

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 site 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 lited 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.

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 parging 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.

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