

STERLING 1835 TOWN HALL

**ARCHITECTURAL / STRUCTURAL ASSESSMENT
and
FEASIBILITY STUDY FOR UNIVERSAL ACCESSIBILITY
of the
STERLING 1835 TOWN HALL BUILDING**

JULY 8, 2005

STERLING 1835 TOWN HALL

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- B. Code Analysis
- C. Existing Conditions Survey
- D. Photographs
- E. Treatment Recommendations
- F. Exterior Repair / Restoration Estimate

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Reinhardt Associates, Inc. conducted an Architectural and Structural analysis of the existing observable building and site conditions on January 28th, February 1ST and March 7th, 2005. RAI's analysis also included reviews of previous building reports and studies. RAI found the 1998 Study prepared by Suzanne Carlson to reflect the previous progression of additions and renovations and this information is not repeated here. Generally the building was found to be in good condition with some deficiencies that will be further described.

The Building envelope was generally intact and serviceable. The slate roof, wood clapboard and wood windows afforded good weather protection although all exterior surfaces have weathered considerably given their appearance and presumed age. The Building's foundation system is in reasonably good shape and is further discussed in the Structural Engineer's Analysis.

The Building's interior has undergone several renovations some of which have caused significant damage and/or elimination of important historic architectural elements and is more fully repeated in the Conditions Survey portion of this study. The observable interior surfaces, materials and elements appear in good to very good condition with some exceptions that will be further discussed.

Exterior Observed Deficiencies:

- Extensive surface decay of unprotected wood surfaces.
- On-going repairs to wood trim at North corner of upper portico.
- Partial to complete paint failure on all exposed surfaces including siding, trim, fascias, soffits, columns, metal railings, steel fire escape and brick surfaces.
- Severely deteriorated brick and mortar foundations.
- Slate roof tiles exhibit some surface degradation with some delamination of surfaces especially in areas of observable biological growths.
- **Observable sag and deflection in roof deck. Significant crowning of ridge at roof truss locations.**
- Exterior window glazing putty is mostly missing or broken. Some broken window glass. Screens missing from aluminum storm windows.
- Refer to Conditions Survey / Treatment recommendations for further information.
- Asphalt surfaces have many cracked, broken area most likely from frost and poor drainage.
- Rear drive area is unpaved and heavily pitted.

Interior Basement Observed Deficiencies:

- Interior brick bearing walls and brick foundation walls have severely deteriorated mortar joints and brick surfaces from previous and prolonged exposure to moisture. Condition affects approximately 30-40% of brick surfaces. Deterioration of masonry structure has structurally impaired these load bearing walls.
- Efflorescence on brick walls indicate previous moisture conditions. Efflorescence is mostly an appearance issue and does not impair brick or mortar.
- Interior brick bearing wall partially removed at newer piping installation possibly affecting structural adequacy of wall in this area.
- Rubble foundation at North end of West wall has open diagonal joint from removal of previous stairs.
- Boiler Room fire door is not self-closing.

Multiple steps / levels in concrete floor creates tripping hazards. Newer, raised concrete floors are not level.

- Broken raised slab construction and remains of previous floor mounted plumbing fixture create safety hazards.
- Operation of (2) rolling doors could not be verified due to locks.
- Windows are physically damaged with broken and missing components.

Interior First Floor Observed Deficiencies:

- Minor water staining of suspended ceiling tiles from previous roof leaks, wall flashing at Second floor fire escape door / sill or possibly Second Floor hydronic radiation piping.
- Stairwell paint and plaster skim coat cracked and flaking off from probable cold temperatures and temperature fluctuations caused by inadequate heating of space.
- Original wood trim and casing at window heads was cut and removed during installation of previous installed suspended acoustical ceiling system.
- Bottom of exterior stair exit door is heavily corroded possibly from build-up of snow on exterior of door.

Interior Second Floor Observed Deficiencies:

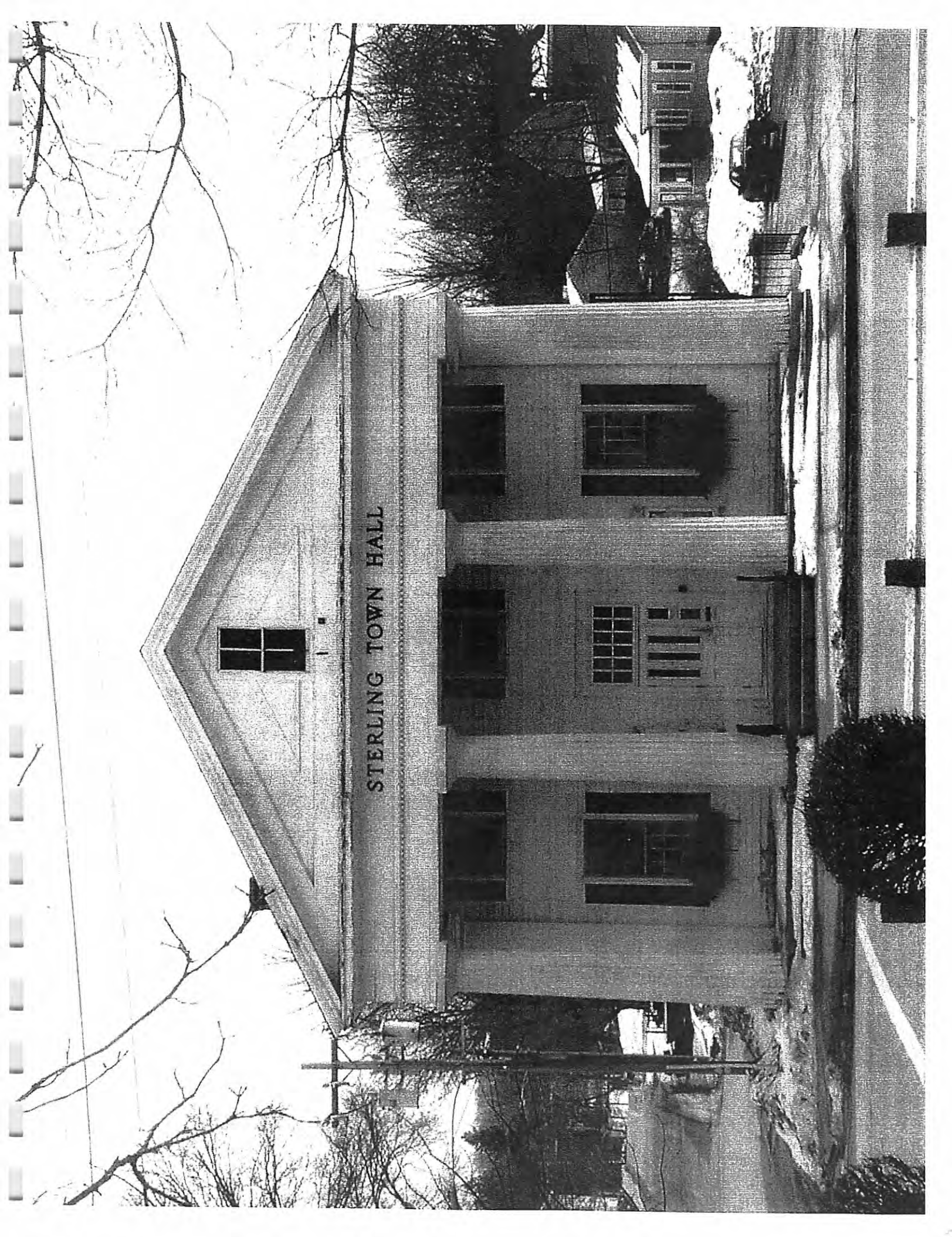
- No guards at Stage windows cause safety concern from accidental falls, accidental glass breakage.
- Plaster damaged and missing near previous chimney flashing leak. Chimney and flashing previously repaired.
- Water staining of some suspended ceiling tiles from previous roof leaks.
- Cracked plaster walls, some missing plaster and flaking paint observed primarily below balcony, balcony stairs and at exterior walls.
- Apparent stress cracks in Stairwell paint and plaster skim coat possible from removal of original floor structure.
- Bottom of fire escape wood door and recessed wood panels have water damage and some delamination.
- Door from Lobby area to Meeting Room has cracked / split wood panels.
- Possible vinyl asbestos tile and mastic in office space. Tile is intact and not direct / current hazard.
- Wood flooring finish is worn and damaged in areas.

Interior Balcony Level Observed Deficiencies:

- Balcony stair does not have a handrail.
- Balcony stair guardwall has insufficient strength to prevent serious fall.
- Cracked, loose and missing plaster.
- Balcony lacks lighting and switching
- Original board and batten ceiling removed and replaced with gypsum board at areas of previous truss repair.

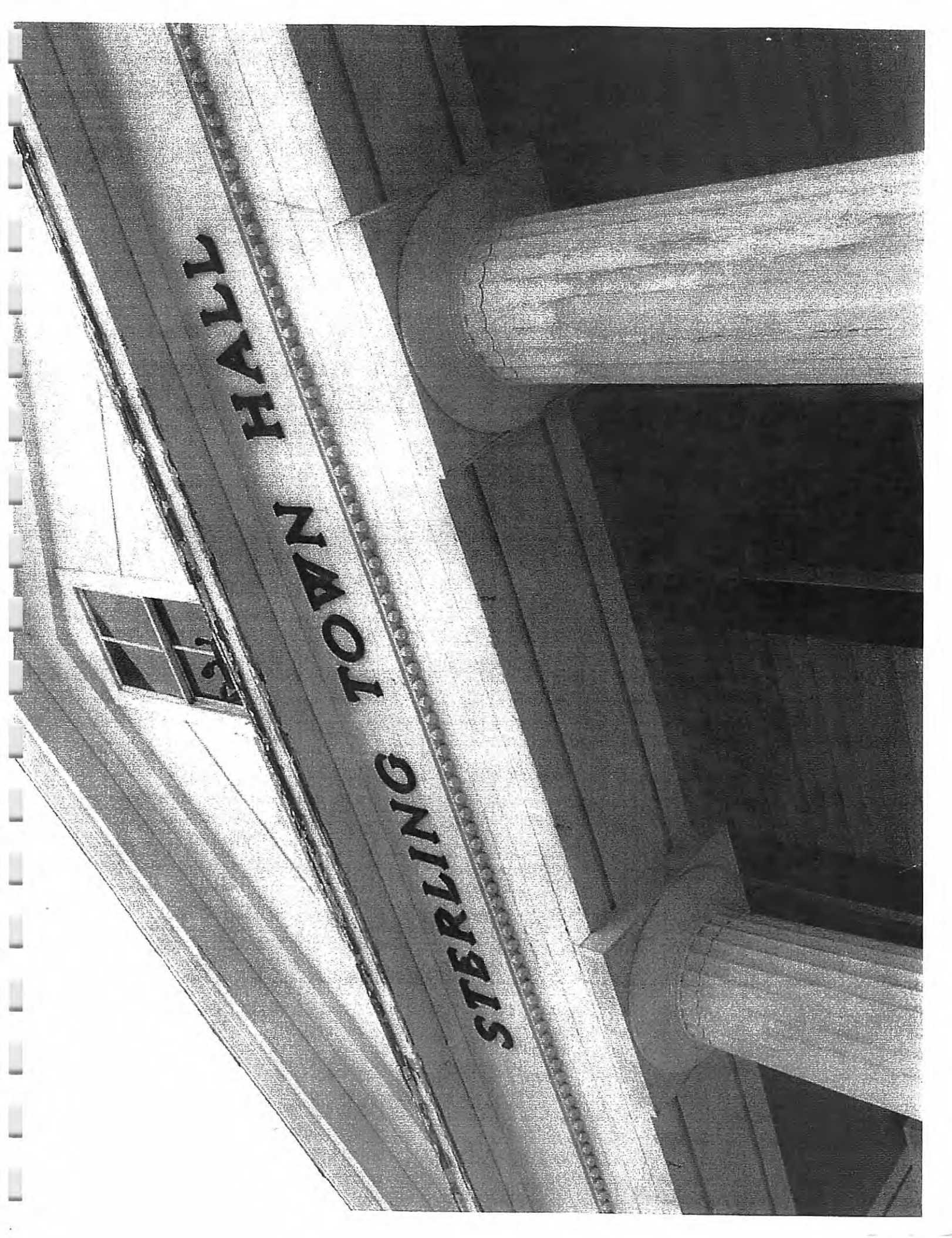


Second Fl. Meeting Room Circa 1920's



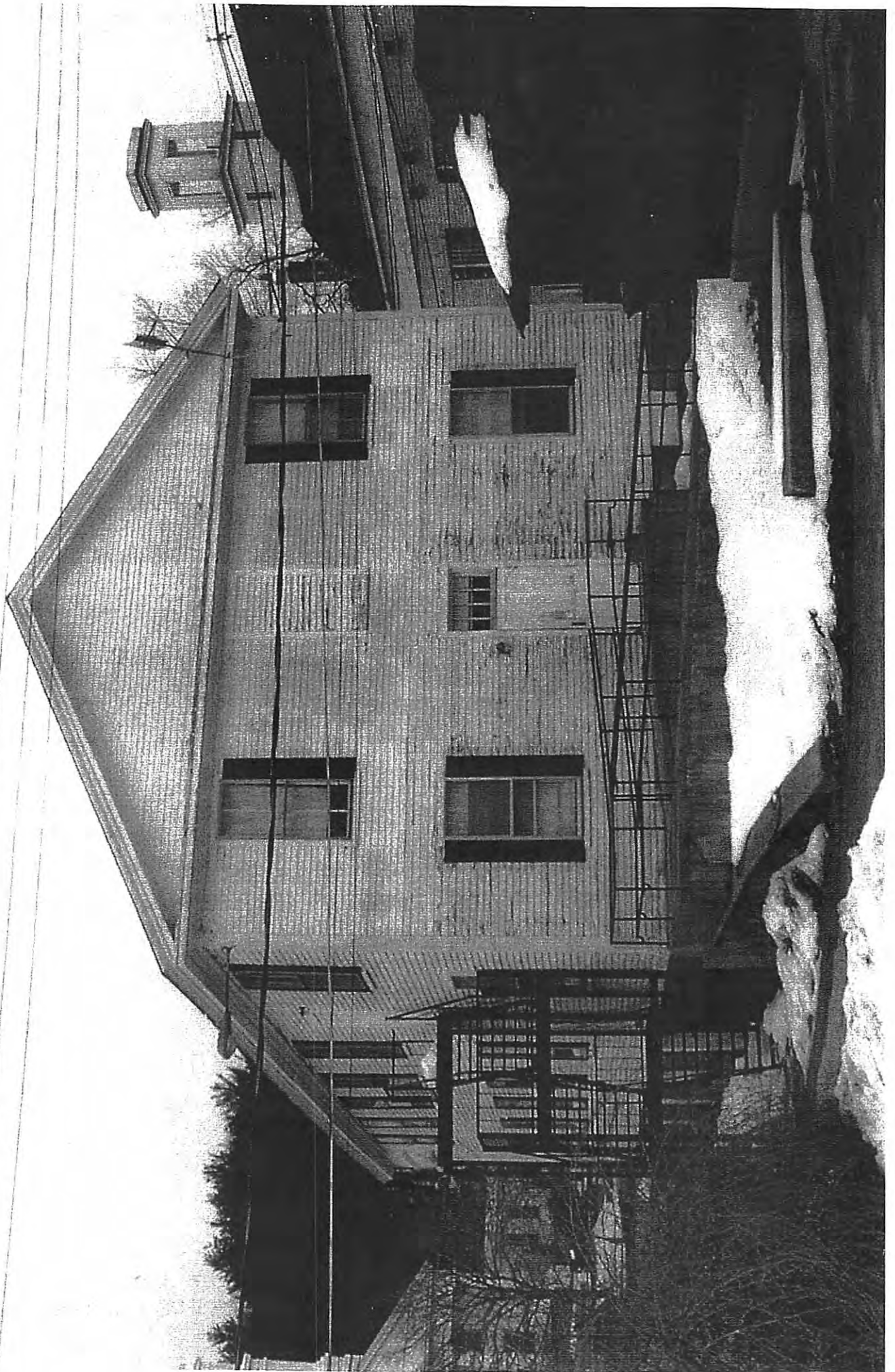
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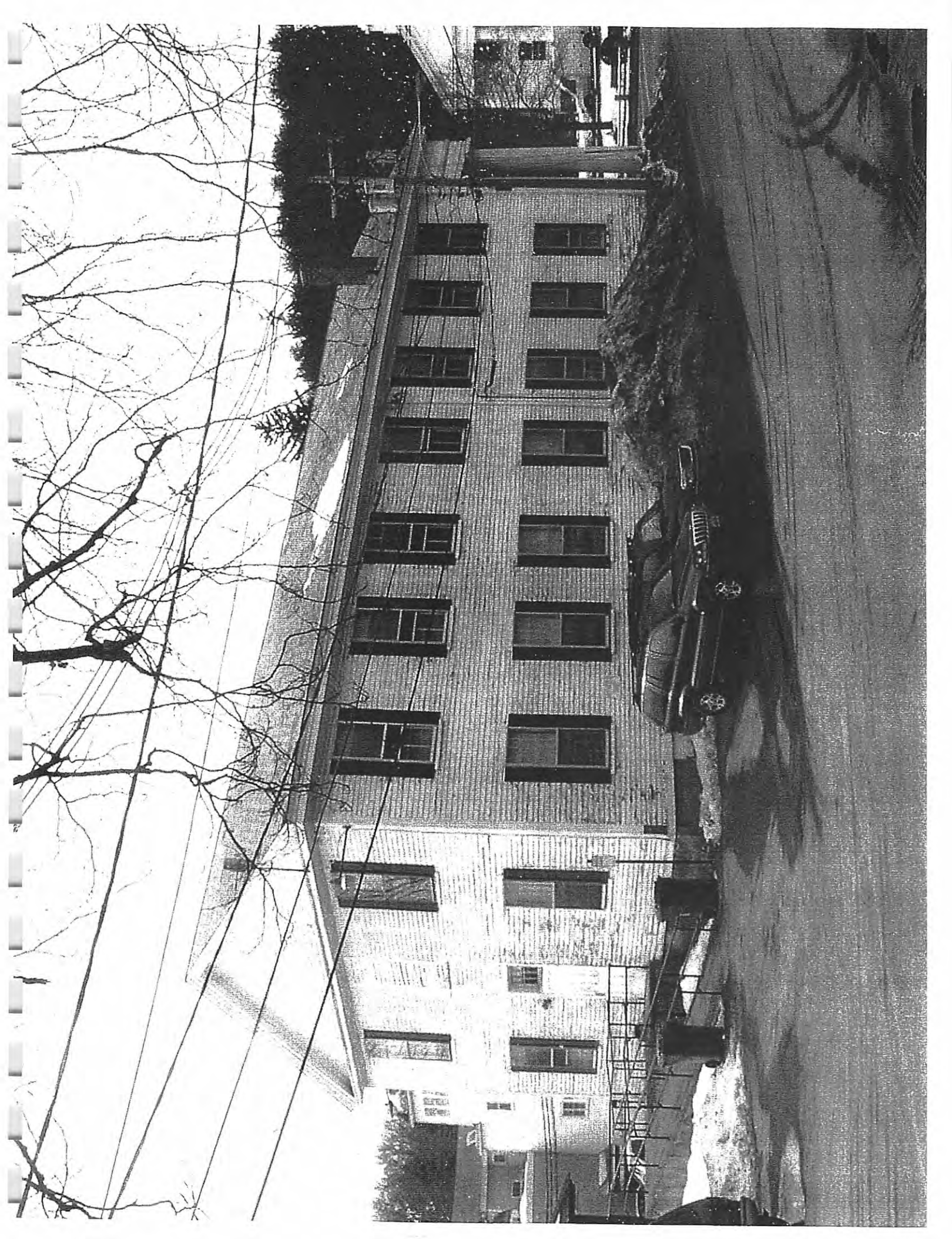
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The Massachusetts State Building Code 780CMR will govern the existing conditions and any future proposed work to this building or site. Specifically Chapter 34 Repair, Alteration, Addition and change of use of Existing Buildings will regulate code compliance for this existing historical building. Generally speaking an existing building that is not undergoing repair, alteration or addition is grand fathered from compliance from current codes. The assumption being that the building was built, repaired, altered or added onto in accordance with the prevalent codes at the time.

Notwithstanding consideration of the above the Building Code Chapter 34 does require and enforce, in the interest of public safety minimum provisions for means of egress and the elimination of hazards in the means of egress. RAI's review of the existing building conditions identified the following hazards to the existing means of egress.

- Snow and ice was not removed from exterior stair exit door at time of review. Exit door could not be opened. This item is an ongoing maintenance issue and not specifically a building deficiency.
- First floor multi-purpose room on exit door to fire escape has interior screen door that swings inward and not in the direction of egress travel as required.
- Fire escape structure is not secured at Second floor and the fire escape exhibits significant sway. Refer also to structural review for additional commentary. Fire escape was also observed to be partially blocked by fallen snow from the roof.
- An exceptional amount of snow was found stockpiled along North exterior wall of building. Snow appears to be from roof and adjacent road and parking area. This snow blocked access to the electrical meter and obstructed the boiler make-up air vent.
- Basement boiler room door is not self-closing.

Remaining building conditions appeared to be in general conformance to previous codes with the obvious exception of the Massachusetts Architectural access board (MAAB) rules and regulations, 521 CMR. These MAAB regulations provide for handicap accessibility in public buildings and spaces and are similar to the American with Disabilities Act (ADA) that provides for accessibility in areas of employment. RAI's review of the existing building conditions identified the following non-accessible conditions:

- Previous installed accessible water cooler was removed.
- Toilet room grab bars installed lower than 33" above floor.
- Toilet room sinks do not have minimum 29" clear below bottom of apron.
- Toilet room mirrors installed more than 40" above floor.
- Toilet room piping below sinks is not insulated or guarded.
- Toilet room baseboard convectors project into clear floor space for toilet.
- Men's toilet room sink projects into door pull-side clearance.
- Women's toilet room door does not have minimum door pull-side clearance.
- Men's toilet room door does not have minimum door push-side clearance.
- Stair door does not have lever type hardware.
- Many other doors do not have lever type hardware.
- Ramp at rear of building slightly exceeds 1:12 maximum slope requirements.
- No handicap designated parking and signage.

In regard to any proposed repair, alteration or addition to the existing 1835 Town Hall, an analysis of the current building statistics is required and is provided as follows:

Building Area:

Basement:	3053 GSF
First Floor:	3053 GSF
Second Floor:	3053 GSF
Second Floor Balcony (Mezzanine):	<u>898</u> GSF

Total Building Area: 9159 GSF

Note: Mezzanine areas do not contribute to building area

Building Classification: Mixed Use

B – Business

A – Assembly

S2 – Storage, Low Hazard

Construction Classification: N/A

The equalized full and fair cash value of the 1835 Town Hall as listed with the Town's Assessors Office is approximately \$167,000. Therefore pursuant to MAAB any future addition, alterations or repairs to the building exceeding 30% or \$50,000, over a two (2) year period, will require the entire building to comply with current MAAB regulations; excluding roof, window, masonry and septic repairs/replacement, retrofitting for automatic sprinkler or hazardous material abatement costs.

Major compliance requirements and/or variances would include but not be limited to the following:

- Accessible front main entrance.
- Accessible Second Floor, if available for public use.
- Area of rescue assistance from all non-grade accessible levels, if automatic sprinklers not installed.

In regard to requirements for installation of automatic sprinklers, the Town has adopted MGL C148 §26G requiring sprinkler installations in existing buildings greater than 7500 GSF when substantially renovated or altered. Substantial renovations is further defined as work that is major in scope and expenditure when compared to the work and expenditure to install a fire protection system. The issue of fire protection should be discussed with Fire Department in planning any future addition or renovation.

Based upon the apparent historical nature of this 1835 Sterling Town Hall and its listings on the National Register of Historic Places the building qualifies as a partially preserved building under Massachusetts Building Code 780CMR 3409.0 which permits in-kind material repairs and replacement without compliance with most current codes including the Energy Conservation Code, 780CMR 13.

The Town of Sterling's own Protective by Laws identifies the 1835 Town Hall property with its Town Center District and as a municipal facility it is a permitted use in this district. Although a current property survey is not available it is believed the existing Building does not comply with dimensional controls for Town center properties requiring a 40 ft. front yard setback, 10 ft. and 25 ft. Side and rear yard setbacks respectively and therefore the 1835 Town Hall is probably a non-conforming structure.

The proposed handicap accessibility addition for a new elevator and stair would require a special permit from the Board of Appeals, and if the addition were to extend into an existing required setback then a variance would also need to be granted by the Board of Appeals. It should also be noted that a non-conforming structure, which has been abandoned, or not used for a period of 2 years, shall lose its protective status and be subject to all provisions of the current Zoning Bylaw.

The Sterling Protective Bylaws also designate minimum amount of off-street parking required for each Building use. Although Town center district parking requirements are reduced 50% the available parking is less than current zoning requirements but based on a continuing existing use, compliance with newer parking regulations would not be required.

The Building's existing sanitary system is presumed by the Town to be inadequate and is not in compliance with Title 5 regulations for sanitary systems. The Building occupancy and septic system flow rate based upon full occupancy, is as follows:

1st Floor meeting space @ 1,278 S.F./ 15 S.F. per Occupant = 86 Occupants
2nd Floor meeting space @ 2,380 S.F./ 15 S.F. per Occupant = 159 Occupants

Therefore 245 Occupants @ 3 gal. per day (GPD) = 735 GPD (assembly)

(2) offices of 609 Sq. Ft. total @ 75 GPD/ 1,00 S.F. = 46 GPD (office)

Total Estimate Flow = 781 GPD

Designated flow rate from combined Fire Station/ Old Town Hall sanitary facility is 610 GPD (see Ross Associates Meeting Minutes 5/9/00) and provides an insufficient capacity for full occupancy at above described densities.

In order to have a compliant flow capacity total assembly occupancy must be limited to 188 maximum Occupants, assuming office is left unchanged. This limitation need to be coordination with and approved by the Building Inspector and Fire Inspector.

Domestic Cold Water System:

The existing Domestic Cold Water Service is a three-quarter inch (3/4"), which enters through the basement foundation wall on the Southeast side of the building. A three-quarter inch (3/4") water meter and pressure regulating valve are installed on this cold water service line. The water service line is not equipped with a backflow prevention device. At the time of installation a backflow prevention device was not required.

The present Massachusetts Plumbing Code 248 CMR states "A potable water supply system shall be designed, installed and maintained in such manner as to prevent contamination from nonpotable liquids, solids, or gases from being introduced into the potable water supply through cross connections or any other piping connections to the system".

In order to insure the protection of the Town water from any cross connections, etc, the installation of a reduced pressure zone backflow prevention device is required.

The existing plumbing fixtures; water closets, lavatories, etc. which are "Grandfathered" do not meet the present plumbing code energy requirements. Energy requirements in regards to water usage. The existing water closets require three (3) gallons of water per flush, when the new code mandates one and one half (1-1/2) gallons per flush. Faucets sets on lavatories for public use require metering faucets, etc.

The domestic water distribution system presently is approximately fifty (50) percent insulated. The Massachusetts State Building Code 780 CMR, Chapter 13, requires one-inch (1") thick insulation provided for piping carrying fluid having a temperature of 140 degrees F or less.

Sanitary Waste & Vent System:

The existing sanitary waste & vent system as installed is in compliance with the Massachusetts State Plumbing Code that was current at the time of installation. The present Massachusetts State Plumbing Code has adapted more stringent requirements regarding environmental issues.

For example: The present plumbing code mandates that all floor drains be equipped with Trap Primers. Trap Primers are installed on floor drains that do not receive sufficient water to maintain a trap seal. Once the trap seal is lost, do to evaporation; sewer gases will escape to the spaces atmosphere. Trap Primers discharge water to the floor drain trap maintaining the trap seal.

Fire Suppression System:

The building presently does not have a fire suppression system. At the time the building was constructed there was no code requirement for one. Today Chapter 148 of the Massachusetts General Laws, effective May 1998, states "In any city or town which accepts the provisions of this section, every building of more than seventy-five hundred square feet in floor area or every addition of more than seventy-five hundred gross square feet in floor area shall be protected throughout with an adequate system of automatic sprinklers in accordance with the provisions of the state building code."

Depending on the square footage of any future additions, the above requirements mandated in Chapter 148 of the Massachusetts General Laws for automatic sprinklers will be reviewed.

Heating and Ventilating System:

The existing heating system which consists of two (2) Weil McLain Boilers, circulating pump, piping distribution system which has been segmented into five (5) heating zones, has been installed in compliance with the present codes.

The facility presently does not meet the present Mechanical Ventilation Codes, which mandates twenty (20) cubic feet per minute (cfm) of outside air per person to be mechanically introduced into the facility during occupied periods of operation.

The electrical life safety elements of the building are mostly in good order. The building has a complete working fire alarm system with pull stations at exits to each floor, adequate audio/visual signaling, and complete detector coverage. Some pull stations are of an older variety. The fire alarm system is conventional (non-addressable) with dedicated telephone jacks for alarm. There is a four-zone fire alarm annunciator in the main entrance vestibule. There are fire alarm strobes in the toilet rooms for ADA compliance. Much of the fire alarm wiring in unoccupied areas is run exposed and is secured to the building with staple clips.

The interior of the building has adequate exit and emergency lighting, except in the Basement. Except for one existing unlit exit sign, the Basement needs exit and emergency lighting. There is no emergency lighting in the boiler room or by the electrical service main distribution panel. There do not appear to be provisions for emergency lighting for egress at the exterior of the building.

There are about a dozen ungrounded outlets, which would only need to be replaced with grounded outlets under renovation.

Above the ceiling on the First and Second floors and along the ceiling in the Basement are many wires and cables which are unsupported, not tied together, and not run in an orderly fashion. In the Basement, there are many apparently abandoned cables, including telephone wiring, and cabling is often run with other piping through the same crevices and narrow holes in the building structure. In the Attic above the Second floor suspended ceiling are older fixtures concealed from view, which are mounted above retrofit support beams for the building. These fixtures along with very old knob and tube wiring in the attic spaces are still installed even though they have been abandoned. Abandoned equipment and wiring needs to be disconnected and removed if any renovation is to take place. Remaining wiring needs to be routed and supported in an orderly fashion.

Much of the data cabling and some data jacks once used in the First floor Meeting room when it served as a library has been concealed loose above the suspended ceiling. This cabling needs to be disconnected and removed under any renovation. This wiring and corresponding data jacks appear to be in excellent condition and perhaps they may be reused.

The existing observed building conditions are documented in the following existing conditions survey. The building history and progression of additions and renovations was previously reported in the 1998 Carlson Study and is excerpted here for reference:

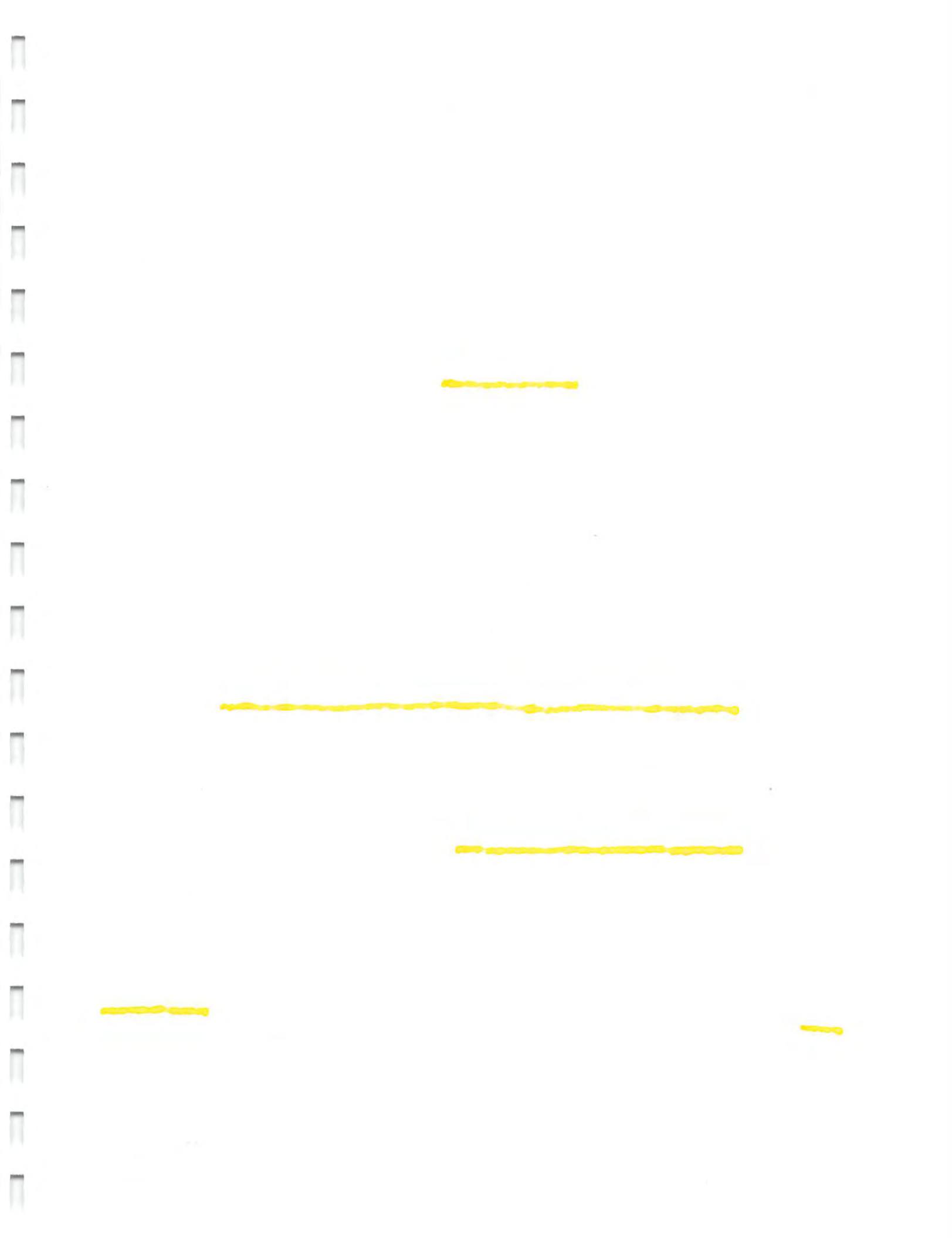
The New Town Hall was completed in November 1835 at a cost of \$2,857.85. An additional \$2,000.00 was given to the Town by Jane Bailey Kilburn, widow of Capt. Eli Kilburn, for the enlargement and beautification of the Hall. This gift, which was accepted at the 1893 Town Meeting, became a bequest with the death of Mrs. Kilburn several days later. When the addition was made, the architecture was not changed. The interior was improved and frescoed; a gallery was built at the front end of the Second floor and a furnace and other modern convenience were added. The Sterling Town Hall has had a long tradition of civic and community use. From its first construction, the First floor was used for such things as the exhibition hall during the cattle show, graduations, dinners and suppers, singing masters drilling students in the upper hall, antique fairs, and dances, in addition to annual and special Town Meetings.

Later additions of a fire escape and handicapped ramp at the rear and basement doors; remodeling to install handicapped toilets and a code complying stairway to the Second floor have not altered the architectural significance of the building. The exterior remains essentially in tact with an 1893 rear addition designed as an extension to match to existing building. As part of the work, all the second story window sash were changed to a 2/2 light configuration.

The Town of Sterling is fortunate to have this outstanding example of an early, "high Style" Greek Revival design serving as a landmark on the Sterling Town common. Designed and built in 1835 by John Springer, it is the oldest public building in Sterling. This 2 ½ store classic temple front building features four handsome fluted Doric columns built by John Stevenson supporting a simple but heavy dentilated entablature and fully enclosed pediment with a deep coffered ceiling and capped Doric plastered corner posts. The main facade is horizontal flush boarding with the side and rear walls clapboard. With the except of the 1983 addition that gave the building a length of seven bays, the exterior has not changed from its original construction. An original fan shaped louver has been overlaid by a double hung window. The louver was left in the attic and is in good condition awaiting its return to the pediment. The columns sit directly on a base consisting of two granite steps bordering the sidewalk.

The general condition of the building is good. The exterior historical appearance of the building although is significantly degraded by several issues including paint finished, aluminum storm windows, aluminum shutters, deteriorating masonry foundations and failing slate roofing.

The exterior wood surfaces are deteriorating from the previous loss of their protective paint finish. In many areas there is a complete paint failure with extensive cracking, spalling and missing paint finishes. Moisture has infiltrated the exterior surfaces in these areas causing significant surface deterioration including splitting of wood siding, cupping and bowing of clapboard, surface mold, swelling and withdrawal of wood fasteners, and further opening of joints between wood boards. Significant build up of paint has also occurred in areas and was observed to be approximately 1/16 inch thick. This represents many successive coats of paint. The total weight of the accumulated paint finish will sometimes be



enough to pull the paint finish from its substrate. Exposed wood surfaces have deteriorated not only from moisture but from ultra-violet radiation which has also degraded the wood surface. It is not certain that the current wood siding can be adequately and reasonably prepared to accept a long lasting paint finish and wood siding replacement may need to be considered. In the interim, a technical specification for the preparation and painting of exterior wood is included Phase IV of this report. In addition previous caulking and joint sealers have also failed due to age and will need to be removed and replaced.

The original brick masonry foundation wall, principally on the South elevation was previously painted in an attempt to prevent moisture infiltration and brick and mortar damage. Unfortunately the paint prevented trapped moisture from evaporating from the brick surface. The trapped moisture would then cause brick surface and mortar failures evident in the numerous brick spalls, loose, flaking brick surfaces, missing and loose mortar and general erosion of the exposed masonry. In areas close to grade moss is growing in the deteriorated mortar joints. The original mortar appears to be a very light color and of a softer consistency probably from a higher percentage of lime in the mortar mix. While this type of mortar provides good adhesion it is characteristically softer and is less durable in exposed conditions.

Several significant areas of brick damage have occurred particularly at the jambs of the rolling Basement doors from probable accidental, physical contact and appears in at least one location to have been previously repaired.

The condition of the exterior double-hung wood window is serviceable with the previous addition of aluminum storm windows. The storm windows although unsightly protect the original wood windows from the weather. The First floor windows are 12/12 lilted sash and the Second floor is 2/2. The glazing compound is in general poor shape with most areas having broken, loose or missing compound caused by previous weather exposure and the sun's ultraviolet lights. Paint surfaces are also in poor shape possibly from seasonal condensation in the interstitial space and weather. Basement windows are particularly damaged and in many areas are not intact and have been boarded up. The aluminum storms have a unaesthetic natural mill aluminum finish and many are missing their screen sash.

The original wooden shutters have been removed and replaced with prefinished aluminum louvers of very poor and non-historical proportion. The original shutter size can be observed by the distinct peeling paint finish on each side of the windows. The paint finish of these aluminum shutters appears to be fading from prolonged exposure and corrosion is occurring at the steel drywall type fasteners used to secure the shutters. On the rear elevation (2) shutters are missing and may have been used to replace shutters lost on more prominent elevations. Historically correct shutter size should match exterior window frame height and one-half window frame width, to conceal window when closed.

The slate roof is not all original and has been extensively repaired and replaced over the last 170 years. The current physical condition of the slate is satisfactory with evidence of multiple previous repairs of different slate colors. The slate above the rear stage is of a slightly different color as the predominant original slate color. It appears the original slate was a fading green variety. There also appears to be a blackish moss type growth on the slate tiles that is causing tile to split and delaminate. Based upon the overall age of the majority of the roof it is likely that more and more frequent repairs will be required until the entire roof is replaced.

There are fortunately few flashing points to the roof. The most prominent of which is the copper ridge flashing. The copper ridge is currently serviceable but is also subject to accelerating degradation especially at the fastener locations which are non-copper, causing electrolytic corrosion at the points of attachment. The ridge flashing lap joints were also not well secured or sealed. Metal eave edge flashing is painted and in similar condition to roof ridge.

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The wood roof deck has sagged and deflected in areas but does not appear to have done so to the point of structurally impairing its load carrying capacity. In one particular area it appears previous truss repair may have lifted the truss ridge and caused a visible crown along the roof ridge.

There are many other localized and specific deficiencies observed on the building exterior and were identified as follows:

- Base of wood columns at portico are loose and subframe appears to have deteriorated due to previous moisture damage. Wood is particularly vulnerable when in contact with stone or masonry. South facing column joints are widening. Snow is left in contact with wood columns accelerating column deterioration.
- Previous concrete portico slab installation appears to be trapping moisture at wood column base because slab was installed higher than column base stone.
- Failed sealant joint at concrete portico slab to wood base board. It appears concrete was poured adjacent to original wood base trim.
- Flush wood siding on front (West) elevation is cupping or ridging at joints due to swelling with moisture.
- North West corner of roof eave has heavy water damage with rotting/falling wood trim.
- No flashings observed on projecting column capitals but should be present and should be further inspected.
- Failure of most previous joint sealers due to age and differed maintenance.
- Original portico light fixture is missing, replaced with exposed floodlight lamp that is unsuitable to quality of building.
- Front entrance doors were replaced with 36 inch door and sidelight for accessibility.
- Front handrails have some surface rust.
- Exit door from interior stair is deteriorated at base due to moisture, metal plates have been installed to reinforce door but will continue to trap moisture and damage door.
- Concrete areaway at exit door is cracked and spalling. Areaway is subject to snowfalls from roof and will block exit door. Metal railing has surface corrosion.
- Basement window sills in proximity to ground are fully rotted.
- Steel fire escape has surface corrosion especially near joints and edged. Steel supports are in contact with ground and subject to prolong moisture contact. Top rail of fire escape is 36" high, current code would require 42" guard rail.
- Rear (East) accessible entrance door has poorly repaired jamb near sill. Door is not original or historically accurate. Light fixture near door is loose.

- Second floor Stage door opening has been previously infilled with wood siding to prevent door usage.
- North East corner board of building has been cut and partially removed. Missing piece store at Building.
- North (Maple Street) Basement windows have dirt and moss growing into windows.

In regards to site condition, the lot area is very small and available site area is very constrained. The condition of the asphalt pavement is fair and will require future repairs particularly on South side subject to poor drainage and frost heaves. Repairs to existing deteriorated asphalt and paving of rear drive could be coordinated to occur with a proximate Town paving project. There appears to be an asphalt patch on South side of building where previous excavation occurred. Available parking on-site is also limited and by itself could not satisfactorily serve the building. This is further exacerbated by dangerous snow and ice falls from the building roof. Snow falls were observed to be blocking both stair exit doors and fire escape and broken icicles were observed on North elevation, some a couple of inches in diameter.

Street snow plowing deposits large amounts of snow along North elevation and prevents parking near the building and possible car damage from snow and ice falls. At one time this snow deposit was observed to have been built up over six feet high and was in contact with the building. This is certainly damaging the wood framed and sided building and needs to be prevented in the future. The boiler make-up air vent is also located in this area and is obstructed by snow at times.

The rear of the building contains a concrete access ramp in good condition with only minor cracking, steel handrails with failing paint and surface corrosion, and a stone retaining wall with broken mortar joints and broken concrete capstone. There is also concrete paving over the granite foundation that is spalling.

Other observed site conditions area as follows:

- Poor drainage and puddling near basement rolling doors.
- Front (Main Street) sidewalk did not curb cut at cross walk.
- Electrical meter as blocked/obstructed by large snow pile.

The Site

The observations made are not intended to address or include any geological conditions or site stability information. For information concerning these conditions, a soils engineer should be consulted. Any reference to grade is limited to only areas around the exterior of the exposed areas of foundation or exterior walls. The observations were visual in nature and do not attempt to determine drainage performance of the site or the condition of any underground piping, including municipal water and sewer service piping or septic systems. Areas too low to enter, or in some other manner not accessible, are excluded from the inspection and are not addressed in the report.

The grades adjacent to the perimeter of the building were snow covered at the time of this reporters visit. Therefore, the adequacy of drainage away from the building could not be determined. Another aspect of the grading adjacent to the building that could not be determined was the proximity of grade to the exterior wood structure.

The Exterior

Areas hidden from view by the exterior finish, vegetation, or stored items cannot be judged and are not a part of the observations made. The original structure has an exterior of wood siding. The condition of the siding appears to be in generally poor condition due to peeling paint. The exposed wood has weathered to the point that it may not be appropriate to only repaint the building. Additional preparation of the wood will be required and may not provide the necessary bonding of the paint to the wood.

An exterior metal fire escape is located at the right rear of the building and was visually inspected from the top of the grade to the upper landing. The condition of the steel framing members of the stairs is in generally good condition. The portion of the stairs that is not in compliance with acceptable engineering practice is the attachment to the building. The stair does not appear to be designed as a freestanding assembly, and no attachments to the building were observed for the upper half of the structure. The handrail at the upper landing is not attached to the building. There is a large gap between the upper landing and the exiting doorway. The attachments of the stair to the building at the lower half of the building are questionable. The spacing of the vertical balusters is not in compliance with current code. The connection and condition of the stair stringers to the foundation needs remedial work (i.e. cleaning, painting, etc.). The foundation for the stairs was not observed and it cannot be determined if it is adequate. The depth of the foundations was not determined to verify if frost protection is provided.

Along the right side of the building, there are two large and one small opening for access to the basement from grade as well as two windows. The two large opening have slide by wood doors. Between the doors are brick walls/piers that are in need of remedial work. One of the piers is bowing and both need re-pointing and brick repair. The small door has been infilled with plywood.

Observing the roofline from grade, the ridgeline is uneven and a hump appears at the approximate location of one of the trusses. Unevenness of the roof plane was also observed. This unevenness can be contributed to the size and spacing of the roof rafters as well as the condition of the roof rafters and long-term deflection. Further investigation of the ridgeline and roof rafters should be undertaken from within the buildings attic space. Undersized rafters will need to be replaced during renovations based on required loads of the Commonwealth of Massachusetts State Building Code.

The Interior

The interior foundation walls were observed from the basement. The existing foundation walls consist of mortared rubble stone, brick and cut granite. The mortared rubble stone that was observed appeared to be in generally good condition. Additional concrete block piers and reinforcing of existing brick piers have been installed in the past. With the addition of new concrete block piers, additional wood beams were also installed in order to strengthen the framing for the first floor.

There is an interior brick wall within the basement approximately 1/3 forward of the rear wall. This brick wall is in need of repointing and brick repair.

Very little of the first floor framing was observed from the basement. At some time in the past, a gypsum board ceiling was attached to the underside of the wood framing. The additional wood beams that were mentioned above were apparently installed to strengthen the existing wood floor joists. Verification of the connection between the existing floor joists and the new wood beams was not conducted because the gypsum board ceiling was installed. The floor joists need to bear directly on the wood beams in order to provide additional support. If gaps exist between the joists and beams, the floor joists can deflect vertically until the gap decreases to zero, thus floor movement can occur and cause cracks in wall finishes.

The second floor framing was observed by moving sections of the suspended ceiling. The wood floor joists that were observed appeared to be in generally good condition. The steel beams supporting the second floor joists were observed from the rear office area of the first floor. Steel columns support the steel beams. The steel framing appears to be in generally good condition.

The portion of the roof framing open to view was observed from the balcony. A majority of the roof framing was hidden behind ceiling. The only framing that was observed over the main portion of the building were the steel tie rods and cables that resist the horizontal forces of the timber trusses and the intermediate horizontal timbers, also part of the timber trusses. The connection of the cables and tie rods to the timber framing was hidden behind the gypsum ceiling.

Proceeding through a window opening, observations of the attic framing above the entry alcove were conducted. The framing consists of heavy timber framing supporting roof rafters and ceiling joists. Most of the timbers have splits and checks, none of which seemed abnormal for the age of the building. Most of the pegged joints appeared tight.

Report review

A review of the existing reports provided by the owner indicates that the building had structural assessments in the past. The reports that were supplied consist of the following:

1. Interim Report, Horizontal Tie Replacement, Sterling Town Hall, Sterling, Massachusetts, prepared by Harvey & Tracy Associated, Inc, Worcester, MA dated August, 1987.
2. General Structural Assessment, Framed Floors, Existing Town Hall, Sterling, MA prepared by Harvey & Tracy Associated, Inc, Worcester, MA dated August 29, 1997.
3. Town Hall, Historical Commission, Town Hall Committee, Library Building Committee, prepared by Mr. Paul DeSalvo, Professional Engineer dated February, 2002.

There are questions regarding the installation of the ties noted in the Interim Report by Harvey & Tracy Associates. The report states that three of the four tie rod assemblies "... do not appear to be structurally adequate for code mandated loads..." Also in Part VI – Recommendations, the report states "New tie rod assemblies should be designed and installed to replace all of the existing tie assemblies including the ones recently installed." I was informed verbally that the ties were redesigned and installed, but at the time of this report I do not have any documentation that this work was completed.

Conclusion

The main components of the structure are in good overall condition. The tie rod/cable assemblies need further investigation to determine adequacy and compliance with the Building Code. In order to accomplish the engineering for the ties, additional investigation is required. Access to the existing connection will require the removal of the gypsum ceiling that is now covering the joint. In addition to the work required for the ties, further investigation of the attachment of the fire escape stairs to the building will be required. Allowing access to the framing within the wall is necessary to determine how the stairs can be attached to the building. Re-painting of the building will be covered in the Architectural portion of the report.

We have determined that the framing for the building can sustain the loads required by the Commonwealth of Massachusetts State Building Code, Sixth Edition for the following:

- Office (excluding high density filing systems)
- Educational
- Assembly (without impact loads)

In Closing

This report has been provided as a general guide to help the client make his/her own evaluation of the overall condition of the property, and was not intended to reflect the value of the property.

Report Limitations

This report is intended only as a general guide to help the client make his own evaluation of the overall condition of the property, and is not intended to reflect the value of the premises. The report expresses the personal opinions of the reporter, based upon his visual impressions of the conditions that existed at the time of the site visit only. The observations and report are not intended to be technically exhaustive, or to imply that every structural component was inspected, or that every possible defect was discovered. No disassembly of equipment, opening of walls, moving of furniture, appliances or stored items, or excavation was performed. All components and conditions, which by the nature of their location are concealed, camouflaged or difficult to inspect, are excluded from the report. No physical testing was performed to determine the adequacy of the structural system.

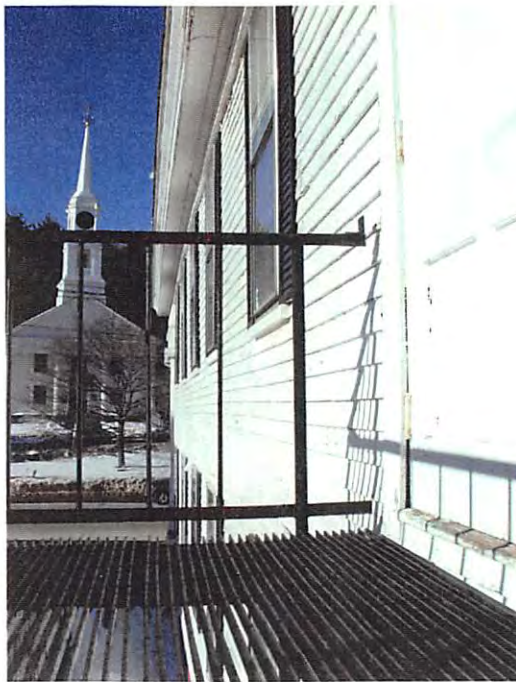
The systems and conditions that are not within the scope of the structural assessment include, but are not limited to the following: formaldehyde, lead paint, asbestos, toxic or flammable materials, and other environmental hazards; pest infestation, playground equipment, efficiency measurement of insulation or heating and cooling equipment, internal or underground drainage or plumbing, any systems which are shut down or otherwise secured; water wells (water quality and quantity) zoning ordinances; intercoms; security systems; heat sensors; cosmetics or building code conformity. Any general comments about these systems and conditions are informational only and do not represent an inspection.

This report should not be construed as a compliance inspection of any governmental or nongovernmental codes or regulations. The report is not intended to be a warranty or guarantee of the present or future adequacy or performance of the structure, its systems, or their component parts. This report does not constitute any express or implied warranty of merchantability or fitness for use regarding the condition of the property and it should not be relied upon as such. Any opinions expressed regarding adequacy, capacity, or expected life of the structural components are general estimates based on information about similar components and occasional wide variations are to be expected between such estimates and actual experience.

Neither EDA nor any of its representatives have any interest, present or contemplated, in this property or its improvement and no involvement with trades people or benefits derived from any sales or improvements. To the best of our knowledge and belief, all statements and information in this report are true and correct.



Inadequate anchorage of Fire Escape



Inadequate anchorage of Railing



Right Side Brick Foundation



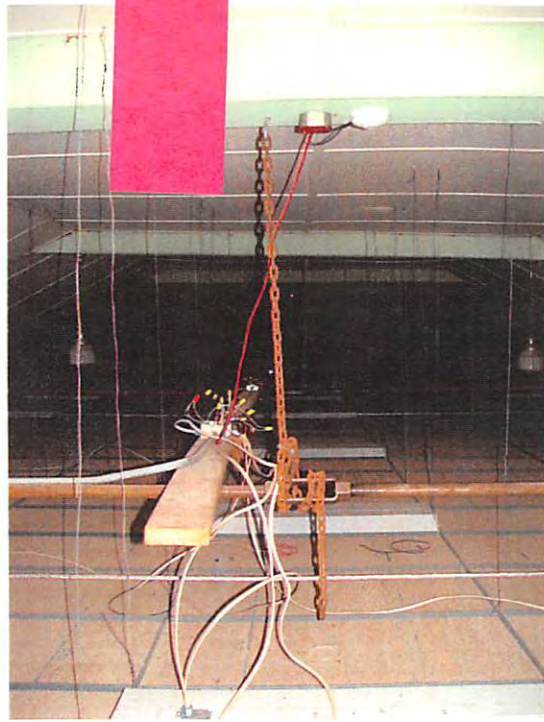
Right Side Building Elevation – Hump in Roof Ridge



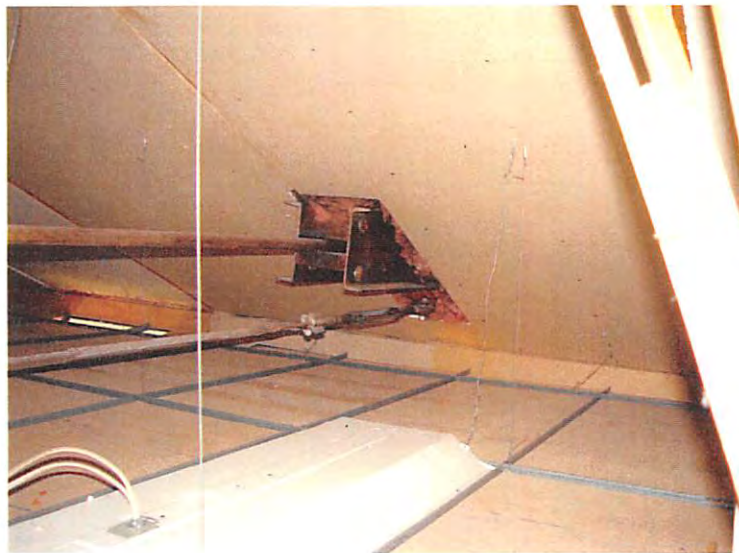
Interior brick wall requiring re-pointing



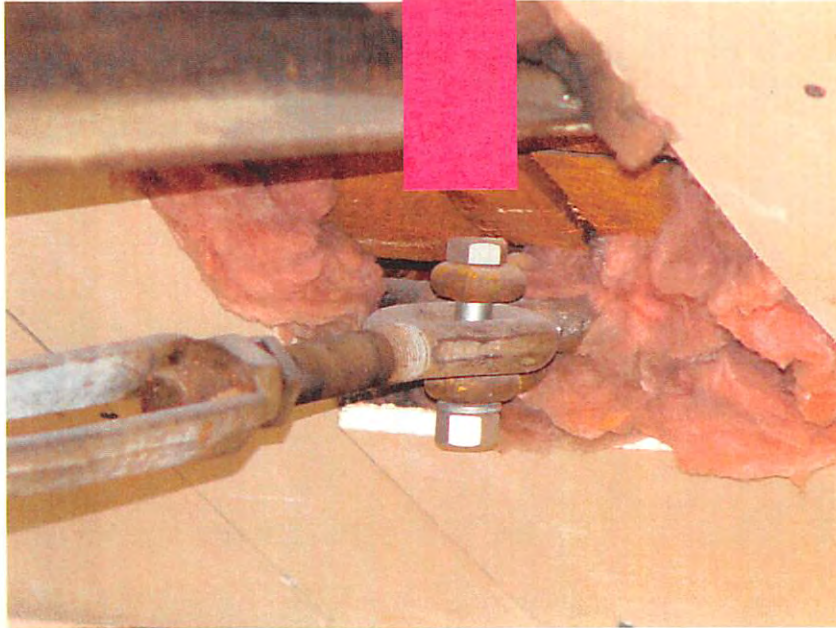
Second Floor Framing



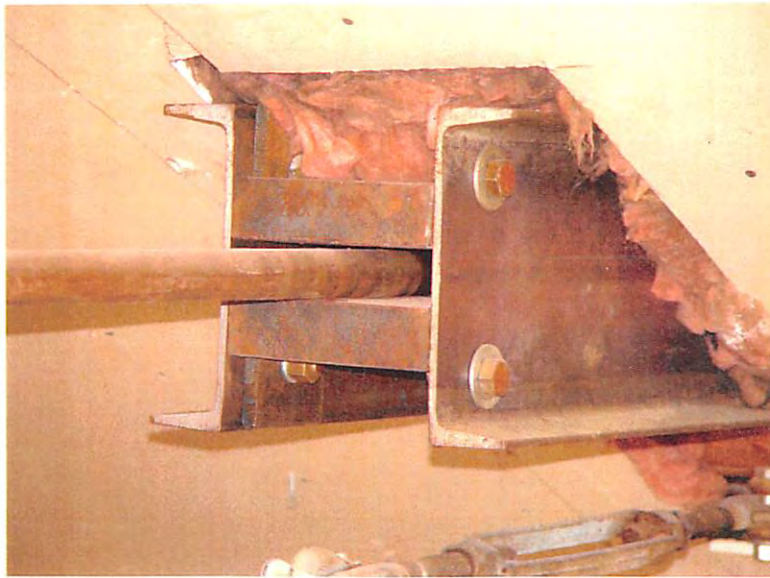
Tie Rod with Lower Cable



Tie Rod/Cable Connection Assembly



Cable Connection



Tie Rod Connection



Timber Construction



Timber Construction

Domestic Cold Water System:

The existing Domestic Cold Water Service is a three-quarter inch (3/4"), which enters through the basement foundation wall on the Northwest side of the building. A three-quarter inch (3/4") water meter and pressure regulating valve are installed on this cold water service line. The water service line is not equipped with a backflow prevention device. At the time of installation a backflow prevention device was not required.

The present Massachusetts Plumbing Code 248 CMR states "A potable water supply system shall be designed, installed and maintained in such manner as to prevent contamination from nonpotable liquids, solids, or gases from being introduced into the potable water supply through cross connections or any other piping connections to the system".

In order to insure the protection of the Town water from any cross connections, etc, the installation of a reduced pressure zone backflow prevention device is required.

The existing plumbing fixtures; water closets, lavatories, etc. which are "Grandfathered" do not meet the present plumbing code energy requirements. The existing water closets require three (3) gallons of water per flush, when the new code mandates one and one half (1-1/2) gallons per flush. Faucets sets on lavatories for public use require metering faucets, etc.

The domestic water distribution system presently is approximately fifty (50) percent insulated. The Massachusetts State Building Code 780 CMR, Chapter 13, requires one-inch (1") thick insulation provided for piping carrying fluid having a temperature of 140 degrees F or less.

Sanitary Waste & Vent System:

The existing sanitary waste & vent system as installed is in compliance with the Massachusetts State Plumbing Code that was current at the time of installation. The present Massachusetts State Plumbing Code has adapted more stringent requirements regarding environmental issues.

For example: The present plumbing code mandates that all floor drains be equipped with Trap Primers. Trap Primers are installed on floor drains that do not receive sufficient water to maintain a trap seal. Once the trap seal is lost, do to evaporation; sewer gases will escape to the spaces atmosphere. Trap Primers discharge water to the floor drain trap maintaining the trap seal.

Plumbing System Description:

As stated, under the Code Analysis the facility has a 3/4" domestic cold water service, which enters through the Basement foundation wall at the southeast side of the building.

The domestic water piping distribution system is in good condition. Approximately fifty percent of the domestic water piping is insulated.

A 15 gallon electric hot water heater located in the first floor Janitor's Closet is in fair condition. The water heater appears to be approximately eight to ten years old. Average life expectancy for a water heater is eight years. Unit will probably need replacing within the next two years.

The plumbing fixtures throughout the facility are in good condition and meet the handicap requirements. Due to their age, they do not meet the present energy code and unless replaced they do not have to.

The existing water cooler has been removed. The present Massachusetts Plumbing Code requires one water cooler per 1000 occupants. Since the water cooler was included in a previous Building Permit it should be replaced.

Heating System Description:

The heating system consists of two oil fired hot water boilers manufactured by the Weil Mclain Company. The present condition of the boilers is poor to fair. They appear to be approximately fifteen to twenty years old. The average life expectancy of these boilers is twenty years.

Two new 275 gallon double wall fuel oil tanks have been installed which serves the boilers. The fuel supply oil piping feeding the boilers presently has a plywood barrier erected to protect the fuel oil piping from possible damage. This piping arrangement and/or location should be reviewed.

The remainder of the building's heating system consists of hot water piping distribution system, baseboard radiation in the First Floor Office Areas, Toilet Rooms, and Second Floor Meeting Room. The entry and stair areas are heated with hot water convectors. The condition of the baseboard radiation is good; the convectors are in fair condition.

The heating system controls are manufactured by White Rodgers. The existing system has four zones. Thermostats are located in the First Floor Meeting / Multi-Purpose Room, one in each office presently occupied by the fire department, and one for the Second Floor Meeting Room. The control system is approximately five years old. The existing control system has a life expectancy of approximately twenty years.

The existing heating system control sequence of operation provides that when the space or zone thermostat calls for heat, its respected zone control valve located in the Boiler Room opens, allowing hot water to circulate through the board radiation. When the space or zone is satisfied the zone valve closes. The Boiler is controlled via an outside reset control. This type of control adjust the hot water supply temperature. As the outside air temperature increases, the hot water supply temperature decreases. When the outside temperature reaches a preset temperature, approximately 60 degrees F., the boiler is disabled.

The fire alarm system is in good condition. All four (4) zones are currently in use, and no additional zones may be used on this conventional zoned system. Some of the manual pull stations appear to be of an older type than others.

Most of the lighting is old and should be replaced. Most of the fluorescent fixtures on the First floor have discolored lenses indicative of ballast seepage typical of aged fixtures. There are cracked lenses on some of the Second floor recessed 2' x 4' fluorescent troffers, and the remaining lenses are thin and often warped. There are also wraparound fixtures with discolored or missing lenses in some parts of the building.

The Basement is lit mainly with inefficient porcelain socket incandescent fixtures. There are many older incandescent fixtures throughout the building and on the exterior which are old and worn and do not match each other. Except for the unused pendant mounted incandescent fixtures above the Second floor suspended ceiling, which also do not match each other, the incandescent fixtures are not "traditional" in appearance and do not enhance the historical aspect of the building.

The wiring to the lights serving the Second floor Meeting room is mostly loose ROMEX wiring, connected in open standard sized junction boxes with so many wires spliced in them that the top faceplate is off, and the wires within all jut out.

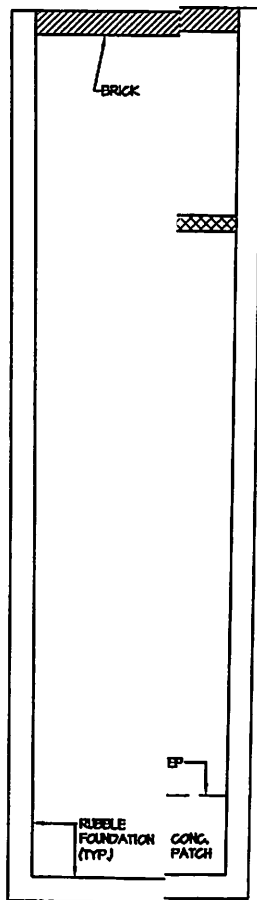
The emergency lighting fixtures and remote heads are old. The exit signs are inefficient incandescent fixtures. The Basement exit sign is currently not working. The existing dull yellow emergency fixtures and black exit fixtures are not aesthetically pleasing and detract from the historical aspect of the building.

The power receptacles and wall switches are mostly black, which does not blend in with the surroundings. A few switches are beige, quiet-type, but most are not. There are not nearly enough power receptacles in the office areas, and they are currently supplemented with a number of portable plug strips. There are, however, fairly new surface mounted CAT 5e data jacks, which are in good condition and apparently adequate in quantity.

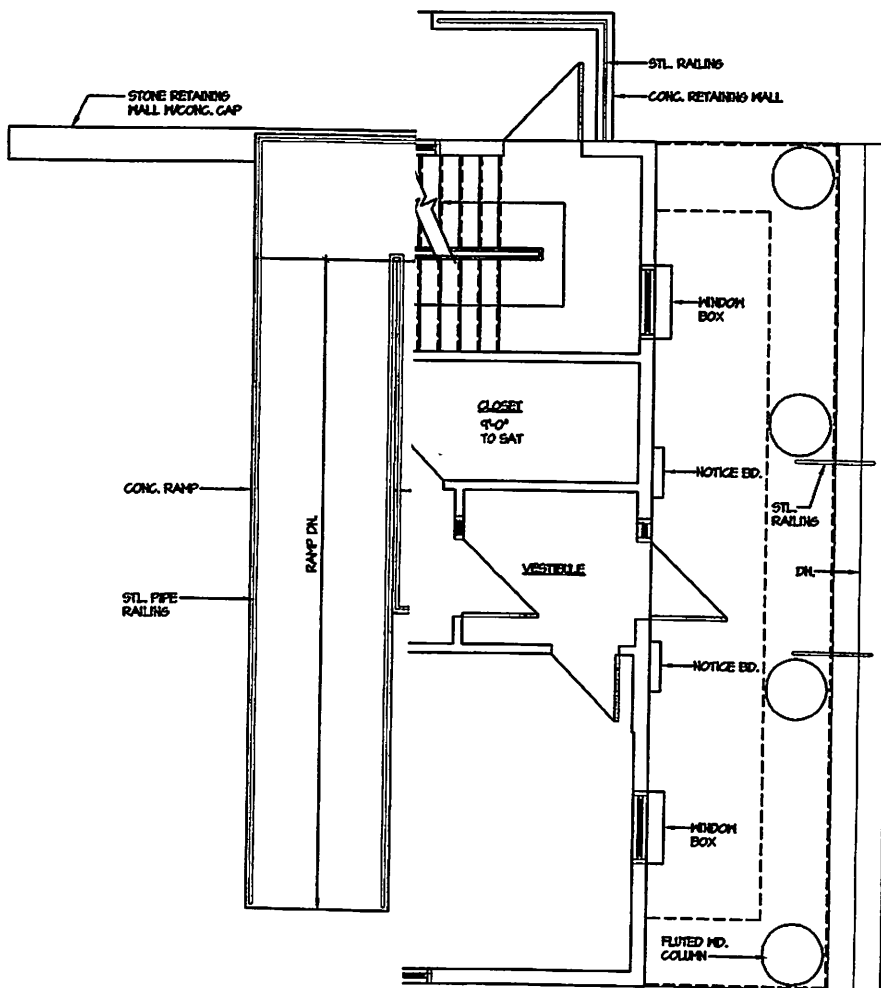
The utility lines serving the building have three phase power available, but the existing electrical service is 200 Amps, 120/240 Volts, single phase, 60 Hz. The electrical service entrance appears to meet code. However, the service wires from the utility pole are located somewhat close to a second floor window, and could pose a danger, especially if the electrical service is upgraded as will be required for a possible new elevator. The MDP (Main Distribution Panel) is 40 poles with a 200A-2P main circuit breaker and includes, several basement circuits, (2) 30A-2P breakers serving an air conditioner and the old records building, and (2) 100A-1P breakers likely serving a panelboard on the Second floor (and not fuse box(es) as labeled). The MDP feeds through to an adjacent 150A-2P circuit breaker in a separate enclosure serving panelboard on the First floor. There are 19 spaces available in the MDP.

The First floor panel is a recessed 28 pole, 200 Amp MLO (Main Lug Only) panelboard in fair condition, with all poles used for 15A or 20A 120 Volt circuits, except circuit #27 is a spare 20A-1P circuit breaker. The Second floor panel is a surface mounted 24 pole MLO panelboard in good condition with nine (9) 15A or 20A 120 Volt circuits and the rest spaces. The old fuse box(es) are no longer in use.

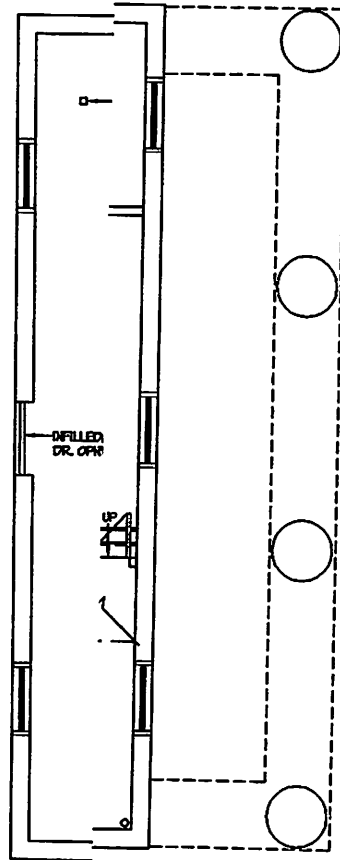
There is currently no existing sound system and no existing lightning protection system.



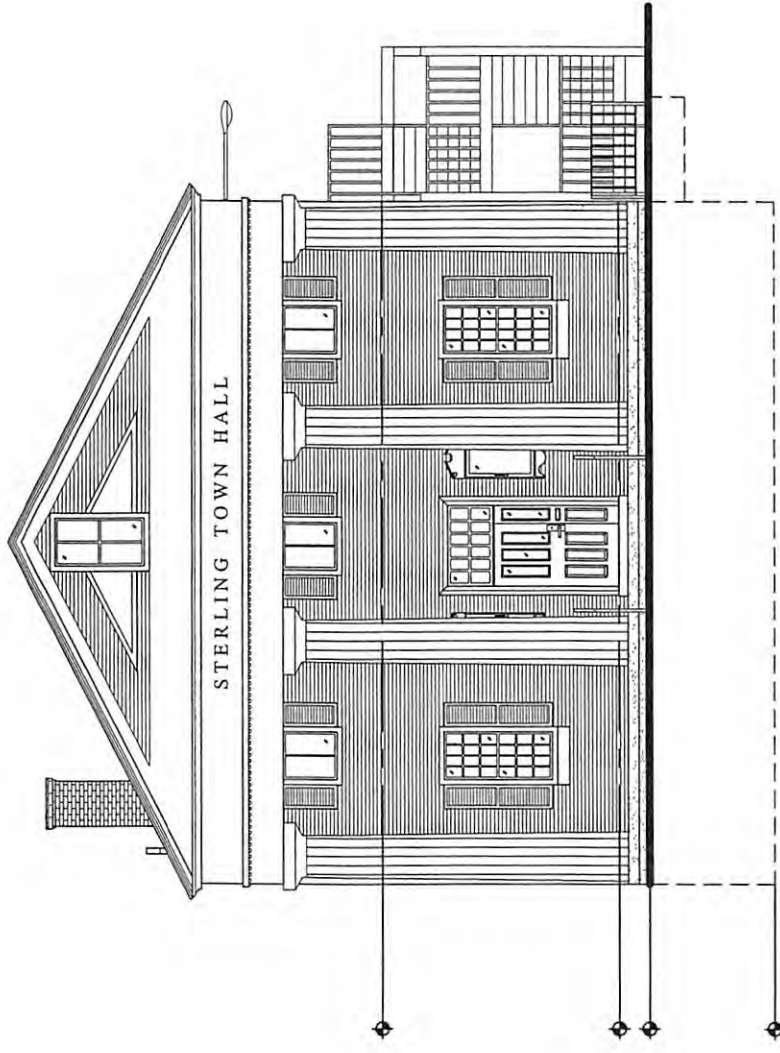
FLOOR PLAN



1st FLOOR PLAN
 1'-0"



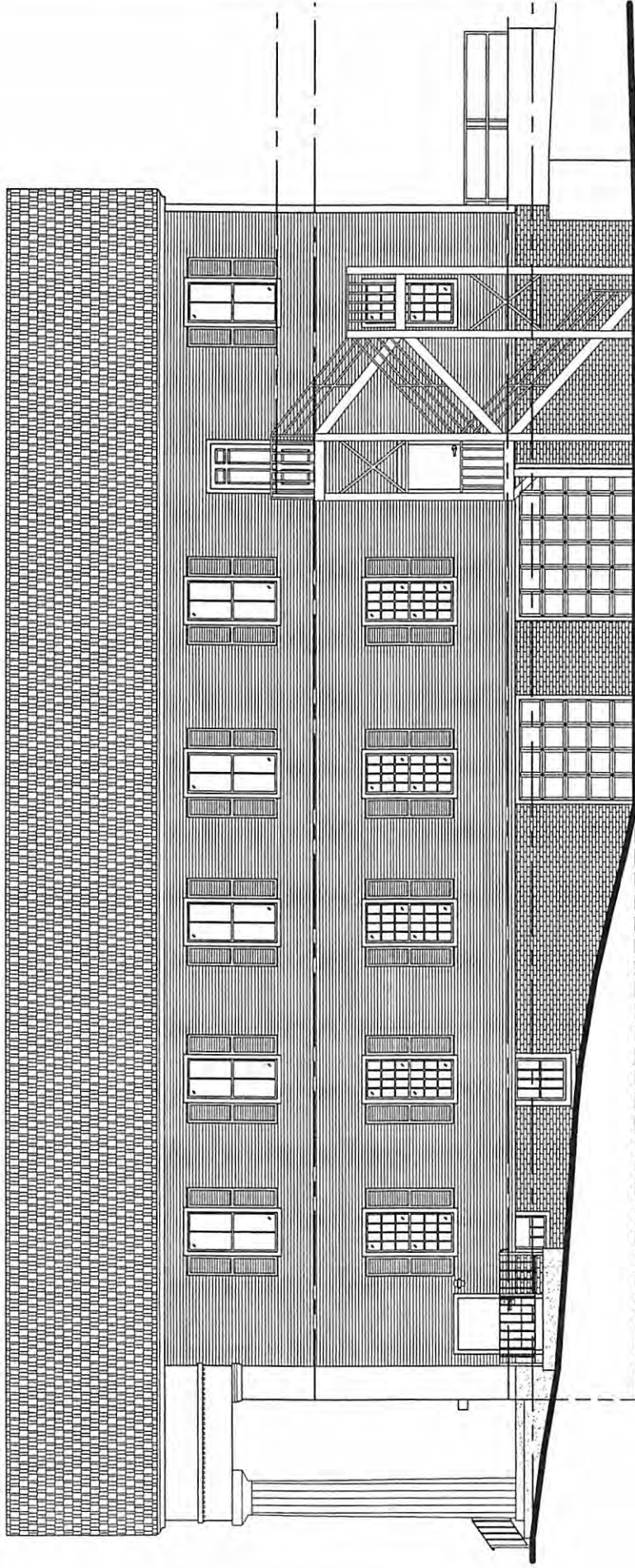
SECOND FLOOR PLAN



EXISTING WEST ELEVATION
SCALE: 3/32" = 1'-0"

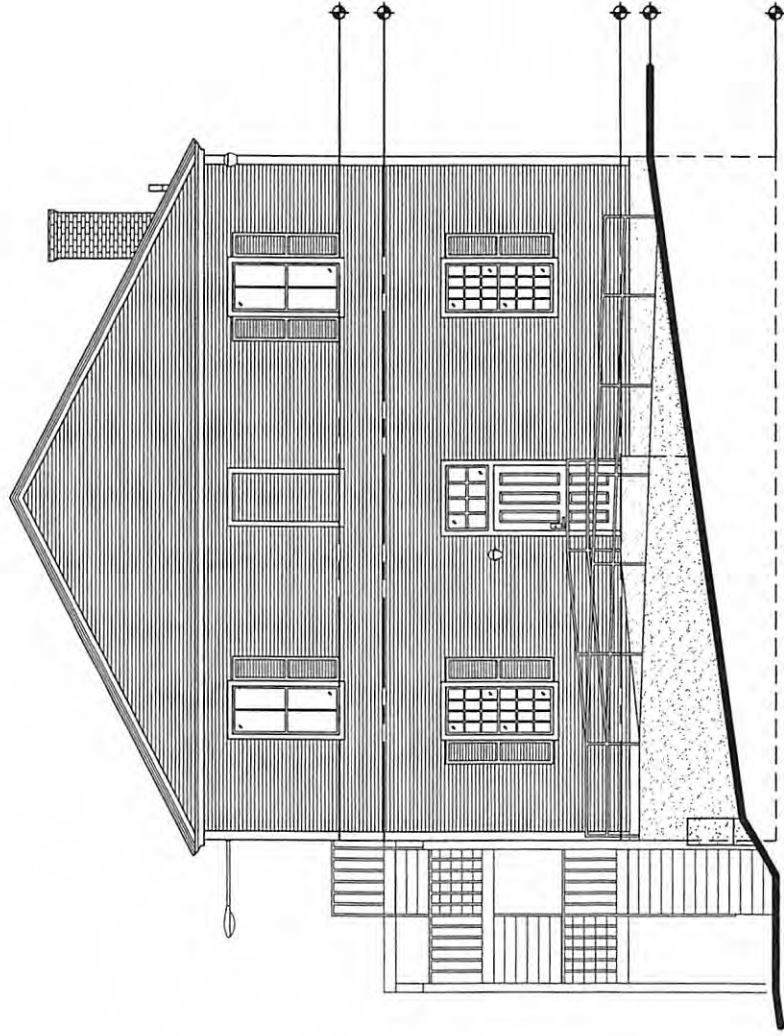


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EXISTING SOUTH ELEVATION
SCALE: 3/32" = 1'-0"

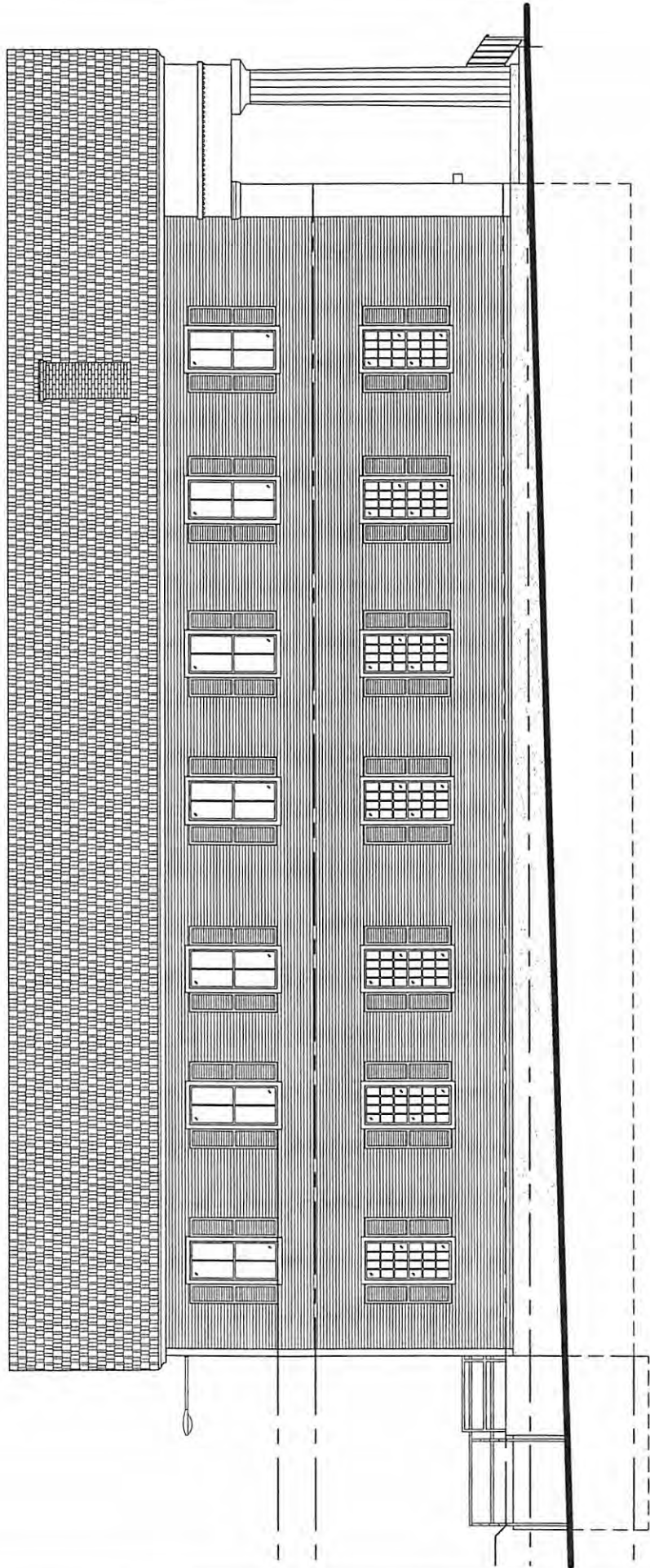




EXISTING EAST ELEVATION
SCALE: 3/32" = 1'-0"



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EXISTING NORTH ELEVATION

SCALE: 3/32" = 1'-0"



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MAIN STREET (WEST) BUILDING ELEVATION



MAIN STREET (SOUTHWEST) BUILDING PERSPECTIVE



SOUTH BUILDING ELEVATION



EAST BUILDING ELEVATION



MAPLE STREET (NORTHEAST) BUILDING PERSPECTIVE



MAIN ENTRANCE PORTICO



STAIR EXIT DOOR AND AREAWAY

- Door Boarded Up and Steel Plate Added
- Cracked Concrete Wall
- Rusting Metal Railing
- Broken Basement Window Boarded Up
- Brick Missing Upper Right of window Opening



BASEMENT WINDOW SOUTH ELEVATION

- Rotted Wood Window Sill
- Paint Failure at Window
- Broken / Missing Glazing Putty



FIRST FLOOR WINDOW SOUTH ELEVATION

- Broken / Missing Glazing Putty



FIRST FLOOR WINDOW SOUTH ELEVATION

- Moss Growing in Mortar Joints



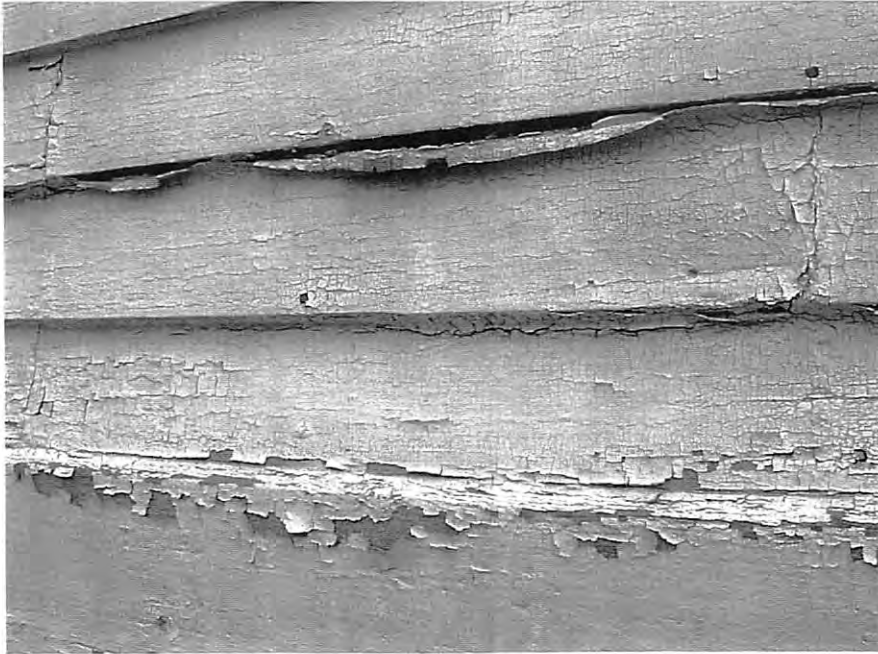
BRICK FOUNDATION SOUTH ELEVATION

- Spalled Deteriorated Brick
- Deteriorated / Missing Mortar



BRICK FOUNDATION SOUTH ELEVATION

- Broken Previously Repaired Masonry Jamb
- Cracked Broken Masonry
- Deteriorated / Missing Mortar
- Typical of (2) Doors



WOOD SIDING SOUTH ELEVATION

- Cracked, Crazed, Peeling, Curling Paint Failure



WOOD CORNERBOARD / SIDING NORTHEAST BUILDING CORNER

- Paint Failure at Clapboard Siding
- Missing Cornerboard Trim

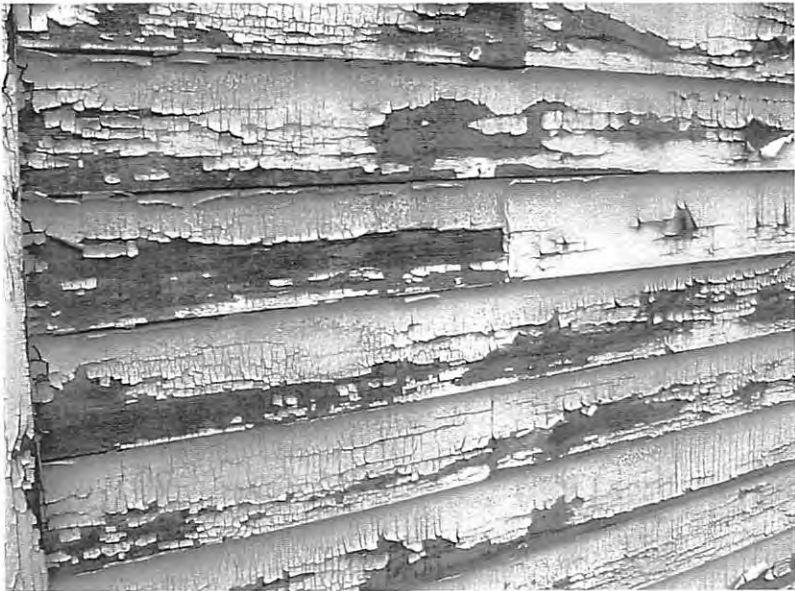
STEEL FIRE ESCAPE

- Steel Supports in Contact with Ground
- First Floor Door Boarded Up
- Non-Historical Light Fixtures



STONE / CONCRETE RETAINING WALL

- Broken Concrete
- Exposed Reinforcing Bar
- Loose / Broken Stone Mortar Joints



WOOD SIDING NORTH ELEVATION

- Cracked, Crazed, Peeling, Curling Paint Failure



NORTH ELEVATION SNOW PILE

- Snow Pile Obstructing Electric Meter
- Snow Pile Obstructing Boiler Air Intake



MAIN ENTRANCE PORTICO

- Recess Granite Below Columns



NORTH PORTICO ELEVATION

- On-Going Corner Capital Repairs



BASEMENT BOILER ROOM

- Open Concrete Floor Slab



BASEMENT FUEL OIL TANKS

- Plywood Protection Skirt at Exposed Piping and Valves
- Existing Sewer Entrance
- Newer CMU Structural Piers (Left)
- Mattress to Block Basement Window Opening (Upper Right)



BASEMENT WINDOW

- Broken, Deteriorated Wood Window
- Moisture Damage at Masonry below Window



BASEMENT BRICK INTERIOR BEARING WALL

- Deteriorated and Missing Mortar



BASEMENT BEARING WALL

- Brick Removed for Pipe Installation
- Missing / Deteriorated Mortar



BASEMENT ABANDONED FUEL OIL TANK

- CMU Supplemental Pier
- Rubble Stone Foundation Intact



BASEMENT COLUMN REPAIR

- Deteriorated Brick Pier
- Supplemental CMU Pier



BASEMENT COLUMN REPAIR

- Supplemental CMU Pier
- Efflorescent Staining from Previous High Water



FOUNDATION WALL AT BASEMENT STAIR

- Missing and Deteriorated Mortar Joints
- Missing, Flaking Paint

STAIR EXIT DOOR

- Plywood Covered Door
- Rusting Steel Plate Reinforcing
- Moisture Damage. Buckling Vinyl Til





EXIT STAIR

- Loose, Spalling Paint
- Vinyl Stair Treads and Risers



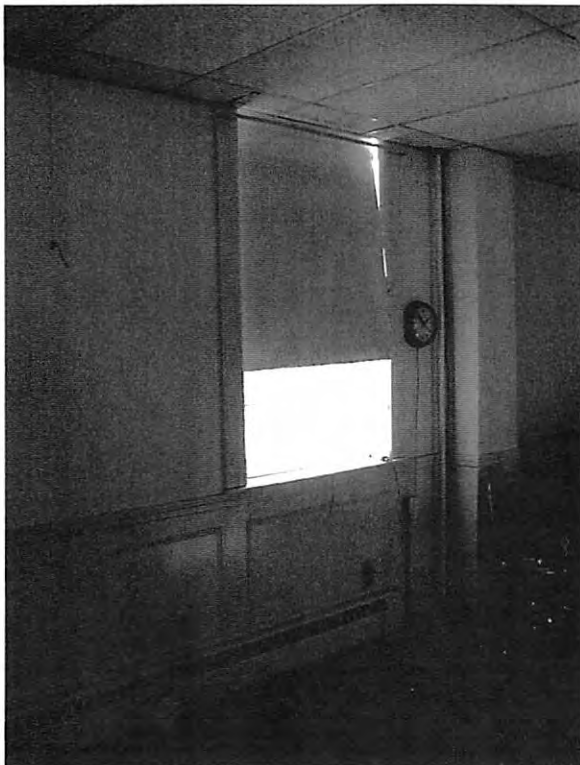
FIRST FLOOR MEN'S ROOM

- Non-Accessible / Compliant Toilet Accessories



FIRST FLOOR MEETING ROOM

- Previous Installed Suspended Ceiling / Lighting
- Previous Installed Wood Wainscoting and Doors
- Original Wood Columns



FIRST FLOOR MEETING ROOM

- Suspended Ceiling Bisects Glass Window



FIRST FLOOR MEETING ROOM CEILING PLENUM

- Previously Installed Suspended Ceiling / Lighting
- Remaining Furring from Original Ceiling Finish
- Original Column Capital Concealed Above Ceiling
- Loose Electrical Wiring
- Plenum Smoke Detector



FIRST FLOOR MEETING ROOM WINDOW HEAD

- Wood Window Trim at Suspended Ceiling
- Suspended Ceiling Bisects Glass Window



FIRST FLOOR OFFICE

- Previous Newer Finishes Include Gypsum Wallboard, Suspended Ceiling, Lighting, Chairrail, Door, Carpeting



FIRST FLOOR CORRIDOR

- Previous New Finishes Include Gypsum Wallboard, Suspended Ceiling Lighting, Wainscoting, Doors, Vinyl Tile Flooring



SECOND FLOOR MEETING ROOM / STAGE

- Previous Installed Suspended Ceiling / Lighting
- Low Window Sill Height at Stage



SECOND FLOOR MEETING ROOM / STAGE

- Previous Installed Suspended Ceiling / Lighting
- Temporary Wood Partitioning
- Previously Installed Perimeter Hydronic Baseboard



SECOND FLOOR MEETING ROOM

- Previous Water Damage Near Chimney



SECOND FLOOR FIRE ESCAPE EXIT DOOR

- Moisture Damage at Lower Door
- Wood Wainscoting
- Previously Installed Hydronic Baseboard



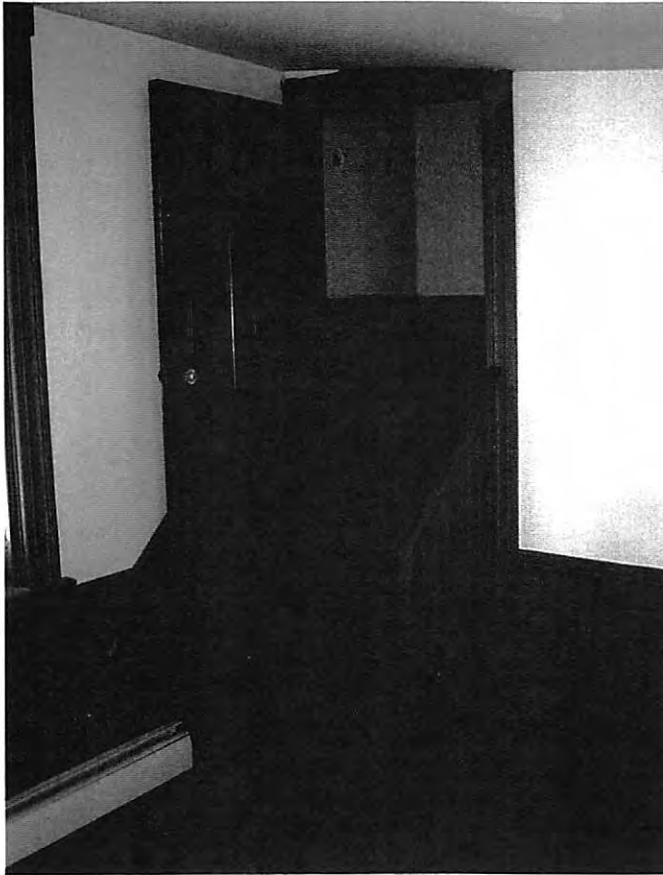
SECOND FLOOR FIRE ESCAPE

- Snow and Ice Falls from Roof Obstructing Exit
- Wood Will Partially Rotted



SECOND FLOOR OFFICE

- Probable Vinyl Asbestos Floor Tile



SECOND FLOOR BALCONY STAIR

- Cracked Plaster Ceiling in Lobby Area
- Exterior wall Cored Openings for Previous Blown-In Insulation

SECOND FLOOR LOBBY CEILING

- Cracked Plaster





SECOND FLOOR BALCONY STAIR

- Cracked Plaster Ceiling in Lobby Area
- Exterior Wall Cored Openings for Previous Blown-in Insulation

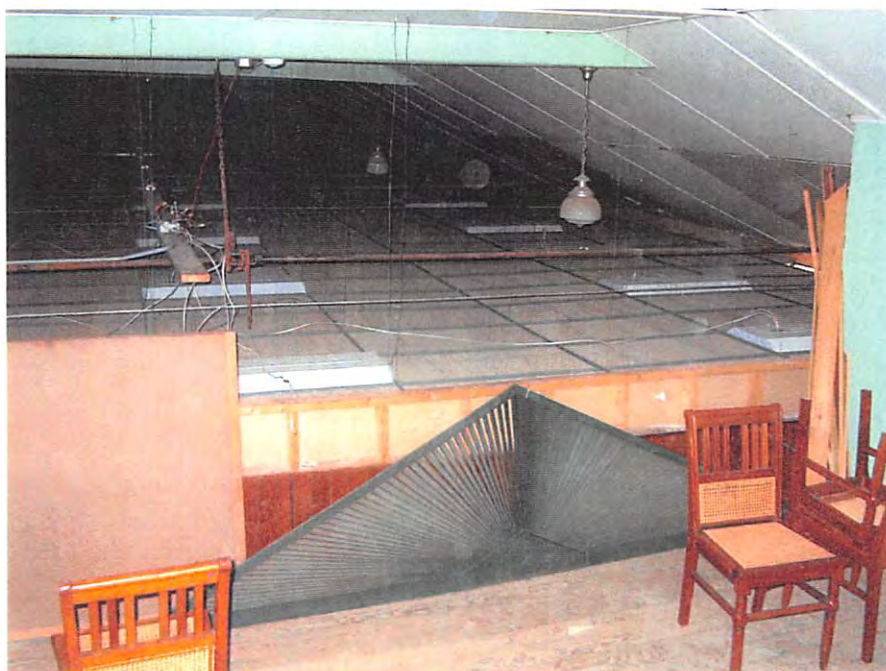


SECOND FLOOR LOBBY CEILING
Cracked Plaster



BALCONY

- Board and Batten Ceiling
- Original Stepped / Tiered Floor



BALCONY

- Original Ceiling Above Suspended Ceiling
 - Original Type Light Fixtures
- Timber Truss Tie Rod and Cable Repairs



BALCONY

- Truss Tie Rod Repair
- Gypsum Board Repair of Original Wood Board / Batten Ceiling



BALCONY

- Previous Roof Leak / Damage Near Chimney

Recommendations for repairs and treatment of the 1835 Town Hall are based on four principal and prioritized concerns, (1) repair or correction of discovered code related issues effecting life safety, (2) stabilization of existing building envelope and structure, (3) repairs, renovations and development of Universal Accessibility within the existing Building and grounds, (4), support and/or improvement of the existing Building in its reuse as a Community Center.

The following recommendations have been developed through review, discussions and coordination with the Sterling Town Hall Committee and Sterling Historical Commission. The overriding wish of each of the Committee/Commission is to maintain as much historical accuracy as possible throughout any repairs or renovations.

1. Code related repairs are based upon discovered safety issues found during times of review and will require either actual repair or additional maintenance. The intent of these repairs is to improve occupants life safety.
 - a. Secure steel fire escape structure to Building Second floor framing.
 - b. Provide new or repair existing Boiler room to be self closing.
 - c. Improve emergency lighting and exit signage in Basement.
 - d. Provide increased maintenance to remove snow and ice from exitways.
 - e. Revise snow stockpiling procedures to obstructing boiler make-up air vent.
 - f. Accessible issues are longstanding and are addressed later.
2. Stabilizing of the existing Building envelope and structure is a priority concern to limit on-going degradation of the Building envelope components and structure. Previous moisture damage and deferred maintenance is responsible for much of the poor envelope and structural damage and increase any future repair cost.
 - a. Remove exterior brick masonry paint at exposed foundation, evaluate brick condition and either replace exterior brick wythe or repoint mortar joints.
 1. A clear water repellent may be applied to existing exterior brick surface if acceptable to local and state Historic Commission.
 - b. Remove existing deteriorated paint from all existing wood surfaces, clean and prepare surfaces for new paint finish. (Primer and two finish coats)
 1. Preparation will be extensive as exterior wood surface is heavily weathered. Appropriateness and uniformity of preparation work will be a field condition and paint application could not be warranted for more than 2 years.
 2. Optional treatment is to replace exterior deteriorated wood siding, clapboard and trim with new wood or cement fiber (pre-primed) siding clapboard and trim for longer lasting paint substrate and application.
 3. Provide incidental repairs and/or replacement of existing deteriorated trim to remain.
 4. Repair existing deteriorated lower wood column sub-framing. Removal and reinstallation of wood slats to access sub-framing will be required.



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Sterling 1835 Town Hall

Architecture

- c. Removal of existing paint and preparation of exterior wood surfaces will require removal of existing aluminum storm windows. Based on age and condition, the storm windows reinstallation would not be recommended.
- Therefore new replacement storm windows should be installed after exterior preparation and painting work is complete. Color of replacement storm windows should be white to minimize appearance.
- d. Removal and replacement of the existing aluminum storm windows will provide the single best opportunity to reglaze the original double hung wood windows. The existing glazing putty is beyond deteriorated and is not present in many areas. In addition wood window would be clean, prepare, painted and refurbished to an operating condition.
1. Rotted and broken Basement windows will require more extensive repair and/or replacement.
- e. Removal of existing aluminum shutters will also be required by exterior surface preparation and painting. Shutters, while improving the historical accuracy of the Building's appearance will not improve the weather resistance of the building envelope. Installation of new wood shutters of historically accurate proportions is considered in an Option or future phase of the treatment recommendations.
- f. Remove and replace exterior caulking and sealants.
1. Windows, doors, exposed joints, front portico slab to building joint, etc.
- g. Multiple previous repairs have made the existing slate roof generally weather resistant. Removal and replacement of existing slate will eventually be necessary but can be deferred until roof leaks become more prevalent, possibly 2 to 8 years. It may also be advisable to install a new more durable and more weather resistant roof prior to any significant interior renovation and expenditure.
1. As part of any future re-roofing work, evaluation of the condition of the existing wood roof deck should be performed after removal of slate roof. Additional funds for replacement of any discovered deteriorated wood roof decking should be included in re-roof work at an additional unit price.
 2. Repair and/or replace existing copper ridge flashing.
 3. Replace existing metal roof edge flashing.
 4. Replace wood roof scuttle with new wood scuttle and lead coated copper cladding.
 5. Provide snow guards in hazardous areas.
- h. Repair and/or replace existing deteriorated exit doors at existing stair and fire escape, subject to accessibility improvements, described later.
1. Fire escape and exit door work should be coordinated with any proposed Second floor accessibility project and schedule.

3. Feasibility Study for Universal Accessibility and recommendations is provided in Phase I of this Study.
4. It is the expressed desire of the Town to maintain and further develop the 1835 Town Hall as a Community Center. It is also the expressed desire of both the Sterling Town Hall Committee and the Sterling Historical Commission to promote the reuse of the 1835 Town Hall through appropriate repairs, renovation/adaption and/or addition. Including eventual Universal Accessibility, and to preserve and maintain as much historical accuracy as possible. The following recommendations are provided to support and improve the continued use of the 1835 Town Hall as a multi-purpose Community Center.
 - a. Remove Second floor meeting room suspended acoustical tile ceiling and recessed lighting, and re-establish original room/ceiling appearance. Providing Universal Accessibility to the Second floor will be a prerequisite to re-establishing public use of any Second floor space.
 1. Re-establish original electrical lighting supplementing as required to accommodate all planned uses.
 2. Repair original board and batten ceiling.
 3. Provide window guards at stage windows approximately 18-inches above finish floor.
 4. Repair deteriorated, broken and missing plaster walls and soffit, refinish to match existing.
 5. Remove existing wood panel partition.
 6. Re-establish stage curtain and track similar to original for stage productions.
 7. Refinish wood flooring.
 8. Repair meeting room/hall door panel.
 - b. Restore existing Second floor balcony for limited use and to original appearance.
 1. Resecure guard wall and rails.
 2. Repair deteriorated, broken and missing plaster walls and soffit, refinish to match existing.
 3. Provide Balcony stair handrail.
 4. Re-establish original Balcony electrical lighting.

- c. Recreate a historically accurate wood stair from First floor to Second floor to replace original stair(s) previously removed.
 - 1. Removal of existing interior egress stair construction will be required and will require approval of local authorities having jurisdiction.
 - 2. Installation of an automatic fire suppression system would help mediate code issue of an open stairway to match the original open stairway.
 - 3. Recreation of Basement stair would be required.

- d. Remove First floor Meeting room suspended acoustical tile ceiling and recessed lighting and re establish original plaster ceiling appearance.
 - 1. Provide new lighting to replicate historic lighting.
 - 2. Replace window trim and casing removed during suspended ceiling installation to match existing.
 - 3. Replacement of carpet flooring.

New plumbing fixtures will include water closets, lavatories and a water cooler meeting the MAAB/ADA Requirements and Massachusetts Energy Code.

A new electric hot water heater will need to replace the existing 15 gallon unit in order to meet the demand of any additional fixtures.

A new electric water cooler will need to be provided for the First Floor in order to meet the present Massachusetts Plumbing Code.

Insulate all existing and new domestic water piping.

Fire Protection System:

As stated in the Code Analysis, the requirements of Chapter 148 of the Massachusetts General Law will need to be reviewed when repairs, renovations or additions are contemplated. Particularly c148§ 26g, adopted by the Town of Sterling, requiring automatic sprinkler system for major alterations to existing Buildings over 7,500 S.F.

If it is determined that a sprinkler system is required, a wet and dry fire suppression system will be installed. This system will require the installation of a new sprinkler water service. Estimated water service should be a 4" service. This new 4" service should enter the building in the same area as the existing 3/4" domestic water service.

A Hydrant Flow Test will be required to determine the adequacy of the town's water supply to support the fire suppression system although proposed improvements to the town water supply should ensure sufficient water pressure is available.

Since the existing structure is wood framed, sprinkler protection will be required in all occupied and unoccupied spaces, closets, toilet areas, and concealed spaces such as areas above dropped ceilings, truss spaces, etc. in order to meet the present NFPA requirements. Proper planning and design will be required to minimize the visual impact of the sprinkler system in historic areas.

Heating, Ventilating, and Air Conditioning:

If it is decided to introduce central heating and air conditioning into the building the mechanical ventilation requirements mandated by the Mechanical Code (BOCA) will have to be met. The heating capacity of the existing boilers will not be sufficient to support the additional ventilation loads. Due to this increase the existing hot water boilers will have to be removed and replaced with units having adequate capacity to meet this demand.

The new boiler should be an oil fired hot water sectional boiler. The new boiler will be a sectional type allowing assembly of the unit in the Basement area. The units will have an efficiency of 80 to 85% compared to the present boiler having a 75% efficiency at best. New flue piping, expansion tank, pumps, etc will also be required.

A new chemical feed system will be added to the system. This system will insure system water quality adding reduced maintenance cost as well as boiler life.

The existing baseboard radiation on the First and Second floors can remain.

The existing chimney should be inspected to insure masonry flue is intact and code compliance is met.

Ventilation air, and air conditioning can be introduced throughout the building using air handling units with outside condensing units. A variable volume duct distribution system, having multiple zones can be installed to distribute conditioned air to each occupied space.

The ventilation air, and air conditioning system can be designed to take advantage of load shedding which will reduce equipment cost, as well as energy cost. In addition to load shedding, CO2 Monitoring can be provided which will dramatically reduce the amount of outside air requirements and substantially reduce operating cost.

A new DDC Temperature Control System can be provided that will not only control the heating system but also the ventilating and air conditioning systems as well. This system should have a Central Control Panel having the capability of trouble shooting the entire heating and air conditioning system from its location. The Central Control Panel should also give the user the ability of resetting space temperatures, adjusting outside air requirements, set occupied and unoccupied hours of operation, etc.

Plumbing System:

The Plumbing System's ¾" domestic water service should be adequate based upon a possible two (2) additional single occupancy toilet rooms. Further review will be conducted once the total number of additional plumbing fixtures has been confirmed.

Priority recommendations are related to proposed renovations to include a new elevator restrooms and a new sprinkler system. These elements will require additional zones on the fire alarm system for elevator recall and fire protection switches. This will exceed the capacity of the existing five (5) zone fire alarm panel, which is already using four (4) zones. A new ten (10) zone fire alarm panel may have enough zones for the renovation, but there would be very little or no spare capacity for future expansion of the system. Therefore, a new addressable fire alarm system is recommended, which requires simpler wiring and allows the equivalent of many zones, since each device is separately "addressed"; this would allow for future expansion of the fire alarm system.

Short-term recommendations include interior incandescent fixtures with more efficient fluorescent or compact fluorescent fixtures. The porcelain socket fixtures in the Basement may be relamped with new compact fluorescent lamps with screw-in base. The exterior fixtures should be replaced with new decorative lighting, and supplemented with emergency lighting at the entrances for security and safety. The existing fluorescent lights, many of which are broken and worn should be replaced with new efficient T8 fluorescent light fixtures. In addition, most of the emergency lighting could be incorporated into the general lighting by means of emergency ballasts in select fixtures, which is less expensive an obtrusive than installing separate emergency battery pack light fixtures. The Second floor Meeting room should have attractive emergency light fixtures.

Long-Term recommendations are also based on future proposed renovations as follows.

The suspended ceiling to the Second floor Meeting room may be removed under a future interior renovation. In this instance, decorative pendant mounted lighting is recommended to replace the existing pendant mounted fixtures concealed in the Attic space above the Second floor. The existing support beams running across the Attic space must be accounted for in any such design.

It is recommended to replace the old receptacles and wall switches with new grounded receptacles and quiet type wall switches of a suitable color. Additional receptacles and plugmold are recommended in the office areas and for other future designated uses to be determined.

Based upon the apparent historical nature of this 1835 Sterling Town Hall and its listing on the National Register of Historic Places this Building qualifies as a partially preserved Building under Massachusetts Building Code 780CMR 3409.0 which permits in-kind material repairs and replacement without compliance with most current codes including the Energy Conservation Code, 780 CMR 13.

The following Estimate of proposed exterior repairs and restoration work has been prepared for purposes of developing an overall Budget for this work and to assist selection and identification of preferred repair options. This estimate is preliminary in nature and therefore conservative contingencies are applied for unknown / unforeseen conditions and further development of the scope of repairs and restoration. All work is estimated to be completed in 2005. Additional escalation should be added at a pro-rated rate of 9% per annum for work postponed beyond 2005.

The following Estimate excludes Hazardous Material Abatement and monitoring expenses.

1. Wood Surfaces and Repairs

- a. Remove existing paint, clean, prepare and paint all exposed wood surfaces;
- b. Repair broken, missing, damaged wood siding and trim (Unit Price / Allowance);
- c. Repair damaged column subframing

(OR)	Sub-Total:	\$ 51,500.
------	------------	------------

- d. Remove and replace wood siding to match existing; pre-prime and paint;
- e. Clean, prepare and paint all exposed wood surfaces;
- f. Repair broken, missing, damaged wood trim (Unit Price / Allowance)
- g. Replace metal window head flashing;

Sub-Total/Add:	\$ 119,100. [Option 1]
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- h. Remove and replace window shutters (Replacement Optional):
- | | |
|------|-----------------------|
| Add: | \$ 22,300. [Option 4] |
|------|-----------------------|

2. Wood Surfaces and Repairs

- a. Remove exist. Aluminum window louvers;
- b. Remove exist. Aluminum storm windows;
- c. Repair / refurnish wood windows, clean, prepare and paint;
- d. Remove and recaulk joints;
- e. Install new heavy duty aluminum storm windows;
- f. Repair / replace damaged basement windows

Sub-Total:	\$ 31,200.
------------	------------

3. Brick Masonry Repairs

- a. Remove exist. Paint from exterior brick in its entirety;
- b. Replace damaged / deteriorated exterior brick, repoint all mortar joints;
- c. Replace damaged interior brick, repoint deteriorated mortar joints;
- d. Apply water repellent treatment

Sub-Total: \$ 13,900.

{OR}

- e. Remove and replace outer wythe of brick to match exist;
- f. Repair and repoint deteriorated concealed brick and mortar joints;
- g. Repair, replace interior deteriorated brick, repoint interior mortar joints;

Add: \$ 8,700. [Option 2]

\$ 10,500.

4. Slate Roof Repairs

- a. Remove and replace slate roofing to match original;
- b. Remove and replace felt underlayment;
- c. Install ice and water shield underlayment at flashings at roof edges;
- d. Inspect / replace damaged wood deck (allow for 25% replacement);
- e. Replace all metal flashings incl. Ridge and eaves;
- f. Replace wood roof scuttle;
- g. Provide snow guards at hazardous areas

Sub-Total: \$ 115,400. [Option 3]

5 Exterior Wood Door Repairs

- a. Remove and replace exterior stair door;
- b. Remove and replace 1st floor fire escape door;
- c. Repair 2nd floor fire escape door
(NOTE: b. and c. may not be required if accessibility Project undertaken)
- d. Replace front door with historic replica

Add: \$ 4,400. [Option 5]

Sub-Total: \$ 5,300.

Sterling 1855 Town Hall

Architectural

6. Site Repairs

- a. Repair and replace retaining wall cap stone;
- b. Repair / seal existing cracks at concrete ramp.

Sub-Total: \$ 2,100.

- c. Asphalt pavement repairs and new pavement By Town

7. Miscellaneous Exterior Repairs

- a. Remove Main St. attic window and reinstall original wood louver; \$ 3,200.
- b. Replace exterior light fixtures (6) with more Historic style; 2,600.
- c. Clean, prepare and paint exterior metal railings 1,700.
- d. Repair/Seal portico slab to Bldg. joint 500.

SUB-TOTAL ALL ITEMS EXCEPT AS FOLLOWS: \$ 122,000.

Contingency @ 20% 24,400.

SUB-TOTAL REPAIR / RESTORATION COSTS: \$ 146,400.

OPTION 1 - Add for New Wood Siding: \$ 164,400.

OPTION 2 - Add for Exterior Brick Replacement: \$ 12,000.

OPTION 3 - Add for New Slate Roofing: \$ 185,200.

OPTION 4 – Add New Wood Shutters \$ 29,000.

OPTION 5 – Add for New Front Door \$ 7,000.

8. Project Development

- a. Architectural and Engineering Fees (assumed / No Options) \$ 22,100.
- b. Clerk-of-the-Works By Others.
- c. Project Expenses
 - 1. Hazardous Material Investigation See Accessibility Estimate.
 - 2. Reproduction of Bid Documents (allowance) \$ 6,000.
 - 3. Legal Advertisements (allowance) \$ 800.

Sub-Total: \$ 6,800.

Total Project Development Expenses: \$ 28,800.

Total Base Bid Costs: \$ 175,200.

TOTAL REPAIR / RESTORATION PROJECT COSTS (All Options) : \$ 572,800.

STERLING 1835 TOWN HALL

PHASE II: CYCLICAL MAINTENANCE PLAN

This cyclical maintenance plan has been developed to provide a prioritized list of reoccurring maintenance procedures to prevent future damage to the integrity of the building structure. The principal cause of damage in most structures is typically water infiltration and water damage exacerbated by freeze/ thaw conditions. In particular, the 1835 Town Hall structure has suffered from some prolonged water and moisture infiltration and differed maintenance. Existing conditions associated with this water damage include the exterior wood siding and trim, exterior brick masonry, window glazing putty and some minor slate roof damage.

The priority in establishing the cyclical maintenance plan to prevent future building and structural damage is to stabilize the exterior envelope materials, surfaces and finishes. The following is an outline of recommended maintenance procedures designed to prevent and/ or limit future water/ moisture infiltration:

1. Slate Roofing

- a. Visual inspection of exterior slate roofing and flashings each Spring to identify any and all damage.
- b. Visual inspection of accessible interior/ underside roof areas for initial water infiltration.
- c. Repair or replace damaged roofing materials to match existing and to make weather tight.

2. Caulking and Sealants

- a. Annual visual inspection of all exterior caulk/ sealant joints to identify initial sealant deterioration and cracked or open joints.
- b. Repair poor sealant joints and install new sealants.

3. Brick Masonry

- a. Visual inspection of exterior brick masonry and mortar joints each Spring to identify damaged or cracked brick or mortar.
- b. Replace damage brick and repoint cracked, deteriorated mortar joints.
- c. Application of a clear masonry water repellent treatment is an option. Application may need to be approved by Mass Historical Commission and then reapplied every 5 to 10 years.

4. Exterior Wood Siding/ Trim and Paint

- a. Annual visual inspection of exterior wood surfaces and paint finishes to identify areas of paint deterioration, cracking, crazing or other conditions affecting paint finish integrity and weather resistance.
- d. Clean and prepare existing deteriorated areas of paint for refinishing, remove all loose, failing paint to sound substrate and paint to match existing finish.

5. Wood Windows and Storm Windows

- a. Visually inspect existing wood windows and aluminum storm windows for weather tightness, proper operation and condition of existing glazing putty, paint finish and sealants.
- b. Repair and or replace any found deteriorated materials or finishes.

And addition area of concern for the integrity of the Building is the historically problematic roof timber truss. Although these trusses have been previously repaired it is prudent to maintain surveillance of the trusses to identify any change in condition such as any cracking or splitting of the wood timbers or connections, any observed deflections in truss members or change in overall truss geometry or roof slope.

Cyclical maintenance costs for the described inspections performed by competent trade persons or subcontractors should range from approximately \$800. to \$1,400. per year, not including any required repairs.

STERLING 1835 TOWN HALL

PHASE III: FEASIBILITY STUDY FOR UNIVERSAL ACCESSIBILITY AND REUSE

- A. Programmatic Priorities**
- B. Concept Plans (See Outline Plans)**
- C. Universal Accessibility Budget**

Sterling 1835 Town Hall

Programmatic Priorities for scheduling the proposed repair/restoration and other work were developed and prepared by the Sterling 1835 Town Hall Committee and the Sterling Historical Commission. The work priorities are listed in five categories with 'A' listed items having the highest priority and 'E' listed items having the lowest priority.

1835 Town Hall Work Priorities

priority	category	item
A	Upper floor	Add Safety Barrier at stage windows
A	Upper floor	Rem suspended ceiling, refurb old lights
A	Main floor	Remove drop ceiling at multi-purpose room, Repair window casings
A	Main floor	Reproduce original stairs, Remove exterior subgrade door
A	Basement	Remove old fuel tank, extraneous junk
A	Exterior	Replace Aluminum storm windows
A	Exterior	Reinstall original fan, modify/restore window and trim
A	Exterior	Repair foundation brick
A	Exterior	Install Correct Window Shutters
A	Exterior	Relocate Electrical service
A	General	Barrier Free Access
A	Utilities	Provide Sprinkler Fire Protection
A	Utilities	Septic connection to Fire Station Leach area
B	Upper floor	Re-open Balcony
B	Upper floor	Install Stage Curtains
B	Basement	Provide New Caterer Kitchen
B	Basement	Provide New Recreation room
B	Basement	Provide New Storage Areas
B	Basement	New Concrete Floor
B	Basement	Provide New Craft Room
B	Exterior	Restore Original Front Door
B	Exterior	Install correct Lantern (lighting) and Side lamps
B	Utilities	Phone Jacks on each floor
B	Utilities	Upgrade fire alarms (May be done by FD funding)
C	Upper floor	Install room darkening shades
C	Exterior	Remove ramp at rear door
C	Utilities	Update wiring
D	Basement	Relocate fuel tanks away from open area
D	Basement	New boilers
D	Exterior	Remove brick building
E	Upper floor	Rehab Fire door and relocate escape at rear
E	Basement	Install Restrooms
E	Basement	Provide ventilation
E	Basement	Provide A/C

Sterling 1835 Town Hall

The following Budget estimate of proposed exterior repairs and restoration work has been prepared for purposes of developing an overall Budget for this work and to assist selection and identification of preferred repair options. This estimate is preliminary in nature and therefore conservative contingencies are applied for unknown / unforeseen conditions and further development of the scope of repairs and restoration. All work is estimated to be complete in 2005. Additional escalation should be added at a pro-rated rate of 9% per annum for work postponed beyond 2005.

The following Estimate excludes Hazardous Material Abatement and monitoring Expenses:

1. Site Work

a. Selective Demolition	\$ 9,000.
b. Site Work	12,000.
c. Septic System Repairs	8,000.

2. General Construction and Renovations

a. 810 GSF New Addition/ Construction @ \$150/sf =	\$ 121,500.
b. 8 in. CMU Elevator Hoistway	22,700.
c. Three Stop Elevator	70,000.
d. Construct elevator machine room	5,800
e. Construct new wood stairs @ 40 treads x \$165/tread =	6,600.
f. Construct (2) Toilet Rooms per MAAB/ADA	23,400.
g. Replace door hardware with ADA/lever handles	2,800.
h. Non-structural accessibility improvements @ ex. Toilet Rooms	700.
i. New ADA water cooler	500.
j. Self-closing basement boiler room door	600.
k. Remove meeting space suspended clg's. restore original clg.	51,800.
l. Electrical Service upgrade and distribution	17,000.
m. Handicap accessible ramp to stage	9,400.
n. Upgrade fire alarm system	By SFD.
o. Miscellaneous cutting and patching/plaster repairs/painting	12,000.
p. Install fire protection/sprinklers per MGL c14g: 9150sf @ \$5/sf =	45,800.
Subtotal:	419,600.
q. General Design Contingency @ 15% =	62,900.
Subtotal:	<u>482,500.</u>
r. Construction Change Contingency @ 5% =	24,000.
s. Escalation to Mid. Pt. Construction (6/06) @ 9% =	<u>43,400.</u>

Sub-Total All Items: \$ 549,900.

Sterling 1835 Town Hall

3. Project Development

a. Architectural and Engineering Fees (assumed)	\$ 60,500.
b. Clerk of the Works (Part-Time)	20,000.
c. Project Expenses	
1. Site Survey	2,500.
2. Geotechnical Investigation	N/A.
3. Hazardous Material Investigation	4,500.
4. Reproduction of Bidding Documents (allowance)	8,000.
5. Legal Advertisement (allowance)	800.
6. Construction Materials Testing (allowance)	<u>2,000.</u>

Sub Total: \$ 98,300.

4. Total Project Development Expenses: \$ 648,200.

5. Optional Project Requirements (incl. Contig. & proj. develop.)

a. Provide Building Air Conditioning/Replace Boilers/Tanks	\$ 233,800.
b. Remove/Reconstruct Original Front Stair	75,600.
c. Wire mesh basement storage lockers	4,300.
d. Basement prep kitchen	21,100.
e. Balcony repairs	4,600.

STERLING 1835 TOWN HALL

PHASE IV: OUTLINE PLANS AND SPECIFICATIONS

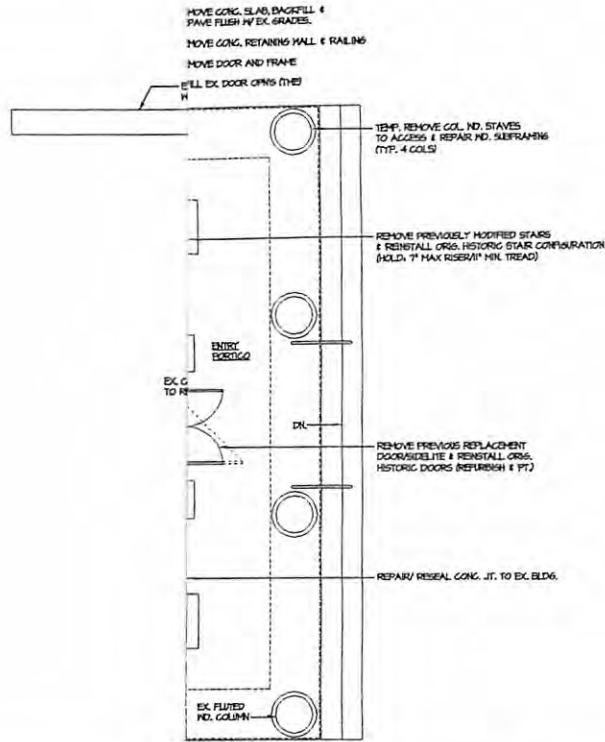
- A. Proposed Building Plans and Elevations**
- B. Outline Specifications**



- ARCHITECTS
- ENGINEERS
- INTERIOR DESIGNERS
- PROJECT MANAGEMENT

430 MAIN STREET
 ANDAMAS, MA 01001
 TEL.: 413.786.0600
 FAX: 413.786.0699

STAMP:



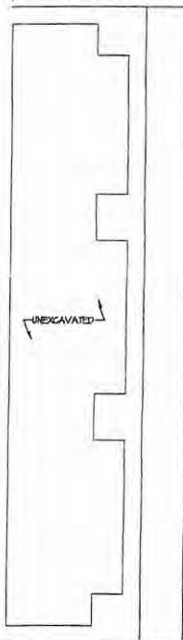
FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0"
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REMOVE PREVIOUSLY MODIFIED STAIRS & REINSTALL ORIG. HISTORIC STAIR CONFIGURATION



BASEMENT FLOOR PLAN

SCALE: 1/4" = 1'-0"

PROJECT TITLE:

UNIVERSAL ACCESSIBILITY AND REPAIRS/ RESTORATION OF THE 1835 TOWN HALL
 STERLING, MA

DRAWING:

PROPOSED BASEMENT AND FIRST FLOOR PLANS

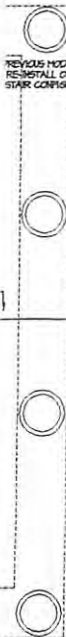
SHEET

A.1



REMOVE PREVIOUS INSTALLED WINDOW & WALL INFILL. INSTALL ORIG. TRANSOM W/ LOWER TO MATCH ORIG. INSTALLATION. CLEAN, PREP. & PT. LOWER.

BALCONY FLOOR PLAN
SCALE: 1/4" = 1'-0"



PREVIOUS MODIFIED
REINSTALL ORIG
STAR CONFIGURATION

REMOVE EX. SUSPENDED
NON-HISTORIC LIGHT FIXTURE.
INSTALL NEW APPROVED
HISTORICAL LIGHT FIXTURE.

SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"



- ARCHITECTS
- ENGINEERS
- INTERIOR DESIGNERS
- PROJECT MANAGEMENT

430 MAIN STREET
ABAWAM, MA 01001
TEL. 413. 785. 8500
FAX 413. 785. 8500

STAMP:

SCALE: 1/4" = 1'-0"
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 CHECKED: JMAC
 PROJ. NO.: 04-1855
 FILE NAME: ARCH/DWG/A.2
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 REV:

PROJECT TITLE:
**UNIVERSAL
ACCESSIBILITY
AND
REPAIRS/
RESTORATION
OF THE
1835
TOWN
HALL
STERLING, MA**

DRAWING:
**PROPOSED
SECOND
AND
BALCONY
FLOOR
PLANS**

SHEET:

A.2

- ARCHITECTS
- ENGINEERS
- INTERIOR DESIGNERS
- PROJECT MANAGEMENT

430 MAIN STREET
 ASHAWM, MA 01001
 TEL.: 413.785.8600
 FAX.: 413.785.8699

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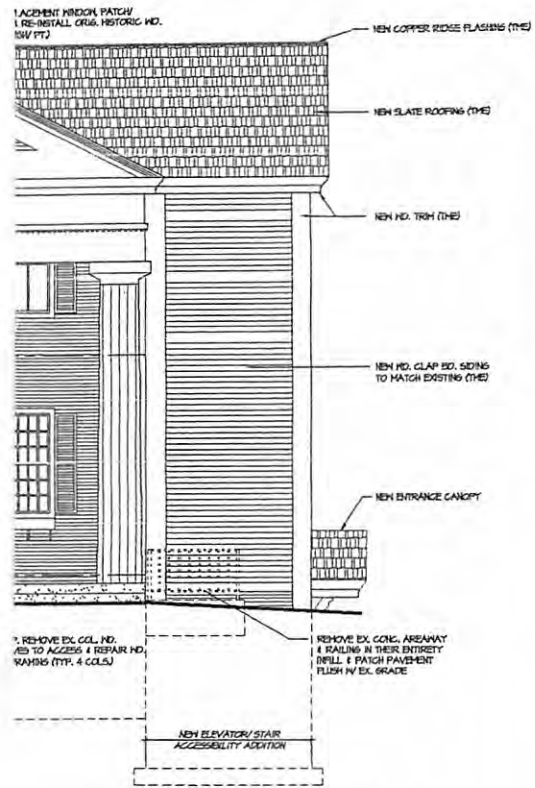
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PROJECT TITLE:
UNIVERSAL ACCESSIBILITY AND REPAIRS/ RESTORATION OF THE 1835 TOWN HALL
 STERLING, MA

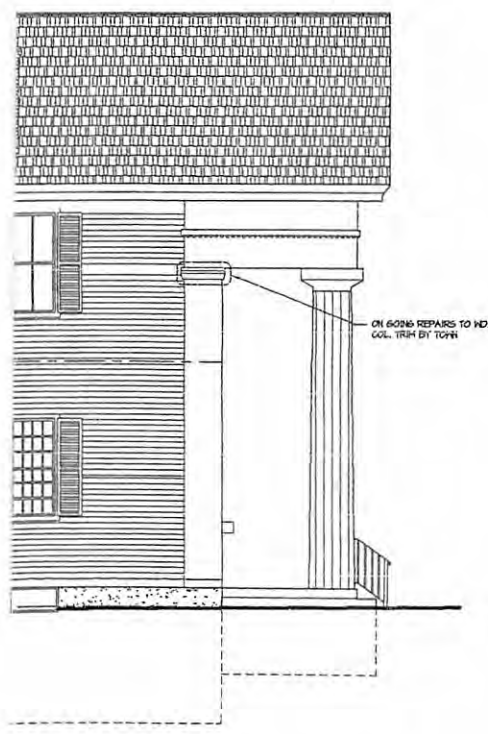
DRAWING:
PROPOSED EXTERIOR ELEVATIONS

SHEET:

A.3



WEST/MAIN STREET ELEVATION
 SCALE: 1/4" = 1'-0"



NORTH/MAPLE STREET ELEVATION
 SCALE: 1/4" = 1'-0"

- ARCHITECTS
- ENGINEERS
- INTERIOR DESIGNERS
- PROJECT MANAGEMENT

430 MAIN STREET
 ASHAWM, MA 01001
 TEL. 413.785.8500
 FAX. 413.785.8500

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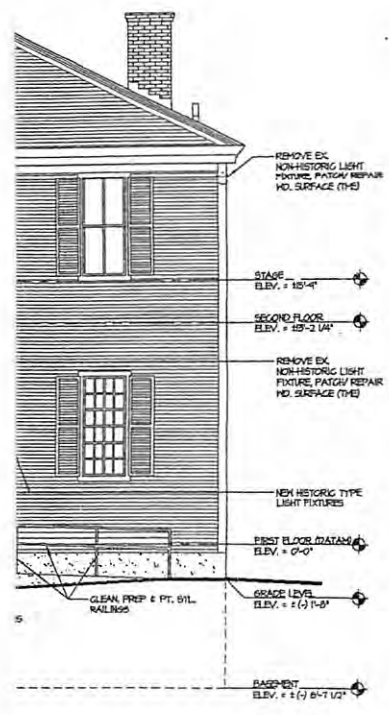
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 REV.
 REV.

PROJECT TITLE:
UNIVERSAL ACCESSIBILITY AND REPAIRS/ RESTORATION OF THE 1835 TOWN HALL
 STERLING, MA

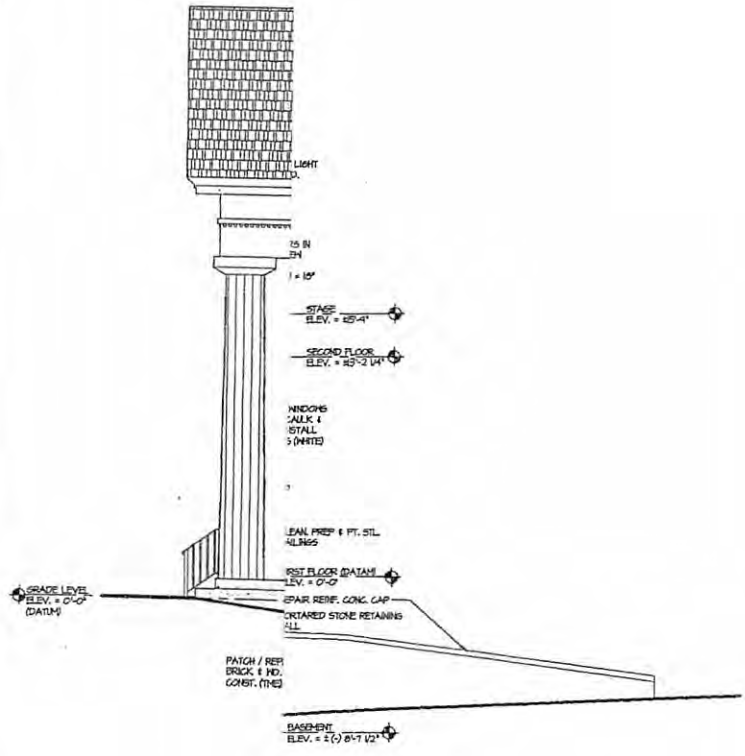
DRAWING:
PROPOSED EXTERIOR ELEVATIONS

SHEET:

A.4



EAST ELEVATION
 SCALE: 1/4" = 1'-0"



SOUTH ELEVATION
 SCALE: 1/4" = 1'-0"

Sterling 1835 Town Hall

The proposed Construction Cost Estimate for the Exterior Repair/ Restoration and Universal Accessibility work is based upon the proposed Floor Plans and Building Elevations attached to this Report and prepared by Reinhardt Associates, Inc., and the following proposed general description and outline specification.

1. Site Work
 - A. Earthwork: Excavation and backfill as required.
 - B. Utilities: Relocated services for Electric, Telephone and new Sanitary system.
 - C. Paved Surfaces: Repair/ Patch asphalt parking, concrete sidewalks.
 - D. Site Improvements: Concrete filled steel bollards, miscellaneous improvements.
2. Substructure
 - A. Footings: Reinforced cast-in-place concrete spread footings.
 - B. Foundations: Reinforced cast-in-place concrete with R-10 rigid insulation, dampproofed.
 - C. Slabs: 4" reinforced cast-in-place concrete with 6 mil poly vapor barrier over compacted structural fill.
3. Superstructure
 - A. Walls: Bearing wood frame and concrete block.
 - B. Columns and Beams: wood, nominal or engineered lumber as required.
 - C. Roof: Nominal wood rafters with plywood roof sheathing.
4. Exterior Construction:
 - A. Walls: 2x6 wood stud frame with plywood sheathing and wood siding to match existing.
 - B. Doors: Insulated, embossed hollow metal with safety glazing.
 - C. Windows: Wood double hung with insulated glazing and exterior muntins.
 - D. Roofing: Unfading green slate to match existing slate with 40# underlayment.
 - E. Insulation: Fiberglass batt (R30) roof; (R19) wall.
 - F. Specialties: Wood window shutters to match original shutters.
5. Interior Construction
 - A. Partitions: Wood stud with gypsum wall board and concrete block.
 - B. Doors: Solid core stile and rail wood doors to match existing doors with finish hardware.
 - C. Floor Finishes: Entrance matting, rubber or vinyl stair treads, risers, tile and base, ceramic tile and base in H.C. toilet rooms.
 - D. Wall Finishes: Paint semi-gloss plaster, gypsum and existing painted surfaces.
 - E. Ceiling Finishes: Painted gypsum, plaster and existing painted surfaces; new suspended acoustical tile ceiling.
 - F. Specialties: Toilet accessories interior signage, wood handrails, etc.
 - G. Millwork: Standard prefabricated kitchen base and wall cabinets, plastic laminated wood countertops.
 - H. Stair Construction: Nominal lumber stringers with plywood treads and risers.
 - I. Elevator: 2,500 lb. capacity, hydraulic (3) stop in-line elevator, MAAB/ ADA accessible.