



Building Condition Assessment
for the:

Old Town Hall

Salem, MA

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Introduction

Old Town Hall is currently managed by the Department of Planning and Community Development as a function hall available for cultural and civic events. The Salem Redevelopment Authority is working with the City to identify a long-term user for Old Town Hall with the goal of better utilizing this historic resource to create vibrant economic development in downtown Salem. To facilitate planning for the long term reuse of Old Town Hall, this analysis was undertaken to evaluate the condition of the building systems and building shell, determine what repairs will be required to comply with the Salem Building Code, assess further repairs recommended to bring the building to a habitable condition, and provide a cost estimate for this work.

The report assesses the condition of building life safety, mechanical, electrical and plumbing systems and their cost for replacement based on age, condition and code requirements for permanent occupancy. Additionally, the report includes a review of occupancy-critical building envelope components, including the masonry, roof and windows. Interior finishes and finish systems are evaluated and costs to repair or restore are provided.

The report includes an analysis of what repairs are required to bring the building into compliance with the Salem Building Code to continue the current use of the building and what further repairs will be required if substantial renovations take place. Primary Recommendations and cost estimates are provided where Building Code conditions must be met for long term re-use of the building. Secondary Recommendations and cost estimates are made with regard to energy efficiency and other long-term issues pertaining to the commercial viability of a long-term leaser of Old Town Hall.

Structural systems were not evaluated as part of this study and no opinion is made to that end. For an analysis of Old Town Hall's structural capacity, refer to the [Structures North Report] study, also completed in May of 2007.

Survey and Methods

On April 5, 2007, an on-site survey of Old Town Hall, Salem, MA was conducted for the purposes of identifying failing, defective or non-compliant mechanical, electrical and life safety components required for the viability and re-use of the facility. The City of Salem provided the assistance of Joe Barbeau Jr., Assistant Building Inspector for his knowledge of code requirements and Dan Stanwood of Salem Department of Public Works. The Salem Department of Public Works is currently charged with maintaining the facility and his assessments were valuable in the development of this report. Additionally, George O'Connell, interim plumbing and heating inspector for the City of Salem, provided insight regarding the facility's heating plant and associated steam distribution system.

A previous facility study implemented by Staley McDermet Associates, Salem, MA *Salem Old Town Hall – Programmatic Study* (1996) was reviewed in detail for background information and prior professional opinions and applicable costs associated with a comprehensive overview of the subject facility.

Cost Estimating practices employed in this report were developed in spreadsheet format using Microsoft Excel and formatted in standard Construction Specification Institute (CSI) format. Cost data was developed from both local cost data based on similar work and standardized costs derived from RS Means Repair and 2007 Remodeling Cost Data Residential/Commercial and RS Means 2007 Square Foot Costs Residential/Commercial/Industrial/Institutional.

Cost factors were adjusted to reflect the nature of the work. Considerations affecting higher construction costs include ownership, the historic nature of the facility and the location of the facility in a pedestrian mall. While not called out specifically within the context of this report, incidental work such as carpentry, cutting and patching and general conditions associated with all prescribed measures are included in each expressed cost. All of the repair and renovation components are estimated for standard equipment and finishes. In the event that premium equipment or finishes are incorporated into a final building plan, costs will likely increase.

This study provides no architectural practices or design development but was developed by evaluating the existing conditions, identification of failing or imminently failing systems and costing the replacement of the identified components. Consultation with local code officials provided the basis for establishing the trigger-points where renovation thresholds require substantial system upgrades.

In the event that the owner engages qualified architectural and engineering services to develop complete work-scopes and detailed system requirements, costs could and will likely increase to reflect the specific nature of plans and specifications. This study, while attempting to project an accurate picture of all anticipated costs, is only a reflection of the existing conditions and system upgrades or replacement based on standard costs and reasonable assumptions and as such is strictly a budgeting tool for use by decision makers.

Building Code Analysis: Thresholds for System Upgrades

The current building use is classified under the Massachusetts State Building Code 780 CMR as Use Group A-3, facilities typically used for public assembly including the use of auditoria where people gather for entertainment including theatrical presentations and other similar purposes without the use of a stage other than a simple raised platform. Use A-3 applies to only those facilities

without permanent seating. See Section 303.4 “Use Group A- 3 Structures” 780 CMR – Sixth Edition of the MSBC.

One section of the MSBC somewhat unique to Massachusetts is Section 34, “Repair, Alteration and Change of Use of Existing Buildings”. In general, this section permits the normal repair and maintenance of existing building components without requiring full compliance with new construction standards. Therefore, the current use of Old Town Hall may continue without compliance with the current Salem Building Code requirements if the work in the building consists only of ordinary repair and maintenance.

Sprinkler and Fire Protection Systems: In an existing building like Old Town Hall, per Section 3404.12, should *substantial renovations* take place, fully-compliant fire protection systems, including sprinklers will be required. The total cost of renovations and repairs projected by this report exceed \$500,000.00; it is almost certain that at some point, sprinklers and fully upgraded fire detection upgrades will be required.

It should also be noted that any change-in-use which includes the serving of alcohol on a regular basis will trigger additional fire protection requirements per Chapter 304. The cost of compliance with Chapter 304 is outside the parameters of this report.

ADA and MAAB Compliance: Other than expenditures on ordinary repairs, the MAAB threshold for accessibility upgrades are triggered when a facility expends more than \$100,000.00 on improvements cumulatively in a three-year period. Therefore, the installation of a lift for access to the stage platform and the installation of appropriate signage throughout the facility will be needed in the event other upgrades are initiated.

Entryways may remain “as is” although it may be reasonable to provide an automatic door entry system and an extension of the brick ramp already in place. Such an extension will be needed to make the landing in front of the door appropriate for such a use; approximately 20SF of additional landing space will be needed if an entry system were considered. Because the general scope of work encompassed in this report impacts primarily interior components and systems, local enforcement may not require this additional measure.

Electrical Upgrades: Comprehensive electrical upgrades to the existing load centers and branch wiring throughout the facility are not required under the MSBC. Such work will on be triggered in the event that walls and ceilings throughout the building were opened in the course of major renovations. There is no code requirement that all the existing fused panels be changed to breakers simply because other building components are being modernized. Only the electrical branches and circuits directly affected by remodeling and substantial repairs are subject to current code requirements. It is certain therefore that the

basement-level bathroom renovations will require substantial improvement to the load centers and branch wiring serving the bathroom locations. Other electrical upgrades may also be anticipated for the boiler room where many original circuits and components dating back to the 1920's are still in use.

It should be noted, however, that many insurance underwriters are requiring policy holders to upgrade from fused panels to breakers as a means to reduce their risk of electrical failures and fire. It may be prudent to plan for breaker-panel upgrades in the event that a site review by an insurance inspector results in a compulsory upgrade to satisfy specific underwriting criteria.

Existing Facility Condition

Building Envelope

Slate Roof and Masonry

The building envelope, including slate roofing and masonry sidewalls are in overall good condition. Some minor repairs might be in order for mortar joints particularly at some of the window arches but immediate action is not required. It may be prudent to initiate a regular program of masonry maintenance at which time properly matched components and mortars can be applied within the development of a specified scope-of-work. Recent repairs to the masonry and slate roof appear to be providing adequate protection to the facility. No action has been recommended for the masonry or slate roof components at this time and not costs are allocated accordingly.

Thermal and Moisture Protection

No insulation is present in the section of ceiling framing below the roof

Windows

Windows represent a 'mixed bag' of repairs and replacement. One window is missing and will need to be fabricated by a custom service via a millwright/glazer specialist. Several windows have been modified with spray painted glass, temporary repairs and some appear to be immobilized in their frames. In general however, the majority of window units only need minor repairs including the restoration of the weight-and-pulley balance system and minor repairs to glass and glazing compound

Doors

The exterior doors are in good condition with one exception; the Essex St. door at the left has begun to rot. This door will likely need to be replaced as part of installing an accessible door and mechanical mechanism at this entryway.

Building Core Mechanical Systems

Elevator

Elevator appears to be compliant with emergency communication and accessibility. Certificate is current.

Plumbing

The existing plumbing at the basement level bathrooms is in fair condition and may continue in its present use at the men's facility. The women's restroom has been shut-off and it is assumed that substantial plumbing repairs are required.

Generally, existing fixture and component plumbing is beyond useful life although it may be possible to re-furbish and refit some of the porcelain fixtures. Walls, floor tiles, and finishes need to be repaired and restored throughout. Additional discussion of the basement bathrooms is found below under Accessibility Compliance.

Heating and Domestic Hot Water

The existing oil-fired steam system and components are obsolete. The existing boiler is approximately 16 years old and 4 years of useful life remain. The boiler is oversized in all likelihood, making it imperative that any change in the distribution system to hydronic (forced water) be preceded by a new heating plant. It is however possible to maintain the existing heating system through continued maintenance and repair for an almost indefinite time.

Domestic hot water is made via tankless coil at the boiler and is of unknown condition other than the current availability of hot water indicates functionality.

An abandoned boiler with an asbestos shell remains in the mechanical room. Asbestos is present in deteriorated condition on approximately 30% of the heating distribution pipes serving the steam system. Asbestos pipe insulation may be present elsewhere in the facility but could not be accessed or quantified.

Electrical System

New electrical entry service was provided to the building in 1997, including an 800 ampere main entry line. New panels and sub panels were installed concurrently and the systems at the load center appear to be in good condition.

The branch and distribution system throughout the facility, however, still require additional upgrades. The bathrooms, for example, are not mechanically vented and lack proper lighting, grounding and code-mandated fire detection and warning system components are not present.

There are still operable remnants of knob-and-tube wiring in critical areas including the boiler room, fused sub-panels existing throughout the facility and unknown distribution hazards may exist at well.

The cost of providing new breaker panels and further load center consolidation has been developed as well as the installation of additional branch circuits to suit

expanded building utilization, including the installation of all requirements for bathroom renovations at the basement level.

Electrical work associated with fire protection and accessibility has been allocated to those specific needs and is not reflected in the costs shown for non-emergency systems.

Fire Protection: Smoke Detection and Sprinklers

The existing fire protection system of smoke detectors is obsolete; amending the current components is not practical or possible due to changes in both codes and technology. New components are not compatible with the existing system which is over 15 years old. A licensed fire protection engineer will likely be required to design and specify system upgrades and component replacements but it is likely that both central control system and peripheral detection and warning equipment will need to be replaced in their entirety to meet current code requirements.

There is currently no automatic fire suppression (sprinkler) system in place; one is typically required for a facility of this use classification including the placement of manually operated fire extinguishers throughout the facility.

Interior Finishes and Systems

Flooring: The existing hardwood floors and stair treads throughout are in fair to poor condition. Sanding and sealing to refinish the floors is required for the preservation of the existing floors.

Bathroom floors are in good condition overall and can be repaired and restored as needed to accommodate bathroom modifications.

Hazardous Materials

Asbestos Pipe Insulation

Asbestos pipe insulation is present throughout the basement both at supply and return lines serving the existing steam distribution system. Some of the paper jacketing is punctured and the fibers may be friable. No access by the public or tenants is currently permitted in this area. It is unknown if the asbestos pipe insulation is present within the walls at the risers serving the heating lines for the upper floor.

Lead Paint

No lead paint abatement is required for facilities of this use classification absent a specific citation by the Board of Health of Inspector of Buildings. No action required.

Bathrooms

Bathrooms, Existing 2nd Floor and Lower Level (Basement)

Second Floor Bathroom: Several improvements to Old Town Hall have increased accessibility including some reasonable but non-compliant modifications to the 2nd level bathroom. Due to physical constraints and limitations presented by building structure, the only locations practical for a fully accessible ADA/MAAB compliant bathrooms are on the lower (basement level) floor of the facility.

MAAB requires that accessible bathrooms must be located on the main floor of the facility where the majority of standard occupancy functions are to take place. A variance to allow the use of the existing basement bathrooms will need to be obtained in order to be compliant. Such a variance, considering the historic nature of the building and elevator access to the bathroom facility will make the granting of a variance likely.

Basement Bathrooms: As indicated above, the basement bathroom for the men's facility is operational but in generally fair to poor condition. It is not however accessible to disabled individuals. The women's has been taken off-line and is in poor overall condition. It too is inaccessible.

Fortunately, both bathrooms can be fully restored and made ADA/MAAB and code compliant in every aspect. Substantial investment in building infrastructure may be needed, however, in order to gain the desired results. Original plumbing drains set in cement flooring and supply lines may need to be relocated at substantial cost. Under MSBC Chapter 34, *Plumbing* is not exempt from meeting new code standards except when the repairs are *ordinary*, clearly major renovations to the bathroom facilities will need to meet all current code requirements.

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Summary of Recommended Work based on Existing Conditions and Code Review

Old Town Hall may be maintained in its current condition indefinitely without making any upgrades or improvements. In the event work outside the definition of *ordinary repairs* is implemented however, certain upgrades will be compulsory as thresholds are crossed, triggering mandatory code compliance for the respective items described herein.

With the goal of providing a safe and accessible facility to a prospective tenant or tenants, the following items are recommended for replacement or substantial upgrade:

Primary Upgrades – Substantial Renovation Requirements

1. **Building Envelope:** One Window needs to be manufactured to match the existing historic configuration.
2. **Environmental/ Asbestos abatement:** Environmental health hazard required to be addressed; pipes are exposed in commonly accessed areas but no tenant access is permitted however. Building-wide HEPA vacuum cleaning may be appropriate due to the existing friable nature of asbestos insulation.
3. **Electrical:** Electrical, Branch Circuit Upgrades and Load Center Consolidation will be required as part of general facility upgrades affecting the bathrooms, fire protection, mechanical and ventilation systems. General scope will likely include replacement or abandonment of some system components still in use after 80 years. Existing fuse panels, branch circuits and related sub-panels may remain unless they are directly related to specific work plans. Expansion of existing or provision of new branch circuits and dedicated lines where required in bathrooms and mechanical control systems are anticipated.
4. **Fire Detection:** Fire detection and warning system upgrades are code-driven; current equipment is obsolete and new central control and peripheral upgrades will be required to meet current standards.
5. **Fire Suppression:** Wet-based sprinkler system installation will likely be triggered by substantial renovations; replacement or upgrades of the systems and components herein are outside the scope of ordinary repairs. A similar facility in the A-3 classification will require sprinklers, as well as manual fire extinguishers.
6. **Accessibility Upgrades** are required by the Massachusetts Architectural Access Board when a facility expends more than \$100,000.00

cumulatively in a three year period. Since the work under consideration for the overall facility exceeds that amount, the following items will need to be planned and costs allocated for ADA/MAAB Compliant Bathrooms
ADA/MAAB compliant Stage lift Associated ADA/MAAB electrical warning devices and ADA/MAAB signage.

PRIMARY UPGRADES

ASBESTOS ABATEMENT	\$	13,000.00
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ELECTRICAL UPGRADES	\$	81,200.00
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Load Center Consolidation as needed to implement work		
Smoke and Fire Protection		
Update Branch Circuits as needed to implement work		
Accessible Bathroom Upgrades		

FIRE SUPPRESSION SYSTEM	\$	116,600.00
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New Dedicated Water Service		
Pump & Pump Room Components		
Sprinkler System		

Accessible Upgrades - Bathrooms, Entryway, Interior	\$	103,905.00
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Plumbing		
Fixtures		
Finishes		
Entryways		
Stage Lift		

TOTAL PRIMARY UPGRADES	\$	314,705.00
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Secondary Upgrades for Building Efficiency and Preservation

With the goal of providing a viable, energy efficient facility and preserving existing value the following items are recommended for consideration. The items below do not affect public safety nor require code-compliance measures at this time but add value to the facility by providing a basis for long-term marketability and productivity:

1. **Heating and steam distribution system replacement:** The existing steam boiler and steam distribution system is functional but obsolete and in need replacement if higher efficiency and lower facility operating costs are goals. The existing boiler is near the end of its useful life and the remaining distribution system is prone to leaks and emergency service for maintenance. Steam traps and other system components suffer from lack of maintenance and available parts. The cost of replacement is for standard equipment; premium efficiency equipment may be more costly but utility rebates may be available to offset costs.
2. **Insulation:** No insulation existing in the attic area below the roof; 12" of thermal barrier for an insulation rating of R-38 is the minimum recommendation.
3. **Window repairs:** Windows are in need of overall maintenance; one window needs to be manufactured to and installed. This cost is carried in Primary Upgrades. Interior storm/acoustical panels serve two purposes as the name implies; they reduce heat loss through the main window and provide better acoustic rendering for the performance space by buffering the glass from the direct impact of sound waves.
4. **Floor Refinishing:** The hardwood oak-strip flooring is in dire need of refinishing or the floors will need complete replacement at much higher cost.
5. **Interior Painting:** Painting is required for the ceiling of the main hall and at other areas throughout the facility
6. **Interior Building Finishes:** The cost estimate is an allowance-based cost to accommodate cutting, patching and refinishing as needed in the implementation of the work related to heating system distribution and other interior work.

SECONDARY UPGRADES

New Heating System	\$ 124,110.00
Remove Existing Boilers	
Remove Existing Radiators	
Install new gas boilers	
Install new forced hot water	
Boiler and Heat System Controls	
Install new DHW system	
Thermal Insulation at Roof	\$8,500.00
Interior Finishes	\$ 53,870.00
Sand and Re-finish wood flooring	
Repair and Paint Main Hall ceiling	
Other Painting re cutting/patching	
Window Repairs	\$ 85,350.00
General Glazing & Repairs	
Fabricate One Unit	
Sash Weights/Pulley	
Paint Windows	
Interior Acoustic/Storm Panel	
TOTAL SECONDARY UPGRADES	\$ 271,830.00
TOTAL PRIMARY and SECONDARY UPGRADES	\$ 586,535.00