# Investigative Report

Engineering - Planning - Surveying - Investigative - Geotechnical



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## **Engineering Our Community**



November 17, 2022

Mr. Gale Blomenkamp Battalion Chief Boone County Fire Protection District (BCFPD) 2201 I-70 Drive Northwest Columbia, MO 65202

RE: Structural Evaluation Old Bank Building 101 Highway 124 Hallsville, MO 65255

# Dear Mr. Blomenkamp:

A walk-through evaluation of the structure at the aforementioned location was completed on October 19, 2022. The evaluation began at approximately 8:15 am. The purpose of our site visit was to determine the condition of the structure. The following individuals were present during our site visit.

- Mr. Charles Harlow (historical society)
- Mayor Logan Carter
- Mr. Norm Hinkle (BCFPD)
- Gale Blomenkamp (BCFPD)
- Police Chief Bryan Schultz
- Jeff Voss (Hallsville Police Department)
- Randy Kimble (Boone County Building Inspector)

The following is a list of information that was reported to our firm.

- a. The structure was built around 1895. The rear portion of the structure may have been an addition.
- b. The structure has been vacant for about 10 years.
- c. The exterior walls were repointed within the last 10 years.
- d. New roofing had been in the process of being installed.
- e. The structure is not on the historical registry.

The structure was a single-story, multi-wythe, unreinforced brick masonry building on a crawlspace foundation (Image A). The north portion of the structure had unreinforced clay tile walls. The structure had wood-framed floor and roof assemblies. The mono-slope roof was covered with ethylene propylene diene monomer (EPDM) roofing and drained toward the north. For reference, the front of the structure faced south (Image B).

The following is a list of noteworthy items that were observed during our evaluation.

## Exterior

- 1. The wood windows and doors around the structure were deteriorated at several locations (Image 1). Some of the windows had been boarded shut.
- 2. Three original lateral wall ties and two newer or additional ties were located along the top of the east wall (Image 2). Three original wall ties and one additional tie were located along the top of the west wall.
- 3. The brick masonry at the south wall was bulged outward along the head of the window around the east jamb (Image 3). The outward translation of the brick had been repointed.
- 4. All of the exterior walls had been repointed in the past (Image 4).

#### Roof

- 5. The entire north portion of the roof had collapsed and was missing (Image 5).
- 6. The top of the masonry walls were exposed at the north portion of the structure due to the collapsed roof (Image 6).
- 7. Newer EPDM roofing had been in the process of being installed along the south portion of the structure (Image 7). The roofing was not finished/secured along the parapets. Roofing material (i.e., insulation board, etc.) was stockpiled on the roof.
- 8. The west wall at the north portion of the structure appeared to have been leaning outward or toward the west at the top between the lateral wall ties (Image 8).

## Interior – South Portion

- 9. A separation of approximately 1 1/2" was observed between the top of the south exterior wall and the ceiling trim (Image 9). This area was adjacent to the bulged brick that was identified in Item 3.
- 10. The space was in disarray with debris and rubbish throughout (Image 10). Nearly all of the interior finishes were degraded, damaged, or missing.
- 11. The wood-framed floor was severely deteriorated with several open areas or holes in the floor (Image 11-A). This condition was more severe at the north end of the space (Image 11-B).
- 12. The ceiling had partially collapsed at the north end and along the east side of the space. The roof joists above this area were severely degraded (Image 12).
- 13. The west exterior brick wall was severely degraded at the north end along the top (Image 13).
- 14. The roof sheathing (planks) were severely degraded at the center of the structure along the west wall (Image 14).
- 15. The roof joists were severely degraded and were not bearing on the east wall at the north end of the structure (Image 15-A). The interior non-load bearing wall was supporting this portion of the roof from collapse (Image 15-B). The east exterior wall was not laterally braced.
- 16. The floor structure at the north end was missing along the east wall (Image 16). A portion of the east wall was visible at this area and appeared to have been undermined.

## Interior – North Portion

- 17. The majority of the ceiling/roof assembly had collapsed and was missing (Image 17).
- 18. The majority of the wood-framed floor assembly had collapsed and was missing (Image 18).
- 19. The north, east, and west walls were unsupported at the top due to the collapsed ceiling/roof assembly (Image 19).
- 20. The north, east, and west walls were degraded along the top (Image 20).

21. A sizable shrub was observed inside the structure (Image 21). The shrub was growing from the debris on the floor.

## Discussion

Several of the windows were damaged and/or had been boarded. The roofing at the south portion was never finished and allowed moisture to readily infiltrate inside the structure along the walls. Moisture infiltration likely occurs through other areas of the building envelope as well due to its overall degraded condition.

The majority of the roof at the north portion of the building had collapsed allowing stormwater to readily enter the structure. The north, east, and west walls were degraded at the interior and were not laterally supported at the top. The wood-framed floor assembly was also severely deteriorated and had collapsed throughout the majority of the space.

The ceiling and roof framing assemblies in the south portion were severely damaged from apparent long-term moisture exposure at visible areas along the east and west walls. The east and west brick walls at this area did not appear to have been supported laterally. The south wall had also translated outward at the top. Due to the partially finished condition of the structure, the extent of the ceiling/roof framing deterioration was not readily visible. The wood-framed floor assembly was also severely deteriorated and had collapsed at several locations.

The electrical, plumbing, and mechanical services in the structure were not operational. The interior finishes were also damaged throughout.

The brick and clay tile masonry walls had been repointed at the exterior, however these bearing walls were severely degraded at numerous locations at the interior. Unreinforced masonry bearing wall buildings with long-term moisture related damage have little redundancy. Thus, immediate failures both at isolated locations and more widespread locations in the structure are possible.

Repair of this structure to an occupiable condition would likely not be feasible in terms of cost.

## Conclusion

The structure was currently not readily occupiable and was not safe for occupancy. Access in and around the exterior of the structure should be restricted due to the unstable condition of the walls and remaining roof assembly. The structure was considered to have been dangerous.

This evaluation is not intended to be fully comprehensive. It was intended to provide a general review of the condition of the structure at the time of our visit. Thus, it does not cover items that may be discovered by invasive methods. Unless noted, no removal of materials or dismantling of systems occurred during the site visit. It should be noted that the above report is based on visual observations and there is no claim, either stated or implied, that all conditions were observed. Allstate Consultants LLC reserves the right to amend this report if additional evidence or information is revealed.

Respectfully Submitted, Allstate Consultants LLC



David Weber, PE, SE En 28957 Missouri

Assisted By: Darin Underwood

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Image A: Aerial view of the subject structure – credit Google Earth (Imagery Date: 3/2/2020).



Image B: Front of the subject structure.



Image 1: Degraded west window.

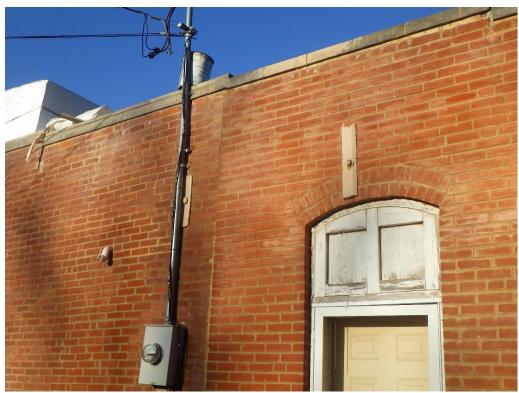


Image 2: Newer lateral wall ties at east wall.



Image 3: South window bulged outward.



Image 4: Repointed exterior walls.



Image 5: Collapsed north roof – looking south.



Image 6: Exposed walls – looking south.



Image 7: Roofing not finished along the parapets – looking south.



Image 8: West wall leaning outward.



Image 9: Separation at ceiling along south wall.



Image 10: Interior in disarray - looking north.



Image 11-A: Holes in the floor.



Image 11-B: Holes in the floor at north end.



Image 12: Deteriorated ceiling/roof joists at east wall.



Image 13: Degraded condition of the west wall.



Image 14: Degraded roof sheathing along the west wall.



Image 15-A: Severely deteriorated joists along the east wall.



Image 15-B: Interior wall supporting the roof.



Image 16: East partially undermined wall.



Image 17: Collapsed ceiling/roof at north structure.



Image 18: Degraded condition of the north floor.



Image 19: East wall unsupported.



Image 20: Degraded west wall.



Image 21: Shrub growing in the debris.