



CITY OF SOMERVILLE, MASSACHUSETTS
MAYOR'S OFFICE OF STRATEGIC PLANNING & COMMUNITY DEVELOPMENT

Joseph A. Curtatone

Mayor

HISTORIC PRESERVATION COMMISSION

KRISTENNA CHASE, *PRESERVATION PLANNER*
SARAH WHITE, *PLANNER & PRESERVATION PLANNER*

Case #: HPC 2019.064
Date: October 15, 2019

Recommendation: NOT Preferably Preserved

PRESERVATION STAFF REPORT
for
Determination of Preferably Preserved

Site: 59 Albion Street Barn

Applicant Name: Daryl P. & Katherine E. St. Laurent

Applicant Address: 59 Albion Street, MA

Owner Name: Same

Owner Address: Same

Petition: Applicant seeks to demolish the 1 ½-story wood-framed barn

HPC Hearing Date: October 15, 2019

I. PROJECT DESCRIPTION

1. **Subject Property:** The subject property is a c.1890 1 ½-story wood-framed barn.
2. **Proposal:** The Applicant seeks to demolish the existing structure.

II. MEETING SUMMARY: Determination of Significance

On September 17, 2019, the Historic Preservation Commission, in accordance with the Demolition Review Ordinance (2003-05), made a determination that the barn at 59 Albion Street is Significant. Per Section 2.17.B, this decision is found on the following criteria:



Section 2.17.B - The structure is at least 50 years old;

and

- (i) *The structure is importantly associated with one or more historic persons or events, or with the broad architectural, cultural, political, economic or social history of the City or the Commonwealth;*

and

- (ii) *The structure is historically or architecturally significant (in terms of period, style, method of building construction, or association with a reputed architect or builder) either by itself or in the context of a group of buildings or structures.*

The subject building is found importantly associated with the broad architectural, cultural, economic and social history of the City due its construction type and use. Barns and stable were necessary adjuncts to the pre-automotive era.

The subject barn at 59 Albion Street is found historically and architecturally significant due to its method of building construction and its association with pre-automotive Somerville.

The period of significance for the barn at 59 Albion Street begins with its construction between 1884-1895 where it essential for the housing of horses and carts and other horse-related equipment and supplies.

III. ADDITIONAL INFORMATION

See attached structural report from Linwood Gallant, Structural Engineer, South Mountain Company, Inc.

Comparable Structures: Barn/stable structures can be found throughout the City. While several barn/stable structures within the City remain in moderate to good condition, many more remain in moderate to poor condition, due to the lack of repurposing this type of structure. Here are a few comparable structures scattered around the city:

The predominant difference between the comparable barns illustrated below is one of maintenance and use. Some have been converted to residences, others to studios and home offices while some are still in use as shelters for automobiles.



Top: 22 Porter Street (LHD); 15 Linden Avenue; Preston Road



Center: Preston Road; ?; Sycamore Street at Broadway;



Bottom: 38 Marshall Street; 29 Meacham Road (LHD)

IV. PREFERABLY PRESERVED

If the Commission determines that the demolition of the significant building or structure would be detrimental to the architectural, cultural, political, economic, or social heritage of the City, such building or structure shall be considered a preferably preserved building or structure. (Ordinance 2003-05, Section 4.2.d)

A determination regarding if the demolition of the subject building is detrimental to the architectural, cultural, political, economic, or social heritage of the City should consider the following:

How does this building or structure compose or reflect features which contribute to the heritage of the City?

- a) How does this building or structure compose or reflect features which contribute to the heritage of the City?*

The form and massing of barn/stable structures represent a common historic accessory structure that served a variety of purposes in the pre-automotive age. This barn illustrates the pre-automotive uses of accessory buildings.

- b) What is the remaining integrity of the structure? The National Park Service defines integrity as the ability of a property to convey significance.*

While the building does convey significance as a barn, the existing conditions are poor. See structural report. The building has an archetypal loft and cross gable plan.

- c) What is the level (local, state, national) of significance?*

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Barn/stable structures were constructed in New England for a variety of general purposes such as to house animals, store food and other general items, and later to shelter carriages. Therefore, the subject structure represents an important aspect of local and state (regional) history.

- d) *What is the visibility of the structure with regard to public interest (Section 2.17.B.ii) if demolition were to occur?*

The subject structure is partially visible from Albion Street. The rear elevation is visible at a distance from Woodbine Street.

- e) *What is the scarcity or frequency of this type of resource in the City?*

Barn/stable structures are found throughout the City; however, not many remain in existence within the immediate area. Also, few barn/stable structures within the City remain in moderate to good condition.

Upon a consideration of the above criteria (a-e), is the demolition of the subject building detrimental to the architectural, cultural, political, economic, or social heritage of the City?

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The subject barn at 59 Albion Street is found historically and architecturally significant due to its method of building construction and its association with pre-automotive Somerville.

The period of significance for the barn at 59 Albion Street begins with its construction between 1884-1895 where it essential for the housing of horses and carts and other horse-related equipment and supplies.

The barn is currently in poor and possibly unsafe condition. Even with full documentation, the loss of the barn would be detrimental to the architectural, cultural, political, economic, or social heritage of the City. Staff, however finds that the condition of the building outweighs its value of its historic and architectural significance to the City.

I V. RECOMMENDATION

Based on the information provided and an assessment of the building, Staff recommends that the Historic Preservation Commission finds the barn at 59 Albion Street NOT to be PREFERABLY PRESERVED.

RUNCIBLE STUDIOS

Architecture | Research | Design

20 August 2019

Somerville Historic Commission
Attn: Sarah White

Re: 59 Albion St Carriage House

Dear Sarah,

My clients, the owners of 59 Albion St, are seeking to demolish the carriage house located in their backyard. This decision comes after nearly a year of investigations they've undertaken, with several different contractors, engineers, and with me. I was engaged by the owners on 8 February 2019, and during my initial site visit, determined that it was not safe for anyone to walk on the second level. I advised the owners not to store anything inside, and not to allow anyone inside the structure. Between February and today, there is additional serious settling and deterioration, which is not surprising, as the foundation, walls, and roof are seriously compromised.

We've received detailed bids from contractors familiar with this type of work and have had some contractors walk away from the job because of the complication and danger. The entire foundation needs to be replaced, which is quite difficult to do when the structure above is in such poor shape – generally, the structure above could be jacked up and set back down on the repaired foundation, but in this case, the upper structure cannot withstand the jacking process. So, the upper structure would have to be shored up first...but the foundation cannot support the weight or stress of this additional work. It is a classic “chicken and egg” situation, which could only be solved with rather extraordinary construction methods costing the owners many hundreds of thousands of dollars.

With a background in historic preservation, and a published academic and research record on vernacular architecture, my professional and personal proclivities generally push me to save old structures whenever possible. However, my years as a general contractor corroborate what the other contractors are saying about the complication of repairing the structure in place. Therefore, it is not flippantly that I support the owners' decision to demolish this structure, but it is also my professional recommendation, given the circumstances. The new structure will not only be in conformance with zoning and building codes, it will be safe, and it will support the owners' long-term goals of raising their family here at this property in a way that's economically possible for them.

Thank you for your consideration, and please feel free to reach out if you have any questions.

Sincerely,

Marilyn W. Moedinger, AIA, NCARB, LEED AP
MA License #50646

south mountain

COMPANY

Marilyn Moedinger
Runcible Studios
440 Somerville Avenue
Somerville, MA 02143

April 2, 2019

RE: 59 Albion Street Barn – Site Visit Report

Dear Ms. Moedinger,

South Mountain Company, Inc. has performed an observational site visit at the above-referenced project, to observe the condition of the existing barn structure. Linwood Gallant, PE visited the site with you on March 22, 2019 and prepared this report.

It is our understanding that the owners of the barn structure are intending to use the structure for storage and as a home gym. We understand that the owner is not intending to use the barn as a garage to store vehicles. We understand that the building will be insulated, and heated/cooled with a heat pump heat/AC unit, but no plumbing will be installed. We understand that a contractor has recently installed some temporary bracing and rafter ties to shore the structure through this past winter.

OBSERVATIONS

During our visit, we performed a visual inspection of exposed portions of the existing barn superstructure and foundations (see attached photographs below). The barn structure was approximately 20 feet by 30 feet in plan, had 2 elevated framed floor levels, a roof, and a 5-foot tall basement. The following is a summary of our observations:

Exterior

It was raining during our visit, which allowed us to observe several deficiencies with the existing grading around the structure. We noted that the driveway sloped down toward the south (front) elevation of the barn (see **Photo 1**). At the garage door, we noted water flowing into the structure, debris from storm water flows, previous repair and sealant applications at the west jamb of the door, and significant deterioration at the base of the 3 1/2" x 5" wood post at the west jamb (see **Photo 2**). Adjacent to this post, we observed a wall stud had detached from the sill plate and had kicked inward. At the interior side of the front wall, we noted a layer of black and grey-colored coarse stone between the bottom foot of the studs (see **Photo 3**). We observed that the exterior elevation appeared slightly higher than the interior first floor elevation at this location, and noted daylight visible at the bottom of the exterior walls at the southwest corner. We also noted that there were no, or structurally inadequate, window headers above the front elevation windows.

At the east exterior wall, we noted the exterior grade was higher than the interior first floor elevation, which indicates the exterior wood wall is retaining soil. We observed water infiltrating through the exterior wall boards toward the interior of the

barn (see **Photos 4 & 5**). We also noted significant deterioration of the wall studs and bracing at the south end of the east exterior wall. Not all studs were exposed at the east wall, but based on the staining observed at perimeter floor boards and interior wall boards, water appeared to be infiltrating along this entire elevation.

At the west elevation, we noted deteriorated clapboard siding and spalled and deteriorated masonry at the exposed exterior face of the foundation wall (see **Photos 6 & 7**).

At the north (rear) elevation, we were unable to view the full extents of the elevation, but noted that from the northwest corner the lower portion of the wall appeared to bow outward, while the middle and upper portion appeared to bow inward (see **Photo 8**).

Roof

The roof framing consisted of 1x boards supported by 2" x 5" rafters spaced at approximately 30 inches on center (see **Photo 9**). The rafters spanned between the ridge and the front and rear exterior knee walls. At the ridge, the rafters butted against each other, with no ridge board or ridge beam. The top plate elevation of the north and south knee walls approximately 4 feet above the second-floor decking elevation. We noted wide-spread staining at the surfaces of the rafters, and at underside of the exterior and interior roof boards. We did not observe ridge, eave, or gable end ventilation. We also observed what appeared to be recently installed rafter ties and hurricane ties (see **Photo 10**).

Second Floor

The second-floor framing consisted of 1x boards supported by 2" x 8 1/2" joists spaced at approximately 17 inches on center (see **Photo 11**). The floor joists spanned between the front and rear exterior walls. We observed that the joists were supported by a top plate of the first-floor walls, but noted that not all of the second-floor knee wall studs were adjacent to or attached to the second-floor joists (see **Photo 12**).

First Floor

The first-floor framing consisted of 1x boards supported by a variety of joist sizes and spacings. It appeared that the original joists were generally 2" x 8" joists spaced at approximately 18 inches on center (see **Photos 13 & 14**). The first-floor joists were supported by the exterior foundation walls and were lapped over an interior 6" x 6" girder, which was supported by 12" x 12" brick columns. We noted wide-spread staining of the floor joists and girders. Where the joists and girders were supported by foundation walls, the staining was more pronounced and we noted moderate to heavy deterioration, particularly at the south and east foundation walls.

Additional 2x8 joists appear to have been added between the existing joists, particularly at the southeast corner of the barn, adjacent to the garage door. In addition, a 4 3/4" x 8" girder was added at the southwest corner, approximately 3 feet from the front foundation wall. We noted a portion at the west end of the girder had deteriorated and collapsed (see **Photo 15**). The additional joists and girder were likely added to support heavy loading, such as vehicles or heavy storage.

At the threshold of the garage door, we noted a 6-inch deep wood beam that spanned between a cast-in-place concrete wall, at the west jamb of the garage door, and the east exterior wall (see **Photo 16**). We noted the beam was wet (saturated), deteriorated, and had a 3" deep x 12" deep notched end at the concrete wall.

Foundations

The foundation walls consisted of a mixture of red brick masonry, approximately 12" thick, atop field stone (see **Photo 17**). We noted mortar between the bricks and stone had varying levels of deterioration and erosion. At the front elevation, it appears that a cast-in-place concrete wall was placed at the interior face of the existing foundation wall (see **Photos 18 & 19**). We noted that the cast-in-place wall was not placed at the garage door location. At the east and west foundation walls, we noted areas of cast-in-place concrete or a thick parge coating at portions of the interior face of foundation walls (see **Photos 19 – 21**). At the southwest corner, we noted an area where the base of the stone wall had partially collapsed inward (see **Photo 21**).

DISCUSSION AND RECOMMENDATIONS

Based on our observations, the existing barn structure is in poor condition and requires significant structural repairs to the superstructure and foundation. At each framed level, the portions or all of the framing was found to be structurally inadequate. In addition, there is likely additional damage to the roof, wall, and floor framing that was not exposed during the time of our visit, due to existing interior finishes. It appears that water intrusion and lack of ventilation are causing significant moisture issues and deterioration at the exterior and interior of the structure. The foundation walls are also experiencing significant moisture exposure and have deteriorated as a result. Based on our observations, the following is a summary of the scope of possible structural repairs required to make the structure safe for the proposed use:

Exterior

1. Fix the exterior grading around the structure to reduce water flows toward and into the structure.
2. Remove all retained earth adjacent to the wood-framed exterior walls.
3. Repairs or replacement of the exterior wall framing is anticipated at each wall elevation, due to long-term exposure to moisture. The extent of which is unknown, due to limited exposure of the exterior wall studs. At a minimum, we anticipate widespread damage at the base of all wall studs.
4. Installation of windows headers where they are missing or inadequate. Only the front elevation headers were exposed, but the condition is likely similar at the other elevations.

Roof

1. Provide new roofing, new roof sheathing, and reinforce or replace the existing rafters. The existing roof framing has deteriorated and the rafters are structurally inadequate for the current code-prescribed roof loads. Due to the level of deterioration observed, replacement is likely the only viable option.
2. Provide a ridge board or other mechanism to prevent rafter movement at ridge.
3. Provide a connection between knee wall studs and second floor joists.
4. Create a permanent rafter thrust restraint mechanism. The currently installed temporary rafter ties will dramatically impact any reasonable use of the second floor.
 - a. One thrust restraint mechanism would be to add a structural ridge, supported by interior posts. This system could be aligned and integrated with a girder/column system at the floor levels below (see sections below for additional info). Adding a ridge beam does not resolve all the issues at the exterior wall framing,

but it will eliminate the rafter thrust due to gravity loads.

Second Floor

1. Reinforce or replace the second-floor joists. The existing joists span over 20 feet and are inadequate for habitable or uninhabitable attic loading. Sistering of the joists may be an option, but due to the extent of work required at the roof, and exterior walls, replacement may be a more feasible approach.
2. Alternatively, introducing a mid-span girder and interior columns may allow for the majority of the existing joists to be reused. However, further exposure of the joists would be required to ensure additional repairs are not required due to deterioration.

First Floor

1. Repair or replace the damaged first-floor joists. The existing joists appear to have adequate capacity for the proposed use, but due to deterioration due to long-term moisture exposure, repairs are anticipated. At a minimum, repairs to the joist ends are anticipated at most, if not all, joists. Additional repairs and reinforcing at interior portions of the joists may be required at spot locations.
2. Reinforce or replace the center girder, or add additional interior columns to support the existing one. The existing girder is structurally inadequate for the proposed use. In addition, the east end of the girder has deteriorated and require repairs and proper support at the foundation wall.
3. Replace the deteriorated beam at the garage door threshold, or remove and support the floor joists with a new foundation wall.

Foundations

The existing stone and brick foundation walls are in poor condition, with areas of partial collapse and major deterioration to the brick/stone units and mortar joints. Due to the extent of damage observed, the following are a few options that could be implemented:

1. Remove and replace the existing foundation in its current location with a new cast-in-place foundation wall. This will require partial removal of the existing foundation wall, in pieces, if the superstructure is going to remain in place during the foundation work. Based on the extent of work to the superstructure, it may be more practical to demolish the superstructure.
2. Build a new foundation wall at the inside face of the existing foundation wall. This option will require either new vertical supports for the floor joists and rafters at the exterior wall, such as a new interior bearing wall, or new floor framing at the first floor that can cantilever past the new interior foundation wall and support the framing above. The demand on the exterior walls can be significantly reduced if an interior girder/column line are introduced at midspan of the first floor, second floor, and roof.
3. Demolish and infill the existing basement and build a new frost-protected foundation or conventional foundation wall at the first floor elevation. Since many of the foundation problems stem from moisture intrusion and grading, removal of the basement and existing foundation walls will significantly reduce the moist intrusion challenges into the build.

Due to the extent of damage to all structural system of the barn structure, it is likely that full replacement of the structure will be the most cost-effective solution. However, if full replacement of the barn is not possible, further development of the above repair, replacement, and reinforcing options can be done in conjunction with Runcible Studios and the owner's contractor. Should the owners wish to attempt a piecewise repair approach, we recommend the owners engage a contractor with significant experience renovating and repairing damaged structures of similar age and complexity.

CLOSING

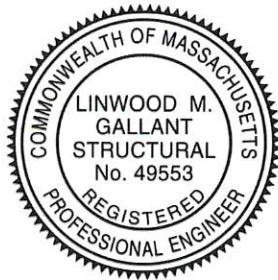
This report was prepared for the exclusive use of South Mountain and Runcible Studios and is not intended for any other purpose. Unless otherwise noted, our report was based on observed site conditions and the information available at the time of our site visit. We reserve the right to amend this report and our conclusions if new information becomes available and revisions are necessary and warranted.

If you have any questions or require additional information, please let me know.

Thank you,

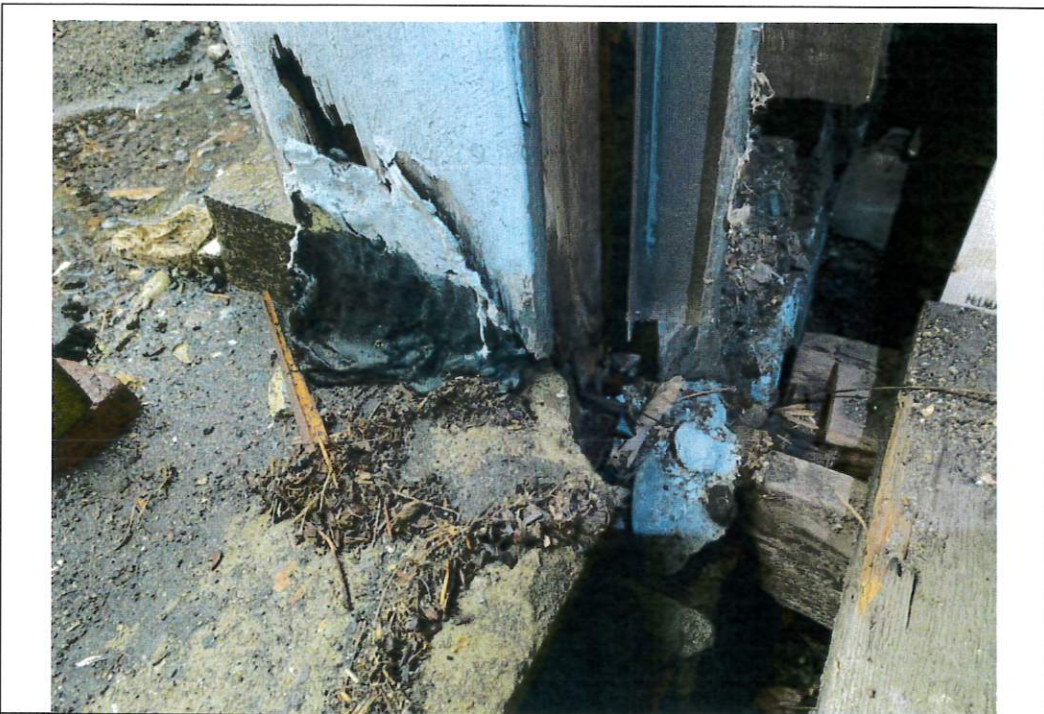


Linwood Gallant
Structural Engineer
South Mountain Company, Inc.
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Photograph 1 – South (front) elevation



Photograph 2 – View of west jamb of garage door



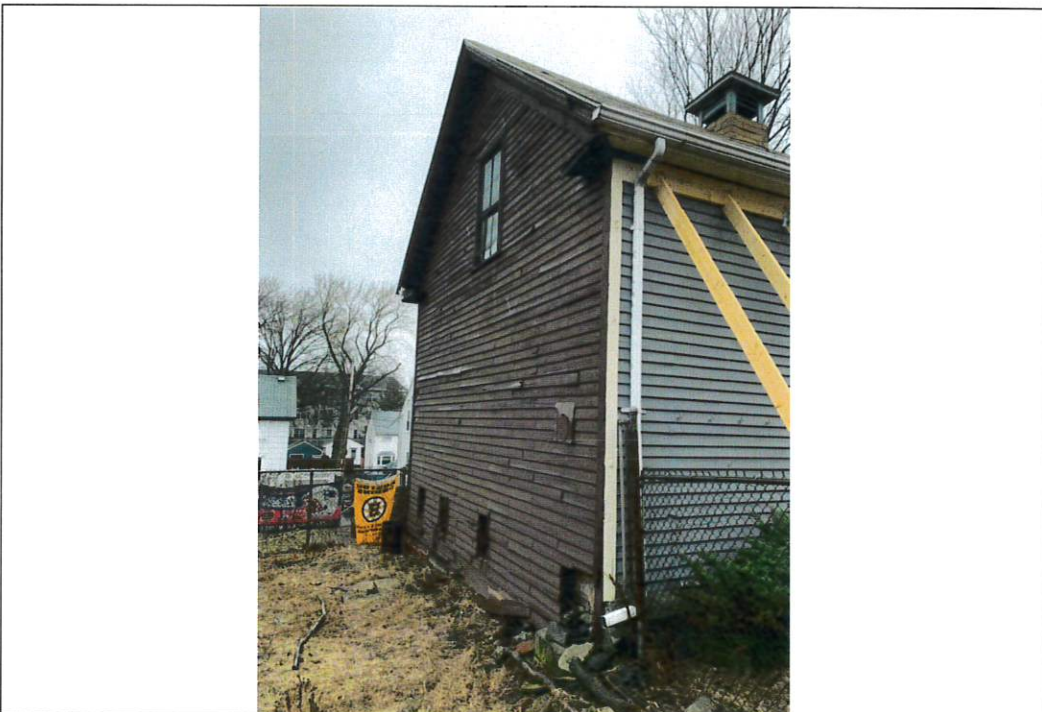
Photograph 3 – View of interior of south exterior wall. Note water staining at wall boards, stone between wall studs, and daylight visible at the southwest corner.



Photograph 4 – View of southeast corner. Note exterior grade is higher than the first floor elevation



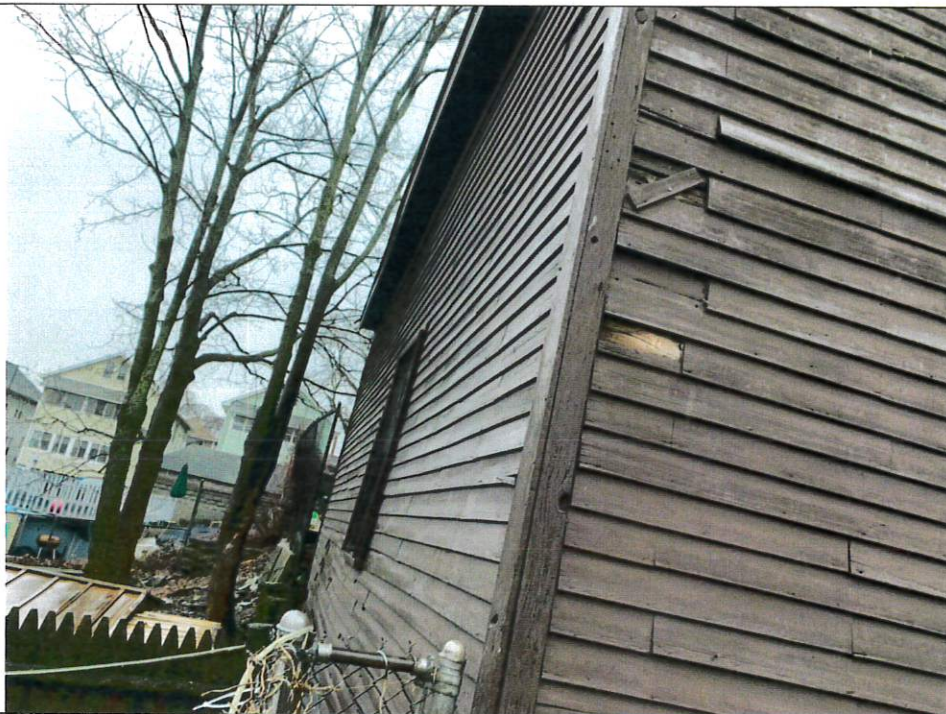
Photograph 5 – View of interior of east exterior wall. Note water seeping through boards and deterioration of studs and bracing.



Photograph 6 – West exterior elevation



Photograph 7 – Closeup view of southwest corner, note deterioration at the top of foundation wall.



Photograph 8 – View of north (rear) elevation (looking east)



Photograph 9 – View of ridge and rafters looking west. Note staining at rafters and underside of roof boards.



Photograph 10 – View of temporary rafter ties and shoring



Photograph 11 – Close-up view second floor joists at south (front) exterior wall from above



Photograph 12 – Close-up view second floor joists at south (front) exterior wall from below. Note not all second-floor wall studs were attached to the floor joists.



Photograph 13 – View of first floor framing looking southwest



Photograph 14 – View of first floor framing looking east



Photograph 15 – View of 4 $\frac{3}{4}$ " x 8" girder near garage door opening. Note staining and collapsed west end of girder



Photograph 16 – View of beam below garage door opening at south (front) elevation



Photograph 17 – View of typical foundation wall configuration



Photograph 18 – View cast-in-place concrete foundation wall at south (front) elevation



Photograph 19 – View south and east foundation walls. Note cast-in-place wall note located at garage door opening area.



Photograph 20 – View of west exterior wall elevation



Photograph 21 – View of foundation at southwest corner. Note partially collapsed stone wall at base of the west foundation wall.