programmable thermostats are set for night set back and set back for unoccupied hours.
5. Provide insulation at existing heating hot water piping throughout the building.
6. For enhanced indoor air quality an Energy Recovery Unit can be added to the attic and paired with the AHU's located in the attic.
7. Retrofitting existing lamps to LED.
8. Install localized standalone vacancy/occupancy sensors for additional energy savings in areas lacking these devices.
9. Replacing the plug-in emergency light device in one of the bathrooms.
10. Removing the items located in front of electrical equipment in the main utility closet is recommended. Its current condition represents a code violation.

Structure

Observations and Recommendations:

At the request of Antinozzi Associates, the staff of Michael Horton Associates, Inc. (MHA) visited the above referenced site to perform a cursory structural conditions analysis of the existing facility. MHA's observations were limited due to in place finishes. Our inspection was comprised of visual observations from finished grade at the exterior and the supported floor levels at the interior. No survey work, destructive testing or exploratory work was performed as part of this investigation.

This two-story, wood framed structure, constructed in 1967, is supported on a cast-in-place concrete foundation. The exterior walls located above grade consist of a brick veneer with wood stud backup. Cracking in the veneer was observed and repairs are required. Water infiltration and freeze/thaw cycles will cause these deficiencies to worsen, and these areas should be repaired. The cracks should be monitored for future movement. Should additional movement occur, further investigation will be required. A steel lintel is present over the personnel door in the exterior wall which exhibited surface corrosion. The steel lintels should be cleaned to bare metal and coated with an appropriate product to prevent further deterioration and loss of section. Failure to do so could result in future replacement of the lintel being required. The interior face of the exterior walls was concealed by in place finishes. Cracking was also observed in the finishes of the interior walls; however, the cracks appear to be minor in nature and do not represent a structural concern at this time. Should the cracking continue or appear in additional areas, further investigation will be required. Please refer to Photograph Exhibits #1 and #2.

The interior walls at the lower level consist of concrete masonry units (CMU). Some portions of the CMU walls are exposed, while other areas are concealed by in place finishes. Cracking of the exposed masonry was observed in some locations as well as in the finishes of the finished partitions. The cracks appear to be minor in nature and do not represent a structural concern at this time. Should the cracking continue or appear in additional areas, further investigation will be required. Please refer to Photograph Exhibits #3 and #4.

The wood framing of the supported floors is concealed by in place finishes and could not be observed. Some cracking of the finishes was observed, however, the cracks appear to be cosmetic in nature and do not represent a structural concern at this time. Should the cracking continue or appear in additional areas, further investigation will be required. Please refer to Photograph Exhibit #5,6. Some water staining was observed in the ceilings. The source of the water staining could not be determined. It also could

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.3 Structural Conditions Analysis

not be determined if the leaks were active. Further investigation should be carried out to determine both of the above.

The roof framing was visible from within the attic space. The roof structure is a conventional wood framed system. Areas of previous repair work were observed and appeared to be weather tight at the time of the site visit. Please refer to Photograph Exhibits #7 and #8.

A stone site retaining wall, located on the north side of the building is in need of remedial work. The mortar joints between the stones are failing and require repointing. The bluestone caps are also in need of repointing. Water infiltration and freeze/thaw cycles will cause these deficiencies to worsen and therefore should be repaired before more significant repairs or replacement is required. Please refer to Photograph Exhibits #9 and #10.

The bluestone topping of the main entrance is delaminating and requires replacement. The delamination of the stones has created a potential trip hazard, which presents a safety concern. Water infiltration, freeze/thaw cycles and the application of deicers will cause these deficiencies to worsen, and these areas should be repaired/replaced. Please refer to Photograph Exhibit #11.

This concludes our structural conditions analysis of this facility.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.3 Structural Conditions Analysis



Exhibit 1



Exhibit 2

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.3 Structural Conditions Analysis

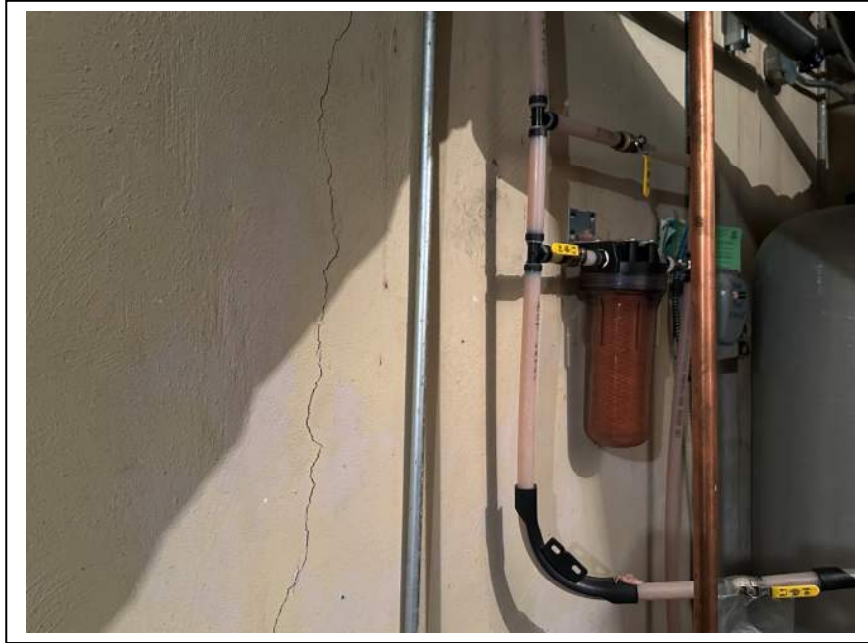


Exhibit 3



Exhibit 4

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.3 Structural Conditions Analysis



Exhibit 5



Exhibit 6

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.3 Structural Conditions Analysis



Exhibit 7

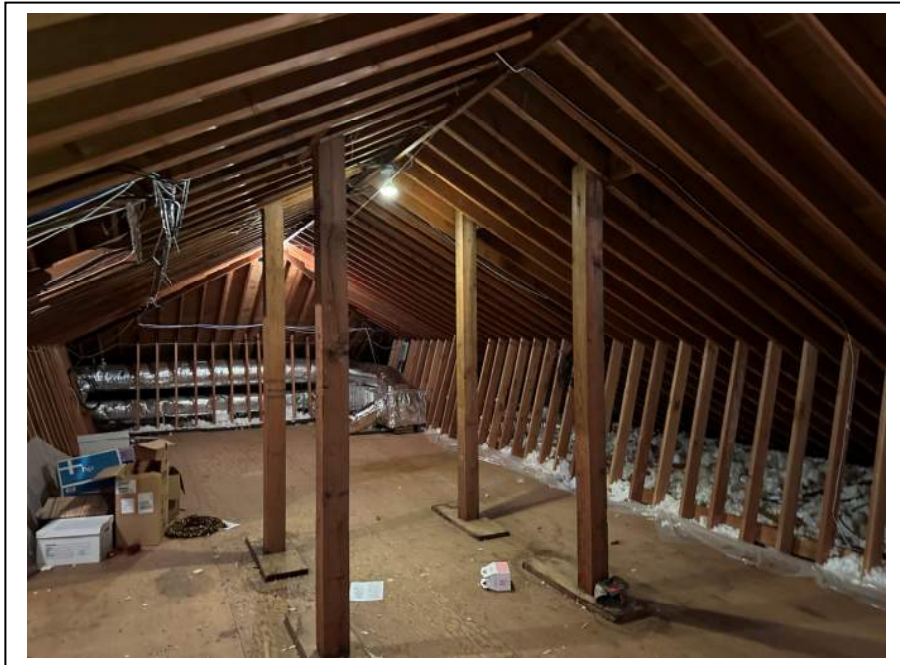


Exhibit 8

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.3 Structural Conditions Analysis



Exhibit 9



Exhibit 10

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM TOWN OFFICE BUILDING
4.1.3 Structural Conditions Analysis



Exhibit 11

4.2 Haddam Old Town Hall

Architectural Conditions Analysis.....	4.2.1
Mechanical, Electrical, and Plumbing Conditions	4.2.2
Structural Conditions Analysis.....	4.2.3

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.1 Architectural Conditions Analysis

Existing Building The Haddam Old Town Hall, located at 31 Field Park Drive, is a Federal / Greek Revival style structure built in 1900. The two-story stone structure was original used as the Town Hall for Haddam until a new Town Office Building was built next door in 1967. Currently, the Town utilizes the 1st Floor of the building for larger meetings conducted in the Main Hall.



Exterior – West elevation

The 2nd floor of the Old Town Hall is occupied by the Masonic Lodge and was not reviewed for the purposes of this report.



Exterior – East elevation



4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM OLD TOWN HALL

4.2.1 Architectural Conditions Analysis

The Old Town Hall shares its site with the Town Office Building atop a hill off Saybrook Road. Parking is provided to the south of the structure.



View looking south



View looking north



Site Plan

This report includes descriptions of the various systems, the areas they serve, system capacities, existing conditions, areas of concern, and recommendations for each system. Existing Code-related items and issues are reviewed for conformance with building codes presently in effect at the time of this Study.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.1 Architectural Conditions Analysis

Building Profile

Old Town Hall
21 Field Park Drive
Haddam, CT 06438

Original Construction:	c. 1900
Lot Size:	1.1 acres
Zoning:	R-2A
Number of Parking Spaces:	11 spaces, incl. two (2) ADA
Building Façade:	Stone/Masonry
Roof Construction:	Asphalt Shingles
Occupancy Classification:	B, Business
Construction Type:	VB – Unprotected-Combustible
Fire Protection System:	No
Emergency Generator:	Yes
Handicap Accessible:	Yes
Number of Floors:	Two Floors and basement
Existing Total Floor Area:	5,016 SF (gross area)

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.1 Architectural Conditions Analysis

Building Site

Site Conditions

The Old Town Hall, situated on approximately 1.1 acres, sits on atop a hill shared with the Town Office Building. Signage indicating the Town Offices and Old Town Hall is clear from Saybrook Road.



View looking north down the entry driveway

The parking lot provides 11 spaces, of which, two are ADA accessible. Handicapped spaces are clearly indicated with signage and striping next to the structure.



ADA parking



Primary parking lot

Landscaping at the Old Town Hall is minimal, with several small shrubs at the north and west side of the building. An emergency generator is located on the north elevations with enough clearance around it for maintenance purposes.



Shrubs at North Elevation



Emergency generator

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.1 Architectural Conditions Analysis

Building Envelope Building Envelope – Exterior Walls

The exterior walls of the Old Town Hall are stone and overall appear to be in good condition. Mortar joints appear solid, with minimal loose material noted on the walls, however several locations were noted requiring repointing. Although it could not be confirmed, insulation at the exterior walls is likely minimal.



West Elevation



North Elevation



East Elevation



South Elevation

The exterior walls bear on stone and masonry walls, with a concrete slab. Although the masonry block walls appear to be in very good condition, there was some efflorescence noted throughout the basement.



Masonry foundation. Visible efflorescence



Stone foundation

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.1 Architectural Conditions Analysis

Building Envelope – Roofs, Gutters, & Chimneys

The Old Town Hall roof is a gabled structure with asphalt shingles. The fish scale style roof shingles appear to be in good condition with no visible damage or fading, however, the age of the shingles could not be concluded, and if the installation was 20 or more years ago, replacement should be considered.



Aerial view of roof



Asphalt shingle roof

K-style gutters run either side of the gabled with downspouts at each of the Old Town Hall corners. Downspouts typically discharge to underground piping.



View of roof eave, panel railing, and downspouts.

Building Envelope – Exterior Doors

There are several entrances to the Old Town Hall, the primary located on the West Elevation. A side entrance is located on the North Elevation, the original main entry is found on the East Elevation, and an emergency exit for the 2nd floor is located on the South elevation. The heavy wood doors appear to be original to the structure and are in good condition, however hardware is older on most doors. The primary

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.1 Architectural Conditions Analysis

entrance is provided with an ADA compliant hardware and a door opener. Exterior hardware at the other doors is not ADA compliant.



Entry door, exterior

Entry door, interior

Side entry, exterior

Side entry, interior

Building Envelope – Windows

The windows at the Old Town Hall are typically double hung with a 12 over 12 lite pattern. Although they look to be in good condition, they appear to be original to the structure and are uninsulated and inefficient.



Typical double hung window, exterior

Typical double hung window, interior

Building Envelope – Porches, Steps, and Ramps

The East façade of the Old Town Hall is distinguished with a Greek Revival style porch. The stone steps are in moderate condition; however, mortar joints are loosening and organic matter is growing. This could be a tripping hazard. The colossal Tuscan columns appear to be in good condition; however, paint is fading and chipping.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.1 Architectural Conditions Analysis



Front porch



Column base

The accessible ramp at the West entrance provides handicapped access to the building, however the handrail does not meet current standards lacking extensions at the bottom of the run. The fire escape for the 2nd floor on the South Elevations is in very good condition, although level grading should be provided at the base of the stairs.



Front entry ramp



Fire escape

Building Interior

Building Interior – Basement / Mechanical

The basement is used primarily for storage and mechanical space. The foundations walls appear to be in good condition structurally, however they are showing indications of moisture infiltration with efflorescence at much of the perimeter.



Basement ceiling structure

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.1 Architectural Conditions Analysis

Mechanical equipment looks to be newer and in good condition.



Mechanical equipment in basement

Building Interior – Meeting Room

The 1st Floor Meeting Room of the Old Town Hall is used for larger meetings held by the Town. The space is generally in good conditions with only the typical wear and tear of a structure of this age.

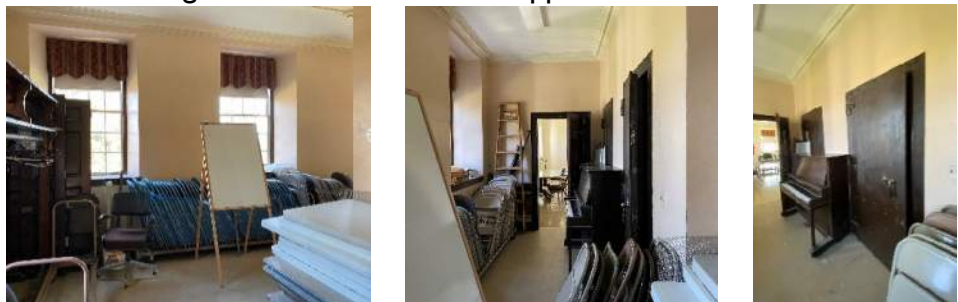


1st Floor Meeting Room

1st Floor Meeting Room

Building Interior – Storage

Storage space on the 1st Floor is located off the main foyer and connects to the Meeting Room. There were no apparent issues.



Storage Room

Storage Room

Vault door

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM OLD TOWN HALL

4.2.1 Architectural Conditions Analysis

Building Interior – Flooring

The flooring varies from what appears to be quarry tile in the Kitchen, to carpeting in the corridors, and VCT in the Meeting Room. In all scenarios, flooring appears to be in good condition, however dated.



Typical Meeting Room VCT flooring



Kitchen tile



ViCT flooring in toilet room



Corridor carpet

Building Interior – Walls

The interior walls of the Old Town Hall are a variety of original plaster on lath, and more modern sheetrock on studs and are typically in very good condition.



Typical Meeting Room wall



Typical Corridor wall

Building Interior – Ceiling

The ceilings on the 1st Floor vary from gypsum board in the corridors to ACT in the toilet room. All ceilings appear to be in good condition. Crown molding is used throughout the spaces and also looks to be good.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.1 Architectural Conditions Analysis

Due to the age of the structure, the adhered ceiling tile in the Meeting Room should be tested for hazardous materials in the tiles and/or adhesive.



Meeting Room ceiling



Crown molding in corridors



ACT ceiling in toilet room

Building Interior – Doors and Hardware

The typical doors on the 1st Floor of the Old Town Hall are 6 and 8 panel wood doors. The doors appear to be original to the building and are in good condition. Door handles are generally door knobs and are not ADA compliant.



8 Panel historic door and trim



6 Panel historic door



Corridor doors

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM OLD TOWN HALL

4.2.1 Architectural Conditions Analysis

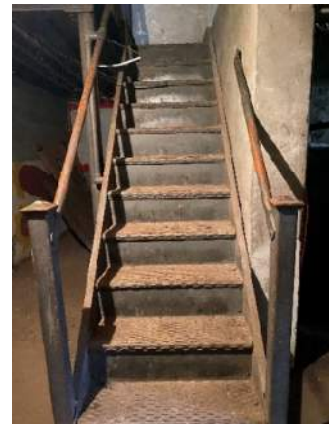
Building Interior – Stairs

The main stair is located near the north entrance and provides access to the 2nd floor. The grand stair case is in good condition and although it no longer meets code with proper tread and riser dimensions, it is equipped with a chair lift to provide ADA access to the 2nd floor. The marble treads could be slipping hazards and should be provided with non-slip treads.

The narrow metal stairs to the basement do not meet current code with improper tread and riser dimensions.



1st Floor stair



Basement stair

Building Interior – Kitchen

Cabinets, countertops, and fixtures all appear to be in good condition, however they are not ADA compliant. Cabinets are not the proper height, nor do they provide knee space at the sink for wheelchair access. Upper cabinets are also out of the required 48” reach zone.



1st Floor Kitchen

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.1 Architectural Conditions Analysis



Kitchen cabinets



Kitchen cabinets

Building Interior – Toilet Rooms

The Toilet Room on the 1st Floor can be found near the North entry to the Old Town Hall. Fixtures and finishes are in good condition and are ADA accessible with proper clearances and grab bars provided.



1st Floor toilet room

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.1 Architectural Conditions Analysis

RECOMMENDATIONS

The scope of work presented here for the Haddam Old Town Hall is in an effort to create a structure that will provide the Town of Haddam a structure that is Building Code and ADA compliant, with newer finishes and equipment, and provide spaces for multiple activities:

Refer to the Structural and MEP reports for recommendations regarding structural and mechanical concerns.

1. Exterior
 - a. Clean and re-seal exterior stone veneer
 - b. Repaint columns and trim
 - c. Repoint stone steps
 - d. New 30 year architectural asphalt shingles
2. Doors
 - a. Update door hardware to ADA standards
3. Windows
 - a. Update windows to energy efficient insulated double hung to match existing style
4. Floors
 - a. Provide new flooring throughout
5. Ceilings
 - a. Remove glues ceiling in Meeting Room and replace with new gypsum board ceiling
6. Kitchen
 - a. Provide kitchen cabinets, fixtures, and appliances that are ADA compliant
7. Stairs
 - a. Provide anti-slip nosing

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM OLD TOWN HALL

4.2.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Plumbing

Domestic Water

The buildings domestic water is supplied from an on-site well water system. There is a well storage tank located inside the buildings basement mechanical room. Recommend installing low flow plumbing fixtures to reduce water consumption.



Neutralizer



Well Storage Tank

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL

4.2.2 Mechanical, Plumbing, and Electrical Conditions Analysis
Domestic Hot Water Plant

The buildings domestic hot water is generated by an electric storage tank water heater. Domestic hot water piping is a mix of copper with soldered fittings and PEX piping. Piping is currently un-insulated. The existing water heater is dated from 2008, recommend removing and replacing. Recommend insulating all domestic copper piping to reduce heat loss and energy loss.



Water Heater



Water Heater

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL

4.2.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Mechanical

Heating and Cooling

The building is heated with an oil fired boiler located in the basement. The boiler distributes hot water via three inline pumps to perimeter radiation. There is no insulation at hot water heating piping. There is no cooling or ventilation/fresh air provided at this building. The boiler and pumps are in good condition.

The building does not have a central Building Management System (BMS), heat is controlled by a stand alone thermostat.

Recommendations:

Provide split system heat pump units for cooling and back up heating. Add insulation to hot water heating piping.



Hot Water Boiler



Typical perimeter radiation

4.2.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Electrical

Electrical Service and Distribution

The building is fed by a 100Amp, 240/120V, 1-phase, 3-wire service via overhead lines from a utility pole mounted transformer.

The main electrical equipment is located in the basement, which also contains the electric meter, main service disconnect, and distribution panelboards feeding the building's various mechanical, lighting, and receptacle loads. The electrical service is fed via an optional standby Automatic Transfer Switch (ATS) rated at 100Amp, 208/120V, 3-phase, 4-wire, which provides full building backup. The ATS is connected to a 20kW pad mounted diesel generator located on the exterior of the building. Some of the interior exposed branch wiring was observed in poor condition.

Lighting

The lighting in the building consists of surface linear wraparound or wall mounted chandelier style fixtures. The lamp type or style of fixtures vary by location (primarily T8 fluorescent, incandescent in the basement). Controls consist primarily of single pole toggle switches. Exterior building mounted lighting is controlled via timeclock and photocell.

Emergency lighting consists of combination exit sign or stand-alone self-contained battery units. Code compliant coverage was observed in the corridors.

Fire Alarm

The building contains an addressable horn-strobe fire alarm system by Fire Lite. The fire alarm control panel is located in next to the main entrance, connected to a cellular wireless communicator by Starlink. The building is protected by smoke detectors and manual pull stations at the points of egress. Visual and/or sound notification appliances were observed at required locations.

Telecommunications & Security

No active telecommunication or security video surveillance equipment was observed in the building. Intrusion detection consists of door and motion sensors, and security keypads.

Recommendations:

1. Retrofitting existing lamps to LED and installation of localized standalone vacancy/occupancy sensors is recommended for additional energy savings.
2. The building currently doesn't have an active internet connection. Providing a basic high-speed internet connection is recommended as it will promote a more desirable use of the space. It will also allow for the installation of a small-scale video surveillance system with remote monitoring.
3. Assess and replace exposed branch circuit wiring in poor condition. Its current condition represents a fire hazard.

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM OLD TOWN HALL

4.2.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Main Electrical Service Equipment



Automatic Transfer Switch



Combination self-contained exit sign






Fire Alarm Control Panel

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM OLD TOWN HALL

4.2.2 Mechanical, Plumbing, and Electrical Conditions Analysis

 A photograph of a wall-mounted security keypad. The keypad has a small screen displaying the time '9:22 AM' and the date 'Wed 10-26-23'. Below the screen is a green padlock icon and the text 'SYSTEM DISABLED'. Two green indicator lights are visible above the screen.	 A photograph of an incandescent light bulb hanging from a ceiling in a basement. The bulb is illuminated and is surrounded by a network of pipes and structural beams.
<p>Security Touch Keypad</p>	<p>Basement Incandescent Lamp</p>
 A photograph showing exposed electrical wiring. The wires are bundled together and run along the edge of a wooden door frame, where they are not properly enclosed in a conduit or raceway.	
<p>Exposed branch circuit wiring</p>	

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM OLD TOWN HALL

4.2.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Recommendations

Summary

1. Replace plumbing fixtures (i.e. faucets, toilets) with low-flow water saving plumbing fixtures.
2. Insulate all domestic cold and domestic hot water piping.
3. Replace existing domestic water heater.
4. Insulate all heating hot water piping.
5. Provide split system heat pump units for cooling and back up heating.
6. Retrofit existing lamps to LED.
7. Install localized standalone vacancy/occupancy sensors for additional energy savings.
8. Provide a basic high-speed internet connection. This will promote a more desirable use of the space and allow for the installation of a small-scale video surveillance system with remote monitoring.
9. Assess and replace exposed branch circuit wiring in poor condition. Its current condition represents a fire hazard.

Structural

Observations and Recommendations:

At the request of Antinozzi Associates, the staff of Michael Horton Associates, Inc. (MHA) visited the above referenced site to perform a cursory structural evaluation of the existing facility. MHA's observations were limited due to in place finishes. Our inspection was comprised of visual observations from finished grade at the exterior and the supported floor levels at the interior. No survey work, destructive testing or exploratory work was performed as part of this investigation.

This two-story structure, constructed circa 1900, is supported on a rubble stone and brick foundation. Only minor cracking in the mortar joints was observed in the foundation walls and require repointing. The exterior walls above grade also consist of mortared in place stone. Cracking in the mortar joints was observed in the exterior walls and requires repointing. The stone chimney could only be observed from grade level, however, repointing is required. The loose stones of the chimney could potentially fail, presenting a safety issue and must be repaired. Water infiltration and freeze/thaw cycles will cause the deficiencies in the stone elements to worsen. These areas should be repaired to prevent further damage. Please refer to Photograph Exhibits #1 and # 2. Except for the minor cracking of the joints indicated, the building foundation was observed to be in sound condition.

The first-floor level construction consists of a concrete slab supported by wire mesh over steel joists and beams. Surface corrosion was present on the steel joists and beams throughout. The steel sections should be cleaned to bare metal and coated with an approved product to prevent loss of section. Dehumidification of the lower level must also be implemented to prevent future corrosion of the steel sections.

The structure of the supported floors and roof level are concealed by in place finishes and could not be observed. Cracking of the interior finishes was observed in various locations. The cracks appear to be cosmetic in nature and do not represent a structural concern at this time. Should the cracking continue or appear in additional areas, further investigation will be required. Please refer to Photograph Exhibits #3 and #4. Our staff was not allowed access to the second-floor tenant spaces during the site visit.

The ornate wood trim at the roof level could only be observed from grade level. Deterioration was observed and further inspection is required to determine the extent of the damage. Remedial work will be required. Please refer to Photograph Exhibit #5.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.3 Structural Conditions Analysis

The exterior stone stairs, walkways and window well are all in need of repointing. Water infiltration, freeze/thaw cycles and the application of deicers will cause these deficiencies to worsen, and these areas should be repaired. Please refer to Photograph Exhibits #6 and #7.

The steel fire escape stairs appear to be in sound condition.

This concludes our evaluation of this facility.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.3 Structural Conditions Analysis



Exhibit 1



Exhibit 2

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.3 Structural Conditions Analysis



Exhibit 3



Exhibit 4

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.3 Structural Conditions Analysis



Exhibit 5



Exhibit 6

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM OLD TOWN HALL
4.2.3 Structural Conditions Analysis



Exhibit 7

4.3 Haddam Community Center

Architectural Conditions Analysis.....4.3.1
Mechanical, Electrical, and Plumbing Conditions4.3.2
Structural Conditions Analysis.....4.3.3

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis

Existing Building The Haddam Community Center, located at 7 Candlewood Hill Road, is a gabled structure built in 1965. The one-story brick building was originally the Town fire station and was eventually converted into the Community Center.



Exterior – North elevation



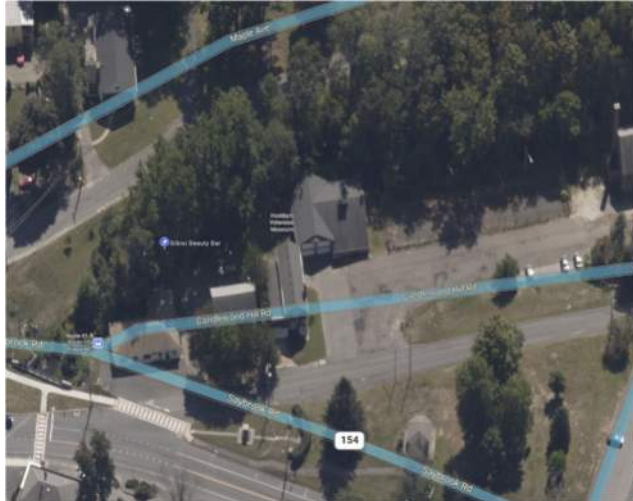
Exterior – West elevation



Exterior – View towards main entrance

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis

The Community Center shares its site with the Haddam Veteran's Museum on grade that slopes upwards to the west. Parking is provided on the west side of the property, with access off of Candlewood Hill Road.



View looking south



Site Plan

This report includes descriptions of the various systems, the areas they serve, system capacities, existing conditions, areas of concern, and recommendations for each system. Existing Code-related items and issues are reviewed for conformance with building codes presently in effect at the time of this Study.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis

Building Profile	Haddam Community Center 7 Candlewood Hill Road Haddam, CT 06438
Original Construction:	1965
Lot Size:	.3 acres
Zoning:	RI
Number of Parking Spaces:	unknown, no marked spaces
Building Façade:	Masonry
Roof Construction:	Asphalt Shingles
Occupancy Classification:	A, Assembly
Construction Type:	VB – Unprotected-Combustible
Fire Protection System:	No
Emergency Generator:	No
Handicap Accessible:	Yes
Number of Floors:	One Floor
Existing Total Floor Area:	3,784 SF (gross area)

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis

Building Site

Site Conditions

The Haddam Community Center, situated on approximately .3 acres, sits on a site that slopes upward to the west and is shared with the Haddam Veteran’s Museum. A large parking area is provided for the building, however there are no marked spaces, and the lot has many pot holes and bare unpaved patches. The entrance to the parking merges directly into the road, with little to distinguish between the two.



View looking east



Entrance to parking lot



View of parking lot from Candlewood Hill Road

Landscaping at the building is minimal, with several shrubs at the north side of the building and a low stone wall. A small brook runs along the rear of the building to the south.



Shrubs at North Elevation

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis

Building Envelope Building Envelope – Exterior Walls

The exterior walls of the Community Center are brick veneer with wood frame backup on a cast concrete foundation. Overall, the brick appears to be in good condition, are clean, and show minimal signs of efflorescence. The mortar joints look to be solid with no obvious loose material, however several locations were noted with cracking and/or damaged brick.



North Elevation



West Elevation



South Elevation



East Elevation



Cracking at concrete foundation joint near brick



Damaged brick at window sill



Staining on brick

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis

The garage/storage portion of the structure is constructed of CMU block and while overall it appears good, several cracks were noted in the walls and at the pre-cast lintels.



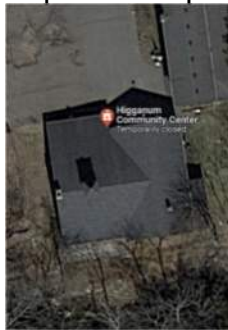
East Elevation – mortar joint crack



Horizontal cracking at pre-cast lintel and along vertical mortar joints

Building Envelope – Roofs, Gutters, & Chimneys

The Community Center roof is a gabled structure with asphalt shingles on plywood sheathing, supported by wood framing. A square cupola tops the structure. The roof shingles appear to be in good condition; however, the age could not be determined and if the installation was 20 or more years ago, replacement should be considered. The cupola requires new painting,



Aerial view of roof



Interior view of roof structure

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis

K-style gutters wrap the perimeter of the roof, with downspouts at each of the corners. Downspouts typically discharge to underground piping.



Typical downspout



Typical gutter



Discharge to underground piping

Building Envelope – Exterior Doors

The main entrance to the Community Center is located on the North elevation and is protected by an outdoor vestibule. The half glass wood door is in good condition; however, the door hardware is not ADA compliant.

A flush panel metal door is located on the South elevation providing necessary egress to the rear of the building. Door hardware is not always ADA compliant. Overhead garage doors and a single 6 panel metal door provide access to the garage.



Front Entry vestibule



Front Entry door

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis



Rear Entry door Side Entry door Garage doors

Building Envelope – Windows

The windows at the Community Center are a vary from double hung with a 6/1 lite pattern at the Community Center portion of the structure, to awning windows at the garage/storage portion of the building. The age of the windows could not be determined, however, they appear to be vinyl and insulated and in good condition.



Typical double hung window Picture window Typical awning window

Building Interior

Building Interior – Meeting Room

The Meeting Room at the Community Center is the primary space of the building. The large space appears well maintained and in good condition. as does the central brick fireplace. Although the space is adequate for large groups of people, there is no separate space for quieter or smaller group activities. Also, the Community Center provides no space for any administrative or office needs.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis



Meeting Room



Meeting Room



Meeting Room

Building Interior – Garage

The Garage space has been converted to storage for Community Center activities and for the local youth sports leagues. A chain link fence provides a secure area for the equipment to be stored in. Stairs to a loft area provide “attic” space for additional storage.



Garage storage



Stairs to loft storage

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis

Building Interior – Mechanical Room

The Mechanical Room, located off the garage, provides sufficient space for the mechanical equipment.



View of the cupola from the attic

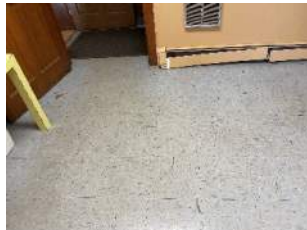
Building Interior – Flooring

The hardwood flooring in the Meeting Room appears to be in very good condition



Meeting room hardwood flooring

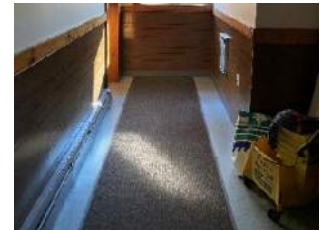
VCT flooring in the corridor, kitchen, and toilet rooms is dirty, faded and dated. Multiple cracks, chips and divots were noted in the toilet room floors.



VCT in kitchen



VCT in toilet room



Corridor carpet runners

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis

Building Interior – Walls

The interior walls of the Community Center are typically in good condition; however, the wood paneling is dated and the paint could use a fresh coat with newer colors.



Meeting Room



Meeting Room



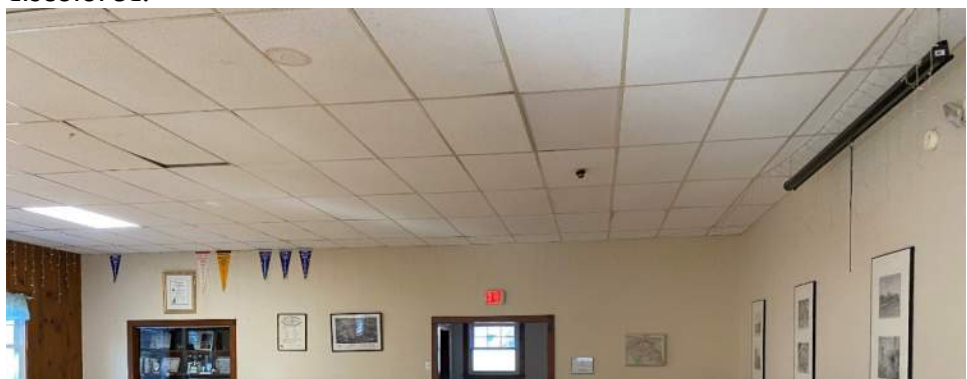
Typical corridor walls



Typical corridor walls

Building Interior – Ceiling

The ACT ceiling in the Meeting Room is in moderate condition with several tiles that are sagging and water stained, and the ceiling grid is discolored.



Typical Acoustical Ceiling Tile ceiling

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis

Gypsum wall board ceiling in the corridors, kitchen and toilet rooms appear to be in good condition.



Gypsum board kitchen ceiling



Typical gypsum ceiling at corridor

Building Interior – Doors and Hardware

The typical doors throughout the Community Center are 6 panel wood doors and appear to be in good condition. Door handles are generally door knobs and are not ADA compliant.



Kitchen interior door



Toilet room interior door

Building Interior – Kitchen

Kitchen cabinets, countertops, and fixtures all appear to be in good condition, however they are not ADA compliant and dated. Cabinets are not the proper height, nor do they provide knee space at the sink for wheelchair access. Upper cabinets are also out of the required 48” reach zone.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.1 Architectural Conditions Analysis



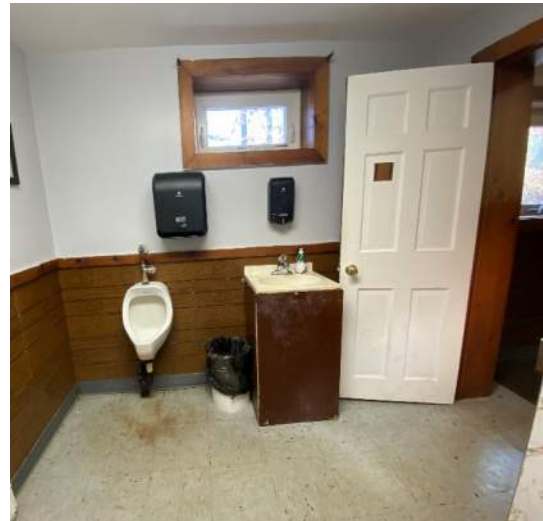
Kitchen

Building Interior – Toilet Rooms

Single occupancy Men's and Women's Toilet Rooms are located to the rear of the building. Plumbing fixtures appear to be in good condition, however vanities are not. The Men's vanity appear to be nothing more than a wooden box supporting the sink. Neither toilet room is ADA compliant.



Women's toilet room



Men's toilet room

RECOMMENDATIONS

The scope of work presented here for the Haddam Community Center is in an effort to create a structure that will provide the Town of Haddam a structure that is Building Code and ADA compliant, with newer finishes and equipment, and provide spaces for multiple activities:

Refer to the Structural and MEP reports for recommendations regarding structural and mechanical concerns.

1. Site
 - a. Re-pave parking lot and provide line striping and ADA signage
 - b. Provide signage indicating Community Center
2. Exterior
 - a. Clean and seal brick veneer
 - b. Repair, re-point, replace damaged masonry
 - c. New 30-year architectural asphalt shingles
 - d. Scrape, clean, and re-paint cupola
3. Doors
 - a. Update door hardware to ADA standards
4. Floors
 - a. Provide new flooring and wall base throughout
5. Ceilings
 - a. Provide new ACT ceiling in Meeting Room
6. Walls
 - a. Re-paint throughout
7. Kitchen
 - a. Complete renovation to kitchen. Provide kitchen cabinets, fixtures, and appliances that are ADA compliant
8. Toilet Rooms
 - a. Complete renovation to toilet rooms. Provide vanities and fixtures that are ADA compliant
9. Programmatic Needs
 - a. Office/administrative space
 - b. Smaller group spaces
 - c. Storage space is currently the garage space and is occupied by Town Rec sports equipment. Additional space for Community Center furniture and supplies is required.



4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER

4.3.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Plumbing

Domestic Water

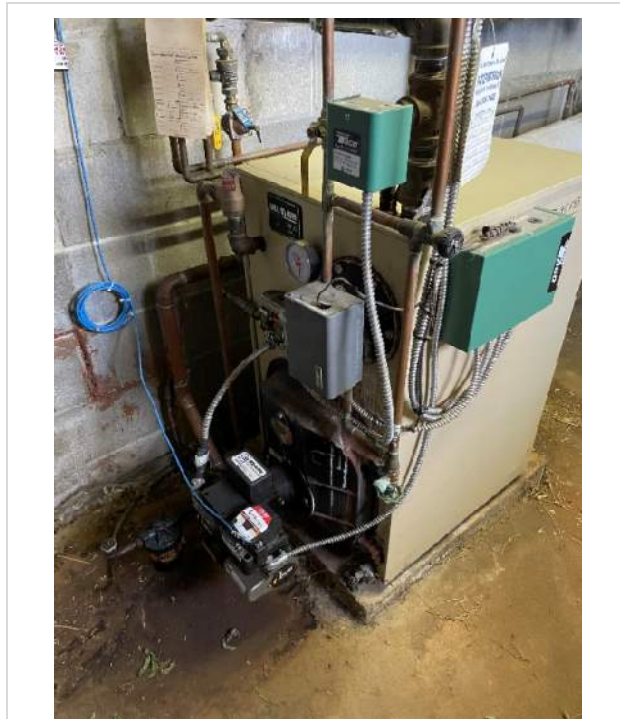
The buildings domestic water is supplied from an on-site well water system. A well storage tank was not identified inside the building. Recommend installing low flow plumbing fixtures to reduce water consumption.

	
<p>Water Service from Well</p>	<p>Water Well at Exterior</p>

4.3.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Domestic Hot Water Plant

The buildings domestic hot water plant was not identified. It is believed that the hot water is generated from the buildings boiler and is piped to an indirect water heater located in a restricted access room. Recommend insulating all domestic hot and cold water piping to reduce heat loss and energy loss.



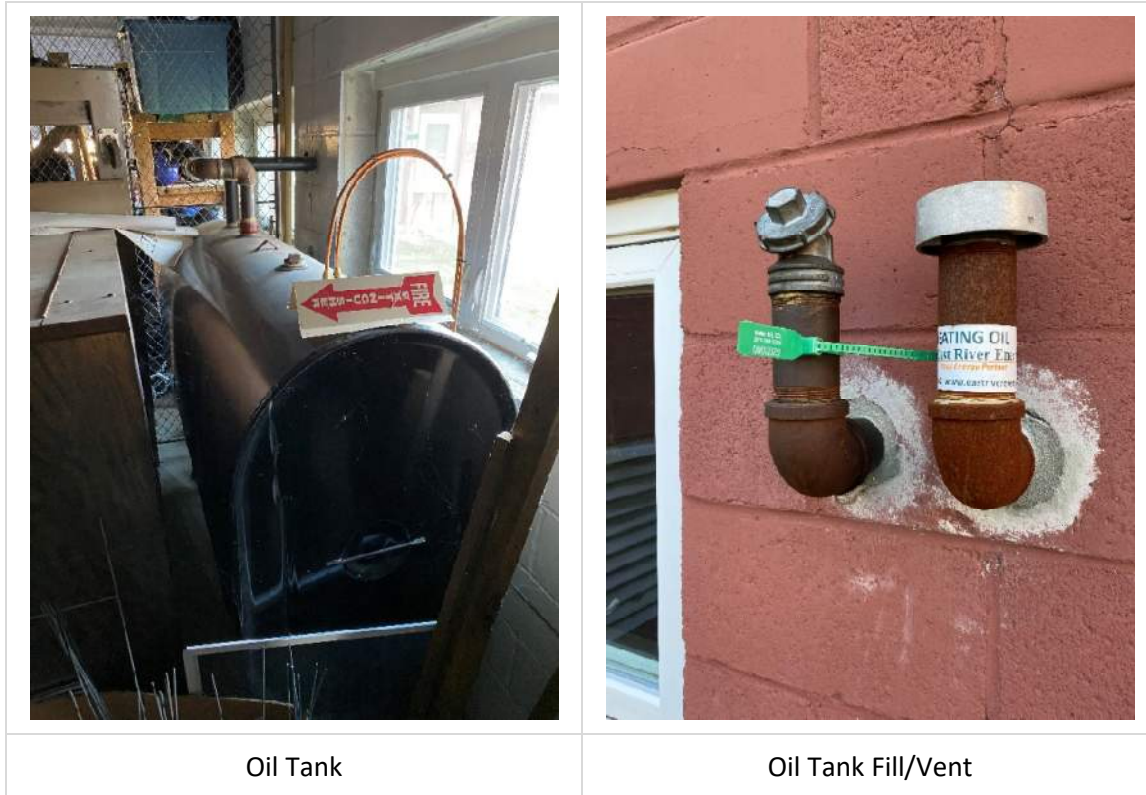
Boiler

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER

4.3.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Oil Supply

The building is currently heated with heating oil. There is a large storage tank located inside the building that supplies the boiler.



Mechanical

Heating and Cooling

The buildings heating is provided by an oil fired boiler. The boiler is manufactured by Weil McLain and in good condition. There are three hot water pumps that distribute hot water to fin tube radiation, wall heaters and unit heaters. There is no insulation on the hot water piping. The large community room has an exhaust grille connected to an exhaust fan. The garage storage area has two ceiling hung unit heaters. There is no mechanical cooling or ventilation at this building. Ventilation is via operable windows.

Recommendations:

Add insulation to the heating hot water piping. Ensure thermostats are programmed correctly with night set backs and heat is set back during unoccupied hours. Provide split system air conditioning units/heat pumps to provide cooling and back up heating. An Energy Recovery Unit could be added for enhanced indoor air quality.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER

4.3.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Oil Fired Boiler



Community Room with Fin Tube Radiation and exhaust grille

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER

4.3.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Boiler pumps



Typical stand alone thermostat



Circulation fan and heater in garage area



Wall heater and baseboard heater at entrance

4.3.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Electrical

Electrical Service and Distribution

The building is fed by a 200Amp, 240/120V, 1-phase, 3-wire service from overhead utility lines.

The main electrical panelboard is located in a cabinet within the kitchen. The main panelboard feeds the building's various mechanical, lighting, and receptacle loads. The building contains a diesel generator estimated at 15kW. The generator does not appear to be tied to the electrical distribution of this building.

Lighting

Lighting in the building consists primarily of surface linear or recessed 2x4 fixtures. The lamp type or style of fixtures vary by location (primarily T8 fluorescent). Controls consist primarily of single pole toggle switches. Exterior building mounted lighting is controlled via timeclock and photocell.

Emergency lighting consists of combination exit sign or stand-alone self-contained battery units. Code compliant coverage was observed in the corridors.

Fire Alarm

The building does not currently have a fire alarm system and is only protected by battery operated smoke detectors.

Telecommunications & Security

No telecommunication or video surveillance equipment was observed in the property. Intrusion detection consists of door and motion sensors, and security keypads.

Recommendations:

1. Retrofitting existing lamps to LED and installation of localized standalone vacancy/occupancy sensors is recommended for additional energy savings.
2. The building currently doesn't have an active internet connection. Providing a basic high-speed internet connection is recommended as it will promote a more desirable use of the space. It will also allow for the installation of a small-scale video surveillance system with remote monitoring.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER

4.3.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Electric service entrance and meter



Main electrical panel



Typical 2'x4' recessed light fixtures



Typical self-contained emergency light

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER

4.3.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Security touch keypad



Exit sign



Diesel generator



Typical single pole switches

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM COMMUNITY CENTER

4.3.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Recommendations

Summary

1. Replace plumbing fixtures (i.e. faucets, toilets) with low-flow water saving plumbing fixtures.
2. Insulate all domestic cold and domestic hot water piping.
3. Insulate all heating hot water piping.
4. Ensure thermostats are programmed correctly with night set backs and heat is set back during unoccupied hours.
5. Provide split system air conditioning units/heat pumps to provide cooling and back up heating. An Energy Recovery Unit could be added for enhanced indoor air quality.
6. Retrofit existing lamps to LED.
7. Install localized standalone vacancy/occupancy sensors for additional energy savings.
8. Provide a basic high-speed internet connection. This will promote a more desirable use of the space and allow for the installation of a small-scale video surveillance system with remote monitoring.

Structural

Observations and Recommendations:

At the request of Antinozzi Associates, the staff of Michael Horton Associates, Inc. (MHAI) visited the above referenced site to perform a cursory structural conditions analysis of the existing facility. MHAI's observations were limited due to in place finishes. Our inspection was comprised of visual observations from finished grade at the exterior and the first-floor level at the interior. No survey work, destructive testing or exploratory work was performed as part of this investigation.

This one-story, wood framed structure was originally constructed as a fire house in 1965, with an addition/renovation constructed in later years. There appears to be a separation joint between the addition and the existing building.

The structure is supported on what appears to be a cast-in-place concrete foundation. There is a change of grade of approximately 2'-0" at the front and side of the building, where the first floor is set below grade. Significant cracks were observed in the concrete slab within the boiler and storage rooms. Please refer to Photograph Exhibits #1 and #2. The cause of the cracks could not be determined, however, no vertical displacement was detected, therefore the cracks are likely due to the shrinkage of the concrete after placement. The cracks should be repaired and monitored for future movement.

The exterior walls above the foundations consist of a mixture of brick veneer with wood stud backup; exposed concrete masonry units (CMU); and wood siding with a wood stud backup.

Cracking was observed in both the exterior CMU walls and the brick veneer, in various locations. No control joints were visible in the veneer which could explain the cause of vertical cracking at the long stretches of wall. Cracks were also observed in the brick chimney extension above the roof and require repair. Previous repairs were performed on the chimney and should be inspected. Water infiltration and freeze/thaw cycles will cause these deficiencies to worsen, and these areas should be repaired. Please refer to Photograph Exhibits #3 and #4. Please note that failure to repair the brick chimney could result in failing bricks.

Precast concrete lintels are present on the rear elevation of the building over the window and door openings. Horizontal cracks are present in the lintels. The cracks are likely caused by either overstressing of the lintel or water infiltration into the lintel that has caused the reinforcing to begin to corrode. The lintels should be replaced with new steel or precast. Cracking and displacement of the CMU were observed in the rear exterior walls, as

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.3 Structural Conditions Analysis

well as open control joints. Water infiltration and freeze/thaw cycles will cause these deficiencies to worsen, and these areas should be repaired. Please refer to Photograph Exhibits #5 and #6. It could not be determined if brick ties were present, or their condition.

As previously stated, the interior face of the exterior walls and roof framing are concealed by in place finishes and could not be observed. Some cracking of the finishes was observed. The cracks appear to be cosmetic in nature and do not represent a structural concern at this time. Should the cracking continue or appear in additional areas, further investigation will be required. Please refer to Photograph Exhibits #7.

The exterior stone planter walls located on the north side of the building are displaced and in need of repairs. Water infiltration and freeze/thaw cycles will cause these deficiencies to worsen, and these walls must be repaired to prevent further damage. Please refer to Photograph Exhibits #8.

A wood framed cupola is present on the roof and could not be inspected. The integrity of the cupola structure and the attachment to the roof should be inspected to determine if remedial work is required.

This concludes our structural conditions analysis for this facility.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.3 Structural Conditions Analysis



Exhibit 1



Exhibit 2

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.3 Structural Conditions Analysis



Exhibit 3



Exhibit 4

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.3 Structural Conditions Analysis



Exhibit 5



Exhibit 6

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM COMMUNITY CENTER
4.3.3 Structural Conditions Analysis



Exhibit 7



Exhibit 8

4.4

Haddam Senior Center

Architectural Conditions Analysis.....	4.4.1
Mechanical, Electrical, and Plumbing Conditions	4.4.2
Structural Conditions Analysis.....	4.4.3

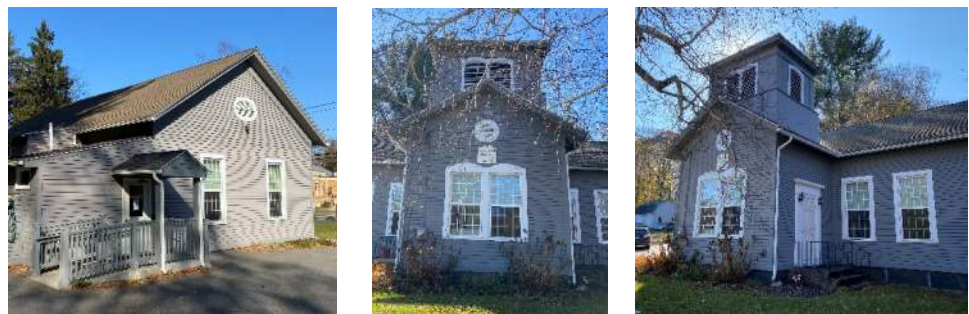
4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Existing Building The Haddam Senior Center, located at 923 Saybrook Road, is an Italianate style structure built in 1867. The one-story structure was originally the First District Schoolhouse and was converted into the Senior Center some time later.

As described on the Town of Haddam website, the Senior Center is: *“A family-friendly, non-denominational gathering space, designed to promote the social, intellectual, and physical well-being of adults 60 and older within the community by providing an array of programs as well as information and access to local services. In addition, the Haddam Senior Center serves as a congregated meal site, offering seniors the option of a prepared, well-balanced, affordable lunch in a comfortable community setting.”*



Exterior view from Saybrook Road



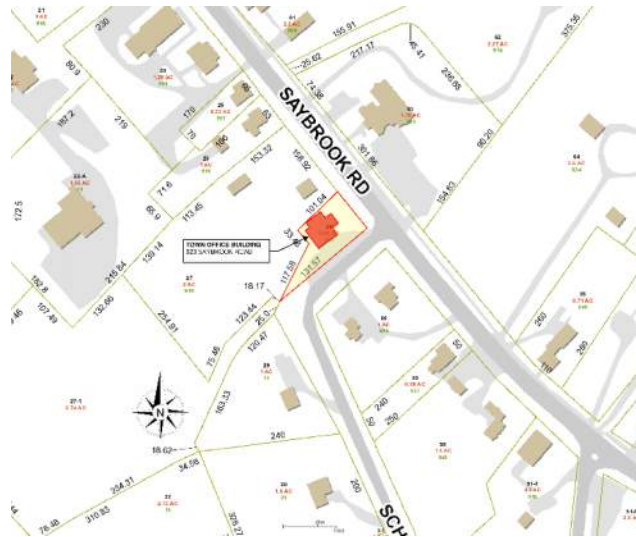
Exterior views

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

The Senior Center sits on relatively flat grade across the street from the Brainerd Memorial Library off of Saybrook Road. Parking is provided on the south side of the property, with access off of Schoolhouse Lane.



Aerial view



Site Plan

This report includes descriptions of the various systems, the areas they serve, system capacities, existing conditions, areas of concern, and recommendations for each system. Existing Code-related items and issues are reviewed for conformance with building codes presently in effect at the time of this Study.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Building Profile

Haddam Senior Center
923 Saybrook Road
Haddam, CT 06438

Original Construction:	c. 1867
Lot Size:	.35 acres
Zoning:	R-2A
Number of Parking Spaces:	7 spaces, incl. one (1) ADA
Building Façade:	Wood clapboards
Roof Construction:	Asphalt Shingles
Occupancy Classification:	A, Assembly
Construction Type:	VB – Unprotected-Combustible
Fire Protection System:	No
Emergency Generator:	No
Handicap Accessible:	Yes
Number of Floors:	One Floor
Existing Total Floor Area:	2,112 SF (gross area)

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Building Site

Site Conditions

The Haddam Senior Center, situated on approximately .35 acres, sits on a relatively flat site across the street from the Brainerd Memorial Library. A concrete sidewalk provides access to the library. The sidewalks appear to be in good condition, with no cracking and heaving.



Street view looking north

The parking lot provides seven spaces, of which, one is ADA accessible. The handicapped space is clearly indicated with signage and striping. Overflow parking can be accommodated by the library across the street, however, this is not ideal for a Senior Center.



Entrance to parking lot



View of parking lot from School House Lane

Landscaping at the Senior Center is minimal and well maintained. Shrubs and plantings are located at the east perimeter of the building, with a medium sized birch in the middle of the front yard.



Shrubs at North Elevation



Sidewalk to crosswalk

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Building Envelope Building Envelope – Exterior Walls

The exterior walls of the Senior Center are wood framed, clapboard and shiplapped sided, and overall appear to be in good condition. Although it could not be confirmed, insulation at the exterior walls is likely minimal.



East Elevation



South Elevation



Shiplap siding



Clapboard siding

Portions of the foundation appear to be original to the structure, constructed from stone and mortar. The Kitchen and Toilet Room addition at the rear of the building are built on a newer cast-in place concrete foundation. Except for some efflorescence, and poor mortar joints, the foundations appear to be in good condition.



Stone foundation



Newer concrete foundation

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Building Envelope – Roofs, Gutters, & Chimneys

The Senior Center roof is a gabled structure with a large bell tower and broad overhanging eaves. The asphalt roof shingles appear to be in good condition; however, the age of the shingles could not be concluded, and if the installation was 20 or more years ago, replacement should be considered.



Aerial view of roof



Bell tower

The chimney appears to be in good condition, however there are several spalled bricks, some visible efflorescence, and it is need of cleaning and re-sealing.



Spalled masonry at chimney



Visible efflorescence at chimney

Typical K-style gutters run the eaves of the gabled roof, with multiple downspouts. Downspouts typically discharge to daylight.



View of roof eave and gutters



4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Building Envelope – Exterior Doors

The primary entrance to the Senior Center is located on the south elevation, off the parking lot. The half glass metal door is provided with ADA compliant hardware and is in good condition.



Main Entry door, exterior



Main Entry door, interior

There are two original doors to the Senior Center from schoolhouse days that are no longer in use.



Original exterior doors



4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Building Envelope – Windows

The windows along the front and sides of the Senior Center are simulated divided lite, 12 over 12, vinyl, double hung windows. They appear to be newer and insulated, and are in good condition.



Double hung windows at front and sides

Windows in the Toilet Rooms are vinyl awnings. Kitchen windows are 6 over 6 vinyl double hung. Similar to the front windows, they appear to be relatively newer and insulated.



Awning windows at Toilet Rooms



Double hung windows at Kitchen

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Building Envelope – Porches, Steps, and Ramps

An accessible concrete ramp at the south entrance allows for handicapped access to the Senior Center. Handrail extensions are not provided.



Accessible ramp entrance

Concrete steps lead to the original school entry doors. The steps are overgrown with moss and organic matter, and there are multiple cracks. Wrought iron handrails do not meet current ADA guidelines, lacking extensions and size requirements.



South steps



North steps

Building Interior

Building Interior – Meeting Room

The 1,440 square foot Meeting Room is the primary space of the Senior Center and the large open room allows for multiple activities at one time. Overall, the space is in good condition, however, due to the open nature of the space, it is difficult for quieter activities to occur while larger events are occurring at the same time.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis



Meeting room looking south



Meeting Room looking north



Meeting Room looking north



Meeting room looking west

Building Interior – Office

The Senior Center Office is a small room located off the Meeting Room. The space is cramped and only allows enough room for one office worker. There is no area for additional staffing without taking away from the Meeting Room. Additionally, with the office located directly off the Meeting Room, it does not allow for much privacy, even with a closed door.



View of Office from Meeting Room



Office

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Building Interior – Mechanical Room

The Mechanical Room is a closet space located directly off the Kitchen. Mechanical equipment is tight in the room and there is little space for workers to maneuver around. Kitchen paraphernalia was blocking the door at the time of this review.



Door to Mechanical Room from Kitchen



Mechanical equipment

Building Interior – Flooring

The flooring for the Senior Center is typically VCT. Most flooring appears to be in fair condition, although somewhat worn and there are several areas of cracked tiles.



Typical VCT flooring in Meeting Room

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Flooring for the Office is sheet vinyl and is worn and dated.



Typical vinyl flooring in office



Typical VCT flooring in toilet rooms



Transition from VCT to vinyl



Cracked VCT

Building Interior – Walls

The interior walls of the Senior Center are typically in very good condition, with clean painted walls, and only minimal cracks.



Typical 1st Floor wall



Typical 2nd Floor wall

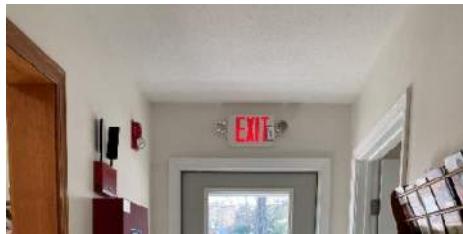
4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Building Interior – Ceiling

The ceilings overall are in good condition, however ACT ceiling in the Meeting Room is showing signs of sagging. Gypsum board ceilings throughout are in good condition.



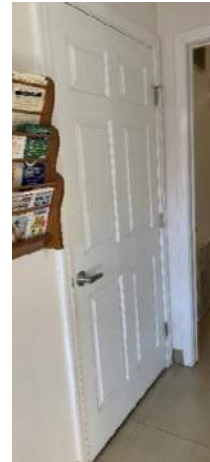
Typical Meeting Room ACT ceiling



Typical corridor gypsum board ceilings

Building Interior – Doors and Hardware

The typical doors throughout the Senior Center are 6 panel wood doors, All doors appear to be in good condition. Door handles are generally door knobs and are not ADA compliant, however the ADA t toilet room is equipped with accessible hardware.



Typical doors

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

Building Interior – Kitchen

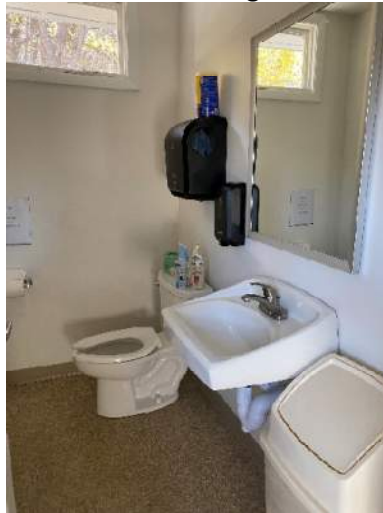
Kitchen cabinets, countertops, and fixtures all appear to be in fair condition and operable, however several doors were found to be damaged or loose on hinges. They are dated in appearance and are not ADA compliant. Cabinets should be at 34” in height and do not provide knee space at the sink for wheelchair access. Upper cabinets are also out of the required 48” reach zone.



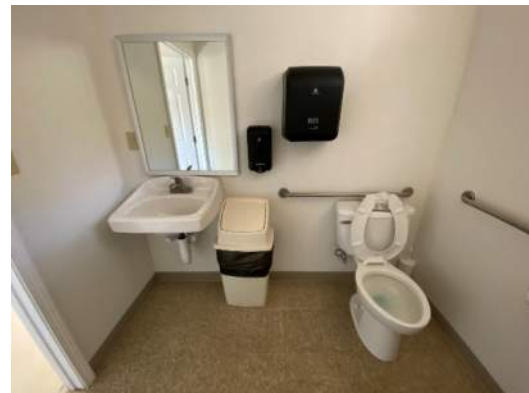
Kitchen

Building Interior – Toilet Rooms

Two toilet rooms are provided, one of them is ADA accessible. Fixtures and finishes are in good condition.



1st Floor toilet room



ADA toilet room

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.1 Architectural Conditions Analysis

RECOMMENDATIONS

The scope of work presented here for the Haddam Senior Center is in an effort to create a structure that will provide the Town of Haddam a structure that is Building Code and ADA compliant, with newer finishes and equipment, and provide spaces for multiple activities:

Refer to the Structural and MEP reports for recommendations regarding structural and mechanical concerns.

1. Site
 - a. Additional parking is recommended
2. Exterior
 - a. Clean and seal masonry chimney
 - b. Clean efflorescence from foundation
3. Doors
 - a. Update door hardware to ADA standards
4. Floors
 - a. Provide new flooring and wall base throughout
5. Kitchen
 - a. Complete renovation of kitchen. Provide kitchen cabinets, fixtures, and appliances that are ADA compliant
6. Ceilings
 - a. Provide new ACT ceiling and grid
7. Programmatic Needs
 - a. Smaller group spaces
 - b. Storage space
 - c. Office/administrative space
 - d. Mechanical space is tight

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM SENIOR CENTER

4.4.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Plumbing

Domestic Water

The buildings domestic water is supplied from an on-site well water system. There is a 20-gallon well storage tank located inside the building mechanical room. The well storage tank was manufactured on May 7, 2012 and installed on August 9, 2012. The unit appears to be in good working condition but is nearing the end of its life as well tanks are typically replaced every 10 to 15 years. Domestic water piping is a combination of copper and PEX. Recommend replacing well storage tank. Recommend installing low flow plumbing fixtures to reduce water consumption.



20-Gallon Well Storage Tank



20-Gallon Well Storage Tank

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM SENIOR CENTER

4.4.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Domestic Hot Water Plant

The buildings domestic hot water is generated by a 20-gallon electric storage tank water heater. Water heater was manufactured on June 16, 2022 and appears to be in good working condition. Recommend insulating all domestic hot and cold copper piping to reduce heat loss and energy loss.



Water Heater



Water Heater Manufacturer Plate

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM SENIOR CENTER

4.4.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Oil Supply

The building is currently heated with heating oil. There is a large storage tank located in a shed along the building exterior. Oil is currently supplied to the buildings HVAC equipment.



Mechanical

Heating and Cooling

The buildings heating and cooling is provided by an oil fired vertical air handling unit (AHU). This unit is provided with a DX cooling coil connected to a grade mounted condensing unit. The unit or the building does not have any mechanical ventilation/outdoor air. There are operable windows in the building. The AHU distributes heating and cooling via an overhead ducted supply air system. The unit is controlled by a programmable stand alone local thermostat. The AHU is in fair condition.

Recommendations:

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM SENIOR CENTER

4.4.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Ensure the thermostat is programmed with a night set back and set back while the building is unoccupied.



Vertical Air Handling Unit



Grade mounted Condensing Unit

Electrical

Electrical Service and Distribution

The building is fed by a 200Amp, 240/120V, 1-phase, 3-wire service via overhead lines originating on the main road.

The main electrical panelboard is located in a utility closet and feeds various mechanical, lighting, and receptacle loads.

The closet housing the main electrical panelboard is currently being used as storage. Boxes and other elements were observed partially blocking equipment and working clearances.

Lighting

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM SENIOR CENTER

4.4.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Lighting in the building consists of recessed or surface lensed 2x4 fixtures. The lamp type or style of fixtures vary by location but are mostly linear T8 fluorescent. Controls consist primarily of single pole toggle switches.

Emergency lighting consists of combination exit sign or stand-alone self-contained battery units. Code compliant coverage was observed in the corridors and areas of assembly.

Fire Alarm

The building contains an addressable horn-strobe fire alarm system by Fire Lite. The fire alarm control panel is located in the main entrance lobby, connected to a cellular wireless communicator by Starlink. The building is protected by smoke detectors and manual pull stations at the points of egress. Visual and/or sound notification appliances were observed at required locations.

Telecommunications & Security

The building is served by internet service provided by a wifi-enabled cable modem located in the main open gathering area.

No video surveillance or intrusion detection system was observed in the property.

Recommendations:

1. Retrofitting existing lamps to LED and installation of localized standalone vacancy/occupancy sensors is recommended for additional energy savings.
2. Installing a security system and a small-scale video surveillance system with remote monitoring will improve the physical security of the building, its occupants, and internal assets.

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM SENIOR CENTER

4.4.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Electrical service entrance and meter



Main Electrical Panel



Fire Alarm Control Panel



Typical 2'x4' lighting

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM SENIOR CENTER

4.4.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Combination self-contained exit sign



Combination wifi-modem

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM SENIOR CENTER

4.4.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Recommendations Summary

1. Replace plumbing fixtures (i.e. faucets, toilets) with low-flow water saving plumbing fixtures.
2. Insulate all domestic cold and domestic hot water piping.
3. Replace existing well-water storage tank.
4. Ensure the thermostat is programmed with a night set back and set back while the building is unoccupied.
5. Retrofit existing lamps to LED.
6. Install localized standalone vacancy/occupancy sensors for additional energy savings.
7. Installing a security system and a small-scale video surveillance system with remote monitoring will improve the physical security of the building, its occupants, and internal assets.

Structural

Observations and Recommendations:

At the request of Antinozzi Associates, the staff of Michael Horton Associates, Inc. (MHA) visited the above referenced site to perform a structural conditions analysis of the existing facility. MHA's observations were limited due to in place finishes. Our inspection was comprised of visual observations from finished grade at the exterior and the first-floor level at the interior. No survey work, destructive testing or exploratory work was performed as part of this investigation.

This one-story, wood framed structure, constructed in 1867 with a subsequent addition in later years (date unknown), is supported on a combination of cast-in-place concrete and stone foundations. Repointing of the stone joints is required in various areas. However, the foundations overall were observed to be in sound condition. Please refer to Photograph Exhibits #1 and #2.

As previously stated, the wood framing is concealed by in-place finishes and could not be observed. The first floor appears to be a supported floor over a crawlspace. Please refer to Photograph Exhibit #3. Deflection of the floor framing was observed in one of the offices located towards the front of the facility. Access to the crawlspace was not available. The cause of the deflection cannot be determined without access to the crawlspace or exploratory work to expose the floor framing.

Some cracking of the plaster finishes was observed, however, the cracks appear to be cosmetic in nature and do not represent a structural concern at this time. Should the cracking continue or appear in additional areas, further investigation will be required. Please refer to Photograph Exhibit #4.

At the exterior concrete stairs and landings; cracking, corrosion of railings at the point of embedment, and opening of joints were observed. Please refer to Photograph Exhibit #5. Water infiltration, freeze/thaw cycles and the application of deicers will cause these deficiencies to worsen. These areas should be repaired to avoid further disrepair of the stairs and railings.

The masonry chimney is also in need of repairs. Missing bricks and failed mortar joints were observed. Water infiltration and freeze/thaw cycles will cause these deficiencies to worsen, potentially causing additional bricks to fall. Repointing of the joints and replacement of the missing bricks is required. Please refer to Photograph Exhibit #6.

This concludes our structural conditions analysis of this facility.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.3 Structural Conditions Analysis



Exhibit 1



Exhibit 2

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.3 Structural Conditions Analysis



Exhibit 3



Exhibit 4

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM SENIOR CENTER
4.4.3 Structural Conditions Analysis



Exhibit 5



Exhibit 6

4.5 Haddam Municipal Annex

Architectural Conditions Analysis.....	4.5.1
Mechanical, Electrical, and Plumbing Conditions	4.5.2
Structural Conditions Analysis.....	4.5.3

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis

Existing Building The Haddam Municipal Annex, located at 11 Jail Hill Road, is a gambrel structure built in 2001 to provide social services for the Town of Haddam. The two-story wood framed building provides space for public services and food pantry for the disadvantaged on the lower level, and space for donated goods to be dropped off and picked up on the upper level.



Exterior – North elevation showing entry to lower level Social Services



Exterior – South elevation showing entry to upper level Donations/Collections

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM MUNICIPAL ANNEX

4.5.1 Architectural Conditions Analysis

The Annex shares its site with the Haddam Gaol and Workhouse on sloping grade off of Jail Hill Road. Parking is provided for Social Services on the north side of the property, and on the South side for Donations.



View looking south



Site Plan

This report includes descriptions of the various systems, the areas they serve, system capacities, existing conditions, areas of concern, and recommendations for each system. Existing Code-related items and issues are reviewed for conformance with building codes presently in effect at the time of this Study.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis

Building Profile	Haddam Municipal Annex 945 Saybrook Road Haddam, CT 06438
Original Construction:	2001
Lot Size:	4.2 acres
Zoning:	R-2A
Number of Parking Spaces:	North Lower Lot - 16 spaces, incl. one (1) ADA spaces South Upper Lot – Four, incl. two (2) ADA spaces
Building Façade:	Vinyl Siding
Roof Construction:	Asphalt Shingles
Occupancy Classification:	B, Business
Construction Type:	VB – Unprotected-Combustible
Fire Protection System:	No
Emergency Generator:	No
Handicap Accessible:	Yes
Number of Floors:	Two Floors
Existing Total Floor Area:	2,352 SF (gross area)

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis

Building Site

Site Conditions

Located on Jail Hill Road, off of Saybrook Road, the Municipal Annex is situated on approximately 4.2 acres, on a sloping site shared with the Haddam Gaol and Workhouse.



Aerial view

Parking is provided in two lots, a northern one for the 1st Floor Social Services, and a southern one for the 2nd Floor Donations. There is no signage to indicate which lot one should park in for the respective services.

The lower lot provides 16 spaces, of which, one is ADA accessible. The upper lot provides four spaces, two of which are ADA accessible. Handicapped spaces are clearly indicated with signage and striping. Although mostly still in good condition, there are multiple cracks in the paving in both lots.



Entrance to lower parking lot



Entrance to upper parking lot

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis



ADA spaces – lower lot



ADA spaces – upper lot

Concrete sidewalks lead from the parking areas to the Annex. Several areas were noted with cracking. These areas could be tripping hazards and will continue to get worse with water infiltration and freezing.



Cracks in various concrete sidewalks

Landscaping at the Annex is minimal and well maintained, with several shrubs and plantings along the concrete walk to the 1st Floor Social Services.



Plantings along North Elevation



South Elevation

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis

A stone retaining wall along the west side of the property appears to be in good condition. The cast-in-place retaining wall along the south east entry to the upper level is showing multiple areas of cracking and spalling



Stone retaining wall



Cast-in-place retaining wall, areas of cracking and spalling

Building Envelope Building Envelope – Exterior Walls

The exterior walls of the Municipal Annex are wood frame on cast-in-place foundation walls, with vinyl siding. There are several locations on the siding that require cleaning, and multiple spots on the west elevation that are dented, cracked, and rippling. Several small crack lines were noted on the concrete foundation, as well as some slight efflorescence.



South Elevation



West Elevation



North Elevation



East Elevation

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis

Building Envelope – Roofs & Gutters

The Municipal Annex roof is a gambrel structure with asphalt shingles. The roof shingles appear to be in good condition, with no significant staining, fading, curling, or obvious damage. However, the age of the shingles could not be concluded, and if the installation was 20 or more years ago, replacement should be considered.



Aerial view of roof



Interior view of roof structure

K-style gutters run the eaves of the roof, with downspouts at each of the building corners. Downspouts typically discharge to daylight.



View of roof eave, gutters, and downspouts.



Building Envelope – Exterior Doors

Entry to the 1st Floor Social Services offices and the food pantry is an aluminum and glass door that appears to be in good condition. The 2nd Floor Donations and Collection entry is a single steel door with a narrow glass lite and also appears to be in good condition. Both doors are ADA compliant.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis

The upper floor has a secondary egress door on the west elevation that leads to an outdoor stair. The flush panel, steel clad door provides no hardware for entry and is only for egress purposes.



1st Floor Entry door, exterior



1st Floor Entry door, interior



2nd Floor Entry door



2nd Floor egress door

Building Envelope – Windows

The windows at the Municipal Annex are vinyl clad casement windows and appear to be original to the building's construction. Although they appear to be in good condition, they are nearing their 30-year life.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis



Typical casement windows, north elevation



Typical casement windows, south elevation



Typical casement window, interior



Typical casement window, interior

Building Envelope – Porches, Steps, and Ramps

Access to the 1st Floor is via a concrete ramp that is ADA compliant and provides a direct route from the north parking lot to the building entry. The steel tube handrail that runs the length of the ramp is constructed to the proper height and has the compliant handrail extension at the end. Efflorescence and cracking was noted at one end of the ramp.



ADA ramp at building entry



Efflorescence and cracking at bottom of ramp

A concrete sidewalk provides access from the south parking lot to the 2nd floor Donations and Collections

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM MUNICIPAL ANNEX

4.5.1 Architectural Conditions Analysis



Views of sidewalk to 2nd floor entry



As noted earlier, there is a second door for egress on the 2nd Floor that leads to an external covered staircase to grade. The wood framed steps appear to be in good condition.



2nd Floor egress stair



Building Interior

Building Interior – 1st Floor Offices

There are two office spaces on the 1st floor to provide social services for the Town of Haddam. Each office has sufficient space for a single occupant, however there is little room to expand if more staff is ever needed.



1st Floor Office



1st Floor Office

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis



1st Floor lobby

Building Interior – 1st Floor Food Pantry & Storage

In addition to Social Services, the 1st Floor is used for a food pantry for the residents of Haddam. Storage space appears to be sufficient, however this should be reviewed with the Annex staff to verify if their needs are being met.

The 2nd Floor is not accessible from the 1st Floor, so residents in need of both food and clothing are required to leave the building and walk or drive around to the other side to get to the other floor for their needs.



1st Floor Storage



1st Floor Storage

Building Interior – 2nd Floor Donations/Collections Space

The 2nd Floor of the Municipal Annex is used for donations and collections of clothing and goods for the Town People of Haddam in

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis

need. The large open space is in good condition. However, as noted in the previous section, there is no direct access to the 1st Floor.



2nd Floor Donations Room



2nd Floor Donations Room

Building Interior – Mechanical

Mechanical space is located on the 1st Floor of the Annex and appears to be in good condition.



Mechanical Space



Mechanical Space

Building Interior – Flooring

The flooring for the Municipal Annex is VCT in the common areas, and LVT wood plank in the main foyer and offices. The newer LVT is in excellent condition. VCT is in good condition, however dated in appearance. Cracking was noted in several areas.



Typical 1st floor LVT flooring

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis



1st Floor VCT in corridor



1st Floor VCT in toilet room



2nd Floor VCT in Donations Space



2nd VCT in toilet room

Building Interior – Walls

The interior walls are typically in very good condition with no major dents or dings. The typical concerns with most walls are scuff marks that can be resolved with new paint.



Typical 1st Floor wall



Typical 2nd Floor wall

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.1 Architectural Conditions Analysis

Building Interior – Ceiling

The ceilings overall are in good condition. Ceilings on the 1st floor are gypsum board and show no signs of obvious marks or cracks.

Ceilings on the 2nd floor are newer 2x4 ACT tiles and are in excellent condition.



1st Floor gypsum board ceiling



1st Floor gypsum board ceiling



2nd Floor ACT ceiling



2nd Floor ACT ceiling

Building Interior – Doors and Hardware

The typical doors throughout the Municipal Annex are flush panel metal doors. Door handles are a combination of door knobs and levers are not always ADA compliant.



Typical doors



4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

HADDAM MUNICIPAL ANNEX

4.5.1 Architectural Conditions Analysis

Building Interior – Kitchen

The 1st Floor kitchen cabinets, countertops, and fixtures all appear to be in good condition, however they are not ADA compliant. Cabinets are not the proper height, nor do they provide knee space at the sink for wheelchair access.



Lower level Kitchenette



Lower level Kitchenette cabinets

Building Interior – Toilet Rooms

Toilet Rooms are provided for on the 1st and 2nd Floors. Fixtures and finishes are in good condition.



1st Floor toilet room



2nd Floor toilet room

RECOMMENDATIONS

The scope of work presented here for the Haddam Municipal Annex is in an effort to create a structure that will provide the Town of Haddam a structure that is Building Code and ADA compliant, with newer finishes and equipment, and provide spaces for multiple activities:

Refer to the Structural and MEP reports for recommendations regarding structural and mechanical concerns.

1. Site
 - a. Repair work to the east cast-in-place retaining wall
 - b. Repave parking lot
 - c. New concrete sidewalks
2. Exterior
 - a. New 30-year architectural shingles
 - b. Repair work to damaged vinyl clapboard
3. Doors
 - a. Update door hardware to ADA standards
4. Windows
 - a. Provide new thermally efficient vinyl windows
5. Kitchen
 - a. Provide kitchen cabinets, fixtures, and appliances that are ADA compliant
6. Programmatic Needs
 - a. Office space is adequate, but minimal
 - b. Access between floors internally would be beneficial
 - c. Storage is adequate, but could be better planned. Clothing is upstairs and food pantry is downstairs

4.5.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Plumbing

Domestic Water

The buildings domestic water is supplied from an on-site well water system. There is a 44-gallon well storage tank and acid neutralizing water treatment device located inside the building mechanical room. The well storage tank was manufactured on May 2, 2017 and appears to be in good working condition. Domestic cold water piping is copper with soldered and press-fit fittings. Piping is currently un-insulated. Recommend installing low flow plumbing fixtures to reduce water consumption.

	
44-Gallon Well Storage Tank.	Acid Neutralizer

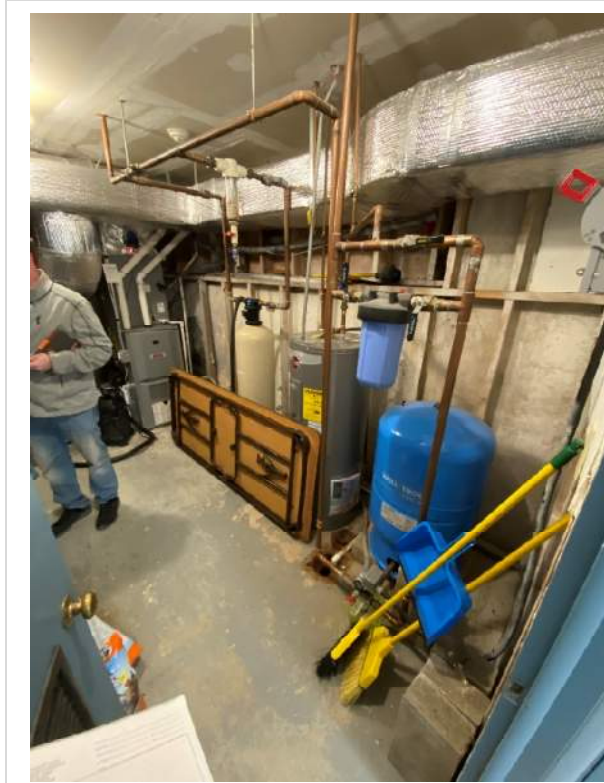
4.0 Existing Facility Survey

Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX

4.5.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Domestic Hot Water Plant

The buildings domestic hot water is generated by a 40-gallon electric storage tank water heater. The water heater was manufactured on February 16, 2021 and appears to be in good working condition. Domestic hot water piping is copper with soldered and press-fit fittings. Piping is currently un-insulated. Recommend insulating all domestic hot and cold water piping to reduce heat loss and energy loss.



Mechanical Room



Water Heater

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX

4.5.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Propane Supply

There is a 500 gallon above ground propane tank located outside the building which currently serves the building's HVAC equipment. Gas piping inside the building is black steel with threaded fittings.



500-Gallon Propane Tank



Propane Gas Piping to HVAC Unit

4.5.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Mechanical

Heating and Cooling

The building is heated and cooled via two Air Handling Units (AHU). The first floor is heated and cooled with a propane fired vertical AHU. The AHU is also equipped with a DX cooling coil that is connected to a grade mounted outdoor condensing unit. The AHU is connected to ductwork which distributes heated and cooled air to the various rooms. There is no mechanical ventilation/outdoor air connected to the AHU. There are operable windows in the building. The AHU is controlled by a stand alone programable thermostat.

The second floor has a similar configuration for heating and cooling.

Recommendations:

To provide enhanced indoor air quality an Energy Recovery Unit can be added and paired with the existing AHU to provide ventilation air. Ensure thermostats are programmed correctly with night set backs and heat is set back during unoccupied hours.



Electrical

Electrical Service and Distribution

The building is fed by a 200Amp, 240/120V, 1-phase, 3-wire service via overhead lines from a utility pole mounted transformer.

The main utility room contains the main electrical panelboard for the building, which feeds the building’s various mechanical, lighting, and receptacle loads.

Lighting

4.5.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Lighting in the building consists primarily of surface linear lensed fixtures. The lamp type or style of fixtures vary by location (CFL or T8 fluorescent retrofit). Controls consist primarily of single pole toggle switches. Exterior building mounted lighting is controlled via timeclock and photocell.

Emergency lighting consists of combination exit sign or stand-alone self-contained battery units. Code compliant coverage was observed in the corridors.

Fire Alarm

The building contains an addressable horn-strobe fire alarm system by Fire Lite. The fire alarm control panel is located in the main utility room, connected to a cellular wireless communicator by Starlink. The building is protected by smoke detectors and manual pull stations at the points of egress. Visual and/or sound notification appliances were observed at required locations.

Telecommunications & Security

The building is served by internet service provided by a wifi-enabled cable modem located in one of the offices. A wall section in the utility room contains punch down blocks for cooper.

Security consists of video Surveillance cameras around the building perimeter. No Intrusion detection was observed in the property.

Recommendations:

1. Retrofitting existing lamps to LED and installation of localized standalone vacancy/occupancy sensors is recommended for additional energy savings.
2. Installing a security system will improve the physical security of the building, its occupants, and internal assets.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX

4.5.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Electric service entrance and meter



Main electrical panel



Fire Alarm Control Panel



Internet wireless-modem

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX

4.5.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Self-contained emergency light and strobe



Typical surface linear light fixture

4.5.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Recommendations Summary

1. Replace plumbing fixtures (i.e. faucets, toilets) with low-flow water saving plumbing fixtures.
2. Insulate all domestic cold and domestic hot water piping.
3. Provide Energy Recovery Unit, paired with the existing AHU, to provide ventilation air and enhanced indoor air quality.
4. Ensure thermostats are programmed correctly with night set backs and heat is set back during unoccupied hours.
5. Retrofitting existing lamps to LED.
6. Install localized standalone vacancy/occupancy sensors for additional energy savings.
7. Installing a security system will improve the physical security of the building, its occupants, and internal assets.

Structural

Observations and Recommendations:

At the request of Antinozzi Associates, the staff of Michael Horton Associates, Inc. (MHAI) visited the above referenced site to perform a cursory structural conditions analysis of the existing facility. MHAI's observations were limited due to in place finishes. Our inspection was comprised of visual observations from finished grade at the exterior and the supported floor levels at the interior. No survey work, destructive testing or exploratory work was performed as part of this investigation.

This two-story, wood framed structure, constructed in 2001, is supported on a cast-in-place concrete foundation. The exterior grade slopes from the front to the rear (north to south) of the structure. Due to this grade differential, the building foundation is performing as a retaining wall, however no distress was observed. Minor cracking was observed in the foundation walls, in various locations. Water infiltration and freeze/thaw cycles will cause these deficiencies to worsen, and these areas should be repaired. Please refer to Photograph Exhibits #1 and #2. Except for the minor cracking indicated, the building foundation was observed to be in sound condition.

As previously stated, the wood framing of the supported floors and roof level are concealed by in place finishes and could not be observed. Some cracking of the finishes was observed; however, the cracks appear to be cosmetic in nature and do not represent a structural concern at this time. Should the cracking continue or appear in additional areas, further investigation will be required.

The exterior concrete site retaining walls located on the south side of the building requires structural repairs. Deficiencies such as cracking, surface spalling, and cracks at the railing embedment were observed. Water infiltration and freeze/thaw cycles will cause these deficiencies to worsen, and these areas should be repaired. Please refer to Photograph Exhibits #3 thru #5.

The exterior concrete sidewalks are in need of repairs, such as cracking and spalling of the concrete. Repairs were previously performed, however these patches have failed in various locations. Water infiltration, freeze/thaw cycles and the application of deicers will cause these deficiencies to worsen, and these areas should be repaired. Please refer to Photograph Exhibits #6.

This concludes our structural conditions analysis of this facility.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.3 Structural Conditions Analysis



Exhibit 1



Exhibit 2

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.3 Structural Conditions Analysis



Exhibit 3



Exhibit 4

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM MUNICIPAL ANNEX
4.5.3 Structural Conditions Analysis



Exhibit 5



Exhibit 6

4.6 Haddam Elementary School

Architectural Conditions Analysis.....4.6.1
Mechanical, Electrical, and Plumbing Conditions4.6.2
Structural Conditions Analysis.....4.6.3

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.1 Architectural Conditions Analysis

Existing Building The Haddam Elementary School, located at 272 Saybrook Road, is a two story brick structure originally built in 1948, with additions built in 1953 and 1989. Due to a school restructuring plan, the school was closed in 2019 and is currently being looked at for adaptive re-use to contribute to the area of Higganum Village.



Exterior



Exterior

4.0 Existing Facility Survey

Six Town Buildings Facility Assessment

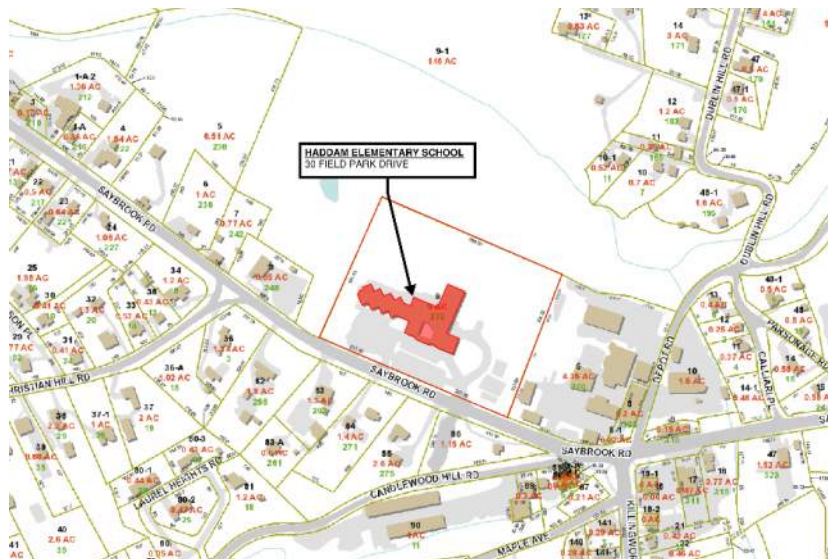
HADDAM ELEMENTARY SCHOOL

4.6.1 Architectural Conditions Analysis

The school is located on flat terrain with the grade sloping down on the north side towards the east. Parking is provided on the south side of the property, with access off of Saybrook Road.



Site aerial



Site Plan

This report includes descriptions of the various systems, the areas they serve, system capacities, existing conditions, areas of concern, and recommendations for each system. Existing Code-related items and issues are reviewed for conformance with building codes presently in effect at the time of this Study.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.1 Architectural Conditions Analysis

Building Profile Haddam Elementary School
272 Saybrook Road
Haddam, CT 06438

Original Construction:	1948
Additions:	1953, 1989
Lot Size:	9 acres
Zoning:	R-1
Number of Parking Spaces:	80 spaces, incl. (2) ADA
Building Façade:	Brick veneer
Roof Construction:	EPDM
Occupancy Classification:	E, Education
Construction Type:	VB – Unprotected-Combustible
Fire Protection System:	No
Emergency Generator:	No
Handicap Accessible:	Yes
Number of Floors:	Two Floors
Existing Total Floor Area:	44,000 SF (gross area)

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.1 Architectural Conditions Analysis

Building Site

Site Conditions

The Haddam Elementary School is situated on approximately 9 acres near Higganum Center directly off of Saybrook Road. Concrete sidewalks line the south side of the building and lead to the Center. The sidewalks are in moderate condition and there are areas of notable cracking. Access to the site is relatively easy from Saybrook Road at multiple entrances.



View from Saybrook Road

The parking lot is split between a larger lot, directly in front of the school, and a smaller lot, to the south east of the building. Overall, it provides 88 spaces, of which two spaces are ADA accessible.

There are two paved play areas to the north east of the school. And the playground to the west of the school appears to have been recently taken down.



Site aerial indicating parking lots and playgrounds

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.1 Architectural Conditions Analysis

Paving overall is in moderate condition in the parking lot and drop off areas. Although there is no major damage, paving is cracked and parking lines are faded.



Entrance to parking lot



View of parking lot

Asphalt paving abuts much of the rear of the school and is cracked and buckling.



Typical asphalt paving at rear of school



As noted earlier, sidewalks around much of the school are showing signs of deterioration, cracking, and general disuse.



Typical damage at concrete sidewalks

Landscaping around the school consists of small trees and bushes around the front of the building, primarily located around the entries. Low post and rail fencing lines the front of the west wing.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.1 Architectural Conditions Analysis



Typical fencing and landscaping at west wing

A central courtyard between the older entrance and the new is surfaced with brick pavers. The landscaping appears to be in good condition and not overgrowing, however, organic growth is expanding in the joints of the pavers and may eventually cause damage.



Courtyard pavers and landscaping

Building Envelope Building Envelope – Exterior Walls

The exterior walls of the Haddam Elementary School are brick veneer with CMU block or wood stud backup, and overall appear to be in good condition. Mortar joints typically show minimal signs of cracking; however, some open joints and spalling were noted on the west façade. Some cracking was also noted in the cast-in-place foundation. Staining on the brick was observed at multiple window sills and near leaders. Graffiti was noted on the west elevation.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.1 Architectural Conditions Analysis



South east elevation



North east elevation



Crack in cast-in-place foundation



Staining at brick



Staining at rain leaders and window sills



Graffiti



Open mortar joints and spalled brick & column requiring painting



Staining, cracked brick

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.1 Architectural Conditions Analysis

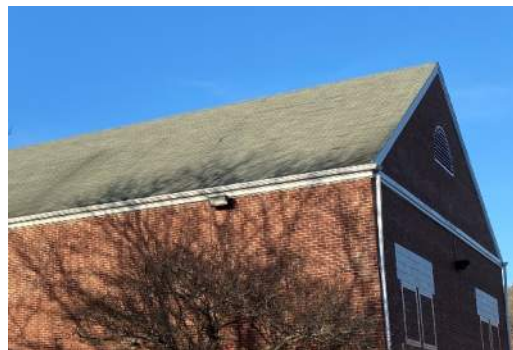
Building Envelope – Roofs and Gutters

The Haddam Elementary School roof is primarily flat with an EPDM surface. The EPDM has been inspected and repaired over 20+ years, and well maintained; however, with an aging roof, replacement should be considered.



Aerial of roofs

The asphalt shingles on the gabled Multi-purpose room and Gymnasium have exceeded their life expectancy and loose and missing shingles were noted.



Asphalt roof at gymnasium



Asphalt roof at old entry

Gutters and leaders appear to be in good condition; however, several bent and damaged leaders were noted around the perimeter of the building. Leaders typically run to underground piping, although several do run to daylight.

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View of roof eave, downspouts, and underground connections

Building Envelope – Exterior Doors

There are multiple entrances to the Haddam Elementary School. Door styles vary from solid to glass, and are typically in fair to good condition. Doors typically are functioning well, however have chipped paint. Hardware is ADA compliant. Many doors appear to be original to the building and replacement should be considered.



South east Entry door

South west entry door,
interior

East entry



East entry door



West entry door



West entry

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Building Envelope – Windows

The windows at the Haddam Elementary School are typically aluminum storefront casement or awning style, with insulated glass. The age of the windows could not be determined; however, if they are near 15-20 years, they have reached their life expectancy and should be replaced.



Typical classroom windows



Typical toilet room windows



Typical windows, east wing



Curtain wall window at east entrance, rear

Paint is flaking at steel lintels at windows and they are showing signs of rusting.



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Building Envelope – Entry, Porches, Steps, and Ramps

The original entrance to the Haddam Elementary School requires steps and is not handicapped accessible. Barrier free entry is provided at the newer main entrance at the east wing of the school, as well as a secondary entry in the west wing.



Old Front entry steps



Entry colonnade



West entrance

The Haddam Elementary School is fully accessible, however there are several locations steps and ramps are required to navigate entrance into the building or around it. Many of these locations are deteriorating and in very poor condition.



Covered areaway



Steps at rear



Accessible curb cut

Building Interior

Building Interior – Mechanical Room

Mechanical spaces are located in the basement and typically appear to be in good working condition; however, it was noted that there is visible corrosion on one of the boilers.



Mechanical equipment in basement

Building Interior – Classrooms

Haddam Elementary School provides classrooms located over two floors in the east wing, and one floor in the west wing. Overall, classrooms are

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in moderate to good condition. Flooring and ACT ceilings are showing staining, sagging, and general signs of dis-use.



Typical classroom, east wing



Typical classroom, east wing



Typical classroom, west wing



Typical classroom, west wing

Building Interior – Multi-Purpose Room

The Multi-Purpose Room, located centrally in the school, provides a space for multiple events including gym activities, plays, large group meetings, and dining. The space is in good condition overall, although water stains were noted in the ceiling tiles.



Multi-purpose Room, looking towards the stage

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View from stage looking south



Stage



Steps to stage



Back stage

Building Interior – Gymnasium

The Gymnasium, located in the lower level of the east wing was part of the last addition to the school. Overall the space is in very good condition, however the floor is cracked, striping is worn, and the surface is slippery.



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Gymnasium



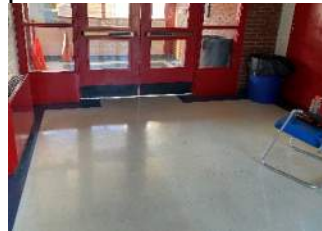
Gymnasium



Gymnasium flooring

Building Interior – Flooring

The flooring for the Haddam Elementary School varies from bare concrete in the Mechanical Room, to VCT and carpeting in the corridors and classrooms, to rubber surface flooring in the gymnasium. Most flooring appears to be in fair condition, although worn and stained in places.



VCT at main entrance



Stained carpet in corridor



Wrinkled carpet in classroom

Flooring for the east wing Toilet Rooms is 1x1 tile and in fair condition. There are no significant signs of cracking or damage, however tiles and grout are dirty from age and dated in appearance.



East wing tile flooring in toilet rooms

Flooring in the west wing Toilet Rooms is poured epoxy and is in moderate condition. It is dirty and stained, and locations under urinals have been replaced with what appears to be a concrete epoxy.

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West wing epoxy flooring in Toilet Rooms



Building Interior – Walls

The interior walls of the school are typically CMU block, brick, or gypsum wall board. Most walls are in good condition; however, the gypsum wall board walls of the west wing show signs of denting, scuffing and light damage.



Typical CMU wall



Brick wall in east wing



Gypsum board walls in west wing

Building Interior – Ceiling

The ceilings throughout the school are mostly ACT and are showing signs of water staining, sagging, mis-matched and broken tiles.



Main Entry ceiling



Water stains at classroom ceiling



Water stains, corridor



Mis-matched tiles



Water stains and sagging

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Building Interior – Doors and Hardware

The doors throughout the Haddam Elementary School vary. Classroom doors are typically solid wood with a slender pane of glass. Office spaces are similar, but often paired with a side lite of glass. Other doors vary from solid wood, to metal with glass lites. All doors appear to be in good condition. Door handles are often door knobs and are not ADA compliant.



Office door



Typical solid wood



Typical classroom and library door



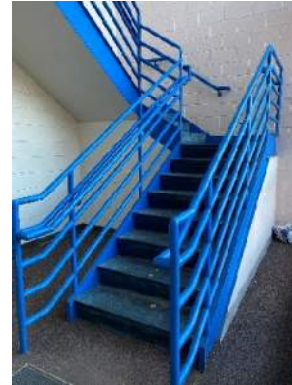
Typical metal door

Building Interior – Stairs

There are two primary stair cases in the school. Both are in good condition with ADA and code compliant treads, risers and railing.



Stairs leading to ground floor



Main stairs

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Secondary stair



Building Interior – Elevators

The elevator is located in the two-story east wing. Wall panels, flooring, and controls are all in good condition.



Elevator door at 2nd Floor



Elevator interior



Elevator interior

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Building Interior – Toilet Rooms

Boys and girls toilet rooms in the newer east wing are provided for on the 1st and 2nd Floors. Fixtures and finishes are in good condition. ADA compliant stalls and fixtures are provided. As discussed in the ceilings section of this report, the ACT is water stained in multiple areas. The 2x2 floor tile is showing signs of wear and tear.



East wing toilet room



Toilet rooms are also provided in the original school's west wing. A fully compliant ADA stall is not provided, however, ambulatory stalls with grab bars are. Fixtures are in good condition. The epoxy flooring is in moderate condition with staining, pitting, and areas that have been patched in completely. Similar to the newer toilet rooms, the ACT ceiling is drooping and water stained.



West wing toilet room



West wing toilet room



RECOMMENDATIONS

The scope of work presented here for the Haddam Elementary School is in an effort to create a structure that will provide the Town of Haddam a structure that is Building Code and ADA compliant, with newer finishes and equipment, and provide spaces for multiple activities.

In an effort to adapt and re-use the former Haddam Elementary School (HES), the Assessment Team was directed to provide the Town of Haddam two conceptual plans to consider the relocation of the Town departments into the former school. Option 1 would incorporate some Town Offices in the west wing, while the east wing would be developed into housing units. Option 2 would utilize the entire school for all Town offices. Recommendations as listed here would apply to both options. Refer to Section 6.0, Conceptual Studies, for mor information.

Refer to the Structural and MEP reports for recommendations regarding structural and mechanical concerns.

1. Site
 - a. Repave parking and re-stripe spaces
 - b. Remove asphalt paving abutting rear of building and replace with sidewalks and landscaping
 - c. Remove and replace existing concrete sidewalk
2. Exterior
 - a. Repoint and repair brick veneer
 - b. Repair cracks in cast-in-place foundation
 - c. Clean and reseal brick veneer
 - d. Provide new EPDM roof
 - e. Provide new 30-year architectural asphalt shingles
3. Windows
 - a. Replace windows with new energy efficient insulated storefront windows
 - b. Scrape, clean and paint steel lintels
4. Doors
 - a. Replace all exterior doors new thermally efficient doors and frames
 - b. Update door hardware to ADA standards throughout
5. Elevator
 - a. Inspect and update elevator certification
6. Floors
 - a. Carpeting in corridors and classrooms should be removed and replaced with new LVT/VCT
 - b. New gym flooring in the Gymnasium
 - c. Toilet room flooring to be replaced with new epoxy flooring

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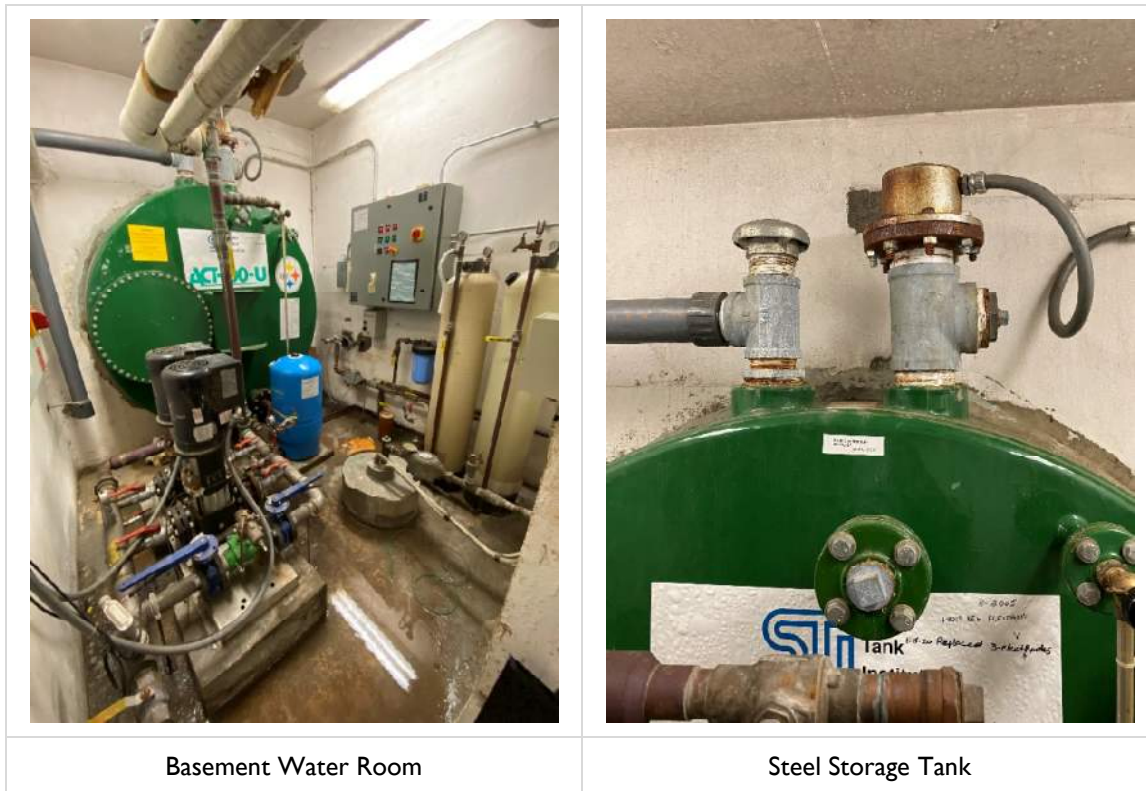
7. Ceilings
 - a. Provide new ACT ceiling that is sag free and clean throughout
8. Walls
 - a. Various minor repairs to walls throughout
 - b. New paint throughout

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Plumbing

Domestic Water

The buildings domestic water appears to be supplied from two (2) on-site well water systems, one (1) old and one (1) new, each with their own neutralizer. Water is stored in a large semi-underground steel tank that is partially underground and partially into the basement. The storage tank appears to be from 2005 and had 3 electrodes replaced on 01-15-2020. The water system is equipped with a skid mounted duplex booster pump system with control panel and hydro tank.



Basement Water Room


Steel Storage Tank

Domestic Hot Water Plant

The buildings domestic hot water is generated by a 70-gallon oil-fired storage tank water heater. Domestic hot water is supplied through a master thermostatic mixing valve. The building is equipped with a hot water recirculation loop and pump. The recirculation pump appears to be new as of 02-14-2023. Recommend insulating all domestic cold water, hot water, and hot water recirculation piping to reduce heat loss and energy loss.

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4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

	
Water Heater	Master thermostatic Mixing Valve

Oil Supply

There is a buried oil tank at the exterior of building which supplies the domestic water heater and boiler plant.

	
Buried Oil Tank	Oil Tank Level Monitor System

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Recommendations:

Based on Architect's Option 1 (Town utilizes all of the building):

Recommend switching to propane-fired mechanical equipment, discussed further in depth below, and removing the existing buried oil storage tank and all associated oil fill and oil vent piping. Remove existing oil distribution piping within building currently serving the existing water heater and boiler plant.

Remove existing oil-fired water heater and replace with a new propane fired water heater, AO Smith model #BTH-150(A).

Provide three (3) new 1,000-gallon propane tanks at the building exterior. Propane piping will be routed into the building to supply the new domestic water heater and new boiler heating plant.

Remove and replace existing duplex domestic water booster pump package including skid mounted pumps and control panel. Provide new duplex booster pump package, Armstrong 6800 series with integrated controls and variable speed motors. Pumps shall be 208V, 1 Phase, 2HP each.

Existing plumbing fixtures in the new Town spaces will be removed. Recommend removing all domestic cold water, domestic hot water, and domestic hot water recirculation piping back to the domestic water booster pump in the basement. Provide new domestic cold water, domestic hot water, and domestic hot water recirculation distribution piping to serve the new plumbing fixtures. Provide new drain, waste, and vent piping to tie new plumbing fixtures in existing drain, waste, and vent piping.

Recommend providing low-flow water saving plumbing fixtures by American Standard, or equal.

Recommendations:

Based on Architect's Option 2 (Town utilizes part of the building):

All existing plumbing piping serving portions of the existing building that will be outside the extents of the new Town spaces shall be disconnected and removed.

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Recommend switching to propane-fired mechanical equipment, discussed further in depth below, and removing the existing buried oil storage tank and all associated oil fill and oil vent piping. Remove existing oil distribution piping within building currently serving the existing water heater and boiler plant.

Remove existing oil-fired water heater and replace with new propane fired water heater, AO Smith model #BTH-120(A).

Provide two (2) new 1,000-gallon propane tanks at the building exterior. Propane piping will be routed into the building to supply the new domestic water heater and new boiler heating plant.

Remove and replace existing duplex domestic water booster pump package including skid mounted pumps and control panel. Provide new duplex booster pump package, Armstrong 6800 series with integrated controls and variable speed motors. Pumps shall be 208V, 1 Phase, 2HP each.

Existing plumbing fixtures in the new Town spaces will be removed. Recommend removing all domestic cold water, domestic hot water, and domestic hot water recirculation piping back to the domestic water booster pump in the basement. Provide new domestic cold water, domestic hot water, and domestic hot water recirculation distribution piping to serve the new plumbing fixtures. Provide new drain, waste, and vent piping to tie new plumbing fixtures in existing drain, waste, and vent piping.

Recommend providing low-flow water saving plumbing fixtures by American Standard, or equal.

Mechanical

Heating, Cooling and Ventilation

The heating is provided by two oil fired low pressure steam boilers. Steam is distributed to approximately half the building. One of the boilers has visible corrosion. The other half of the building is heated with hot water, the hot water is generated via a steam to hot water shell and tube heat exchanger. Hot water is distributed by two base mounted pumps. Perimeter radiators are located throughout the building. The radiators are steam or hot water depending on the area of the building. Entrances and vestibules are heated with cabinet unit heaters.

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4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

The gym is provided heat and ventilation by two air handling units that are hung from the structure above. The units are connected to distribution ductwork. Each unit has a steam heating coil and is connected to an outside air intake louver located at the gabled ends of the gym. Two exhaust fans are located on the gym roof.

East wing of the building's classrooms are provided with exhaust via rooftop exhaust fans.

West wing of the building's classrooms are provided with exhaust via a rooftop energy recovery air handling unit.

Three classrooms are provided with through wall air conditioning units for cooling.

Kitchen on lower level has two ducted exhaust hoods.

The office area is cooled and ventilated via a rooftop air handling unit.

The building is equipped with an active radon exhaust system which was installed in 2017.

There are pneumatic controls located in the basement. There is a also a combination of pneumatic and digital thermostats in rooms. The pneumatic controls are by Johnson and the digital are by Alerton.

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Recommendations:

Hydronic Heating System

Based on Architect's Option I (Town utilizes all of the building):

Remove existing oil fire steam boilers. Provide two (2) new propane fired high efficiency condensing boilers. Provide pumps to distribute heating hot water to the entire building. Each boiler will be approximately 850 MBH Patterson Kelly Sonic Model SC-850 or similar.

Alternate 1: Maintain existing fin tube radiators, adjust as need to accommodate new walls. This would include maintaining existing hot water piping distribution and also providing new hot water piping to new (4) Dedicated Outdoor Air Systems (DOAS).

Alternate 2: Remove all existing radiators and provide new radiators sized for low temperature. New radiators to be provided at perimeter locations. This would also include new heating hot water piping connected to the new boilers and (4) DOAS.

Alternate 3: Remove all existing radiators and provide new ceiling mounted radiant panel heaters. This would also include new heating hot water piping connected to the new boilers and (4) DOAS.

Heating And Cooling System:

Based on Architect's Option I (Town utilizes all of the building):

Provide heating and cooling via Variable Refrigerant Flow (VRF) system. This would consist of roof or grade mounted air cooled condensing units. A combination of ducted and ductless indoor evaporator units. Provide (1) three roof mounted DOAS to provide outdoor/ventilation air. DOAS unit will consist of energy recovery, hot water coil, cooling coil and hot gas reheat. This unit would provide ventilation air to the office areas only, i.e. Tax Collector, Assessor, First Selectman, Fire Marshall, Parks and Rec, Social Services, Youth and Family, Building Support and a few future spaces on lower level. Provide Building Management System (BMS) to control heating, cooling and ventilation systems.

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

This option shall also include quantity of unit shown below in Option 2.

Gym (assembly space):

Base Bid:

Maintain (2) existing ceiling hung hot water heating and only units. These units are in fair condition.

Alternate:

Provide (2) new ceiling hung hot water air handling unit (AHU) with DX cooling and ventilation air. The DX cooling would be provided by a grade mounted condensing unit connected to the indoor unit via refrigerant piping. The indoor unit would be equipped with hot gas reheat and an energy recovery wheel. Existing roof mounted exhaust fans would be removed, the existing exhaust penetrations would be reutilized for exhaust air from the AHU. Each of the (2) AHU would be sized for 4,000 cfm and 10 Tons.

Summary of VRF units:

CU-1 = 20 Ton (Mitsubishi Model PURY-HP240 with Hyper-heat or similar)

VRF-A = 1 Ton x 4 (Mitsubishi Model PLFY-EPI2NEMU, Ceiling cassette or similar)

VRF-B = 1.5 Ton x 2 (Mitsubishi Model PLFY-EPI8NEMU, Ceiling cassette or similar)

VRF-C = 0.5 Ton x 5 (Mitsubishi Model PMFY-P06NBMU, I-way Ceiling cassette or similar)

CU-2 = 24 Ton (Mitsubishi Model PURY-HP288 with Hyper-heat or similar)

VRF-C = 0.5 Ton x 8 (Mitsubishi Model PMFY-P06NBMU, I-way Ceiling cassette or similar)

VRF-E = 2 Ton x 12 (Mitsubishi Model PLFY-EP24NEMU, Ceiling cassette or similar)

Kitchen:

Base Bid:

Maintain existing hoods and associated exhaust fan. The hoods and associated fans are in good condition.

Alternate:

The kitchen will be provided with exhaust fans connected to any grease hoods. New exhaust fan will be grease rated and size for 2,000 cfm. The quantity of fans depends on the new kitchen layout.

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Hydronic Heating System

Based on Architect's Option 2 (Town utilizes part of the building):

Disconnect/remove existing heating systems from existing boilers. Provide two (2) new propane fired wall mounted high efficiency condensing boilers. Provide zone pumps to each of the three different occupancy types. Each boiler will be approximately 328 MBH Lochinvar Model WHB399L or similar.

Alternate 1: Maintain existing fin tube radiators, adjust as need to accommodate new walls. This would include maintaining existing hot water piping distribution and also providing new hot water piping to new (3) Dedicated Outdoor Air Systems (DOAS).

Alternate 2: Remove all existing radiators and provide new radiators sized for low temperature. New radiators to be provided at perimeter locations. This would also include new heating hot water piping connected to the new boilers and (3) DOAS.

Alternate 3: Remove all existing radiators and provide new ceiling mounted radiant panel heaters. This would also include new heating hot water piping connected to the new boilers and (3) DOAS.

Heating And Cooling System:

Based on Architect's Option 2 (Town utilizes part of the building):

Provide heating and cooling via Variable Refrigerant Flow (VRF) system. This would consist of roof or grade mounted air cooled condensing units. A combination of ducted and ductless indoor evaporator units. Provide (3) three roof mounted DOAS to provide outdoor/ventilation air. DOAS unit will consist of energy recovery, hot water coil, cooling coil and hot gas reheat. Each unit will be dedicated to a zone, Town Offices, Senior Center and Community Shared Space. Provide Building Management System (BMS) to control heating, cooling and ventilation systems.

Town Hall:

CU-3 = 6 Ton (Mitsubishi Model PURY-HP72 with Hyper-heat or similar)
VRF-A = 1 Ton x 1 (Mitsubishi Model PLFY-EPI2NEMU, Ceiling cassette or similar)

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

VRF-B = 1.5 Ton x 3 (Mitsubishi Model PLFY-EP18NEMU, Ceiling cassette or similar)
VRF-C = 0.5 Ton x 2 (Mitsubishi Model PMFY-P06NBMU, I-way Ceiling cassette or similar)
DOAS/ERV-1 = 500 cfm (Renewaire Model DN2RT or similar)

Senior Center:

CU-4 = 12 Ton (Mitsubishi Model PURY-HPI44 with Hyper-heat or similar)
VRF-A = 1 Ton x 1 (Mitsubishi Model PLFY-EP12NEMU, Ceiling cassette or similar)
VRF-C = 0.5 Ton x 1 (Mitsubishi Model PMFY-P06NBMU, I-way Ceiling cassette or similar)
VRF-D = 3.0 Ton x 3 (Mitsubishi Model PLFY-EP36NEMU, Ceiling cassette or similar)
DOAS/ERV-2 = 1,055 cfm (Renewaire Model DN2RT or similar)

Community Shared Space:

CU-5 = 12 Ton (Mitsubishi Model PURY-HPI44 with Hyper-heat or similar)
VRF-A = 1 Ton x 1 (Mitsubishi Model PLFY-EP12NEMU, Ceiling cassette or similar)
VRF-D = 3 Ton x 2 (Mitsubishi Model PLFY-EP36NEMU, Ceiling cassette or similar)
VRF-E = 2 Ton x 3 (Mitsubishi Model PLFY-EP24NEMU, Ceiling cassette or similar)
DOAS/ERV-3 = 2750 cfm (Renewaire Model DN3RT or similar)

Controls (Applies to both options):

Provide Building Management System (BMS) to control all new mechanical and selected electrical systems. BMS shall be by the Temperature control vendor approved by the owner. System shall include web based graphics to display and monitor/control systems. System shall also have off site alarming capabilities.

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4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis



(2) Oil Fire Steam Boilers



(2) Corrosion at bottom of boiler #1



Shell and tube steam to hot water heat exchanger



(2) Hot Water Pumps

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4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Compressor for pneumatic controls



Classroom with perimeter radiator and (2) through wall air conditioning units



Air Handling Units at Gym



AHU with energy recovery on roof of West Wing

Electrical

Electrical Service and Distribution

The building is fed by an 800Amp, 208/120V, 3-phase, 4-wire electrical service supplied by a pad mounted transformer located near the main entrance to the building.

The main electrical equipment is located in the basement, main electrical room. The main electrical room contains the main service electric meter, main service disconnect, and distribution panel equipment feeding the

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

building's various mechanical, lighting, and receptacle loads. No permanent or temporary generator equipment connections exist in the building.

The service entrance equipment is manufactured by General Electric, consisting of two switchboards (main switch and distribution) and is from the 1989 building renovation. This equipment is located adjacent to the boiler room in the basement. The switchboard is in working condition but is nearing the end of its useful life and replacement parts could be difficult to obtain if needed in the future. The switchboard does not have phase failure or surge protective components, leaving it vulnerable to lightning and utility phase loss conditions.

Lighting

Lighting in the building varies by location and mainly consists of surface linear wraparound fixtures in utility spaces and recessed lensed 2'x4' in corridors, bathrooms, classrooms, or academic spaces. The lighting largely appears to be original to the building construction. The multi-purpose space contains stage lighting consisting of fixtures secured to a rigging system or recessed when located in flat ceiling areas. The lamp type or style vary by location (CFL or T8 fluorescent). The stage lighting appears to be using incandescent lamps. Controls consist primarily of single pole toggle switches.

Occupancy sensors were observed in the interior corridors and in a few office/administrative spaces. Exterior building mounted lighting is controlled via timeclock and photocell.

Emergency lighting consists of stand-alone self-contained battery units. Corridor coverage was observed to be deficient. No emergency lighting was observed at the points of egress.

Fire Alarm

The building currently operates using a conventional horn-strobe fire alarm system by Silent Knight. The fire alarm control panel is located in the main electrical room and is connected to redundant copper lines. Cabinets from an older Simplex Fire Alarm system remain in place and are now used as a splice box for connection to the Silent Knight system loops. Fire Alarm remote annunciators were observed next to the main panel, and in the main entrance vestibule.

The building is protected by smoke detectors and manual pull stations at the points of egress. Visual and/or sound notification appliances were

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

observed throughout the building; however, not all required areas were covered as required by code.

Telecommunications & Security

The telecommunications building entrance facility is located in the main electrical room. Fiber enters this space via an underground conduit. Structured cabling throughout the building consists of analog phone cabling run to telephone handsets, and data CAT5e cabling originating from telecommunication rack equipment located in the basement to outlets in classrooms and offices. No wireless access points were observed in the building. Quantity of data drops in typical office or classroom spaces will not meet the need of new end users.

An Iwatsu telephone system PDX block exists in the main electrical room, but telephone handsets have since been removed from the building. This system is outdated and in need of replacement.

The facility contains a public address and bell system manufactured by Bogen, which appears to have been installed during the 1989 building renovation. This system consists of wall mounted speakers and bells installed in corridors. It is unclear if this system is operational. The head-end equipment is located in the office work area, next to the main office.

Video Surveillance consists of POE cameras mounted on the exterior perimeter and the main entrance. The cameras are connected to a Network Video Recorder (NVR) and monitoring station located in the main office.

Recommendations:

Based on Architect's Option I (Town utilizes all of the building)

Electrical Service and Distribution:

Provide a new electrical service to support all the planned new HVAC, lighting, receptacle, and equipment loads for this option.

The new proposed electrical service shall be sized at 2000A, 277/480V, 3-phase, 4-wire and shall include new distribution equipment to support all loads as required by the new intended use, and latest applicable version of the International Energy Conservation Code (IECC 2021).

The existing electrical service previously serving the building shall be removed in its entirety. The removal shall include electrical distribution, branch panels (serving lighting, receptacle, and mechanical equipment

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

loads), feeders, and connections to existing equipment. The kitchen panel shall remain for future reconnection to the new electrical distribution. Circuits associated with exterior and site lighting shall be relocated to a new lighting panel.

New proposed electrical equipment shall include the following (located in a new electrical room in the basement area):

- Main Distribution Switchboard – 2000 Amp, 277/480V, 3-phase, 4-wire. The main distribution switchboard shall include:
 - Integral SPD and ground fault protection.
 - Main Service Disconnect (MCB) Section.
 - Load Distribution Section with electronic or thermal magnetic circuit breaker devices.
 - Submetering equipment for all load classifications.
- Mechanical Distribution Panel – 800 Amp, 277/480V, 3-phase, 4-wire, 42-space. This panelboard will serve all new CU, DOAS and ERV equipment.
- Mechanical Distribution Panels – (2) 150Amp, 120/208V, 3-phase 4-wire, 42-space, fed via a step-down transformer from upper 277/480V distribution. The panelboard will serve all new indoor VRF, fans, and other mechanical equipment loads.
- Lighting Distribution Panel – 200 Amp, 120/208V, 3-phase, 4-wire, 42-space.
- General Receptacle Distribution Panel – 800 Amp, 120/208V, 3-phase, 4-wire, 42-space, fed via a step-down transformer from upper 277/480V distribution.

Branch panels shall be provided to support all spaces as described in Options I. Electrical panels shall be provided as follows:

- General Receptacle
 - (4) 200 Amp, 120/208V, 3-phase, 4-wire, 42-spaces, with integral SPD protection. These panels will be located

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

centralized to support the Tax Collector wing of the building, upper and lower levels.

- (1) 100 Amp, 120/208V, 3-phase, 4-wire, 42-spaces. This panel will be dedicated to the warming kitchen.
 - (1) 100 Amp, 120/208V, 3-phase, 4-wire, 42-spaces. This panel will be dedicated to the stage and community room areas.
 - (1) 50 Amp, 120/208V, 3-phase, 4-wire, 42-spaces. This panel will be dedicated to new IT loads.
- Lighting
 - (4) 50 Amp, 277/480V, 3-phase, 4-wire, 30-spaces. These panels will be located centralized to support the State Trooper, Computer Lab, and Tax Collector wing of the building, upper and lower levels.
 - (1) 50 Amp, 120/208V, 3-phase, 4-wire, 30-spaces. This panel will be dedicated to the stage and community room areas.

Lighting fixtures and controls:

Provide new lighting fixtures and energy code compliant lighting controls shall be for all spaces associated with Options I.

Lighting fixtures shall be high-efficiency LED. Lighting controls shall consist of low voltage intelligent room controllers, programmable wall switches, and vacancy/occupancy sensors. The lighting control system shall also provide receptacle control as required by the energy code (IECC) in required areas.

Fire Alarm:

Provide a new addressable fire alarm system to support the spaces associated with Options I. The new system shall consist of a new addressable control panel, devices, and connection to redundant copper lines for external communication. The existing fire alarm system to be removed in its entirety.

Telecommunication and Security:

Provide a new telecommunication distribution system for the spaces associated with Option I. The new backbone system shall include new rack

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

equipment, data wiring (Category 5e minimum / Category 6 recommended) to new network drops for computer or wireless equipment. The new telecommunication distribution system shall also be arranged to support a VoIP system.

Provide a small-scale access control system consisting of card reader coverage for the main entrance to a minimum.

Provide new door contacts for all exterior doors located at grade. Similarly, provide intrusion detection motion sensors in all rooms located at grade fitted with exterior windows.

Provide video surveillance cameras to cover the perimeter of the associated building area and entrances.

Based on Architect's Option 2 (Town utilizes part of the building)

Electrical Service and Distribution:

Provide a new electrical service to support all the planned new HVAC, lighting, receptacle, and equipment loads for this option.

The new proposed electrical service shall be sized at 800A, 120/208V, 3-phase, 4-wire and shall include new distribution equipment to support all loads as required by the latest applicable version of the International Energy Conservation Code (IECC 2021). Providing a new service will allow the addition of surge protection and prevent future interruptions due to overload or existing equipment failure if tied to the existing service serving the remaining portion of the building.

Existing electrical infrastructure and connections to equipment located in the areas planned for Options 2 shall be removed back to the panelboard or equipment of origin.

The new proposed electrical equipment shall include the following (located in a new electrical room in the basement area):

- Main Distribution Panelboard – 800 Amp, 120/208V, 3-phase, 4-wire. The main distribution panel shall be provided with Integral SPD protection.
- Mechanical Distribution Panel – 400 Amp, 120/208V, 3-phase, 4-wire, 42-space. This panelboard will serve all new CU, DOAS and VRF equipment.

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

- Lighting Distribution Panel – 100 Amp, 120/208V, 3-phase, 4-wire, 42-space.
- General Receptacle Distribution Panel – 400 Amp, 120/208V, 3-phase, 4-wire, 42-space.

Branch panels shall be provided to support all spaces as described in Options 2. Electrical panels shall be provided as follows:

- General Receptacle
 - (2) 150 Amp, 120/208V, 3-phase, 4-wire, 42-spaces, with integral SPD protection.
 - (1) 100 Amp, 120/208V, 3-phase, 4-wire, 42-spaces. This panel will be dedicated to the warming kitchen.
 - (1) 100 Amp, 120/208V, 3-phase, 4-wire, 42-spaces. This panel will be dedicated to the stage and community room areas.
- Lighting
 - (2) 50 Amp, 120/208V, 3-phase, 4-wire, 30-spaces.
 - (1) 50 Amp, 120/208V, 3-phase, 4-wire, 30-spaces. This panel will be dedicated to the stage and community room areas.

Lighting fixtures and controls:

Provide new lighting fixtures and energy code compliant lighting controls shall be for all spaces associated with Options 2.

Lighting fixtures shall be high-efficiency LED. Lighting controls shall consist of low voltage intelligent room controllers, programmable wall switches, and vacancy/occupancy sensors. The lighting control system shall also provide receptacle control as required by the energy code (IECC) in required areas.

Fire Alarm:

Provide a new addressable fire alarm system to support the spaces associated with Options 2. The new system shall consist of a new addressable control panel, devices, and connection to redundant copper lines for external communication. The existing Silent Knight System to

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

remain and shall be reconfigured to continue to provide protection to the rest of the building.

Telecommunication and Security:

Provide a new telecommunication distribution system for the spaces associated with Options 2. The new backbone system shall include new rack equipment, data wiring (Category 5e minimum / Category 6 recommended) to new network drops for computer or wireless equipment. The new telecommunication distribution system shall also be arranged to support a VoIP system.

Provide a small-scale access control system consisting of card reader coverage for the main entrance to a minimum.

Provide new door contacts for all exterior doors located at grade. Similarly, provide intrusion detection motion sensors in all rooms located at grade fitted with exterior windows.

Provide video surveillance cameras to cover the perimeter of the associated building area and entrances.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Main Electrical Distribution Equipment



Fire Alarm Control Panel and Splice Box



PDX headend and fiber entrance



Typical self-contained emergency light

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis



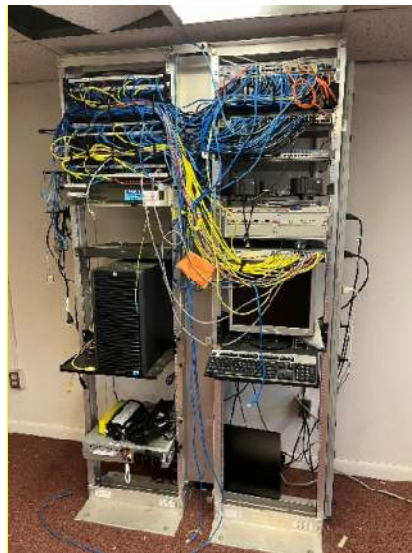
Typical single pole switches



Typical 2'x4' lighting



Stage lighting



Telecommunication rack equipment

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL

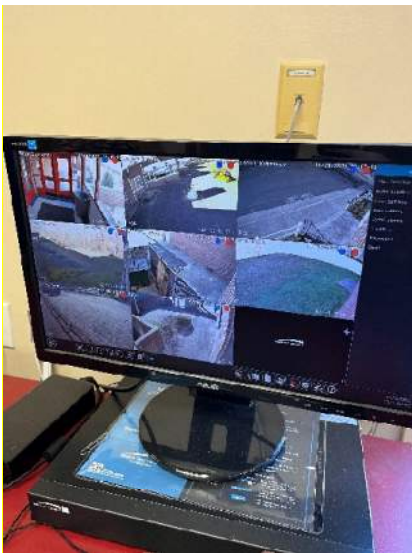
4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis



Central emergency lighting inverter



Main Entrance Lobby equipment



Video Surveillance NVR and Station



PA System headend equipment

4.6.2 Mechanical, Plumbing, and Electrical Conditions Analysis

Recommendations

Summary – Applies to Option 1 & Option 2

1. Remove existing buried oil storage tank and associated trim.
2. Remove and replace existing oil-fired domestic water heater and oil-fired boilers with new propane-fired equipment. Provide propane storage tanks at exterior of building to supply new water heater and new boiler(s).
3. Replace existing domestic water booster pump.
4. Remove and replace existing domestic cold, hot, and hot water recirculation piping. Piping shall be Type L copper with fiberglass insulation.
5. Remove and replace existing plumbing fixtures with low-flow water saving plumbing fixtures.
6. Remove existing boiler plant.
7. Provide new boiler plant including pumps and associated equipment.
8. Provide (3) Dedicated Outdoor Air systems, Variable Refrigerant Flow heat pumps and (3) condensing units for heating and cooling.
9. Provide Building Management System to control mechanical systems.
10. Provide a new electrical service to support all MEP systems associated with Options 1 or 2.
11. Provide new electrical distribution equipment to support the planned electrical loads.
12. Provide new high-efficiency LED lighting fixtures and controls.
13. Provide a new addressable fire alarm system.
14. Provide a new telecommunication backbone and distribution system to support the planned spaces.

Structural

Observations and Recommendations:

At the request of Antinozzi Associates, the staff of Michael Horton Associates, Inc. (MHA) visited the above referenced site to perform a cursory structural conditions analysis of the existing facility. MHA's observations were limited due to in-place finishes. Our inspection was comprised of visual observations from finished grade at the exterior and the various floor levels at the interior. No survey work, destructive testing or exploratory work was performed as part of this investigation.

This two-story structure was constructed in 1948, with subsequent additions in 1953 and 1989. The structure is supported on a cast-in-place concrete foundation throughout. The foundation walls are exposed in the lower-level boiler room and storage room which were observed to be in good condition except for minor shrinkage cracks and exposed horizontal rebar at one location. Please refer to Photograph Exhibits #1 and #2. The slabs on grade also appear to be in good condition with no major cracking.

The exterior walls of the original structure consist of brick veneer with wood stud backup. The interior partitions consist of wood studs with plaster or gypsum finishes. The exterior walls of the additions consist of a brick veneer with masonry backup. The classroom and corridor walls primarily consist of concrete masonry units (CMU). Some of the corridor walls consisted of glazed blocks. Minor vertical cracks were observed in both the CMU and glazed block walls. Please refer to Photograph Exhibit #3. The Gymnasium walls consist of exposed CMU. Control joints were visible on the interior face of the gym walls. Please refer to Photograph Exhibit #4. Vertical and horizontal cracks were observed at various locations in the gym. The stairwell walls all appeared to be in good condition. Please refer to Photograph Exhibit #5.

As previously stated, the existing framing at the various levels is concealed by in place finishes and could not be observed. Some cracking of the finishes was observed; however, the cracks appear to be cosmetic in nature and do not represent a structural concern at this time. Should the cracking continue or appear in additional areas, further investigation will be required. Water damage was also visible in the finishes in some locations. It could not be determined if the water leaks were active or have been repaired. The exposed steel roof framing within the Gymnasium appeared to be in good condition. Steel frames at the roof drains were missing in some locations and should be installed to support the roof deck.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis

The exterior of the building consists of brick veneer with exposed concrete foundation walls. Localized foundation cracking was observed at the new addition of the building. Please refer to Photograph Exhibit #6. There were many locations where brick was noted as cracked or having the face popped. These conditions are typically due to moisture infiltration and should be addressed to avoid further deterioration of the brick. The following are a few of the deficiencies that were noted: The brick windowsill at the main entrance had several chipped or cracked bricks. Please refer to Photograph Exhibit #7. The brick chimney is missing mortar and requires repointing. The exterior fascia board was missing in the rear of the building. Please refer to Photograph Exhibit #8. Brick was cracked or popped in several of the building corners. Please refer to Photograph Exhibit 9-13. There was a large separation crack where two different additions meet. Please refer to Photograph Exhibit #14 There should be a caulked joint at this intersection to allow for differential movement of the buildings.

The main entrance consists of a brick archway with an adjoining canopy. The archway brick has cracked and several of the face shells have popped due to moisture entrapped in the brick and freezing conditions. Please refer to Photograph Exhibit 15 & 16 The steel lintels are also corroded at the archway. Please refer to Photograph Exhibit 17 & 18 The canopy steel columns have severe corrosion at the bases and at connections. Please refer to Photograph Exhibit 19 & 20.

The site retaining wall has spalling concrete with water mitigation through the wall which would indicate that the wall requires waterproofing or drainage behind it. Please refer to Photograph Exhibit 21 & 22. Cracking was also observed where the steel railings are embedded into the top of the wall. Please refer to Photograph Exhibit #23 The site concrete, including stairs, had several cracks and was in poor condition. Please refer to Photograph Exhibit 24 & 25. There was organic material growing on the stairs and walls which were mainly in shaded areas.

This concludes our structural conditions analysis of this facility.

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis

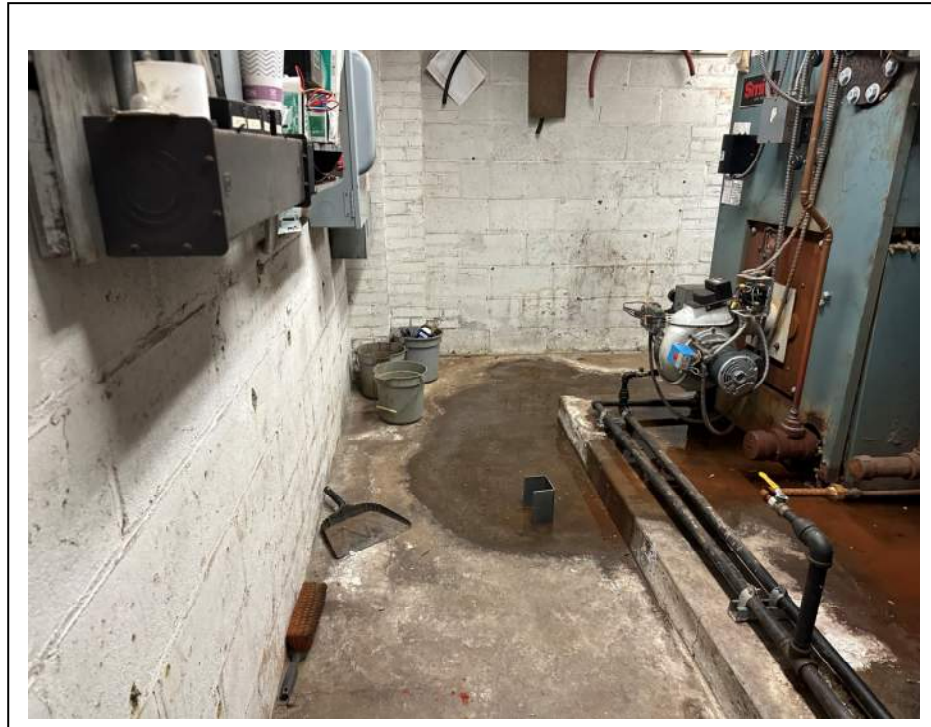


Exhibit 1



Exhibit 2

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis



Exhibit 3

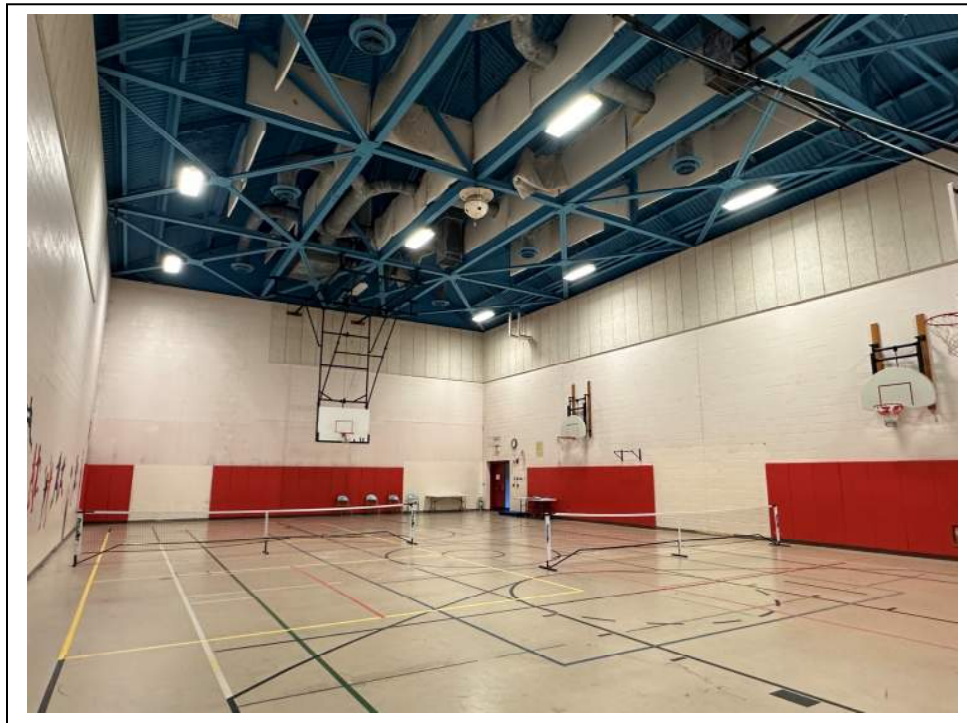


Exhibit 4

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis



Exhibit 5



Exhibit 6

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis



Exhibit 7



Exhibit 8

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis

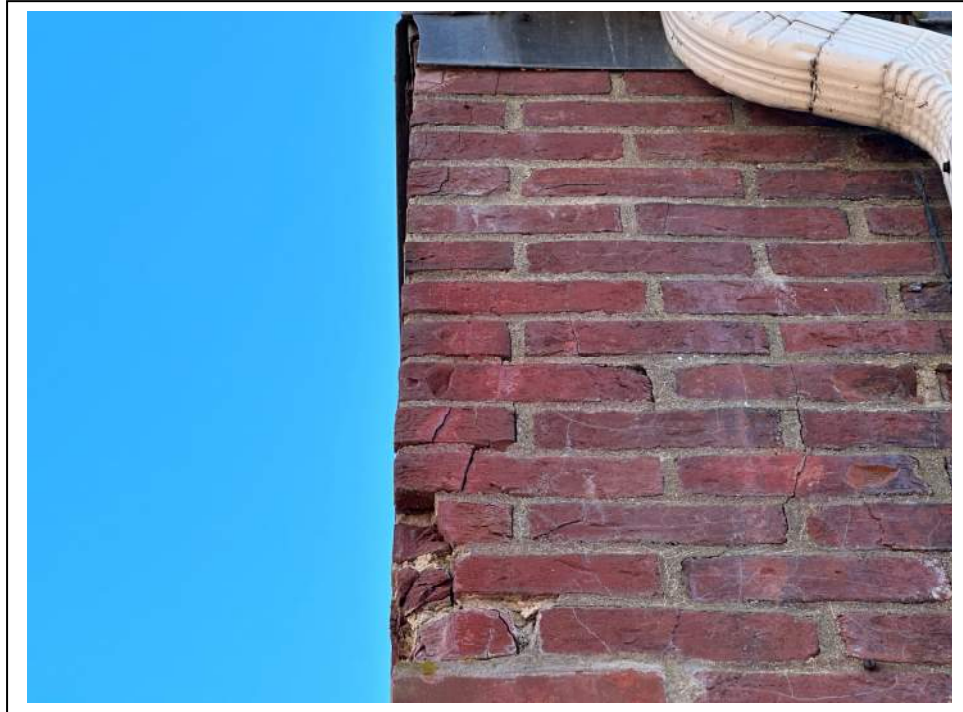


Exhibit 9



Exhibit 10

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Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis



Exhibit 11



Exhibit 12

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis



Exhibit 13



Exhibit 14

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis

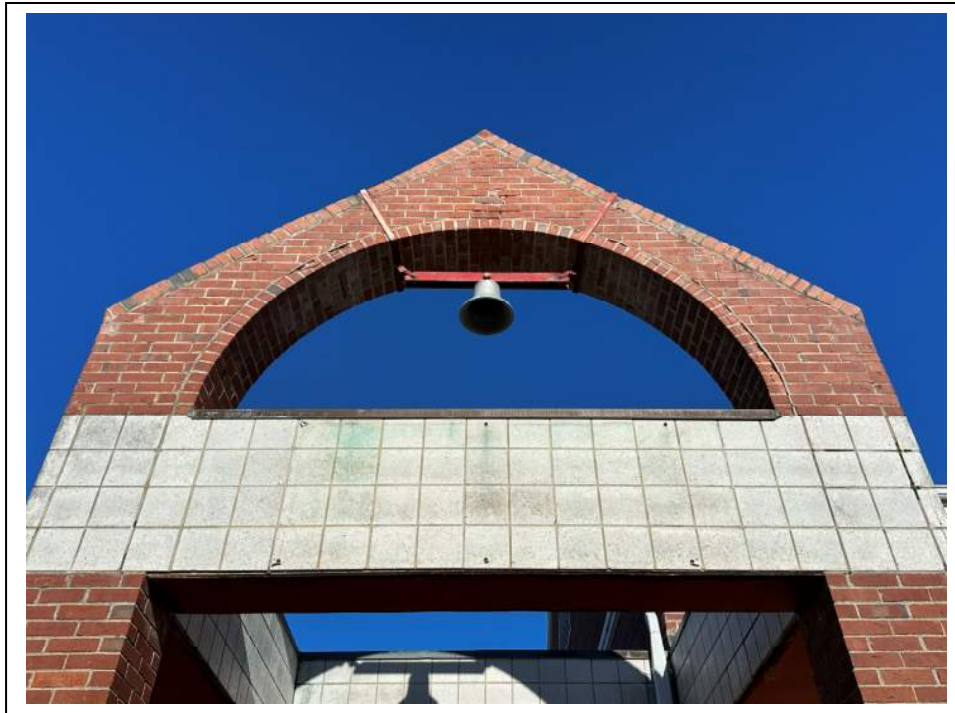


Exhibit 15



Exhibit 16

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis



Exhibit 17



Exhibit 18

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis



Exhibit 19



Exhibit 20

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4.6.3 Structural Conditions Analysis



Exhibit 21



Exhibit 22

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis



Exhibit 23



Exhibit 24

4.0 Existing Facility Survey
Six Town Buildings Facility Assessment
HADDAM ELEMENTARY SCHOOL
4.6.3 Structural Conditions Analysis

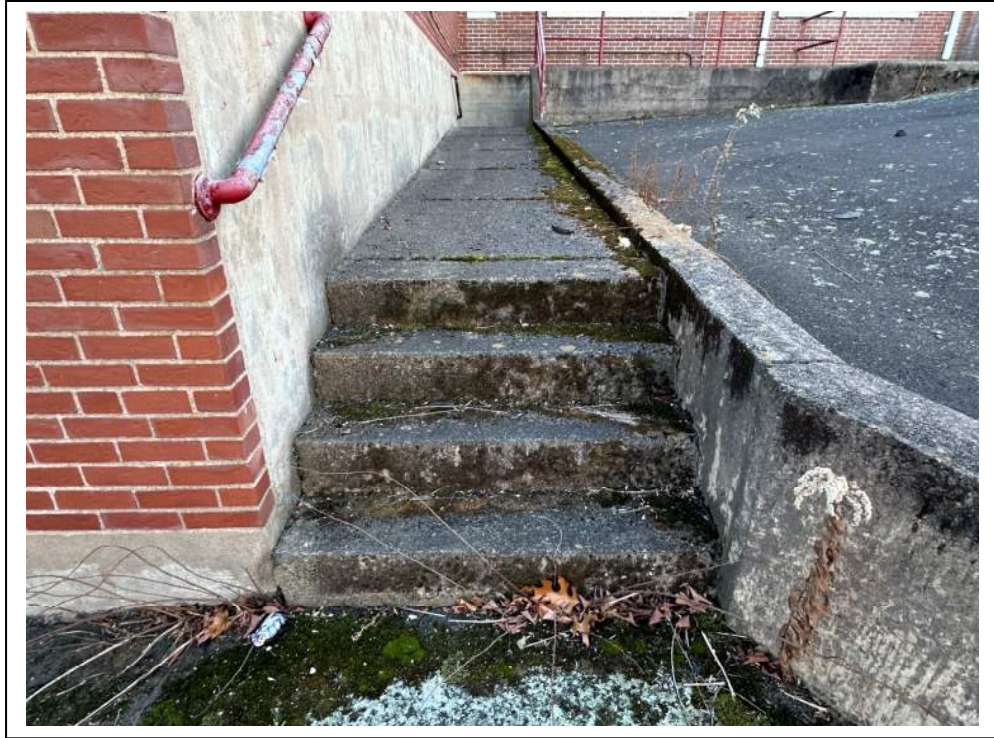


Exhibit 25

5.0 Program Assessment Needs

Programmatic Survey

A series of interviews and walk through's took place with all departments within the existing Town Hall, Department of Social Services, and the Senior Center. The departments in the Town Hall included: Tax Collector, Finance, Town Clerk, Assessor, First Selectman, and Land Use. Within the Town Hall we walked through the existing Fire Marshal's space, and Custodial and shared storage spaces, however, did not meet with anyone for these spaces. The Youth & Family and Recreation Departments corresponded by email for space needs. These interviews were in a questionnaire format that included:

- Description of Services
- Number of staff per department
- Type of space needed (office or cubicle, etc.), as well as support rooms or spaces
- HVAC, plumbing, and electrical requirements
- Service counters or fixed millwork requirements
- Furnishing types that would be appropriate and functional
- Appropriate desired finish types for the space

The interviews were translated into a Program Assessment Need report per space. Based on the space needs a square foot analysis was then created to determine how many square feet each department requires. The Report and the Square Foot Analysis Spreadsheet were submitted for review and approval to Town of Haddam.

The Haddam Elementary School, located at 272 Saybrook Road, was studied to include relocating the Senior Center, Registrar of Voters, and the Community Center. A series of test fits was generated and presented to Town for review and comment. These plans can be found in Section 6, Conceptual Studies.



Program Assessment Needs

DEPT: Tax Collector – Kristin Battistoni

Description of Services:

Public walk up to transaction window, with no access to inside of dept space. Public queue's in common space in lobby. Lock box on exterior, with security monitoring.

Employees (Office or Cubicle or Service Counter):

2 person department, currently in a shared office for 2, that works fine.

Support Rooms:

Access to a safe within space or adjacent, legally required, and use daily. Ideal adjacent dept would be Town Clerk. Needs to be adjacent to Assessors Dept. Need a fireproof file room.

MEP:

Panic buttons at desks.

Millwork:

Include a base cabinet with mail drawers in service counter, 6"h minimum. Service counter is walk up for 1 person at a time.

Finishes:

Likes chalkboard paint on an accent wall.

Technology:

Security cameras, 1 printer, 1 small copier on a stand.

FF&E:

2 desks, 1 storage cabinet, open shelving for binders, 1 Two Drawer Lateral, plus drawers in desks. Uses a cash counter machine, not at counter.

Other Notes:

Needs clear signage on exterior to get into building and each department. Commented on need for more toilets.



Program Assessment Needs

DEPT: Finance – Linda Pinette; Ann Harter

Description of Services:

Do not meet with any public. Handle confidential materials (payroll).

Employees (Office or Cubicle or Service Counter):

Dept of 2, both in private offices.

Support Rooms:

Conference room for 4. Currently adjacent to First Selectman.

MEP:

Millwork:

None

Finishes:

Technology:

1 printer each office.

FF&E:

Linda has (13) drawers within file cabinets; L shaped desk with overhead storage; shelves for binders. Ann has U shaped desk, and a meeting table (better if in a shared room between them).

Other Notes:



Program Assessment Needs

DEPT: Town Clerk – Dawn Tarbetsky; Robert (Bobby) Siegrist

Description of Services:

Meets with public via walk up service counter. Busiest during June-July, queueing occurs.

Employees (Office or Cubicle or Service Counter):

Department of two, in a shared office space, each with own desk.

Support Rooms:

Vault Room, Mailroom (supports all departments), Registrar of Voters (which are now in a different building); Assessor & Land Use (share copier for maps).

MEP:

Panic button.

Millwork:

Include new pay station with drawers. Open shelves on private side. Public stations for (2), 1 standing, 1 sitting (ADA). Currently a lot of built in shelving for Minutes, but should move to vault.

Finishes:

Technology:

1 floor copier; 5 printers; 1 Election Station; Stamper; Scanners; Registers at desks.

FF&E:

Currently 2 tall bookcases, 16 drawers within files.

Other Notes:

Need space for coats, office supplies.

Mailroom consists of: 1 storage cabinet, 1 three drawer lateral, mailbox slots, copier, counter, shredder, 1 sit down workstation (not required), postal machine, base cabinets for storage, and the room supports everyone.

Vault consists of: 4+ flat files stacked for maps, 3 storage cabinets, 4 four drawer verticals, 3 industrial shelves, Vitals cabinet, whole wall of map storage binders, 2 tables with chairs for 6 at each.

Cage adjacent to Vault consists of: 17+ four drawer verticals, storage cabinet, map shelving.

Program Assessment Needs

DEPT: Assessor



Description of Services:

Meets with public via walk up service counter. Speaks with seniors often about private financial matters, need privacy.

Employees (Office or Cubicle or Service Counter):

Department of two, both in private offices.

Support Rooms:

Vault Room, Mailroom, Tax Collector & Town Clerk.

MEP:

Panic button

Millwork:

Service counter with gate separating public/private. Need cash locked drawer. Need 1 public station for property searches, currently not working.

Finishes:

Technology:

tbd

FF&E:

(4) four drawer fireproof verticals. (1) four drawer vertical. (1) Veterans card file drawer. (1) storage cabinet. (1) tall bookcase.

Other Notes:

Program Assessment Needs

DEPT: First Selectman – Robert (Bob) and JoAnn



Description of Services:

Sees public for mostly pistol permits, or misc complaints or issues. Public do not access space, they approach a half door which is locked, and stand in hallway.

Employees (Office or Cubicle or Service Counter):

Department of two, Bob and JoAnn. Bob in private office, not visible from common area. JoAnn visible and is adjacent to Bob's space.

Support Rooms:

Central office or Finance.

MEP:

Panic button.

Millwork:

Finishes:

Technology:

(1) Printer, (1) small safe for Pistol Permit \$)

FF&E:

(2) Four drawer laterals, Robert (Bob) has U shaped desk, 2 small bookcases, 1 conference/meeting table for six, 1 tall bookcase

Other Notes:



Program Assessment Needs

DEPT: Land Use - Diane (Building Admin); Rachael (Land Use)

Description of Services:

Waiting area for (2). Public access to retrieve files or drop off building applications.

Employees (Office or Cubicle or Service Counter):

Department of 5-6: Zoning Enforcement, Building Official, Town Planner, Building Admin., Land Use

Support Rooms:

Conference room.

MEP:

Panic button.

Millwork:

Service counter for 2-3. Private side has application slots, open shelving. Main area has spacesaver sliding file storage on track system, 5 doubles (6'w x 2'deep), 2 singles at ends.

Finishes:

Technology:

One floor copier, one map plotter, printer.

FF&E:

Diane (Bldg Admin) has 1 desk, 1 four drawer lateral, 1 low cabinet.

Rachael (Land Use) has 1 desk.

Town Planner has desk, table for 4, 2 bookcases

Building Official has desk, 2 bookcases, hanging file rack

Zoning has desk, small refrigerator

Common area has 1 three drawer lateral, 1 bookcase, spacesavers.

Other Notes:

Program Assessment Needs

DEPT: Fire Marshall



Description of Services:

Employees (Office or Cubicle or Service Counter):

Support Rooms:

Building Department.

MEP:

Millwork:

Finishes:

Technology:

1 printer.

FF&E:

Desk, bookshelf, table, low cabinet.

Other Notes:

Program Assessment Needs

DEPT: Storage & Custodial



Description of Services:

Cold Storage Room; Dead Storage; Custodial office; Custodial Storage; Electrical

Employees (Office or Cubicle or Service Counter):

Custodial office for (2) in shared space.

Support Rooms:

MEP:

Millwork:

Finishes:

Technology:

FF&E:

Cold Storage – (22) four drawer verticals, (1) Veterans vertical; (4) four drawer laterals
Dead Storage – (4) industrial shelves; (11) four drawer verticals

Other Notes:



Program Assessment Needs

DEPT: Social Services - Becky

Description of Services:

Currently at 11 Jail Hill Rd. Consists of Food Bank, Clothing Bank, Energy Assistance. Independent separate building works for privacy issues.

Employees (Office or Cubicle or Service Counter):

Department of (2). Becky in office, future part time support staff.

Support Rooms:

Main area displays toiletries and snacks. Food Bank Room. Clothing Bank 2nd floor. Storage Room. Meeting space on 2nd floor.

MEP:

Panic buttons.

Millwork:

Sink & base cabinet in Food Pantry.

Finishes:

Technology:

Hydroponic lettuce machine. Printer in Becky's office.

FF&E:

Food Bank Appliances – double freezer, Single freezer, 1 top/bottom refrigerator/freezer.

Food Pantry – 3 cabinets, 3 industrial shelves, sink & base cabinets

Becky's Office – desk, seating for (3)

Storage Room – (6) 4'w deep shelving for canned goods; Personal Care closet; closet for tables & chairs

Clothing Store – (7) clothing racks, (2) tables, (2) shelf racks

Other Notes:

Access to 2nd floor requires going outside and around to back entrance.



Program Assessment Needs

DEPT: Senior Center – Doreen (& Becky f/ Social Services attended meeting)

Description of Services:

Open M, T, Th from 10:00am-2:00pm. Serves lunch at 12:00. Activities include mobility, yoga, weights, balls, social with round tables, crafts, games, music.

Employees (Office or Cubicle or Service Counter):

Support Rooms:

Warming kitchen, Storage Room. A meeting room/space would be nice.

MEP:

Need sink for craft projects.

Millwork:

Finishes:

Technology:

Large TV, projection screen, printer.

FF&E:

Dorian's office has desk w/ space for security monitors. Multi purpose room has (6) round tables, (2) bookcases, (1) game shelf, (1) TV on stand w/ storage below. Piano.

Other Notes:



Program Assessment Needs

DEPT: Youth & Family – Jane Baird

Description of Services:

Services for families who are struggling financially, prevention programming and supporting the emotional wellness of our communities. Confidentiality is critical. Some special events include Holiday Giving Program.

Employees (Office or Cubicle or Service Counter):

4 Private Offices – Exec. Director, Clinical Counselor, Prevention Coordinator, Project Coordinator
Open Office – Administrative/Bookkeeper
Meeting Room – dedicated or shared
Storage Room - large

Support Rooms:

Meeting Room – dedicated or shared
Storage Room - large

MEP:

Millwork:

Finishes:

Technology:

FF&E:

Other Notes:



Program Assessment Needs

DEPT: Recreation Department – Robyne Brennan

Description of Services:

Employees (Office or Cubicle or Service Counter):

3 Offices – Director, Supervisor, Administrative Assistant
One office make size of a double for (2) workstations.

Support Rooms:

Copy/Work Room
Meeting Room – could be combined w/ work room
Storage Room - Large

MEP:

Millwork:

Finishes:

Technology:

FF&E:

Other Notes:



PROGRAM AREAS	QTY.	SF	TOTAL SF	COMMENTS
Tax Collector				
Office for (2)	1	250	250	
Service Counter for (2)	1	225	225	
Shared Storage	1	50	50	Safe, storage cabinet, file
Total, Tax Collector			525	
Finance				
Office	2	150	300	
Meeting Room for 4	1	150	150	
Total, Finance			450	
Town Clerk				
Office for (2)	1	250	250	
Service Counter for (2)	1	225	225	
Public Search Stations for (2)	1	150	150	1 standing, 1 sitting
Open work area	1	100	100	copier, election station, several printers
Total, Town Clerk			725	
Assessor				
Office for (1)	2	125	250	
Service Counter for (2)	1	225	225	
Public Search Station for (1)	1	75	75	
Open work area	1	100	100	shared files & storage cabinet
Total, Assessor			650	
First Selectman				
Office - First Selectman	1	300	300	Executive office with meeting table for 6
Cubicle workstation	1	75	75	
Service Counter for (2)	1	225	225	Security high priority
Total, First Selectman			600	
Land Use				
Waiting	1	75	75	Seating for (2)
Service Counter for (3)	1	300	300	
Office for (1)	6	125	750	Land Use, Planner, Bldg Off, Zoning, Admin
Open work area	1	100	375	Spacesaver track system, table for 4, plotter
Total, Land Use			1,500	
Fire Marshall				
Office	1	125	125	with plan table for spread out
Total, Fire Marshall			125	
Building Support				
Mechanical Rooms	1	225	225	
IT Closets (MDF / IDF)	1	100	100	
Electrical Rooms	1	100	100	
Restrooms	2	200	400	Mens & Womens Rooms Ganged
Cage Storage	1	275	275	Shared storage
Cold Storage Room	1	325	325	holds file cabinets
Dead Storage Room	1	275	275	hold files and industrial shelving
Seasonal Storage Closet	1	50	50	Decorations, overflow recycling & compost bins
Custodial	1	125	125	1 office for (2)
MailRoom	1	100	100	
Vault	1	400	400	
Total, Building Support			2,375	
Multi Purpose Spaces (Brainard Hall)				
Multi Purpose Meeting Room	1	2,000	2,000	
Warming Kitchen	1	200	200	
Storage	1	500	500	
Mechanical Rooms	1	225	225	



IT Closets (MDF / IDF)	1	100	100	
Electrical Rooms	1	100	100	
Custodial Closet	1	50	50	
Restrooms	2	200	400	(1) Mens, (1) Womens Ganged
Total, Brainard Hall			3,575	
Building Summary				
Net SF Program Total			10,525	
Factor for Circulation	@	40%	4,210	
Gross SF Total, Town Hall & Brainard Hall			14,735	
Social Services				
Office for (1)	2	125	250	2nd office part time employee
Food Bank/Pantry	1	450	450	includes appliances, sink
Clothing Store	1	600	600	includes clothing racks, tables
Meeting Room	1	175	175	
Dry Storage	1	275	275	deep adjustable shelving for canned goods
Mechanical Rooms	1	225	225	
IT Closets (MDF / IDF)	1	100	100	
Electrical Rooms	1	100	100	
Custodial Closet	1	50	50	
Restrooms	3	75	225	(1) Mens, (1) Womens, (1) Staff
Total, Social Services			2,450	
Building Summary				
Net SF Program Total			2,450	
Factor for Circulation	@	40%	980	
Gross SF Total, Social Services			3,430	
Senior Center				
Warming Kitchen	1	200	200	
Multi Purpose Room	1	2,000	2,000	Mobility, yoga, weights, balls, social/lunch
Director Office	1	125	125	
Mechanical Rooms	1	225	225	
IT Closets (MDF / IDF)	1	100	100	
Electrical Rooms	1	100	100	
Custodial Closet	1	50	50	
Restrooms	3	75	225	(1) Mens, (1) Womens, (1) Staff
Storage Room	1	400	400	
Meeting Room	1	200	200	Could be shared
Total, Senior Center			3,625	
Building Summary				
Net SF Program Total			3,625	
Factor for Circulation	@	40%	1,450	
Gross SF Total, Senior Center			5,075	
Youth & Family				
Office for (1)	4	125	500	
Cubicle Workstation	1	75	75	Administrative / Bookkeeper
Meeting Room	1	200	200	
Mechanical Rooms	1	225	225	
IT Closets (MDF / IDF)	1	100	100	
Electrical Rooms	1	100	100	
Custodial Closet	1	50	50	
Restrooms	2	200	400	(1) Mens, (1) Womens Ganged



Storage Room	1	400	400	Large
Meeting Room	1	200	200	Could be shared
Total, Youth & Family			2,250	
Building Summary				
Net SF Program Total			2,250	
Factor for Circulation	@	40%	900	
Gross SF Total, Youth & Family			3,150	
Parks & Recreation Department				
Office for (1)	2	125	250	
Office for (2)	1	250	250	
Copy / Work Room / Storage	1	250	250	
Mechanical Rooms	1	225	225	
IT Closets (MDF / IDF)	1	100	100	
Electrical Rooms	1	100	100	
Custodial Closet	1	50	50	
Restrooms	2	75	150	(1) Mens, (1) Womens
Total, Parks & Recreation			1,375	
Building Summary				
Net SF Program Total			1,375	
Factor for Circulation	@	40%	550	
Gross SF Total, Parks & Recreation			1,925	
Community Center				
Multi Purpose Room	1	2,000	2,000	
Warming Kitchen	1	200	200	
Storage	1	500	500	
Mechanical Rooms	1	225	225	
IT Closets (MDF / IDF)	1	100	100	
Electrical Rooms	1	100	100	
Custodial Closet	1	50	50	
Restrooms	2	200	400	(1) Mens, (1) Womens Ganged
Total, Community Center			3,575	
Building Summary				
Net SF Program Total			3,575	
Factor for Circulation	@	40%	1,430	
Gross SF Total, Community Center			5,005	
State Trooper				
Office for (1)	1	500	500	
Gross SF Total, State Trooper			500	
Registrar of Voters				
Office for (1)	1	1,000	1,000	
Gross SF Total, Registrar of Voters			1,000	
Buildings & Spaces Combined Summary				
Gross SF Total, Town Hall & Brainard Hall			14,735	
Gross SF Total, Social Services			3,430	
Gross SF Total, Senior Center			5,075	
Gross SF Total, Youth & Family			3,150	
Gross SF Total, Recreation			1,925	



Gross SF Total, Community Center			5,005	
Gross SF Total, State Trooper			500	
Gross SF Total, Registrar of Voters			1,000	
Gross SF Total			34,820	



ANTINOZZI ASSOCIATES
ARCHITECTURE + INTERIORS

S:\23040 (Haddam - Space Utilization Study)\20 SD\2P\Haddam Program Spreadsheet_Square Footage.xlsx



ANTINOZZI ASSOCIATES
ARCHITECTURE + INTERIORS

S:\23040 (Haddam - Space Utilization Study)\20 SD\2P\Haddam Program Spreadsheet_Square Footage.xlsx

Conceptual Studies

In an effort to adapt and re-use the former Haddam Elementary School (HES), the Assessment Team was directed to provide the Town of Haddam conceptual plans to consider the relocation of the Town departments into the former school. Utilizing information gathered from existing documents, the Facility Assessments, and the Programmatic Survey, two schematic options were developed.

OPTION I

Option I would utilize a portion of the former school for Town purposes, and the other portion would be used for purposes other than Town related functions.

The one-story west wing would be occupied by several relocated Town services. These departments include:

- Registrar of Voters
- State Trooper
- Senior Center
- Community Center

The Registrar of Voters and the State Trooper would have their own entrance and would be independent and not accessible from the Community and Senior Center. The Community and Senior Center would be able to make use of the existing Multi-Purpose Room within the school, and the former HES classrooms would be redesigned to offer spaces for computer labs, exercise equipment, and a lounge.

The two-story east wing would be operated and developed by a source other than the Town for a function yet to be determined.

The following plans for Option I, although not showing a proposed layout for the east wing (to be developed by others), illustrates the area it would occupy, alongside the new Town offices.

The project cost estimate for this option is an order of magnitude of \$9.5 million.

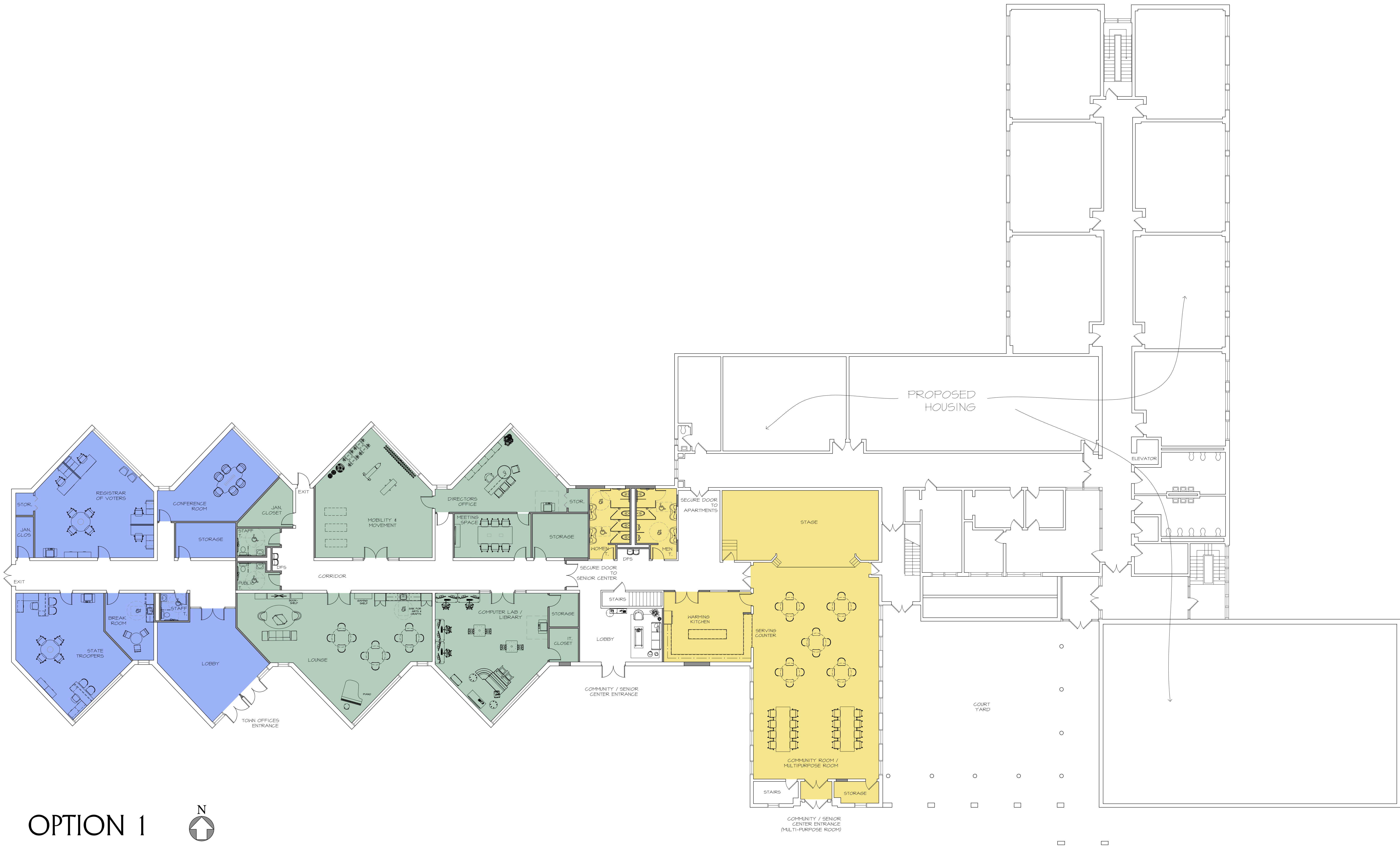
OPTION 2

Option 2 would utilize the same allocation of Town departments in the west wing, however, would also make use of the 2-story east wing for other Town Departments. Along with the previously mentioned functions, the following would be moved to the former school:

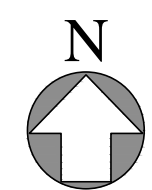
- First Selectman
- Tax Collector
- Assessor
- Town Clerk
- Fire Marshall
- Finance
- HK Recreation Department
- HK Youth & Family
- Land Use
- Social Services

The following plans for Option 2 make use of the same west wing plan from Option 1 and illustrate the approximate areas required for the additional departments to be relocated into the east wing. These areas were calculated with the use of the Programmatic Surveys and will provide sufficient space for staff and furnishings.

The project cost estimate for this option is an order of magnitude of approximately \$31,970,000.



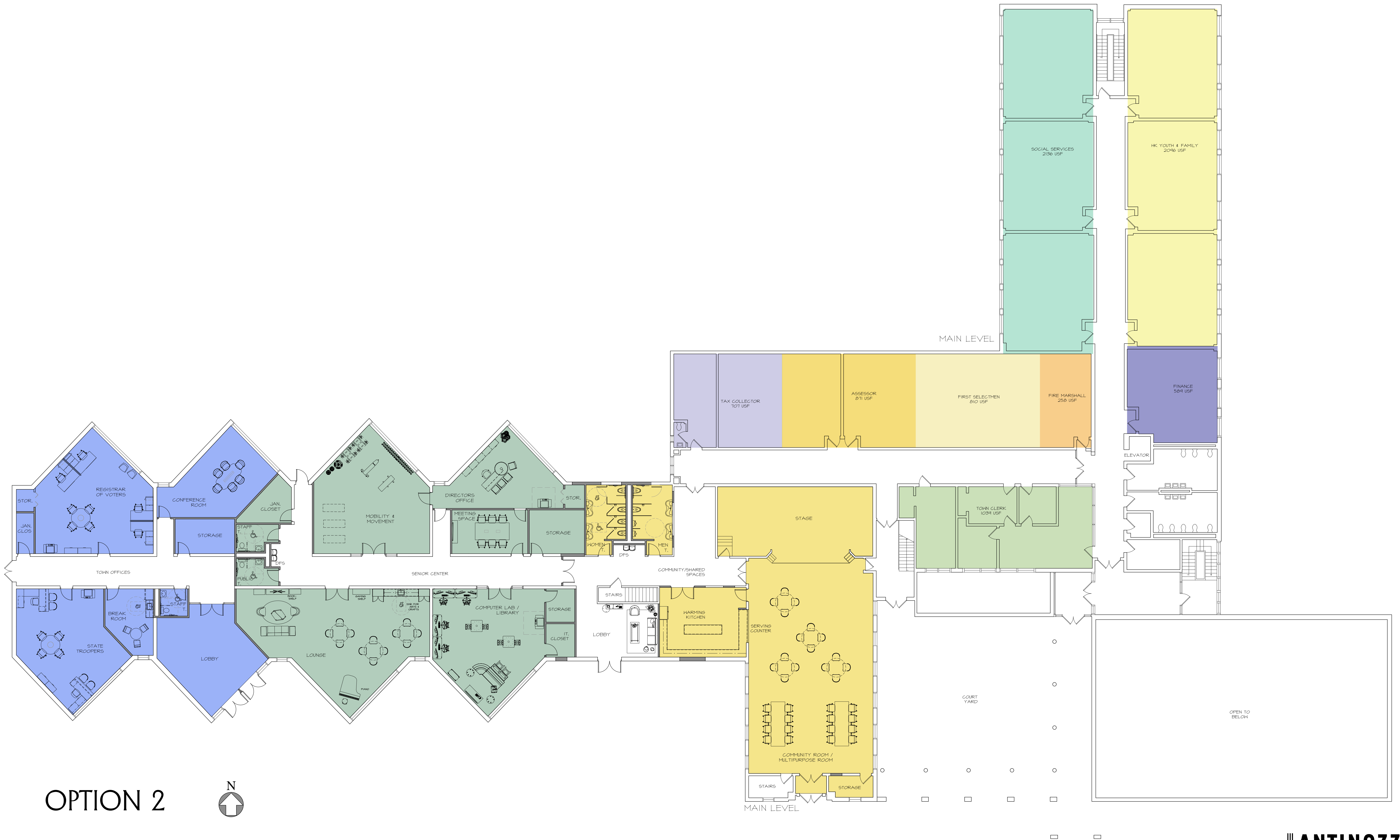
OPTION 1



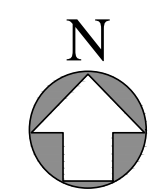


OPTION 1

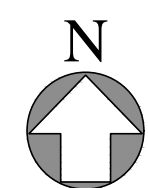




OPTION 2



OPTION 2



7.0 Cost Estimate

Haddam Town Hall Building - Facilities Assessment upgrades

30 Field Park Drive - Concept Estimate

Date: **Monday, March 25, 2024**



Basis Of Estimate

Basis of Estimate

Introduction

PACS has been engaged by Antinozzi Associates Architects to provide a Cost Estimate.

Estimate is based on the Town of Haddam Facility Assessment Report draft for review dated January 31, 2024.

- **Estimate quantities are based on the Haddam Town Hall Building Quantities provided by Antinozzi Associates (attached).**

Quantities and Methodology

- The cost estimate is based on the measurement of quantities wherever possible.
- Where actual measurements are not used, parametric measurements are used in conjunction with previous but similar project benchmarks.
- PACS uses a wide range of standard measurement and quantifying methods that are common practice in the construction industry today.

Basis of Pricing

- a) The construction costs shown in this estimate represent the fair market value and are not intended to be a prediction of the lowest bid.
- b) The costs include: labor, material, equipment and the subcontractors overhead and profit.
(Subcontractor's Mark Up)
- c) The cost of labor is based on local Prevailing wage rates for all trades.
- d) The construction rates used are based in "today's dollar" and an escalation allowance is included in the Estimate summary.
- e) Our pricing assumes competitive bidding on all elements of the construction work, assuming a minimum of three competitive bidders for all general contractors, subcontractors, materials and
- f) It is typical in our experience that if fewer bids are received or solicited, prices can be expected to be higher due to lack of competition.
- g) The subcontractor's mark ups include their own overhead, including the cost in the field as well as profit.
- h) PACS has priced this taking into account current market conditions, competition between trades and the cost fluctuations in the construction industry.
- i) Estimate assumes no Phasing required..
- j) Proposal is based on construction being performed on regular hours.

Basis Of Estimate

Design and Pricing Contingency

A Design and Pricing Contingency is used as a budgetary tool that allows for scope and detail not defined during the design stage. As the design becomes more defined as the project passes through the design stages, the Design and Pricing Contingency decreases as more scope and detail is now being shown in the documents and is therefore reflected in the cost estimate as actual trade cost. The Design and Pricing Contingency is reduced to zero at 100% Bid Documents.

Escalation

As outlined above the estimate is calculated using rates that are "today's dollar" and reflect the cost of the project as if it was to bid on the date of issue. Due to construction projects having long design phases and long construction schedules, it is imperative to project the construction cost further ahead into the future to the point at which it is bid out. It is common practice to escalate the cost estimate to the mid point of construction to accommodate for economic inflation. This percentage accounts for this increase.

Construction Contingency

PACS advise that a Construction Contingency is carried for unforeseen project conditions and field changes. Typically we see this in the range of 3% to 5% dependent on the scope of the project.

Probable Cost

It is important for the Owner and Design team to carefully review this cost estimate including all line item descriptions, clarifications, exclusions, unit prices, assumptions, allowances, mark ups and contingencies to ensure the estimate reflects the scope of the project.

PACS has produced the cost estimate based on the widely practiced methods of cost estimating and aims to reflect the fair market value of the construction project. Our aim is to be not the highest or the lowest in the range of bids but to use our experience and expertise in the construction industry to provide the client with a degree of confidence that the project will be close to our calculated estimate.

Exclusions

This cost estimate excludes the following:

- Premiums for working in inaccessible or partially accessible spaces during construction
- Surplus Stock and Spares
- Premiums for restrictive and uncompetitive bidding
- Premiums for non-standard work times
- Work beyond the project limits
- CT Sales Tax - Assumes Exempt
- Wellpoints - Assumes open trench pumping only
- Rock or Unsuitable soils remediation
- Hazardous, Contaminated or Polluted soils
- Hazardous materials, abatement or associated restoration within the buildings
- AV Equipment / Technology Budget
- Utility Costs - Electric, Gas, Water (assumes by Owner)

Risks to the Cost Estimate

Items that may affect the cost estimate, the list as follows but not limited:

- Changes to the design subsequent to the issue of the documents stated above which this estimate is based on
- Non Competitive Bid restrictions and the sole sourcing of products/materials from specific vendors
- Restrictive technical specifications that produce a non competitive environment
- Changes to the project schedule that delay the project and therefore have impact on cost
- Incomplete and poorly coordinated documentation
- Access restrictions, unidentified out of hours work policies and phasing restrictions
- Restrictive technical specifications that produce a non competitive environment
- Unforeseen and unknown Site conditions

Haddam Town Hall Building - Facilities Assessment upgrades



30 Field Park Drive - Concept Estimate

		Base Estimate		Addition	
Trade		Cost	Cost / SF	Cost	Cost / SF
01 50 00	Temporary Facilities and Controls	\$ 42,675	\$ 7.50	\$ -	\$ -
02 41 19	Selective Demolition	\$ 25,498	\$ 4.48	\$ -	\$ -
03 30 00	Cast-In-Place Concrete	\$ -	\$ -	\$ -	\$ -
04 20 00	Unit Masonry	\$ 40,500	\$ 7.12	\$ -	\$ -
05 50 00	Metal Fabrications	\$ -	\$ -	\$ -	\$ -
06 10 00	Rough Carpentry	\$ -	\$ -	\$ -	\$ -
06 20 00	Finish Carpentry	\$ 34,056	\$ 5.99	\$ -	\$ -
07 50 00	Roofing	\$ 123,870	\$ 21.77	\$ -	\$ -
07 92 00	Joint Sealants	\$ 2,500	\$ 0.44	\$ -	\$ -
08 10 00	Hollow Metal Doors & Frames	\$ 87,510	\$ 15.38	\$ -	\$ -
08 50 00	Windows	\$ 59,925	\$ 10.53	\$ -	\$ -
09 51 00	Acoustical Ceiling	\$ -	\$ -	\$ -	\$ -
09 65 00	Resilient Flooring	\$ -	\$ -	\$ -	\$ -
09 91 00	Painting & Wallcoverings	\$ 9,280	\$ 1.63	\$ -	\$ -
10 28 00	Toilet Accessories	\$ 1,400	\$ 0.25	\$ -	\$ -
13 00 00	Special Construction (4,100 sf addition)	\$ -	\$ -	\$ 2,255,000	\$ 550.00
22 00 00	Plumbing	\$ 22,318	\$ 3.92	\$ -	\$ -
23 00 00	HVAC	\$ 29,250	\$ 5.14	\$ -	\$ -
26 00 00	Electrical	\$ 41,055	\$ 7.22	\$ -	\$ -
33 00 00	Sitework	\$ 30,800	\$ 5.41	\$ 136,500	\$ 33.29
TOTAL DIRECT COST		\$ 562,111	\$98.79	\$ 2,391,500	\$583.29

Haddam Town Hall Building - Facilities Assessment upgrades



30 Field Park Drive - Concept Estimate

		Base Estimate		Addition	
Trade		Cost	Cost / SF	Cost	Cost / SF
TOTAL DIRECT COST (FROM PREVIOUS PAGE)		\$ 562,111	\$98.79	\$ 2,391,500	\$583.29
Design & Estimating Contingency	10.00%	\$ 56,211		\$ 239,150	
Escalation -	6.00%	\$ 37,099		\$ 157,839	
General Conditions- (3 mos @ 25,000 / Month)	\$ 75000	\$ 75,000		\$ 100,000	
Preconstruction - Assumes None		\$ -		\$ -	
GC Insurances	1.25%	\$ 9,130		\$ 36,106	
GC Surety Bond	0.78%	\$ 5,112		\$ 21,750	
GC Fee	5.00%	\$ 32,771		\$ 139,424	
TOTAL CONSTRUCTION COST (DIRECT & INDIRECT COSTS)		\$ 777,435	\$136.63	\$ 3,085,770	\$752.63
Bonding & Legal fees to Town	Excluded	Excluded		Excluded	
A&E Fees / Professional Services	7.00%	\$ 54,420		\$ 216,004	
Commissioning agent	Excluded	Excluded		Excluded	
Owners Representative	Excluded	Excluded		Excluded	
Builders Risk Insurance - Town	Excluded	Excluded		Excluded	
Testing & Inspections	Excluded	Excluded		Excluded	
Building Permit - Assumes waived	Excluded	Excluded		Excluded	
Moving & Relocation costs	Excluded	Excluded		Excluded	
FF&E (Furniture Fixtures and Equipment)	Excluded	Excluded		Excluded	
State Permit 0.26%	Excluded	Excluded		Excluded	
A/V Systems - Assumes in FF&E	Excluded	Excluded		Excluded	
Artwork - By Owner	Excluded	Excluded		Excluded	
Utility Connection fees allowance	Excluded	Excluded		Excluded	
Owners Contingency:	5.00%	\$ 38,872		\$ 154,288	
TOTAL CONSTRUCTION & SOFT COSTS		\$ 870,728	\$153.03	\$ 3,456,062	\$842.94



30 Field Park Drive - Concept Estimate

Estimate Detail

Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
01 50 00 Temporary Facilities and Controls					
Temporary Site Services - GC Bid (minimal)	5,690	SF	\$ 7.50	\$ 42,675	
Subtotal Temporary Facilities and Controls					\$ 42,675
02 11 00 Contaminated Soil Excavation & Disposal					
Assumes not required					
Subtotal Contaminated Soil Excavation & Disposal					\$ -
02 12 00 Transportation/Disposal of Contaminated Materials					
Assumes not required					
Subtotal Transportation/Disposal of Contaminated Materials					\$ -
02 80 00 Hazardous Abatement					
Assumes not required					
Subtotal Hazardous Abatement					\$ -
02 41 16 Building Demolition					
Assumes not required					
Subtotal Building Demolition					\$ -
02 41 19 Selective Demolition					
Remove exterior doors-prep for new frame installation	31	EA	\$ 500.00	\$ 15,500	
Demo existing flooring and base					
Demo existing kitchen cabinets and appliances					
Demo existing gyp ceilings for replacement	675	SF	\$ 4.65	\$ 3,139	
Demo existing plumbing fixtures - prep for replacement	8	EA	\$ 75.00	\$ 600	
Demo existing lighting - prep for replacement	5,690	SF	\$ 1.10	\$ 6,259	
Subtotal Selective Demolition					\$ 25,498
03 30 00 Cast-In-Place Concrete					
None identified					
Subtotal Cast-In-Place Concrete					\$ -
04 20 00 Unit Masonry					
Envelope					
Masonry - Brick repoint & repair 10%	1,800	SF	\$ 22.50	\$ 40,500	
Subtotal Unit Masonry					\$ 40,500
05 50 00 Metal Fabrications					
None identified					
Subtotal Metal Fabrications					\$ -
06 10 00 Rough Carpentry					
None identified					
Subtotal Rough Carpentry					\$ -
06 20 00 Finish Carpentry					
Exterior Finish Carpentry & Trims - installed					
Exterior door replacements - Exterior trims	40	LF	\$ 17.50	\$ 700	
Exterior Window replacements - Exterior trims	573	LF	\$ 22.00	\$ 12,606	
Exterior clapboard siding remove and replace	900	SF	\$ 22.50	\$ 20,250	
Interior Finish Carpentry & Millwork					
Exterior door replacements -Interior trims	40	LF	\$ 12.50	\$ 500	
Base cabinet with Solid surface top					
Plam uppers					
Subtotal Finish Carpentry					\$ 34,056
07 50 00 Roofing					
Asphalt shingle roof - Rip and replace with Ice & Water Shield	5,780	SF	\$ 14.50	\$ 83,810	
Rubber - low slope remove and reinstall - small area	288	SF	\$ 35.00	\$ 10,080	
Gutters Remove & replace	360	LF	\$ 35.00	\$ 12,600	
Leaders - Remove & replace	168	LF	\$ 35.00	\$ 5,880	
Splash blocks -	10	EA	\$ 325.00	\$ 3,250	
Metal roof campy	30	SF	\$ 275.00	\$ 8,250	
Snow guards -					
Subtotal Roofing					\$ 123,870
07 92 00 Joint Sealants					
Caulking & Sealants	1	LS	\$ 2,500.00	\$ 2,500	
Subtotal Joint Sealants					\$ 2,500
08 10 00 Hollow Metal / Wood Doors & Frames					
Exterior metal door, frame and hardware replacement 8x6 with transom	1	EA	\$ 5,000.00	\$ 5,000	
Exterior metal door, frame and hardware replacement	1	EA	\$ 3,500.00	\$ 3,500	
Interior wood door, frame and hardware replacement	29	EA	\$ 2,500.00	\$ 72,500	
Install frame	31	EA	\$ 120.00	\$ 3,720	
Install Door leaf	31	EA	\$ 90.00	\$ 2,790	
Subtotal Hollow Metal / Wood Doors & Frames					\$ 87,510
08 50 00 Windows					
Remove & Replace with single hung energy efficient windows	515	SF	\$ 95.00	\$ 48,925	
Exterior Storefront - remove & replace	100	SF	\$ 110.00	\$ 11,000	
Subtotal Windows					\$ 59,925
09 21 00 Gypsum Board Assemblies					
Gyp ceiling replacements - water damage areas	675	SF	\$ 17.00	\$ 11,475	
Subtotal Gypsum Board Assemblies					\$ 11,475
09 51 00 Acoustical Ceiling					
Ceilings - ACT 2x2 Tegular edge					
Subtotal Acoustical Ceiling					\$ -



30 Field Park Drive - Concept Estimate

Estimate Detail

Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
09 65 00 Resilient Flooring					
Vinyl Sheet Flooring - installed			< not included >		
Resilient Base 4" vinyl			< not included >		
Floor Prep - Resilient			< not included >		
Subtotal Resilient Flooring					\$ -
09 91 00 Painting & Wallcoverings					
Painting - walls & Ceilings - repair work only & Touch up allowance	1	LS	\$ 5,000.00	\$ 5,000	
Painting Exterior trims and siding - Repair work only	900	SF	\$ 2.00	\$ 1,800	
Paint Doors and Frames (new)	31	EA	\$ 80.00	\$ 2,480	
Vinyl Wallcoverings			< Excluded >		
Digital Wallcoverings			< Excluded >		
Subtotal Painting & Wallcoverings					\$ 9,280
10 28 00 Toilet Accessories					
TR Accessories - PT Dispenser			< not included >		
TR Accessories - Grab Bars			< not included >		
TR Accessories - Lav Guard	3	EA	\$ 295.00	\$ 885	
TR Accessories - Electric Hand Dryers			< not included >		
TR Accessories - Soap dispensers			< not included >		
TR Accessories - Mirrors			< not included >		
TR Accessories - Coat hooks			< not included >		
TR Accessories - Custodial	1	EA	\$ 395.00	\$ 395	
TP Dispensers			< not included >		
Baby changing stations			< not included >		
Accessory Installation	4	EA	\$ 30.00	\$ 120	
Subtotal Toilet Accessories					\$ 1,400
11 30 00 Residential Appliances					
Refrigerator - ADA			< not included >		
Microwave - ADA			< not included >		
Range with oven - ADA			< not included >		
Dishwasher ADA			< not included >		
Residential range hood			< not included >		
Subtotal Residential Appliances					\$ -
21 00 00 Fire Protection					
Fire Protection -Distribution			< Excluded >		
Subtotal Fire Protection					\$ -
22 00 00 Plumbing					
Water heater replacement 20 Gal	1	EA	\$ 3,250.00	\$ 3,250	
Pipe insulation - insulate existing exposed copper piping	650	LS	\$ 7.25	\$ 4,713	
Fixture - Sink and faucet Kitchen	1	EA	\$ 1,595.00	\$ 1,595	
Fixture - Sink and faucet - TR wall hung vitreous	3	EA	\$ 1,100.00	\$ 3,300	
Fixture - Custodial mop sink	1	EA	\$ 1,275.00	\$ 1,275	
Fixture - Water Closet	3	EA	\$ 1,675.00	\$ 5,025	
Fixture Rough-in	8	EA	\$ 395.00	\$ 3,160	
Subtotal Plumbing					\$ 22,318
23 00 00 HVAC					
Controls and Instrumentation - Provide programable t-stats for existing equipment	1	LS	\$ 2,500.00	\$ 2,500	
Provide energy recovery unit for existing AHU's	1	LS	\$ 25,000.00	\$ 25,000	
Surface mounted fan in kitchen	1	LS	\$ 1,750.00	\$ 1,750	
Subtotal HVAC					\$ 29,250
26 00 00 Electrical					
Lighting and Branch					
<u>Lighting</u>					
Light Fixture 1x4 Surface	77	EA	\$ 275.00	\$ 21,175	
Light Fixture Surface mounted - Exterior	12	EA	\$ 395.00	\$ 4,740	
Light Fixture - Exterior @ Building - Pendant	1	EA	\$ 795.00	\$ 795	
Site light poles @ Parking			< Excluded >		
<u>Lighting Device Branch</u>					
Lighting controls - local			< Assumes Existing >		
Occupancy Sensor - retrofit to existing control	25	EA	\$ 550.00	\$ 13,750	
Site lighting controller / clock			< Excluded >		
Lighting branch wiring -			< Assumes Existing >		
Lighting branch wiring & Conduits - site light poles allowance			< Excluded >		
<u>Power</u>					
Circuit and switch for kitchen fan	1	EA	\$ 595.00	\$ 595	
Safety & Security					
<u>Security Access Control & CCTV</u>					
Control panels , licenses and programming allowance			< Assumes not required >		
Access control door roughing & devices			< Assumes not required >		
Exterior wall mount camera & cable			< Assumes not required >		
Interior wall mounted camera & cable			< Assumes not required >		
Subtotal Electrical					\$ 41,055
33 00 00 Sitework					
Repair, repoint Stone retaining wall	280	SF	\$ 95.00	\$ 26,600	
Repair bluestone treads & risers	28	SF	\$ 150.00	\$ 4,200	
Parking striping and signage allowance			< Not included >		
Electric Vehicle Charging Stations allowance - Excluded			< Not included >		
Subtotal Sitework					\$ 30,800

Haddam Town Hall Building**5690± SF GROSS - 30 Field Park Drive**

	Description	Quantity	Unit
<u>Site</u>			
Repair, Repoint Stone Retaining Wall	10'H	280	SF
Repair Stone Step With Bluestone Treads	3 Risers, 3 Treads 4'W	28	SF
<u>Exterior</u>			
Asphalt shingle roof	30 year asphalt shingles	5780	SF
Gutters		360	LF
Downspouts		12	
Splash block		10	
Metal roof Canopy		30	SF
Exterior Storefront	10'h x 10w	1	
Exterior door 3 panel W/transom	8'h x 6'w	1	
exterior door 6 panel	7' x 3' w	1	
Exterior HC Storefront	5'w x 7'H Energy Efficient Single Hung W/Grid	1	
Lower Windows	3'w x4'H Energy Efficient Single Hung W/Grid	7	
Upper Windows	3'w x6'H Energy Efficient Single Hung W/Grid	22	
Brick	Repoint, repair	18,000	SF
Siding		900	SF
Rubber low slope roof		288	SF
Interior Doors	Wood Doors	29	
Ceiling	Patch Gyp. BD as needed	672	SF
<u>Plumbing</u>			
Faucets		3	
Toilets		3	
Urinal		1	
Mop Sink	4x4 Floor mounted	1	
Water Heater	19 Gallons	1	
Pipe insulation	All exposed copper Piping	650	LF
Kitchen sink		1	
<u>Electrical</u>			
New Lighting:	Throughout entire building		
2x4 Lay In Fixtures			
Exterior Fixtures	Surface Mounted	12	
Exterior Fixtures	Hanging	1	
Basement	1x4 Surface Mounted	33	
First Floor	1x4 Surface Mounted	44	
Vacancy Sensors		25	
Programable thermostat		4	
Fan	Surface Mounted Kitchen fan	1	
<u>Mechanical</u>			
Energy Recovery Unit		1	Unit

Haddam Old Town Hall - Facilities Assessment upgrades

21 Field Park Drive - Concept Estimate

Date: **Tuesday, March 26, 2024**



Basis Of Estimate

Basis of Estimate

Introduction

PACS has been engaged by Antinozzi Associates Architects to provide a Cost Estimate.

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- **Estimate quantities are based on the Haddam Old Town Hall Quantities provided by Antinozzi Associates (attached).**

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(Subcontractor's Mark Up)
- c) The cost of labor is based on local Prevailing wage rates for all trades.
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- e) Our pricing assumes competitive bidding on all elements of the construction work, assuming a minimum of three competitive bidders for all general contractors, subcontractors, materials and
- f) It is typical in our experience that if fewer bids are received or solicited, prices can be expected to be higher due to lack of competition.
- g) The subcontractor's mark ups include their own overhead, including the cost in the field as well as profit.
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- i) Estimate assumes no Phasing required..
- j) Proposal is based on construction being performed on regular hours.

Basis Of Estimate**Design and Pricing Contingency**

A Design and Pricing Contingency is used as a budgetary tool that allows for scope and detail not defined during the design stage. As the design becomes more defined as the project passes through the design stages, the Design and Pricing Contingency decreases as more scope and detail is now being shown in the documents and is therefore reflected in the cost estimate as actual trade cost. The Design and Pricing Contingency is reduced to zero at 100% Bid Documents.

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As outlined above the estimate is calculated using rates that are "today's dollar" and reflect the cost of the project as if it was to bid on the date of issue. Due to construction projects having long design phases and long construction schedules, it is imperative to project the construction cost further ahead into the future to the point at which it is bid out. It is common practice to escalate the cost estimate to the mid point of construction to accommodate for economic inflation. This percentage accounts for this increase.

Construction Contingency

PACS advise that a Construction Contingency is carried for unforeseen project conditions and field changes. Typically we see this in the range of 3% to 5% dependent on the scope of the project.

Probable Cost

It is important for the Owner and Design team to carefully review this cost estimate including all line item descriptions, clarifications, exclusions, unit prices, assumptions, allowances, mark ups and contingencies to ensure the estimate reflects the scope of the project.

PACS has produced the cost estimate based on the widely practiced methods of cost estimating and aims to reflect the fair market value of the construction project. Our aim is to be not the highest or the lowest in the range of bids but to use our experience and expertise in the construction industry to provide the client with a degree of confidence that the project will be close to our calculated estimate.

Exclusions

This cost estimate excludes the following:

- Premiums for working in inaccessible or partially accessible spaces during construction
- Surplus Stock and Spares
- Premiums for restrictive and uncompetitive bidding
- Premiums for non-standard work times
- Work beyond the project limits
- CT Sales Tax - Assumes Exempt
- Wellpoints - Assumes open trench pumping only
- Rock or Unsuitable soils remediation
- Hazardous, Contaminated or Polluted soils
- Hazardous materials, abatement or associated restoration within the buildings
- AV Equipment / Technology Budget
- Utility Costs - Electric, Gas, Water (assumes by Owner)

Risks to the Cost Estimate

Items that may affect the cost estimate, the list as follows but not limited:

- Changes to the design subsequent to the issue of the documents stated above which this estimate is based on
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- Restrictive technical specifications that produce a non competitive environment
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- Incomplete and poorly coordinated documentation
- Access restrictions, unidentified out of hours work policies and phasing restrictions
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- Unforeseen and unknown Site conditions

Haddam Old Town Hall - Facilities Assessment upgrades



3/26/2024

21 Field Park Drive - Concept Estimate

Base Estimate

Trade		Cost	Cost / SF
01 50 00	Temporary Facilities and Controls	\$ 37,620	\$ 7.50
02 41 19	Selective Demolition	\$ 23,118	\$ 4.61
03 30 00	Cast-In-Place Concrete	\$ -	\$ -
04 20 00	Unit Masonry	\$ 44,176	\$ 8.81
05 50 00	Metal Fabrications	\$ -	\$ -
06 10 00	Rough Carpentry	\$ -	\$ -
06 20 00	Finish Carpentry	\$ 47,991	\$ 9.56
07 50 00	Roofing	\$ 53,760	\$ 10.72
07 92 00	Joint Sealants	\$ 2,500	\$ 0.50
08 10 00	Hollow Metal Doors & Frames	\$ 44,320	\$ 8.84
08 50 00	Windows	\$ 89,680	\$ 17.88
09 51 00	Acoustical Ceiling	\$ -	\$ -
09 65 00	Resilient Flooring	\$ 21,869	\$ 4.36
09 91 00	Painting & Wallcoverings	\$ 14,128	\$ 2.82
10 28 00	Toilet Accessories	\$ 325	\$ 0.06
11 30 00	Residential Appliances	\$ 8,140	\$ 1.62
22 00 00	Plumbing	\$ 15,150	\$ 3.02
23 00 00	HVAC	\$ 140,840	\$ 28.08
26 00 00	Electrical	\$ 94,442	\$ 18.83
33 00 00	Sitework	\$ -	\$ -
TOTAL DIRECT COST		\$ 661,187	\$131.81

Haddam Old Town Hall - Facilities Assessment upgrades



21 Field Park Drive - Concept Estimate

3/26/2024

Base Estimate

Trade		Cost	Cost / SF
TOTAL DIRECT COST (FROM PREVIOUS PAGE)		\$ 661,187	\$131.81
Design & Estimating Contingency	10.00%	\$ 66,119	
Escalation -	6.00%	\$ 43,638	
General Conditions- (3 mos @ 25,000 / Month)	\$ 75000	\$ 75,000	
Preconstruction - Assumes None		\$ -	
GC Insurances	1.25%	\$ 10,574	
GC Surety Bond	0.78%	\$ 6,013	
GC Fee	5.00%	\$ 38,547	
TOTAL CONSTRUCTION COST (DIRECT & INDIRECT COSTS)		\$ 901,096	\$179.64
Bonding & Legal fees to Town	Excluded	Excluded	
A&E Fees / Professional Services	7.00%	\$ 63,077	
Commissioning agent	Excluded	Excluded	
Owners Representative	Excluded	Excluded	
Builders Risk Insurance - Town	Excluded	Excluded	
Testing & Inspections	Excluded	Excluded	
Building Permit - Assumes waived	Excluded	Excluded	
Moving & Relocation costs	Excluded	Excluded	
FF&E (Furniture Fixtures and Equipment)	Excluded	Excluded	
State Permit 0.26%	Excluded	Excluded	
A/V Systems - Assumes in FF&E	Excluded	Excluded	
Artwork - By Owner	Excluded	Excluded	
Utility Connection fees allowance	Excluded	Excluded	
Owners Contingency:	5.00%	\$ 45,055	
TOTAL CONSTRUCTION & SOFT COSTS		\$ 1,009,228	\$201.20



Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
01 50 00 Temporary Facilities and Controls					
Temporary Site Services - GC Bid (minimal)	5,016	SF	\$ 7.50	\$ 37,620	
Subtotal Temporary Facilities and Controls					\$ 37,620
02 11 00 Contaminated Soil Excavation & Disposal					
Assumes not required	< Excluded >				
Subtotal Contaminated Soil Excavation & Disposal					\$ -
02 12 00 Transportation/Disposal of Contaminated Materials					
Assumes not required	< Excluded >				
Subtotal Transportation/Disposal of Contaminated Materials					\$ -
02 80 00 Hazardous Abatement					
Assumes not required	< Excluded >				
Subtotal Hazardous Abatement					\$ -
02 41 16 Building Demolition					
Assumes not required	< Excluded >				
Subtotal Building Demolition					\$ -
02 41 19 Selective Demolition					
Remove exterior doors-prep for new frame installation	4	EA	\$ 500.00	\$ 2,000	
Demo existing flooring and base	2,508	SF	\$ 2.55	\$ 6,395	
Demo existing kitchen cabinets and appliances	1	LS	\$ 750.00	\$ 750	
Demo existing gyp ceilings for replacement	1,786	SF	\$ 4.65	\$ 8,305	
Demo existing plumbing fixtures - prep for replacement	2	EA	\$ 75.00	\$ 150	
Demo existing lighting - prep for replacement	5,016	SF	\$ 1.10	\$ 5,518	
Subtotal Selective Demolition					\$ 23,118
03 30 00 Cast-In-Place Concrete					
None identified	< Excluded >				
Subtotal Cast-In-Place Concrete					\$ -
04 20 00 Unit Masonry					
Envelope					
Clean and seal Stone veneer	7,280	SF	\$ 5.45	\$ 39,676	
Repoint Stone window wells	24	SF	\$ 125.00	\$ 3,000	
Repoint Stone steps	1	LS	\$ 1,500.00	\$ 1,500	
Subtotal Unit Masonry					\$ 44,176
05 50 00 Metal Fabrications					
None identified	< Excluded >				
Subtotal Metal Fabrications					\$ -
06 10 00 Rough Carpentry					
None identified	< Excluded >				
Subtotal Rough Carpentry					\$ -
06 20 00 Finish Carpentry					
Exterior Finish Carpentry & Trims - installed					
Exterior door replacements - Exterior trims	96	LF	\$ 17.50	\$ 1,680	
Exterior Window replacements - Exterior trims	858	LF	\$ 22.50	\$ 19,305	
Interior Finish Carpentry & Millwork					
Exterior door replacements -Interior trims	96	LF	\$ 12.50	\$ 1,200	
Window replacements -Interior trims	858	LF	\$ 17.00	\$ 14,586	
Base cabinet with Solid surface top	16	LF	\$ 395.00	\$ 6,320	
Plam uppers	20	LF	\$ 245.00	\$ 4,900	
Subtotal Finish Carpentry					\$ 68,241
07 50 00 Roofing					
Asphalt shingle roof - Rip and replace with Ice & Water Shield	3,000	SF	\$ 14.50	\$ 43,500	
Gutters Remove & replace	160	LF	\$ 35.00	\$ 5,600	
Leaders - Remove & replace	96	LF	\$ 35.00	\$ 3,360	
Splash blocks -	4	EA	\$ 325.00	\$ 1,300	
Snow guards -	< not included >				
Subtotal Roofing					\$ 53,760
07 92 00 Joint Sealants					
Caulking & Sealants	1	LS	\$ 2,500.00	\$ 2,500	
Subtotal Joint Sealants					\$ 2,500
08 10 00 Hollow Metal / Wood Doors & Frames					
Exterior metal door, frame and hardware replacement 8x6 with transom	2	EA	\$ 5,000.00	\$ 10,000	
Exterior metal door, frame and hardware replacement	2	EA	\$ 3,500.00	\$ 7,000	
Interior wood door, frame and hardware replacement	8	EA	\$ 2,500.00	\$ 20,000	
Provide door operator	1	EA	\$ 4,800.00	\$ 4,800	
Install frame	12	EA	\$ 120.00	\$ 1,440	
Install Door leaf	12	EA	\$ 90.00	\$ 1,080	
Subtotal Hollow Metal / Wood Doors & Frames					\$ 44,320
08 50 00 Windows					
Remove & Replace with single hung energy efficient windows	944	SF	\$ 95.00	\$ 89,680	
Subtotal Windows					\$ 89,680
09 21 00 Gypsum Board Assemblies					
Gyp ceiling replacements - Meeting area	1,786	SF	\$ 12.95	\$ 23,129	
Subtotal Gypsum Board Assemblies					\$ 23,129
09 51 00 Acoustical Ceiling					
Ceilings - ACT 2x2 Tegular edge	< not included >				
Subtotal Acoustical Ceiling					\$ -



Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
09 65 00 Resilient Flooring					
Vinyl Sheet Flooring - installed	2,508	SF	\$ 6.75	\$ 16,929	
Resilient Base 4" vinyl	300	SF	\$ 3.45	\$ 1,035	
Anti slip nosings	88	LF	\$ 23.00	\$ 2,024	
Floor Prep - Resilient	2,508	SF	\$ 0.75	\$ 1,881	
Subtotal Resilient Flooring					\$ 21,869
09 91 00 Painting & Wallcoverings					
Painting - walls & Ceilings - repair work only & Touch up allowance	1	LS	\$ 5,000.00	\$ 5,000	
Painting Exterior trims and siding - Repair work only	1	LS	\$ 1,500.00	\$ 1,500	
Paint Doors and Frames (new)	12	EA	\$ 80.00	\$ 960	
Paint columns	2,304	SF	\$ 2.65	\$ 6,106	
Paint exterior trims	250	LF	\$ 2.25	\$ 563	
Subtotal Painting & Wallcoverings					\$ 14,128
10 28 00 Toilet Accessories					
TR Accessories - PT Dispenser	< not included >				
TR Accessories - Grab Bars	< not included >				
TR Accessories - Lav Guard	1	EA	\$ 295.00	\$ 295	
TR Accessories - Electric Hand Dryers	< not included >				
TR Accessories - Soap dispensers	< not included >				
TR Accessories - Mirrors	< not included >				
TR Accessories - Coat hooks	< not included >				
TR Accessories - Custodial	< not included >				
TP Dispensers	< not included >				
Baby changing stations	< not included >				
Accessory Installation	1	EA	\$ 30.00	\$ 30	
Subtotal Toilet Accessories					\$ 325
11 30 00 Residential Appliances					
Refrigerator - ADA	1	EA	\$ 2,350.00	\$ 2,350	
Microwave - ADA	1	EA	\$ 795.00	\$ 795	
Range with oven - ADA	1	EA	\$ 2,250.00	\$ 2,250	
Dishwasher ADA	1	EA	\$ 1,750.00	\$ 1,750	
Residential range hood	1	EA	\$ 995.00	\$ 995	
Subtotal Residential Appliances					\$ 8,140
21 00 00 Fire Protection					
Fire Protection -Distribution	< Excluded >				
Subtotal Fire Protection					\$ -
22 00 00 Plumbing					
Pipe insulation - insulate existing exposed copper piping	460	LS	\$ 7.25	\$ 3,335	
Fixture - New 30 Gallon Domestic Water Heater	1	EA	\$ 5,500.00	\$ 5,500	
Fixture - Sink and faucet - TR wall hung vitreous	1	EA	\$ 1,100.00	\$ 1,100	
Fixture - Sink and faucet - 3 bay sink in Kitchen	1	EA	\$ 2,750.00	\$ 2,750	
Fixture - Water Closet	1	EA	\$ 1,675.00	\$ 1,675	
Fixture Rough-in	2	EA	\$ 395.00	\$ 790	
Subtotal Plumbing					\$ 15,150
23 00 00 HVAC					
Controls and Instrumentation - Provide control for new Mechanical Systems	5,016	SF	\$ 6.50	\$ 32,604	
Ceiling Fan	1	LS	\$ 750.00	\$ 750	
Split Systems with Heat Pumps - Assumes 1 ton / 350 SF	14	TON	\$ 7,500.00	\$ 107,486	
Subtotal HVAC					\$ 140,840
26 00 00 Electrical					
Lighting and Branch					
<u>Lighting</u>					
Light Fixture 1x4 Surface	12	EA	\$ 275.00	\$ 3,300	
Light Fixture 1x4 Surface - utility	6	EA	\$ 245.00	\$ 1,470	
Light Fixture - Pendant	1	EA	\$ 795.00	\$ 795	
Light Fixture - Exterior	4	EA	\$ 395.00	\$ 1,580	
Light Fixture - Rqeplace remaining @ 1/120 SF	23	EA	\$ 240.00	\$ 5,472	
Site light poles @ Parking	< Excluded >				
<u>Lighting Device Branch</u>					
Lighting controls - local	< Assumes Existing >				
Occupancy Sensor - retrofit to existing control	6	EA	\$ 550.00	\$ 3,300	
Site lighting controller / clock	< Excluded >				
Lighting branch wiring -	< Assumes Existing >				
Lighting branch wiring & Conduits - site light poles allowance	< Excluded >				
<u>Power</u>					
Provide new 400A Incoming Service to support new Mechanical Systems	1	LS	\$ 60,000.00	\$ 60,000	
Provide power to Heat Pump units - Interior & Exterior	8	EA	\$ 2,250.00	\$ 18,000	
Provide power to Ceiling Fan	1	EA	\$ 525.00	\$ 525	
Safety & Security					
<u>Security Access Control & CCTV</u>					
Control panels , licenses and programming allowance	< Assumes not required >				
Access control door roughing & devices	< Assumes not required >				
Exterior wall mount camera & cable	< Assumes not required >				
Interior wall mounted camera & cable	< Assumes not required >				
Subtotal Electrical					\$ 94,442
33 00 00 Sitework					
None identified	< Not included >				
Subtotal Sitework					\$ -

Old Town Hall**5016± SF GROSS - 31 Field Park Drive**

	(Second floor not included)	Quantity	Unit
Exterior			
	30 year asphalt shingles		
Asphalt shingle roof		3000	SF
Gutters		160	LF
Downspouts	24'H	4	
Re-seal stone veneer		7280	SF
First Floor Windows	Energy Efficient Single Hung 7'x4'W/Grid	15	
Second Floor Windows	Energy Efficient Single Hung 7'x4'W/Grid	17	
Basement windows	Energy Efficient Fixed 4'x 2'W/Grid	3	
Attic Windows	Energy Efficient Single Hung 3'x2'W/Grid	4	
6 panel Exterior Doors	ADA Hardware	1	
4 panel w/transom	ADA Hardware	2	
8 panel ADA Door	ADA Hardware & Push Button	1	
Paint Columns	3' Dia 24'H	4	
Paint Columns	2' W x 24'H	2	
Paint Trim	1'H	250	LF
Repoint Stone Steps	10'D x 28'W 4R @ 6" Stone	4	Risers
Interior			
First Floor New Flooring	Vinyl Sheet Flooring	2508	SF
Gypsum Ceiling	Meeting Area	1786	SF
Kitchen			
Base cabinets		16	LF
Upper cabinets		20	LF
ADA Refrigerator		1	
ADA Microwave		1	
ADA Residential Oven		1	
ADA Dishwasher		1	
ADA Residential 3 bay sink	Commercial use	1	
Stairs:			
Anti slip nosing		22	Risers
Interior Doors	Solid Wood/Historic	8	
Plumbing			
Toilets		1	
Faucets		1	
Insulate piping	All exposed copper Piping	460	
New Domestic water heater	30 Gallon	1	
Mechanical			
Split system heat pump		7	units
Electrical			
New Lighting:	Throughout entire building		
Exterior Lights	Wall Mounted	4	
Basement Interior Lights	Utility Lights 4'L	6	
Meeting Room	1 x4 surface mounted	12	
First Floor	Hanging	1	
Ceiling Fan	3'W	1	
Vacancy Sensors		6	
High speed internet connection		2	
Structural			
Repoint Window wells	Field Stone (2) 4'D 3'W	24	SF

Haddam Community Center - Facilities Assessment upgrades

7 Candlewood Hill Road - Concept Estimate

Date: **Tuesday, March 26, 2024**



Basis Of Estimate

Basis of Estimate

Introduction

PACS has been engaged by Antinozzi Associates Architects to provide a Cost Estimate.

Estimate is based on the Town of Haddam Facility Assessment Report draft for review dated January 31, 2024:

- **Estimate quantities are based on the Haddam Community Center Quantities provided by Antinozzi Associates (attached).**

Quantities and Methodology

- The cost estimate is based on the measurement of quantities wherever possible.
- Where actual measurements are not used, parametric measurements are used in conjunction with previous but similar project benchmarks.
- PACS uses a wide range of standard measurement and quantifying methods that are common practice in the construction industry today.

Basis of Pricing

- a) The construction costs shown in this estimate represent the fair market value and are not intended to be a prediction of the lowest bid.
- b) The costs include: labor, material, equipment and the subcontractors overhead and profit.
(Subcontractor's Mark Up)
- c) The cost of labor is based on local Prevailing wage rates for all trades.
- d) The construction rates used are based in "today's dollar" and an escalation allowance is included in the Estimate summary.
- e) Our pricing assumes competitive bidding on all elements of the construction work, assuming a minimum of three competitive bidders for all general contractors, subcontractors, materials and
- f) It is typical in our experience that if fewer bids are received or solicited, prices can be expected to be higher due to lack of competition.
- g) The subcontractor's mark ups include their own overhead, including the cost in the field as well as profit.
- h) PACS has priced this taking into account current market conditions, competition between trades and the cost fluctuations in the construction industry.
- i) Estimate assumes no Phasing required..
- j) Proposal is based on construction being performed on regular hours.

Basis Of Estimate

Design and Pricing Contingency

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- Hazardous, Contaminated or Polluted soils
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- Restrictive technical specifications that produce a non competitive environment
- Changes to the project schedule that delay the project and therefore have impact on cost
- Incomplete and poorly coordinated documentation
- Access restrictions, unidentified out of hours work policies and phasing restrictions
- Restrictive technical specifications that produce a non competitive environment
- Unforeseen and unknown Site conditions

Haddam Community Center - Facilities Assessment upgrades



7 Candlewood Hill Road - Concept Estimate

3/26/2024

Trade		Cost	Cost / SF
01 50 00	Temporary Facilities and Controls	\$ 28,380	\$ 7.50
02 41 19	Selective Demolition	\$ 15,762	\$ 4.17
03 30 00	Cast-In-Place Concrete	\$ -	\$ -
04 20 00	Unit Masonry	\$ 29,725	\$ 7.86
05 50 00	Metal Fabrications	\$ 5,000	\$ 1.32
06 10 00	Rough Carpentry	\$ -	\$ -
06 20 00	Finish Carpentry	\$ 38,439	\$ 10.16
07 50 00	Roofing	\$ 69,167	\$ 18.28
07 92 00	Joint Sealants	\$ 2,500	\$ 0.66
08 10 00	Hollow Metal Doors & Frames	\$ 41,810	\$ 11.05
08 50 00	Windows	\$ 24,960	\$ 6.60
09 51 00	Acoustical Ceiling	\$ 14,048	\$ 3.71
09 65 00	Resilient Flooring	\$ 31,002	\$ 8.19
09 91 00	Painting & Wallcoverings	\$ 17,942	\$ 4.74
10 28 00	Toilet Accessories	\$ 650	\$ 0.17
11 30 00	Residential Appliances	\$ 8,140	\$ 2.15
22 00 00	Plumbing	\$ 20,780	\$ 5.49
23 00 00	HVAC	\$ 105,682	\$ 27.93
26 00 00	Electrical	\$ 84,138	\$ 22.24
33 00 00	Sitework	\$ 21,358	\$ 5.64
TOTAL DIRECT COST		\$ 559,482	\$147.85

Haddam Community Center - Facilities Assessment upgrades



7 Candlewood Hill Road - Concept Estimate

3/26/2024

Trade		Cost	Cost / SF
TOTAL DIRECT COST (FROM PREVIOUS PAGE)		\$ 559,482	\$147.85
Design & Estimating Contingency	10.00%	\$ 55,948	
Escalation -	6.00%	\$ 36,926	
General Conditions- (3 mos. @ 25,000 / Month)	\$ 75000	\$ 75,000	
Preconstruction - Assumes None		\$ -	
GC Insurances	1.25%	\$ 9,092	
GC Surety Bond	0.78%	\$ 5,088	
GC Fee	5.00%	\$ 32,618	
TOTAL CONSTRUCTION COST (DIRECT & INDIRECT COSTS)		\$ 774,154	\$204.59
Bonding & Legal fees to Town	Excluded	Excluded	
A&E Fees / Professional Services	7.00%	\$ 54,191	
Commissioning agent	Excluded	Excluded	
Owners Representative	Excluded	Excluded	
Builders Risk Insurance - Town	Excluded	Excluded	
Testing & Inspections	Excluded	Excluded	
Building Permit - Assumes waived	Excluded	Excluded	
Moving & Relocation costs	Excluded	Excluded	
FF&E (Furniture Fixtures and Equipment)	Excluded	Excluded	
State Permit 0.26%	Excluded	Excluded	
A/V Systems - Assumes in FF&E	Excluded	Excluded	
Artwork - By Owner	Excluded	Excluded	
Utility Connection fees allowance	Excluded	Excluded	
Owners Contingency:	5.00%	\$ 38,708	
TOTAL CONSTRUCTION & SOFT COSTS		\$ 867,052	\$229.14



Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
01 50 00 Temporary Facilities and Controls					
Temporary Site Services - GC Bid (minimal)	3,784	SF	\$ 7.50	\$ 28,380	
Subtotal Temporary Facilities and Controls					\$ 28,380
02 11 00 Contaminated Soil Excavation & Disposal					
Assumes not required	< Excluded >				\$ -
Subtotal Contaminated Soil Excavation & Disposal					\$ -
02 12 00 Transportation/Disposal of Contaminated Materials					
Assumes not required	< Excluded >				\$ -
Subtotal Transportation/Disposal of Contaminated Materials					\$ -
02 80 00 Hazardous Abatement					
Assumes not required	< Excluded >				\$ -
Subtotal Hazardous Abatement					\$ -
02 41 16 Building Demolition					
Assumes not required	< Excluded >				\$ -
Subtotal Building Demolition					\$ -
02 41 19 Selective Demolition					
Remove doors-prep for new frame installation	11	EA	\$ 75.00	\$ 825	
Demo existing flooring and base	3,784	SF	\$ 2.55	\$ 9,649	
Demo existing kitchen cabinets and appliances	1	LS	\$ 750.00	\$ 750	
Demo existing gyp ceilings for replacement	< Excluded >				
Demo existing plumbing fixtures - prep for replacement	5	EA	\$ 75.00	\$ 375	
Demo existing lighting - prep for replacement	3,784	SF	\$ 1.10	\$ 4,162	
Subtotal Selective Demolition					\$ 15,762
03 30 00 Cast-In-Place Concrete					
None identified	< Excluded >				\$ -
Subtotal Cast-In-Place Concrete					\$ -
04 20 00 Unit Masonry					
Envelope					
Control Joints CMU	120	LF	\$ 18.00	\$ 2,160	
Repair & Repoint chimney - brick	200	SF	\$ 75.00	\$ 15,000	
Clean & Seal Brick Veneer	2,300	SF	\$ 4.25	\$ 9,775	
Clean & Seal CMU	900	SF	\$ 3.10	\$ 2,790	
Subtotal Unit Masonry					\$ 29,725
05 50 00 Metal Fabrications					
New Steel Lintels & Flashing	40	LF	\$ 125.00	\$ 5,000	
Subtotal Metal Fabrications					\$ 5,000
06 10 00 Rough Carpentry					
None identified	< Excluded >				\$ -
Subtotal Rough Carpentry					\$ -
06 20 00 Finish Carpentry					
Exterior Finish Carpentry & Trims - installed					
Exterior door replacements - Exterior trims	< not included >				
Exterior Window replacements - Exterior trims	278	LF	\$ 22.50	\$ 6,255	
Exterior Mechanical Louvers	3	EA	\$ 375.00	\$ 1,125	
Exterior Replace cedar shakes	540	SF	\$ 17.95	\$ 9,693	
Interior Finish Carpentry & Millwork					
Exterior door replacements -Interior trims	< not included >				
Window replacements -Interior trims	278	LF	\$ 17.00	\$ 4,726	
Base cabinet with Solid surface top	26	LF	\$ 395.00	\$ 10,270	
Plam uppers	26	LF	\$ 245.00	\$ 6,370	
Subtotal Finish Carpentry					\$ 38,439
07 50 00 Roofing					
Asphalt shingle roof - Rip and replace with Ice & Water Shield	4,066	SF	\$ 14.50	\$ 58,957	
Gutters Remove & replace	152	LF	\$ 35.00	\$ 5,320	
Leaders - Remove & replace	84	LF	\$ 35.00	\$ 2,940	
Splash blocks -	6	EA	\$ 325.00	\$ 1,950	
Snow guards -	< not included >				
Subtotal Roofing					\$ 69,167
07 92 00 Joint Sealants					
Caulking & Sealants	1	LS	\$ 2,500.00	\$ 2,500	
Subtotal Joint Sealants					\$ 2,500
08 10 00 Hollow Metal / Wood Doors & Frames					
Exterior metal door, frame and hardware replacement 8x6 with transom	< not included >				
Exterior metal door, frame and hardware replacement	3	EA	\$ 3,500.00	\$ 10,500	
Interior wood door, frame and hardware replacement	8	EA	\$ 2,500.00	\$ 20,000	
Provide door operator	< not included >				
Install frame	11	EA	\$ 120.00	\$ 1,320	
Install Door leaf	11	EA	\$ 90.00	\$ 990	
New 10x10 OH Garage doors with operators - Remove & Replace	2	EA	\$ 4,500.00	\$ 9,000	
Subtotal Hollow Metal / Wood Doors & Frames					\$ 41,810
08 50 00 Windows					
Remove & Replace with single hung energy efficient windows	240	SF	\$ 95.00	\$ 22,800	
Window Treatments	240	SF	\$ 9.00	\$ 2,160	
Subtotal Windows					\$ 24,960
09 21 00 Gypsum Board Assemblies					
Gyp ceiling replacements - Meeting area	< not included >				\$ -
Subtotal Gypsum Board Assemblies					\$ -
09 51 00 Acoustical Ceiling					
Ceilings - ACT 2x2 Tegular edge	1,767	SF	\$ 7.95	\$ 14,048	
Subtotal Acoustical Ceiling					\$ 14,048



Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
09 65 00 Resilient Flooring					
Vinyl Sheet Flooring - installed	3,784	SF	\$ 6.75	\$ 25,542	
Resilient Base 4" vinyl	760	SF	\$ 3.45	\$ 2,622	
Floor Prep - Resilient	3,784	SF	\$ 0.75	\$ 2,838	
Subtotal Resilient Flooring					\$ 31,002
09 91 00 Painting & Wallcoverings					
Painting - walls & Ceilings	3,784	SF	\$ 3.65	\$ 13,812	
Painting Exterior trims and siding - Repair work only	1	LS	\$ 1,500.00	\$ 1,500	
Paint Doors and Frames (new)	11	EA	\$ 80.00	\$ 880	
Paint Cupola	1	LS	\$ 1,750.00	\$ 1,750	
Subtotal Painting & Wallcoverings					\$ 17,942
10 28 00 Toilet Accessories					
TR Accessories - PT Dispenser	< not included >				
TR Accessories - Grab Bars	< not included >				
TR Accessories - Lav Guard	2	EA	\$ 295.00	\$ 590	
TR Accessories - Electric Hand Dryers	< not included >				
TR Accessories - Soap dispensers	< not included >				
TR Accessories - Mirrors	< not included >				
TR Accessories - Coat hooks	< not included >				
TR Accessories - Custodial	< not included >				
TP Dispensers	< not included >				
Baby changing stations	< not included >				
Accessory Installation	2	EA	\$ 30.00	\$ 60	
Subtotal Toilet Accessories					\$ 650
11 30 00 Residential Appliances					
Refrigerator - ADA	1	EA	\$ 2,350.00	\$ 2,350	
Microwave - ADA	1	EA	\$ 795.00	\$ 795	
Range with oven - ADA	1	EA	\$ 2,250.00	\$ 2,250	
Dishwasher ADA	1	EA	\$ 1,750.00	\$ 1,750	
Residential range hood	1	EA	\$ 995.00	\$ 995	
Subtotal Residential Appliances					\$ 8,140
21 00 00 Fire Protection					
Fire Protection -Distribution	< Excluded >				
Subtotal Fire Protection					\$ -
22 00 00 Plumbing					
Pipe Insulation - insulate existing exposed copper piping	320	LS	\$ 7.25	\$ 2,320	
Fixture - Floor sink - Kitchen	1	EA	\$ 2,225.00	\$ 2,225	
Fixture - Sink and faucet - TR wall hung vitreous	2	EA	\$ 1,100.00	\$ 2,200	
Fixture - Urinal	1	EA	\$ 1,495.00	\$ 1,495	
Fixture - Water Closet	2	EA	\$ 1,675.00	\$ 3,350	
Fixture - Custodial Mop Sink	1	EA	\$ 1,425.00	\$ 1,425	
Fixture - ADA Shower unit & Shower Valve assy	1	EA	\$ 5,000.00	\$ 5,000	
Fixture Rough-in	7	EA	\$ 395.00	\$ 2,765	
Subtotal Plumbing					\$ 20,780
23 00 00 HVAC					
Controls and Instrumentation - Provide control for new Mechanical Systems	3,784	SF	\$ 6.50	\$ 24,596	
Split Systems with Heat Pumps - Assumes 1 ton / 350 SF	11	TON	\$ 7,500.00	\$ 81,086	
Subtotal HVAC					\$ 105,682
26 00 00 Electrical					
Lighting and Branch					
Lighting					
Light Fixture 8" Diameter	4	EA	\$ 275.00	\$ 1,100	
Light Fixture 1x4 Surface - utility	6	EA	\$ 245.00	\$ 1,470	
Light Fixture - 2x4 troffer	8	EA	\$ 325.00	\$ 2,600	
Light Fixture - Exterior	6	EA	\$ 395.00	\$ 2,370	
Light Fixture - Rqeplace remaining @ 1/120 SF	14	EA	\$ 240.00	\$ 3,248	
Site light poles @ Parking	< Excluded >				
Lighting Device Branch					
Lighting controls - local	< Assumes Existing >				
Occupancy Sensor - retrofit to existing control	12	EA	\$ 550.00	\$ 6,600	
Site lighting controller / clock	< Excluded >				
Lighting branch wiring -	< Assumes Existing >				
Lighting branch wiring & Conduits - site light poles allowance	< Excluded >				
Power					
Provide new 400A Incoming Service to support new Mechanical Systems	1	LS	\$ 60,000.00	\$ 60,000	
Provide power to Heat Pump units - Interior & Exterior	3	EA	\$ 2,250.00	\$ 6,750	
Safety & Security					
Security Access Control & CCTV					
Control panels , licenses and programming allowance	< Assumes not required >				
Access control door roughing & devices	< Assumes not required >				
Exterior wall mount camera & cable	< Assumes not required >				
Interior wall mounted camera & cable	< Assumes not required >				
Subtotal Electrical					\$ 84,138
33 00 00 Sitework					
Asphalt Paving - Added	185	SYD	\$ 75.00	\$ 13,858	
Parking striping and signage allowance	1	SYD	\$ 7,500.00	\$ 7,500	
Electric Vehicle Charging Stations allowance - Excluded	< Not included >				
Subtotal Sitework					\$ 21,358

Haddam Community Center**3784± SF GROSS - 7 Candlewood Hill Road**

	Description	Quantity	Unit
<u>Site</u>			
Asphalt paving	Adjacent to Building	1660	SF
Car parking Striping		25	
1 ADA Striping		3	
ADA Parking Signage		3	
Location Signage		2	
<u>Exterior</u>			
Asphalt shingle roof	30 year asphalt shingles	4066	SF
Gutters		152	LF
Downspouts	14'H	6	
First Floor Windows	Energy Vinyl Awning 4'X3'	3	
First Floor Windows	Energy Efficient Vinyl Single Hung 4'X3'	9	
First Floor Windows	Energy Efficient Vinyl Fixed 6' X6'	1	
First Floor Windows	Energy Efficient Vinyl Fixed 5'X3'	2	
First Floor Windows	Energy Efficient Vinyl Sliders 5'X 2'	3	
Overhead Garage Doors	Insulated Doors 10'W X 10'H	2	
Exterior Doors & Hardware		3	
Mechanical Louvers	Drainable W/ insect screen 2' x 1'	3	
Seal Brick Veneer	Entire Building	2300	SF
Masonry cleaning & Repoint CMU	Entire Building	900	SF
Replace Cedar Shake		540	SF
Paint Cupola	Scrape, Patch, Clean & Repaint	120	SF
<u>Interior</u>			
First Floor New Flooring	Vinyl Sheet Flooring	3784	SF
First Floor Base	4" Rubber	760	LF
ACT Ceiling	New 2x2 ACT Meeting Room	1767	SF
Interior Doors & Hardware	Flush Wood Doors/Flush Wood Doors w/Lite	8	
Window Treatments	Mecho shade	18	
Repaint	All Rooms		
<u>Kitchen:</u>			
Base cabinets		26	LF
Upper cabinets		26	LF
ADA Refrigerator		1	
ADA Microwave		1	
ADA Residential Oven		1	
ADA Dishwasher		1	
<u>Plumbing</u>			
Sink		2	
Toilet		2	
Urinal		1	
Floor Sink		1	
Mop Sink		1	
Insulate piping	All exposed copper piping	320	LF
		1	
Shower assembly	4x4 ADA Shower	1	
<u>Mechanical</u>			
Split system heat pump		3	Systems
<u>Electrical</u>			
New Lighting:	Throughout entire building		
1x4 Fixture Surface mounted	Toilet Rooms/kitchen	6	
8" dia Surface mounted	Hallway	4	
Surface Mounted Exterior	Building	6	
2x4 Fixtures in Grid	Meeting Space	8	
Vacancy Sensors		12	
Programable thermostats		3	
High speed internet connection		3	
<u>Structural</u>			
Repair & Repoint Chimney	Brick	200	SF
New Steel Lintels & Flashing	5'W	8	
Control Joints	CMU	120	LF

Haddam Senior Center - Facilities Assessment upgrades

923 Saybrook Road - Concept Estimate

Date: **Tuesday, March 26, 2024**



Basis Of Estimate

Basis of Estimate

Introduction

PACS has been engaged by Antinozzi Associates Architects to provide a Cost Estimate.

Estimate is based on the Town of Haddam Facility Assessment Report draft for review dated January 31, 2024:

- **Estimate quantities are based on the Haddam Senior Center Quantities provided by Antinozzi Associates (attached).**

Quantities and Methodology

- The cost estimate is based on the measurement of quantities wherever possible.
- Where actual measurements are not used, parametric measurements are used in conjunction with previous but similar project benchmarks.
- PACS uses a wide range of standard measurement and quantifying methods that are common practice in the construction industry today.

Basis of Pricing

- a) The construction costs shown in this estimate represent the fair market value and are not intended to be a prediction of the lowest bid.
- b) The costs include: labor, material, equipment and the subcontractors overhead and profit.
(Subcontractor's Mark Up)
- c) The cost of labor is based on local Prevailing wage rates for all trades.
- d) The construction rates used are based in "today's dollar" and an escalation allowance is included in the Estimate summary.
- e) Our pricing assumes competitive bidding on all elements of the construction work, assuming a minimum of three competitive bidders for all general contractors, subcontractors, materials and
- f) It is typical in our experience that if fewer bids are received or solicited, prices can be expected to be higher due to lack of competition.
- g) The subcontractor's mark ups include their own overhead, including the cost in the field as well as profit.
- h) PACS has priced this taking into account current market conditions, competition between trades and the cost fluctuations in the construction industry.
- i) Estimate assumes no Phasing required..
- j) Proposal is based on construction being performed on regular hours.

Basis Of Estimate**Design and Pricing Contingency**

A Design and Pricing Contingency is used as a budgetary tool that allows for scope and detail not defined during the design stage. As the design becomes more defined as the project passes through the design stages, the Design and Pricing Contingency decreases as more scope and detail is now being shown in the documents and is therefore reflected in the cost estimate as actual trade cost. The Design and Pricing Contingency is reduced to zero at 100% Bid Documents.

Escalation

As outlined above the estimate is calculated using rates that are "today's dollar" and reflect the cost of the project as if it was to bid on the date of issue. Due to construction projects having long design phases and long construction schedules, it is imperative to project the construction cost further ahead into the future to the point at which it is bid out. It is common practice to escalate the cost estimate to the mid point of construction to accommodate for economic inflation. This percentage accounts for this increase.

Construction Contingency

PACS advise that a Construction Contingency is carried for unforeseen project conditions and field changes. Typically we see this in the range of 3% to 5% dependent on the scope of the project.

Probable Cost

It is important for the Owner and Design team to carefully review this cost estimate including all line item descriptions, clarifications, exclusions, unit prices, assumptions, allowances, mark ups and contingencies to ensure the estimate reflects the scope of the project.

PACS has produced the cost estimate based on the widely practiced methods of cost estimating and aims to reflect the fair market value of the construction project. Our aim is to be not the highest or the lowest in the range of bids but to use our experience and expertise in the construction industry to provide the client with a degree of confidence that the project will be close to our calculated estimate.

Exclusions

This cost estimate excludes the following:

- Premiums for working in inaccessible or partially accessible spaces during construction
- Surplus Stock and Spares
- Premiums for restrictive and uncompetitive bidding
- Premiums for non-standard work times
- Work beyond the project limits
- CT Sales Tax - Assumes Exempt
- Wellpoints - Assumes open trench pumping only
- Rock or Unsuitable soils remediation
- Hazardous, Contaminated or Polluted soils
- Hazardous materials, abatement or associated restoration within the buildings
- AV Equipment / Technology Budget
- Utility Costs - Electric, Gas, Water (assumes by Owner)

Risks to the Cost Estimate

Items that may affect the cost estimate, the list as follows but not limited:

- Changes to the design subsequent to the issue of the documents stated above which this estimate is based on
- Non Competitive Bid restrictions and the sole sourcing of products/materials from specific vendors
- Restrictive technical specifications that produce a non competitive environment
- Changes to the project schedule that delay the project and therefore have impact on cost
- Incomplete and poorly coordinated documentation
- Access restrictions, unidentified out of hours work policies and phasing restrictions
- Restrictive technical specifications that produce a non competitive environment
- Unforeseen and unknown Site conditions

Haddam Senior Center - Facilities Assessment upgrades



923 Saybrook Road - Concept Estimate

		Base Building		Addition	
Trade		Cost	Cost / SF	Cost	Cost / SF
01 50 00	Temporary Facilities and Controls	\$ 31,680	\$ 15.00	\$ -	\$ -
02 41 19	Selective Demolition	\$ 14,950	\$ 7.08	\$ -	\$ -
03 30 00	Cast-In-Place Concrete	\$ 5,500	\$ 2.60	\$ -	\$ -
04 20 00	Unit Masonry	\$ 4,188	\$ 1.98	\$ -	\$ -
05 50 00	Metal Fabrications	\$ 3,300	\$ 1.56	\$ -	\$ -
06 10 00	Rough Carpentry	\$ 18,600	\$ 8.81	\$ -	\$ -
06 20 00	Finish Carpentry	\$ 27,915	\$ 13.22	\$ -	\$ -
07 50 00	Roofing	\$ 43,634	\$ 20.66	\$ -	\$ -
07 92 00	Joint Sealants	\$ 1,500	\$ 0.71	\$ -	\$ -
08 10 00	Hollow Metal Doors & Frames	\$ 8,130	\$ 3.85	\$ -	\$ -
08 50 00	Windows	\$ 21,375	\$ 10.12	\$ -	\$ -
09 51 00	Acoustical Ceiling	\$ 10,437	\$ 4.94	\$ -	\$ -
09 65 00	Resilient Flooring	\$ 17,030	\$ 8.06	\$ -	\$ -
09 91 00	Painting & Wallcoverings	\$ 4,240	\$ 2.01	\$ -	\$ -
10 28 00	Toilet Accessories	\$ 4,255	\$ 2.01	\$ -	\$ -
11 30 00	Residential Appliances	\$ 8,140	\$ 3.85	\$ -	\$ -
13 00 00	Special Construction (3,000 sf Addition)	\$ -	\$ -	\$ 1,425,000	\$ 475.00
22 00 00	Plumbing	\$ 15,555	\$ 7.37	\$ -	\$ -
23 00 00	HVAC	\$ 2,500	\$ 1.18	\$ -	\$ -
26 00 00	Electrical	\$ 78,350	\$ 37.10	\$ -	\$ -
33 00 00	Sitework	\$ 35,447	\$ 16.78	\$ 95,000	\$ 31.67
TOTAL DIRECT COST		\$ 356,725	\$168.90	\$ 1,520,000	\$506.67

Haddam Senior Center - Facilities Assessment upgrades

923 Saybrook Road - Concept Estimate

Trade	Base Building		Addition		
	Cost	Cost / SF	Cost	Cost / SF	
TOTAL DIRECT COST (FROM PREVIOUS PAGE)	\$ 356,725	\$168.90	\$ 1,520,000	\$506.67	
Design & Estimating Contingency	10.00%	\$ 35,673	\$ 152,000		
Escalation -	6.00%	\$ 23,544	\$ 100,320		
General Conditions- (3 mos @ 25,000 / Month)	\$ 75000	\$ 75,000	\$ 75,000		
Preconstruction - Assumes None		\$ -	\$ -		
GC Insurances	1.25%	\$ 6,137	\$ 23,092		
GC Surety Bond	0.78%	\$ 3,244	\$ 13,824		
GC Fee	5.00%	\$ 20,797	\$ 88,616		
TOTAL CONSTRUCTION COST (DIRECT & INDIRECT COSTS)		\$ 521,120	\$246.74	\$ 1,972,852	\$657.62
Bonding & Legal fees to Town	Excluded	Excluded	Excluded		
A&E Fees / Professional Services	7.00%	\$ 36,478	\$ 138,100		
Commissioning agent	Excluded	Excluded	Excluded		
Owners Representative	Excluded	Excluded	Excluded		
Builders Risk Insurance - Town	Excluded	Excluded	Excluded		
Testing & Inspections	Excluded	Excluded	Excluded		
Building Permit - Assumes waived	Excluded	Excluded	Excluded		
Moving & Relocation costs	Excluded	Excluded	Excluded		
FF&E (Furniture Fixtures and Equipment)	Excluded	Excluded	Excluded		
State Permit 0.26%	Excluded	Excluded	Excluded		
A/V Systems - Assumes in FF&E	Excluded	Excluded	Excluded		
Artwork - By Owner	Excluded	Excluded	Excluded		
Utility Connection fees allowance	Excluded	Excluded	Excluded		
Owners Contingency:	5.00%	\$ 26,056	\$ 98,643		
TOTAL CONSTRUCTION & SOFT COSTS		\$ 583,654	\$276.35	\$ 2,209,594	\$736.53



Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
01 50 00 Temporary Facilities and Controls					
Temporary Site Services - GC Bid (minimal)	2,112	SF	\$ 15.00	\$ 31,680	
Subtotal Temporary Facilities and Controls					\$ 31,680
02 11 00 Contaminated Soil Excavation & Disposal					
Assumes not required	< Excluded >				\$ -
Subtotal Contaminated Soil Excavation & Disposal					\$ -
02 12 00 Transportation/Disposal of Contaminated Materials					
Assumes not required	< Excluded >				\$ -
Subtotal Transportation/Disposal of Contaminated Materials					\$ -
02 80 00 Hazardous Abatement					
Assumes not required	< Excluded >				\$ -
Subtotal Hazardous Abatement					\$ -
02 41 16 Building Demolition					
Assumes not required	< Excluded >				\$ -
Subtotal Building Demolition					\$ -
02 41 19 Selective Demolition					
Remove exterior doors-prep for new frame installation	3.0	EA	\$ 500.00	\$ 1,500	
Demo existing flooring and base	2,112.0	SF	\$ 2.55	\$ 5,386	
Demo existing kitchen cabinets and appliances	1.0	LS	\$ 2,500.00	\$ 2,500	
Demo existing ACT ceilings	1,470.0	SF	\$ 1.95	\$ 2,867	
Demo existing plumbing fixtures - prep for replacement	5.0	EA	\$ 75.00	\$ 375	
Demo existing lighting - prep for replacement	2,112.0	SF	\$ 1.10	\$ 2,323	
Subtotal Selective Demolition					\$ 14,950
03 30 00 Cast-In-Place Concrete					
Provide new Exterior Steps	2.0	EA	\$ 1,500.00	\$ 3,000	
Provide modifications / improvements to ADA ramp for code compliance	1.0	EA	\$ 2,500.00	\$ 2,500	
Subtotal Cast-In-Place Concrete					\$ 5,500
04 20 00 Unit Masonry					
<u>Envelope</u>					
Masonry cleaning & Sealing	425	SF	\$ 7.50	\$ 3,188	
Restoration at Spalled bricks - Allowance	1	LS	\$ 1,000.00	\$ 1,000	
Subtotal Unit Masonry					\$ 4,188
05 50 00 Metal Fabrications					
ADA Railing @ Entry Ramp	1	LS	\$ 3,300.00	\$ 3,300	
Subtotal Metal Fabrications					\$ 3,300
06 10 00 Rough Carpentry					
Sistering Floor Joists - Crawlspace access	1,240	LF	\$ 15.00	\$ 18,600	
Subtotal Rough Carpentry					\$ 18,600
06 20 00 Finish Carpentry					
<u>Exterior Finish Carpentry & Trims - installed</u>					
Exterior door replacements - Exterior trims	51	LF	\$ 17.50	\$ 893	
Exterior Window replacements - Exterior trims	270	LF	\$ 22.00	\$ 5,940	
Exterior Louver - 24" round - Remove & replace with new trims	3	EA	\$ 595.00	\$ 1,785	
Exterior Louver - 2.5' x 6' round - Remove & replace with new trims	6	EA	\$ 795.00	\$ 4,770	
<u>Interior Finish Carpentry & Millwork</u>					
Exterior door replacements -Interior trims	51	LF	\$ 12.50	\$ 638	
Base cabinet with Solid surface top	24	LF	\$ 395.00	\$ 9,480	
Plam uppers	18	LF	\$ 245.00	\$ 4,410	
Subtotal Finish Carpentry					\$ 27,915
07 50 00 Roofing					
Asphalt shingle roof - Rip and replace with Ice & Water Shield	2,183	SF	\$ 14.50	\$ 31,654	
Gutters and leaders - Remove & replace	128	LF	\$ 35.00	\$ 4,480	
Leaders - Remove & replace	140	LF	\$ 35.00	\$ 4,900	
Splash blocks -	8	EA	\$ 325.00	\$ 2,600	
Snow guards -	< not included >				
Subtotal Roofing					\$ 43,634
07 92 00 Joint Sealants					
Caulking & Sealants	1	LS	\$ 1,500.00	\$ 1,500	
Subtotal Joint Sealants					\$ 1,500
08 10 00 Hollow Metal / Wood Doors & Frames					
Exterior metal door, frame and hardware replacement	3	EA	\$ 2,500.00	\$ 7,500	
Install frame	3	EA	\$ 120.00	\$ 360	
Install Door leaf	3	EA	\$ 90.00	\$ 270	
Subtotal Hollow Metal / Wood Doors & Frames					\$ 8,130
08 50 00 Windows					
Remove & Replace with single hung energy efficient windows 3x5	225	SF	\$ 95.00	\$ 21,375	
Subtotal Windows					\$ 21,375
09 21 00 Gypsum Board Assemblies					
None identified	< Excluded >				\$ -
Subtotal Gypsum Board Assemblies					\$ -
09 51 00 Acoustical Ceiling					
Ceilings - ACT 2x2 Tegular edge	1,470	SF	\$ 7.10	\$ 10,437	
Subtotal Acoustical Ceiling					\$ 10,437



Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
09 65 00 Resilient Flooring					
Vinyl Sheet Flooring - installed	2,112	SF	\$ 6.75	\$ 14,256	
Resilient Base 4" vinyl	345	LF	\$ 3.45	\$ 1,190	
Floor Prep - Resilient	2,112	SF	\$ 0.75	\$ 1,584	
Subtotal Resilient Flooring					\$ 17,030
09 91 00 Painting & Wallcoverings					
Painting - walls & Ceilings - repair work only & Touch up allowance	1	LS	\$ 2,500.00	\$ 2,500	
Painting Exterior trims and siding - Repair work only	1	LS	\$ 1,500.00	\$ 1,500	
Paint Doors and Frames (new)	3	EA	\$ 80.00	\$ 240	
Vinyl Wallcoverings	< Excluded >				
Digital Wallcoverings	< Excluded >				
Subtotal Painting & Wallcoverings					\$ 4,240
10 28 00 Toilet Accessories					
TR Accessories - PT Dispenser	3	EA	\$ 175.00	\$ 525	
TR Accessories - Grab Bars	6	EA	\$ 95.00	\$ 570	
TR Accessories - Lav Guard	2	EA	\$ 295.00	\$ 590	
TR Accessories - Electric Hand Dryers	< N/A >				
TR Accessories - Soap dispensers	3	EA	\$ 95.00	\$ 285	
TR Accessories - Mirrors	2	EA	\$ 345.00	\$ 690	
TR Accessories - Coat hooks	2	EA	\$ 35.00	\$ 70	
TR Accessories - Custodial	< N/A >				
TP Dispensers	2	EA	\$ 65.00	\$ 130	
Baby changing stations	1	EA	\$ 765.00	\$ 765	
Accessory Installation	21	EA	\$ 30.00	\$ 630	
Subtotal Toilet Accessories					\$ 4,255
11 30 00 Residential Appliances					
Refrigerator - ADA	1	EA	\$ 2,350.00	\$ 2,350	
Microwave - ADA	1	EA	\$ 795.00	\$ 795	
Range with oven - ADA	1	EA	\$ 2,250.00	\$ 2,250	
Dishwasher ADA	1	EA	\$ 1,750.00	\$ 1,750	
Residential range hood	1	EA	\$ 995.00	\$ 995	
Subtotal Residential Appliances					\$ 8,140
21 00 00 Fire Protection					
Fire Protection -Distribution	< Excluded >				
Subtotal Fire Protection					\$ -
22 00 00 Plumbing					
Welltrol pressure tank - remove and replace with new pressure switch	1	EA	\$ 1,850.00	\$ 1,850	
Pipe insulation - insulate existing exposed copper piping	460	LS	\$ 7.25	\$ 3,335	
Fixture - Sink and faucet Kitchen	1	EA	\$ 1,595.00	\$ 1,595	
Fixture - Sink and faucet - TR wall hung vitreous	2	EA	\$ 1,100.00	\$ 2,200	
Fixture - Water Closet	2	EA	\$ 1,675.00	\$ 3,350	
Fixture Rough-in	5	EA	\$ 395.00	\$ 1,975	
Fixture Rough-in & Connections - Kitchen	1	LS	\$ 1,250.00	\$ 1,250	
Subtotal Plumbing					\$ 15,555
23 00 00 HVAC					
Controls and Instrumentation - Provide programable t-stats for existing equipment	1	LS	\$ 2,500.00	\$ 2,500	
Subtotal HVAC					\$ 2,500
26 00 00 Electrical					
Lighting and Branch					
Lighting					
Light Fixture 2x4 troffers	12	EA	\$ 365.00	\$ 4,380	
Light Fixture Recessed	7	EA	\$ 225.00	\$ 1,575	
Light Fixture - Exterior @ Building	5	EA	\$ 295.00	\$ 1,475	
Site light poles @ Parking	2	EA	\$ 5,500.00	\$ 11,000	
Lighting Device Branch					
Lighting controls - local	< Assumes Existing >				
Occupancy Sensor - retrofit to existing control	10	EA	\$ 550.00	\$ 5,500	
Site lighting controller / clock	1	LS	\$ 795.00	\$ 795	
Lighting branch wiring -	< Assumes Existing >				
Lighting branch wiring & Conduits - site light poles allowance	250	LF	\$ 22.50	\$ 5,625	
Safety & Security					
Security Access Control & CCTV					
Control panels , licenses and programming allowance	1	LS	\$ 10,000.00	\$ 10,000	
Access control door roughing & devices	< Assumes not required >				
Exterior wall mount camera & cable	4	EA	\$ 3,500.00	\$ 14,000	
Interior wall mounted camera & cable	4	EA	\$ 3,500.00	\$ 14,000	
Subtotal Electrical					\$ 78,350
33 00 00 Sitework					
Additional paving 3,000 sf - assumes stripping, subgrading, export of spoils, 8" sub-base, 6" base, 1.5" base course and 1.5" surface	333	SY	\$ 80.00	\$ 26,667	
Additional paving 3 additional parking spaces - assumes stripping, subgrading, export of spoils, 8" sub-base, 6" base, 1.5" base course and 1.5" surface	66	SY	\$ 80.00	\$ 5,280	
Parking striping and signage allowance	1	LS	\$ 3,500.00	\$ 3,500	
Electric Vehicle Charging Stations allowance - Excluded	< Not included >				
Subtotal Sitework					\$ 35,447

Haddam Senior Center**2112± SF GROSS - 923 Saybrook Road**

	Description	Quantity	Unit
<u>Site</u>			
Additional parking	3 spots & Signage		
Car parking Striping	8 spots 2 HC	10 total	
Asphalt Paving		3000	SF
<u>Exterior</u>			
Gutters		128	LF
Downspouts		10	
Splash block		8	
Asphalt shingle roof	30 year asphalt shingles	2183.5	SF
Masonry cleaning	Chimney	193.6	SF
Masonry cleaning	Foundation	210	LF
Exterior Windows	Energy Efficient vinyl Single Hung W/Grid 5'x3'	15	
Exterior Doors	metal 6 Panel	2	
Exterior Doors	metal 2 Panel W/lite	1	
Exterior Louver	Tower Rectangle 2'-6" X 4'	6	
Exterior Louver	Circle 2' Dia	3	
<u>Interior</u>			
New Flooring	Vinyl Sheet Flooring	2112	SF
New Base	4" Rubber	362	LF
<u>Kitchen:</u>			
Base cabinets		24	LF
Upper cabinets		18	LF
ADA Refrigerator		1	
ADA Microwave		1	
ADA Residential Oven		1	
ADA Dishwasher		1	
Hood		1	
Ceiling ACT & Grid	2x2 Meeting Area	1470	SF
<u>Plumbing</u>			
Toilets	Low Flow Water Saving Fixtures	2	
Faucets/sinks	Low Flow Water Saving Fixtures	2	
Insulate piping	All exposed copper Piping	460	LF
New water well water storage tank	20 Gallon	1	
Faucets/Kitchen sinks	Low Flow Water Saving Fixtures	1	
<u>Electrical</u>			
New Lighting:	Throughout entire building		
2x4 Lay In Fixtures		12	
Recessed down lights Fixtures		7	
Exterior Lighting Fixtures		5	
Vacancy Sensors		10	
Programable thermostats		3	
Interior Security Video Surveillance System		4	
Exterior Security Video Surveillance System		4	
<u>Structural</u>			
Additional Structure	Sistering of joist at crawlspace (deflection)	800	SF
Repair concrete Stair Landing & Ramp			

Haddam Municipal Annex - Facilities Assessment upgrades

Jail Hill Road - Concept Estimate

Date: **Tuesday, March 26, 2024**



Basis Of Estimate

Basis of Estimate

Introduction

PACS has been engaged by Antinozzi Associates Architects to provide a Cost Estimate.

Estimate is based on the Town of Haddam Facility Assessment Report draft for review dated January 31, 2024:

- **Estimate quantities are based on the Haddam Senior Center Quantities provided by Antinozzi Associates (attached).**

Quantities and Methodology

- The cost estimate is based on the measurement of quantities wherever possible.
- Where actual measurements are not used, parametric measurements are used in conjunction with previous but similar project benchmarks.
- PACS uses a wide range of standard measurement and quantifying methods that are common practice in the construction industry today.

Basis of Pricing

- a) The construction costs shown in this estimate represent the fair market value and are not intended to be a prediction of the lowest bid.
- b) The costs include: labor, material, equipment and the subcontractors overhead and profit.
(Subcontractor's Mark Up)
- c) The cost of labor is based on local Prevailing wage rates for all trades.
- d) The construction rates used are based in "today's dollar" and an escalation allowance is included in the Estimate summary.
- e) Our pricing assumes competitive bidding on all elements of the construction work, assuming a minimum of three competitive bidders for all general contractors, subcontractors, materials and
- f) It is typical in our experience that if fewer bids are received or solicited, prices can be expected to be higher due to lack of competition.
- g) The subcontractor's mark ups include their own overhead, including the cost in the field as well as profit.
- h) PACS has priced this taking into account current market conditions, competition between trades and the cost fluctuations in the construction industry.
- i) Estimate assumes no Phasing required..
- j) Proposal is based on construction being performed on regular hours.

Basis Of Estimate

Design and Pricing Contingency

A Design and Pricing Contingency is used as a budgetary tool that allows for scope and detail not defined during the design stage. As the design becomes more defined as the project passes through the design stages, the Design and Pricing Contingency decreases as more scope and detail is now being shown in the documents and is therefore reflected in the cost estimate as actual trade cost. The Design and Pricing Contingency is reduced to zero at 100% Bid Documents.

Escalation

As outlined above the estimate is calculated using rates that are "today's dollar" and reflect the cost of the project as if it was to bid on the date of issue. Due to construction projects having long design phases and long construction schedules, it is imperative to project the construction cost further ahead into the future to the point at which it is bid out. It is common practice to escalate the cost estimate to the mid point of construction to accommodate for economic inflation. This percentage accounts for this increase.

Construction Contingency

PACS advise that a Construction Contingency is carried for unforeseen project conditions and field changes. Typically we see this in the range of 3% to 5% dependent on the scope of the project.

Probable Cost

It is important for the Owner and Design team to carefully review this cost estimate including all line item descriptions, clarifications, exclusions, unit prices, assumptions, allowances, mark ups and contingencies to ensure the estimate reflects the scope of the project.

PACS has produced the cost estimate based on the widely practiced methods of cost estimating and aims to reflect the fair market value of the construction project. Our aim is to be not the highest or the lowest in the range of bids but to use our experience and expertise in the construction industry to provide the client with a degree of confidence that the project will be close to our calculated estimate.

Exclusions

This cost estimate excludes the following:

- Premiums for working in inaccessible or partially accessible spaces during construction
- Surplus Stock and Spares
- Premiums for restrictive and uncompetitive bidding
- Premiums for non-standard work times
- Work beyond the project limits
- CT Sales Tax - Assumes Exempt
- Wellpoints - Assumes open trench pumping only
- Rock or Unsuitable soils remediation
- Hazardous, Contaminated or Polluted soils
- Hazardous materials, abatement or associated restoration within the buildings
- AV Equipment / Technology Budget
- Utility Costs - Electric, Gas, Water (assumes by Owner)

Risks to the Cost Estimate

Items that may affect the cost estimate, the list as follows but not limited:

- Changes to the design subsequent to the issue of the documents stated above which this estimate is based on
- Non Competitive Bid restrictions and the sole sourcing of products/materials from specific vendors
- Restrictive technical specifications that produce a non competitive environment
- Changes to the project schedule that delay the project and therefore have impact on cost
- Incomplete and poorly coordinated documentation
- Access restrictions, unidentified out of hours work policies and phasing restrictions
- Restrictive technical specifications that produce a non competitive environment
- Unforeseen and unknown Site conditions

Haddam Municipal Annex - Facilities Assessment upgrades



3/26/2024

Jail Hill Road - Concept Estimate

		Base Estimate		Addition	
Trade		Cost	Cost / SF	Cost	Cost / SF
01 50 00	Temporary Facilities and Controls	\$ 35,280	\$ 15.00	\$ -	\$ -
02 41 19	Selective Demolition	\$ 12,468	\$ 5.30	\$ -	\$ -
06 20 00	Finish Carpentry	\$ 41,864	\$ 17.80	\$ -	\$ -
07 50 00	Roofing	\$ 26,720	\$ 11.36	\$ -	\$ -
07 92 00	Joint Sealants	\$ 1,500	\$ 0.64	\$ -	\$ -
08 10 00	Hollow Metal Doors & Frames	\$ 79,010	\$ 33.59	\$ -	\$ -
08 50 00	Windows	\$ 16,438	\$ 6.99	\$ -	\$ -
09 91 00	Painting & Wallcoverings	\$ 4,900	\$ 2.08	\$ -	\$ -
11 30 00	Residential Appliances	\$ 8,645	\$ 3.68	\$ -	\$ -
13 00 00	Special Construction (1,100 sf Addition)	\$ -	\$ -	\$ 522,500	\$ 475.00
22 00 00	Plumbing	\$ 20,780	\$ 8.84	\$ -	\$ -
23 00 00	HVAC	\$ 23,000	\$ 9.78	\$ -	\$ -
26 00 00	Electrical	\$ 91,280	\$ 38.81	\$ -	\$ -
33 00 00	Sitework	\$ 190,429	\$ 80.96	\$ 60,280	\$ 54.80
TOTAL DIRECT COST		\$ 552,314	\$234.83	\$ 582,780	\$529.80

Haddam Municipal Annex - Facilities Assessment upgrades



3/26/2024

Jail Hill Road - Concept Estimate

Trade		Base Estimate		Addition	
		Cost	Cost / SF	Cost	Cost / SF
TOTAL DIRECT COST (FROM PREVIOUS PAGE)		\$ 552,314	\$234.83	\$ 582,780	\$529.80
Design & Estimating Contingency	10.00%	\$ 55,231		\$ 42,064	
Escalation -	6.00%	\$ 36,453		\$ 29,766	
General Conditions- (3 mos @ 25,000 / Month)	\$ 75000	\$ 75,000		\$ 50,000	
Preconstruction - Assumes None		\$ -		\$ -	
GC Insurances	1.25%	\$ 8,987		\$ 8,276	
GC Surety Bond	0.78%	\$ 5,023		\$ 4,297	
GC Fee	5.00%	\$ 32,200		\$ 27,546	
TOTAL CONSTRUCTION COST (DIRECT & INDIRECT COSTS)		\$ 765,209	\$325.34	\$ 744,729	\$677.03
Bonding & Legal fees to Town	Excluded	Excluded		Excluded	
A&E Fees / Professional Services	7.00%	\$ 53,565		\$ 52,131	
Commissioning agent	Excluded	Excluded		Excluded	
Owners Representative	Excluded	Excluded		Excluded	
Builders Risk Insurance - Town	Excluded	Excluded		Excluded	
Testing & Inspections	Excluded	Excluded		\$ 10,000	
Building Permit - Assumes waived	Excluded	Excluded		Excluded	
Moving & Relocation costs	Excluded	Excluded		Excluded	
FF&E (Furniture Fixtures and Equipment)	Excluded	Excluded		Excluded	
State Permit 0.26%	Excluded	Excluded		Excluded	
A/V Systems - Assumes in FF&E	Excluded	Excluded		Excluded	
Artwork - By Owner	Excluded	Excluded		Excluded	
Utility Connection fees allowance	Excluded	Excluded		\$ 25,000	
Owners Contingency:	5.00%	\$ 38,260		\$ 37,236	
TOTAL CONSTRUCTION & SOFT COSTS		\$ 857,034	\$364.39	\$ 869,096	\$790.09



Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
01 50 00 Temporary Facilities and Controls					
Temporary Site Services - GC Bid (minimal)	2,352	SF	\$ 15.00	\$ 35,280	
Subtotal Temporary Facilities and Controls					\$ 35,280
02 11 00 Contaminated Soil Excavation & Disposal					
Assumes not required	< Excluded >				
Subtotal Contaminated Soil Excavation & Disposal					\$ -
02 12 00 Transportation/Disposal of Contaminated Materials					
Assumes not required	< Excluded >				
Subtotal Transportation/Disposal of Contaminated Materials					\$ -
02 80 00 Hazardous Abatement					
Assumes not required	< Excluded >				
Subtotal Hazardous Abatement					\$ -
02 41 16 Building Demolition					
Assumes not required	< Excluded >				
Subtotal Building Demolition					\$ -
02 41 19 Selective Demolition					
Remove vinyl siding and prep for new	4,225.0	SF	\$ 2.25	\$ 9,506	
Demo existing plumbing fixtures - prep for replacement	5.0	EA	\$ 75.00	\$ 375	
Demo existing lighting - prep for replacement	2,352.0	SF	\$ 1.10	\$ 2,587	
Subtotal Selective Demolition					\$ 12,468
03 30 00 Cast-In-Place Concrete					
None identified	< not included >				
Subtotal Cast-In-Place Concrete					\$ -
04 20 00 Unit Masonry					
None identified	< not included >				
Subtotal Unit Masonry					\$ -
05 50 00 Metal Fabrications					
None identified	< not included >				
Subtotal Metal Fabrications					\$ -
06 10 00 Rough Carpentry					
None identified	< not included >				
Subtotal Rough Carpentry					\$ -
06 20 00 Finish Carpentry					
Exterior Finish Carpentry & Trims - installed					
Exterior door replacements - Exterior trims	34	LF	\$ 17.50	\$ 595	
Exterior Window replacements - Exterior trims N/A - Vinyl trims with siding	< Assumes not required >				
Exterior vinyl calboard siding	4,225	SF	\$ 7.95	\$ 33,589	
Interior Finish Carpentry & Millwork					
Exterior door replacements -Interior trims	< Assumes not required >				
Base cabinet with Solid surface top	12	LF	\$ 395.00	\$ 4,740	
Plam uppers	12	LF	\$ 245.00	\$ 2,940	
Subtotal Finish Carpentry					\$ 41,864
07 50 00 Roofing					
Asphalt shingle roof - Ri and replace with Ice & Water Shield	1,200	SF	\$ 14.50	\$ 17,400	
Gutters and leaders - Remove & replace	80	LF	\$ 35.00	\$ 2,800	
Leaders - Remove & replace	112	LF	\$ 35.00	\$ 3,920	
Splash blocks -	8	EA	\$ 325.00	\$ 2,600	
Snow guards -	< not included >				
Subtotal Roofing					\$ 26,720
07 92 00 Joint Sealants					
Caulking & Sealants	1	LS	\$ 1,500.00	\$ 1,500	
Subtotal Joint Sealants					\$ 1,500
08 10 00 Hollow Metal / Wood Doors & Frames					
Interior door, frame and hardware replacement	26	EA	\$ 2,500.00	\$ 65,000	
Storefront door	1	EA	\$ 3,750.00	\$ 3,750	
Install frame	26	EA	\$ 120.00	\$ 3,120	
Install Door leaf	26	EA	\$ 90.00	\$ 2,340	
Door Operator - Electric	1	LS	\$ 4,800.00	\$ 4,800	
Subtotal Hollow Metal / Wood Doors & Frames					\$ 79,010
08 50 00 Windows					
Remove & Replace with single hung energy efficient windows	213	SF	\$ 65.00	\$ 13,813	
Storefronts	35	SF	\$ 75.00	\$ 2,625	
Subtotal Windows					\$ 16,438
09 21 00 Gypsum Board Assemblies					
None identified	< Assumes not required >				
Subtotal Gypsum Board Assemblies					\$ -
09 51 00 Acoustical Ceiling					
Ceilings - ACT 2x2 Tegular edge	< Assumes not required >				
Subtotal Acoustical Ceiling					\$ -



Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
09 65 00 Resilient Flooring					
Vinyl Sheet Flooring - installed			< Assumes not required >		
Resilient Base 4" vinyl			< Assumes not required >		
Floor Prep - Resilient			< Assumes not required >		
Subtotal Resilient Flooring					\$ -
09 91 00 Painting & Wallcoverings					
Painting - walls & Ceilings - repair work only & Touch up allowance	1	LS	\$ 2,500.00	\$ 2,500	
Painting Exterior trims and siding - Repair work only			< Assumes not required >		
Paint Doors and Frames (new)	26	EA	\$ 80.00	\$ 2,080	
Paint large bollards	4	EA	\$ 80.00	\$ 320	
Vinyl Wallcoverings			< Excluded >		
Digital Wallcoverings			< Excluded >		
Subtotal Painting & Wallcoverings					\$ 4,900
10 28 00 Toilet Accessories					
TR Accessories - PT Dispenser			< Assumes not required >		
TR Accessories - Grab Bars			< Assumes not required >		
TR Accessories - Lav Guard			< Assumes not required >		
TR Accessories - Electric Hand Dryers			< Assumes not required >		
TR Accessories - Soap dispensers			< Assumes not required >		
TR Accessories - Mirrors			< Assumes not required >		
TR Accessories - Coat hooks			< Assumes not required >		
TR Accessories - Custodial			< Assumes not required >		
TP Dispensers			< Assumes not required >		
Baby changing stations			< Assumes not required >		
Accessory Installation			< Assumes not required >		
Subtotal Toilet Accessories					\$ -
11 30 00 Residential Appliances					
Refridgerator - ADA	1	EA	\$ 2,350.00	\$ 2,350	
Microwave - ADA	1	EA	\$ 795.00	\$ 795	
Deep Freeze- ADA	3	EA	\$ 1,250.00	\$ 3,750	
Dishwasher ADA	1	EA	\$ 1,750.00	\$ 1,750	
Residential range hood			< Excluded >		
Subtotal Residential Appliances					\$ 8,645
21 00 00 Fire Protection					
Fire Protection -Distribution			< Excluded >		
Subtotal Fire Protection					\$ -
22 00 00 Plumbing					
Welltrol pressure tank - remove and replace with new pressure switch	1	EA	\$ 1,850.00	\$ 1,850	
Pipe insulation - insulate existing exposed copper piping	320	LF	\$ 7.25	\$ 2,320	
Fixture - Sink and faucet Kitchen	1	EA	\$ 1,595.00	\$ 1,595	
Fixture - Sink and faucet - TR wall hung vitreous	3	EA	\$ 1,100.00	\$ 3,300	
Fixture - Water Closet	3	EA	\$ 1,675.00	\$ 5,025	
Fixture - Urinal	1	EA	\$ 1,425.00	\$ 1,425	
Fixture - Mop Sink	1	EA	\$ 1,250.00	\$ 1,250	
Fixture Rough-in	7	EA	\$ 395.00	\$ 2,765	
Fixture Rough-in & Connections - Kitchen	1	LS	\$ 1,250.00	\$ 1,250	
Subtotal Plumbing					\$ 20,780
23 00 00 HVAC					
Controls and Instrumentation - Provide programable t-stats for existing equipment	4	EA	\$ 750.00	\$ 3,000	
Heat recovery ventilator - Allowance	2	EA	\$ 10,000.00	\$ 20,000	
Subtotal HVAC					\$ 23,000
26 00 00 Electrical					
Lighting and Branch					
<u>Lighting</u>					
Light Fixture 2x4 troffer lay-in	21	EA	\$ 365.00	\$ 7,665	
Light Fixture 2x4 surface mounted	21	EA	\$ 365.00	\$ 7,665	
Light Fixture Wall mounted wet location	4	EA	\$ 425.00	\$ 1,700	
Light Fixture - Exterior @ Building			< Assumes not required >		
Site light poles @ Parking			< Assumes not required >		
<u>Lighting Device Branch</u>					
Lighting controls - local			< Assumes Existing >		
Occupancy Sensor - retrofit to existing control	20	EA	\$ 550.00	\$ 11,000	
Site lighting controller / clock			< Assumes not required >		
Lighting branch wiring -			< Assumes Existing >		
Lighting branch wiring & Conduits - site light poles allowance			< Assumes not required >		
<u>Equipment power</u>					
Power to door operator	1	LS	\$ 1,750.00	\$ 1,750	
Safety & Security					
<u>Security Access Control & CCTV</u>					
Control panels , licenses and programming allowance	1	LS	\$ 10,000.00	\$ 10,000	
Access control door roughing & devices			< Assumes not required >		
Exterior wall mount camera & cable	8	EA	\$ 2,250.00	\$ 18,000	
Interior wall mounted camera & cable	8	EA	\$ 2,250.00	\$ 18,000	
Install new intrusion detection system	1	LS	\$ 5,500.00	\$ 5,500	
Subtotal Electrical					\$ 91,280
33 00 00 Sitework					
Re-pave 14,650 sf - assumes stipping, subgrading, export of spoils, 8" sub-base, 6" base, 1.5" base course and 1.5" surface	1,628	SY	\$ 80.00	\$ 130,222	
Stump removal	1	LS	\$ 750.00	\$ 750	
Add sidewalks - Concrete new	1,100	SF	\$ 12.95	\$ 14,245	
Add sidewalks - Bituminous	400	SF	\$ 7.95	\$ 3,180	
Remove and replace spalled concrete	1,110	SF	\$ 15.00	\$ 16,650	
Site concrete mechanical pad	60	SF	\$ 25.00	\$ 1,500	
E&B, Demo and Export existing damage retaining wall	26	CYD	\$ 75.00	\$ 1,983	
Replace CIP retaining wall and footing - Concrete	26	CYD	\$ 65.00	\$ 1,719	
Fieldstone face on retaining wall replacement	272	SF	\$ 65.00	\$ 17,680	
Parking striping and signage allowance	1	LS	\$ 2,500.00	\$ 2,500	
Electric Vehicle Charging Stations allowance - Excluded			< Not included >		
Subtotal Sitework					\$ 190,429

Haddam Annex

2352± SF GROSS - 11 Jail Hill Road

Site

Repair Retaining wall	Field stone 4'H	68 LF
Asphalt paving		14650 SF
Car parking Striping ADA		3 Spots
Car parking Striping		13 Spots
Concrete Sidewalks	6'W	1100 SF
Asphalt paving sidewalk	5'W	400 SF

Exterior

Gutters		80 LF
Downspouts		8
Splash block		8
Asphalt shingle roof	30 year asphalt shingles	1200 SF
New Vinyl Clapboard	6" Horz	4224 SF
Exterior Windows	Energy Efficient Vinyl Single Hung 2'-6"WX3'H	11
Exterior Windows	Energy Efficient Vinyl Single Hung 2'-6"WX4'H	11
Exterior Windows	Energy Efficient Vinyl Single Hung 1'WX5'H	4
Exterior Doors Store front	4-1/2" D 7'H x 5' W 3'-0"W Door	1
Exterior Door W/ Lite	Flush Door 3'x7'	1
Exterior Flush Door	Flush Door 3'x7'	1
Stump Removal	3' Wide	1
Paint Large Bollards	Concrete 4'H	4

Interior**Kitchen:**

Base Cabinets		12 LF
Upper cabinets		12 LF
ADA Refrigerator		1
ADA Microwave		1
ADA Deep Freeze		3
ADA Dishwasher		1
Doors & hardware Second Floor		12
Wood Flush Doors & Hardware First Floor		14

Plumbing

Urinal	Low Flow Water Saving Fixtures	1
Toilets	Low Flow Water Saving Fixtures	3
Faucets/sinks	Low Flow Water Saving Fixtures	3
Insulate piping	All exposed copper Piping	320 LF
New water well water storage tank	20 Gallon	1
Faucets/Kitchen sinks	Low Flow Water Saving Fixtures	1
Mop Sink		1

Mechanical

Energy Recovery Unit		1
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Electrical

New Lighting:	Throughout entire building	
2x4 Lay In Fixtures		21
Wall mounted	Wet locations	4
2X4 Surface Mounted		21
ADA push button Assembly	Entry Door	1
Vacancy Sensors		20
Programable thermostats		4
Interior Security Video Surveillance System		8
Exterior Security Video Surveillance System		8

Structural

Site retaining wall	Cracking and Surface spalling and cracks at the railing embedment	40 LF
Concrete Mechanical Pad	10'X 6'	60 SF
Exterior Concrete Sidewalk	Cracking and spalling of the concrete 6'W	185 LF

8.0 Options & Recommendations

Options

As noted throughout this report, the existing Town Buildings, although sound in structure, present multiple issues ranging from typical upkeep items (windows, doors, roofs) to programmatic needs. In addition to these needs is the effort to adapt and re-use the former Haddam Elementary School (HES) for use with Town Offices, either in part or in its entirety.

The two schematic designs presented in Part 6 of this report can provide the Town with several options on moving forward:



SELECT TOWN OFFICES TO OCCUPY HES WITH OTHER USES

This option would see several Town offices move into the west wing of the HES. The east wing would be developed and occupied by an outside source. The central location in Town is ideal for the Community and Senior Centers, and the large Multi-Purpose Room would provide ample space for activities. Bringing in the Registrar of Voters and the State Troopers to this location would also make great use of the space. The Town Building, Old Town Hall, and the Municipal Annex would all remain in their respective buildings.

- Community Center
- Senior Center
- Registrar of Voters
- State Troopers
- Other uses

COSTS = \$ 9,500,000



ALL TOWN OFFICES TO OCCUPY HES

This option would bring all the Town offices to one central location, occupying the entirety of the HES. The advantage to this scheme would be bringing all Town functions under one roof in a central location to the Town. However, this would then leave five Town buildings unoccupied. This, along with the costs to renovate the HES for new occupants, may make this option objectionable.

- Town Office Building
- Old Town Hall
- Community Center
- Senior Center
- Municipal Annex

8.1 Options & Recommendations

Six Town Buildings Facility Assessment

- Registrar of Voters
- State Troopers

COSTS = \$31,970,000

3

RENOVATE EXISTING / EXPAND BUILDINGS

This option would have no Town functions move to HES and all Town offices would remain in their respective buildings.

Renovations would be done to each building as described in the report, providing new windows, doors, roofs, etc., to ensure these structures last another 30 years. In addition to the renovations, each building would be expanded to meet the requirements of the programmatic assessments.

- Community Center
- Senior Center
- Registrar of Voters
- State Troopers
- Other uses

COSTS = \$9,834,660

8.1 Options & Recommendations

Six Town Buildings Facility Assessment

Recommendations

I Relocate to HES + **3A** Renovate

- Community Center, Senior Center, Registrar of Voters, and State Trooper to move into the HES.
- The Town Office Building, Old Town Hall and Municipal Annex are to be renovated per report recommendations regarding typical upkeep items (windows, doors, roofs, etc.), newer and more efficient mechanical and electrical equipment, and newer/updated finishes.

I Relocate to HES + **3B** Renovate and Additions

- Community Center, Senior Center, Registrar of Voters, and State Trooper to move into the HES.
- The Town Office Building, Old Town Hall and Municipal Annex are to be renovated per report recommendations regarding typical upkeep items (windows, doors, roofs, etc.), newer and more efficient mechanical and electrical equipment, and newer/updated finishes.
- The Town Office Building, Old Town Hall and Municipal Annex are also to be added on to in order to meet the necessary programmatic requirements for each department.

I Relocate to HES + **3B** No Work

- Community Center, Senior Center, Registrar of Voters, and State Trooper to move into the HES.
- No work to be done on any other Town Buildings