



Review Draft 2.29.12
Rehabilitation Study
Old Town Hall
Sterling, Massachusetts



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ACKNOWLEDGMENTS

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Menders, Torrey & Spencer would like to thank the following individuals for their invaluable contributions to this project:

Vernon Gaw, 1835 Town Hall Committee
Terry Ackerman, Town Administrator

EXECUTIVE SUMMARY

It was a privilege to be selected to investigate and develop plans for rehabilitation and universal access for the Old Town Hall. This handsome Greek Revival building, a treasured presence in the historic town center for almost two centuries, will be renovated and made accessible to all members of the Sterling community. This study provides the stewards of the building with a description of its architectural significance, an understanding of its structure and fabric, and most importantly, a road map for its rehabilitation.

Part One of this study, Building History and Significance, provides a brief historical synopsis, a physical description of the building, a list of character defining features, and general guidelines for preservation and rehabilitation that are informed by *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. The recommendations comply with the requirements of the preservation restriction placed on the Old Town Hall by the Massachusetts Historical Commission in 2005.

Part Two, Existing Conditions and Rehabilitation Plan, comprises an examination of the physical conditions at the Town Hall and treatment recommendations for preservation and restoration. **The building is in good condition.....The most pressing near-term issue is**

Plans for renovating the building begin with the established program of needs and a comprehensive regulatory analysis, both essential informants to the conceptual designs that follow. Schematic drawings, outline specifications and cost estimates for rehabilitation are included, as well as a cyclical maintenance plan that will help the building stewards anticipate and budget for routine maintenance activities.

Moving Forward

METHODOLOGY

The Rehabilitation Study represents a collaborative effort between Menders, Torrey & Spencer, Inc. (MTS) and the Town of Sterling. The Town was represented by Vernon Gaw of the 1835 Town Hall Committee who served as point of contact with MTS and facilitated access to local resources. The project team was assembled and coordinated by Lynne Spencer, principal preservationist at Menders, Torrey & Spencer, and Patrick Guthrie, RA, who together directed on-site investigations and prepared the rehabilitation study. They were assisted by Tom Burgess, architectural designer/preservation specialist, Nick Curtis, architectural designer, and Lynn Smiledge, preservation planner, who coordinated final assembly of the report.

The building investigation and documentation took place in the fall of 2011. The exploratory team performed the activities described below.

Existing conditions drawings of the plans and elevations were developed using building information modeling (BIM) software, which means that all drawings are a two dimensional representation of a three dimensional computer generated model. The “information” part of the model means that within each object of the model, information is stored that can be utilized to generate schedules of work for doors, windows, and room finishes. The model becomes a critical tool for coordinating building systems integration into the project during design development and construction documents. The information in the model is based upon previously completed architectural drawing sets as well as site verified dimensions and observations.

MTS produced outline plans and specifications for stabilization and restoration and schematic designs for rehabilitation that were informed by the recommendations made by Structures North Consulting Engineers, JRW Engineering, and Whitman & Bingham Engineering.

Structures North conducted the structural assessment of the building and prepared a report that commented on existing conditions and explained the actions required to bring the structure into compliance with building code requirements.

JRW Engineering surveyed the mechanical, electrical, plumbing and fire protection systems and prepared a report of recommendations to bring the building up to code.

Fuss & O’Neill Consultants surveyed hazardous materials and provided recommendations for remediation.

AM Fogarty developed cost estimates for stabilization, restoration and rehabilitation of the building based on the outline drawings, specifications, and the schematic drawings provided in the conditions assessment.

All photographs were taken by Menders, Torrey & Spencer, Inc. unless otherwise indicated. The final report is issued both as a printed document and in electronic format as a portable document format (.pdf). Hard copies were delivered along with a digital file (pdf) on compact disc.



BUILDING HISTORY & DESCRIPTION

Sterling's second Town Hall was constructed in 1835 on the site of the original town hall, which had fallen into disrepair and was relocated and remodelled as a residence. This classic Greek Revival building was designed by John Springer, a carpenter/builder born in Conway, New Hampshire who married Sterling resident Eliza Barnard. Springer was responsible for several fine Greek Revival buildings in Sterling, including the First Federated Church and the Holbrook and Sawyer Houses. The Doric columns at the portico of the Town Hall were built by local carpenter John Stevenson.



An extension was made adding two bays to the east end of the building in 1893. An article in the Worcester Daily Telegram reported that “the architecture was not changed... The interior was improved and frescoed; a gallery was built at the front end (2nd floor), and a furnace and other modern conveniences were added.” In addition to serving as the seat of local government and the venue for town meetings, the town hall has historically hosted a variety of activities ranging from dinners, dancing classes and graduation ceremonies to musical performances and exhibitions of prizewinning produce.



The Greek Revival style was based on the architecture of classic Greek temples and was known as the “National Style” in America between 1830 and 1850 because of its nationwide predominance and popularity. Massachusetts architect-carpenter Benjamin Asher (1773–1845) is credited with disseminating the Greek Revival style through his influential house plan books.

Characteristic Greek Revival elements at the Old Town Hall include its front-gabled orientation; the full-height, full-width colonnaded porch, the wide band of trim below the cornice representing the classical entablature, and the pilasters at the building corners.

BUILDING DESCRIPTION

Exterior

The 1835 Town Hall Community Center is a rectangular, gable front building three bays wide and seven bays deep. The clapboard siding and all wood elements are painted white. The facade, which faces west across the town common, has a full-width, full-height portico with four fluted Doric columns supporting a deep entablature. “Sterling Town Hall” is lettered across the frieze. The single main entry has a transom and a single half-height sidelight (the matching sidelight was removed when the door was modified). A single rectangular window in the pediment gable replaced the original triangular louvered vent. This probably occurred in 1893 when the Assembly Room was expanded and the balcony added. Shutters have been removed from all elevations.



Facade (north elevation).

The portico has a slab concrete porch approached by granite steps. The windows throughout the building are original double-hung, 12-over-12 light sash at the first floor and Victorian era 2-over-2 light sash at the second floor. This change dated to the 1893 renovation, when New England thrift inspired the reuse of the 1835 12-over-12 windows while introducing the more “up-to-date” 2-over-2 windows in the expanded Assembly Room. The 1893 roof is light gray and variegated purple slate, which probably replaced original wood shingles.

The side elevations are symmetrical in original design, with 2-over-2 light sash on the second level and 12-over-12 light sash on the first level. The second level windows are flush with the cornice trim. The building rests on a rubble stone foundation faced with granite on the east elevation.

At the west elevation, two windows were replaced with egress doors at both levels where a fire escape was installed. The foundation on this side of the building is faced with brick. Note the increased building height gained due to the sloping site.



East elevation.



West elevation.



South elevation.

The south (rear) elevation, which is three bays wide, has a centered single entry with transom. The central window at the second floor, located behind the stage in the assembly room, was filled in. A concrete handicap access ramp with metal hand railings spans the width of the building.

Interior

The basement of the building is unfinished with spaces for storage and mechanicals.



Basement.

The north end of the first floor contains the main entry and vestibule, two offices, and two rest rooms. These spaces were renovated c. 1978 and most of the finishes are modern. The south end contains a large recreation room. There is a dropped ceiling and carpeting throughout. Also part of the 1978 work was the removal of the historic staircase to the second floor. A new, narrower stair was introduced along with a space for a future elevator, now used as storage.

The second floor is filled by the Assembly Room. It contains a wood stage at the east end and a balcony at the west end dating to the 1893 expansion of the building. The dropped ceiling obscures the balcony and the large attic space above. The floor is wood.



First floor: View South through the entry vestibule towards the recreation room doors. Offices and rest rooms flank the hallway.



First floor: View south toward exit door in Recreation Room. Note wood columns from the 1893 addition which help support the large Assembly Room, carpeting and dropped ceiling.



Second floor: Stage at south end of the Assembly Room. The rear window was blocked in when the stage was installed. The egress door at right was converted from a window when the fire escape was installed.

CHARACTER DEFINING FEATURES

Character defining features refer to the significant observable and experiential aspects of a building that define its architectural power and personality. They are critically important considerations whenever repairs or alterations are contemplated. Inappropriate changes to historic features can undermine the historical and architectural significance of the building, sometimes irreparably. Retaining a structure's integrity is essential to eligibility for National Register of Historic Places status and for preservation grants such as Save America's Treasures, the Massachusetts Preservation Projects Fund, and Community Preservation Act funds.

This survey considers the overall shape of the Town Hall and its materials, craftsmanship, decorative details, and various aspects of its site and environment – all elements that contribute to the building's unique character. **All features in the bulleted lists that follow should be retained to preserve the historic integrity and national significance of the Old Town Hall.** Because the building retains original detail and is virtually unaltered on its exterior, nearly all of the original elements are character-defining.

SITE AND ENVIRONMENT

- Facing west across the Common at the historic village center towards the 1841 First Church of Sterling and the 1885 Sterling Library. Sited south (across Maple Street) of the former Universalist Church and north of the adjacent 1850s Commercial Block.



Left: Town Hall (in red box). Right: View of Town Hall, north facade.



Left: Former Universalist Church at left, Town Hall at right. Right: View of Town Hall, north elevation.

SHAPE AND MASSING

- Rectangular plan with gable roof and pedimented entrance.

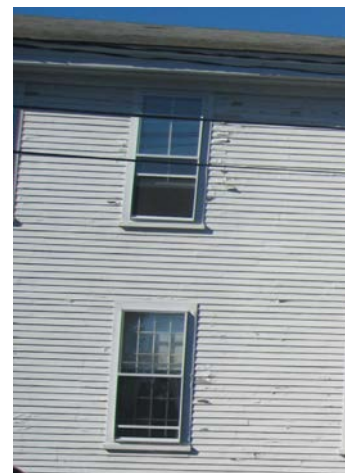
STYLISTIC FEATURES

Materials

- Wood
- Granite
- Brick
- Slate
- Plaster
- Glass

Decorative & Stylistic Details: Exterior

- Entrance portico with deep entablature, fluted Doric columns and corner pilasters
- STERLING TOWN HALL letters at the frieze
- Multi-light transom window over main door
- NOTE: The original double doors flanked by half-height sidelights were replaced by a wide single door with a sole sidelight.
- Wood windows with multi-light (12 over 12) configuration at the first level and 2 over 2 (Victorian era) configuration at the second level
- NOTE: The rectangular window in the pediment replaced the original triangular louvered vent, now stored in the attic. The



Top: Entrance portico with columns supporting an entablature.
Left: Lettering at the frieze. Right: 12 over 12 sash at first level, 2 over 2 sash at second level.

original triangle-shaped trim is still visible at the tympanum.

- Paneled wood doors
- Colonial Revival sign frames flanking main door
- Brick and granite-faced foundation
- NOTE: original shutters were replaced with aluminum shutters, currently in storage
- Slate roof



**Decorative & Stylistic Details:
Interior**

Left: Fluted wood column resting on granite porch at portico.
Right: 12 over 12 sash configuration.

- Volumetric space of Assembly Hall
- Stage and balcony in Assembly Hall
- Wood columns in recreation room
- Wood wainscot (beadboard and paneled) and paneled doors where original
- Original door trim in select locations



Above left: Stage, beadboard wainscot in second floor assembly hall.
Above right: Wood columns and paneled wainscot in first floor recreation room.
Lower right: Greek Revival door casing with characteristic channels and round corner medallions on the second floor. Note: modern wood trim has replaced original door casings on the first floor.





PRESERVATION GUIDELINES

This section of the report describes how work performed on historic buildings should be approached in order to respect and preserve those elements that define their historic and architectural character. The character defining features of the Old Town Hall identified in this report should be retained and preserved when possible.

Repairs, maintenance, and renovations at the Town Hall should be guided by the significance of the building and site as framed by the National Register of Historic Places and their character defining features. *The Secretary of the Interior's Standards for the Treatment of Historic Properties* should be used as a guide. The Standards provide advice on the preservation and protection of cultural resources and recognize four building treatments: Preservation, Rehabilitation, Restoration and Reconstruction. The first three are relevant to this project and are defined below.

PRESERVATION is defined “as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a Preservation project.”

REHABILITATION is defined “as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural or architectural values.”

RESTORATION is defined “as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.”

APPLICATION OF THE STANDARDS

Structural Systems: Minimal Intervention, Compatibility and Reversibility

Working with historic construction involves the careful balance of modern engineering principles and traditional construction methods to meet established preservation objectives. The principle of minimal intervention seeks to “do no harm” to the structure by over zealous efforts to upgrade structural systems to meet modern building code requirements. Stabilization and strengthening schemes should

address life safety imperatives without compromising the original historic fabric by minimizing changes to the structure's materials and appearance and retaining as much of the existing materials as possible.

Stabilization efforts must be physically and aesthetically compatible with the original building materials and design concept. New materials must be chosen for compatibility with existing materials to match physical and mechanical properties such as strength, stiffness, porosity, density, vapor transmission, thermal conductivity, etc. Materials compatibility will assure consistent performance and response to applied loads and environmental conditions.

When structural interventions are required to meet minimum life safety code requirements, they should be designed to be reversible. This means that they may be removed in the future without major compromise to the historic building fabric and do not interfere with or prevent future efforts to maintain the building.

Additions

Additions to a historic structure should be respectful and subordinate to the original building. Although the addition should possess similar mass, proportions and materials, and can feature complementary stylistic details, it should not replicate the original building.

Materials

When repairs are required, original building materials should be replaced in kind – granite for granite, brick for brick, wood for wood, slate for slate. When traditional replacement materials are not available or are economically unfeasible, substitute materials that mimic the look, feel, and workability of original materials may be considered. Care should be taken when deciding to use a synthetic material, however, since modern products may interface poorly with traditional building materials, offer limited longevity versus traditional materials, and often exhibit color shifts and other deteriorative changes.

Wood Windows, Doors & Trim

Wood windows and doors are character defining features and essential contributing elements to a historic building's distinctive appearance. Repairing and weatherizing existing wood doors and windows is always the preferred approach for historic buildings and provides energy efficiency comparable to replacement elements. When windows have exceeded their useful lives and retention is not practical or economically feasible, an approach that combines repairing old windows where possible and introducing new windows where necessary is recommended. Where original windows cannot be salvaged, historically appropriate, high quality wood windows with pane configurations matching the originals and true divided lights are acceptable.

Wood trim, both exterior and interior, should be similarly retained and preserved.

Masonry

Brick and stone elements should be replaced with matching material. For example, cast stone, which differs from natural stone in appearance, texture and workability, is not an appropriate substitute for natural material.

An appropriate mortar formula should be established and adopted for all repointing campaigns. Clear records of the mortar mix, proportions of tinting pigments and the application technique, including the final strike, should be documented in the building owner's maintenance records. Actual mortar samples should be retained with the records along with a sample panel on the building.

Slate Roofing

Modern roofing materials cannot rival the distinctive appearance, durability and longevity of slate. With careful maintenance, roofs constructed of particularly durable varieties of slate have life spans of more than a century. Like materials should be used whenever possible when repairs or replacement of slate roofs are required, and craftspersons skilled in the techniques needed to properly install historic slate roofs should be employed. The use of synthetic slate materials, which are aesthetically inferior and short-lived compared to true slate, is not recommended.

Paint Finishes

Original paint formulations and colors are character-defining elements that are often lost over time because the paint materials themselves are relatively short-lived. When repainting is necessary to preserve the integrity of the envelope, the colors chosen should be appropriate to the style and setting of the building. If the intent is to reproduce the original colors or those from a significant period in the building's history, they should be based on the results of a scientific paint analysis.

Traditional lead-based paints, which offer excellent longevity, durability and color stability, are no longer available in the United States. The highest quality latex-based paints available should be employed instead, after thorough surface preparation and priming. Permanent vinyl or ceramic liquid coating systems are damaging to wood siding and historically inappropriate.

Preservation Restriction

A preservation restriction held by the Massachusetts Historical Commission (MHC) was placed on the 1835 Old Town Hall in 2005 as a requirement of grant funding. This means that all changes to the building exterior must be reviewed and approved by MHC. The process for project notification, review and approval is described on the MHC website at <http://www.sec.state.ma.us/mhc/mhcrevcom/revcomidx.htm>.

APPLICATION OF THE STANDARDS AT THE OLD TOWN HALL

Preservation of the character defining features and architectural integrity of the building should be of paramount concern for the building's stewards.

Preservation of Exterior Character-Defining Features

Roofing

The original roof of the Town Hall was probably wood shingle, replaced at some point with more durable slate (a common practice for early public buildings). When next faced with the need for roof replacement, the building stewards may consider either wood shingle or slate as historically appropriate. Asphalt shingle roofing is an acceptable substitute for historic roofing material when an economical solution is desired. Simulated slate is not recommended as it is expensive and not long-lived.

Wood Siding, Windows, Doors and Trim

All wood materials should be retained and maintained. Replacement wood shutters, appropriately sized and configured, should be installed in place of the aluminum shutters currently in storage. The original triangular louvered vent in the tympanum at the facade should be restored and reinstated. The original double-leafed front doors, now in storage, should be restored.

Masonry

The stone and brick foundation walls and granite steps should be retained and repaired as needed. An appropriate mortar formula should be developed and documented for use in future repointing campaigns.

Preservation of the Interior Plan & Character-Defining Features

The second floor (the Assembly Room) should retain its plan and original spatial dimensions along with its trim, wainscot and doors. The dropped ceiling should be removed and the balcony revealed as an historic artifact. The first floor has been significantly redesigned and most of its original finishes have been removed, so it can be freely reinterpreted. Existing wood elements should be retained and restored, including restoring the original configuration of the staircase in the northwest corner. The building interior and its constituent materials should be carefully documented, both photographically and with a written narrative, prior to any interventions.

EXISTING CONDITIONS & RECOMMENDATIONS

SITE:

Conditions

The site topography forms a gentle bowl form with the low point southwest of the building. Topography is generally level along the east, north and west sides of the building and slopes down along the south side. At the rear of the building a east to west running concrete retaining wall contains the higher ground adjacent to the west elevation.

A secondary building, a fire-proof brick storage structure with a hipped roof, is situated about thirty feet west of the town hall.

The town hall is bounded on three sides by paved surfaces. On the west, along Main Street, a concrete sidewalk abuts the raised granite plinth of the portico. The sidewalk turns the corner onto Maple Street but ends in sloped asphalt paving that extends from the north foundations to the street. This thin strip of paving has been stripped for parking. On the south side the paving extends from the foundations out to the property line and includes a shared driveway from Main Street to a loosely striped parking area behind the adjacent commercial structures.

Recommendations

- Spot repair and patch paving as required.
- Stripe the parking when lines are faded.
- Monitor area around retaining wall for erosion.
- Coordinate with town on sidewalk maintenance.



Aerial view of site from south west. (Image from Bing.com)



Brick fire proof storage building and concrete ramp at south side of building.



Parking lot on west side.

BUILDING EXTERIOR: ROOF

Conditions

Town Hall has a simple gable roof. The ridge runs east to west and the present roofing material is slate. One chimney pierces the roof on the north side in the second bay.

The slate is near the end of its useful life. Repairs have become a yearly requirement and in 2010 there was interior damage from ice damming. Falling snow is a continuing concern at the portico and above the fire escape and the south side door into the basement stair landing.

Wood framing supporting the roof consists of rafters, purlins and trusses. The purlins are overstressed and the top chord of one truss has failed. There are no trusses at the westernmost bays of the building. Past concerns about the trusses resulted in the installation of tie rods.

Recommendations

- Reroof with slate or wood shingle as the preferred historic materials. Asphalt shingle or metal roofing would have no historic integrity but would be less costly.
- Install rail type snow retention system along eaves above entries.
- Install new supplemental truss framing and purlins below existing to strengthen roof framing. These would be visible in the Meeting Hall but would allow removal of the acoustical tile flat ceiling and revealing the historic ceiling height. The trusses would be encased to create architectural elements. The tie rods would remain, but new sag bars would be installed that would be more architectural.



Aerial view of roof from south west. (Image from Bing.com)



Snow rail and chimney flashing at slate roof.



Snow rail and roof hatch on slate roof.

NORTH ELEVATION

Conditions

The paint finish at the facade (north elevation) is in generally good condition. Areas of failure were observed at the architrave and the column bases, where moisture penetration is an ongoing problem. The building is on a recurring paint cycle with each elevation scheduled for repainting every five to seven years.

The windows are in poor condition. The storm windows were recently replaced. The wide single entry door is in fair condition.

There are areas of separation between granite step components and several cracks in the concrete slab at the portico. The foundation walls have deteriorated at all four elevations.

Recommendations

- Spot repair and repaint trim elements at the facade. Repaint the entire elevation on a cyclical schedule.
- Repair, reglaze and repaint all windows.
- Repair and reinstall the louvered vent at the pediment and the original double entry doors with sidelights. These actions will help restore the building's Greek Revival character.
- Repoint the granite steps and repair or replace cracks the concrete slab.
- Cut and repoint all foundation stones.



The facade (north elevation).



Shifted, separated granite steps at the south elevation. Paint failure at the column base.



Original louvered vent stored in attic.

EAST ELEVATION

Conditions

The paint on the east elevation is in fair condition, with areas of peeling seen primarily at the eastern half of the building around window openings.

The windows are in poor condition. The aluminum storm windows are in fair condition. The basement windows have been filled in with plywood or vent louvers.

There are gaps and failed mortar joints in the granite foundation

The slate roof is in poor condition and is nearing the end of its useful life. Snow guards over the portico are rusted.

There are no gutters or downspouts.

Recommendations

- Spot repair and repaint wood clapboards. Repaint the entire elevation on a cyclical schedule.
- Repair, reglaze and repaint all windows on the first and second levels.
- **Restore the basement windows?**
- Repoint the granite foundation.



South elevation.



Peeling paint on wood siding around windows at both floor levels.



XXX

SOUTH ELEVATION

Conditions

The paint on the south elevation is in good condition.

The windows are in poor condition. The center window on the second floor was blocked in to accommodate the stage inside. The aluminum storm windows are in good condition. The basement windows have been filled in with plywood.

There are gaps and failed mortar joints in the granite foundation

The concrete handicap access ramp is pitted, cracked and rust stained around and under the painted metal posts and railings. The metal posts and railings are exfoliating and causing expansion cracks in the concrete.

Recommendations

- Repaint the entire elevation on a cyclical schedule.
- Repair, reglaze and repaint all windows on the first and second levels.
- Restore the basement windows?
- The proposed schematic design calls for the concrete ramp to be removed. If it remains, it should be repaired and the railings refinished.



South elevation.



The concrete handicap ramp is in poor condition.

WEST ELEVATION

Conditions

The paint on the west elevation is in poor condition. Painting this elevation was postponed in anticipation of proposed alterations and construction of a handicap access addition.

The windows are in poor condition. One window was blocked out and two were converted to egress doors when the fire escape was installed. The fire escape is rusted. Several basement level windows were filled in with plywood. The two diagonal plank loading doors and the small vertical plank door at the northwest corner are in fair condition.

The granite foundation is clad in painted brick on this elevation. There is widespread mortar joint failure. The concrete entry platform with metal railing at the northwest corner is in poor condition.

Recommendations

The proposed schematic design calls for removal of the fire escape and significant alterations at this elevation. As part of this project:

- Repaint the entire elevation on a cyclical schedule.
- Repair, reglaze and repaint all windows.
- Repoint the masonry foundation.
- Repair the concrete entry platform at the northwest corner.



Poor paint conditions at the west elevation.



Cracked and stained concrete entry platform at the northwest corner. Painted masonry foundation with failed mortar joints and peeling paint.

BUILDING INTERIOR: BASEMENT

Conditions

The unfinished basement, which has been subdivided by brick and concrete block walls into areas for storage and mechanicals, is damp and shows evidence of water infiltration at the north and east walls where mortar joints have deteriorated. Two vertical piers supporting the first floor framing beams are damaged, particularly at their bases. Several first floor framing beams have insufficient capacity for the load required.

The heating system is new and is adequate for the building. The electrical service is insufficient for the building needs; the fire alarm system is outdated. Exhaust fans in the rest rooms are outdated.

There is open plumbing in the basement; the fixture count is too low to support use of the upstairs hall per the building code. There is no fire protection sprinkler system in the building.

Recommendations

- Replace damaged piers with hollow steel columns.
- Reinforce framing beams as required.
- Repoint foundation walls
- Upgrade the electrical service to support air conditioning and an elevator.
- Upgrade the fire alarm system and install a sprinkler system.
- Install a permanent dehumidifier.



New boilers installed in the basement. Areas of moisture seen on the floor.



Supply storage in the basement.



The original jail cell dates to the building's construction. ????

FIRST FLOOR

Conditions

Joists at the second floor framing have insufficient capacity for assembly use. The dropped ceiling is unattractive. Walls and trim in good condition. Carpeting is in fair condition. The original staircase at the northwest corner of the building has been reconfigured and is in worn condition. The toilet room configuration is not an efficient use of space and does not meet capacity for a fully occupied building.

Recommendations

- Sister the joists as required with new framing.
- Remove dropped ceiling.
- Restore original staircase configuration and finishes.
- Replace restrooms with new, code complaint accessible facilities



xx



xx



xx

SECOND FLOOR

Conditions

The dropped ceiling is unattractive, historically inappropriate and creates a cramped feeling in the space. The acoustic ceiling tile shows water damage in several areas from roof leaks. The finish on the wood floor is worn. Paint finishes are in fair to good condition.

Recommendations

- Remove dropped ceiling to create “cathedral” space.
- Refinish wood floor.
- Refresh paint finishes as required.



Dropped ceiling detracts from the aesthetics of the assembly room.



Water damage to acoustic tile ceiling.



Attic and roof framing over the assembly room.



Stairs to the assembly room balcony, which has been covered by the drop ceiling. Wood doors, trim and wainscot are among the remaining original Greek Revival details at the building interior.



Pendant lamp obscured by drop ceiling.



PROGRAM OF NEEDS

The Program of Needs was determined through discussions with the 1835 Old Town Hall Committee. In addition to the listed program items, a major focus of the rehabilitation study was to make the entire building fully accessible by adding an elevator and a secondary means of egress.

Second Floor

Assembly Room – 1928 SF

Occupancy: 275 Row Seating
128 Tables + Chairs

Balcony – 274 SF

Occupancy: Unoccupied

Stage - 476 SF

Occupancy: 32

Support Space – 150 SF Minimum

Assembly room storage – 150 SF Minimum
Tables & Chairs
Audio visual system.

Second Floor Total – 2828 SF

First Floor

Recreation Room – 1270 SF

Occupancy: 181 Row Seating
85 Tables + Chairs

Conference Room - 390 SF

Occupancy: 26

Recreation Office – 150 SF

Recreation Director
Full time, Monday – Friday
Desk, files, guest chairs

Veterans Office – 100 SF

2 hr/wk
Desk, files, guest chairs
Possible to move to basement

Support Space – 395 SF

Recreation Room storage – 150 SF
Tables & Chairs, Equipment

■

Toilet Rooms – 225 SF

Female: assume building occupancy at 152

3 Toilets required, 125 SF

Male: assume building occupancy at 152

2 Toilets required, 100 SF

Janitors Closet – 20 SF

First Floor Total – 2550 SF

Basement

Offices - 300 - 400 SF

Town offices

Kitchen – 200 to 300 SF

Food Preparation

Mechanical Room - 600 SF

Sprinkler room

Boiler room

Elevator machine room

Basement Total – 800 to 900 SF

REGULATORY REVIEW SUMMARY

This section of the report describes in brief the applicability of the current building code (2009 International Existing Building Code – with Massachusetts Amendments), architectural access regulations, and the Town of Sterling zoning regulations.

The main purpose of the building code is to protect public health, safety and general welfare as they relate to the construction and occupancy of buildings and structures. Some issues affecting the life safety of occupants are left up to interpretation by the local building official. It is generally a good idea for owners of historic buildings to consult the local officials and discuss renovation ideas with them prior to filing for a building permit.

This summary of the code notes that the Old Town Hall has been maintained and used for other functions since the Meeting Hall's use was discontinued. The new use of the Old Town Hall will be for assembly gatherings.

For purposes of the building code, the Old Town Hall is categorized as a partially preserved building because it is listed on the State Inventory of Historic Places as a contributing building to the Sterling Center Historic District. There are generally few building code-mandated requirements for partially preserved buildings. They are exempted from energy code requirements for new buildings, including the stretch energy code, although the design for renovations seeks to improve the energy efficiency of the historic building envelope and systems.

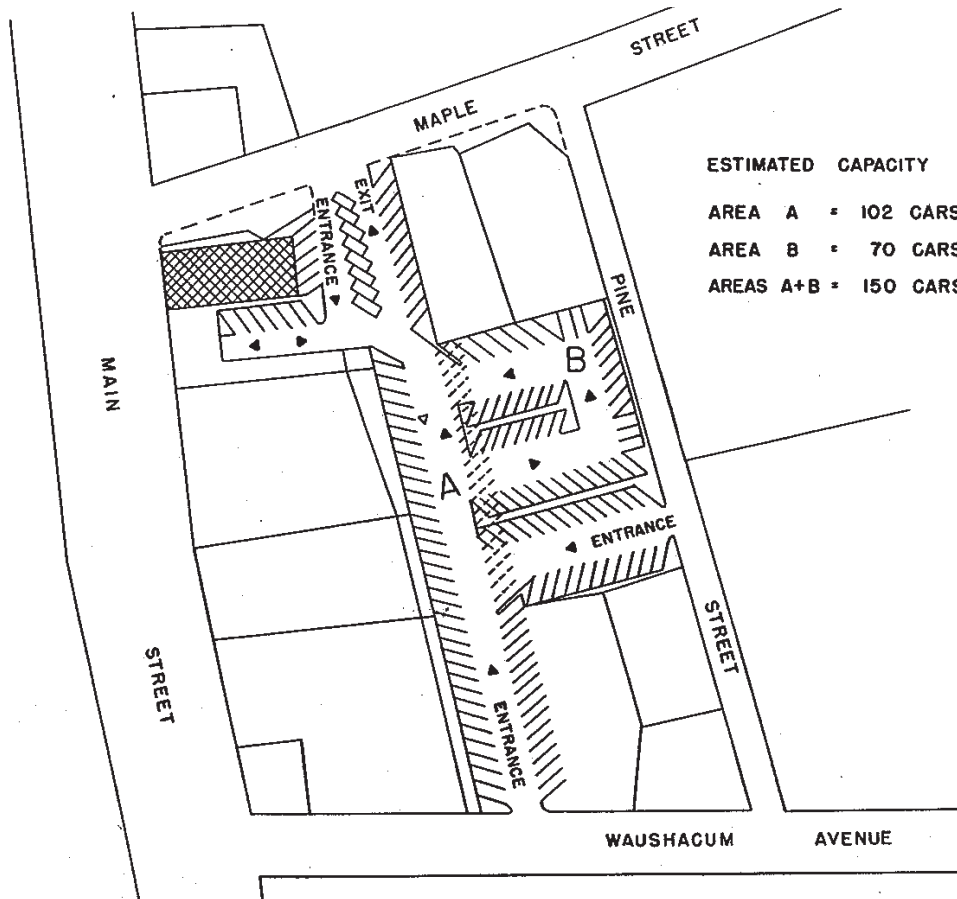
The greatest challenge at the Old Town Hall is to render the building fully accessible as required by the Massachusetts Architectural Access Board. There are currently two entrances into the building, one at the front and one at the rear. The front entrance is inaccessible and the rear has been made accessible through the construction of a large concrete ramp. The only other doorway into Old Town Hall is an emergency exit located on a stair landing on the West side of the building. Currently there is no elevator in the building which prevents communication from the first to second floor. The basement level is also inaccessible; however, present use of this space as mechanical space allows it to be this way. The second floor assembly hall also has a balcony and raised stage which present further vertical access challenges.

The assembly hall is serviced by a single staircase at the northwest corner of the building and a steel fire escape at the west side of the building. The current building code no longer recognizes exterior fire escapes as an acceptable means of egress, although it does allow existing fire escapes to remain in use. However, conceptual plans for an addition to Old Town Hall are in the location of the existing fire escape and an additional egress staircase will be required.

To address universal access and egress requirements, the approved conceptual design provides a small addition onto the west side of the Old Town Hall. The addition locates a new accessible entrance at grade at the basement floor level and an elevator to the first and second floors. A supplementary egress staircase is also provided in the addition. We further recommend constructing a combination of a sloped walkway and ramp to provide access to the front entrance of the building. Also, a vertical lift provides access to the stage in the Meeting Hall.

Difficult modifications would need to be made to the existing balcony in order to make it a safe space to inhabit. Furthermore, an additional lifting device would be required to make the balcony accessible. Owing to these challenges we recommend preventing use of the balcony.

Based upon the Town of Sterling Zoning By-Laws, dated May 16, 2011, the Old Town Hall is located in the Town Center district. The by-laws require adequate off street parking based upon a building's use. The proposed assembly use of the Old Town Hall requires that there is one parking space for every two occupants in the building. Based upon an occupancy of two hundred and sixty people, this



Municipal parking lot plan from 1962 Town of Sterling Master Plan.

1835 Old Town Hall Community CenterSterling, MA
MTS Project No. 1140.00

Applicable Building Codes:

2009 International Existing Building Code – With Massachusetts Amendments
521 CMR Architectural Access Board
Plumbing Code
Town of Sterling Zoning Regulations

A. Use Group Classification

1. Assembly & Offices
2. First Floor: Business Group B (IBC 2009 Section 304 & Table 303.1)
3. Second Floor: Assembly Group A-3 – Community Hall (IBC 2009 Section 303)

B. Construction Classification

1. Existing Construction Type V
2. Fire protection: Building to be equipped throughout with automatic fire suppression system

C. Occupant Load

1. Occupant load is based on preliminary square footage analysis. It is assumed that the occupant load will be limited to lesser quantities pending structural analysis.
2. Occupancy Calculations (based on maximum code allowed sf. per occupant – 780 CMR Table 1008.1.2 for each use area)
 - a. Ground Floor: 13 (5 Kitchen [200 gross at 1024 SF] + 8 Mechanical/Storage [300 gross at 2339 SF])
 - b. First Floor: 93 (8 Office [100 gross at 833 SF] + 85 Assembly [15 net at 1270 SF])
 - c. Second Floor Tables & Chairs: 160 (128 Assembly [15 net at 1928 SF] 32 Stage [15 net at 476 SF])
 - d. Second Floor Fixed Seating: 307 (275 Assembly [7 net at 1928 SF] 32 Stage[15 net at 476 SF])
 - e. Balcony Fixed Seating: 38 (Assembly 7 net at 267 SF)Overall Total: 304 – 451

D. Egress Requirements

1. Egress Stairway width per Occupant = 0.2" (MA Amendments to IBC 2009, 1005.1)
Required with Calculation for Actual Occupancy: 60.8", required minimum = 44" (IBC 2009 Section 1009.1)
 1. Total per level: Two stairs required at 44" min ea.
2. Egress Door Width per Occupant = .2" (IBC 2009 1005.1)
Required with Calculation for Actual Occupancy: 60.8", code minimum = 32" clear
 1. Total per level: 2 required, 2 provided
3. Minimum Number of Exits Required (per floor) – 2 (1015.1)
4. Maximum Length of Exit Access Travel – 250 ft (IBC 2009 Table 1016.1)



5. Minimum Egress Passage/Corridor Width – 44"
6. Minimum Stairway Width – 44" (IBC 2009 Section 1009.1)

E. Plumbing Code – Based on 304 Occupants, 152 Men, 152 Women.

1. Restrooms Required (Table 1: Minimum Facilities for Building Occupancy 248 CMR 2.10, Hall use)
For Men: 1 per 100 or 2 total.
For Women: 1 per 50 or 3 total.
2. Lavatories: 1 per 200 or 2 total
3. Water fountains: 1 per 1000 or 1 total.
4. Janitors Sink: 1 per floor or 3 total.

F. Massachusetts Architectural Access Board

1. Place of assembly: Assistive listening system installed in assembly areas accommodating at least 50 persons.
2. Access to balcony: Access is required to the balcony if it is opened to public use.
3. Access to stage: A ramp or a wheelchair lift is required to provide access to the stage.
4. Parking: 1 accessible space required for total parking of 15-25 spaces. Shall be van accessible.
5. Entrances: All public entrances of a building shall be accessible.
6. Door widths: 32" minimum.
7. Elevators: All multi-story buildings shall be served by a passenger elevator.
8. Toilet Rooms: At least one toilet and one sink in each toilet room must be accessible.

Code Analysis Prepared By:

Thomas Burgess
Architectural Designer

IEBC Notes:

Historic Building

1105.4 1 HR Occupancy separation may be omitted when the building is provided with an approved sprinkler.

1105.7 Door Swing. When approved by the code official, existing front doors need not swing in the direction of exit travel, provided that other approved exits having sufficient capacity to serve the total occupant load are provided. (Applies to occupant loads over 50 in new construction)

Means of Egress

1007.3 The area of refuge is not required at open exit access or exit stairways as permitted by sections 1016.1 and 1022.1 in buildings that are equipped with an automatic sprinkler system installed in accordance with code.

CONCEPTUAL DESIGN

The conceptual plans that follow are the result of a series of meetings with the Old Town Hall Committee and multiple iterations to arrive at a preferred scheme. The governing principles that led to the preferred design were:

- Provide a fully accessible, code compliant structure that meets all life-safety requirements of the Massachusetts Building Code, which included:
 - Introduction of an elevator to traverse the three existing floors
 - Render all entrances to the building fully accessible
- Provide energy efficient building systems and building envelope:
 - Insulate the existing walls and attic
 - Introduce a new cooling system and reuse the existing heating system
- Follow *The Secretary of Interior's Standards* for building rehabilitation
- Integrate the Program of Needs, included earlier in this section of the report.

The design process began with a second look at the addition proposed by Reinhardt Associates in their 2005 Feasibility Study. Two designs were presented showing slightly enlarged additions, one with a generous basement level lobby space and the second with two office spaces. In both schemes substantial modifications were proposed for the interior of the building, including remodeled rest rooms with additional fixtures, a generously sized kitchen in the basement, new finishes throughout the interior, and extensive site work to accommodate parking. A preliminary cost per square foot estimate for both of these schemes totalled approximately \$2 million.

The committee requested minor modifications to both schemes which led to Scheme C, a combination of Scheme A and Scheme B which met all of the needs and goals held by the committee. However, in recognition of budgetary constraints, two more schemes were presented, Scheme D and Scheme E. Scheme D provided a smaller addition which only contained an elevator, staircase, and modest lobby space. Alterations to the building interior were greatly reduced, and parking was not addressed. Scheme E was a second look at a design prepared by Donald R. Boyce, Inc. Architects in 1978 which had an elevator located inside the existing building. This scheme also reduced the amount of intervention to interior finishes and eliminated all changes to the basement. It was determined by the committee that this scheme sacrificed too many of the goals for rehabilitating the building and that Scheme C was beyond the reach of funding.

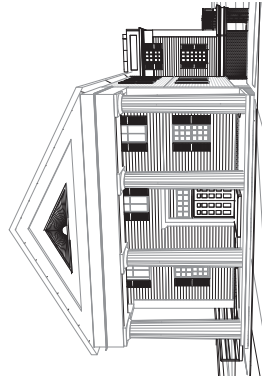
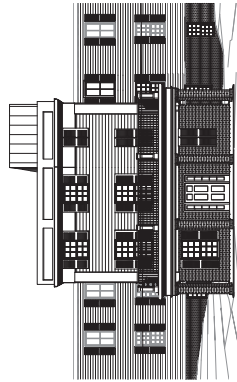
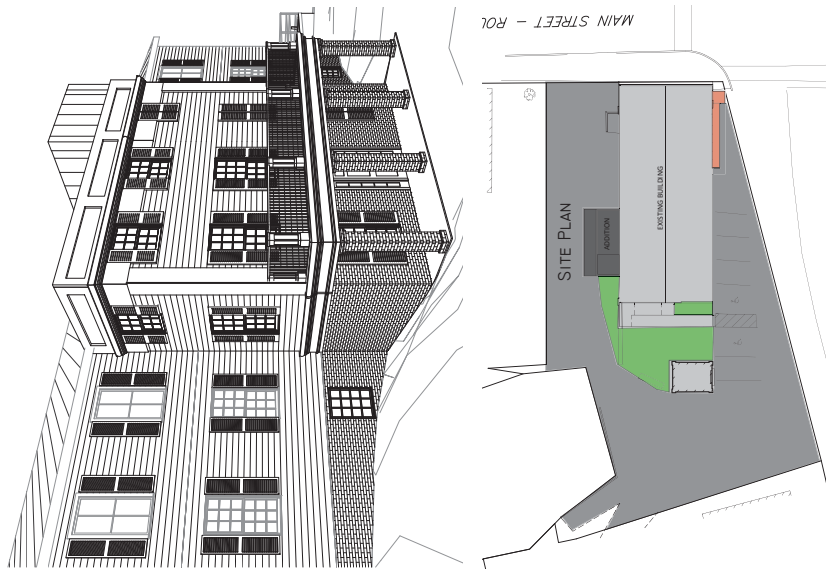
Thus Scheme D was chosen to be further explored and modified, which led to Scheme F. The greatest changes in Scheme F occur in the basement, where additional office spaces are provided. A final meeting with the Committee prompted



a few additional changes to the basement plan which marked the end of the design process and culminated in Scheme G, the plans of which are shown here. Scheme G was then developed for cost estimating with several alternates, which included the basement fit out for additional office space, site adjustments for parking, and the construction of a plaza and sloped walkway at the northwest corner of the building.

All of the earlier schemes are provided in the appendix of this document to serve as records of the decisions made and options explored in leading to this design.

Sterling Old Town Hall
Option G - Elevator Addition



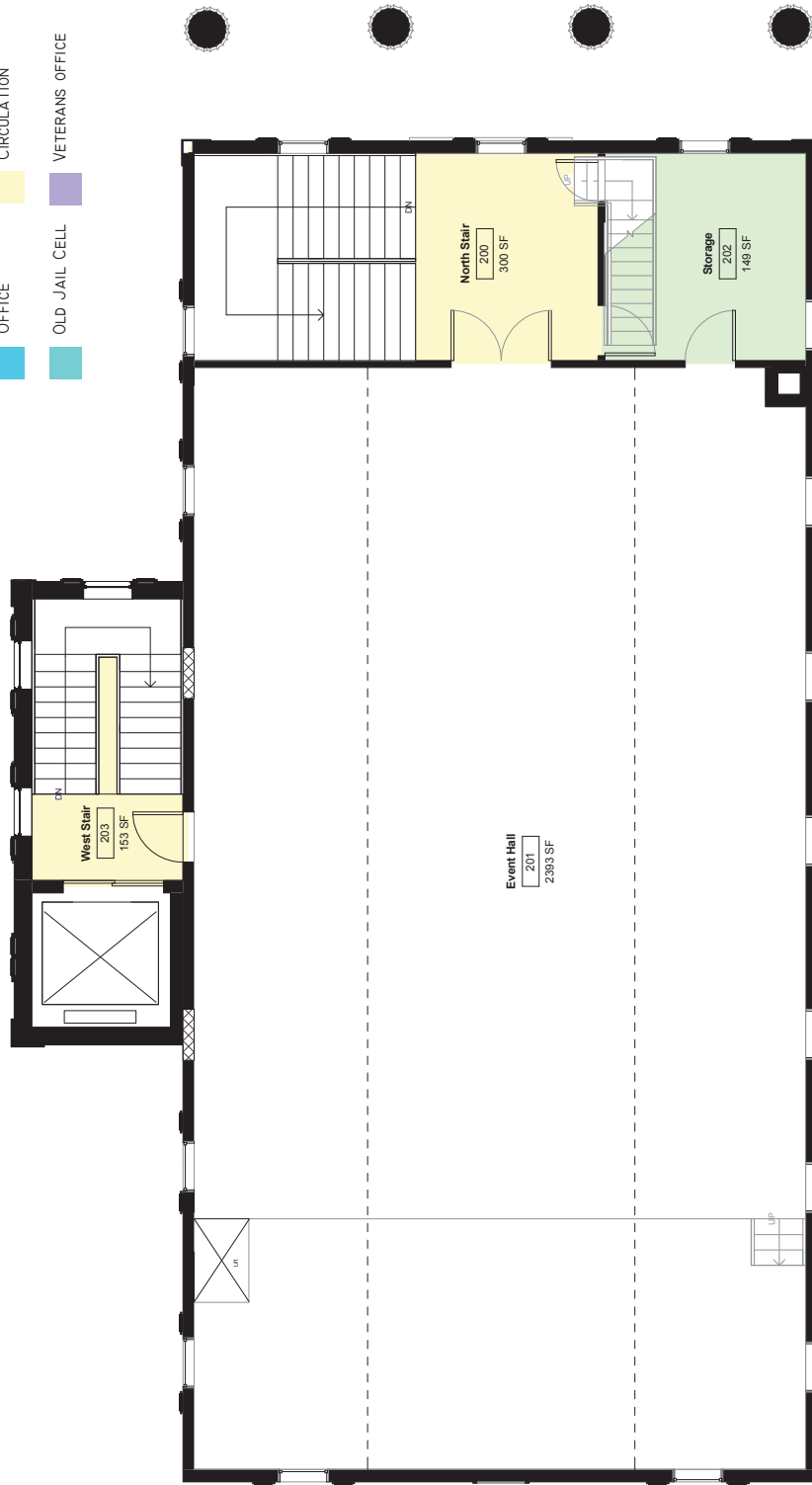
- MECHANICAL SPACE
- KITCHENETTE
- CIRCULATION
- VETERANS OFFICE
- STORAGE
- UTILITY SPACE
- OFFICE
- OLD JAIL CELL

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- OFFICE
- OLD JAIL CELL
- KITCHENETTE
- OFFICE
- VETERANS OFFICE
- CIRCULATION
- VETERANS OFFICE



LEVEL 2 OPTION G



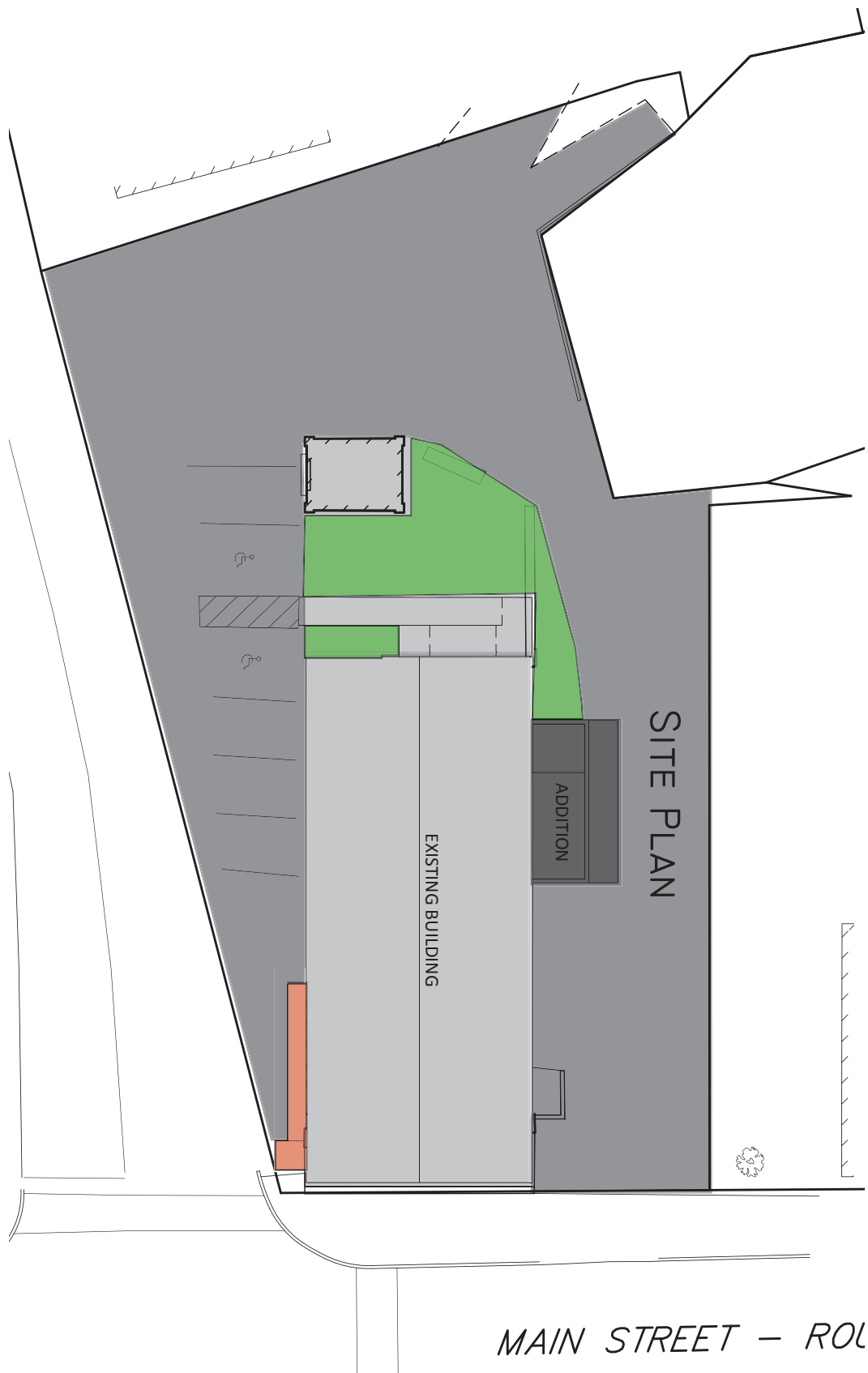
LEVEL I OPTION G

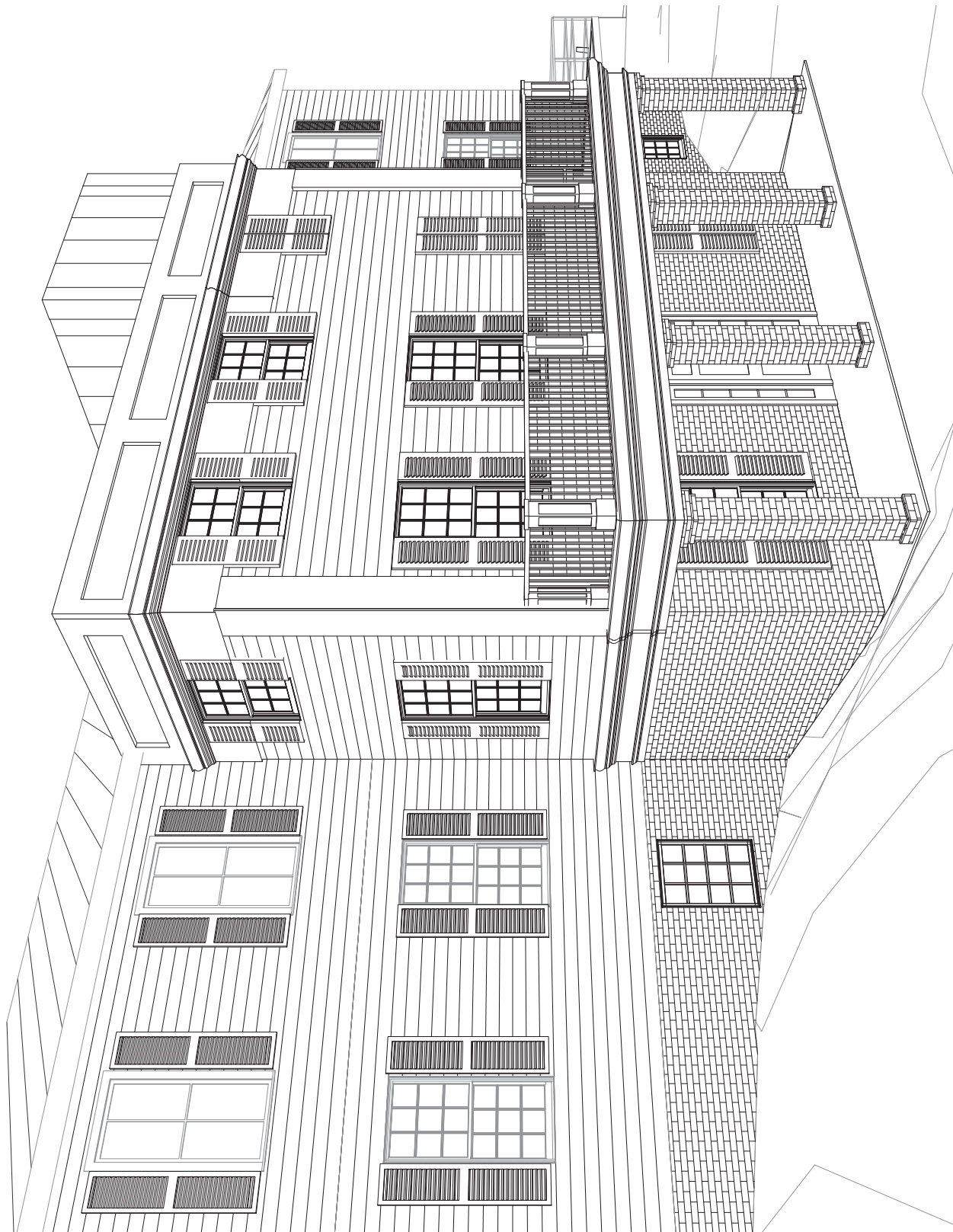


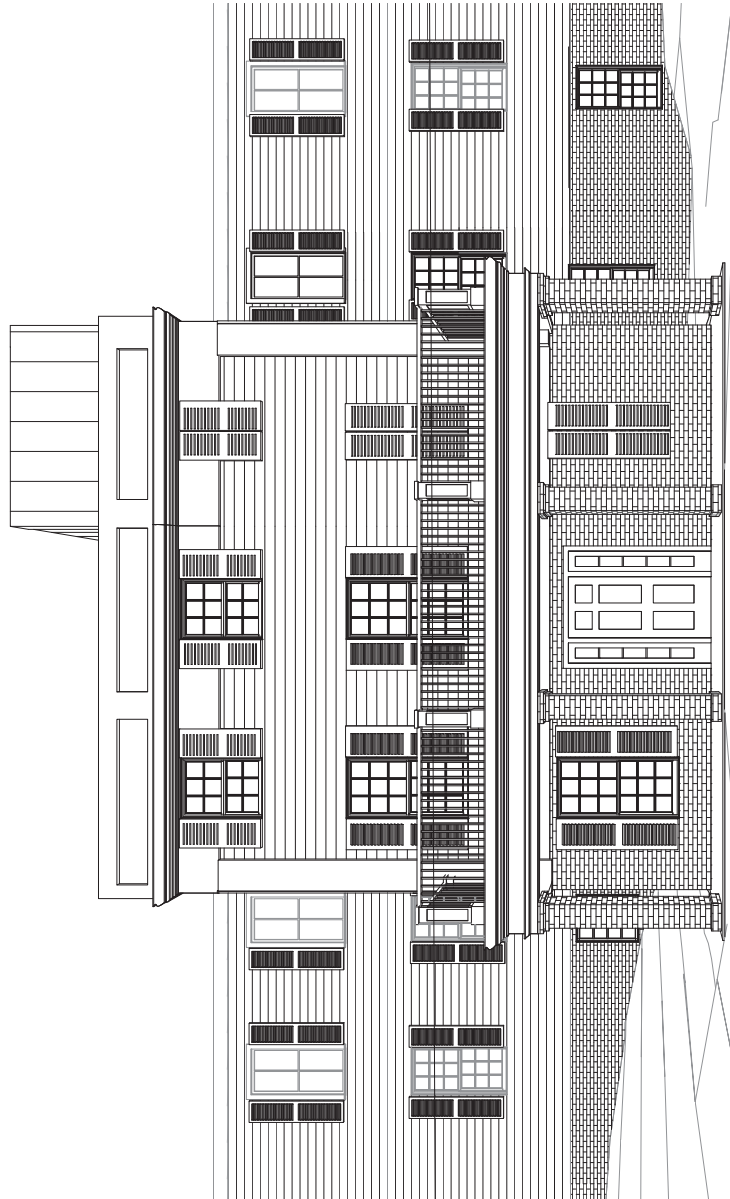
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- STORAGE
- UTILITY SPACE
- OFFICE
- OLD JAIL CELL
- KITCHENETTE
- CIRCULATION
- VETERANS OFFICE

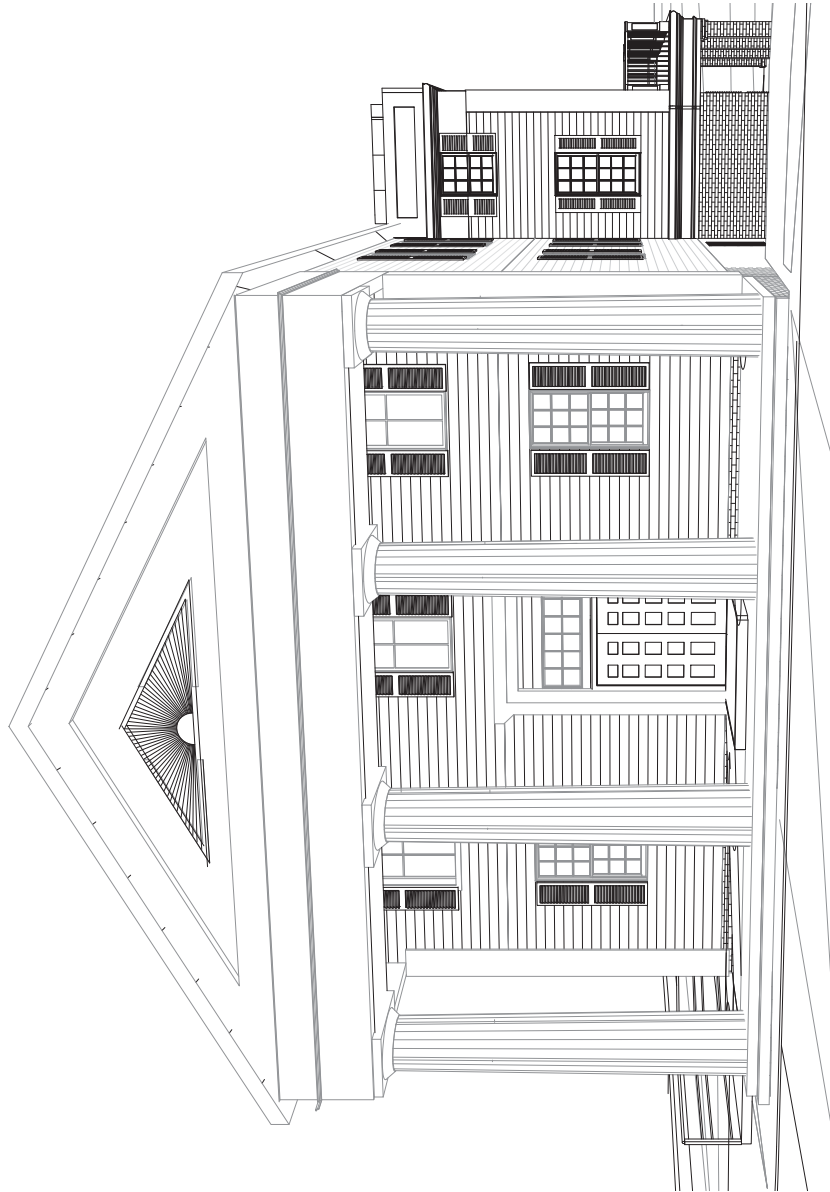


GROUND LEVEL OPTION G





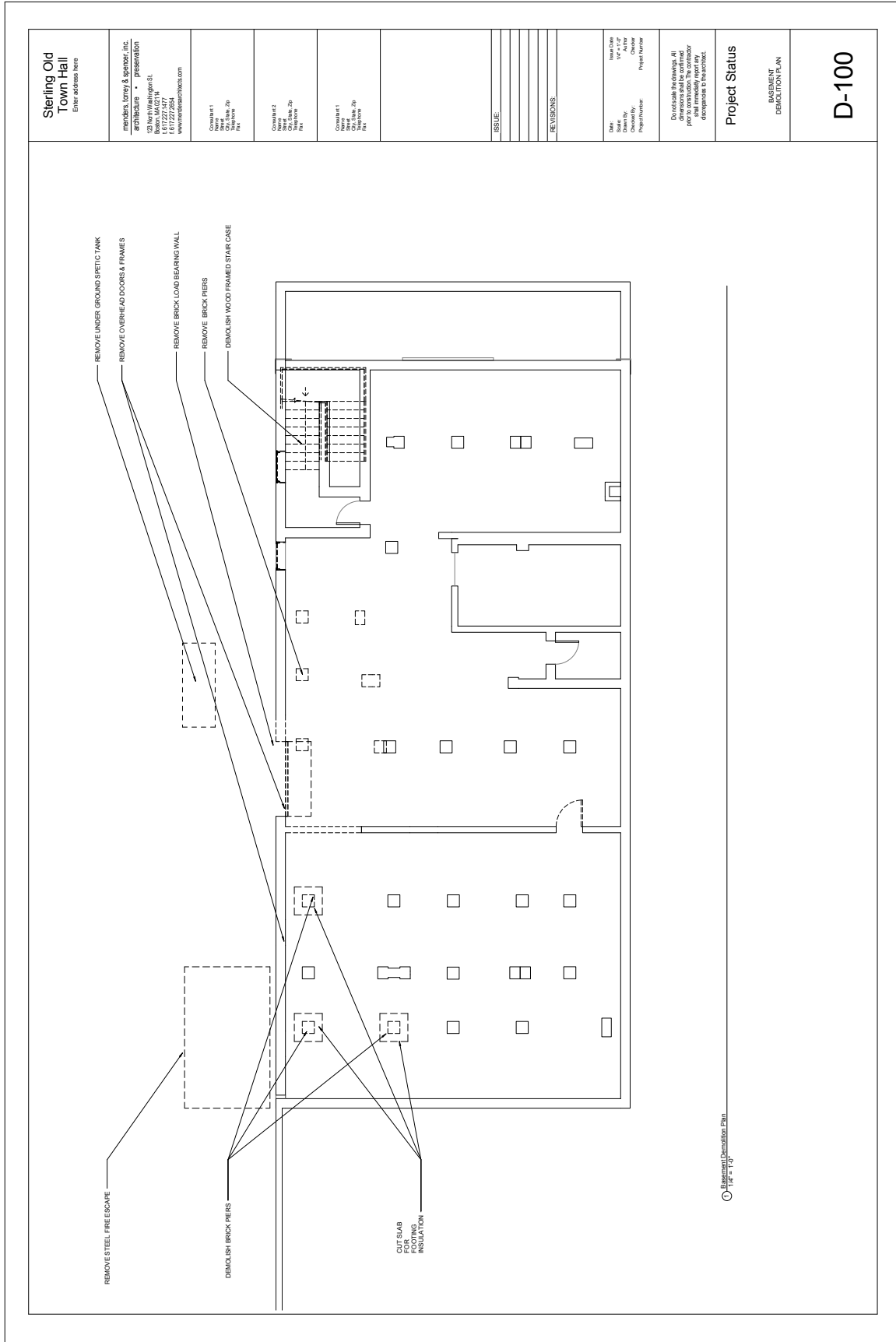




SCHEMATIC DRAWINGS & SPECIFICATIONS

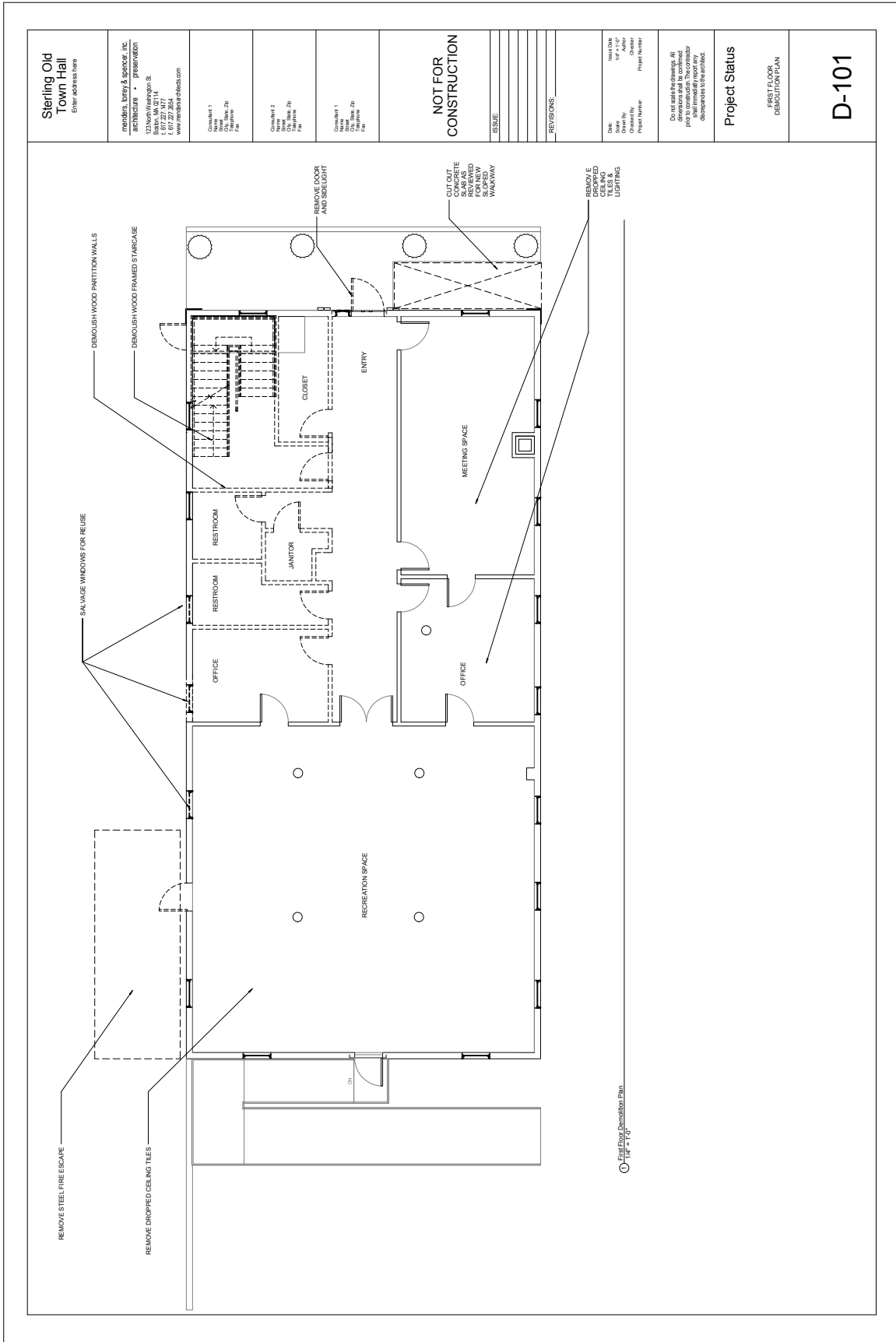
The schematic drawings and specifications were prepared to provide a detailed scope of work from which A.M. Fogarty could provide a budget cost estimate for the project. These documents are constructed from the conceptual design plans and the existing conditions recommendations completed by MTS and our consultants. The documents include assumptions for site work, material finishes, and details that need to be further developed with the Old Town Hall committee during a design development phase.

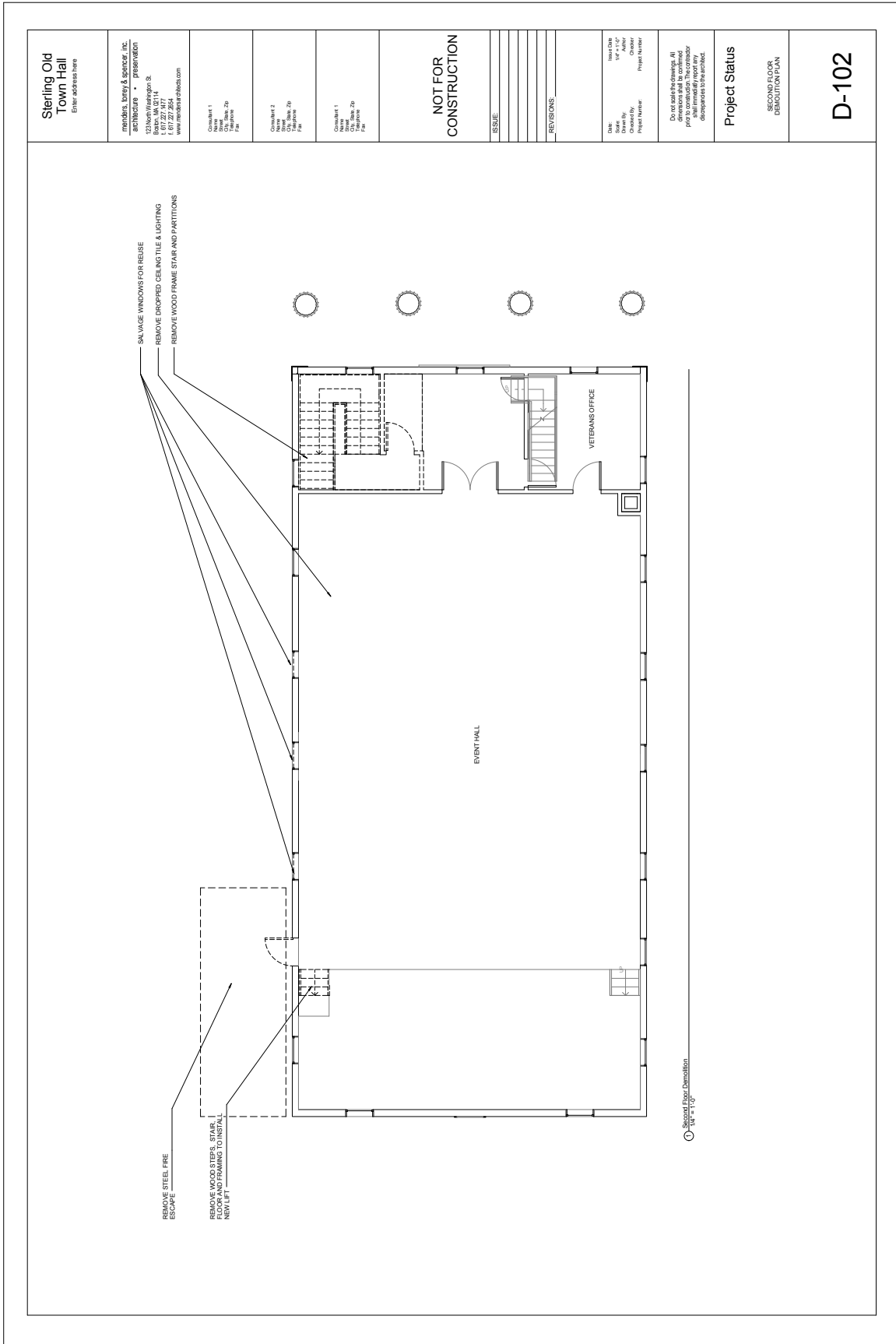
The drawings provide a framework for identifying and locating work activities that need to be accomplished in order to rehabilitate the Old Town Hall. These work items are further developed in the outline specification, which are broken down into categories based upon the Construction Specifications Institute (CSI) Format. This document expands on the information shown on the drawings by providing more detailed materials and methodology for completing the work shown.

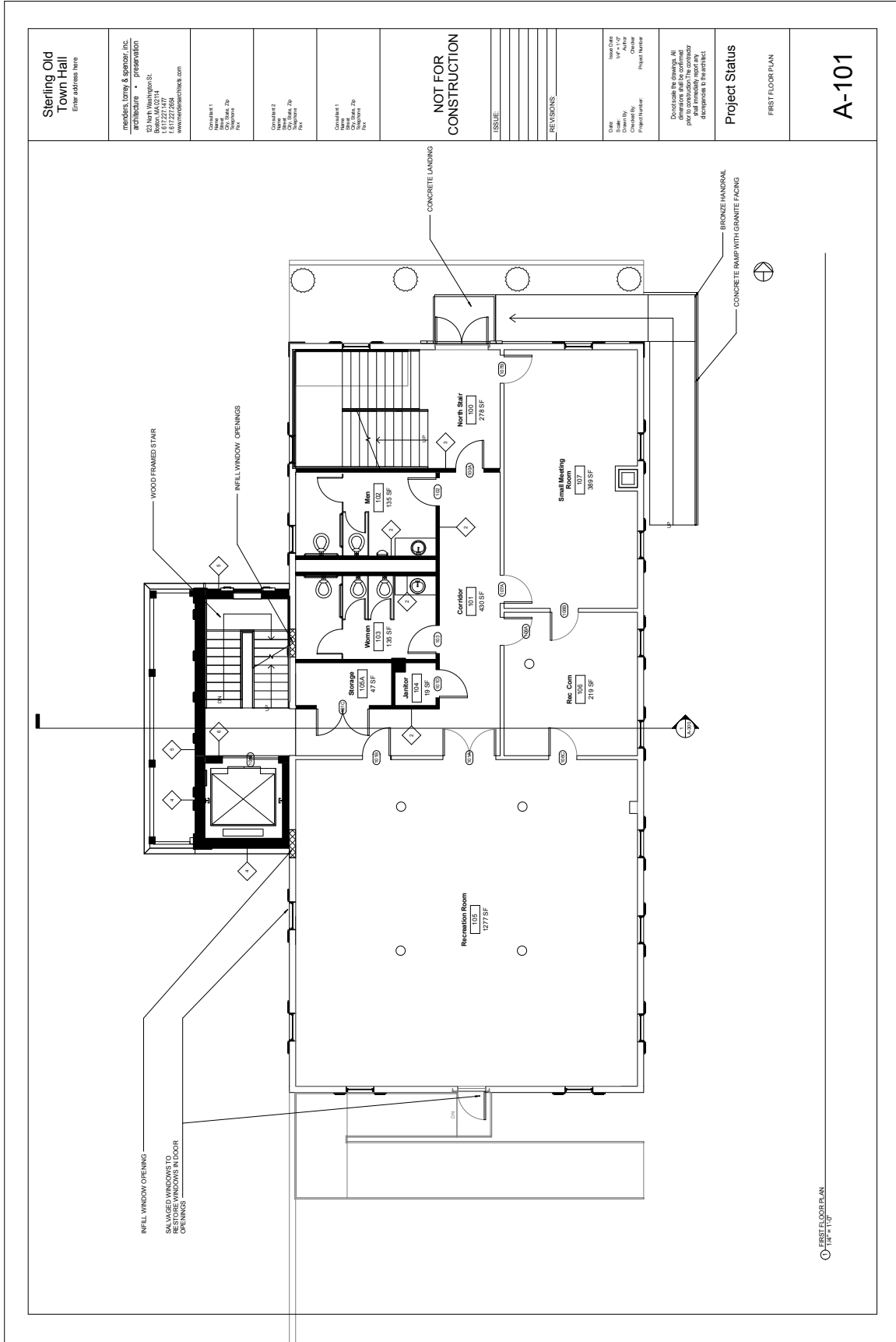


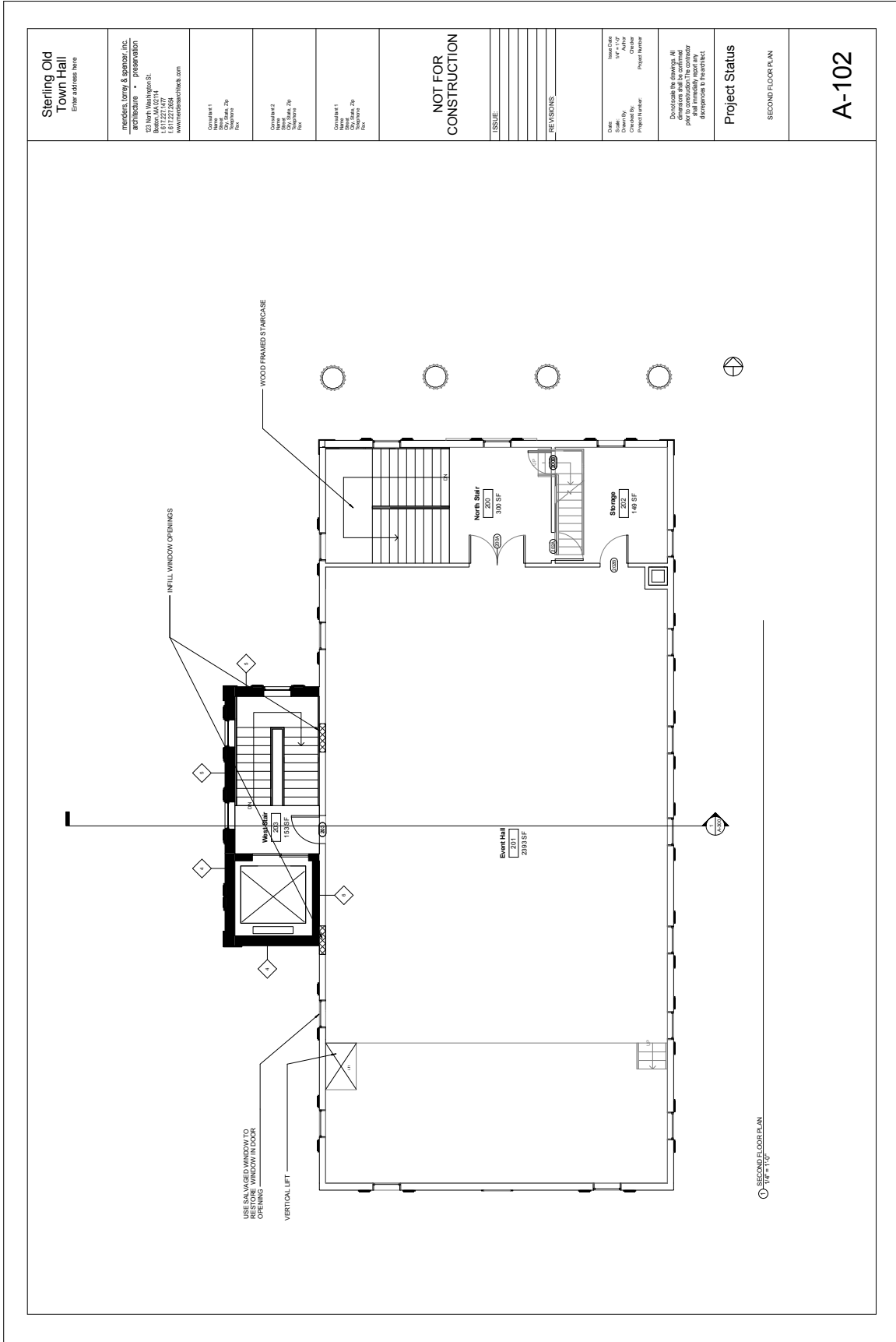
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menders, torrey & spencer, inc. architecture + preservation 123 North Washington St. Boston MA 02114 617.227.2624 www.mtsarchitects.com	
Consultant 1 Name: _____ Title: _____ Signature: _____ Date: _____	Consultant 2 Name: _____ Title: _____ Signature: _____ Date: _____
Consultant 1 Name: _____ Title: _____ Signature: _____ Date: _____	Consultant 2 Name: _____ Title: _____ Signature: _____ Date: _____
ISSUE: _____	
REVISIONS: _____	
Date: _____ Scale: 1/4" = 1'-0" Checked By: _____ Project Number: _____	Issue Date: _____ Scale: 1/4" = 1'-0" Checked By: _____ Project Number: _____
Do not scale the drawings. All dimensions shall be confirmed from the field. The contractor shall immediately report any discrepancies to the architect.	
Project Status BASEMENT DEMOLITION PLAN	
D-100	

Basement Demolition Plan
1/4" = 1'-0"

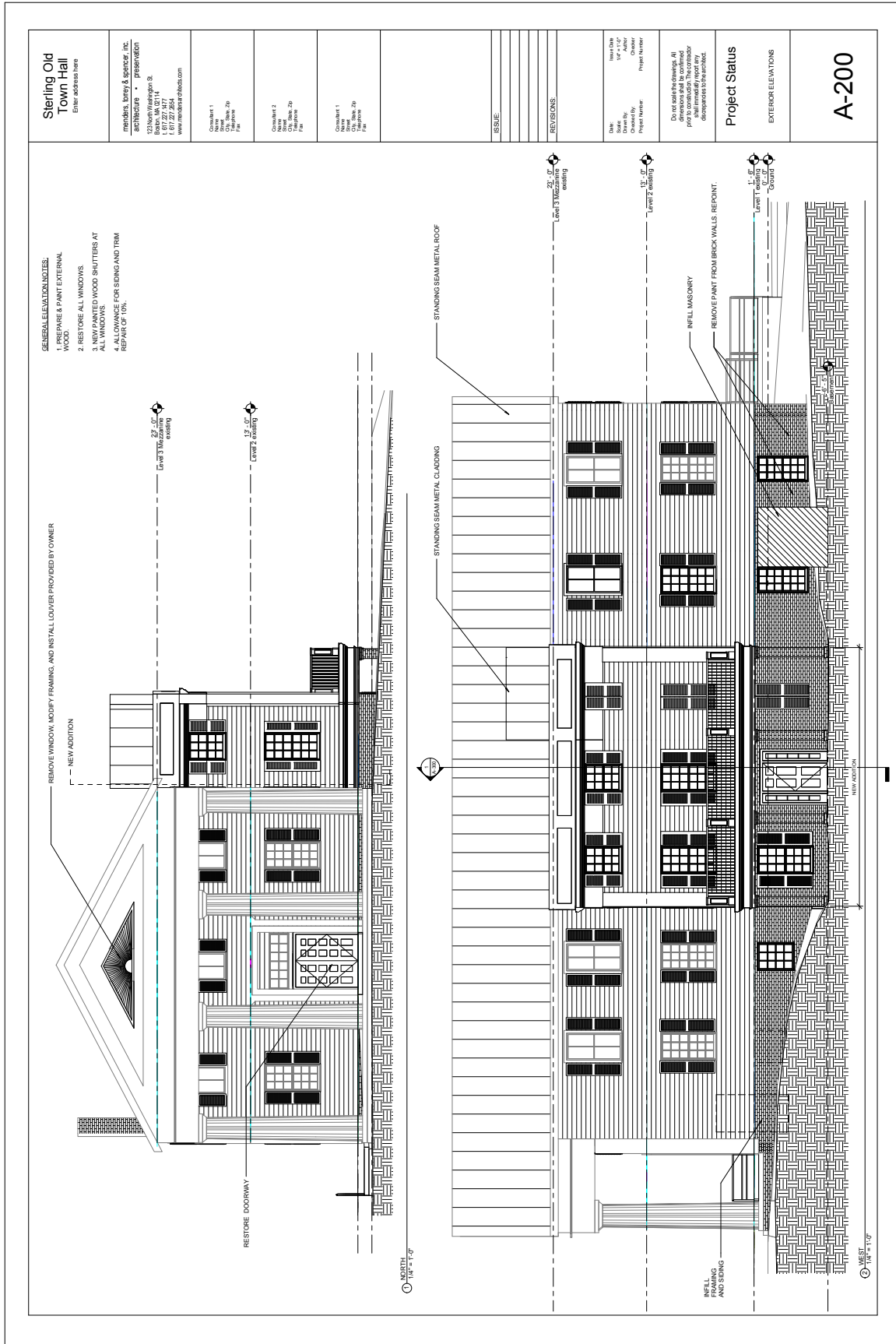




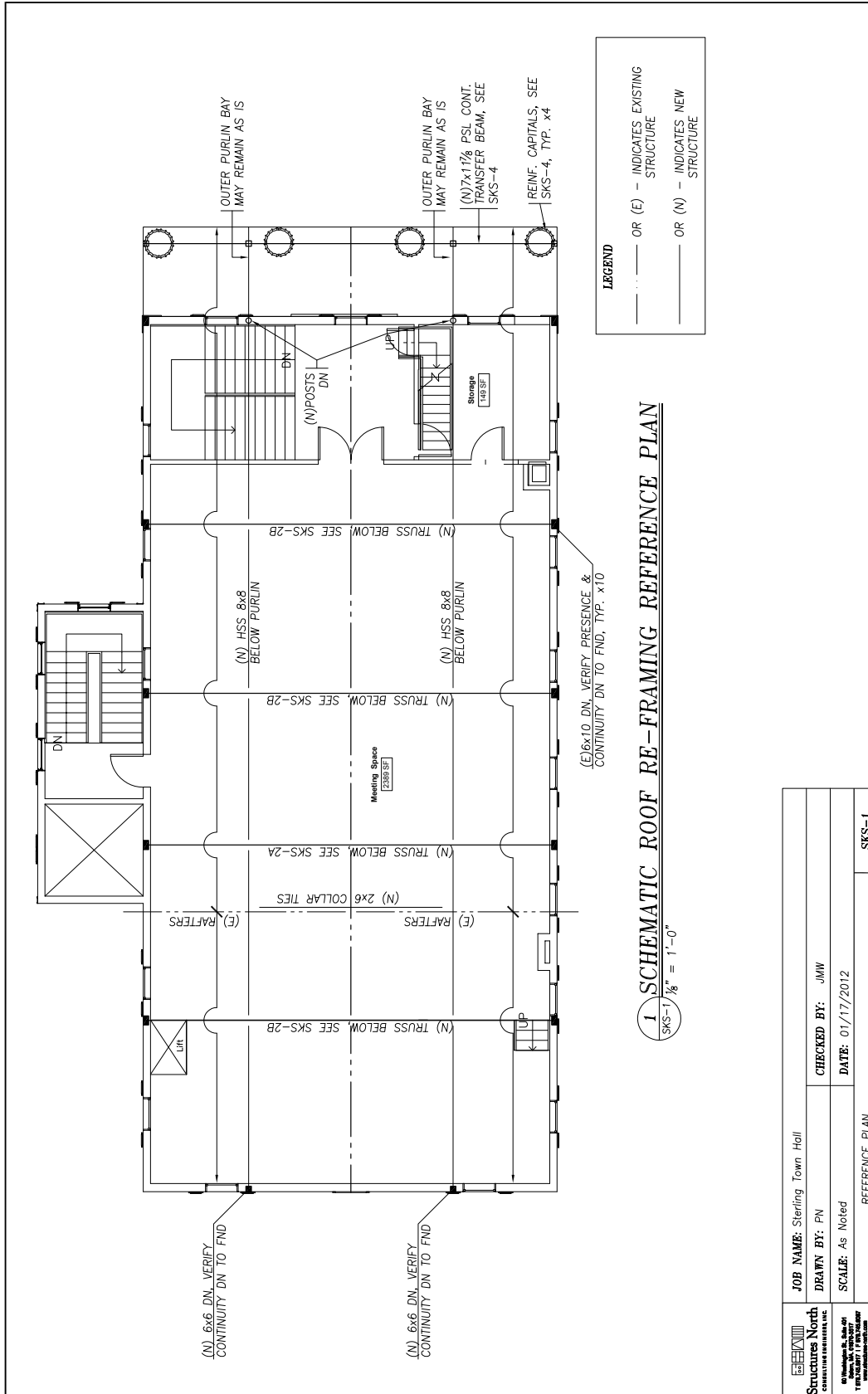




<p>Sterling Old Town Hall Enter address here</p>	<p>menders, torrey & spencer, inc. architecture • preservation 23 North Washington St. Boston, MA 02114 617.227.2854 www.mtsarchitect.com</p>	<p>CONTRACT 1 Sheet No. 20 Revisions 0</p>	<p>CONTRACT 2 Sheet No. 20 Revisions 0</p>	<p>CONTRACT 1 Sheet No. 20 Revisions 0</p>	<p>NOT FOR CONSTRUCTION</p>	<p>ISSUE:</p>	<p>REVISIONS:</p>	<p>DATE: _____ Scale: 1/4" = 1'-0" Checked By: _____ Project Number: _____</p>	<p>Download the drawings. All dimensions shall be confirmed prior to construction. If any discrepancies are noted, please contact the architect immediately, report any and all discrepancies to the architect.</p>	<p>Project Status SECOND FLOOR PLAN</p>	<p>A-102</p>
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Consultant 1 Name Title Telephone No. Fax	Consultant 2 Name Title Telephone No. Fax
Consultant 1 Name Title Telephone No. Fax	Consultant 2 Name Title Telephone No. Fax
DATE: _____ DRAWN BY: _____ CHECKED BY: _____ PROJECT NUMBER: _____ SHEET DATE: 10/11/10 SHEET NO.: 10/11/10	
Do not scale the drawings. All dimensions shall be confirmed prior to construction. Your attention is directed to the fact that the final report may differ from the preliminary report.	
Project Status EXTERIOR ELEVATIONS	
A-200	



Room Schedule		Door Schedule									
Level	Number	Name	Area	Ceiling Height	Perimeter	Floor Finish	Ceiling Finish	Wall Finish	Base Finish	Base Detail	Comments
Basement	001	Oil Tanks	414 SF	8'-0"	91'-9 1/2"	Existing slab	Existing	Existing	Existing	None	
Basement	002	North Stair	119 SF	8'-0"	76'-8"	VCT	PLY GWB	PLY GWB	PLY GWB	Vinyl	
Basement	003	Office	111 SF	8'-0"	47'-9"	Carpet	PLY GWB	PLY GWB	PLY GWB	Vinyl	
Basement	004	Reception	119 SF	8'-0"	44'-4 1/2"	VCT	PLY GWB	PLY GWB	PLY GWB	Vinyl	
Basement	005	Warehouse	483 SF	8'-0"	157'-3 1/2"	1/4" Ply	PLY GWB	PLY GWB	PLY GWB	Wood w/ Hard Med	
Basement	006	Warehouse	97 SF	8'-0"	52'-9 1/2"	Existing slab	PLY GWB	PLY GWB	PLY GWB	None	
Basement	007	Storage	97 SF	8'-0"	52'-9 1/2"	Existing slab	PLY GWB	PLY GWB	PLY GWB	None	
Basement	008	Room	97 SF	8'-0"	52'-9 1/2"	Existing slab	PLY GWB	PLY GWB	PLY GWB	None	
Basement	009	Office	128 SF	8'-0"	45'-0 1/2"	VCT	PLY GWB	PLY GWB	PLY GWB	Aluminum #5	
Basement	010	Office	223 SF	8'-0"	67'-3 1/2"	Carpet	PLY GWB	PLY GWB	PLY GWB	Vinyl	
Basement	011	Storage	483 SF	8'-0"	157'-3 1/2"	1/4" Ply	PLY GWB	PLY GWB	PLY GWB	Vinyl	
Basement	012	Storage	483 SF	8'-0"	157'-3 1/2"	1/4" Ply	PLY GWB	PLY GWB	PLY GWB	None	
Basement	013	Sprinkler	66 SF	8'-0"	46'-5 1/4"	Existing slab	Existing	Existing	Existing	None	
Basement	014	Entrance	69 SF	8'-0"	30'-4 1/4"	Existing	Existing	Existing	Existing	None	
Basement	015	Oil Tank Cell	37 SF	8'-0"	24'-5"	Existing	Existing	Existing	Existing	None	
Basement	016	Mechanical	151 SF	8'-0"	55'-10"	Existing	Existing	Existing	Existing	None	
Basement	017	Storage	132 SF	8'-0"	52'-9 1/2"	VCT	PLY GWB	PLY GWB	PLY GWB	Vinyl	
Basement	018	Storage	37 SF	8'-0"	44'-8 3/4"	VCT	PLY GWB	PLY GWB	PLY GWB	Vinyl	
Basement	019	North Stair	278 SF	8'-0"	69'-2 1/2"	Wood	PLY GWB	PLY GWB	PLY GWB	Wood w/ Hard Med	
Level 1	100	Condo	430 SF	8'-0"	147'-8"	Wood	PLY GWB	PLY GWB	PLY GWB	Wood w/ Hard Med	
Level 1	101	Men	135 SF	8'-0"	48'-0"	Ceramic	PLY GWB	PLY GWB	PLY GWB	Ceramic tile	
Level 1	102	Men	135 SF	8'-0"	48'-0"	Ceramic	PLY GWB	PLY GWB	PLY GWB	Ceramic tile	
Level 1	103	Men	135 SF	8'-0"	48'-0 1/4"	Ceramic	PLY GWB	PLY GWB	PLY GWB	Ceramic tile	
Level 1	104	Men	135 SF	8'-0"	48'-0 1/4"	Ceramic	PLY GWB	PLY GWB	PLY GWB	Ceramic tile	
Level 1	105	Reception	127 SF	8'-0"	44'-10"	Carpet	PLY GWB	PLY GWB	PLY GWB	Vinyl	
Level 1	106A	Storage	47 SF	8'-0"	29'-8 1/4"	Carpet	PLY GWB	PLY GWB	PLY GWB	Vinyl	
Level 1	106B	Rec. Com	219 SF	8'-0"	69'-3 1/2"	Carpet	PLY GWB	PLY GWB	PLY GWB	Paint	
Level 1	107	Rec. Com	219 SF	8'-0"	69'-3 1/2"	Carpet	PLY GWB	PLY GWB	PLY GWB	Paint	
Level 1	108	Rec. Com	219 SF	8'-0"	69'-3 1/2"	Carpet	PLY GWB	PLY GWB	PLY GWB	Paint	
Level 1	109	Rec. Com	219 SF	8'-0"	69'-3 1/2"	Carpet	PLY GWB	PLY GWB	PLY GWB	Paint	
Level 1	200	North Stair	303 SF	8'-0"	73'-1 3/4"	Wood	PLY GWB	PLY GWB	PLY GWB	Wood w/ Hard Med	
Level 2	201	Event Hall	239 SF	8'-0"	211'-8 1/2"	Reinforced concrete	Reinforced concrete	Reinforced concrete	Reinforced concrete	Paint	
Level 2	202	Storage	149 SF	8'-0"	46'-10"	Carpet	PLY GWB	PLY GWB	PLY GWB	Paint	
Level 2	203	West Stair	153 SF	8'-0"	51'-9 3/4"	Wood	PLY GWB	PLY GWB	PLY GWB	Wood w/ Hard Med	

Level	Mark	To Room	Starts	Normal Size	Door	Frame	Fire Rating	Hardware	Comments
Basement	001	Oil Tanks	New	3'-0"	6'-8"	0'-2"	1.5 HR	7	Mechanical Rooms
Basement	002	North Stair	Existing	2'-6"	7'-0"	0'-2"		3	Stairs
Basement	003	Office	New	3'-0"	7'-0"	0'-2"		4	Office
Basement	004	Reception	New	3'-0"	6'-8"	0'-2"		3	Stairs & Storage
Basement	005	Warehouse	New	3'-0"	7'-0"	0'-2"		3	Stairs & Storage
Basement	006	Warehouse	New	3'-0"	6'-8"	0'-2"		6	No Lockset
Basement	007	Warehouse	New	3'-0"	7'-0"	0'-2"		2	Stairs
Basement	008	Room	New	3'-0"	7'-0"	0'-2"		7	Mechanical Rooms
Basement	009	Office	New	3'-0"	7'-0"	0'-2"		7	Mechanical Rooms
Basement	010	Office	New	3'-0"	7'-0"	0'-2"		4	Office
Basement	011	Storage	New	3'-0"	7'-0"	0'-2"		7	Mechanical Rooms
Basement	012	Storage	New	3'-0"	7'-0"	0'-2"		7	Mechanical Rooms
Basement	013	Sprinkler	Existing	2'-6"	7'-0"	0'-2"		7	Mechanical Rooms
Basement	014	Entrance	Existing	2'-6"	7'-0"	0'-2"		7	Mechanical Rooms
Level 1	100	Condo	New	5'-6"	6'-8"	0'-2"		1	Double doors
Level 1	101	Men	New	3'-0"	7'-0"	0'-2"		8	No Lockset
Level 1	102	Men	Existing	6'-6"	6'-8"	0'-2"		6	No Lockset
Level 1	103	Men	Existing	3'-0"	6'-8"	0'-2"		6	No Lockset
Level 1	104	Men	Existing	3'-0"	6'-8"	0'-2"		6	No Lockset
Level 1	105	Reception	New	3'-0"	7'-0"	0'-2"		8	No Lockset
Level 1	106A	Storage	New	3'-0"	6'-8"	0'-2"		6	No Lockset
Level 1	106B	Rec. Com	New	3'-0"	6'-8"	0'-2"		7	Mechanical Rooms
Level 1	107	Rec. Com	Existing	3'-0"	6'-8"	0'-2"		7	Mechanical Rooms
Level 1	108	Rec. Com	Existing	3'-0"	6'-8"	0'-2"		7	Mechanical Rooms
Level 1	109	Rec. Com	Existing	3'-0"	6'-8"	0'-2"		7	Mechanical Rooms
Level 1	200	North Stair	Existing	3'-0"	6'-8"	0'-2"		5	Reception
Level 1	201	Event Hall	Existing	3'-0"	6'-8"	0'-2"		5	Reception
Level 1	202	Storage	Existing	3'-0"	6'-8"	0'-2"		2	Storage Door
Level 1	203	West Stair	Existing	3'-0"	6'-8"	0'-2"		4	Office
Level 2	200	North Stair	Existing	3'-0"	6'-8"	0'-2"		4	Office
Level 2	201	Event Hall	Existing	3'-0"	6'-8"	0'-2"		4	Office
Level 2	202	Storage	Existing	3'-0"	6'-8"	0'-2"		4	Office
Level 2	203	West Stair	Existing	3'-0"	6'-8"	0'-2"		3	Stairs
Level 2	204	West Stair	Existing	3'-0"	6'-8"	0'-2"		3	Stairs

Level	Mark	To Room	Starts	Normal Size	Door	Frame	Fire Rating	Hardware	Comments
Basement	001	Oil Tanks	New	3'-0"	6'-8"	0'-2"	1.5 HR	7	Mechanical Rooms
Basement	002	North Stair	Existing	2'-6"	7'-0"	0'-2"		3	Stairs
Basement	003	Office	New	3'-0"	7'-0"	0'-2"		4	Office
Basement	004	Reception	New	3'-0"	6'-8"	0'-2"		3	Stairs & Storage
Basement	005	Warehouse	New	3'-0"	7'-0"	0'-2"		3	Stairs & Storage
Basement	006	Warehouse	New	3'-0"	6'-8"	0'-2"		6	No Lockset
Basement	007	Warehouse	New	3'-0"	7'-0"	0'-2"		2	Stairs
Basement	008	Room	New	3'-0"	7'-0"	0'-2"		7	Mechanical Rooms
Basement	009	Office	New	3'-0"	7'-0"	0'-2"		7	Mechanical Rooms
Basement	010	Office	New	3'-0"	7'-0"	0'-2"		4	Office
Basement	011	Storage	New	3'-0"	7'-0"	0'-2"		7	Mechanical Rooms
Basement	012	Storage	New	3'-0"	7'-0"	0'-2"		7	Mechanical Rooms
Basement	013	Sprinkler	Existing	2'-6"	7'-0"	0'-2"		7	Mechanical Rooms
Basement	014	Entrance	Existing	2'-6"	7'-0"	0'-2"		7	Mechanical Rooms
Level 1	100	Condo	New	5'-6"	6'-8"	0'-2"		1	Double doors
Level 1	101	Men	New	3'-0"	7'-0"	0'-2"		8	No Lockset
Level 1	102	Men	Existing	6'-6"	6'-8"	0'-2"		6	No Lockset
Level 1	103	Men	Existing	3'-0"	6'-8"	0'-2"		6	No Lockset
Level 1	104	Men	Existing	3'-0"	6'-8"	0'-2"		6	No Lockset
Level 1	105	Reception	New	3'-0"	7'-0"	0'-2"		8	No Lockset
Level 1	106A	Storage	New	3'-0"	6'-8"	0'-2"		6	No Lockset
Level 1	106B	Rec. Com	New	3'-0"	6'-8"	0'-2"		7	Mechanical Rooms
Level 1	107	Rec. Com	Existing	3'-0"	6'-8"	0'-2"		7	Mechanical Rooms
Level 1	108	Rec. Com	Existing	3'-0"	6'-8"	0'-2"		7	Mechanical Rooms
Level 1	109	Rec. Com	Existing	3'-0"	6'-8"	0'-2"		7	Mechanical Rooms
Level 1	200	North Stair	Existing	3'-0"	6'-8"	0'-2"		5	Reception
Level 1	201	Event Hall	Existing	3'-0"	6'-8"	0'-2"		5	Reception
Level 1	202	Storage	Existing	3'-0"	6'-8"	0'-2"		2	Storage Door
Level 1	203	West Stair	Existing	3'-0"	6'-8"	0'-2"		4	Office
Level 2	200	North Stair	Existing	3'-0"	6'-8"	0'-2"		4	Office
Level 2	201	Event Hall	Existing	3'-0"	6'-8"	0'-2"		4	Office
Level 2	202	Storage	Existing	3'-0"	6'-8"	0'-2"		4	Office
Level 2	203	West Stair	Existing	3'-0"	6'-8"	0'-2"		3	Stairs
Level 2	204	West Stair	Existing	3'-0"	6'-8"	0'-2"		3	Stairs



OUTLINE SPECIFICATIONS

The following outline specifications describe work approaches to the items identified in this conditions assessment. Note that instruction for access – staging, lifts, etc. are not included since access to work areas typically falls under the purview of the contractor. Specification sections below are listed by the conventional numbering sequence of the Construction Specifications Institute MasterFormat 2011 which maintains a general listing construction activities organized by trade or material.

00 00 00	PROCUREMENT AND CONTRACTING REQUIREMENTS
00 20 00	Instructions for Procurement
	Publically bid
	Bid Bond
	Single Prime Contract
	Filed Sub-Bids Required
	Prevailing wage
	Owner's Project Manager Required
	Payment Bond
	Performance Bond
00 31 26	Hazardous Material Information
	Tested Positive for Asbestos Bearing Materials
	Tested Positive for Lead Painted Surfaces
01 00 00	GENERAL REQUIREMENTS
01 10 00	Summary
	Construction of three story, 840 s.f. (280 s.f./floor) addition with elevator and egress staircase.
	Renovation of existing 9000 s.f. wood-framed former town hall into community rooms and offices. All electrical and plumbing systems will be replaced, air conditioning and a fire suppression system will be added. Existing heating system to remain and be expanded into new addition.
01 23 00	Alternates
Alternate #1	Work shown on C-101, includes moving brick historic one story outbuilding, site clearing and grubbing, paving and striping
Alternate #2	Work shown on C-101, includes construction of sloped walkway and plaza with granite faced concrete walls with granite top (18" high). Include deletion of ramp on east elevation. Modifications to front porch (landing and sloped walkway) are similar in both schemes.
Alternate #3	Basement fit-out in south end of basement – includes partition walls, floor, ceiling, and wall finishes. Mechanical and electrical runs. Area shown on A-100.
Alternate #4	Substitute green slate roof with copper flashing for standing seam metal roof.

01 40 00	Quality Requirements Build to requirements of 8th edition Massachusetts Building Code Restoration, Renovation and Repainting lead paint requirements will apply Maintenance of Historic Materials to be performed by qualified restoration specialist
01 50 00	Temporary Facilities and Controls Temporary electricity Field Office in building Temporary Sanitary Facilities Temporary erosion and sediment control Temporary Fencing Temporary Town Project Sign
01 74 00	Cleaning and Waste Management Construction waste to be sorted for recycling Final cleaning to leave building move-in ready
01 90 00	Life Cycle Activities Commissioning
02 00 00	EXISTING CONDITIONS
02 40 00	Demolition Selective site demolition Paving demolition at trenches for utilities Fire escape demolition Septic tank demolition Interior air monitoring for lead levels during demolition Selective wood partition demolition Selective bearing wall demolition Selective brick pier demolition Demolish existing wood staircase Selective window demolition Selective door demolition Demolish dropped ceilings and grids on first and second floors (in rooms noted) Demolish all existing electrical wiring and devices Demolish all existing plumbing equipment, devices and controls Core 24" granite foundation wall for utility penetrations at 4 locations Cut concrete slab at front entrance for installation of new ramp
02 43 00	Structure Moving Alternate #1 – Move brick masonry building to offsite location, assume 1 mile move. Building is approximately 15 feet tall.
02 80 00	Facility Remediation Selective asbestos floor tile and mastic remediation – see Fuss and O'Neill report. Removal of mercury ballast lights, mercury thermostats

03 00 00	CONCRETE
03 30 00	Cast-In-Place Concrete Frost wall footings and 4" slab with wire reinforcing at new addition 4" ramp and sloped walkway at north east corner 6" pad for condensers (6) 12x24x24 post footings with reinforcing and embedded threaded rods (6 in base bid, 3 additional as part of Alternate #3) 5' deep elevator pit with water stopping at all cold joints, vertical and horizontal epoxy coated reinforcing
03 80 00	Concrete Cutting and Boring Cut existing 6" slab (assumed) for post footings (6 in base bid, 3 additional as part of Alternate #3)
04 00 00	MASONRY
04 01 00	Maintenance of masonry Repoint entire brick foundation with Type N mortar, using white Portland cement and buff coloring, provide three samples for color and tooling selection. Repoint exposed exterior and interior joints of north foundation wall Repoint existing granite steps and at north entrance Remove paint from west foundation wall.
04 20 00	Unit Masonry Brick units to match existing masonry for infill at closed or reduced openings set with Type N mortar using white Portland cement and buff coloring, provide three samples for color and tooling selection Brick units to match existing for new porch columns. 1" Brick veneer (to match existing basement brick) on exterior of new 8" CMU walls of basement level of addition. At elevator shaft 8" CMU, fully grouted, reinf. for full height with #5 bars @ 32" on center and bond beams every 48"
04 43 00	Stone Masonry 8" high granite base (veneer, 1" thick) at addition Saw cut, 4" granite veneer pinned to ramp landing and cheekwall
05 00 00	METALS
05 10 00	Structural metal framing 8" hoist beam for elevator 4" tube steel posts in basement (6 in base bid, 3 additional as part of Alternate #3) Structural reinforcement of 6 wood trusses 6" angles for new brick wall penetration headers over 12" wide Miscellaneous brackets and flanges and plates as required for strengthening wood framing 5% allowance for additional miscellaneous metal framing that may be required after further investigation
05 40 00	Cold Formed Metal Framing Metal support assemblies for electrical panel boards, tel/com home panels, attic placed HVAC equipment

05 70 00	Decorative Metal Bronze railing and posts at ramp – Julius Blum
06 00 00	WOODS, PLASTICS AND COMPOSITES
06 10 00	Rough carpentry New stair framing, 2x12 stringers plus blocking (at addition and internal staircase) New stud bearing walls 2x6 at 16" o.c. (at new addition above basement floor) New partitions 2x4 at 16" o.c. Infill at closed openings 2x to match wall thickness Headers at new 3' doors (2) 2x8 padded flush to wall framing 5% allowance for additional miscellaneous rough carpentry that may be required after further investigation
06 16 00	Sheathing 3/4" plywood subfloor at first and second floors of new addition 1/2" plywood over existing wood sheathing of existing roof 3/4" plywood sheathing at new addition
06 40 00	Architectural Woodwork Assume Cedar for all exterior woodwork Exterior siding and trim at new windows and doors, wood entablature and cornice, and wood pilasters on addition. Adjustments to north door casing to make accessible New wood railings – clear finish with square palings and wooden cap rail at both staircases Wood door trim at new doors first floor Wood door casing at entry from new porch Wood stops stools and sills at new windows Wood baseboard on new partitions in rooms scheduled
06 49 00	Wood Screens & Exterior Wood Shutters Exterior wood shutters on existing building and new addition
06 60 00	Plastic Fabrications Solid surface lavatory countertops at restrooms (2)
07 00 00	THERMAL AND MOISTURE PROTECTION
07 10 00	Dampproofing and waterproofing Dampproof face of new frost wall @ addition. Waterproof elevator pit.
07 20 00	Thermal Protection Rigid insulation on exterior of new addition walls Tapered insulation on roof of new addition
07 26 00	Vapor Retarders Vapor retarder under new slab at addition Vapor retarder at new exterior walls

07 27 00	Air Barriers Air barrier at new exterior partition walls at new entry porch
07 60 00	Flashing and Sheet Metal Copper flashing at new windows and doors New, 6" round, metal downspouts and hangers (4 on existing building, 1 at new addition) Standing seam, factory painted steel roof on existing building & new addition with manufacturers recommended snow guards on entire field
07 80 00	Fire and Smoke Protection Firestopping at penetrations of rated walls Building perimeter firestopping Firestopping at vertical shaftways at floor penetrations
07 90 00	Joint Protection Joint sealants 1" expansion joint between existing building and new addition
08 00 00	OPENINGS
08 01 00	Operation and Maintenance of Openings Historic treatment of existing wood windows – remove sash, strip paint and glazing, prime, paint and reglaze, install weatherstripping in rabbets cut in sash and meeting rails, attach new cords to sash weights and reinstall in openings. Historic treatment of wood doors – remove doors, strip paint, remove hardware, prime and paint, install weatherstripping in rabbets cut in bottom rail and jambs for exterior doors, replace astragals in double doors.
08 10 00	Doors and Frames Hollow metal doors and frames, slab doors, rated as indicated on schedule, welded frame Wood stile and rail doors custom sticking to match existing doors, glazed and rated per schedule
08 30 00	Specialty Doors and Frames Access doors, with typical distribution for 10,000 square feet of commercial space – assumed exposed mechanical systems in basement
08 50 00	Windows Retain existing storm windows. New insulated glass, true divided light, wood double hung windows matching the stile, rail and glazing configuration of existing wood windows

08 70 00

Hardware

See attached hardware schedule – replace all at existing doors to remain, install all new with new hardware, electric door locks at new porch entry and at daily entrance – per schedule

Sets: All sets have ball bearing hinges, door silencers, door stops. All latches are mortises

1. Automatic door opener, wall mounted push panel activators, panic bar – vertical rod devices – astragal, closer coordinators, weatherstripping, electric strike entry function
2. Panic bar, closer, electric strike entry function
3. Panic bar, closer, passage function
4. Office function
5. Closer, push plate, D-pull, kick plates both sides, no latch set.
6. No additional hardware
7. Store room function, knurled surface

08 90 00

Louvers and Vents

Louver between elevator machine room and shaft
Elevator louver through CMU shaftwall
Fresh air louver at mechanical room

09 00 00

FINISHES

09 01 20

Maintenance of Plaster and Gypsum Board

Plaster crack repair in second floor storage room and north staircase

09 20 00

Plaster and Gypsum Board

5/8" Gypsum board on new wood or metal stud partitions for new wall construction with acoustical batt insulation for interior partitions, type X both sides where rating required at elevator mechanical room, sprinkler valve room, basement to first floor of both stairways, mechanical/electrical room.

All other GWB partitions, tape, mud and paint

Cementitious backing boards at restroom walls for tile application

09 30 00

Tiling

Thin set ceramic tile floor, cove, 42" high wainscot and bull-nose cap tile at restrooms

Exterior glazed paver tiles at new entry porch

Thin set porcelain tile floor and baseboard, basement level, new addition

09 51 00

Acoustical Ceilings

High density fiberglass acoustic ceiling panels in 102 on flat attached to existing and/or added wood strapping (Ecophon Focus F) in rooms scheduled.

09 60 00	<p>Flooring Resilient base and accessories at all room floors as scheduled Carpet tile – commercial grade as scheduled with underlayment over existing flooring to provide level application – use leveling compound in basement VCT – 12”, standard commercial colors, two color patterns per room schedule with underlayment over existing flooring to provide level application. Use leveling compound in basement. Wood strip flooring in scheduled rooms Resilient stair treads and risers over new wood treads and finishes at interior stairs (2)</p>
09 81 00	<p>Acoustic Insulation Acoustic batt insulation in first floor ceilings of small meeting room, recreation office, and recreation room.</p>
09 90 00	<p>Painting and Coating Exterior new wood seal, prime, paint – 2 coats Exterior new metal prime, paint – 2 coats Interior – new gwb, two coats, sand between each coat Interior – new wood, prime, paint – 2 coats Steel beams – factory priming Sand and refinish meeting room floor (2 coats)</p>
10 00 00	<p>SPECIALTIES</p>
10 10 00	<p>Information Specialties Silk screened room signage with raised Braille room indicators Wall mounted room directory at lobbies (2)</p>
10 20 00	<p>Interior Specialties Fiberglass toilet compartments Stainless steel ADA fittings at accessible toilet stalls Plastic toilet paper holders – partition mounted ADA restroom mirrors</p>
10 40 00	<p>Safety Specialties Wall hung fire extinguishers for elevator mechanical room</p>
12 00 00	<p>FURNISHINGS</p>
12 20 00	<p>Window Treatments Roll down blinds all second floor rooms</p>
12 30 00	<p>Casework P-lam cabinets above and below counter at kitchenette all drawers with heavy duty glides, self closing hinges on doors and silencers for doors and drawers</p>
12 40 00	<p>Furnishings and Accessories Entrance floor mats and frames 3’x4’ – (2 locations)</p>
12 60 00	<p>Multiple seating 200 cloth seat, metal, stackable chairs with trolley 20 cloth seat general seating chairs</p>

13 00 00	SPECIAL CONSTRUCTION
Not used	Not used
14 00 00	CONVEYING SYSTEMS
14 20 00	Elevators Machine room-less electric traction elevator – Kone EcoSpace 3000# passenger elevator w/ front opening, 3-stops, 3 full floors
14 40 00	Vertical Wheelchair Lift 45” rise Garaventa Genesis OPAL
21 00 00	FIRE SUPPRESSION SYSTEM
21 10 00	Water-Based Fire Suppression Systems Wet pipe basement to second floor Dry pipe attic See Attached description in plumbing
22 00 00	PLUMBING
22 00 00	See attached plumbing description
23 00 00	HVAC
23 00 00	See attached HVAC description
26 00 00	ELECTRICAL
26 00 00	See attached electrical description
27 00 00	COMMUNICATIONS
27 30 00	Voice Communications Elevator phone with own dedicated line Install to Basement Offices – 3 phone lines
28 00 00	ELECTRONIC SAFETY AND SECURITY
28 10 00	Electronic access control and intrusion detection Video monitor and call button at west entry Contact switches at entries and basement windows. Motion detectors at north and west stairways
28 30 00	Electronic detection and alarm Digital, addressable fire alarm system with fire department and remote monitoring connections, detectors for heat, smoke and carbon-monoxide
31 00 00	EARTHWORK
31 10 00	Site Clearing Pavement removal and at new addition & utility trenches Additional site clearing as part of Alternate #1 and Alternate #2

31 20 00	Earth Moving Rough and finish grading at new sloped walkway, new paved area outside Entry Porch of addition Excavation and backfill at new addition and utility trenching
32 00 00	EXTERIOR IMPROVEMENTS
32 10 00	Bases, Ballasts and Paving Patch asphalt paving at trenching for utilities (parking and roadways) Alternate #1: New paving and striping as shown on C-101
32 30 00	Site Improvements Alternate #2: 4000 psi, cast in place concrete retaining wall for exterior sloped walkway at north entry with epoxy coated reinforcing with stone shelf for granite vener
32 90 00	Planting Replant stockpiled sod Hydroseed in disturbed areas where old sod does not cover Import new topsoil at east elevation and seed Prepare planting beds within seeded area along east elevation, plant with 1-dozen flowering shrubs
33 00 00	UTILITIES
33 20 00	Water Utilities New 6" domestic water for fire from line in street on west side of building
33 30 00	Sanitary Sewerage Utilities New sanitary line to existing sanitary system located off site, trench approximately 250' including through active roadway. See attached MEP report
33 70 00	Electrical Utilities See attached MEP report

Comments:

Outline Specification Prepared by

Thomas Burgess
Project Designer



SUMMARY OF PROBABLE COSTS

Cost estimating services were provided by A.M. Fogarty based upon the outline plans and specifications provided by MTS. The estimate provides a completely rehabilitated building with new electrical, plumbing, and fire protection systems, new rest rooms, an elevator and universal access solution, and upgraded finishes throughout the interior. It includes upgrading utilities to the building and a new upgraded electric service. Repairs to the exterior of the building include miscellaneous siding and trim repairs and window restoration. Structural deficiencies, notably at the existing roof trusses are rectified and a new slate roof is installed. The site immediately surrounding Old Town Hall is improved with landscaping and hardscape. The total cost for the base bid project is projected to be approximately \$2.3 million. With the addition of soft costs (architectural/engineering fees calculated at 10% of construction cost) and an Owners Project Manager, the total project cost would be **\$2.6 million.**

Possible savings in the project cost include replacing the proposed slate roof with an asphalt shingle roof, which was estimated at a savings of \$105,732. While this solution has short term savings, long term projections for maintenance and replacement costs show that the longevity of slate roofs will pay for themselves within their extended life cycle.

At this time, the most crucial work to be performed on the building is with regards to keeping water out. This begins at the slate roof, which required numerous repairs in recent years and owing to significant ice damming, caused damage to interior finishes at the second floor. A potential project to move towards full rehabilitation of the building is a roof, structural augmentation, and second floor ceiling restoration project. This project would replace the slate roof, address structural deficiencies with the roof trusses, and remove the dropped ceiling at the second floor. The space could be left unfinished until the complete rehab project with elevator is installed. It is also prudent to leave the space unfinished until systems, such as the required sprinkler system, are installed. The cost for this project is estimated at \$240,000.

We have also provided five lump sum costs and three alternates. The lump sums are listed for the cost of the Addition at \$500,000; the cost to restore the Front Door and add a ramp to the east elevation at \$63,400; the cost to restore the historic staircase of \$19,750; and the cost to restore the wood shutters onto the building at \$31,062. The suggested alternates were for relocating the brick outbuilding, estimated at \$53,614; installing the sloped walkway and plaza shown on C-101 in lieu of the ramp on the east at an increase of \$18,624; Fitting out the basement for three offices at \$35,817, and substituting asphalt shingles for the slate roof at \$105,732 savings.

Included here are the budget summary and a conceptual estimate prepared using the same CSI format found in the Outline Specification. A more detailed itemization of tasks and costs is included in the appendix of this report.

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"Construction Cost Consultants"

Sterling Old Town Hall
Sterling, MA

February 15, 2012

GRAND SUMMARY

RENOVATION/ADDITION		\$1,735,612
HAZARDOUS WASTE REMOVAL		\$30,250
SITE IMPROVEMENTS		\$49,535

TOTAL DIRECT COST		\$1,815,397
GENERAL CONDITIONS	6.5%	\$118,001
GENERAL ADMINISTRATIVE O&P	5%	\$96,670
P&P BOND	1.5%	\$30,451
DESIGN CONTINGENCY	10%	\$206,052
ESCALATION (summer 2012)	2%	\$45,331

TOTAL CONSTRUCTION COST		\$2,311,902
COST PER SF		\$245.89

BREAKOUT COST WHICH ARE INCLUDED ABOVE:

1. BASEMENT FIT-OUT	see alterante
2. ADDITION	\$500,000
3. FRONT DOOR AND NE RAMP	\$63,400
4. HISTORIC STAIRCASE	\$19,750
5. ROOFING AND REINFORCEMENT	\$236,000
6. SHUTTERS ON EXISTING BUILDING	\$31,062

ALTERNATES

ALTERNATE NO. 1- RELOCATE BRICK HISTORIC ONE STORY OUTBUILDING	\$53,614
ALTERNATE NO. 2 - SLOPED WALKWAY AND PLAZA - NORTHWEST	\$18,624
ALTERNATE NO. 3 - FIT-OUT IN SOUTH END OF BASEMENT	\$35,817
ALTERNATE NO. 4 - SUBSTITUTE ASPHALT SHINGLE ROOF FOR SLATE SHINGLE ROOF	(\$105,732)

PROJECT: Sterling Old Town Hall
 LOCATION: Sterling, MA
 CLIENT: Menders Torrey & Spencer, Inc.
 DATE: 15-Feb-12

NO. OF SQ. FT.: 9,402
 COST PER SQ. FT.: 184.60
 *GSF Excludes Balcony, Attic Space and
 Existing Ext. wall

No.: 12004

RENOVATION/ADDITION

SUMMARY	DIVISION TOTAL	PERCENT OF PROJECT	COST PER SF
DIVISION 2 - SITEWORK	58,896	3%	6.26
DIVISION 3 - CONCRETE	36,064	2%	3.84
DIVISION 4 - UNIT MASONRY	125,198	7%	13.32
DIVISION 5 - METALS	11,500	1%	1.22
- MISCELLANEOUS METALS	28,776	2%	3.06
DIVISION 6 - WOOD AND PLASTICS	196,306	11%	20.88
DIVISION 7 - THERMAL MOISTURE PROTECTION			
- WATRPRF,DAMPRF,& CAULKING	10,765	1%	1.15
- INSULATION	33,876	2%	3.60
- ROOFING AND FLASHING	150,087	9%	15.96
DIVISION 8 - DOORS AND WINDOWS	43,150	2%	4.59
- WINDOWS	27,235	2%	2.90
- GLASS & GLAZING	4,000	0%	0.43
DIVISION 9 - FINISHES			
- GYPSUM DRYWALL	67,830	4%	7.21
- TILE	18,508	1%	1.97
- ACOUSTICAL TILE	109,240	6%	11.62
- WOOD FLOORING	23,790	1%	2.53
- RESILIENT FLOORING	4,876	0%	0.52
- CARPET	13,148	1%	1.40
- PAINTING	81,294	5%	8.65
DIVISION 10 - SPECIALTIES	21,175	1%	2.25
DIVISION 11 - EQUIPMENT	0	0%	0.00
DIVISION 12 - FURNISHINGS	8,195	0%	0.87
DIVISION 13 - SPECIAL CONSTRUCTION	0	0%	0.00
DIVISION 14 - CONVEYING SYSTEMS	124,000	7%	13.19
DIVISION 15 - MECHANICAL			0.00
- FIRE PROTECTION	69,233	4%	7.36
- PLUMBING	63,500	4%	6.75
- HVAC	144,724	8%	15.39
DIVISION 16 - ELECTRICAL	260,246	15%	27.68
TOTAL DIRECT COST	1,735,612	100%	184.60



CYCLICAL MAINTENANCE PLAN

Introduction

This section of the conditions assessment provides an anticipated cost for work that would be considered typical responsible exterior maintenance at the 1835 Town Hall Center. These simple activities, most consisting of inspection and minor repairs, performed at regular intervals will slow deterioration and extend the life of the already durable materials. The goal here is to recommend a limited annual investment that will help limit the scope and cost of future repairs.

Maintenance Plan

The following maintenance plan follows an itemization of exterior features and building systems.

The first columns of the chart describe the feature and location, and give the maintenance cycle for the feature. The recommended tasks and procedures will not prevent wear and tear on the building but will increase the lifespan of materials and the cost can be amortized over a longer period of time.

Perhaps the single most important maintenance activity is an annual inspection. The building exterior should be carefully inspected from the ground, preferably by two people and the same people each year, who document any signs of deterioration on any portion of the envelope. When changes are noted, consultation with an architect or engineer may be warranted. Digital photographs should be taken to accompany the written record and stored for comparative referencing the following year.

Listed below are the column headings on the accompanying chart with a brief explanation of their meanings.

Material

The building system is the feature or characteristic that requires a maintenance and/or capital budgeting line item. For example, exterior walls comprise a building system that requires periodic painting.

Location

A brief narrative description of the element location is provided.

Scheduled Frequency, Cost, Annual Cost

The fourth, fifth, and sixth columns describe maintenance activities with intervals and costs for the locations identified. Maintenance activities are largely housekeeping tasks and straightforward proactive work. The frequency is in years and the maintenance work is considered routine upkeep which might require special attention from maintenance personnel or an outside contractor. The intervals are suggested as the maximum span of time between maintenance activities. For example, the wood trim should be painted every six or seven years to retard



deterioration of the wood. Note that fractional yearly frequency means more than once a year. The cost is the estimated cost for the work based on historical information gleaned from industry standards. The annual cost is calculated for convenience to provide a total annual maintenance stipend for the building. This is idealized since some activities occur more than once a year and others only once in several years.

Comments

More detail on the building system and the maintenance work is provided. General observations about access to work or special requirements are made here.

Annual Maintenance Total

The chart has a bottom line showing the cumulative maintenance total per year which is approximately \$XXXX. This total applies only to the exterior of the building. This figure should be applied on top of annual expenses for maintenance staff, housekeeping, consumable replacements (light bulbs, etc.), snow removal, landscaping and interior maintenance items. Note that this total is averaged. Depending on the frequency of individual maintenance activities, the yearly figure may be greater or less. By budgeting the total amount annually and setting aside as a reserve funds not expended in a particular year, there should be sufficient funds for years when the scheduled maintenance expenditures are higher. This total does not include reserves for capital budget items which have been itemized under the repairs section of this report.





APPENDIX

- A) Structural Survey & Recommendations (Structures North, 2011)
- B) Mechanical, Electrical, & Plumbing Survey & Recommendations
(JRW Engineering, 2011)
- C) Limited Hazardous Building Materials Inspection
(Fuss & O'Neill, Oct./Dec. 2011)
- D) Preliminary Asbestos Inspection Report & Lead Based Paint Survey
(Cushing, Jammallo & Wheeler, August 2011)
- E) Cost Estimates (A.M. Fogarty, Feb. 2012)
- F) Architectural/Structural Assessment & Feasibility Study
(Reinhardt Associates, 2005)
- G) Meeting Materials (illustrating conceptual design evolution)
 - 10.19.2011
 - 11.14.2011
 - 12.13.2011
 - 1.30.2012
- H) MHC Inventory Form B