
DIRIGO ENGINEERING

2 Dirigo Drive Fairfield, Maine 04937 (207) 453-2401 Fax: (207) 453-2405

May 6, 2024

#61101

Mr. Jeff Libby, Town Manager
Town of Sangerville, Maine
93 Main Street
PO Box 188
Sangerville, ME 04479

Dear Jeff:

Introduction

The Town of Sangerville is faced with a decision to make regarding the historic Sangerville Town Hall located in Sangerville, Maine. Until recently, the building has been used for town offices, a library and other municipal purposes. However, structural concerns regarding the building safety have been noted by the Maine Municipal Association (MMA), and were significant enough for them to drop insurance coverage on the building. The Town of Sangerville is now deciding what to do with the building in the future. We were asked by you to visit the building, review previous documents related to the structural issues in the building, and provide a preliminary cost estimate for repairs.

Background

The Sangerville Town Hall was constructed in 1901/1902 during a time of economic prosperity in Sangerville. The building was designed and built by C.L. Smith. It is a 2½ story wood frame, rectangular building measuring approximately 48 feet by 80 feet. The building is on a full foundation consisting of fieldstone walls with mortared joints below grade, topped with granite coping stone and a four-layer thick brick wall above grade. The building was placed on the National Registry of Historic Places in 1991. Attachment 1 is the National Register of Historic Places Registration Form and provides more detail regarding the building architecture.

The basement framing is primarily 8" x 8" wood beams spaced at 10 feet towards the rear of the building (which was once used for storing fire-fighting equipment) and spaced at 14 feet in the middle of the building. The front of the building is supported by two additional 6" x 9" wood beams spaced at 17 feet that run perpendicular to the floor beams in the rest of the building. Floor joists are 3" x 9" on 16" center; however, they are deeply notched where the joists rest on the beams.

The beams are supported on the ends by the brick foundation wall and in the basement area by a series of brick columns spaced from approximately 8 to 11 feet apart. There are also a few wood columns supporting the beams. The basement floor is concrete. There is a concrete retaining wall along the rear of the building which appears to be independent of the rest of the foundation.

According to Town records, repair work was undertaken in 1991/1992 at the cost of approximately \$416,000. It is unknown to us what work was accomplished then but it appears that the brick columns, concrete basement floor, and concrete retaining wall at the rear of the building may have been installed at that time. In addition, it appears that some of the brick work was repointed and possibly the Bilco basement doorway was installed.

Town records also indicate that the wood clapboard siding on the building was replaced/repared by John Firth Builders in 2015.

Carpenter Associates

Carpenter Associates of Old Town Maine designed structural renovations to the town hall foundation in 2003, however, to our knowledge, these repairs were not implemented. The plans provided to the town included the following:

- 14 pilasters/butresses inside the exterior basement walls to provide support under the existing beams.
- Below grade reinforced concrete foundation/buttress wall on front, north and south walls tied with rebar to the interior pilasters/butresses.
- Concrete wall along exterior of rear building tied to pilasters/butresses in basement
- New Bilco style basement entry.
- New footing drain.
- Floor slab in basement.
- New basement windows.
- Clean, repoint and seal existing brick foundation.

These plans can be found in Attachment 2

Carpenter Associates again looked at the building briefly in 2019 to review structural issues related to the foundation. In the letter report provided by them (Attachment 3), they offered the following conclusions:

- The foundation walls have begun to buckle in several locations. They attributed this to the lack of foundation drainage making the foundation susceptible to freeze/thaw and general settlement of the foundation.
- The floor joists and beams have severe cracking.
- The floor joists are notched where they connect to beams and ledgers, raising the risk of splitting in the horizontal direction.
- Cracking of the plaster on the first floor.

The recommendations in the letter (Attachment 3) included the following:

- Sistering or replacement of all beams, joists and rafters to meet current structural capacities required by code.
- Installation of additional columns in the basement and steel beams to support the upper floors.
- Repair of the notched joists and beams in the basement.

- Rebuild the entire foundation walls.
- Installation of a foundation drain and grading around the foundation to provide proper drainage.

Maine Municipal Association

In 2022, the Town of Sangerville had an inspection of the building performed by a loss consultant (Justin Lowe) from the Maine Municipal Association. Mr. Lowe identified the following issues:

- Exposed electrical boxes in the basement
- Lack of damage protection for lighting
- Unsecured electrical run on balcony floor
- Exits partially blocked by stored items
- Lack of operational emergency lighting
- Lack of monthly fire extinguisher inspections and 5-year sprinkler inspections
- Old paint chipping and peeling should be evaluated for lead
- Roof leaks around chimneys by stage area
- Large pile of heavy slate shingles in attic contributing to stress on the building structure
- Tin ceilings above balconies indicating signs of water leakage from roof
- Foundation wall above bulkhead showing significant movement
- Foundation walls elsewhere bowing in at ground level and out at sill
- Cracks in beams and floor joists over columns
- Front foundation wall brick has separated near the top about 2½". Inside and outside of wall is cracked and bowed.
- Balconies are sagging

Shortly after the MMA report was completed, the MMA sent an e-mail to the Town recommending:

- Structural engineering assessment of the building
- Limiting the number of staff and citizens in the building due to liability concerns
- Notifying the Town that MMA excluded coverage of the building as of 7/1/22.

Site Visit

We made a brief site visit on March 20, 2024. We looked at the exterior walls, the interior basement walls and first floor framing, and briefly looked at the cracking in the plaster walls on the upper floors and the sagging basement balconies. We have not performed a structural analysis.

Our observations and conclusions support the conclusions and recommendations made by Carpenter Associates and the MMA. There are definite structural concerns with the building and foundation.

The below grade field stone foundation appears to be relatively sound. However, the layered brick above grade wall is cracked and bowed in several locations. The cracking and bowing of the brick foundation is likely primarily related to two causes:

1. Minor settlement of the below grade fieldstone foundation, likely cause by improper drainage around the building and repeated freeze thaw cycles.
2. Expansion of the brick and movement due to water penetrating the brick part of the foundation. The roof of the structure is known to be leaking from the evident water stains and that is a potential source of water. In addition, the cracking in the brick will allow water to penetrate.

Because the framing rests on top of the brick wall, the beams and joists are likely cracking in the basement due to the outside walls settling more than the interior columns. This creates stress in the framing members causing cracking of the beams above the interior columns.

Without repair, the brick will likely continue to bow and break, causing more stress on the framing members. The lack of heat in the building since 2022 has likely exacerbated this condition. In order to remedy this situation, significant repairs are required. At a minimum, foundation drainage, foundation repair and roof repair/replacement are necessary.

In addition, structural repairs/strengthening of the building framing may be required depending on an evaluation of the existing load capacity and the future use of the building. In general, a 40 pound per square foot live load capacity is required everywhere in the building with a potentially much higher design live load capacity in areas such as the library, where heavy materials may be stacked and stored.

An updated detailed building structural analysis should be completed followed by the design and construction of the needed repairs. The analysis and design should be completed by a firm that specializes in architectural and structural engineering services.

Opinion of Probable Project Costs

The costs for the necessary repairs are difficult to estimate accurately because during the repair work, it is likely that other defects will be uncovered which will require repair. In addition, the cost is likely to change depending on the final plans and specifications for the repairs and the bidding climate at the time of bidding. Also, it is uncertain at this time if portions of the wood frame structure of the building will require reinforcement/replacement.

In Table 1 on the following page is based on the 2003 plans prepared by Carpenter Associates with roof repair, framing reinforcement, and a 20% contingency added in. They do not include some of the minor safety items identified by MMA nor such items as plaster wall crack repair, replacement of water damaged components, doors, windows etc. Further, no costs have been included for addressing the sagging balconies.

Costs should be updated once a design has been completed. Also, it is best to get input from a qualified contractor on the likely cost for the work.

Table 1. Opinion of Construction Costs				
Item	Unit	Est. Qty.	Est. Cost	Est. Total
1. Exterior Concrete Walls w/Footings, including Cellar Entry	CY	80	\$1,750	\$140,000
2. Interior Buttresses/Pilasters	Each	14	\$5,000	\$70,000
3. Replace Brick Foundation Wall	SF	440	\$100	\$44,400
4. Repair Brick Foundation Wall	SF	680	\$30	\$20,400
5. Perimeter Drain	LF	260	\$40	\$10,400
6. Site Work/Drainage ¹	Lump Sum		\$75,000	\$75,000
7. Roof Repair ²	SF	2250	\$60	\$135,000
8. Framing Reinforcement Allowance	Lump Sum		\$150,000	\$150,000
Subtotal				\$645,200
Contingency (20%)				\$129,040
			Total Est.:	\$774,240

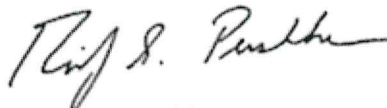
¹ Does not include paving overlay.

² Assumes 50% replacement required, actual condition unknown.

In addition to the construction costs there will be engineering design and inspection costs associated with the project. We suggest budgeting an additional 20% or \$129,040 for these costs which will be required. Therefore, our total preliminary opinion of cost for the repair work outlined above is **\$903,280**.

Please feel free to contact us if you have any questions regarding this brief estimate report.

Sincerely:
Dirigo Engineering

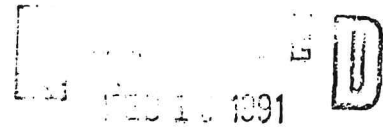


Ricky S. Pershken, PE



Attachment 1
National Registration of Historic Places Registration Form

United States Department of the Interior
National Park Service



National Register of Historic Places
Registration Form

NATIONAL
REGISTER

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Sangerville Town Hall
other names/site number _____

2. Location

street & number Main Street not for publication
city, town Sangerville vicinity
state Maine code ME county Piscataquis code 021 zip code 04479

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
<input type="checkbox"/> private	<input checked="" type="checkbox"/> building(s)	Contributing	Noncontributing
<input checked="" type="checkbox"/> public-local	<input type="checkbox"/> district	<u>1</u>	_____
<input type="checkbox"/> public-State	<input type="checkbox"/> site	_____	_____
<input type="checkbox"/> public-Federal	<input type="checkbox"/> structure	_____	_____
	<input type="checkbox"/> object	<u>1</u>	<u>0</u>
			Total

Name of related multiple property listing: N/A

Number of contributing resources previously listed in the National Register 0

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. See continuation sheet.

Signature of certifying official *Paul S. Frederick* Date 2/8/91
Maine Historic Preservation Commission
State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. See continuation sheet.

Signature of commenting or other official _____ Date _____
State or Federal agency and bureau _____

5. National Park Service Certification

I, hereby, certify that this property is:

entered in the National Register.
 See continuation sheet.

determined eligible for the National Register. See continuation sheet.

determined not eligible for the National Register.

removed from the National Register.

other, (explain:) _____

Entered in the
National Register

Neilous Byers 3/22/91

for Signature of the Keeper Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)

Recreation & Culture/TheatreGovernment/City Hall

Current Functions (enter categories from instructions)

Education/LibraryGovernment/City Hall

7. Description

Architectural Classification

(enter categories from instructions)

Colonial Revival

Materials (enter categories from instructions)

foundation Stone/Granitewalls Wood/Weatherboard

roof Stone/Slateother Entrance Porch

Describe present and historic physical appearance.

The Sangerville Town Hall is a large two-and-a-half-story rectangular frame building which is covered by a hip roof of slate. Stylistically, it exhibits Colonial Revival massing and overall detailing, although it also employs Queen Anne features. The town hall faces east onto Main Street (Route 23) in the middle of Sangerville village. It is sheathed in weatherboards and stands on a granite foundation.

The front elevation is symmetrically divided into three bays with the entrance centrally located. Contained within a broad round arch, the entry consists of a two-leaf paneled door framed by panels and arched Queen Anne windows featuring multi-colored panes of glass. A pedimented porch shelters this entrance. Its roof is supported by two thin square posts that rise to an elaborately detailed entablature featuring dentils and scroll modillions. (Documentary photographs of this building show that it originally had a flat roofed porch crowned by a balustrade, as well as a balustrade between the posts and wall. It is not clear when the alteration was made.) Above the porch is a tripartite grouping of double-hung windows, the upper sash of which feature central diamond-shaped panes. A paneled belt course separates this group of windows from the Palladian upper window that has a louvered fan in the round arch. This tall cluster of windows illuminates the expansive hall that occupies the second floor. Single two-over-two windows flank the entrance on the first story, whereas the upper floor has paired windows similar to those in the center bay separated by the paneled course. These windows are capped by bracketed hoods. A broad cornice whose details match those of the porch carries across the elevation where it meets fluted corner pilasters. The roof is punctuated by a single hip roofed dormer with a pair of Queen Anne windows and a repeat of the elaborate cornice.

There are numerous openings on the building's long south side elevation. The first story contains two widely spaced doorways flanked by two-over-two windows in single and paired combinations. Two smaller units are positioned near the southwest corner. The second floor contains five groups of windows similar to those on the outer bays of the facade. The cornice extends along the side (as it does around the whole building) and a dormer identical to the

United States Department of the Interior
National Park Service

**National Register of Historic Places
Continuation Sheet**

Section number 7 Page 2

one on the front is located mid-way on the roof. In addition, a chimney rises through the roof to the west of the dormer. There are fewer openings on the first story of the north side. They include one two-over-two window as well as five of the smaller units. A window located mid-floor at the rear serves the stair (a similar one is located on the south side) and the five tall windows penetrate the second floor. Both the dormer and chimney are repeated here. At the rear are three first floor openings, one of which was originally much larger, as well as two doors opening onto fire escapes and three windows.

A description of the building was printed in the local newspaper, the Piscataquis Observer on June 5, 1902. The following are excerpts pertaining to the interior:

The public entrance is on Main Street and facing this is the ticket office. On either side are the stairs leading to the auditorium on the second floor. Galleries eight and one-half feet wide are on each side of the hall and at the front extending back over the entrance, the gallery is thirteen feet in width. Below this gallery, off the main floor is a ladies dressing room.

The stage is 24X47 feet and well equipped with scenery. Stairs lead down from either side to dressing rooms which may be reached from a rear entrance. Provision was made for hoisting the trunks of traveling companies to the dressing room floors.

On the second [first] floor is the Selectmen's office, a commodious room off which is a large fireproof vault for the storage of Town Records. This room may be approached from the main vestibule or by a private entrance from the south side of the building.

The rear of the building is really three stories, the ground floor, used for the housing of the hearse and the fire apparatus and the stage entrance. Above this area the Stage dressing rooms to which reference has been made, and above these, the stage.

The finish of the interior of the hall is of natural wood; the doors of cypress and finest of North Carolina pine, all finely selected stock. The floor is of birch. The ceiling is steel which, together with the walls, is delicately tinted and touched with gold. There is an unoccupied space in the center of the ground floor, but we entertain no fear but that a use for it will develop in the future.

**United States Department of the Interior
National Park Service**

National Register of Historic Places Continuation Sheet

Section number 7 Page 3

This interior is largely intact, the most significant alteration being the installation of a suspended ceiling on the upper floor. Close inspection of this change reveals, however, that it is an easily reversible one. Sometime after 1923 a library was created in the southwest part of the first floor behind the Selectman's Office. This was enlarged in the early 1980s into the area originally designed to house the hearse and fire apparatus.

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:

nationally statewide locally

Applicable National Register Criteria A B C D

Criteria Considerations (Exceptions) A B C D E F G

Areas of Significance (enter categories from instructions)

Architecture
Politics/Government

Period of Significance

1902-1941

Significant Dates

1902

Cultural Affiliation

N/A

Significant Person

N/A

Architect/Builder

Smith, C. L., Architect & Builder

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

Sangerville's Town Hall is among the most impressive of such buildings to be found in Maine's small communities. Constructed in 1901-02 by local architect/contractor C. L. Smith, the handsome two-story frame building exhibits a variety of Queen Anne and Colonial Revival style details. The town hall is eligible for nomination to the Register under criteria A and C, respectively, for its association with town government and its architectural distinction.

The town of Sangerville was incorporated on June 13, 1814, having been initially settled some eight years earlier. At the time of incorporation there are believed to have been about forty families in the settlement. By mid-century this figure had grown to 1,267 persons. The local industries included four tanneries, four shingle mills, three sawmills, and two gristmills. Judging by contemporary business directory listings, however, most livelihoods appear to have been made through agricultural pursuits. This pattern apparently persisted into the 1880s; a point that is illustrated by the steady population decline typical of such communities in the post-Civil War period in Maine. However, between 1880 and 1890 Sangerville's economic fortunes changed dramatically due to the establishment of two woolen manufactories. During the decade the town's population rebounded from a low of 1,047 in 1880 to 1,236 in 1890. Equally startling is the change in valuation between these two dates: from just under \$300,000 to nearly \$450,000.

The new-found prosperity in town enabled the residents of Sangerville to erect a seat of town government complete with a commodious auditorium that surpassed those of most of its peers. Previously, town meetings were probably held in whatever space could be obtained. Likewise, town records were likely to have been stored at private residences, a practice which continues today in some Maine towns. At the town meeting held in March 1901, \$7,500 was authorized to acquire a building lot and erect the existing structure. Town records show that a building committee was appointed consisting of F. S. Carr, A. M. Garland, and C. L. Smith. Construction

See continuation sheet

9. Major Bibliographical References

Industrial Journal (Bangor). Maine Building Edition. May, 1902.

175th Anniversary Sangerville Centiseptquinary 1814-1989. Sangerville, ME 1989.

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

See continuation sheet

Primary location of additional data:

- State historic preservation office
- Other State agency
- Federal agency
- Local government
- University
- Other

Specify repository: _____

10. Geographical Data

Acreage of property Less than 1

UTM References

A

1	9
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4	7	1	8	4	0
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5	0	0	1	2	0	0
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Zone Easting Northing

B

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Zone Easting Northing

D

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--	--	--	--	--	--

See continuation sheet

Verbal Boundary Description

The nominated property occupies the Town of Sangerville tax map 23, lot 32.

See continuation sheet

Boundary Justification

The boundary embraces the entire village lot historically associated with this building.

See continuation sheet

11. Form Prepared By

name/title Kirk F. Mohny, Architectural Historian date 1/1991
 organization Maine Historic Preservation Commission telephone (207) 289-2132
 street & number 55 Capitol Street state Maine zip code 04333
 city or town Augusta

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation SheetSection number 8 Page 2

commenced in July, C. L. Smith having been awarded the contract to design and build the hall. By October the project was advanced to the point that the Brownville slaters Harris and Hoskins were engaged to cover the roof. An additional sum of \$4,000 was appropriated at a special town meeting held in January 1902, to complete and furnish the building. It was apparently finished soon thereafter, and the June 5th edition of the Piscataquis Observer noted that three performing companies had already been engaged to provide live entertainment.

Upon its completion, Sangerville possessed a building of considerable architectural prominence. A brief comparison to related buildings in towns of comparable size at the turn of the century underscores this point. In its basic form the 1894 Bridgewater Town Hall (N.R. 1/26/90) is not unlike the one in Sangerville. However, its detailing is far more traditional in character. Likewise, a pair of town houses in Oxford County (Peru, 1896; Otisfield, 1905) are equally modest in their detailing. The Sangerville Town Hall actually bears a considerable resemblance to a building erected for a similar purpose in Hartland in 1897-98. Unfortunately, the architect/builder of this earlier structure has not been identified.

The town hall is one of a number of architecturally significant late nineteenth century buildings in Sangerville. Among these are a trio of Queen Anne houses featuring highly ornamented porches, and an elaborate Queen Anne church. Like the town hall, these buildings reflect the prosperity of the late nineteenth century. However, the overall Colonial Revival aspect of the town hall represents a decided shift in architectural taste. Little is as yet known about the architect/contractor C. L. Smith. However, more is likely to be learned, when a study of Sangerville's architecture is undertaken in the future.

Attachment 2
2003 Carpenter Associates Plan

SANGERVILLE MUNICIPAL BUILDING
 SANGERVILLE-MAINE
STRUCTURAL RENOVATIONS

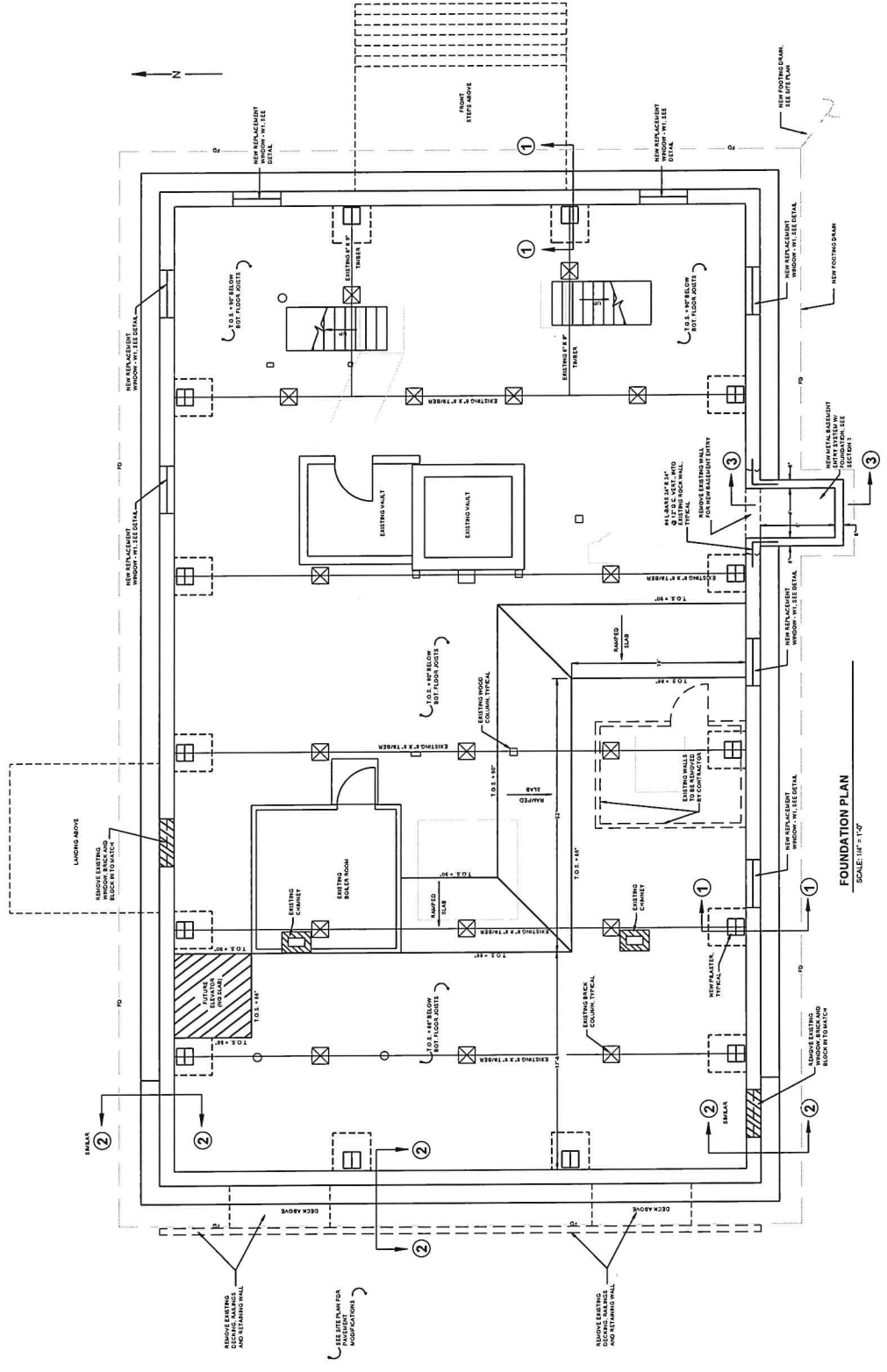
CARPENTER ASSOCIATES
 CONSULTING ENGINEERS
 44 FETTER WATER AVENUE - SUITE TOWN SQUARE 4444

REVISIONS	
NO.	DATE

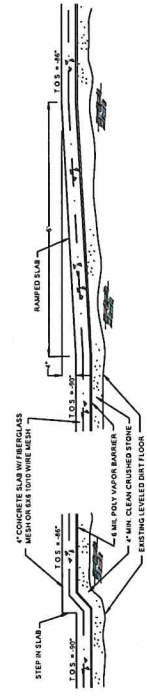
FOUNDATION PLAN
 SCALE: 1/4" = 1'-0"
 DRAWN BY: AT
 PROJECT NO.: 2096
 DATE: 9/03
 SHEET 2 OF 3

NOTES:

1. TOWN OF SANGERVILLE TO REMOVE ALL UNDESIRED MATERIAL FROM BASEMENT AREA, UNLESS NOTED OTHERWISE.
2. EXISTING MATERIAL WILL HAVE TO BE GRADED IN BASEMENT AREA PRIOR TO CRUSHED STONE BASE, VAPOR BARRIER AND POURING OF CONCRETE.
3. PROVIDE EXPANSION JOINTS IN NEW SLAB ALONG WITH ALL PARTS OF 2" DIA. WALL DIRECTIONS.
4. SUPPORT EXISTING ENTRANCE OVERHANGS AND REMOVE STEPS, RAILINGS, ETC. (2 LOCATIONS) AND REPAIR WITH CONCRETE TO ORIGINAL CONDITION.
5. PROVIDE BOND-OUT AT ALL UTILITY SLAB PENETRATIONS, VERIFY WITH ENGINEER.



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



SLAB DETAILS
 SCALE: 3/4" = 1'-0"

DOOR SCHEDULE						
SYMBOL	SIZE	TYPE	HARDWARE	FRAME	REMARKS	
D1	3'-0" X 6'-8"	FLUSH INSULATED STEEL	1 1/2 PAIR HINGES SCHLAGE A SERIES LOCKSET W/ LEVER HANDLE, WEATHERSTRIP, SARGENT 590 SERIES HOLD OPEN	WOOD	EXTERIOR BOILER ROOM	
D2	3'-0" X 6'-8"	FLUSH INSULATED STEEL W/ 24" X 30" INSULATING GLASS & GRIDS	1 1/2 PAIR HINGES SCHLAGE A SERIES, HC LEVER LOCKSET, HC METAL THRESHOLD AND DOOR BOTTOM WEATHERSTRIP	WOOD	H.C. ENTRANCE DOOR	
D3	3'-0" X 6'-8"	SOLID WOOD	HC LEVER LATCH SET WITH PRIVACY LOCK AND INTERIOR STANDARD HINGES	WOOD	H.C. BATHROOM	
D4	3'-0" X 6'-8"	SOLID WOOD	HC LEVER LATCH SET WITH PRIVACY LOCK AND INTERIOR STANDARD HINGES	WOOD	H.C. BEDROOM	
D5	3'-0" X 6'-8"	STEEL FIRE DOOR B-LABEL	1 1/2 PAIR HINGES SCHLAGE A SERIES LOCKSET W/ LEVER HANDLE,	STEEL	INTERIOR BASEMENT BOILER ROOM	
D6	3'-0" X 6'-8"	EXISTING WOOD CLOSET DOOR	NEW SCHLAGE A SERIES LOCKSET W/ LEVER HANDLE TO REPLACE EXISTING	EXISTING WOOD	NEW BUILDING W.H. CLOSET	

Attachment 3
2019 Carpenter Associates Foundation Assessment



CARPENTER ASSOCIATES

CONSULTING ENGINEERS

December 18, 2019

Brydie Armstrong
One Town Hall Avenue
P. O. Box 188
Sangerville, ME 04479

**Re: Sangerville Town Office
Foundation Assessment**

Dear Brydie:

We recently visited the town office building per your request to review potential structural issues with your foundation wall, and offer the following.

The existing building consists of a three story multi-purpose structure. The foundation appears original, consisting of a stone and mortar base foundation; along with multiple brick layers acting as the upper portion of the foundation wall.

Due to insufficient drainage along the foundation, freeze/thaw cycling, and settlement of the original stone walls, the foundation walls have begun to buckle in several locations. The buckling is evident along each foundation wall. The brick foundation layer has several locations that are cracked, settled, and are bowing.

During the visit we also briefly looked at the structural framing located in the basement. The existing floor joists and beams supporting the joists have severe cracks along the members. The framing is a concern due to the age, condition, and lack of supports. The existing structural members have several structural defects. The existing floor joists have all been notched at the bottom of each floor joist. The floor joists bear the load onto ledgers and/or beams. The notching method creates stress concentrations in the middle of the floor joists. The stress concentration can cause the floor joists to split in the horizontal direction, which over time may cause the joists to fail.

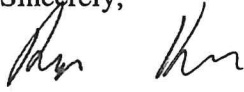
In conclusion, the existing building needs structural attention and repairs. In order to reach the required structural capacities required by code, the beams, joists, and rafters would all need to be redesigned for sistering or replacement. The first floor framing would need additional columns installed, as well as additional steel beams to support the floor joists. The notched and bored joists and beams would require repair. The foundation walls should be redesigned and rebuilt. The exterior drainage surrounding the foundation walls should be addressed as well re-grading of the site to ensure proper drainage of ground and surface water. The other alternative to the invasive and costly repairs would be constructing an entirely new facility at the existing site or an alternative location.

Brydie Armstrong

Page 2

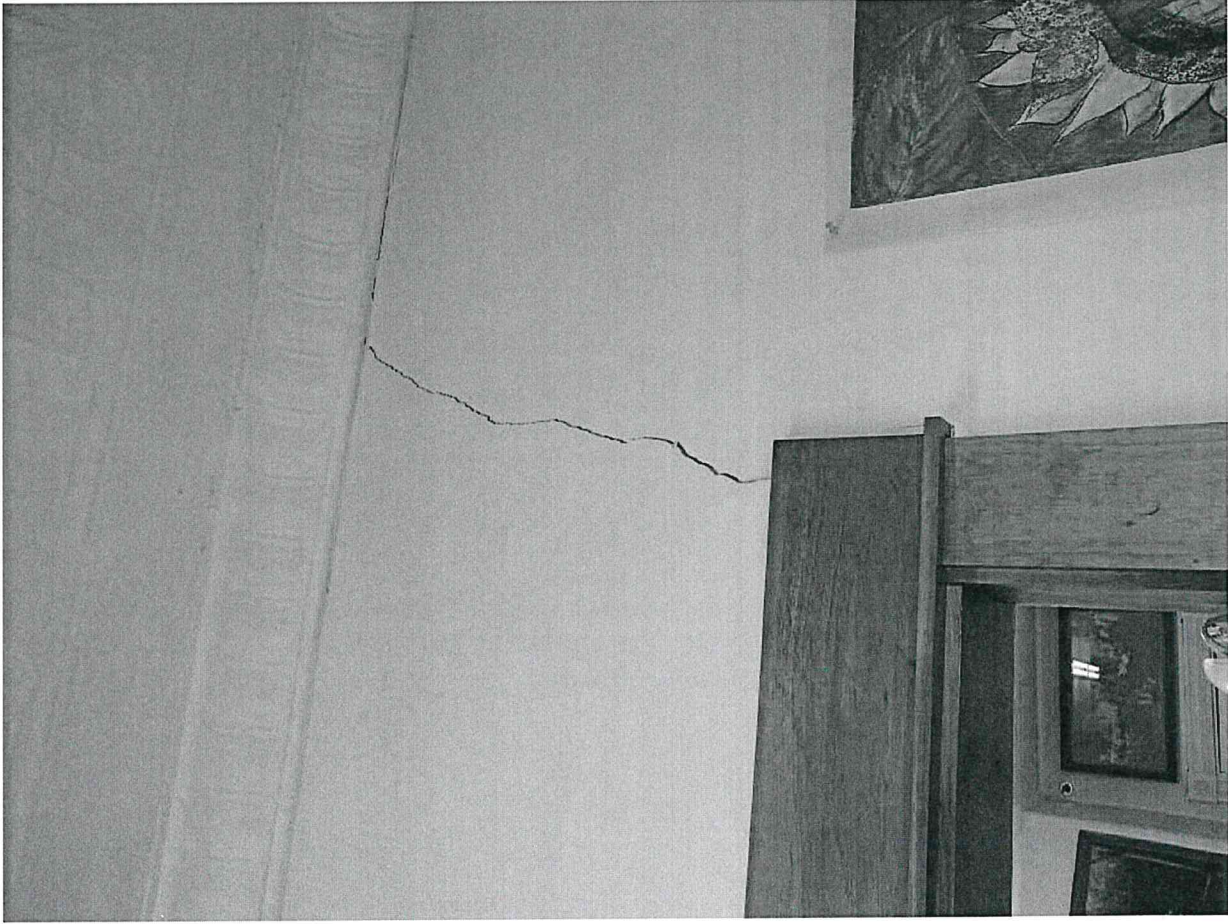
We would be happy to discuss or elaborate on any of our findings, assumptions, or conclusions. Please call with any concerns or questions. We would be more than happy to attend a meeting to discuss the assessment and options to move forward. We have attached a few photos; additional photos are also available upon request.

Sincerely,

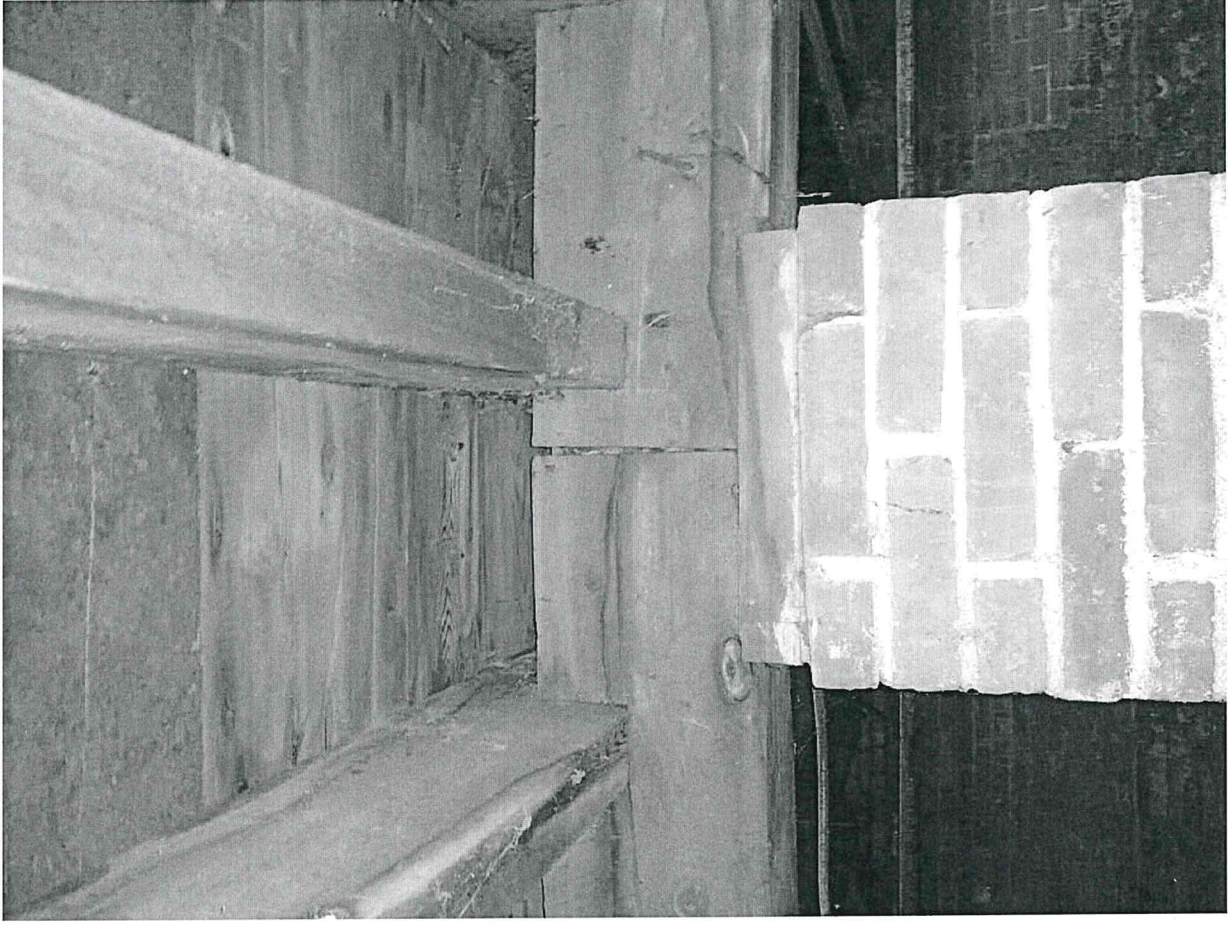
A handwritten signature in black ink, appearing to read "Ryan Keezer". The signature is written in a cursive style with a large initial "R" and "K".

Ryan Keezer, P.E.

Enclosure

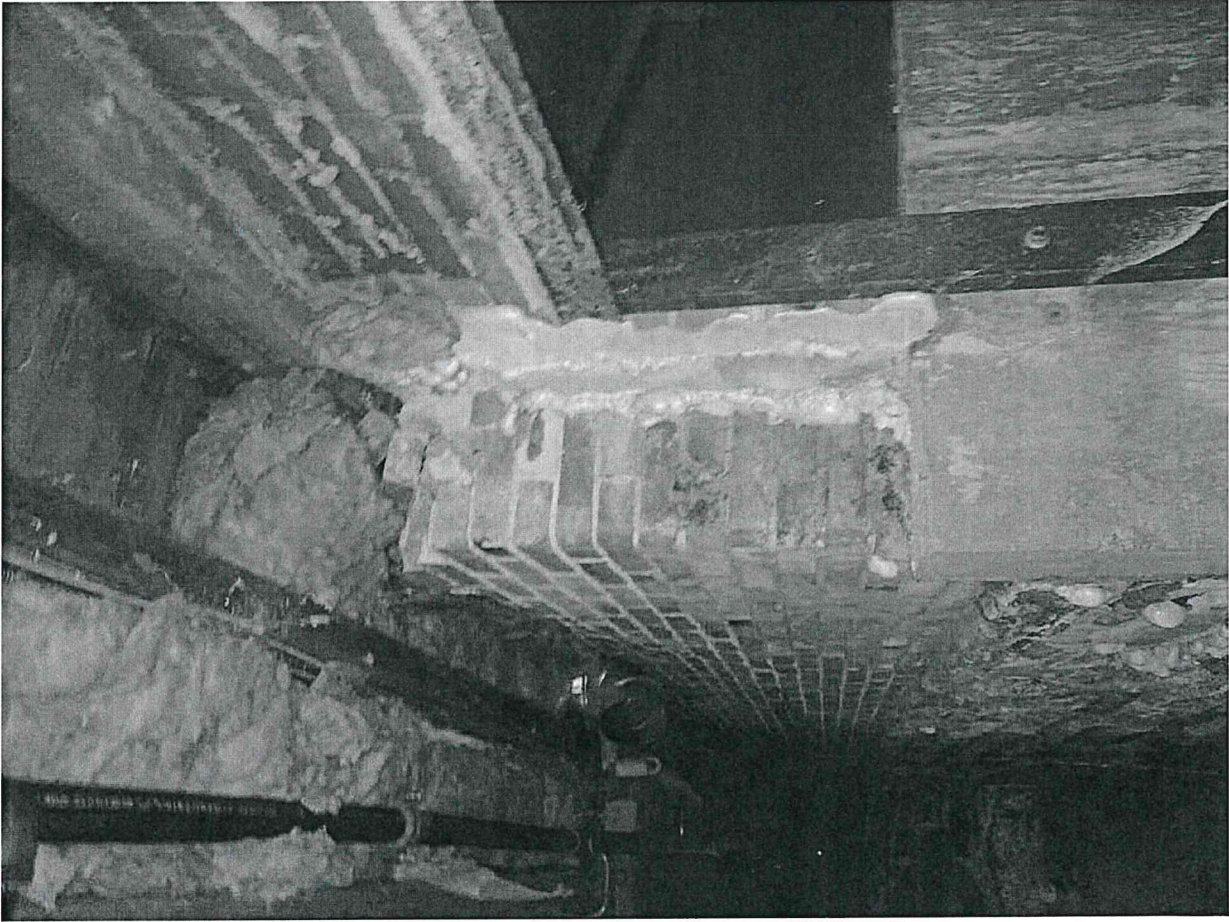


First Floor Wall Crack



Beam Crack

12-16-19

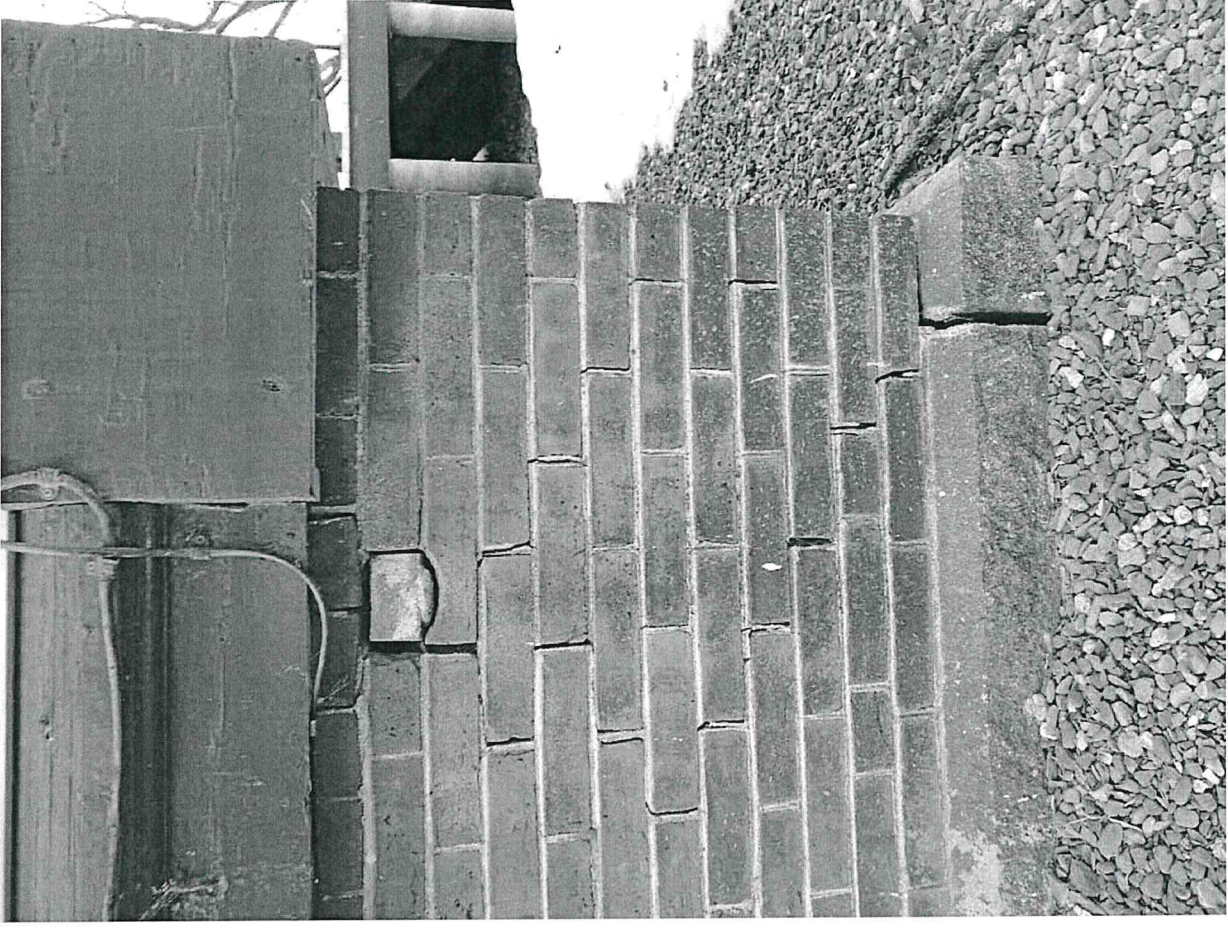


Foundation Wall



Damaged Column

12-16-19



Cornerstone Crack



Foundation Crack

12-16-19

Attachment 4
MMA Inspection Report and E-mail



Maine Municipal Association
RISK MANAGEMENT SERVICES

June 14, 2022

Lorna Bell, Town Manager
Town of Sangerville
PO Box 188
Sangerville, ME 04479-0188

Re: Property Safety Survey (MR)
Town Hall

Lorna,

MMA Risk Management Services looks forward to working with you to create a safer workplace. As part of that effort, a survey was conducted on June 13, 2022 to identify potential hazards.

The inspection report is attached, please review the all the hazards identified. For your convenience there is a link provided in the body of the email that allows you to update the status of each recommendation. If any hazards require documentation, upload that when you respond. If you have questions on the update process review the Corrective Action Item Tutorial provided to you.

Thank you for your efforts in workplace safety and we look forward to your response. Together we are building safer communities. If you have any questions or concerns please contact me at the telephone number or email address provided below.

Sincerely,

Senior Loss Control Consultant, COSS
Maine Municipal Association
Phone: (207) 624-0116
Email: JLowe@memun.org

CC: RMS- Underwriting Department
CC: nturcotte@memun.org

Our survey of your operation is to assist you in your loss control efforts. We do not assume responsibility for the discovery or elimination of all hazards that could possibly cause accidents or losses. Recommendations are developed from the conditions observed at the time of the survey and may not include every possible cause of loss. Compliance with these recommendations does not guarantee the fulfillment of your obligation under local, state, or federal law.

Report Summary

Report Name: Property Safety Survey (MR)
Completed for: Town of Sangerville
Inspection Date: June 13, 2022
Location: Town Hall
Contact: Lorna Bell, Town Manager

Scope of Work: The purpose of the LCC survey is to provide a property evaluation at the request of the member.

Findings:

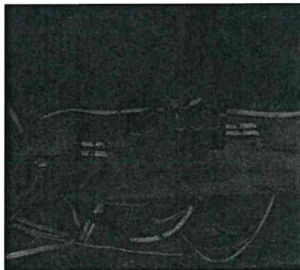
Electrical Safety

Issue Identified Live parts of electrical equipment were not adequately protected against accidental contact (1910.303)

Recommendation *Have a qualified electrician make repairs to electrical equipment and/or install tight fitting covers to protect workers against accidental contact with live parts of electric equipment [reference 1910.303(g)(2)(i)]. [View OSHA Standard](#)*

Notes: Multiple exposed electrical boxes in the basement. Recommend any live electrical is installed to manufacture specifications.

Photo(s)



Basement near stairs and
sprinkler riser

Issue Identified Live parts of electrical equipment were not adequately protected against accidental contact (1910.303)

Recommendation *Have a qualified electrician make repairs to electrical equipment and/or install tight fitting covers to protect workers against accidental contact with live parts of electric equipment [reference 1910.303(g)(2)(i)]. [View OSHA Standard](#)*

Notes: Under stage hanging light fixture suspended by wiring. Recommend any live electrical is installed to manufacture specifications.

Photo(s)



Under stage near back wall

Issue Identified

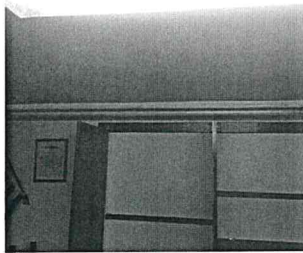
Not all light bulbs/lamps are protected from accidental damage (1910.305)

Recommendation

Take steps to ensure all light bulbs and/or fluorescent lamps used for general illumination are protected from accidental contact or breakage by a suitable fixture or guard. Note: plastic sleeves on fluorescent lamps are an acceptable means of protection [reference 1910.305(a)(2)(ix)]. [View OSHA Standard](#)

Notes: Lights over voter booths are unprotected, recommend lights is protected by sleeves or factory covers.

Photo(s)



Community room

Issue Identified

Issues relating to Electrical Safety standards (1910.303-.335) were identified (see notes/photos for detail)

Recommendation

Review OSHA regulations on Electrical Safety (1910.303-.335) and adhere to applicable requirements in the standard. Reference comments, notes and/or photo(s) for details. [View OSHA Standard](#)

Notes: Electrical was put through a wall and run on the balcony floor, unsecured. Recommend electrical is evaluated by a qualified electrician and installed/ fastened to code.

Photo(s)



Electrical on Balcony floor

Exits/Egress

Issue Identified Exits and pathway to exits are not all free of obstructions (1910.37)

Recommendation *Take appropriate steps to ensure all exit routes are maintained free of obstructions at all times. [reference 1910.37(a)(3)]. [View OSHA Standard](#)*

Notes: Exit out front are unused and being used for storage. Any "EXIT" should be kept clear unlocked and in working order.

Photo(s)

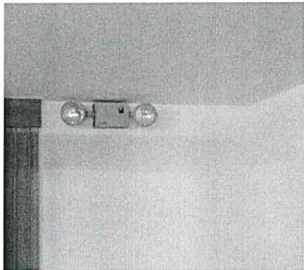


Issue Identified Emergency lights are not provided and/or not all functional (1910.37)

Recommendation *Install emergency lighting as needed to ensure adequate lighting of all exit routes and doors during a power failure. Also, lighting should be tested monthly to ensure batteries are not dead or bulbs burned out. Repair/replace as needed [reference 1910.37(b)(1)]. [View OSHA Standard](#)*

Notes: Multiple emergency lights where tested in the building and non operational. Recommend emergency lights are replaced/ repaired to working condition.

Photo(s)



Multiple in town hall

Fire Safety

Issue Identified Not all portable fire extinguishers are inspected monthly (1910.157)

Recommendation *The employer is responsible for the inspection, maintenance and testing of all portable fire extinguishers in the workplace. Portable extinguishers shall be visually inspected (and documented) at least monthly. [reference 1910.157(e)(2)]. [View OSHA Standard](#)*

Notes: Fire extinguishers need to have the monthly inspections done and documented on tags or in a inspections log.

Photo(s)



Through out City hall

Issue Identified Issues relating to Fire Protection standards (1910.157-.159) were identified (see notes/photos for detail)

Recommendation *Review OSHA regulations on Fire Protection (1910.157-.159) and adhere to applicable requirements in the standard. Reference "Comments" in the Observation section of this report for specific examples of non-compliance.*

Notes: Last internal inspection on sprinkler system was in 2016, recommend at 5 year internal inspection is completed and any other required scheduled inspections.

Health Hazards

Issue Identified Lead exposures are not monitored and/or effective measures are not in place (i.e. hand washing facilities not available, respirators not provided or used properly, wet-cleaning methods not used, etc.) to maintain exposure below 50 micrograms/cubic meter over an 8-hour period (1910.1025)

Recommendation *Take steps to monitor lead exposure in the work area and implement engineering and/or administrative controls (i.e. hand washing, use of respirators, wet-cleaning, etc.) to limit worker exposure below 50 micrograms/cubic meter over an 8-hour period (reference 1910.1025). [View OSHA Standard](#)*

Notes: Old paint is chipped flaking and falling, recommend Lead testing is completed to ensure paint is do not contain lead.

Severity: Serious

Photo(s)



Balcony near windows

Property Hazards

Issue Identified The property/ building is in need of maintenance.

Recommendation *The property/building is showing evidence of deterioration. Please conduct appropriate maintenance to the structure. See notes and / or photo(s) for details.*

Notes: Water marks indicate water leakage in around chimneys by stage area. Recommend roof leaks are repaired as needed.

Photo(s)



Chimney beside stage (Both sides)

Issue Identified Uncontrolled hazards were found during property survey.

Recommendation *Take appropriate steps to address hazardous condition(s) that could lead to property damage. (See notes or photos for details).*

Notes: Attic has a large pile of slate shingles, that is a concentrated in one area (roughly over the bulkhead area) Recommended that slate shingles and brick are removed to relive stress on the buildings structure.

Severity: Serious

Photo(s)



Attic pile of what appears to be slate shingles/ tiles for roof.

Issue Identified Uncontrolled hazards were found during property survey.

Recommendation *Take appropriate steps to address hazardous condition(s) that could lead to property damage. (See notes or photos for details).*

Notes: Tin ceiling above balconies appear to have rust/ corrosion which appears to be from water intrusion. Recommend roof is inspected for leaks and repaired, and tin ceiling is repaired/ replaced to prevent mold/ mildew and un fastened ceiling falling.

Severity: Serious

Photo(s)



Ceiling above balcony

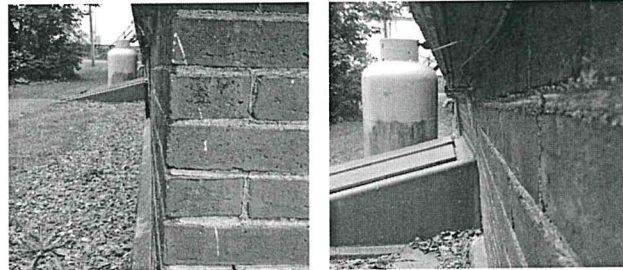
Issue Identified Major structural concerns or anomalies were observed at the survey.

Recommendation *Anomalies that appear to be related to the structural integrity of the building were observed. Because of the significance of these observed anomalies we recommend you contact a professional engineer, who holds a current, active professional engineer's license in the State of Maine, to assess the structural integrity. Please notify your Loss Control Consultant when the engineer survey will be completed, and email a digital copy to them, when available for review. After Maine Municipal Association's review of the engineer's survey, additional recommendations maybe issued.*

Notes: Bulkhead side wall has severe movement from top to bottom. Brick wall is bowing inward and near ground level and outward toward sill plates. Recommended a full engineering study.

Severity: Structural

Photo(s)



Bulkhead side sweep in foundation wall. Recommend a qualified engineering company do a complete structural assessment of the building.

Issue Identified Major structural concerns or anomalies were observed at the survey.

Recommendation *Anomalies that appear to be related to the structural integrity of the building were observed. Because of the significance of these observed anomalies we recommend you contact a professional engineer, who holds a current, active professional engineer's license in the State of Maine, to assess the structural integrity. Please notify your Loss Control Consultant when the engineer survey will be completed, and email a digital copy to them, when available for review. After Maine Municipal Association's review of the engineer's survey, additional recommendations maybe issued.*

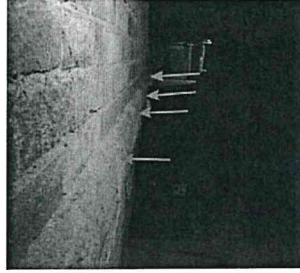
Notes: Foundation walls appear to be bowing inward in the middle and outward toward the sill plates. Recommend a a qualified engineering company do a complete structural survey of the building.

Severity: Structural

Photo(s)



Basement wall on Parking lot side



Foundation wall on parking lot side has evident inward bow. Recommend wall is assessed by a qualified engineer and repaired accordingly.

Issue Identified Major structural concerns or anomalies were observed at the survey.

Recommendation *Anomalies that appear to be related to the structural integrity of the building were observed. Because of the significance of these observed anomalies we recommend you contact a professional engineer, who holds a current, active professional engineer's license in the State of Maine, to assess the structural integrity. Please notify your Loss Control Consultant when the engineer survey will be completed, and email a digital copy to them, when available for review. After Maine Municipal Association's review of the engineer's survey, additional recommendations maybe issued.*

Notes: Column supports have cracks in floor joists and beams where columns meet the beams (noted in 2019), Recommend columns and floor joist structures are evaluated during engineer study.

Issue Identified Major structural concerns or anomalies were observed at the survey.

Recommendation *Anomalies that appear to be related to the structural integrity of the building were observed. Because of the significance of these observed anomalies we recommend you contact a professional engineer, who holds a current, active professional engineer's license in the State of Maine, to assess the structural integrity. Please notify your Loss Control Consultant when the engineer survey will be completed, and email a digital copy to them, when available for review. After Maine Municipal Association's review of the engineer's survey, additional recommendations maybe issued.*

Notes: Road side foundation wall has sever separation of bricks near the top of the brick wall. Wall shift is 3/4s the width of the brick. Recommended a qualified engineering firm conducts a full structural assessment of the building and all repairs are completed with engineer approval.

Severity: Structural

Photo(s)



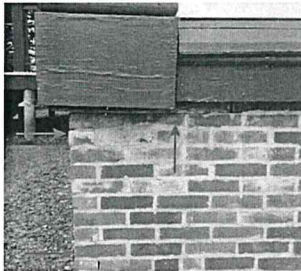
Recommendation: to Have a qualified Engineer to a complete structural assessment of the building from the basement to the roof.



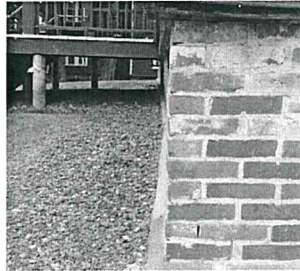
Brick separation on road side.



Step crack with horizontal separation of bricks on road side. Recommend a qualified engineering firm conducts a full structural assessment.



Evident wall movement on roadside/ parking lot corner.



Road side exterior, wall has inward bow from granite up to part way up brick. Top of brick wall is leaning outward.

Issue Identified

Minor structural concerns or anomalies were observed at the survey.

Recommendation

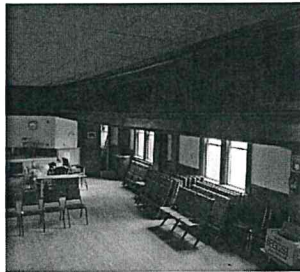
Minor structural damage or anomalies were noted during the survey. Have a qualified contractor review and make the necessary repairs. Contact your Loss Control Consultant and provide a photo when hazard has been corrected.

Notes: Balconies appear to have a sag in the middle across the entire span. Recommend structural components are evaluated by a qualified engineer.
Severity: Structural

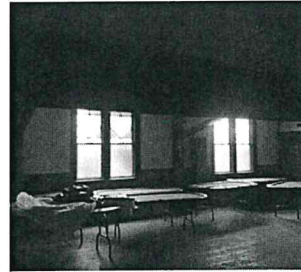
Photo(s)



elevated balconies



Balcony



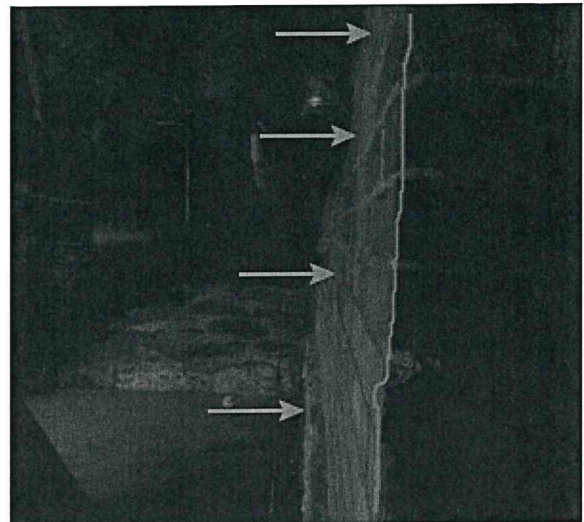
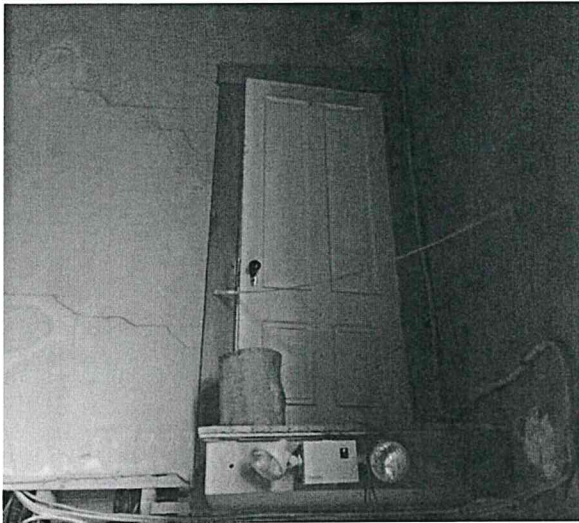
Second balcony parking lot side.

Submitted by:
Justin Lowe
Senior Loss Control Consultant, COSS

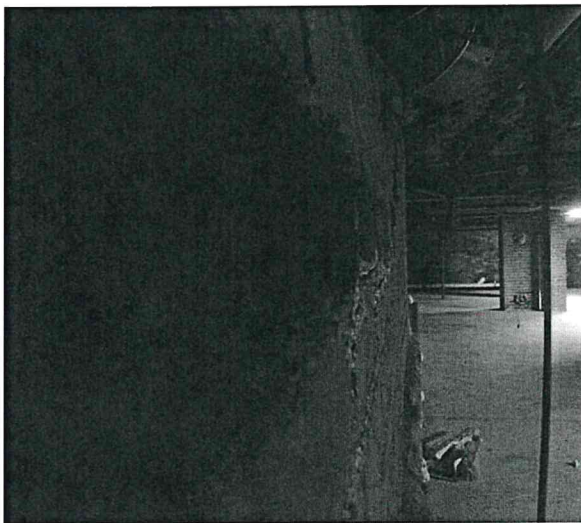
Maine Municipal Association
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JLowe@memun.org

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Additional Photo(s):



At bulkhead looking toward road, wall has evident movement. Recommend an engineer provide a structural assessment of the building and repaired.



Basement wall bulkhead side