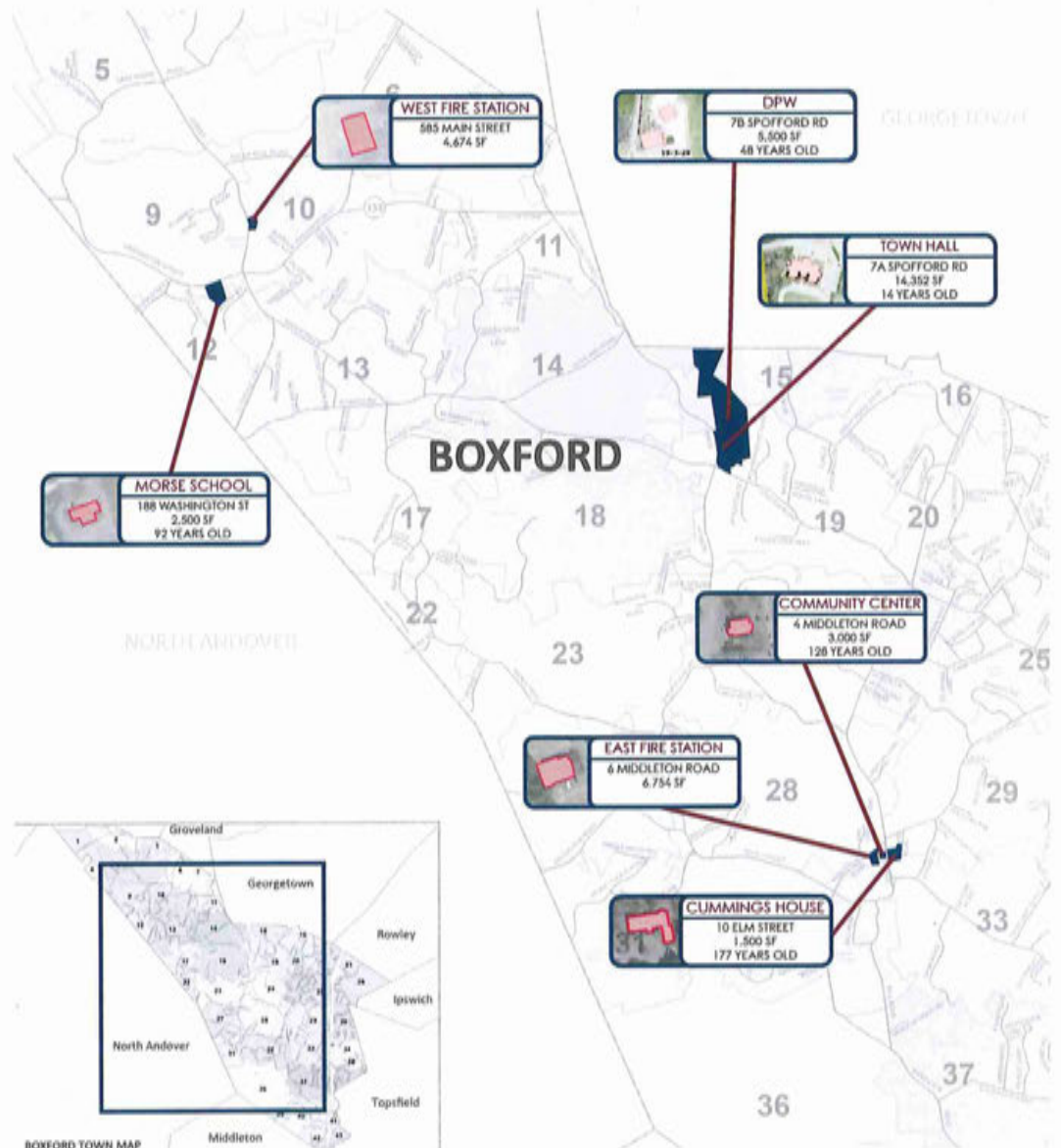




HARRIMAN
Architects + Engineers

Town of Boxford Facility Master Plan

September 18, 2018



46 Harriman Drive
Auburn, ME 04210
207.784.5100

123 Middle Street
Portland, ME 04101
207.775.0053

33 Jewell Court, Suite 101
Portsmouth, NH 03801
603.626.1242

170 Milk Street, Suite 5
Boston, MA 02109-3438
617.426.5050

www.harriman.com

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ACKNOWLEDGEMENTS

This Targeted Municipal Facilities Master Plan (referred to as the “Master Plan”), contracted through the Town of Boxford, Massachusetts Town Administrator’s Office, was managed by the Municipal Facilities Master Plan Task Force (referred to as the “Task Force”). The Task Force served as the Steering Committee for the Master Plan and its members played an active role throughout the entire process. In addition to attending Task Force meetings, Task Force members were assigned to accompany the consultant team for onsite facility assessments, space needs interview meetings, community events, and presentations to other Boards and Commissions in the Town of Boxford. Their leadership and guidance during the twenty-four month planning process was instrumental in the creation of a final Master Plan that reflected the community’s municipal needs and interests.

The consultant Team would like to acknowledge and thank the Boxford Historic District Commission (HDC), Board of Health, Conservation Commission, Council on Aging members, and members of Library Board of Trustees for the time spent reviewing various options and scenarios of the Master Plan.

BOXFORD MUNICIPAL FACILITIES MASTER PLAN TASK FORCE MEMBERS

Name	Title	Affiliation
Bob Gore	Chair	Planning Board
Holly Langer	Member	Planning Board
Christian Wise	Member	Planning Board
Alfred Vaz, Jr.	Member	Selectmen
Peter Bernardin	Member	Finance Committee
Ellen Guerin	Member	Town Official (Treasurer)
Judy Anderson	Member	Council on Aging
Jeanette Glesmann	Member	Library Board of Trustees
Rich O'Brien	Member	Community at-large

CONSULTANT TEAM

Name	Project Role
Harriman	Project Management, Architecture, Engineering, Planning, Public Outreach
Adams & Smith	Library Consultant

SUB CONSULTANTS HIRED BY THE TASK FORCE

Williams & Sparages	Wetland Delineation
Doucet Survey	Spofford Road Site Survey
Weston & Sampson	Geotechnical Engineering

EXECUTIVE SUMMARY

INTRODUCTION

This Targeted Municipal Facilities Master Plan (the "Master Plan"), provides the Town of Boxford Municipal Facilities Master Plan Task Force (the "Task Force") with a series of recommendations for several Town-owned facilities and programs. The Master Plan is the second phase of an initiative to comprehensively address the use and/or redevelopment of the Town's municipal facilities. The study included prescribed goals from the Boxford Municipal Facility Strategy final report prepared by the Cecil Group/Harriman which was the first phase of the Task Force effort.

Over the twenty-four month duration of the Master Plan process, input from the Task Force, Boards, Commissions, and the community led to alterations to the prescribed goals. The final recommendations reflect what was understood as the most important and viable initiatives for the Task Force to meet its mission and project goals. The Master Plan does not include all Town-owned buildings and properties. It is focused on five municipal uses.

PROJECT GOALS

The overarching goal of the Master Plan was to assess a group of town assets that were in need of improvement but had difficulty getting voter approval as independent projects. The Master Plan considered the entire group of assets collectively and created a comprehensive package that met current and future municipal needs. By combining several municipal initiatives into a single study, considerations such as shared uses, phasing, and comprehensive financial analysis could be utilized to reduce anticipated building sizes and minimize taxpayer burdens.

Goals of the Task Force as defined in the February 4, 2017 Community Forum document that was presented by the consultant team included the following bulleted topics.

- Study the current and future needs of selected user groups: Council on Aging, Department of Public Works, Fire Department, Library, and Town Offices.
- Assess the condition of selected town buildings.
- Develop a conceptual plan that best matches user group function with town buildings.
- Conduct financial analysis to minimize tax impact of investment.

According to the frequently asked questions (FAQ) section of the Task Force tab on the Town of Boxford website, major Task Force talking points are described as:



TOWN HALL - 7A SPOFFORD RD



MORSE SCHOOL - 188 WASHINGTON ST



COMMUNITY CENTER - 4 MIDDETON ST



CUMMINGS HOUSE - 10 ELM STREET



DPW - SPOFFORD RD



WEST FIRE STATION - 585 MAIN ST



EAST FIRE STATION - 6 MIDDETON RD

“Approved at the May 2016 Town Meeting, the goal of Boxford’s Facilities Task Force is to develop a targeted comprehensive plan that looks at selected Town buildings to come up with a long-range plan.”

“The needs of the Council on Aging, Department of Public Works, Fire Department, Library, and Town Offices are being studied, and each of the selected town buildings is being evaluated for functional use and how they may be modified, if necessary, to best fit the needs of the town.”

“This leads to the development of conceptual design work that matches user group functions with town buildings, and details any necessary building modifications.”

“Once the conceptual design work has been completed, a financial analysis will be undertaken, in conjunction with the Town Treasurer, to minimize the long term tax impact of investment.”

“The recommendations of the Task Force will be presented at Town Meeting in an article asking for approval of the plan.”

ASSESSMENTS OF FACILITIES AND SPACE NEEDS

To determine a consistent facilities baseline for the Master Plan the following buildings and sites were assessed by the consultant team’s architects and engineers.

Building Name	Address
1. Town Hall	7A Spofford Road
2. Community Center	4 Middleton Road
3. Cummings House	10 Elm Street
4. (the former) Morse School	188 Washington Street
5. Department of Public Works	7B Spofford Road
6. West Fire Station	585 Main Street
7. East Fire Station	6 Middleton Road

Summary findings for these facilities are listed below with expanded summaries located in Chapter 3. The complete Existing Facilities Assessment can be found in Appendix B.

1. Town Hall is a relatively new building that has significant building envelope and HVAC system problems. This assessment led to further detailed studies of the exterior envelope and HVAC by others. Scope and cost to remedy the existing facilities issues are included in the final cost estimates.

2. The Community Center is the original town hall and has been used for several municipal functions over time. It is in relatively good condition for its age but requires upgrades to support infrastructure such as toilet rooms and elevator.
3. The Cummings House is the site of the now closed Boxford Library. The property's deed restriction prohibited any non-library use. During this study, Boxford appealed the restriction and the site can now be considered for other municipal uses. The house itself is in poor to fair condition requiring extensive exterior and interior work.
4. The Morse School building shares its site with a municipal baseball field. The building has been used as a library annex and not fully occupied in several years. Extensive rehabilitation to the interior and installation of a septic system is required to be able to fully utilize this facility.
5. Department of Public Works is a prefabricated building that is failing due to poorly located insulation as well as being past its useful life. Finishes and support spaces are in need of upgrade.
6. The West Fire Station is an on call location that is in fair condition requiring minimal to moderate improvements to most categories.
7. The East Fire Station is Boxford's central fire station and has been added and renovated more extensively than West. The building is in fair condition but requires moderate improvements in most assessment categories.



BUILDING EXTERIOR



BUILDING INTERIOR



BUILDING INTERIOR

In addition to assessing Boxford's facilities, space needs assessments were performed for several municipal departments. Space needs programming interview meetings were held with department heads, Trustees, Board members, and Task Force members to identify current and future program requirements for each department. A space needs assessment program document was created that listed existing and projected square footage needs for key program areas, common facilities, and support service areas. Interviews and assessments were performed for the following municipal departments.

Council on Aging

Department of Public Works

Fire Department

Library

Town Offices



BUILDING INTERIOR

RECOMMENDATIONS

After considering a range of scenario options for the various municipal departments and facility locations, a final set of recommendations was made to the Task Force. These recommendations include single solution options for a combined Town Hall/Library and DPW. Two alternatives were provided for the Council on Aging. The property on 188 Washington housing the former Morse School building was left undecided and given an allowance to rehabilitate.

Options for the Council on Aging include a scenario for renovating and adding to their current facility location at the Community Center at 4 Middleton Road. The other scenario is to move to a new facility at 10 Elm Street. If the latter scenario is chosen, an allowance was provided to make limited repairs and renovations to the facility. Costs and conceptual design plans for the Fire Department were not defined for this study.

The option for the DPW includes upgrades to an existing access drive which was studied in depth to understand its cost and environmental implications. Development of a new DPW at the back portion of the Spofford Road site included an option to phase the development of support elements such as Salt Barn and Fuel Island to reduce the immediate cost impact of the project.

The final recommendation for the existing Town Hall which currently houses Town Offices and Library program was to renovate and expand the building. Creation of new common areas allow both programs to function independently. Existing building remediation of the exterior envelope and HVAC system were included in this option.

A summary of the final recommendation options, their respective areas, and costs are as follows:

Master Plan Facility	Town Hall/Library	Community Center / COA Renovation and Addition	Cummings House Renovation	DPW and Access Drive	Morse School Renovation
Address	7A Spofford Road	4 Middleton Road	10 Elm Street	Site 1, 7 Spofford Road	188 Washington Street
Initiative	Additions and renovations to existing Town Hall to accommodate all Town Office, Library, and meeting program needs. Repair exterior envelope using siding in lieu of brick.	Moderate interior renovation and new construction to serve the COA and Community Center program needs.	Moderate exterior and extensive interior renovations to serve an undetermined need. Demolish former library addition and barn. Create a public park.	Develop an access drive and site to support a new DPW facility including office, vehicle maintenance, vehicle storage, salt barn and fuel island. Additional items such as site fencing are included.	Major interior renovation of facility after Library storage vacates to serve an undetermined use. Provide temporary office trailers as swing space during other municipal construction projects.
Total Area	20,055 GSF	9,600 GSF	1,600 SF	17,000 GSF	2,500 SF
Total Project Cost	\$6,453,078	\$6,084,315	\$500,000	\$7,851,683	\$800,000

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INTRODUCTION

INTRODUCTION

OVERVIEW

This Master Plan provides a series of recommendations for municipal facility improvements. The recommendations constitute a comprehensive strategy that address the needs of the Council on Aging, Department of Public Works, Fire Department, Library, and Town Offices. The Master Plan was led by the Task Force over a twenty-four month process and included facilities assessments, space needs programming, conceptual design, and public outreach.

The goal of the plan was to align Town property and existing facilities with current and future municipal needs. Prior to making final facility recommendations to the residents of Boxford, the Task Force and consultant team investigated an exhaustive number of scenarios to ensure all possible alternatives were reviewed. Order of magnitude (OoM) and/or detailed cost estimates accompanied the scenarios to aid in decision making.

Final recommendations are based on a series of quantifiable steps:

- Onsite facilities review including site, building systems, exterior envelope, and interior finishes.
- Program interviews to understand the current and future needs of each municipal department in the Master Plan.
- Space Needs Program to identify actual square footage required to support each municipal department.
- Exploration of potential sites and facilities including review of previous studies where applicable.
- Determination of the viability of a potential site of facility.
- Concept sketches depicting site development and floor plan development for each site.
- OoM and/or detailed cost estimate to represent a comparative cost for a given scenario.
- Outreach to boards and commissions to attain a preliminary understanding to whether or not an option is viable.
- A comparison of potential options to determine which is best from a space needs and cost point of view.



DPW BUILDING EXTERIOR



TOWN HALL BUILDING EXTERIOR



MORSE SCHOOL BUILDING EXTERIOR

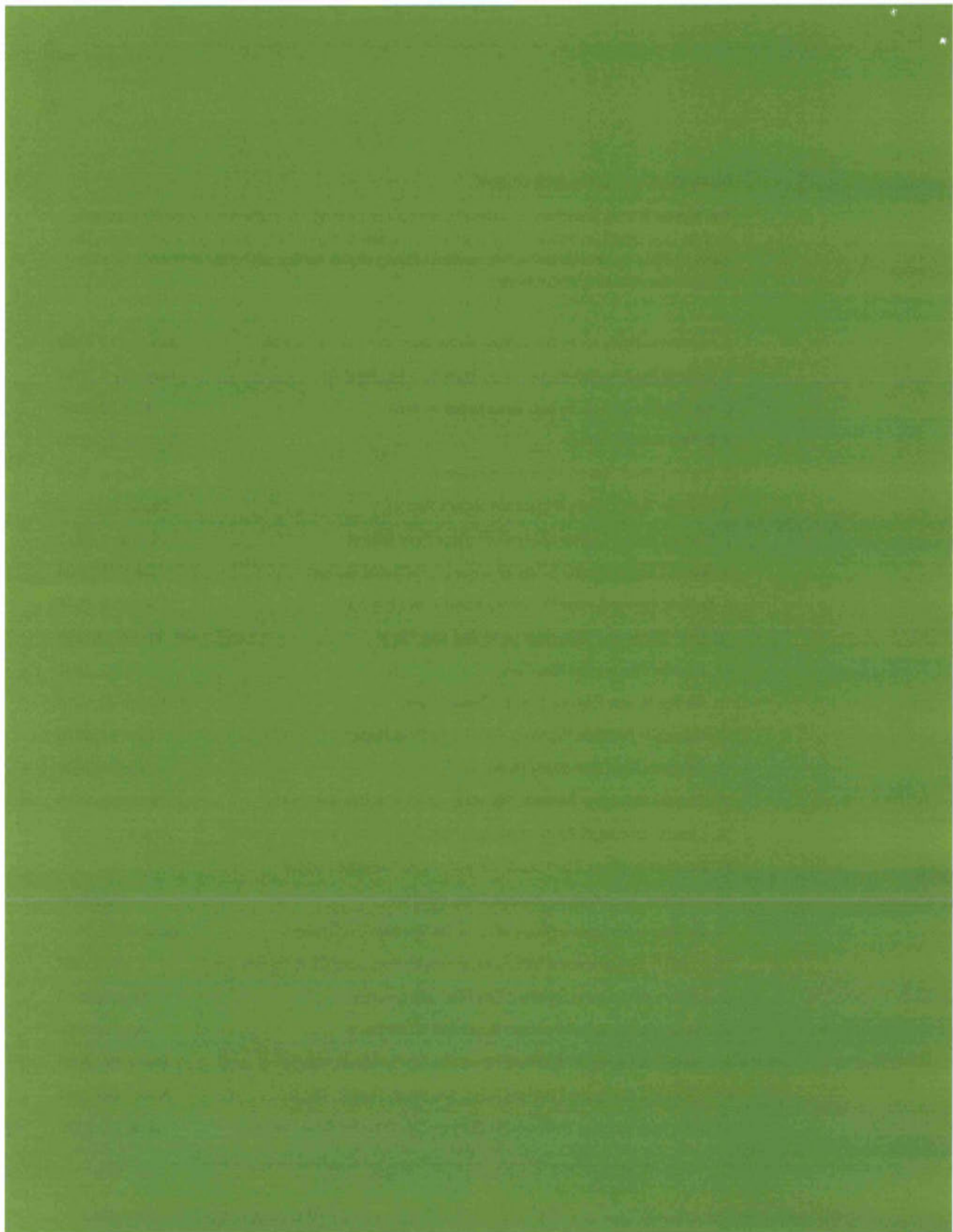


WEST FIRE STATION BUILDING EXTERIOR

PREVIOUS STUDIES AND PLANS

The Master Plan is based on an extensive amount of existing information from previous studies, reports, and design initiatives. This baseline information allowed the consultant team to navigate many options and scenarios with an understanding of site, facility, and political history. The list includes the following documents:

1. Feasibility Study for Police Station Expansion and New Town Hall	January 12, 1996
2. Land Subject to Activity and Use Limitation - Spofford Rd	February 5, 2003
3. New Town Hall Activity and Use Limitation Area	May 16, 2003
4. DPW Feasibility Study	October 12, 2006
5. Boxford Town Hall HVAC Systems Report	May 5, 2017
6. Boxford Town Library Project Manager's Report	December 2013
7. Boxford Senior Center Study Committee Final Report	August 8, 2013
8. Boxford Senior Center Study @ Library - Plans and Budget	March 3, 2008
9. Boxford Senior Center Feasibility Assessment Report	March 5, 2008
10. East Village and Municipal Land Use Site Plans	June 17, 1999 / March 27, 1996
11. Boxford Fire Station Site Plan	April 2, 1982
12. Facility Master Plan for Boxford Town Library	February 29, 2016
13. Municipal Facilities Planning Task Force Final Report	April 27, 2016
14. Spofford Road Site Study Plans	August 2008
15. Boxford Municipal Facilities Planning - Draft Problem Statement	January 5, 2016
16. Boxford Municipal Facilities Master Plan Task Force - Meeting Minutes	January 5, 2016
17. Boxford Spofford Road Study - Summary of Available Reports	
18. Spofford Road Area 4 - Access Drive Site Plan	May 2015
19. Detailed Investigative Study of Land Off Spofford Rd, Phase 1	October 15, 2014
20. Phase 1 Environmental Site Assessment for Proposed DPW Facility, Lot 1	May 2006
21. Donohoe-Parkhurst Spofford Site Plan with Overlay	January 2013
22. Weston & Sampson Spofford Road Site Study Plans	August 2008
23. Weston & Sampson Spofford Road Site Study Report, Vol. 1	November 2008
24. Weston & Sampson Spofford Road Site Study Report, Vol. 2	November 2008
25. 2005 Blue-Spotted Salamander Survey - Spofford Rd Final Report	June 28, 2005



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NEEDS ASSESSMENT

NEEDS ASSESSMENT

INTRODUCTION

The Master Plan included a detailed space needs assessment for all five municipal departments in the study. The space needs assessment (also referred to as programming) identifies the functional area requirements, in square feet, needed for a given department to perform its duties in a safe and efficient manner. These assessments were performed at various times throughout the project since all departments were not identified as requiring an assessment when the study began.

The square footage value of each assessment was compared to the existing area of its department to understand the magnitude of need in the department's existing location. Previous studies and/or designs had determined required program area for the Council on Aging, Department of Public Works, and Library. The Task Force requested that the consultant team review past documents and recommend options to lower proposed building area. This request was intended to reduce the total recommended square footage for all buildings in the Master Plan in hopes of lowering construction cost.

COLLECTION OF INFORMATION

Existing building information was used to create floor plans of buildings for a baseline of room sizes and overall square footage. This baseline was used to provide a comparison to the area determined by the space needs assessment. Review of previous studies provided detailed space needs and building layout information. It is important to clarify that most studies or designs were at least 5-10 years old and department needs may have changed significantly. Therefore, it was still important for the consultant team to perform its own detailed space needs assessment.

DEPARTMENT ASSESSMENT INTERVIEW MEETINGS

Following the review of existing information from past studies, the consultant team met with each department. Interviews with department heads, staff, and Trustees or Board members identified functional needs for current and future use by their department. Data collected at each interview included the following information:

- Hours of operation
- Office requirements
- Public interface
- Meeting space
- Support spaces
- Safety and security concerns
- Inter-departmental adjacency requirements



BUILDING EXTERIOR - DPW OVERFLOW STORAGE



BUILDING INTERIOR - COMMUNITY CENTER



BUILDING INTERIOR - EAST FIRE STATION



BUILDING INTERIOR - LIBRARY

DEVELOPMENT OF FACILITIES SPACE NEEDS PROGRAM

The consultant team developed a space needs program document for the five municipal departments of: Council on Aging (COA), Department of Public Works (DPW), Fire Department, Library, and Town Offices. For each department, key program and common areas such as offices, meeting spaces, lobbies, locker rooms, and vehicle storage areas were defined and given a square footage value. Current and future needs were considered to ensure future staffing and specific program needs were included. Support areas such as toilets and mechanical equipment rooms were also accounted for. The sum of these spaces identifies the net square footage (NSF). A multiplying factor is applied to the NSF to account for walls, corridors, and other infrastructure which results in gross square footage (GSF). The GSF is the area of the entire building.

Departments assessed in the Master Plan are listed below with existing and proposed areas. Actual area values for the conceptual building designs were lower in an attempt to reduce building area and cost.

Department	Existing Area (GSF)	Calculated Area (NSF)	Final Proposed Area (GSF)
COA	4,239	7,444	9,600
DPW	5,500	18,240	17,000
Fire Department	11,428	15,582	25,231 (TBD)
Library	N/A Under construction during Master Plan	10,000 - 13,000 (depending on stacks height and configuration)	13,811
Town Hall	N/A Under construction during Master Plan	10,126	6,244

Each municipal department had one or several critical program elements to consider. For most departments, these critical elements were either missing or undersized in their existing spaces. Critical program areas are outlined below.

DEPARTMENT	CRITICAL PROGRAM ELEMENT OR SPACE
COA	A large, flexible multi-function space of roughly 3,000 SF that can be divided into 3 separate rooms and opens to the outdoors. A kitchen is required to support the multi-function spaces. Additional administrative space was required.
DPW	Indoor vehicle storage and maintenance area is needed to protect the DPW fleet and provide a safe environment for working on and maintaining vehicles. Meeting, administrative, and locker room spaces were identified as requiring more area.
Fire Department	Larger apparatus bay space, dedicated decontamination area, gender parity for locker areas, and office space for full time firefighters were all key requirements, especially at the East Fire Station.
Library	Dedicated youth and teen areas and square footage to accommodate all library resources and programs. Adult reading area, space for public computers, tables for research and flexible meeting spaces for the public to utilize.
Town Hall	Meeting spaces for public meetings should have adjacency to the offices of town employees such as Town Administrator, Director of Conservation, and Tax Collector.

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FACILITY AND SITE ASSESSMENTS

FACILITY AND SITE ASSESSMENTS

INTRODUCTION

The consultant team assessed seven municipal buildings and their sites to better understand their existing conditions as well as their potential for reuse and/or expansion. Assessments were visual and non-destructive in nature. They identified over thirty building categories including: exterior envelope, visible structure, masonry condition, interior finishes, life safety, ADA compliance, roof, mechanical systems and distribution, electrical system and distribution, and plumbing systems. All buildings were reviewed by the same criteria to create a consistent facilities baseline for the Master Plan.

BUILDING ASSESSMENT

All seven buildings were reviewed even though several did not require programming or conceptual design development in the beginning of the project. The front loading of facility assessments allowed the Task Force to make decisions about future capital expenditures for deferred maintenance. The buildings reviewed are as follows:

Building Name	Address
1. Town Hall	7A Spofford Road
2. Community Center	4 Middleton Road
3. Cummings House	10 Elm Street
4. (the former) Morse School	188 Washington Street
5. Department of Public Works	7B Spofford Road
6. West Fire Station	585 Main Street
7. East Fire Station	6 Middleton Road

SITE ASSESSMENT

The sites ranged from easily developable to very difficult to develop. The Spofford Road site, for example, is very large and required analysis and assessment of seven small areas within the overall property boundary. The sites reviewed are as follows:

Site Name	Address
1. Spofford Road municipal site	7A (current Town Hall location)
	7B (current DPW location)
	Chadwick 3 recreation fields
	Area 4 (unbuilt site north of Spofford Pond School)
	Recycle Center (area north of Johnson Fields and east of Chadwick 3)
	Site 1 (area east of capped landfill solar array)
	Access Drive (existing drive connecting Site 1 with the current DPW)

Summary findings for these facilities and their sites follow. The complete Existing Facilities Assessment can be found in Appendix B.



BUILDING EXTERIOR



BUILDING INTERIOR



BUILDING INTERIOR



BUILDING INTERIOR

TOWN HALL

BUILDING EXTERIOR / MAIN ENTRY

Address	7A Spofford Road
Year Constructed	2004
Use	Municipal
Building GSF	14,352
Number of Floors	2 (1, 2, Mechanical Mezzanine)
Construction type	Steel with masonry veneer
Average rating (scale of 0-5)	2.92
Overall Condition Rating	Fair - Good (2.9/5)

GENERAL DESCRIPTION

The Boxford Town Hall resides on a large parcel of Town owned property on the north side of Ipswich Road. It sits on a relatively flat site occupying 14,352 gross square feet (GSF). The parcel also houses the Spofford Pond School, Police Department, Department of Public Works, Town recycling station, and recreation fields. The buildable area of the Town Hall site is restricted due to unsuitable soils and a remediation performed at the time of construction. The area is limited to the interior edge of pavement that surrounds the existing building. There is ample parking on the site and good site circulation.

The facility, which was constructed in 2004, is two full stories plus a composition of steep pitched roof that houses the building's mechanical systems. During the time of the assessment, the building was being actively modified to consolidate Town Hall function and add square footage for the Boxford Library. Most materials are in good condition with the exception of steel doors and lintels which have a high level of corrosion.

Building systems have been replaced since construction and environmental controls are deficient due to poor functionality of the mechanical system.

FACILITY ISSUES AND NEEDS SUMMARY

Site	Contaminated soils nearby limit potential additions to this building.
Structural	Minor rusting at bolted connections in the attic was observed. Noteworthy rusting at most exterior steel lintels was observed.
Building Envelope	Extensive staining was observed. Masonry facade and cladding are noted in poor condition due to evidence of staining from unknown sources. Significant water infiltration was observed on interior sides of exterior windows, especially on north facade. Rust and corrosion was observed on many exterior metal surfaces including lintels, doors and frames. Rot was observed at wood fascia locations.
Building Interior	ACT ceiling is water stained in several locations. The building interior, is in good condition except at GWB window return locations which are heavily water damaged.
Life Safety	No significant issues or needs were observed for this category.
ADA	Door clearance and railing extension issues were observed.
Mechanical	HVAC system has area control issues due to lack of/or removal of adjustable flow capabilities (VFD). The system is operational but is very inefficient. Some air handlers were observed to have been replaced since the building's construction in 2004. Maintenance of HVAC equipment appears to be good. Most major mechanical systems are located in the attic /mechanical mezzanine with access limited to a service ladder.
Plumbing	Building plumbing is in good condition.
Electrical	Several fluorescent lighting fixtures were observed to require re-lamping or repair/replacement.

COMMUNITY CENTER

Address	4 Middleton Road
Year Constructed	1890
Use	Municipal
Building GSF	3,000
Number of Floors	(B, 1, 2, Mezzanine)
Construction type	Wood and heavy timber
Average rating (scale of 0-5)	2.45
Overall Condition Rating	Fair - Good (2.5/5)



BUILDING EXTERIOR / MAIN ENTRY

GENERAL DESCRIPTION

The Boxford Community Center building is the original Town Hall. It was constructed in 1890 and has an area of roughly 3,000 gross square feet (GSF). It is located in the historic East Village with its original front entry facing Elm Street. Primary access is via the back of the building off Middleton Road where the facility's parking lot is located. The building is located across Elm Street from the historic Cummings House, to the north of the Boxford East Village general store and to the south of the intersection of Middleton Road and Elm Street.

The facility has been reasonably well maintained, although its age and historic architectural character have made it difficult to update to current codes. Substantial work should be done to renovate or replace the building's addition to better accommodate accessible access, internal building circulation, and infrastructure such as toilet rooms and kitchen.

Building systems are in reasonable condition although it is highly recommended to provide mechanical ventilation to the main program spaces to improve occupant comfort. Since the assessment was non-destructive in nature, it is recommended that a more detailed structural review be performed to verify bearing wall locations and floor joist sizes prior to any renovation work.

FACILITY ISSUES AND NEEDS SUMMARY

Site	Access through the original front and side entrances is limited and visitors must enter the building from the rear parking lot.
Structural	Steel lally columns on concrete footings were observed throughout the basement. Typical structure is timber and rough cut joists. Roof structure was not observable.
Building Envelope	Siding and trim appeared to contain original material which would require careful restoration for replacement. Corner areas of siding and trim are in good condition. Exposed granite block and fieldstone foundation is in good condition.
Building Interior	Doors are categorized as poor because there is very little accessible hardware. Condition of finishes varies from space to space but a complete upgrade in finishes is recommended for any future renovation work. Stage on 2nd floor is only accessible by stair.
Life Safety	Building is not sprinklered, but has fair to good early detection and exit signage. Assembly space on second floor has 2 means of egress but would not be difficult to navigate in an emergency exiting situation. Stairways require railing and guardrail upgrades to meet current codes. Emergency lighting is old but in fair condition.
ADA	Current LULA Lift is old and lacks many current safety features such as gates and automated controls. Improvements to toilet room accessories are required. Stage is only accessible by stair.
Mechanical	The building has no ventilation. Kitchen and pantry areas require upgrades in exhaust ventilation.
Plumbing	Plumbing fixtures are older and do not meet ADA requirements.
Electrical	Electrical systems are generally in good condition with the exception of limited lighting controls.



BUILDING EXTERIOR / MAIN ENTRY

CUMMINGS HOUSE

Address	10 Elm Street
Year Constructed	1841
Use	Municipal
Building GSF	1,500
Number of Floors	2
Construction type	Wood
Average rating (scale of 0-5)	2.48
Overall Condition Rating	Fair - Good (2.5/5)

GENERAL DESCRIPTION

The Cummings House, located in the center of Boxford's East Village was constructed in 1841 and has an area of roughly 1,500 gross square feet (GSF). It is a building of historic significance that is in need of restorative repair. Deferred maintenance items such as exterior trim are necessary to ensure the building's historic character remains solvent.

Major property modifications are planned by the Town including the demolition of the library addition, a new addition to provide accessibility and infrastructure, and potential new construction of another facility on the site. Any new or renovation work on the site will require the review and approval of the Boxford Historic District Commission.

The interior of the building has been significantly modified and there is little historic character remaining. Access to a basement crawl space, second floor stairway, and attic are very limited and residential in nature.

Building systems are limited and will need to be upgraded and modified when the library addition is removed.

FACILITY ISSUES AND NEEDS SUMMARY

Site	Existing library addition is to be demolished by the Town. The free standing barn and water well, located in the 'Pony Field', need to be considered in any potential development of the site.
Structural	No significant issues or needs were observed for this category.
Building Envelope	Extensive rot was observed at many wood trim and siding locations. Any work to the building will require approval by the Town's Historic Commission. Chimneys were observed to require repointing, as well as replacement/repair of broken window panes
Building Interior	Interior finishes are not original or historic and should be removed, if possible, to reveal any remaining original construction. Accessibility upgrades are required regardless of future municipal use.
Life Safety	Life safety is limited given the age and character of the building. The building is not sprinklered, but early detection is in good condition. The fire alarm panel will need to be relocated when the library addition is demolished.
ADA	When a use for the original house is determined, ADA access will need to be integrated into any renovation plans.
Mechanical	There is no mechanical ventilation or air conditioning. The hot air furnace should be evaluated during the design of the future addition.
Plumbing	Plumbing is limited to a kitchenette on the second floor.
Electrical	No significant issues or needs were observed for this category.

MORSE SCHOOL

Address	188 Washington Street
Year Constructed	1926
Use	Municipal
Building GSF	2,500
Number of Floors	2 (Basement, 1)
Construction type	Masonry
Average rating (scale of 0-5)	2.45
Overall Condition Rating	Fair - Good (2.5 / 5)



BUILDING EXTERIOR / MAIN ENTRY

GENERAL DESCRIPTION

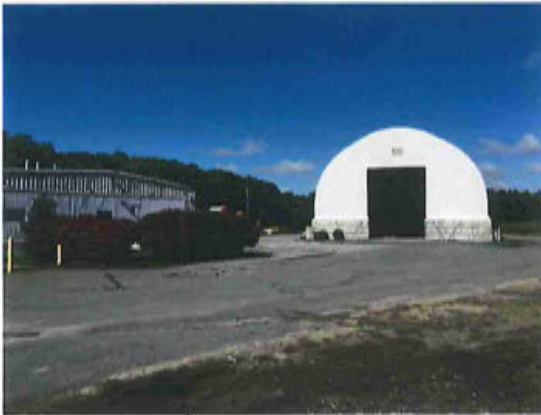
The Morse School building, was constructed in 1926 and has an area of roughly 2,500 gross square feet (GSF). It is located in West Boxford and is currently utilized as a storage facility for the Boxford Library. Access to the building is limited to a marginal condition at the front entry with no means of handicap access from the ground level to the basement. There is a back door that opens at grade from the landing level between the building's 2 floors. The basement also contains a second exit stair leading up roughly 5 feet to grade.

The masonry structure is in good condition. Interior finishes are generally in poor to fair condition and require replacement. The masonry construction will create complications for any future modifications.

Building systems are generally old and require extensive upgrades and replacement. The building will require upgrades to electrical, plumbing, septic, life safety, and mechanical systems regardless of what municipal use is selected to use the facility.

FACILITY ISSUES AND NEEDS SUMMARY

Site	Relatively flat site requires Conservation Commission setback of 200' from the perennial stream running along the west-southwest side of the site. This setback will influence the location of construction of building additions, driveways, parking and septic system.
Structural	No significant issues or needs were observed for this category. Building appears to be in good condition.
Building Envelope	No significant issues or needs were observed for this category. Minor repair is needed at limited locations such as entry door sill and cupola.
Building Interior	Interior finishes are in poor to fair condition and generally require extensive upgrades and/or replacement. Abatement of mold and asbestos flooring material were noted to have occurred within the last two years.
Life Safety	The building is not sprinklered and requires life safety upgrades throughout including exit lighting, alarm, and signage. Emergency lighting and fire alarm are operational but older and should be upgraded.
ADA	See plumbing comments. There is no elevator or lift.
Mechanical	The building has no mechanical ventilation and limited air conditioning which consists of several window A/C units. The boiler is efficient, but old and should be replaced with a more modern system.
Plumbing	Fixtures are very old and generally do not meet ADA requirements. Steam pipe insulation in stairwell corridor appears to be asbestos
Electrical	Electrical systems including junction boxes, wiring and lighting are old and need to be improved or replaced.
Misc.	Building uses a cesspool which is located at the southwest corner of the larger building footprint. Construction of a septic system would be required for any new building program in coordination with adjacent wetland restrictions.



BUILDING EXTERIOR / SALT STORAGE

DEPARTMENT OF PUBLIC WORKS

Address	7B Spofford Road
Year Constructed	1970
Use	Municipal
Building GSF	5,500
Number of Floors	1
Construction type	Pre-engineered Metal
Average rating (scale of 0-5)	2.15
Overall Condition Rating	Poor - Fair

GENERAL DESCRIPTION

The Department of Public Works (DPW) facility resides on a large parcel of Town owned property on the north side of Ipswich Road. It sits on a relatively flat site and includes a main garage, administrative building, salt barn, vehicle storage, brine system, fueling station, and yard storage. The parcel also houses the Spofford Pond School, Police Department, Town Hall, Town Transfer Station, and recreation fields.

In 2006, the town commissioned a feasibility study for a new DPW facility. The final report recommends a 22,379 square foot facility located on the existing site. The build-able area of the current DPW site may be restricted due to unsuitable soils and vernal pools, as documented in a 1996 environmental study. If possible it is recommended that the current site be reused given its central location in the town.

Given the building's age, the accelerated structural deterioration resulting from installation of insulation/vapor barrier, and poor condition of employee facilities, replacement of this facility should be a priority for Boxford. Of the buildings reviewed in the Limited Facilities Master Plan, the DPW facility is, by far, in the worst condition.

FACILITY ISSUES AND NEEDS SUMMARY

- Site **Site constraints include adjacent Town Hall, athletic fields, other circulation on the municipal campus, documented vernal pool locations, and potential soils remediation requirements.**
- Structural **Pre-engineered metal building has outlasted its useful life and should be replaced. Recent insulation improvements resulted in a condensation problem which was noted to be accelerating the deterioration of the structural steel.**
- Building Envelope **Original building was not insulated and has been recently retrofitted with blown in insulation and an interior vapor barrier. The office program occupies a converted construction trailer. All exterior wall assemblies should be replaced by higher performing alternatives to reduce energy consumption. The roof was not observed during this review.**
- Building Interior **Typical with many DPW facilities, there is a lack of interior finishes. The finishes that exist are in poor condition and are in need of replacement.**
- Life Safety **The fuel island should be assessed to determine if it is too close to the building exit locations. Life safety systems are limited and should be upgraded.**
- ADA **There is no accessible entry or egress from the office trailer.**
- Mechanical **No significant issues or needs were observed for this category.**
- Plumbing **Systems and fixtures do not meet ADA compliance requirements.**
- Electrical **Electrical system is in fair condition. Emergency power generator is old but is apparently functional.**

WEST FIRE STATION

Address	585 Main Street
Year Constructed	
Use	Municipal
Building GSF	4,674
Number of Floors	1
Construction type	Wood and steel
Average rating (scale of 0-5)	2.58
Overall Condition Rating	Fair



BUILDING EXTERIOR / MAIN ENTRY

GENERAL DESCRIPTION

The West Fire Station resides on a small parcel of Town owned property on the east side of Main Street in West Boxford overlooking Sperry Pond to the west. It sits on a relatively flat site with upward sloping terrain behind the facility. An area behind the building is used for mock-ups. The parcel has no other buildings immediately adjacent to the fire station.

The original building is identical to the East Fire Station but has not been modified with additions and renovated mezzanine space. Therefore, it is more limited to accommodate full time firefighters and modern apparatus. Its facility condition, and constraints are the same as the East Fire Station.

See the assessment of the East Fire Station regarding future plans for Boxford Fire Department facilities. The existing site is remote compared to other Town locations and has the adjacent water source of Sperry Pond which would make it advantageous as a training site for mock-ups. Consideration for development of this site to serve as a dedicated training location is recommended.

FACILITY ISSUES AND NEEDS SUMMARY

Site	Site size prohibits expansion of needed program areas.
Structural	No significant issues or needs were observed for this category.
Building Envelope	No significant issues or needs were observed for this category. Painted wood soffits are in need of repair. The roof was not observed during this review. The masonry furnace chimney requires pointing.
Building Interior	Finishes are older but generally in fair condition. Rusting was observed on several interior doors.
Life Safety	The building has limited life safety systems. The recently renovated mezzanine is limited to 1 means of egress.
ADA	Toilet fixtures and accessories need to be ADA requirements.
Mechanical	The building has relatively new boilers but no mechanical ventilation beyond the apparatus bay.
Plumbing	No significant issues or needs were observed for this category.
Electrical	Electrical systems are older but no major issues were identified.



BUILDING / MAIN ENTRY

EAST FIRE STATION

Address	6 Middleton Road
Year Constructed	
Use	Municipal
Building GSF	6,754
Number of Floors	2
Construction type	Wood and steel
Average rating (scale of 0-5)	2.55
Overall Condition Rating	Fair

GENERAL DESCRIPTION

The East Fire Station resides on a small parcel of Town owned property on the south side of Middleton Road. It sits on a relatively flat site in the historic village district of Boxford. The parcel is adjacent to a mix of residential, commercial, and municipal properties.

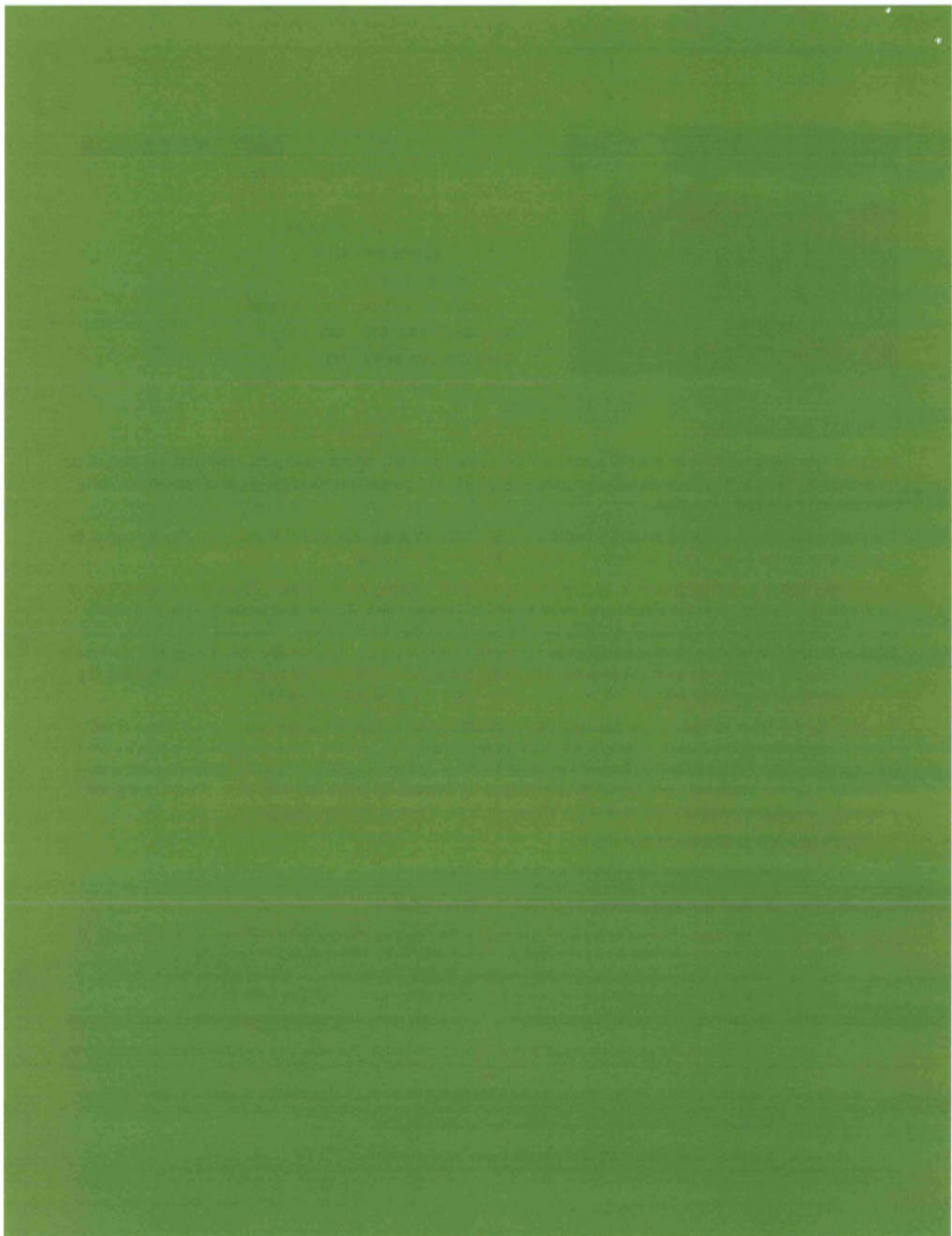
The building has been modified several times to provide additional apparatus and office spaces. Renovation of the existing mezzanine lacks a second means of egress and handicap access.

The current facility is operating over its square footage capacity creating several areas of concern. The addition of full time firefighters has created a increased need for office, lounge, toilet, shower, and locker program. There is currently no available space to accommodate these areas in a code compliant way. There is also no designated location to decontaminate gear in an isolated and properly ventilated area. Additionally, new fire fighting apparatus have continually increasing size requirements. The existing apparatus bays will not be able to accommodate the size of new apparatus which will prohibit the ability of the Town to maintain a current fleet.

The plan, by the Town, to replace the East and West Fire with a new central fire station would solve many of the immediate issues facing this facility. A single, centrally located facility will be allow more appropriate response times for a fire department that has shifted from volunteer to full time. Larger apparatus bays with dedicated decontamination and turnout areas will meet current best practices for operational safety and efficiency. A new facility will enable the creation of spaces such as lounge, office and bunk areas for full time firefighters.

FACILITY ISSUES AND NEEDS SUMMARY

Site	Site size prohibits expansion of needed program areas.
Structural	No significant issues or needs were observed for this category.
Building Envelope	No significant issues or needs were observed for this category. Painted wood soffits are in need of repair. The roof was not observed during this review. The masonry furnace chimney requires pointing.
Building Interior	Finishes are older but generally in fair condition. Rusting was observed on several interior doors. Recent renovations to the mezzanine area are not complete with regard to installing finish flooring.
Life Safety	The building has limited life safety systems. The recently renovated mezzanine is limited to 1 means of egress.
ADA	Toilet fixtures and accessories need to meet ADA requirements. The renovated mezzanine is accessible only by stair.
Mechanical	The building has 3, relatively new gas-fired boilers but no mechanical ventilation beyond the apparatus bay.
Plumbing	No significant issues or needs were observed for this category.
Electrical	Electrical systems are older but no major issues were identified.



4

ALTERNATIVE SCENARIOS

ALTERNATIVE SCENARIOS

INTRODUCTION

Alternative scenario options were developed to explore all viable possibilities for Boxford's municipal needs. The degree of planning and design detail varied depending on department and potential site. Scenario development ranged from simple site blocking diagrams to detailed conceptual plans with rendered perspective drawings. Alternatives explored the best way to meet current and future space needs by using and/or reusing municipal buildings and land.

During the course of the Master Plan effort, the deed restriction on the 10 Elm Street property was challenged by the Town to understand if there was an opportunity to develop the property beyond library uses. As the process progressed, the Town began the legal process to lift the deed restriction, which will allow multiple municipal use options to be explored on the site.

A list of scenarios based on department is as follows:

Council on Aging

- Renovation and addition to 188 Washington Street
- Renovation and addition to 4 Middleton Road
- Renovation and addition to 10 Elm Street (attached to the Cummings House)
- New construction at 10 Elm Street (Cummings House is removed)
- New construction at 10 Elm Street (Cummings House is left as a free standing structure)

DPW

- Replace in-place
- Site 1 (similar to 2006 DPW study and design)
- Chadwick 3 field
- Area 4: multiple access options were explored
- Recycle Center site
- Hybrid option to leave salt barn and fuel island in place
- Access Drive to Site 1 was evaluated in detail and developed

Town Hall

- Renovate existing building
- New construction at 10 Elm
- Renovation and addition to 4 Middleton Road
- Combined Town Hall/Library renovation and addition at 7A Spofford Road





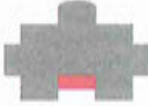






Library

- Renovation of 7A Spofford Road
- Combined Town Hall/Library renovation and addition at 7A

Spofford Road

DESCRIPTION OF SCENARIOS INCLUDING GRAPHICS AND SQUARE FOOTAGES

CONCEPTUAL DESIGN OPTIONS: DIAGRAMS AND SQUARE FOOTAGES

<p>OPTION 1</p>	 <table border="1"> <tr><td>Existing No Reno</td><td>0 SF</td></tr> <tr><td>Renovated</td><td>5,026 SF</td></tr> <tr><td>New</td><td>14,342 SF</td></tr> <tr><td>Total</td><td>19,368 SF</td></tr> </table> <p>Council on Aging at 188 Washington</p>	Existing No Reno	0 SF	Renovated	5,026 SF	New	14,342 SF	Total	19,368 SF	 <table border="1"> <tr><td>Existing No Reno</td><td>0 SF</td></tr> <tr><td>Renovated</td><td>14,500 SF</td></tr> <tr><td>New</td><td>770 SF</td></tr> <tr><td>Total</td><td>15,270 SF</td></tr> </table> <p>Library renovation at 7 Spofford Road</p>	Existing No Reno	0 SF	Renovated	14,500 SF	New	770 SF	Total	15,270 SF	 <table border="1"> <tr><td>Existing No Reno</td><td>0 SF</td></tr> <tr><td>Renovated</td><td>0 SF</td></tr> <tr><td>New</td><td>7,750 SF</td></tr> <tr><td>Total</td><td>7,750 SF</td></tr> </table> <p>New Town Hall building on Cummings House Site</p>	Existing No Reno	0 SF	Renovated	0 SF	New	7,750 SF	Total	7,750 SF
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COUNCIL ON AGING		Site / Location / Description	Pros	Cons
Previous Design		188 Washington Street (2009) A 2,500 G.S.F. renovation of 188 Washington Street and a 7,200 SF addition was designed by Reinhardt Associates. Includes a 3 story elevator, two story addition. Wood framed construction was estimated.		
Council on Aging Option 1 (COA1)		188 Washington - 1st Floor Renovation and Addition	<ul style="list-style-type: none"> • Multipurpose rooms serve dual purpose for activities and large events. • Existing basement is used for storage and services. 	<ul style="list-style-type: none"> • Does not accommodate for future growth with adult program. • No fitness center. • New well and septic required. • Relocation of baseball field required due to stream setback.
Council on Aging Option 2 (COA2)		188 Washington - Basement Renovation - 1st Floor Renovation and Addition	<ul style="list-style-type: none"> • Multipurpose rooms serve dual purpose for activities and large events. • Fitness center. 	<ul style="list-style-type: none"> • Does not accommodate for future growth with adult program. • New well and septic required. • Relocation of baseball field required due to stream setback.
Council on Aging Option 3 (COA3)		188 Washington - 1st Floor Renovation and Addition - 2nd Floor Adult Program	<ul style="list-style-type: none"> • Multipurpose rooms serve dual purpose for activities and large events. • Existing basement is used for storage and services. • Adult Program for future use. 	<ul style="list-style-type: none"> • No fitness center. • New well and septic required. • Relocation of baseball field required due to stream setback.
Council on Aging Option 4 (COA4)		188 Washington - Basement Renovation - 1st Floor Renovation and Addition - 2nd Floor Adult Program	<ul style="list-style-type: none"> • Multipurpose rooms serve dual purpose for activities and large events. • Adult Program for future use. • Fitness Center. 	<ul style="list-style-type: none"> • New well and septic required. • Relocation of baseball field required due to stream setback.

COUNCIL ON AGING		Building Area (SF)		Construction Cost		Project Cost	
Previous Design		Existing No Renovation	2,513				
		Renovated	2,513				
		New Construction	7,200				
		Total	12,226				
Council on Aging Option 1 (COA1)		Existing No Renovation	2,513	Site	\$ 700,000		
Renovated	2,513	Building					
New Construction	5,931	Renovation	\$ 300,000				
Total	10,957	New	\$ 1,400,000	Total Cost	\$ 2,400,000		
Council on Aging Option 2 (COA2)		Existing No Renovation	-	Site	\$ 700,000		
Renovated	5,026	Building					
New Construction	5,931	Renovation	\$ 600,000				
Total	10,957	New	\$ 1,400,000	Total Cost	\$ 2,700,000		
Council on Aging Option 3 (COA3)		Existing No Renovation	2,513	Site	\$ 700,000		
Renovated	2,513	Building					
New Construction	9,316	Renovation	\$ 300,000				
Total	14,342	New	\$ 2,100,000	Total Cost	\$ 3,100,000		
Council on Aging Option 4 (COA4)		Existing No Renovation	-	Site	\$ 700,000		
Renovated	5,026	Building					
New Construction	9,316	Renovation	\$ 600,000				
Total	14,342	New	\$ 2,100,000	Total Cost	\$ 3,400,000		

*Diagrams for each Option (Not to scale)

- Orange = New Construction
- Gray = Renovated
- Black = Previous Design

Site option A - Deduct Costs **Site Deduct** \$ (121,000) \$ (157,300)
 Note - Site Option A is not in compliance with the river setback requirements

NOTES

1 - Construction Costs are in today's dollars and will have to be confirmed once a phasing plan and construction schedule is established.

2- Actual completed design costs may differ at the time of project bid.

DESCRIPTION OF SCENARIOS INCLUDING GRAPHICS AND OoM COST

Council on Aging

Alternatives for the COA included three different sites beginning with a continuation of a previous study in 2009 for a 12,226 GSF renovation/addition at the Morse School building at 188 Washington Street. Four options were presented that varied in scope as outlined in the table below. Roughly 5,000 square feet of existing building were considered for renovation which focused on lobby, administrative, social, and fitness areas. New construction housed vertical circulation, multi-use function spaces, kitchen, and support areas.



COA at 188 Washington Street Alternative Option 4: Site sketch and floor plan layout.

Comments from the Public Forum reflected concerns about removing municipal use from the East Village area as well as a perception that the 188 Washington design square footage values were high. In response, additional scenario options for the COA were made at 4 Middleton Road. Test fit site diagrams and floor plans were created to represent how an addition to the current Community Center would look.

Additional alternative options were presented that varied in scope and layout as represented below. 3,370 square feet of existing building were renovated which focused on, administrative, social, and support areas. In a similar strategy to the 188 Washington designs, new construction housed vertical circulation, multi-use function spaces, kitchen, and the balance of support areas. The four options below were presented to the Task Force and COA Board for review. Final approved versions are described and illustrated in Chapter 5, Recommendations. Larger size illustrations of 4 Middleton Road Alternatives can be found in Appendix D, Public Presentations, March 22, 2017 presentation.



1. 2025 WORK PLAN



2. 2025 WORK PLAN

DETAILED SQUARE FOOTAGE

EXISTING BUILDING	1,200 SF
NEW BUILDING	1,200 SF
TOTAL SQUARE FOOTAGE	2,400 SF



Alternative



1. 2025 WORK PLAN



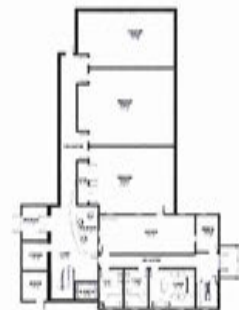
2. 2025 WORK PLAN

DETAILED SQUARE FOOTAGE

EXISTING BUILDING	1,200 SF
NEW BUILDING	1,200 SF
TOTAL SQUARE FOOTAGE	2,400 SF



Alternative



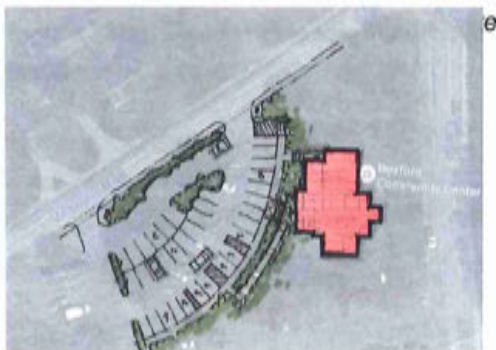
1. 2025 WORK PLAN



2. 2025 WORK PLAN

DETAILED SQUARE FOOTAGE

EXISTING BUILDING	1,200 SF
NEW BUILDING	1,200 SF
TOTAL SQUARE FOOTAGE	2,400 SF



Alternative 3: Site sketch and floor plan layout



1. 2025 WORK PLAN



2. 2025 WORK PLAN

DETAILED SQUARE FOOTAGE

EXISTING BUILDING	1,200 SF
NEW BUILDING	1,200 SF
TOTAL SQUARE FOOTAGE	2,400 SF

Department of Public Works

Alternatives for the DPW did not begin until after the February 2017 Public Forum when facility and space needs concerns raised the DPW to a higher priority in the Master Plan. Exploration of alternatives included five different sites on the Spofford Road property. A majority of the site has a history of use as a landfill which left concerns about contaminated soil, unsuitable material to support building structures, and , lengthy DEP permitting. In addition, the eastern edge of the site is bound by wetland and there is a documented vernal pool off Spofford Road between Town Hall and the Spofford Pond School. These constraints left the large Spofford Road parcel with few viable site alternatives for developing a new DPW facility.

Public works facilities are small campuses that require a substantial amount of open space for large vehicle maneuvering, parking, and material staging. For the purposes of site exploration, the base project program of 18,240 GSF was applied plus the addition of support elements that include: salt barn, fuel island, and yard storage area. A prototypical floor plan layout was created to overlay as a test fit onto the potential sites. Site elements were also create in a prototypical format and altered to meet individual site constraints.















** DPW prototype plan and site layouts for a 18,240 SF facility.*

Of the available possibilities, potential sites fell into two groups:

- Conveniently located sites with limitations such as not enough area to support the program requirements, poor soils requiring expensive building foundation solutions, or potentially contaminated soils that require expensive remediation.
- Sites that provided enough developable area with presumably good soils conditions that are very difficult to access or create safety conflicts with the Spofford Pond School.

The alternative scenario options are shown in the chart below.

DPW	Site / Location / Description	Pros	Cons
Previous Design 	7 Spofford Road Site 1 (2006) A 22,379 gross square foot facility was designed and is larger than required to meet DPW needs. Access drive cost concerns prompted alternative site alternatives for the DPW.	<ul style="list-style-type: none"> Buildable site that is mostly cleared. 	<ul style="list-style-type: none"> Building too big for program needs Site is difficult to access with extensive road length to develop, wetland impact, and capped landfill concerns
DPW Option 1 (DPW1) 	Replace In-place Explored locating a new DPW campus on the current location	<ul style="list-style-type: none"> Does not require additional site development 	<ul style="list-style-type: none"> Current site is not large enough to fit the required program Concern with soils contamination and required abatement To meet program need, development would impact Johnson Fields parking and ball fields
DPW Option 2 (DPW2) 	Chadwick 3 Field Site - Exploration of a large open area adjacent to the existing DPW	<ul style="list-style-type: none"> Access is convenient for DPW staff Limited access drive cost 	<ul style="list-style-type: none"> Field built on 20 feet of clay fill would require a complicated and expensive foundation system Adjacency to other Chadwick field presents potential safety and noise concerns
DPW Option 3 (DPW3) 	Area 4 Site - Exploration of a site behind Spofford School	<ul style="list-style-type: none"> Unbuilt parcel is presumably free of any contaminants 	<ul style="list-style-type: none"> Spofford School and nearby vernal pool make access to Area 4 difficult with potential conflicts of DPW vehicles and school traffic Safe site access would be via the Site 1 access drive but need to be longer and more expensive
DPW Option 4 (DPW4) 	Recycle Center Site - Exploration to develop the existing recycling center as the DPW site	<ul style="list-style-type: none"> Potentially convenient compromise between the Chadwick site and Site 1 	<ul style="list-style-type: none"> Adjacent wetland presents development restrictions: site layout is compromised Displacement of recycling are created an additional unknown for public access to the DPW
DPW Option 5 (DPW5) 	Site 1 w/ Access Drive - Development of site originally identified for the new DPW	<ul style="list-style-type: none"> Buildable site that is mostly cleared Site ended up being the only real option to develop Access Drive cost are estimated to be lower than previously expected 	<ul style="list-style-type: none"> Site is difficult to access with extensive road length to develop, wetland impact, and capped landfill concerns Access drive needs to shrink to 1 lane for 250 feet to reduce wetland impact

DPW	Building Area (SF)	Construction Cost	Project Cost
Previous Design 	Existing No Renovation		
	Renovated		
	New Construction	22,379	
	Total	22,379	
DPW Option 1 (DPW1) 	Total	18,240	Replace in-place option was determined to not be feasible due to lack of buildable area and site contamination concerns
DPW Option 2 (DPW2) 	Existing No Renovation		
	Renovated		
	New Construction	18,240	
	Total	18,240	Chadwick 3 Site option was determined to not be feasible due to poor soils and site contamination concerns
DPW Option 3 (DPW3) 	Existing No Renovation		
	Renovated		
	New Construction	18,240	
	Total	18,240	Area 4 Site option was determined to not be feasible due to access conflicts with Spofford School and nearby vernal pool
DPW Option 4 (DPW4) 	Concept Design TBD		
	Existing No Renovation		
	Renovated		
	New Construction	18,240	
Total	18,240	Recycle Center Site option was determined to not be feasible due to lack of buildable area and displacement of current recycling program	
DPW Option 5 (DPW5) 	Concept Design TBD		
	Existing No Renovation		
	Renovated		
	New Construction	18,240	
Total	18,240		Site Building Renovation
			New \$ 5,776,704
			Total Cost \$ 5,776,704 \$ 7,470,648

Option 1, replace in-place did not contain the area required to meet the program requirements listed above. As the site plan depicts, a new building and fuel island barely fit with not enough room for the salt barn, yard storage, or vehicle circulation. Expansion to accommodate the balance of required program would result in taking one of the Johnson Fields which is problematic as this is a capped landfill and cannot be breached. In addition, replace in-place displaces the current DPW operations for the during construction. These factors, along with the risk of building on the closed landfill site, were presented to the Task Force and Option 1 was decided to be a nonviable option.



DPW Option 1: Replace in-place. Site blocking sketch and floor plan layout show lack of space on the site for salt barn, visitor/staff parking, and vehicle movements.

Option 2, Chadwick 3 site provided a convenient location for the DPW and enough area to support a new facility. However development would displace a currently used playing field that contains roughly a twenty foot depth of clay soils. Given the soil conditions require expensive and complicated foundation systems, Option 2 was decided to be a nonviable option.



DPW Option 2: Chadwick 3 recreation field: Site blocking sketch shows appropriate area for all program requirements.

Option 3, Area 4 site was explored in previous studies as an area that had good development potential. The area was suitable for a new DPW although access was determined to be unacceptable. One option was to connect the DPW entrance to the Spofford Pond School parking lot and was unpopular for school safety concerns. Other access options created the longest access drive of all the DPW alternatives. Option 3 was decided to be a nonviable option.



Option 3, Area 4: Site blocking sketch shows appropriate area for all program requirements and DPW site access connected to the Spofford Pond School. Alternative site access would connect to the DPW from the top left corner of the diagram above.

Option 4, recycle center site emerged as a compromise between Site 1 and replace in-place but it did not yield enough area to be a viable option.



Option 4, Recycle Center: Site blocking sketch shows site layout constraints from the adjacent Johnson Field (lower-middle) and wetland setback boundaries which are depicted by red, orange, and green lines. These constraints forced an awkward layout that results in poor site circulation.

Option 5, Site 1 was the location of a previous study for DPW development. There was concern about the cost of developing the access drive past a capped landfill and wetland edge. Additional survey, geotechnical, and civil design work was performed to clarify an OoM cost for the access drive and facility development at Site 1. This option emerged as the most viable alternative.



Option 5, Site 1: Site blocking and access drive diagram show appropriate area for all program requirements and DPW site access.

Town Hall

Alternatives for the Town Hall included three different sites ranging from continued use at 7A Spofford Road to development at 4 Middleton Road and 10 Elm Street. All scenarios left the large Board of Selectmen (B.O.S.) meeting room at the current Town Hall location for use as a shared municipal space.

Three options were presented that varied in scope as outlined in the table below and described in more detail later in this chapter.

TOWN HALL		Site / Location / Description	Pros	Cons
Previous Design		7A Spofford Road (2004) A 14,352 gross square foot facility was designed on a centrally located site in 2004. The building is two stories plus a combination of steep pitched roofs that houses the building's mechanical systems. There are locations within this building that do not meet ADA.	<ul style="list-style-type: none"> Centrally located within Boxford. Keeps town hall functions together for better customer service. 	<ul style="list-style-type: none"> Building too big for program needs.
Town Hall Option 1 (TH1)		10 Elm Street - 2 Story, New Construction - No renovation - Leaves Community Center vacant	<ul style="list-style-type: none"> Keeps town hall functions together for better customer service. Efficient design in new construction. Town Service in East Village. 	<ul style="list-style-type: none"> Deed restriction currently prohibits development of non-library uses. Large B.O.S. meeting room is remote, located at Spofford Road site.
Town Hall Option 2 (TH2)		4 Middleton Road - 2 Story existing building renovation - 2 story addition	<ul style="list-style-type: none"> Keeps town hall functions together for better customer service. Town Service in East Village. Utilizes existing building. 	<ul style="list-style-type: none"> Small site with limited area for building and parking has a historically high water table. Using existing building creates inefficiencies. Current well, in basement, would require upgrades/replacement. Current septic, under parking, would require upgrades/replacement. Large B.O.S. meeting room is remote, located at Spofford Road site.
Town Hall Option 3 (TH3)		10 Elm Street & 4 Middleton Road - Small 2 Story Addition to existing building at 4 Middleton to provide an elevator (2 stops) - 1 story building, new construction at 10 Elm Street, across the street.	<ul style="list-style-type: none"> Town Service in East Village. Utilizes existing building. New Construction is 1 story. 	<ul style="list-style-type: none"> Deed restriction currently prohibits development of non-library uses for Elm Street site. Town Hall services are split: inconvenience for residents Redundancies in program result in extra square footage / inefficiencies. Improvements to elevator and toilets are required for Community Center. Separating town offices impacts efficiency, oversight, and communications between departments which is perceived as a step backward. Large B.O.S. meeting room is remote, located at Spofford Road site.

TOWN HALL		Building Area (SF)	Construction Cost	Project Cost
Previous Design		Existing No Renovation		
		Renovated		
		New Construction	14,352	
		Total	14,352	
Town Hall Option 1 (TH1)		Existing No Renovation	-	Site \$ 800,000
		Renovated	-	Building Renovation \$ -
		New Construction	7,750	New \$ 1,600,000
		Total	7,750	Total Cost \$ 2,400,000
				\$ 3,120,000
Town Hall Option 2 (TH2)		Existing No Renovation	-	Site \$ 600,000
		Renovated	3,370	Building Renovation \$ 300,000
		New Construction	4,838	New \$ 1,100,000
		Total	8,208	Total Cost \$ 2,000,000
				\$ 2,600,000
Town Hall Option 3 (TH3)		Concept Design TH3		Site \$ 800,000
		Existing No Renovation	-	Building Renovation \$ 300,000
		Renovated	3,800	New \$ 1,100,000
		New Construction	5,000	Total Cost \$ 2,800,000
		Total	8,800	\$ 2,990,000

*Diagrams for each Option (Not to scale)

- Blue = New Construction
- Gray = Renovated
- White = Cummings House
- Black = Previous Design

Construction Costs are in today's dollars and will have to be confirmed once a final siting plan and construction schedule is established.

Final completed design costs may differ at the time of project bid.

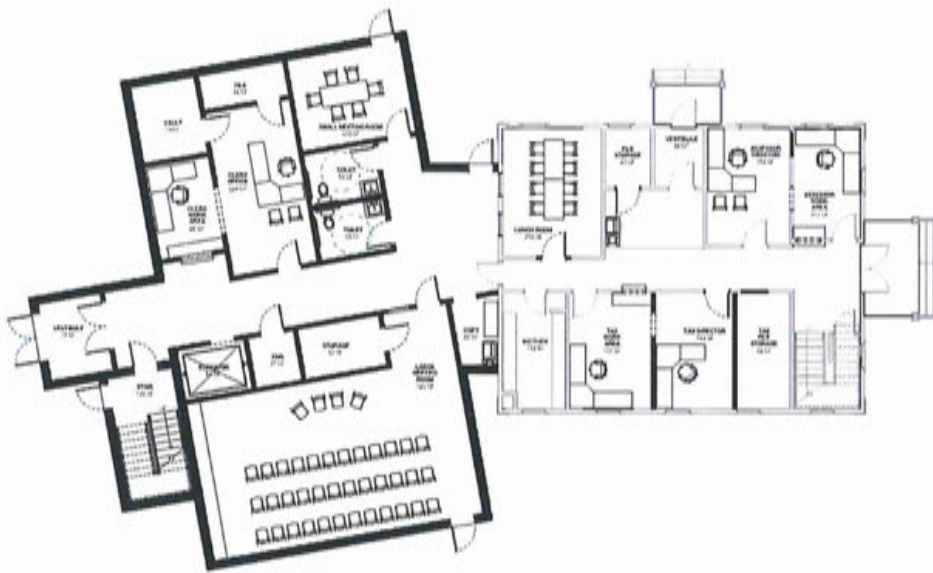
Option 1 develops a new, 7,750 SF two-story building behind the Cummings House at 10 Elm Street. The proposed footprint is a stand-alone facility not connected to the Cummings House. This option assumed that the Library would occupy the entire building at 7A Spofford Road, dislocating the existing Town Office program. The 10 Elm Street deed restriction was still in place when the Town Hall alternatives were being considered.



Option 2 assumes the COA temporarily moves to 188 Washington Street and develops the current Community Center building at 4 Middleton Road. The proposed facility includes 3,370 SF of renovated space and 4,838 SF of addition. The addition footprint extends off the back side of the existing building into the current parking lot. Three alternatives were created for Option 2 to understand how different addition shapes would affect the compact site. Site diagrams and floor plan layouts were created for each alternative.



Town Hall Option 2: 4 Middleton Road multiple site blocking diagrams.



MEETING ROOMS

- FIRST FLOOR
 - SMALL 6 - 8 PEOPLE
 - LUNCH 8 - 10 PEOPLE
 - LARGE 40-50 PEOPLE

- SECOND FLOOR
 - MEETING / WORK 8-10 PEOPLE
 - MEDIUM 12-14 PEOPLE
 - SHARED LAYOUT 6-8 PEOPLE

GROSS SQUARE FOOTAGE

- EXISTING BUILDING
 - FIRST FLOOR = 1,685 SF
 - SECOND FLOOR = 1,685 SF
 - TOTAL EXISTING = 3,370 SF

- NEW ADDITION
 - FIRST FLOOR = 2,714SF
 - SECOND FLOOR = 2,632SF
 - TOTAL ADDITION = 5,346SF

- TOTAL BUILDING
 - FIRST FLOOR = 4,399 SF
 - SECOND FLOOR = 4,317 SF
 - TOTAL = 8,716 SF

Town Hall Option 2: 4 Middleton Road conceptual floor plan layout.

Option 3 is a hybrid that splits development across Elm Street with a 3,800 SF renovation at the current Community Center and 5,000 SF of new construction at 10 Elm Street. The new construction is a single story building. The renovated Community Center includes a small addition for new elevator and vertical circulation which is included in the 3,800 SF number. Similar to Option 2, Option 3 assumes the COA moves to 188 Washington Street.

These Town Hall options were presented at the February 2017 Public Forum.

Library

Alternatives for the Library focused on expanding the current Library use at 7A Spofford Road. Two options range from a renovation only design to renovation and minor addition. Although the current Town Hall building meets the overall square footage needs of the Library program, the shape and layout of the building is not conducive to the needs of a municipal library. Site lines across the building are interrupted by internal infrastructure such as staircases and elevator and the building's footprint creates many areas that cannot be easily supervised by staff. The result is a need for additional staffing to properly and safely manage a library in this location. In addition, the second floor (upper level) structure of the building was designed to support office program uses and not library use. In order to accommodate the heavy weight of library book stacks, reinforcement would need to be made to the existing structural system.

Option 2 creates a small addition to improve site lines and create more open spaces. Both scenarios left the large Board of Selectmen (B.O.S.) meeting room at Town Hall for use as a shared municipal space.

These Library options were presented at the February 2017 Public Forum.

LIBRARY		Site / Location / Description	Pros	Cons
Previous Design		10 Elm Street Behind the Cummings House Swartz Silver Design - 2002		
Library Option 1 (L1)		7A Spofford Road - No Addition - Renovation of 2 stories - No Soil Remediation Required	<ul style="list-style-type: none"> Accommodates all of library's volumes. Centrally located within Boxford. Ample parking. 	<ul style="list-style-type: none"> Existing geometry of building is not conducive to an open plan with good sight lines for staff. No dedicated children's bathroom. Plan would require an additional person within the library staff.
Library Option 2 (L2)		7A Spofford Road - 2 Story Addition - Renovation of 2 Stories - No Soil Remediation Required	<ul style="list-style-type: none"> Accommodates all of library's volumes. Centrally located within Boxford. Ample parking. Open plan with good sight lines. Dedicated children's bathroom. 	

LIBRARY		Building Area (SF)	Construction Cost	Project Cost
Previous Design		Existing No Renovation	-	
		Renovated	-	
		New Construction	14,561	
		Total	14,561	
Library Option 1 (L1)		Existing No Renovation	-	Site \$ -
		Renovated	14,425	Building Renovation \$ 1,100,000
		New Construction	-	New \$ -
		Total	14,425	Total Cost \$ 1,100,000 \$ 1,705,000
Library Option 2 (L2)		Existing No Renovation	-	Site \$ -
		Renovated	14,425	Building Renovation \$ 1,100,000
		New Construction	673	New \$ 200,000
		Total	15,098	Total Cost \$ 1,300,000 \$ 1,965,000

*Diagrams for each Option (Not to scale)

- Red = New Construction
- Gray = Renovated
- White = Cummings House
- Black = Previous Design

NOTES

- 1 - Construction Costs are in today's dollars and will have to be confirmed once a phasing plan and construction schedule is established.
- 2 - The construction cost does not include exterior building repairs that are needed regardless of future development.
- 3 - Project costs includes a budget of \$275,000 for library furniture, fixtures and equipment
- 4- Actual completed design costs may differ at the time of project bid.



Library Option 1: renovation only lower and upper floor plan layouts



Library Option 2: renovation and minor addition lower and upper floor plan layouts



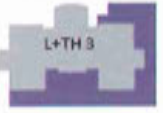
Combined Town Hall / Library




Alternatives for a combined Town Hall / Library included three different options that renovated and added to the current Town Hall building at 7A Spofford Road. Following the alternatives for a Library only design at the town Hall building and Town Hall design in the East Village, it became clear that combining the two programs with a sizable addition was a viable alternative. The general intent of the Town Hall / Library alternatives was to focus library program on the lower level and Town Hall program on the upper level.

The 7A Spofford Road site presented significant limitations for expansion due to a limited footprint for construction. During the original building construction, unsuitable soils were removed within a prescribed boundary. Therefore the opportunity to add to the building is currently constrained on all sides. In addition, the second floor (upper level) structure of the building was designed to support office program uses and not library use. In order to accommodate the heavy weight of library book stacks, reinforcement would need to be made to the existing structural system.

For the purpose of this exercise, simple blocks were added to the existing building footprint to represent the extent of addition options. Across all three options, renovated area is constant at 6,927 SF. New construction area at the addition area changes slightly, ranging between 5,703 SF and 6,110 SF. These diagrams identify locations for potential additions that would offer the greatest square footage gain for the Library and Town Hall programs.

These Town Hall / Library options were presented at the February 2017 Public Forum

LIBRARY & TOWN HALL		Site / Location / Description	Pros	Cons
Previous Design		No previous design layout		
Library & Town Hall Option 1 (L+TH 1)		7A Spofford Road - 1st Floor Renovation - 1 story addition - No renovation of 2nd floor - Leaves Community Center Vacant	<ul style="list-style-type: none"> Central location for town services and ease of access for residents. B.O.S. Meeting Room in same building as Town Offices. Limits need for new elevator, toilets and other expensive program items. Capitalizes on an already good working relationship between the Library and Town Hall Offices. Renovation could include deferred building maintenance and climate control balancing. (Currently not included in cost estimate) 	<ul style="list-style-type: none"> Required site remediation would offset a portion of the construction savings. Floor Plan is not efficient as far as staffing, slight lines and entrance circulation. Plan would require an additional person within the library staff. Site / traffic circulation impact.
Library & Town Hall Option 2 (L+TH 2)		7A Spofford Road - 1st Floor Renovation - 1 story addition - No renovation of 2nd floor - Leaves Community Center Vacant	<ul style="list-style-type: none"> Central location for town services and ease of access for residents. B.O.S. Meeting Room in same building as Town Offices. Limits need for new elevator, toilets and other expensive program items. Capitalizes on an already good working relationship between the Library and Town Hall Offices. Renovation could include deferred building maintenance and climate control balancing. (Currently not included in cost estimate) 	<ul style="list-style-type: none"> Required site remediation would offset a portion of the construction savings. Floor Plan is not efficient as far as staffing, slight lines and entrance circulation for the Library. Site / traffic circulation impact.
Library & Town Hall Option 3 (L+TH 3)		7A Spofford Road - 1st Floor Renovation - 1 story addition - No renovation of 2nd floor - Leaves Community Center Vacant	<ul style="list-style-type: none"> No remediation of soil. 	<ul style="list-style-type: none"> Limited SF makes option unfeasible to work within library requirements.

LIBRARY & TOWN HALL		Building Area (SF)		Construction Cost		Project Cost		
Previous Design		Existing No Renovation						
		Renovated						
		New Construction						
		Total						
Library & Town Hall Option 1 (L+TH 1)		Based on Blocking Plan		Site	\$	700,000		
		Existing No Renovation	6,927	Building				
		Renovated	7,498	Renovation	\$	900,000		
		New Construction	6,110	New	\$	1,500,000		
		Total	20,535	Total Cost	\$	3,100,000	\$	4,305,000
Library & Town Hall Option 2 (L+TH 2)				Site	\$	700,000		
		Existing No Renovation	6,927	Building				
		Renovated	7,498	Renovation	\$	900,000		
		New Construction	5,703	New	\$	1,400,000		
		Total	20,128	Total Cost	\$	3,000,000	\$	4,175,000
Library & Town Hall Option 3 (L+TH 3)		Concept Design TBD		Site				
		Existing No Renovation	6,854	Building				
		Renovated	7,498	Renovation				
		New Construction	5,840	New				
		Total	20,192	Total Cost				

*Diagrams for each Option (Not to scale)

Purple = New Construction

Gray = Renovated

NOTES

- 1 - Construction Costs are in today's dollars and will have to be confirmed once a phasing plan and construction schedule is established.
- 2 - The construction cost does not include exterior building repairs that are needed regardless of future development.
- 3 - Project costs includes a budget of \$275,000 for library furniture, fixtures and equipment
- 4 - Actual completed design costs may differ at the time of project bid.

5

PREFERRED OPTIONS

PREFERRED OPTIONS

INTRODUCTION

The preferred options for the Boxford Targeted Municipal Facilities Master Plan were chosen based on the space needs assessment, facilities assessment, and review of the alternative scenario options. Considerations also include project cost, space efficiencies, and project goals.

Each of the preferred options contains several choices for the Task Force to consider. The final Master Plan will contain a series of single recommendations per municipal department which will become the scope of work presented to Boxford voters.

After reviewing the alternate scenario options the Task Force focused on the following options for the five municipal departments in the Master Plan.

PREFERRED OPTIONS MATRIX

Town Department	Recommended Location	Recommended Scope of Work	Approximate Area
Council on Aging (COA)	4 Middleton Road	Renovation to the 2 story Community Center and new addition	9,000 GSF
Council on Aging (COA)	10 Elm Street	Construction of a new 1 story Community Center / COA	9,000 GSF
Department of Public Works (DPW)	Site 1, Spofford Road	Construction of a new DPW facility	18,240 GSF
Town Offices /Library	7A Spofford Road	Renovation to the 2 story Town Hall building and new addition to support a combined Town Hall and Library	20,055 GSF
Fire Department	TBD	Renovations and/or Additions, TBD	TBD

PREFERRED OPTIONS BY PROGRAM TYPE

COMMUNITY CENTER / COUNCIL ON AGING				
Address	4 Middleton Road	10 Elm Street	10 Elm Street	10 Elm Street
Description	Renovation and Addition of Community Center Building	New Construction, Cummings House not Included	New Construction, Cummings House as Separate Program	New Construction, Cummings House Moved & Incorporated in Project
Area (GSF)	8,965	9,000	10,600	9000
Construction Cost	\$4,085,731	\$4,432,022	\$4,815,261	\$4,667,773
Administrative Cost & Reserve	\$747,860	\$578,202	\$857,289	\$835,166
Fees & Services	\$882,572	\$742,928	\$953,346	\$929,272
Total Project Cost	\$5,716,163	\$5,753,153	\$6,625,896	\$6,432,211



DEPARTMENT OF PUBLIC WORKS (DPW)				
Address	Site 1 Spofford Road	Site 1 Spofford Road	Site 1 Spofford Road	Site 1 Spofford Road
Description	Full Scope New DPW	Reduced Size New DPW Facility	Reduced Size New DPW Facility w/ 3-Sided Storage	Reduced Size New DPW Facility w/ 3-Sided Storage
Area (GSF)	18,240	17,000	16,000	15,000
Construction Cost	\$6,255,778	\$6,085,563	\$6,056,813	\$6,028,062
Administrative Cost & Reserve	\$760,578	\$743,556	\$740,681	\$737,806
Fees & Services	\$1,045,319	\$1,022,564	\$1,018,720	\$1,014,877
Total Project Cost	\$8,061,675	\$7,851,683	\$7,816,214	\$7,780,745

ALTERNATES					
Description	Segment C Access Drive	Full 2-Lane Access Drive	Fence at Solar Array	Reuse Existing Fuel Island	Reuse Existing Salt Barn
Total Project Cost	\$64,111	\$38,350	\$31,035	-\$169,771	-\$88,470



TOWN HALL / LIBRARY			
Address	7A Spofford Road	7A Spofford Road	7A Spofford Road
Description	Renovation and Addition of Town Hall Bulding	Renovation and Addition Plus Exterior Envelope Repair with Siding	Renovation and Addition Plus Exterior Envelope Repair with Brick
Area (GSF)	20,055	20,055	20,055
Construction Cost	\$3,771,531	\$4,448,807	\$4,787,380
Administrative Cost & Reserve	\$895,730	\$997,321	\$1,048,107
Fees & Services	\$891,714	\$1,006,950	\$1,064,557
Total Project Cost	\$5,558,974	\$6,453,078	\$6,900,044



Category	2013	2014	2015	2016
1. P.001 (a) (1) - OTC derivatives	15	10	10	10
2. P.002 - Hedge funds	15	15	15	15
3. P.003 - Investment advisers	15	15	15	15
4. P.004 - Non-OTC derivatives	15	15	15	15
5. P.005 - Risk management	15	15	15	15
6. P.006 - Data aggregation	15	15	15	15
7. P.007 - Systemic risk	15	15	15	15
8. P.008 - Regulatory burden	15	15	15	15
9. P.009 - Market integrity	15	15	15	15
10. P.010 - Consumer protection	15	15	15	15
11. P.011 - Anti-money laundering	15	15	15	15
12. P.012 - Prudential supervision	15	15	15	15
13. P.013 - Insolvency	15	15	15	15
14. P.014 - Investor protection	15	15	15	15
15. P.015 - Systemic risk	15	15	15	15
16. P.016 - Anti-money laundering	15	15	15	15
17. P.017 - Prudential supervision	15	15	15	15
18. P.018 - Insolvency	15	15	15	15
19. P.019 - Investor protection	15	15	15	15
20. P.020 - Systemic risk	15	15	15	15

Category	2013	2014	2015	2016
21. P.021 - Anti-money laundering	15	15	15	15
22. P.022 - Prudential supervision	15	15	15	15
23. P.023 - Insolvency	15	15	15	15
24. P.024 - Investor protection	15	15	15	15
25. P.025 - Systemic risk	15	15	15	15
26. P.026 - Anti-money laundering	15	15	15	15
27. P.027 - Prudential supervision	15	15	15	15
28. P.028 - Insolvency	15	15	15	15
29. P.029 - Investor protection	15	15	15	15
30. P.030 - Systemic risk	15	15	15	15

The table above shows the total number of comments received for each category from 2013 to 2016. The categories are listed in the left column, and the number of comments is shown in the columns for each year. The total number of comments for each category is shown in the rightmost column.

6

RECOMMENDATIONS

FINAL MASTER PLAN RECOMMENDATIONS

INTRODUCTION

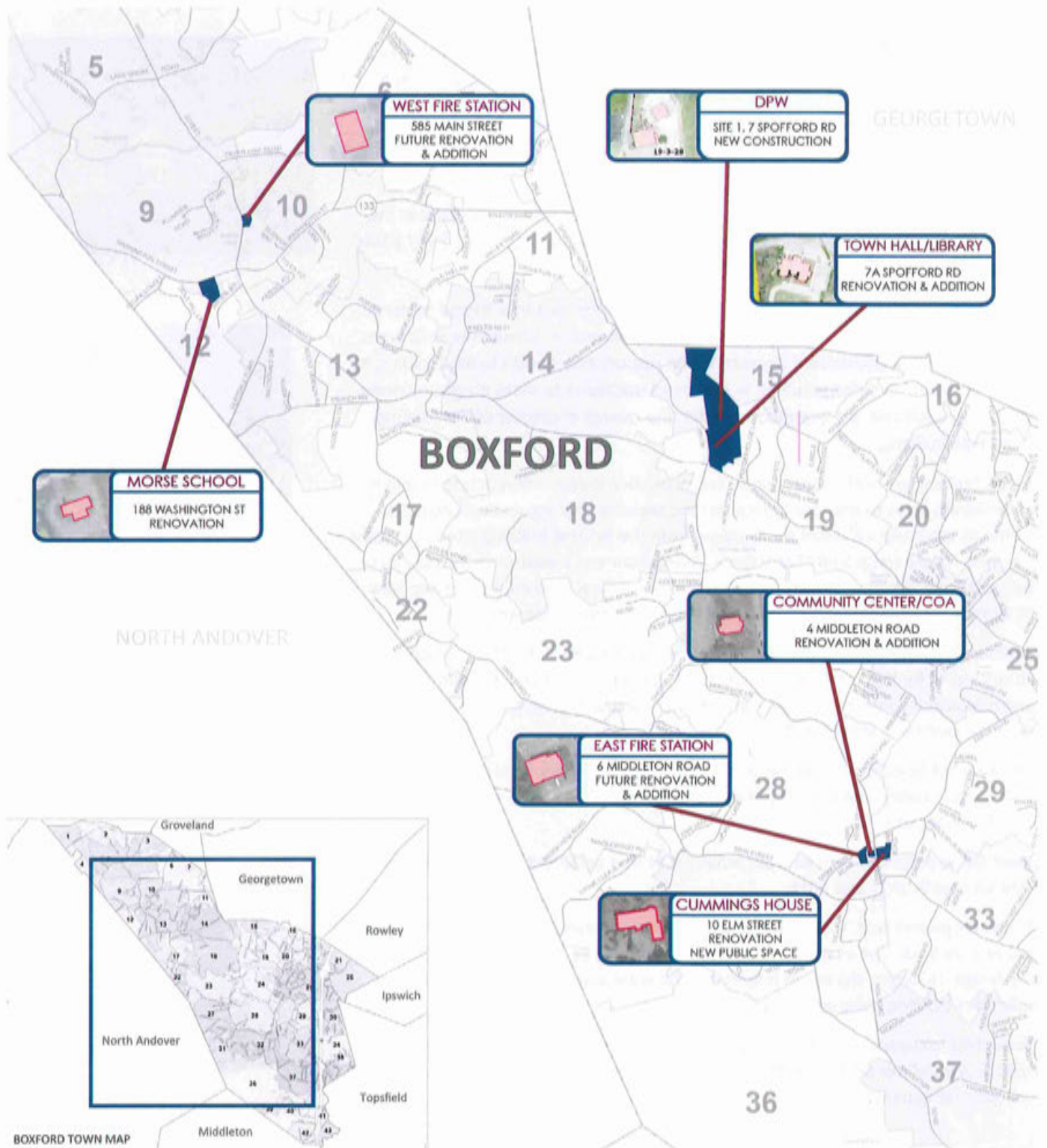
The Task Force made a final recommendation for each municipal program and each municipal site in the Boxford Targeted Municipal Facilities Master Plan. The final recommendations differ from the preferred options in that there is a single facility and site initiative per location.

The final recommendations address all facilities and sites included in the Master Plan process except for the East and West Fire Departments which are identified as being future initiatives. These recommendations meet the spirit of the Task Force goals of maintaining municipal use in the East Village, identifying a site for a new Department of Public Works, creating an optimized use for Town Hall, determining the fate of the Cummings House, improving the Boxford Public Library, improving the Council on Aging, and assessing space needs for the Fire Department.

This section includes more detailed information regarding the location, scope, design, and cost for each recommendation.

Master Plan Facility	Town Hall/Library	Community Center / COA Renovation and Addition	Cummings House Renovation	DPW and Access Drive	Morse School Renovation
Address	7A Spofford Road	4 Middleton Road	10 Elm Street	Site 1, 7 Spofford Road	188 Washington Street
Initiative	Additions and renovations to existing Town Hall to accommodate all Town Office, Library, and meeting program needs. Repair exterior envelope using siding in lieu of brick.	Moderate interior renovation and new construction to serve the COA and Community Center program needs.	Moderate exterior and extensive interior renovations to serve an undetermined need. Demolish former library addition and barn. Create a public park.	Develop an access drive and site to support a new DPW facility including office, vehicle maintenance, vehicle storage, salt barn and fuel island. Additional items such as site fencing are included.	Major interior renovation of facility after Library storage vacates to serve an undetermined use. Provide temporary office trailers as swing space during other municipal construction projects.
Total Area	20,055 GSF	9,600 GSF	1,600 SF	17,000 GSF	2,500 SF
Total Project Cost	\$6,453,078	\$6,084,315	\$500,000	\$7,851,683	\$800,000

FINAL RECOMMENDATIONS MATRIX



FINAL RECOMMENDATIONS MAP

FINAL RECOMMENDATIONS DESCRIPTIONS

TOWN HALL / LIBRARY, 7A SPOFFORD ROAD

The Task Force recommendation for a combined Town Hall and Boxford Public Library included three concurrent initiatives. The first was the acceptance of a renovation and addition project as proposed in the preferred option. The second was an increased scope to address water infiltration issues as reported in both the *Facilities and Site Assessments* section of this report and in further detail in an exterior envelope assessment in March, 2018 by Gale. The third was an increased scope to address mechanical system deficiencies as reported in the *Facilities and Site Assessments* of this report and in further detail in a 2017 HVAC Systems assessment report by BLW Engineers.

The site presented significant limitations for expansion due to a limited footprint for construction. During the original building construction, unsuitable soils were removed within a prescribed boundary. The opportunity to add to the building is constrained on all sides resulting in two small additions to meet program needs. Proposed additions are intended to match the overall character of the existing Town Hall building.

A new building entry element is proposed to provide independent access to different program areas to improve circulation and security. Existing vertical circulation elements (stair and elevator) are removed from the existing building interior to open site lines for the renovated library space. A new stair and elevator are proposed at the new building entry allowing the Library, Town Offices, and public meeting area to operate independently without limiting access to other program areas.

Renovation of the existing building interior as proposed provides the most optimal library layout for this building. Considerations include open site lines from the circulation desk and youth area. Open site lines allow visual oversight which reduces the need for additional library staff.

The Board of Selectmen meeting room is moved to the upper level and combined with toilets, pantry, and a variety of meeting room sizes to create a consolidated area for public use.

Town Office program is left as is per renovations that occurred during the Master Plan process in 2017 and 2018.

To reduce project cost, the exterior finish material is recommended to be siding rather than brick. The exact material and design are to be determined during building design. However, the intent is to match the scale and character of the existing Town Hall building using siding and trim elements.

To address occupant comfort and HVAC control issues, the project budget includes replacement of the existing HVAC system with a more efficient and controllable VRF (variable refrigerant flow) system.



TOWN HALL - 7A SPOFFORD RD



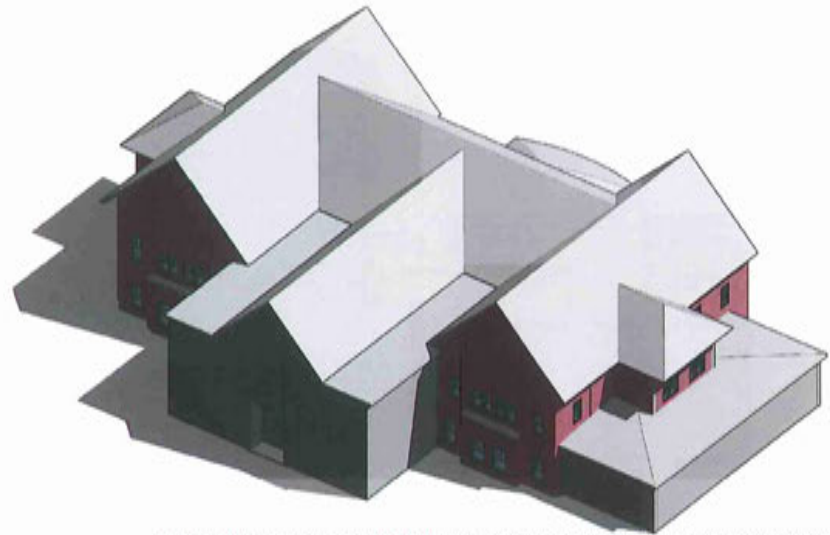
TOWN HALL - 7A SPOFFORD RD



3D VIEW OF 1 STORY LIBRARY ADDITION



3D VIEW OF 2 STORY MAIN ENTRY ADDITION

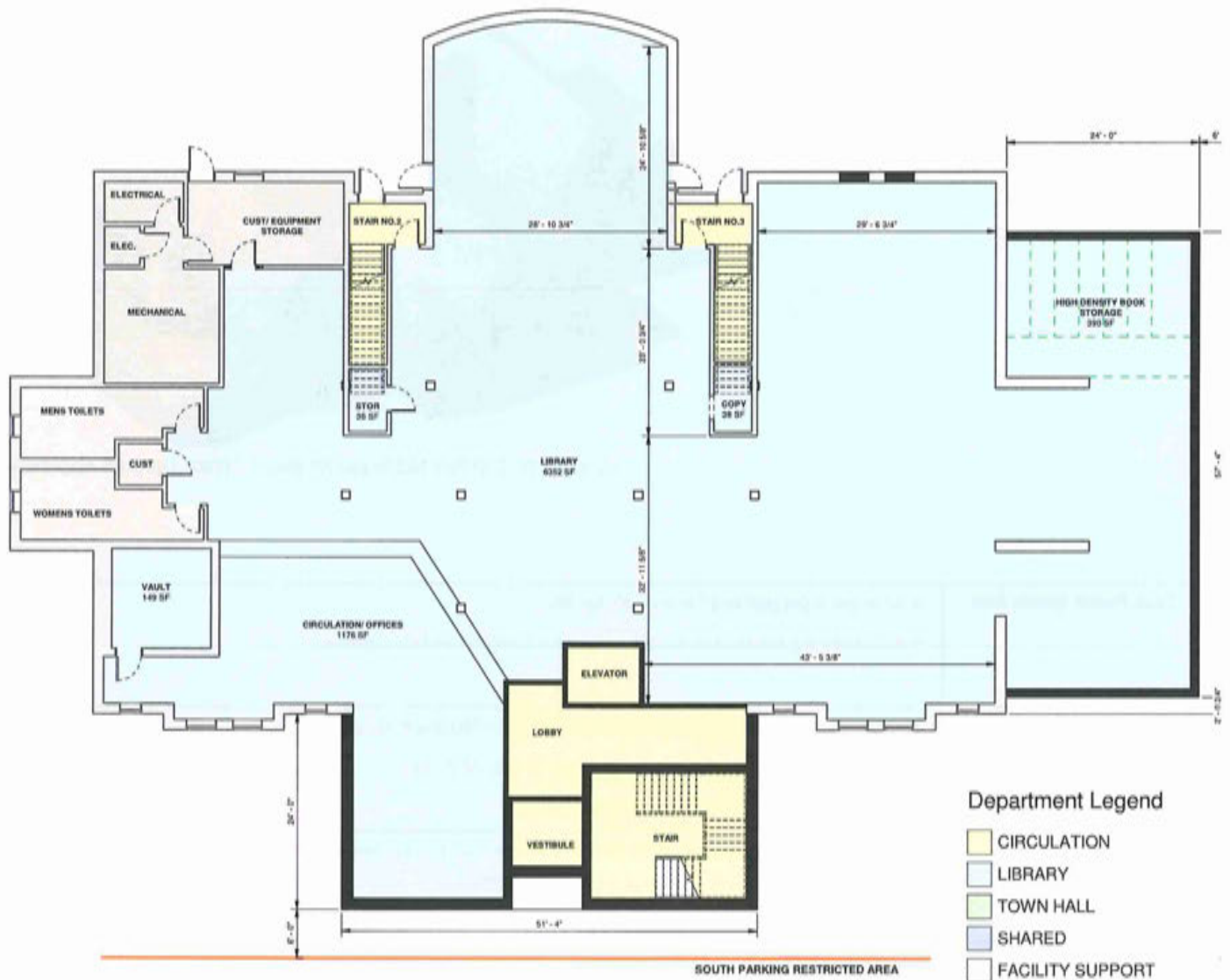


3D VIEW OF 2 STORY MAIN ENTRY AND 1 STORY LIBRARY ADDITION

Task Force Goals Met	<ul style="list-style-type: none"> • Address underutilized Town Hall facility. • Identify a permanent location for the Boxford Public Library.
Facilities Needs Met	<ul style="list-style-type: none"> • Repair exterior envelope to address water infiltration issues. • Replace building exterior using siding in lieu of brick. • Improve and upgrade mechanical system.
Space Needs Met	<ul style="list-style-type: none"> • Additions and renovations to existing Town Hall to accommodate all Town Office, Library, and public meeting program needs. • Project consolidates Library to occupy one building. 188 Washington Street can be vacated by the Library. • Space efficiencies are increased by utilizing shared meeting rooms.
Other Design Considerations	<ul style="list-style-type: none"> • Creates a common lobby for both Town Hall and Library. • Provides controlled and separate access for Town Office areas, Library, and meeting room areas. • Leverage new construction to limit scope of exterior envelope replacement. • Multiple small additions are required due to a limited expansion footprint of existing soils conditions. Limits are depicted on the floor plan with an orange line.
Total Area	20,055 GSF
Total Project Cost	\$6,453,078

COMBINED TOWN HALL / LIBRARY RECOMMENDATION SUMMARY

NORTH PARKING RESTRICTED AREA



NET / ASSIGNABLE SQUARE FOOTAGE

LIBRARY

- CIRC/OFFICE = 1,176 SF
- PROGRAM AREA = 6,352 SF
- HD STORAGE = 464 SF

TOTAL LIBRARY = 7,992 SF

SHARED / MEETING = 2,089 SF

TOWN OFFICES = 4,540 SF

GROSS SQUARE FOOTAGE

TOTAL BUILDING = (*1.37) 20,055 SF

**COMBINED TOWN HALL / LIBRARY
LOWER LEVEL FLOOR PLAN**



Department Legend

- CIRCULATION
- LIBRARY
- TOWN HALL
- SHARED
- FACILITY SUPPORT

NET / ASSIGNABLE SQUARE FOOTAGE

LIBRARY

- CIRC/OFFICE = 1,176 SF
- PROGRAM AREA = 6,352 SF
- HD STORAGE = 464 SF

TOTAL LIBRARY = 7,992 SF

SHARED / MEETING = 2,089 SF

TOWN OFFICES = 4,540 SF

GROSS SQUARE FOOTAGE

TOTAL BUILDING = (*1.37) 20,055 SF

**COMBINED TOWN HALL / LIBRARY
UPPER LEVEL FLOOR PLAN**

Town of Boxford
Town Hall / Library - Conceptual Project Budget
With Façade Replaced as Siding

HARRIMAN
29 August 2018

I. Construction	Library	Town Hall	Shared Costs	Total
Total Construction Costs	2,365,679	1,058,521		3,424,200
Alt 1: New Finishes in Existing Restrooms	21,247			21,247
Shared Costs				
Circulation			326,084	326,084
Envelope Repairs (siding)			677,276	677,276
TOTAL	\$2,386,926	\$1,058,521	\$1,003,360	\$4,448,807

II. Administrative Cost & Reserve				
Land	0	0	0	0
FF&E (budget)	75,000	5,000	0	80,000
high density book shelves (place holder)	25,000			25,000
tierd shelving (stacks - place holder)	165,000			165,000
Infrastructure Technology (budget)	25,000	25,000	0	50,000
Advertising/Printing	2,500	2,500	0	5,000
Insurance/Legal	2,500	2,500	0	5,000
Bid Contingency (7.5%)	179,019	79,389	75,252	333,661
Construction Contingency (7.5%)	179,019	79,389	75,252	333,661
TOTAL	\$653,039	\$193,778	\$150,504	\$997,321

III. Fees & Services				
Architect/Engineer				
<u>Basic A/E Services</u>				
Schematic Design				
Design Development				
Construction Documents				
Bidding and Negotiation				
Construction Administration				
Project Close Out				
Total Basic Services Architect/Engineer	264,292	117,205	111,097	492,594
Additional Services Fees (based on const cont)	18,439	8,177	7,751	34,367
FF&E Fee	50,000	15,000	0	65,000
TEL / Data Design	10,000	10,000	0	20,000
Permitting (budget)	10,000	10,000	0	20,000
A/E Reimbursable	7,929	3,516	3,333	14,778
Survey/Soils/Borings	10,000	10,000	0	20,000
OPM Fees	115,468	51,206	48,538	215,211
Special Inspections	10,000	10,000	5,000	25,000
Commissioning	10,000	10,000	5,000	25,000
Cost Estimating	6,000	6,000	3,000	15,000
Misc Fees and Expenses	10,000	10,000	5,000	25,000
Testing and Balancing	15,000	15,000	5,000	35,000
TOTAL	\$537,128	\$276,104	\$193,718	\$1,006,950

Project Cost	\$3,577,093	\$1,528,403	\$1,347,582	\$6,453,078
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COMBINED TOWN HALL / LIBRARY CONCEPTUAL PROJECT BUDGET

FINAL RECOMMENDATIONS DESCRIPTIONS

COMMUNITY CENTER / COA, 4 MIDDLETON ROAD

The Task Force recommendation for an expanded Community Center and Council on Aging (COA) utilizes the existing parking area for building development. Feedback from the COA, HDC, and the public indicated that the triangular green space at the intersection of Elm Street and Middleton Road should be left undeveloped.

The project scope includes renovation to the existing building to retain its historic qualities on the exterior and modernize its interior spaces. New construction will provide a much needed multi-function space and commercial kitchen as well as an accessible entry lobby and improved staff observation. Interior renovations are to include ADA compliance upgrades and other code improvements throughout the existing building.

Final building and site layout will be determined during the design phase. Coordination with HDC, the COA Board, and abutters will be necessary. Any final designs are recommended to adhere to the *Secretary of the Interior's Standards for the Treatment of Historic Properties* issued by the National Park Service.



COMMUNITY CENTER- 4 MIDDLETON Rd



COMMUNITY CENTER- 4 MIDDLETON Rd



RENDERING OF A PREVIOUS VERSION OF A COA ADDITION



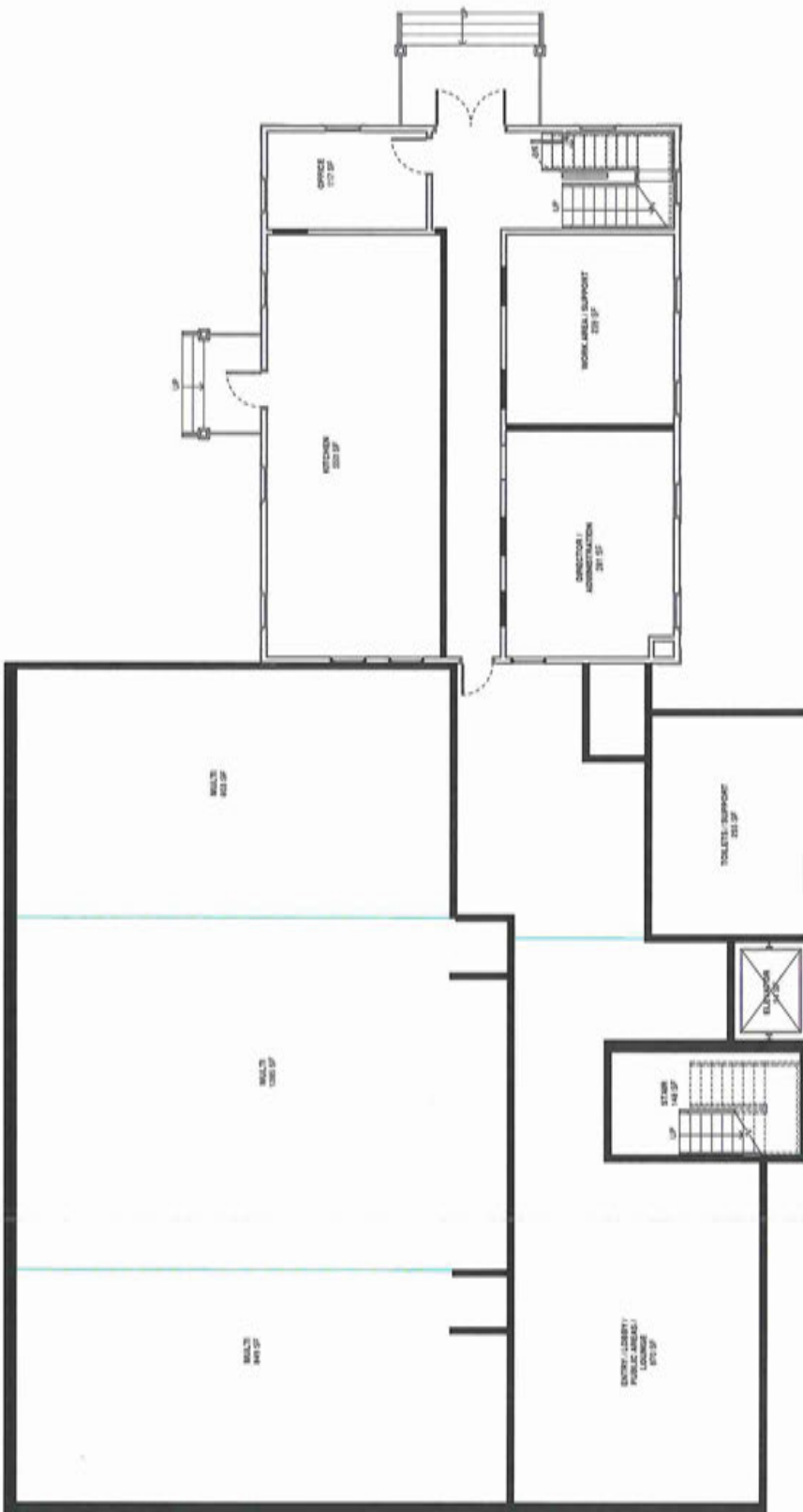
RENDERING OF A PREVIOUS VERSION OF A COA ADDITION



CONCEPTUAL SITE PLAN DIAGRAM OF A NEW ADDITION OFF THE BACK OF A RENOVATED COMMUNITY CENTER

Task Force Goals Met	<ul style="list-style-type: none"> • Retain a municipal use in the East Village. • Continue utilizing an existing municipal facility.
Facilities Needs Met	<ul style="list-style-type: none"> • Renovate interior to meet ADA and other code requirements. • Improve internal and external building circulation. • Add toilets and other infrastructure to meet current code requirements.
Space Needs Met	<ul style="list-style-type: none"> • Additions and renovations to existing Community Center to better meet program needs for the COA and other community uses. • Project provides much needed multi-function spaces and commercial kitchen.
Other Design Considerations	<ul style="list-style-type: none"> • Site location keeps an iconic Town building occupied but has limitations for parking and future expansion. • Project includes infrastructure upgrades such as a new septic system, well, and building HVAC to improve occupant comfort. • Building and site layout to be determined during the design phase. • Building exterior to be coordinated with the Boxford HDC and Planning Board.
Total Area	9,600 SF
Total Project Cost	\$6,084,315

COMMUNITY CENTER / COA RECOMMENDATION SUMMARY



GROSS SQUARE FOOTAGE

- EXISTING BUILDING**
- FIRST FLOOR = 1,685 SF
 - SECOND FLOOR = 1,685 SF
 - TOTAL EXISTING = 3,370 SF

- NEW ADDITION: 2 STORY**
- FIRST FLOOR = 4,930 SF
 - SECOND FLOOR = 1,300 SF
 - TOTAL ADDITION = 6,230 SF

- TOTAL BUILDING**
- FIRST FLOOR = 6,615 SF
 - SECOND FLOOR = 2,985 SF
 - **TOTAL = 9,600 SF**

COMMUNITY CENTER / COA

LOWER LEVEL FLOOR PLAN BLOCKING DIAGRAM



GROSS SQUARE FOOTAGE

- EXISTING BUILDING**
- FIRST FLOOR = 1,685 SF
 - SECOND FLOOR = 1,685 SF
 - TOTAL EXISTING = 3,370 SF
- NEW ADDITION: 2 STORY**
- FIRST FLOOR = 4,930 SF
 - SECOND FLOOR = 1,300 SF
 - TOTAL ADDITION = 6,230 SF
- TOTAL BUILDING**
- FIRST FLOOR = 6,615 SF
 - SECOND FLOOR = 2,985 SF
 - **TOTAL = 9,600 SF**

**COMMUNITY CENTER / COA
UPPER LEVEL FLOOR PLAN BLOCKIG DIAGRAM**

**Town of Boxford
Community Center | COA at 4 Middleton - Concept Project Budget**

**HARRIMAN
11 September 2018**

I. Construction			9,612 sf with addition behind Middleton	4
Total Construction Costs				3,849,839
Alternate 1: Sprinkler including holding tank				120,892
Alternate 2: Emergency Generator				115,000
Add for additional area 647sf	647	429.43		277,841
TOTAL				\$4,363,572

II. Administrative Cost & Reserve			
Land			0
FF&E (budget)			75,000
Infrastructure Technology (budget)			50,000
Advertising/Printing			5,000
Insurance/Legal			5,000
Bid Contingency (7.5%)			327,268
Construction Contingency (7.5%)			327,268
TOTAL			\$789,536

III. Fees & Services			
Architect/Engineer			
<u>Basic A/E Services</u>			
Schematic Design	12%	61,919	
Design Development	20%	103,198	
Construction Documents	40%	206,397	
Bidding and Negotiation	2%	10,320	
Construction Administration	24%	123,838	
Project Close Out	2%	10,320	
Total Basic Services Architect/Engineer	100%	515,992	515,992
Additional Services Fees (based on const cont)			35,999
FF&E Fee			12,000
TEL / Data Design			10,000
Fee for HDC and Planning Board Permitting (budget)			30,000
A/E Reimbursable			15,480
Survey/Soils/Borings			20,000
OPM Fee			199,736
Special Inspections			15,000
Cost Estimating			12,000
Commissioning			20,000
Misc Fees and Expenses			25,000
Testing and Balancing			20,000
TOTAL			\$931,207

Project Cost	\$6,084,315
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COMMUNITY CENTER / COA CONCEPTUAL PROJECT BUDGET

FINAL RECOMMENDATIONS DESCRIPTIONS

CUMMINGS HOUSE RENOVATION, 10 ELM STREET

The Task Force recommendation for the Cummings House includes development of a public park at the Pony Field in addition to renovations to the historic house.

Per the *Cummings House Assessment* by Preservation Timber Framing in August, 2018 removal of both the, currently closed, library addition and the existing ell are recommended. Renovations and restoration of the original house is intended to create a large, open, 2 story interior volume.

A project cost for demolition and renovation totals roughly half of the total project cost. The balance of the project cost would be applied to development of a public park.

Any work on the Cummings House should be done in close coordination with the HDC.



COMMUNITY CENTER- 4 MIDDLETON RD

Task Force Goals Met	<ul style="list-style-type: none"> • Retain a municipal use in the East Village. • Remove the vacated library portion of the Cummings House.
Facilities Needs Met	<ul style="list-style-type: none"> • Renovate interior elements that are in poor condition. • Remove the second floor to remove any ADA requirements for vertical circulation that are not met. • Restore the exterior architectural details and trim which are in poor condition.
Space Needs Met	<ul style="list-style-type: none"> • There is no determined space need for this building.
Other Design Considerations	<ul style="list-style-type: none"> • Site location keeps historic Town building relevant. • Development of the park formalizes the Pony Field.
Total Area	1,600 SF
Total Project Cost	\$500,000

CUMMINGS HOUSE RENOVATION RECOMMENDATION SUMMARY

**Town of Boxford
Cummings House Demolition**

**HARRIMAN
10 September 2018**

I. Construction	
Total Construction Costs	181,325
TOTAL	\$181,325

II. Administrative Cost & Reserve	
Land	0
FF&E (budget)	0
Infrastructure Technology (budget)	0
Advertising/Printing	0
Insurance/Legal	0
Bid Contingency (5%)	9,066
Construction Contingency 5%)	9,066
TOTAL	\$18,133

III. Fees & Services	
Architect/Engineer	
<u>Basic A/E Services</u>	
Schematic Design	12% 1,599
Design Development	20% 2,665
Construction Documents	40% 5,331
Bidding and Negotiation	2% 267
Construction Administration	24% 3,199
Project Close Out	2% 267
Total Basic Services Architect/Engineer	100% 13,327
Additional Services Fees (based on const cont)	934
FF&E Fee	0
TEL / Data Design	0
Fee for HDC and Planning Board Permitting (budget)	2,500
A/E Reimbursable	500
Survey/Soils/Borings	0
OPM Fee	8,160
Special Inspections	0
Cost Estimating	0
Commissioning	0
Misc Fees and Expenses	0
Testing and Balancing	0
TOTAL	\$25,421

Project Cost	\$224,878
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FINAL RECOMMENDATIONS DESCRIPTIONS

DPW AND ACCESS DRIVE, SITE 1, 7 SPOFFORD ROAD

The Task Force recommendation for a new Department of Public Works facility resulted in extensive site analysis and consideration for the access drive that will connect the proposed facility with the rest of the Spofford Road campus. Location of the DPW facility at Site 1 provided a clean site to build on without disrupting existing DPW activities and also located the DPW operations away from recreational fields.

Several building square foot areas were discussed to understand the best way to balance cost while meeting the minimum program needs of the DPW. The recommended project includes a 17,000 GSF DPW building, Fuel Island, 4,000 SF Salt Barn, and yard storage / staging areas. The recommended area is less than the originally identified 18,240 GSF but was determined to provide enough space to meet all DPW needs. The proposed facility is envisioned to be a pre-manufactured steel building.

Site access via an improved drive was developed with additional wetland delineation, site survey, and geotechnical borings investigations. Utilizing the updated information, the consultant team created options to improve the existing access drive to accommodate DPW vehicles. The recommended option creates the least impact on the adjacent wetlands and creates a buffer zone off the adjacent landfill liner. To minimize impact to the wetland, the access drive profile is proposed to slope away from the wetland side.

Findings from the geotechnical report stated that the existing access drive is suitable to build on for DPW use. Recommendations include adding a 12" to 16" gravel base with 5" to 6" of pavement. The complete geotechnical report can be found in Appendix F of this report.

The wetland delineation was also used to create a modified site layout plan to meet wetland setback restrictions.

The project cost estimate includes scope to secure the solar array with fencing. The conceptual budget includes options for reusing the existing salt barn and fuel island with securing and monitoring provisions in the even they remain in place.



DPW 7B SPOFFORD RD



ACCESS DRIVE TO SITE 1



DPW 7B SPOFFORD RD



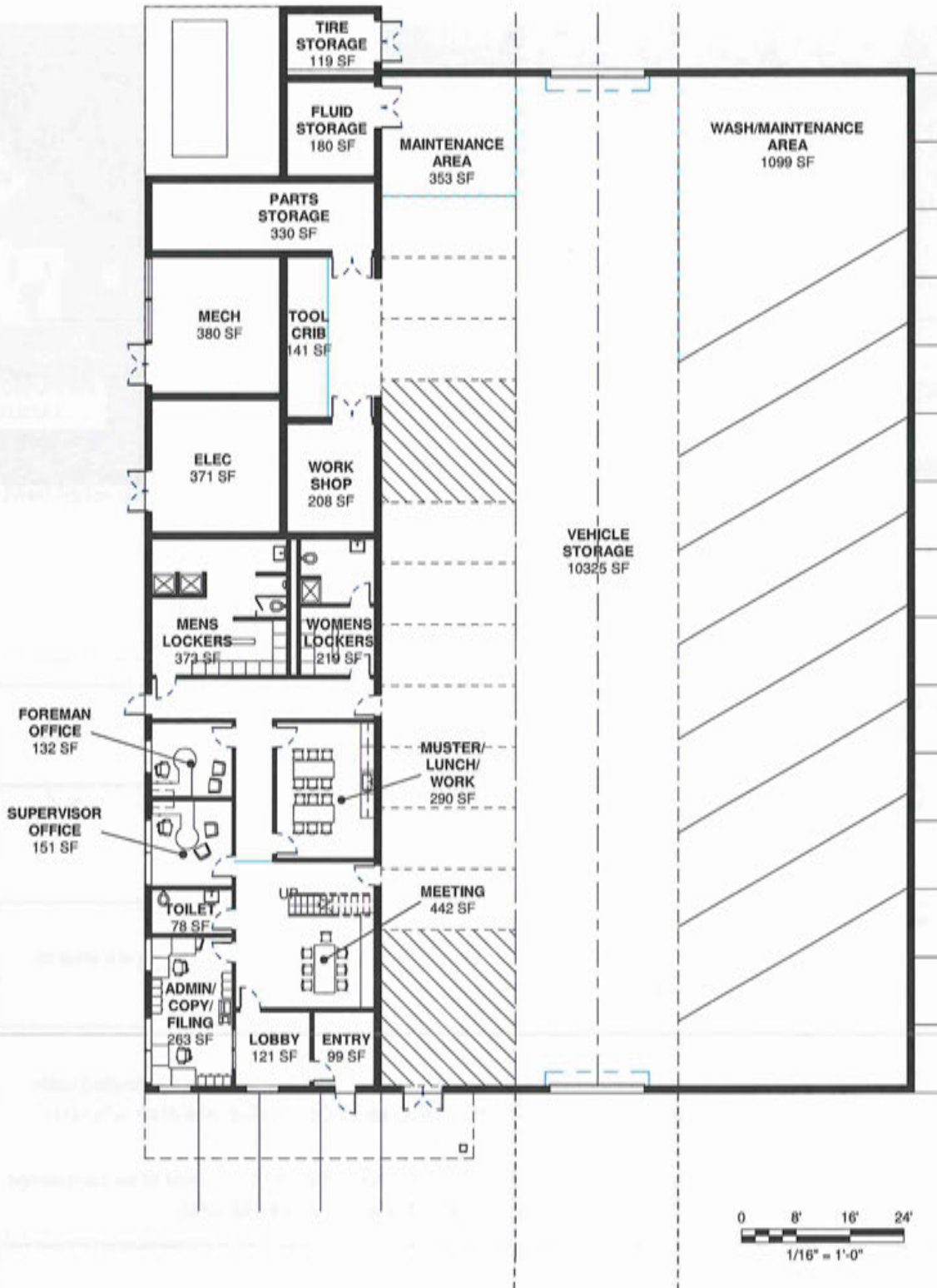
DPW 7B SPOFFORD RDN



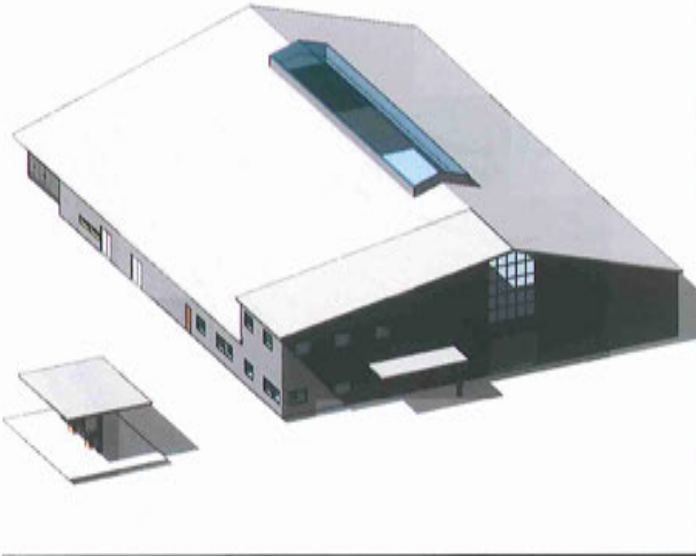
CONCEPTUAL SITE PLAN OF THE PROPOSED DPW AND ACCESS DRIVE ON SITE 1

Task Force Goals Met	<ul style="list-style-type: none"> • Address poor existing facilities and space needs conditions. • Identify a safe and developable location for the DPW.
Facilities Needs Met	<ul style="list-style-type: none"> • Major long-term concerns with existing building structure. • Improve code compliance within building. • Create a safe and functional space to store and maintain DPW fleet.
Space Needs Met	<ul style="list-style-type: none"> • Address significant space need for staff, fleet, and support areas. • Project provides space for drive through vehicle storage and maintenance area to improve staff safety and efficiency.
Other Design Considerations	<ul style="list-style-type: none"> • Site1 is easily developed however access to the site if complicated. • Access Drive and Site 1 design development needs to be closely coordinated with Boxfor Board of Health, Boxford Conservation Commision, and Massachusetts DEP. • Updates to the existing DPW facility, fuel island, and salt barn need to be considered relative to public access and parking at the Johnons Fields area.
Total Area	17,000 GSF
Total Project Cost	\$7,851,683

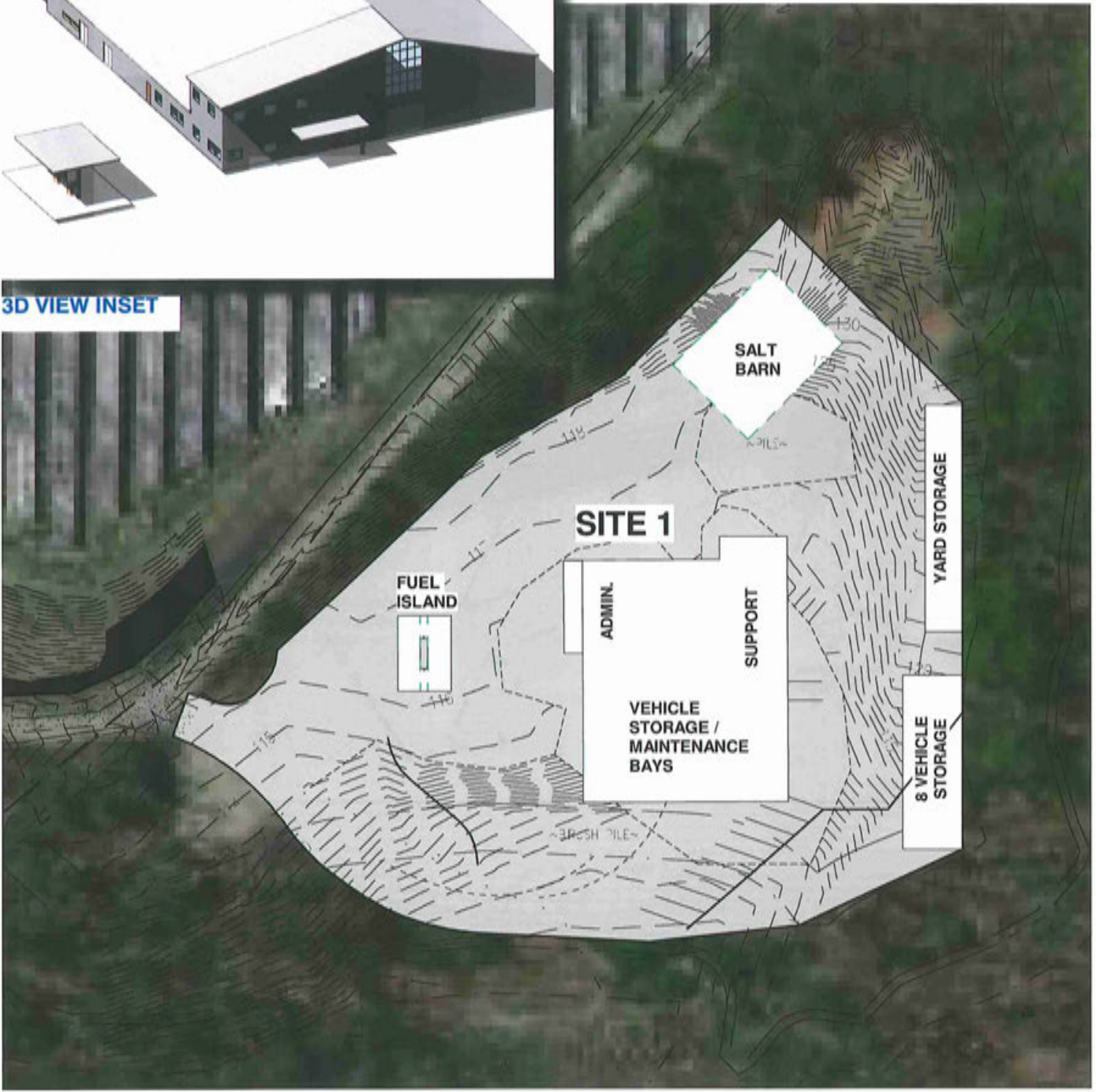
DPW AND ACCESS DRIVE RECOMMENDATION SUMMARY



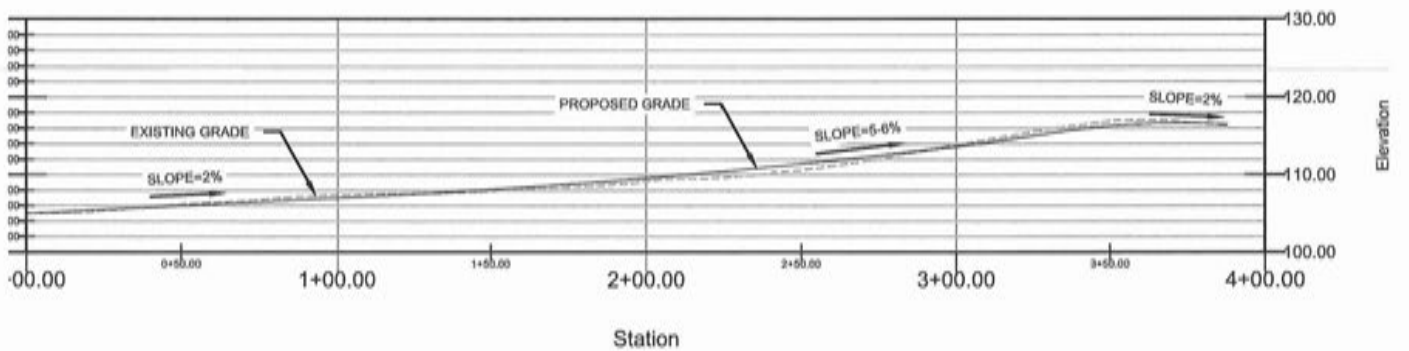
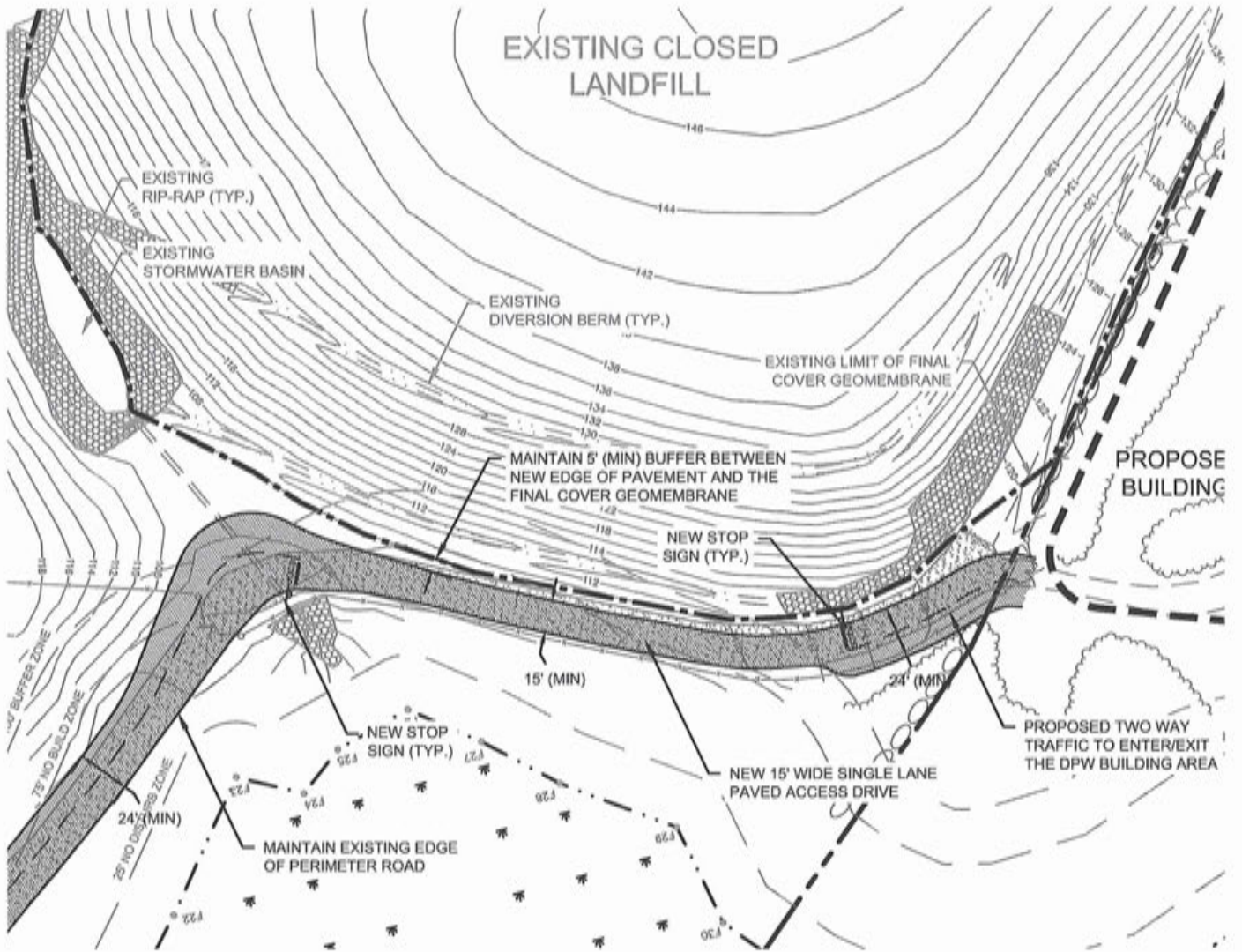
DPW
FLOOR PLAN



3D VIEW INSET



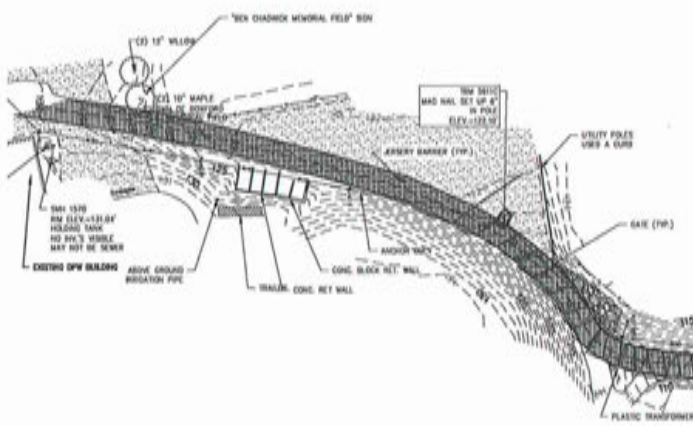
DPW
SITE PLAN



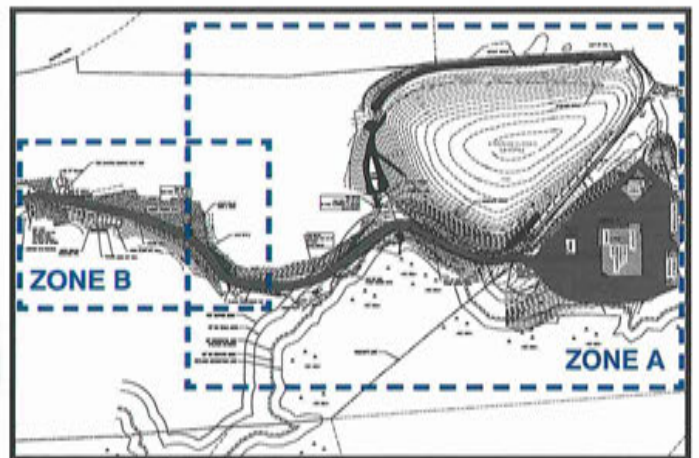
DPW ACCESS DRIVE
CONCEPTUAL PLAN AND GRADING PROFILE



DPW AND ACCESS DRIVE SITE PLAN: ZONE A



DPW AND ACCESS DRIVE SITE PLAN: ZONE B



DPW AND ACCESS DRIVE KEY PLAN

Town of Boxford

Department of Public Works - Concept Project Budget

HARRIMAN

29 August 2018

I. Construction	Full Scope 18,240 sf DPW	17,000 sf DPW	16,000 and Three Sided DPW	15,000 and Three Sided DPW
Total Construction Costs	6,255,778			
Total Construction Costs Reduced Scope		6,085,563		
Total Construction Costs Reduced Scope plus 800 sf shed			6,056,813	
Total Construction Costs Reduced Scope plus 1,600 sf shed				6,028,062
<i>Approximate Value of Road (Included above) = \$ 338,381</i>				
TOTAL	\$6,255,778	\$6,085,563	\$6,056,813	\$6,028,062
II. Administrative Cost & Reserve				
Land	0	0	0	0
FF&E (budget)	75,000	75,000	75,000	75,000
Infrastructure Technology (budget)	50,000	50,000	50,000	50,000
Advertising/Printing	5,000	5,000	5,000	5,000
Insurance/Legal	5,000	5,000	5,000	5,000
Bid Contingency (5%)	312,789	304,278	302,841	301,403
Construction Contingency (5%)	312,789	304,278	302,841	301,403
TOTAL	\$760,578	\$743,556	\$740,681	\$737,806
III. Fees & Services				
Architect/Engineer				
<u>Basic A/E Services</u>				
Schematic Design				
Design Development				
Construction Documents				
Bidding and Negotiation				
Construction Administration				
Project Close Out				
Total Basic Services Architect/Engineer	492,643	479,238	476,974	474,710
Additional Services Fees (based on const cost)	23,459	22,821	22,713	22,605
FF&E Fee	2,000	2,000	2,000	2,000
TEL / Data Design	10,000	10,000	10,000	10,000
Fee for Planning Board Permitting (budget)	30,000	30,000	30,000	30,000
A/E Reimbursable	24,632	23,962	23,849	23,735
Survey/Soils/Borings	50,000	50,000	50,000	50,000
OPM	295,586	287,543	286,184	284,826
Special Inspections	30,000	30,000	30,000	30,000
Cost Estimating	12,000	12,000	12,000	12,000
Commissioning	20,000	20,000	20,000	20,000
Misc Fees and Expenses	35,000	35,000	35,000	35,000
Testing and Balancing	20,000	20,000	20,000	20,000
TOTAL	\$1,045,319	\$1,022,564	\$1,018,720	\$1,014,877
Project Cost	\$8,061,675	\$7,851,683	\$7,816,214	\$7,780,745

DPW AND ACCESS DRIVE CONCEPTUAL PROJECT BUDGET

Town of Boxford

HARRIMAN

Department of Public Works - Concept Project Budget for DPW Alternates

29 August 2018

I. Construction	Segment C Access Drive	Full 2-Lane Access Drive	Fence at Solar Array	Reuse Existing Fuel Island	Reuse Existing Salt Barn
Add Alternates					
Alternate: Segment C Access Drive	51,967				
Alternate Full 2- Lane Access Drive		31,086			
Alternate: Fence at Solar Array			25,156		
Deduct Alternates					
Reuse Existing Fuel Island					
Deduct Cost Fuel Island				-137,613	
Add Barriers and Shed to House Monitoring and Electrical Equipment					
Reuse Existing Salt Barn					
Deduct Cost for Salt Barn					-71,712
Add Fencing around perimeter					
TOTAL	\$51,967	\$31,086	\$25,156	-\$137,613	-\$71,712
II. Administrative Cost & Reserve					
Land	0	0	0	0	0
FF&E (budget)	0	0	0	0	0
Infrastructure Technology (budget)	0	0	0	0	0
Advertising/Printing	0	0	0	0	0
Insurance/Legal	0	0	0	0	0
Bid Contingency (5%)	2,598	1,554	1,258	-6,881	-3,586
Construction Contingency (5%)	2,598	1,554	1,258	-6,881	-3,586
TOTAL	\$5,197	\$3,109	\$2,516	-\$13,761	-\$7,171
III. Fees & Services					
Architect/Engineer	4,092	2,448	1,981	-10,837	-5,647
Additional Services Fees	195	117	94	-516	-269
FF&E Fee	0	0	0	0	0
TEL / Data Design	0	0	0	0	0
Fee for Planning Board Permitting (budget)	0	0	0	0	0
A/E Reimbursable	205	122	99	-542	-282
Survey/Soils/Borings	0	0	0	0	0
OPM	2,455	1,469	1,189	-6,502	-3,388
Special Inspections	0	0	0	0	0
Cost Estimating	0	0	0	0	0
Commissioning	0	0	0	0	0
Misc Fees and Expenses	0	0	0	0	0
Testing and Balancing	0	0	0	0	0
TOTAL	\$6,947	\$4,156	\$3,363	-\$18,397	-\$9,587
Project Cost	\$64,111	\$38,350	\$31,035	-\$169,771	-\$88,470

DPW AND ACCESS DRIVE CONCEPTUAL PROJECT BUDGET

FINAL RECOMMENDATIONS DESCRIPTIONS

MORSE SCHOOL RENOVATION, 188 WASHINGTON STREET

The Task Force recommendation for reuse of the former Morse School building is to leverage the open site area as staging and swing space for displaced municipal program during other municipal construction projects. The building is currently utilized as an annex for the Boxford Public Library and it is unlikely it can be vacated and fully renovated prior to the completion of the combined Town Hall / Library construction project.

Temporary office trailers are envisioned to be located on the site at the back of the building to house the staff and service needs of various municipal programs during construction.

Ultimately, the Morse School building will be renovated and evaluated for lease by the Town.

This initiative has been given an allowance and does not include a detailed estimate.



MORSE SCHOOL BUILDING -
188 WASHINGTON STREET

Task Force Goals Met	<ul style="list-style-type: none"> • Address a municipal building in the West Village. • Evaluate potential municipal uses for the facility.
Facilities Needs Met	<ul style="list-style-type: none"> • Renovate interior to meet ADA and other code requirements. • Improve internal and external building circulation as required for future needs. • Add toilets and other infrastructure to meet current code requirements. • Build a septic system to replace existing cesspool.
Space Needs Met	<ul style="list-style-type: none"> • There is no determined space need for this building.
Other Design Considerations	<ul style="list-style-type: none"> • Site location allows space for the placement of temporary office trailers for use as swing space during other Master Plan construction initiatives.
Renovated Area	2,500 SF
New Construction Area	0 SF
Total Project Cost	\$800,000

MORSE SCHOOL RENOVATION RECOMMENDATION SUMMARY

SUMMARY

The final Master Plan recommendations outlined in this section represent a comprehensive approach to the Town of Boxford's facility and space needs. All five projects are intended to be designed and constructed over a 5 year period. The Task Force has earmarked a 2 year period for design beginning in 2019 and a 3 year period of construction starting, roughly, in 2021. Due to the unknowns of the design and regulatory process, exact dates are undetermined.

Upon completion of this study, the Task Force and consultant team have proposed a framework for Boxford to follow in order to properly maintain its facilities infrastructure and meet its municipal department space needs.