Structural Assessment Report

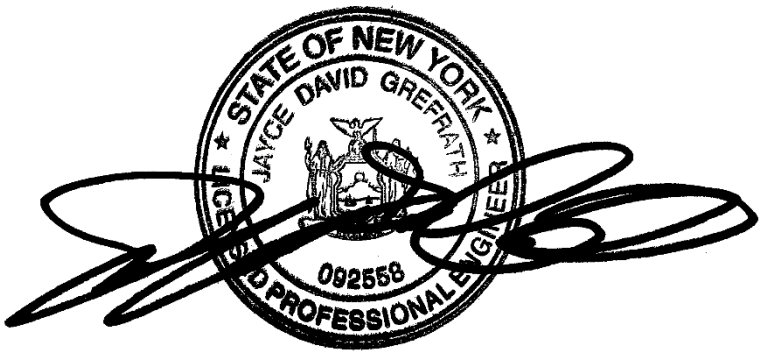
For

600 Ridge Road
Webster, NY 14580

December 13, 2022

Report Prepared for:
Town of Webster

P.N. 101312.13.2022



Structural Summary

On 11/1/2022 Jayce Grefrath met Matt Chatfield on site at 600 Ridge Road, Webster, NY 14580. Mr. Chatfield was inquiring on behalf of the Town of Webster to the structural stability of the building at 600 Ridge Road, and what portions of the building were structurally sound, and could be salvage, and what portions of the building were not structurally sound, and needed to be repaired, replaced, or if the entire building would need to be demolished.

Structural Observations/Conclusions:

After an on-site inspection, the following are the conclusions of the structural engineer:

1. The main conclusion (details listed below) is that there are portions of the existing structure at 600 Ridge Road that need to be repaired or replaced, but overall, the building is structurally sound and can be salvaged.
2. There are 5 areas of the existing structure that need to be repaired. See attached drawing.
3. Area 1 – The floor has collapsed in this area. The existing collapsed joists need to be removed and replaced in kind with new 2x framing @ 16" o.c. Subfloor thickness to match existing. Screw to new joists with #8 screws @ 16" o.c. Joists to bear on existing sill plate and toenailed into rim joist or sill plate. Install blocking at midspan. Total area of replacement is about 50 sq. ft.
4. Area 2 - The floor has collapsed in this area. The existing collapsed joists need to be removed and replaced in kind with new 2x framing @ 16" o.c. Subfloor thickness to match existing. Screw to new joists with #8 screws @ 16" o.c. Joists to bear on existing sill plate and toenailed into rim joist or sill plate. Install blocking at midspan. Total area of replacement is about 30 sq. ft.
5. Area 3 – The roof in this area is fully collapsed and needs to be removed and replaced in kind. A-frame roof with 2x10 rafters @ 24" o.c. Rafter ties @ 24" o.c. 2x8 (min). Install Simpson H2.5A Hurricane clips at all rafter end bearing. Total area of replacement is about 300 sq. ft.
6. Area 4 – The roof in this area is fully collapsed and needs to be removed and replaced in kind. A-frame roof with 2x10 rafters @ 24" o.c. Rafter ties @ 24" o.c. 2x8 (min). Install Simpson H2.5A Hurricane clips at all rafter end bearing. Total area of replacement is about 250 sq. ft.
7. Area 5 – The foundation in this area needs to be sealed with new 8" CMU block. It is recommended to shore the existing framing, remove all rotted wood, and replace with new pressure treated lumber. Fully grout all cells of CMU. #5 rebar vertical @ 24" o.c. Truss type reinf. every other course. Total area of replacement is about 80 sq. ft. (if existing footings are exposed and found to be salvageable).

   The following items need to be addressed eventually (before opening the building to the public), but are not immediate structural concerns:

8. The exposed lintel above the main entrance of the building needs to be fully replaced. The web of the steel beam has rotted out and is not salvageable. Replace in kind with same

depth of steel beam. This beam is load bearing and holding up the brick lintel and roof framing. Shoring will be required for beam replacement.

9. All observable framing in the basement appeared to be in serviceable condition and structurally sound with exception of area 5 (noted in #7).
10. The floors on the first floor need to be repaired in multiple areas (see photo 93).

11. Photo 6: This post needs to be replaced with a steel jack stud.

12. Photo 8: Remove and dispose of all abandoned pipes.

13. Photo 9: Sister new 2x10 joists to existing framing to properly bear on existing foundation wall.

14. Photo 12: Reroute ductwork around joists, or install a header to support the joist. Remove joist hangers from duct work. Do not bear joists on ductwork.

15. Photo 14: Seal all cracks and voids in foundation wall with non-shrink grout, epoxy sealant, or parging.

16. Photo 19: It is recommended that all window openings in the basement be replaced with glass block typically.

17. Photo 31: Pipe coverings could have asbestos in them. It is recommended to either test the insulation for asbestos, or have removed by an asbestos remediation professional.

18. Photo 32: It is recommended to run a dehumidifier in the crawl space to prevent any moisture or mold build up in this area.

19. Photo 48: Sister 2x10 joist at all cut floor joists. Extend past 24” with #8 screws @ 12” o.c.

20. Photo 54: Water main location is in the south east corner of the building (near intersection of Ridge Road and Gravel Road)

21. Photo 55: Cap or remove all abandoned piping.

22. Photo 57: Area 5, needs extensive repair work done to foundation. See Note 7

23. Photo 62: Collapsed roof of Area 3.

24. Photo 72: Remove all fallen or delaminated ceiling panels.

25. Photo 77: Roof of Area 4 needs to be repaired or replaced.

26. Photo 89: Remove and replace in kind existing subfloor,

27. Photo 104: Area 1. See note 3.

28. Photo 113: Repoint all existing brick

29. Photo 116: Remove and replace all existing ceiling lathe that is water damaged.

30. Photo 119: Replace all windows on Second floor that are broken.

31. Photo 120: Roof needs a full tear off and replacement. Existing rafters that are not rotted can be salvaged.

32. Photo 121: Area 3 roof.

33. Photo 140: Area 4 roof.

34. Photo 142: Area 3 roof.

35. Photo 144: Area 2, see note 4.

36. Photo 145: Steel lintel needs to be replaced, see note 8.

37. Photo 152: Remove all rotted wood from exterior and infill opening to be watertight.

38. Photo 155: Recommended to replace window with glass block.

39. Photo 156: Repoint face of exterior block to prevent moisture degradation.

40. Photo 157: It is recommended to install gutters and replace the rotted eave plate with new pressure treated lumber in kind.

41. Photo 158: Clean all moss off of foundation blocks and repoint cracks or fill with an epoxy sealant.

42. Photo 165: Area 5, see note 7.

43. Photo 168: Evidence of settlement. It is recommended to seal the cracks with a non-shrink grout and then seal the face of the crack lines with an epoxy sealant. Monitor if there is any crack propagation over the next 6 months. If cracks return, contact the Engineer (Grefrath, 716-491-0019) for reinforcement recommendations.

44. Photo 173: Remove and replace steps.

45. Photo 174: Repair and repoint all exterior brick.

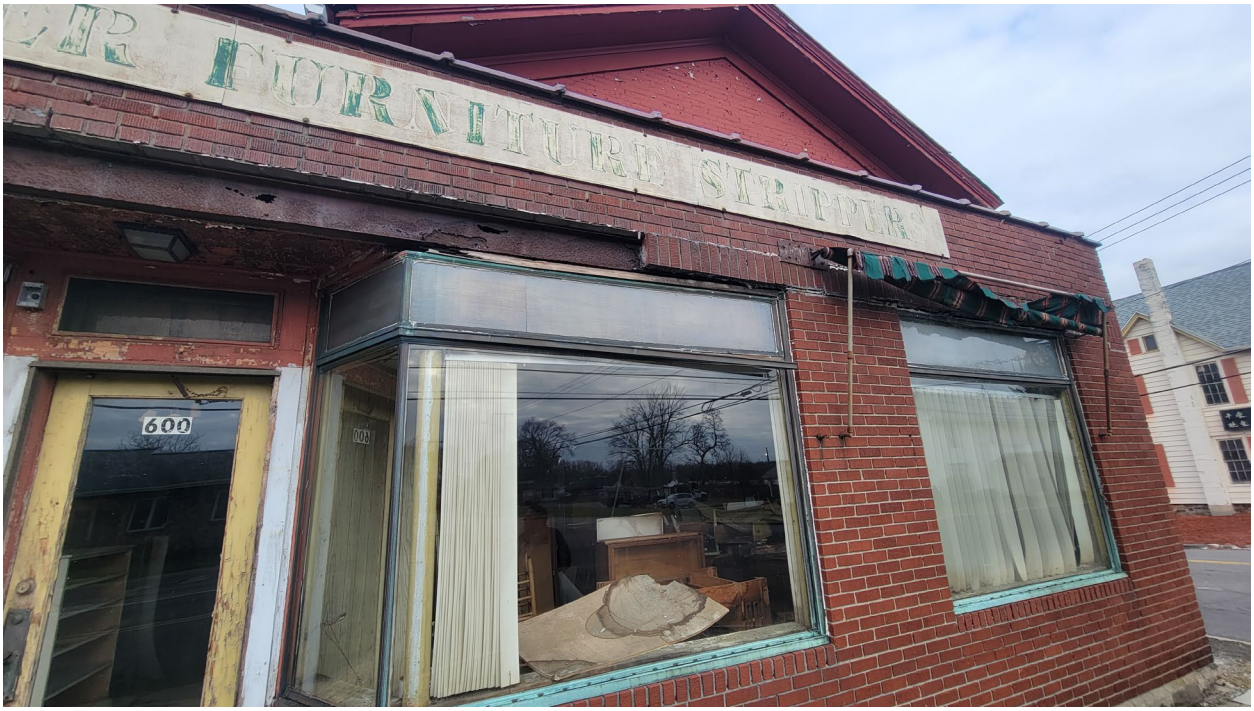
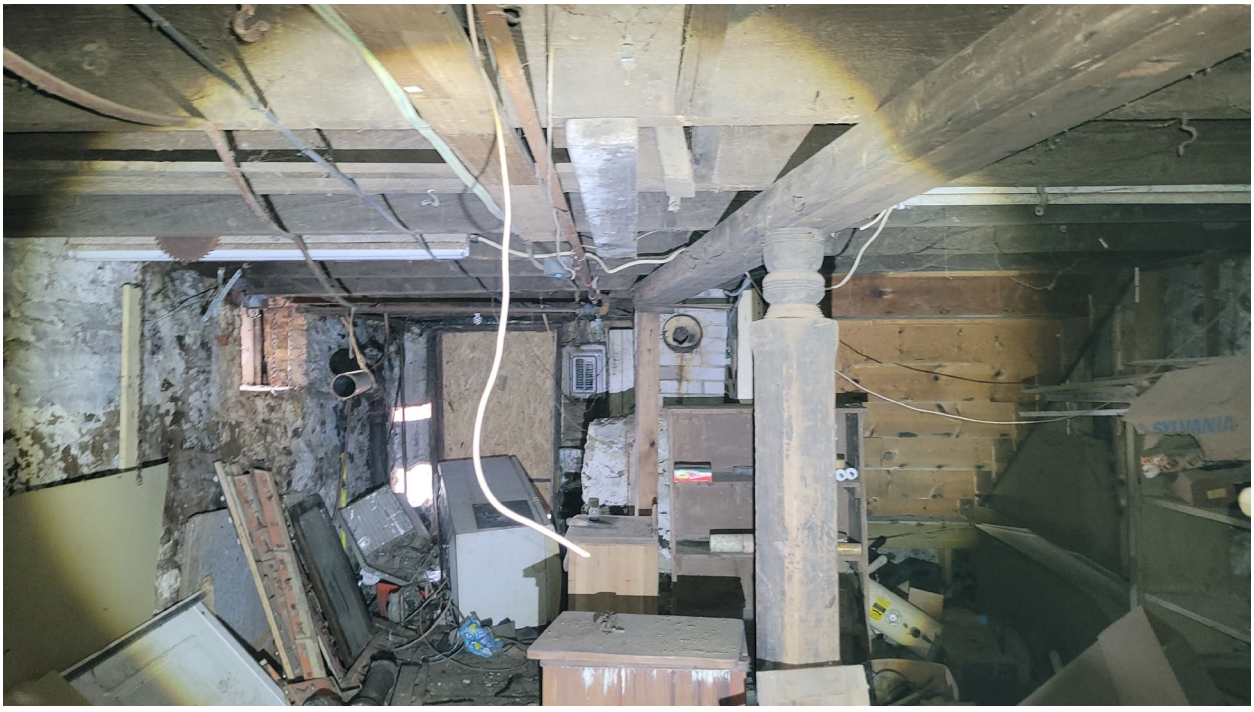


Photo 1:



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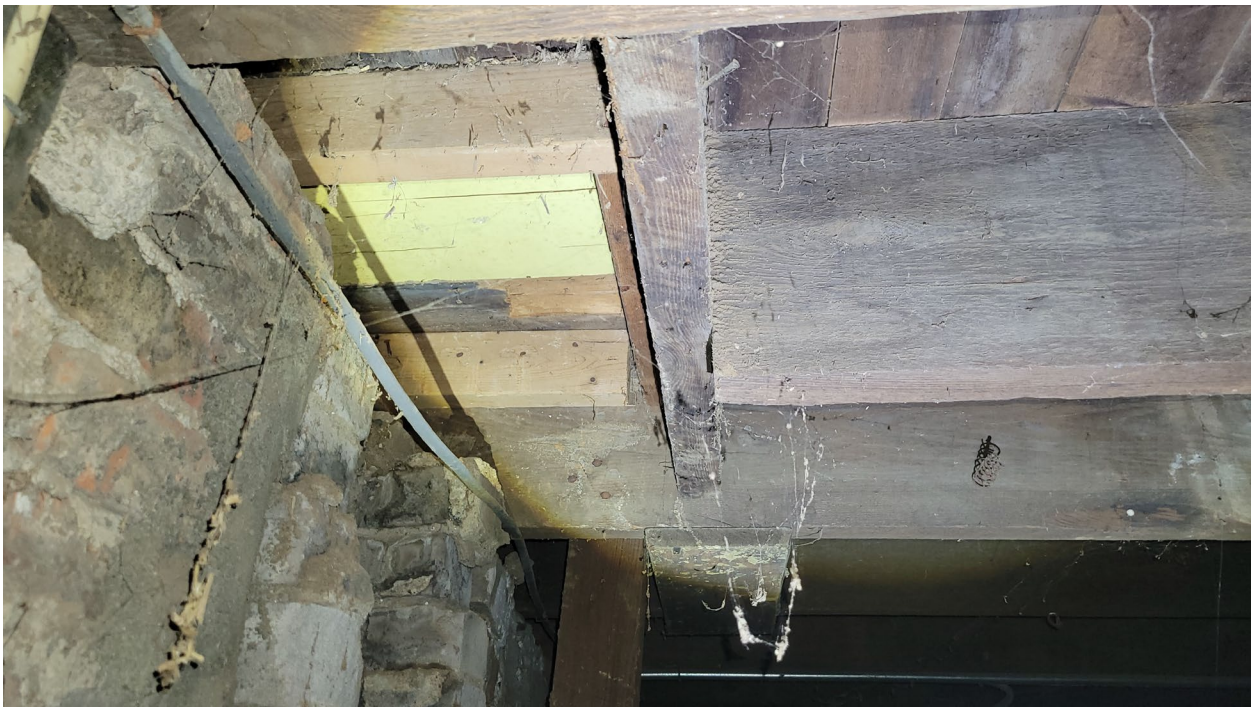

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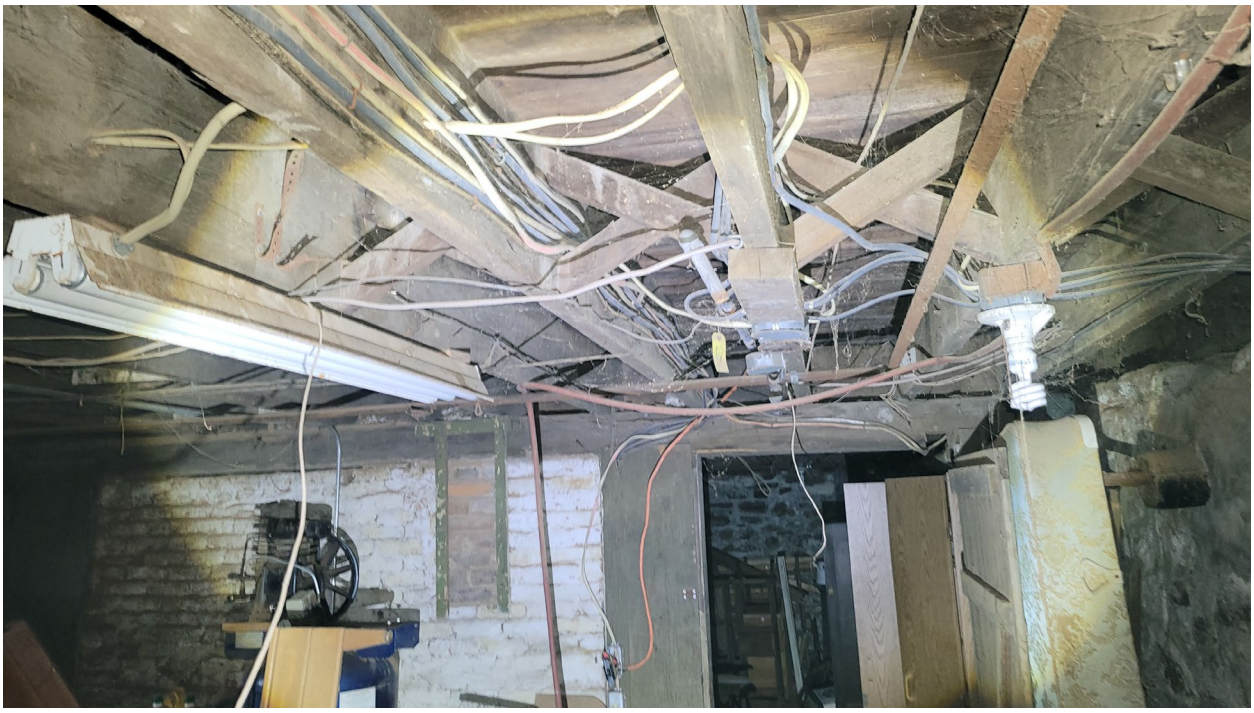

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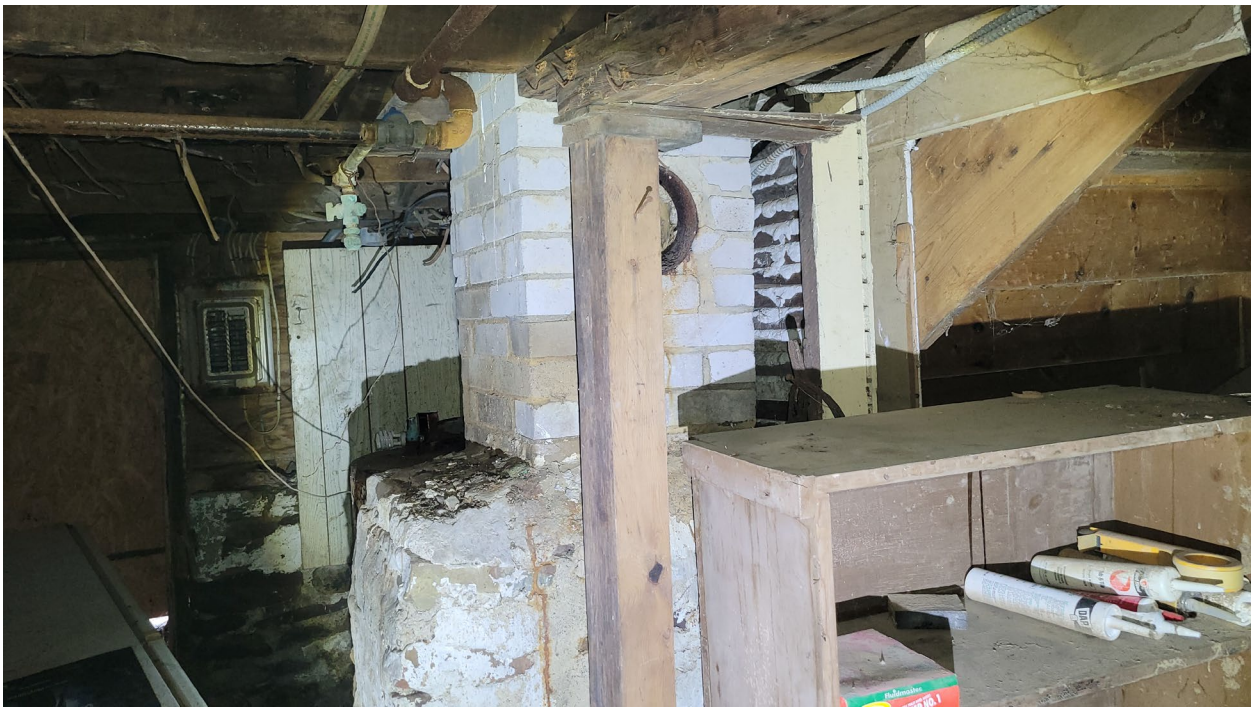

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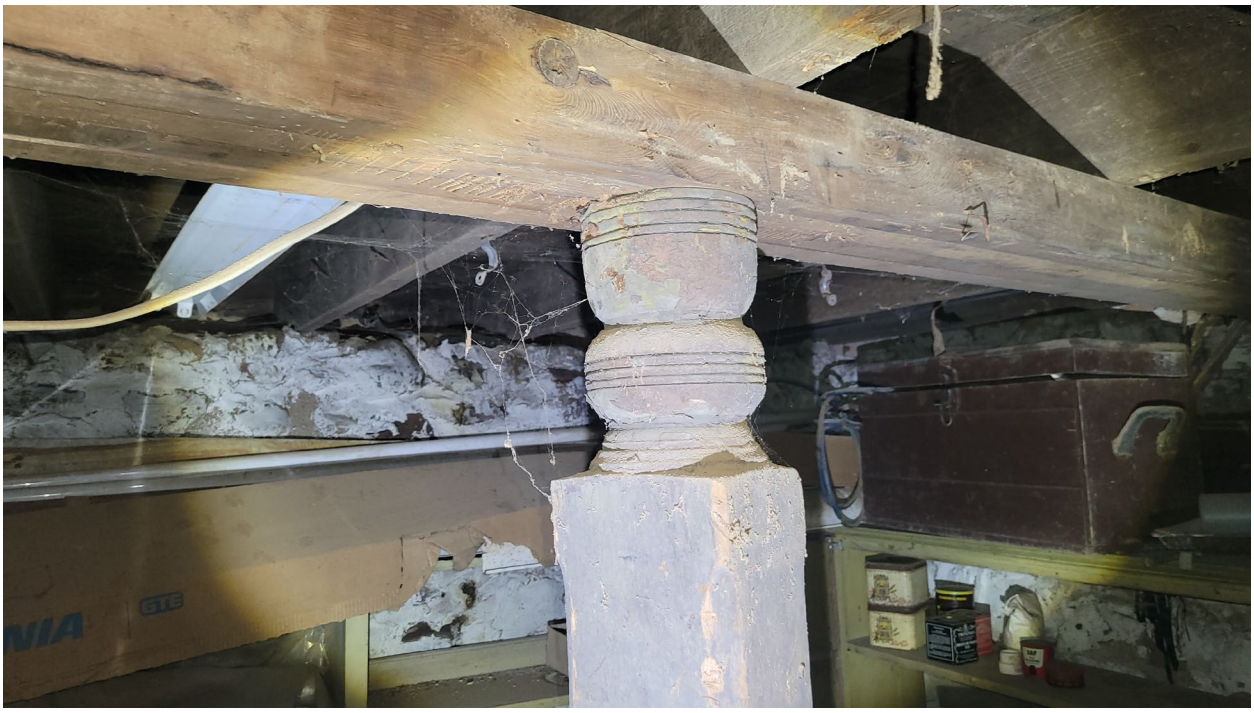
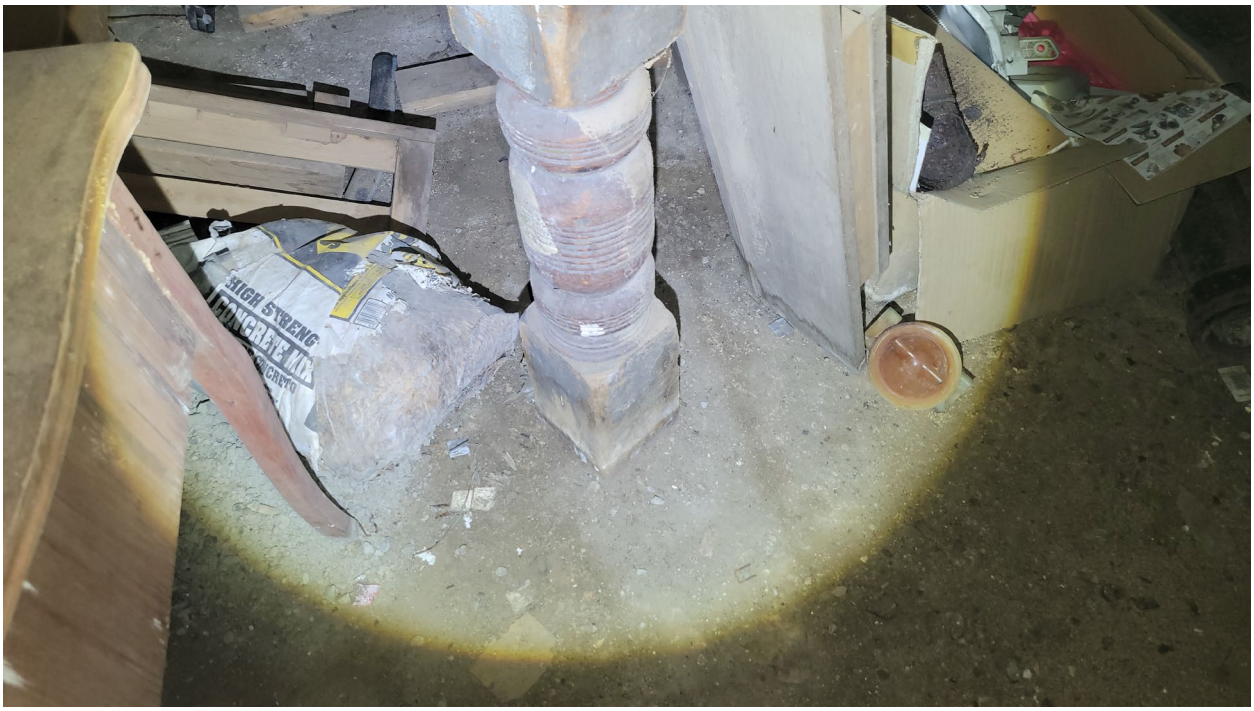


Photo 6: This post needs to be replaced with a steel jack stud.



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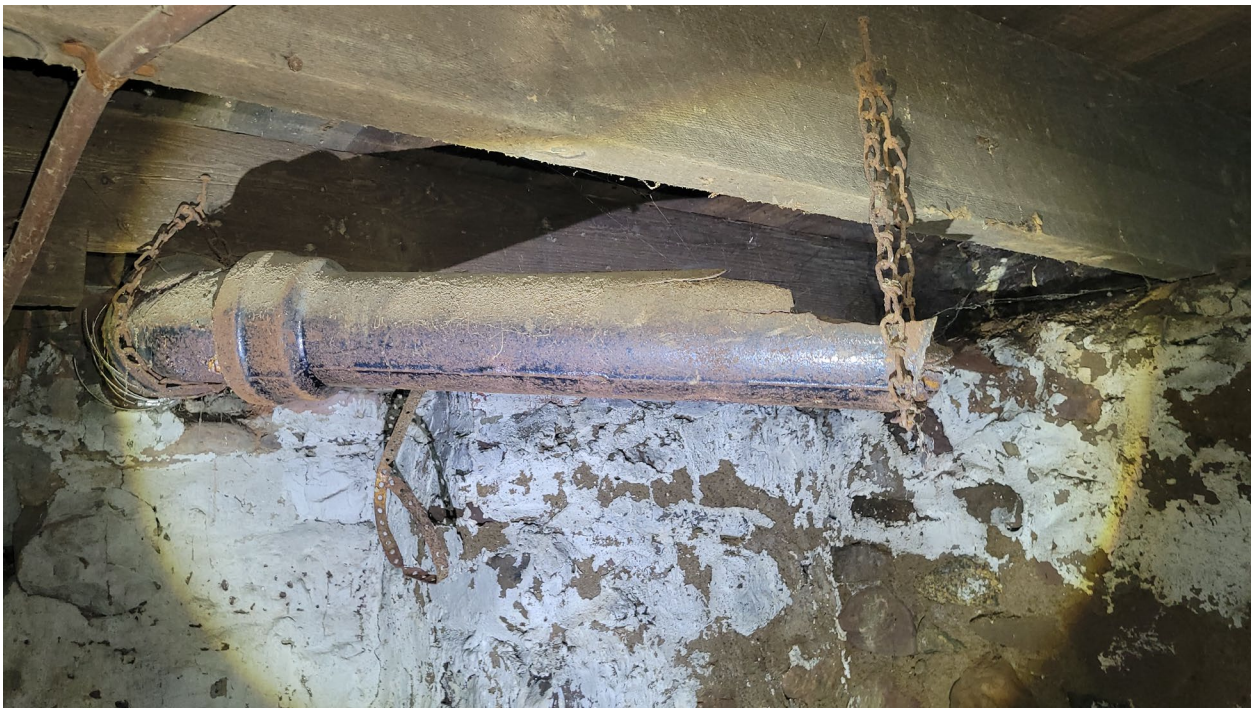


Photo 8: Remove and dispose of all abandoned pipes.

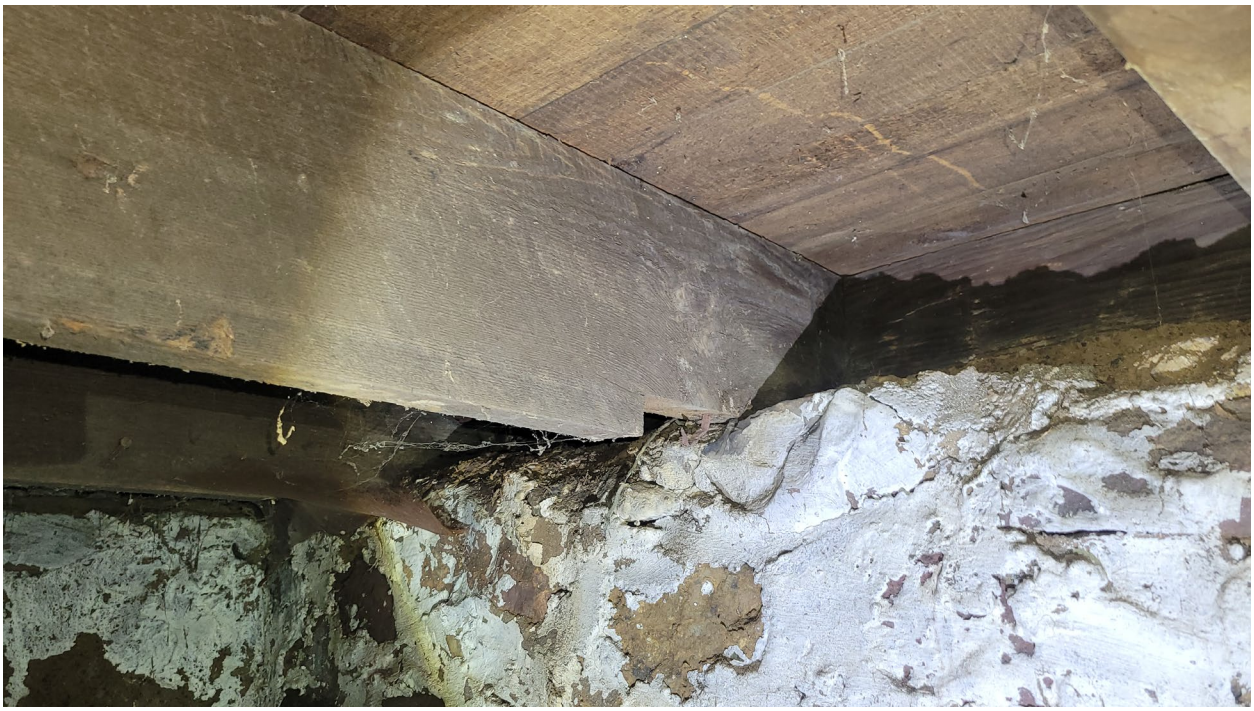
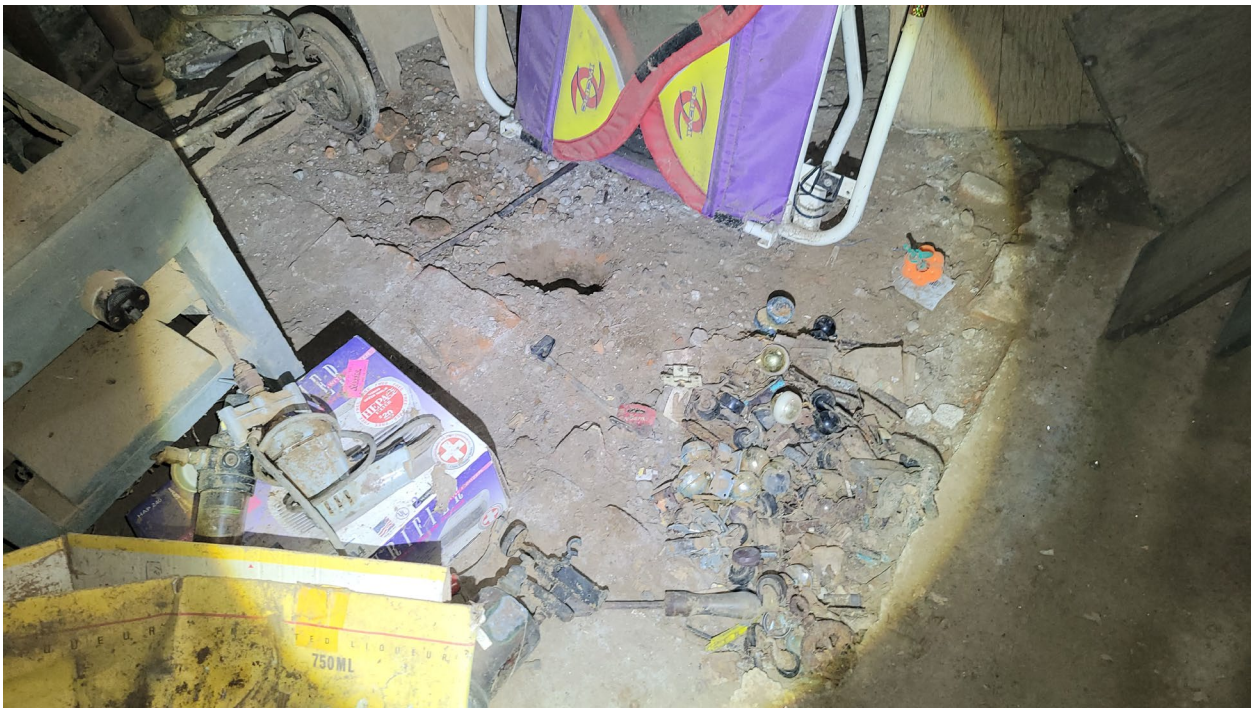


Photo 9: Sister new 2x10 joists to existing framing to properly bear on existing foundation wall.



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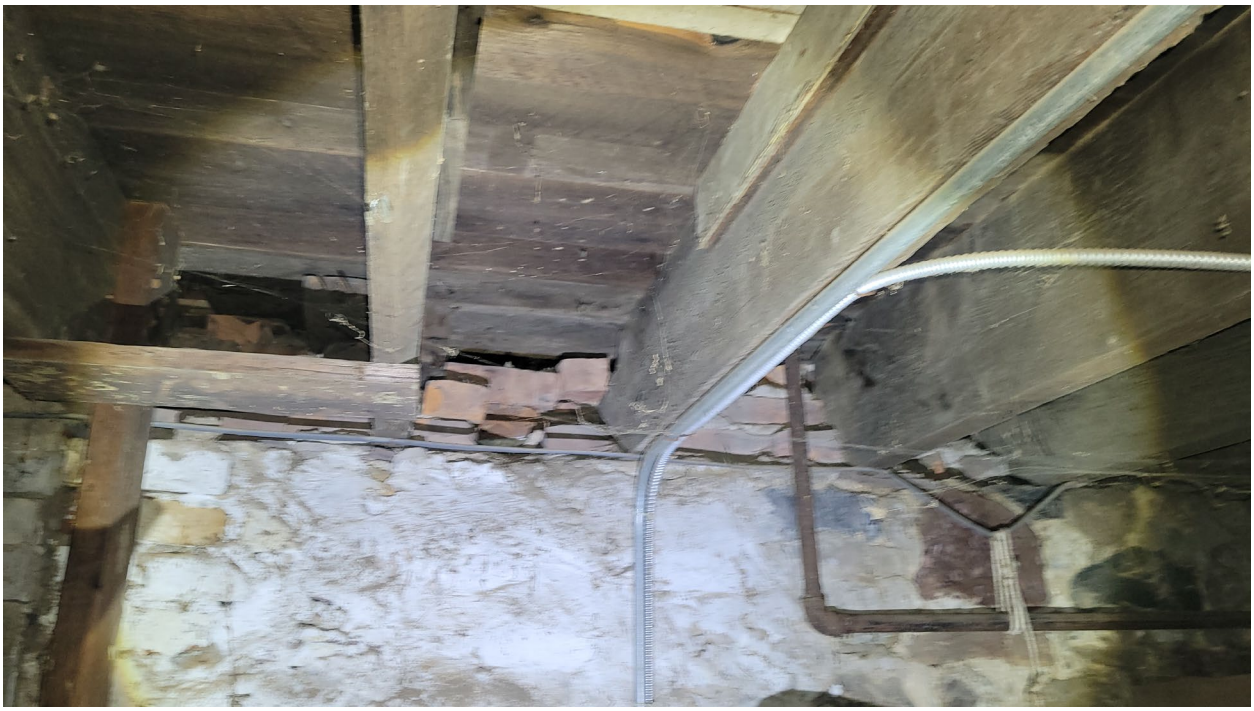

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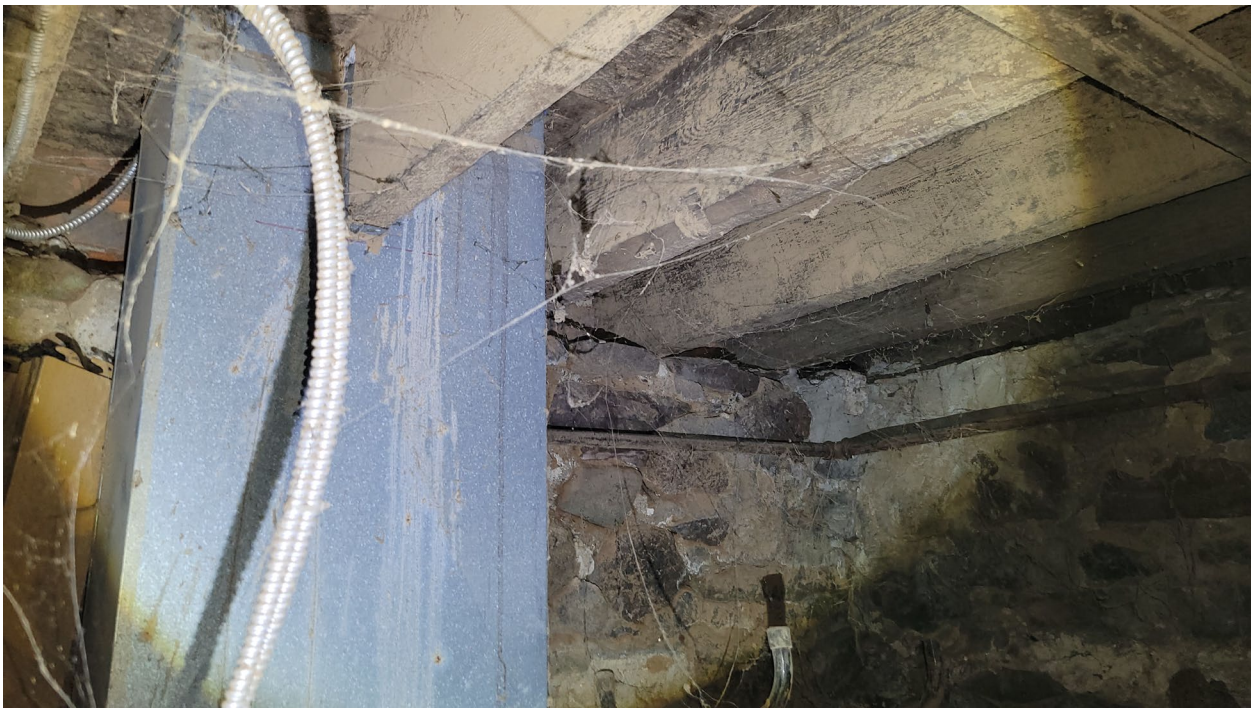


Photo 12: Reroute ductwork around joists, or install a header to support the joist. Remove joist hangers from duct work. Do not bear joists on ductwork.

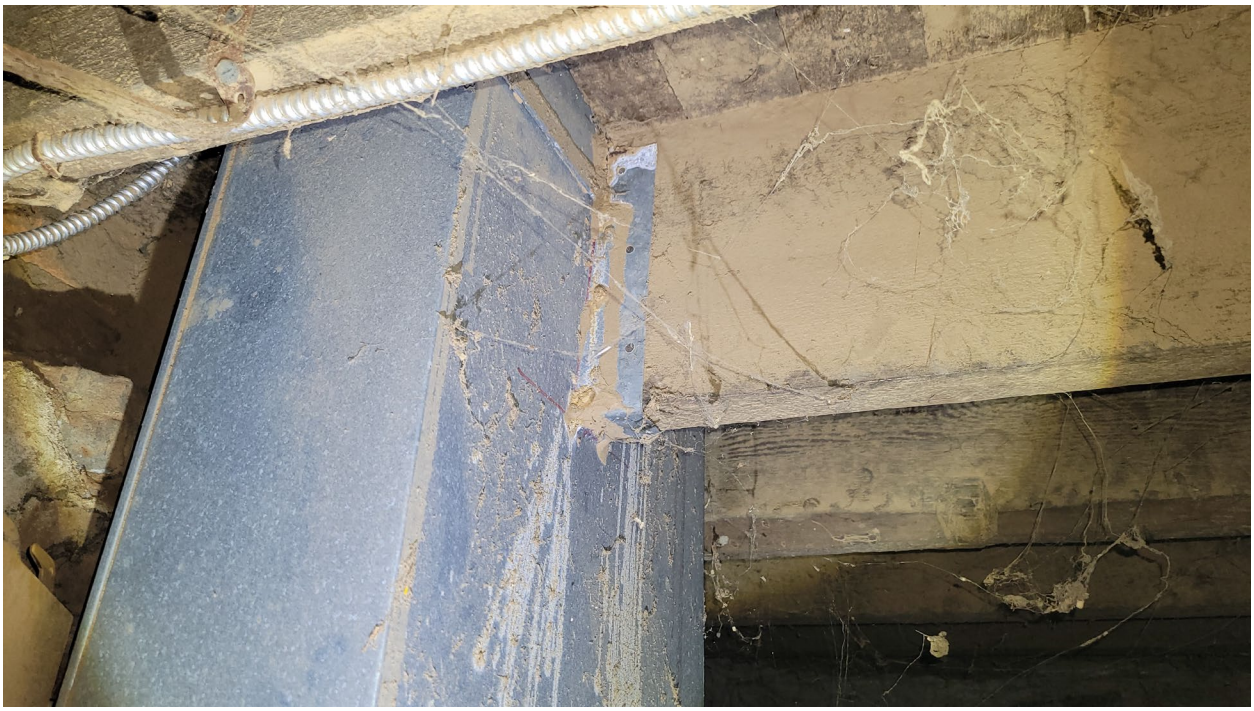
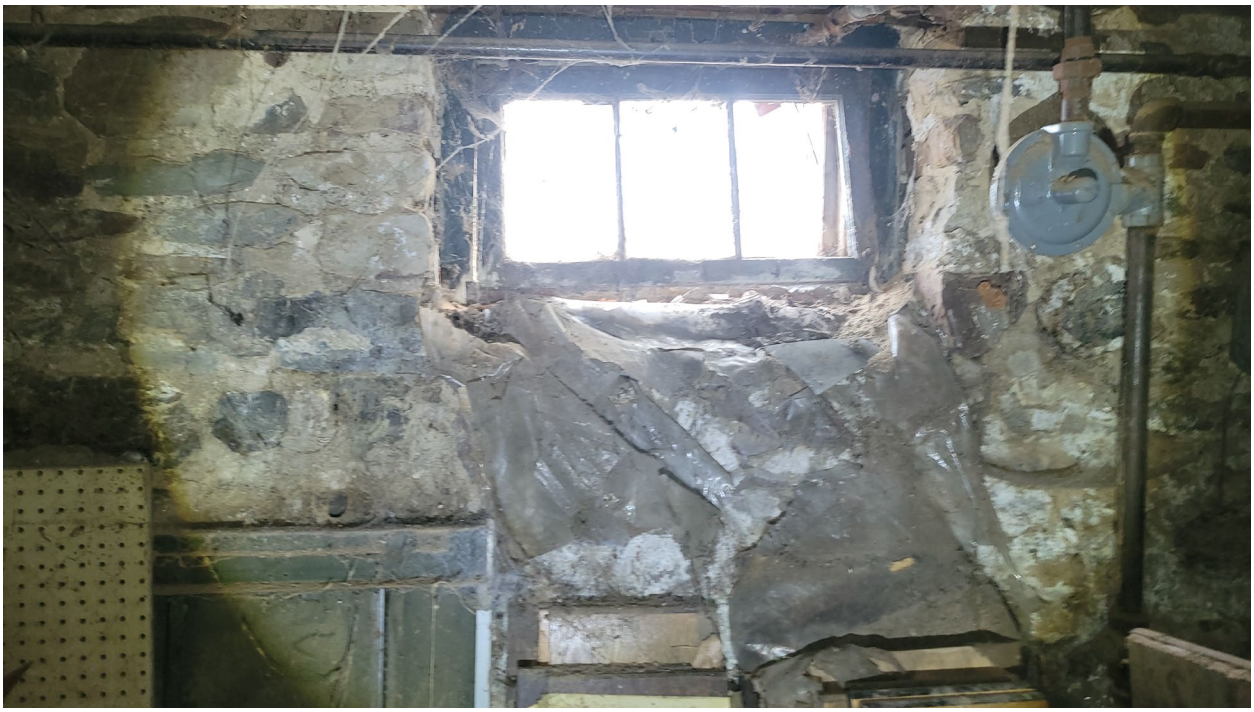


Photo 13:See photo 12.



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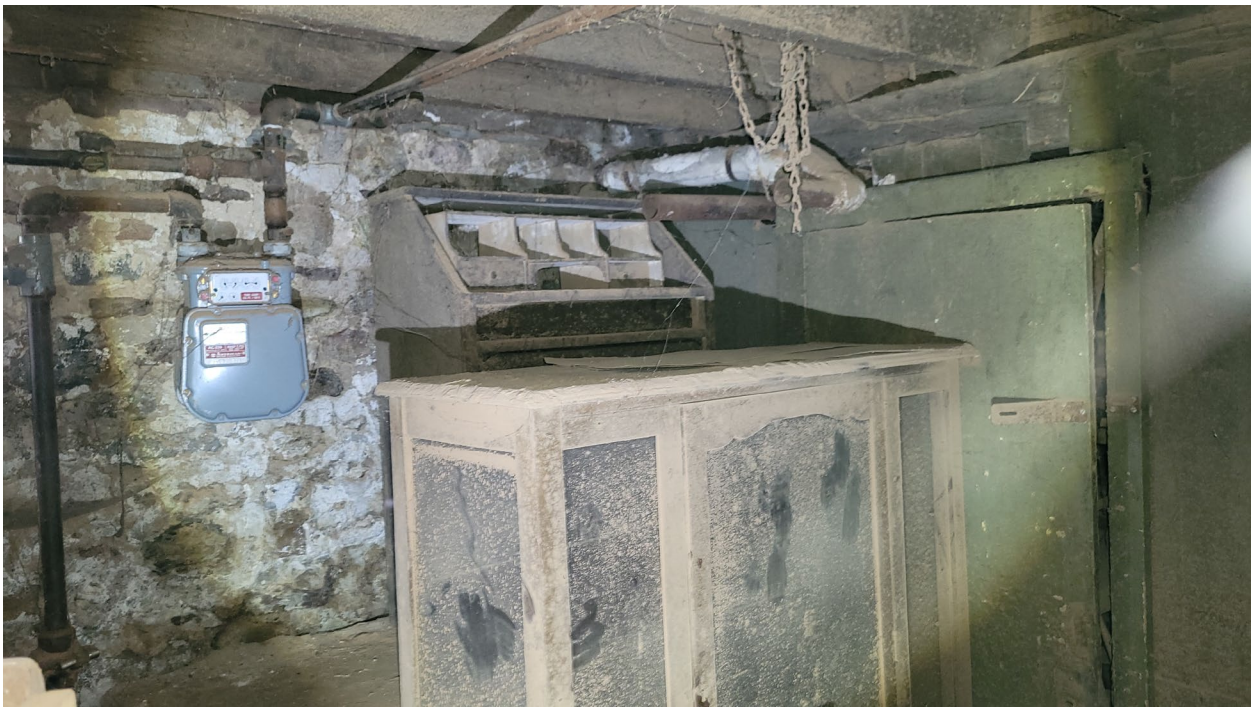

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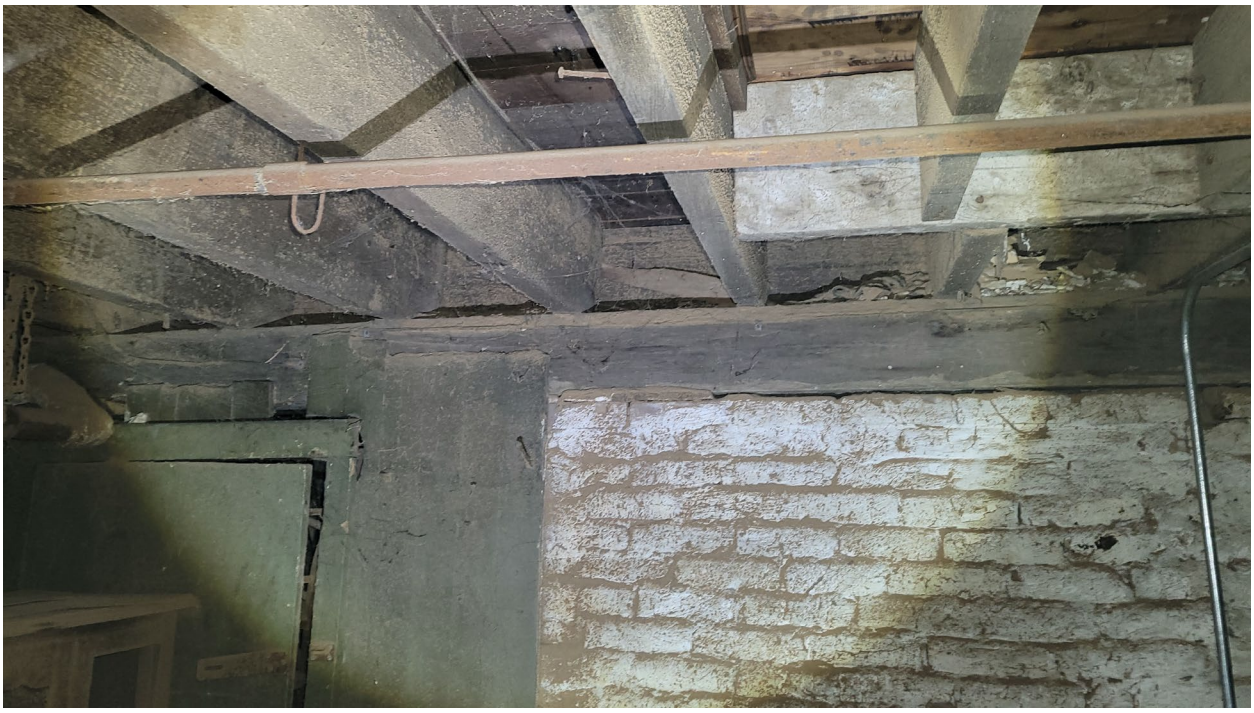

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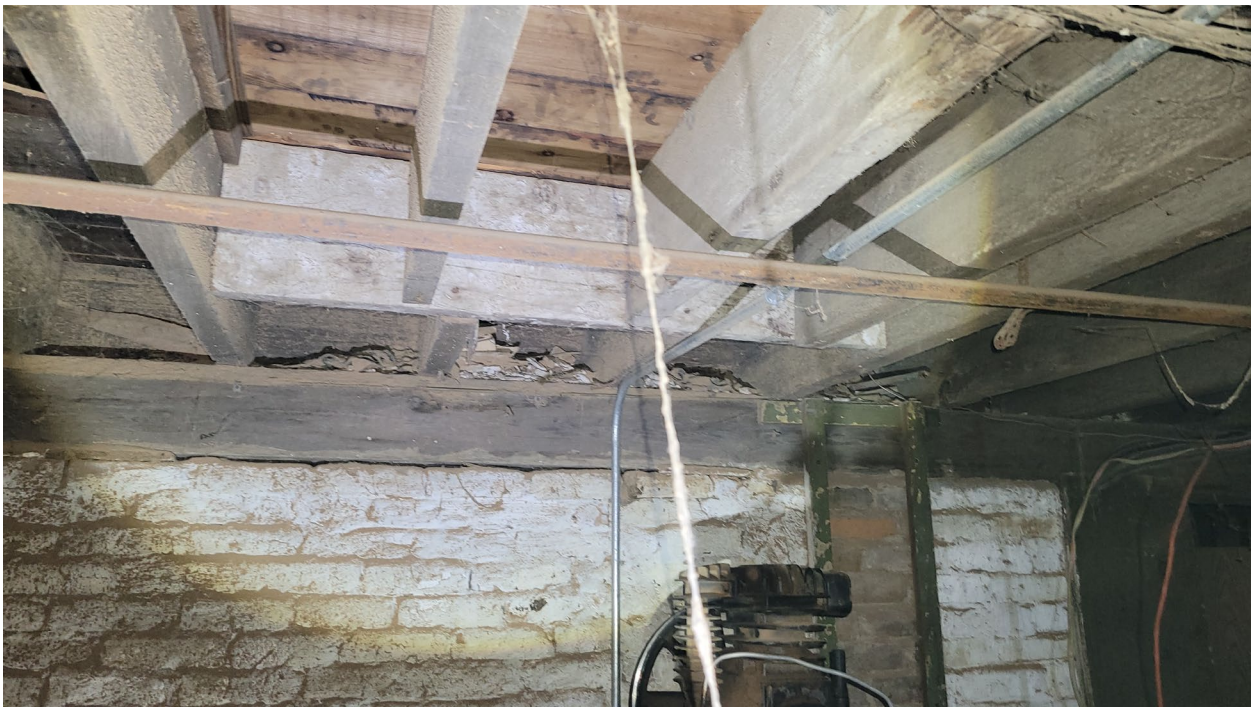

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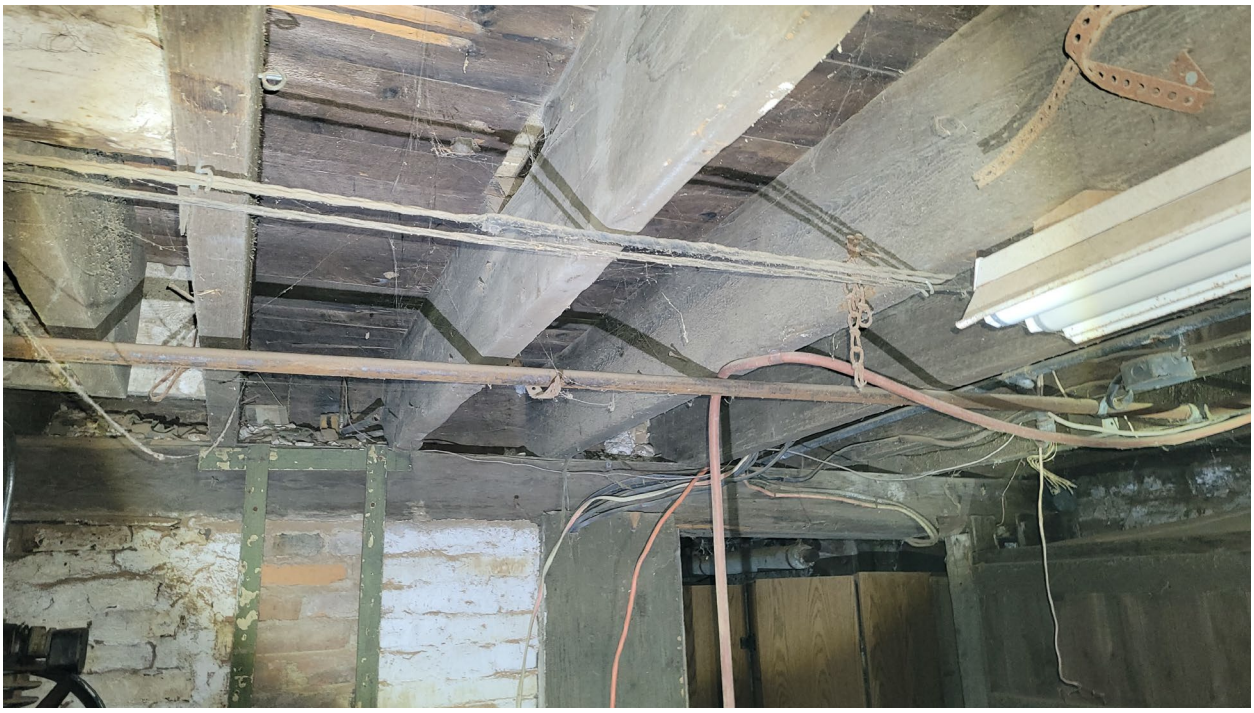

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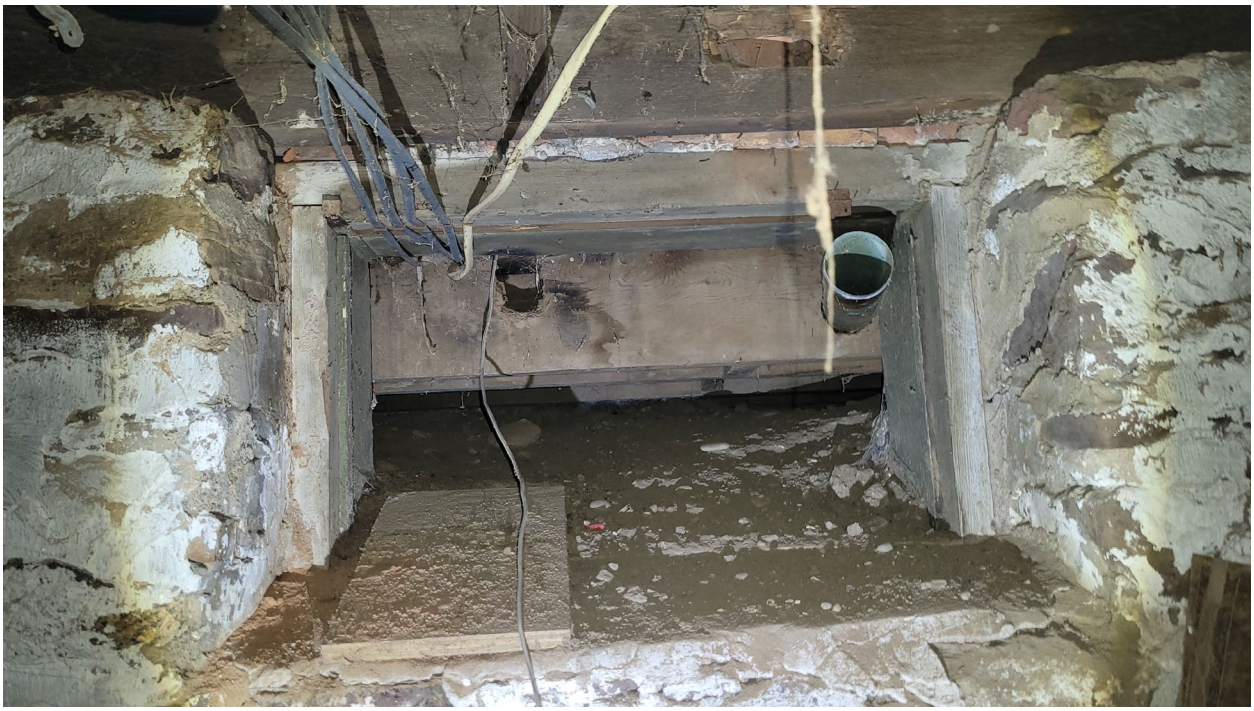

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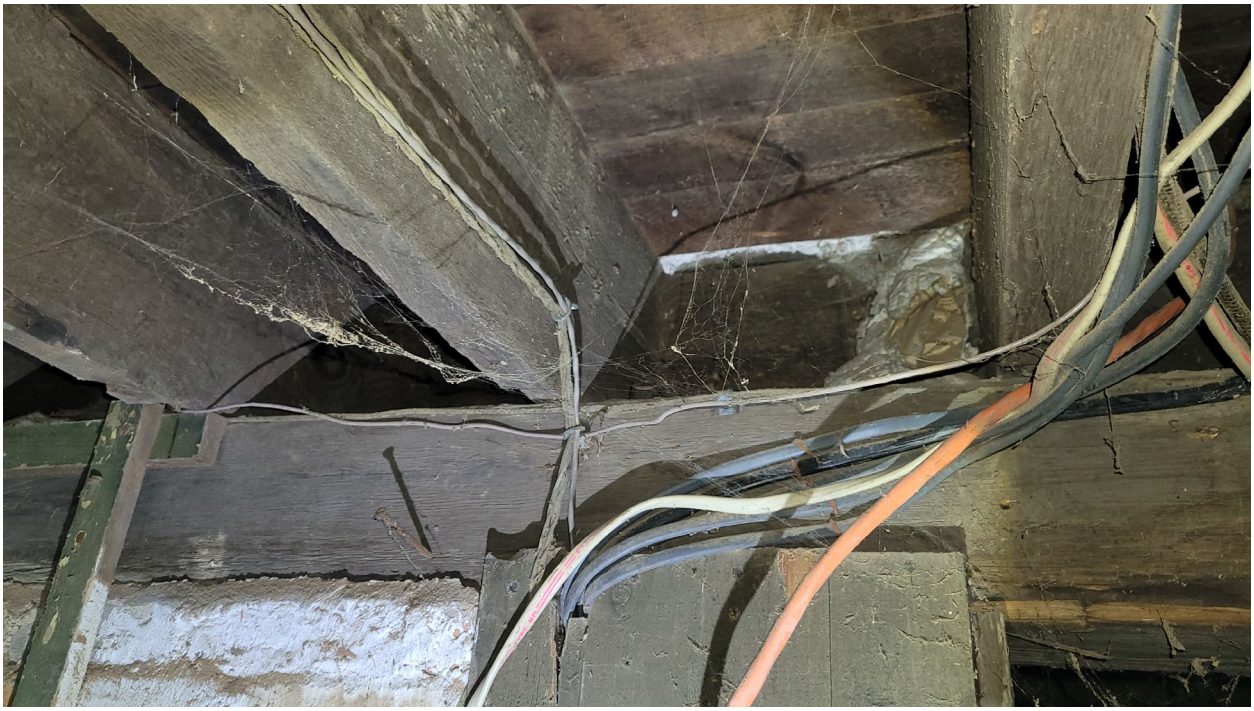

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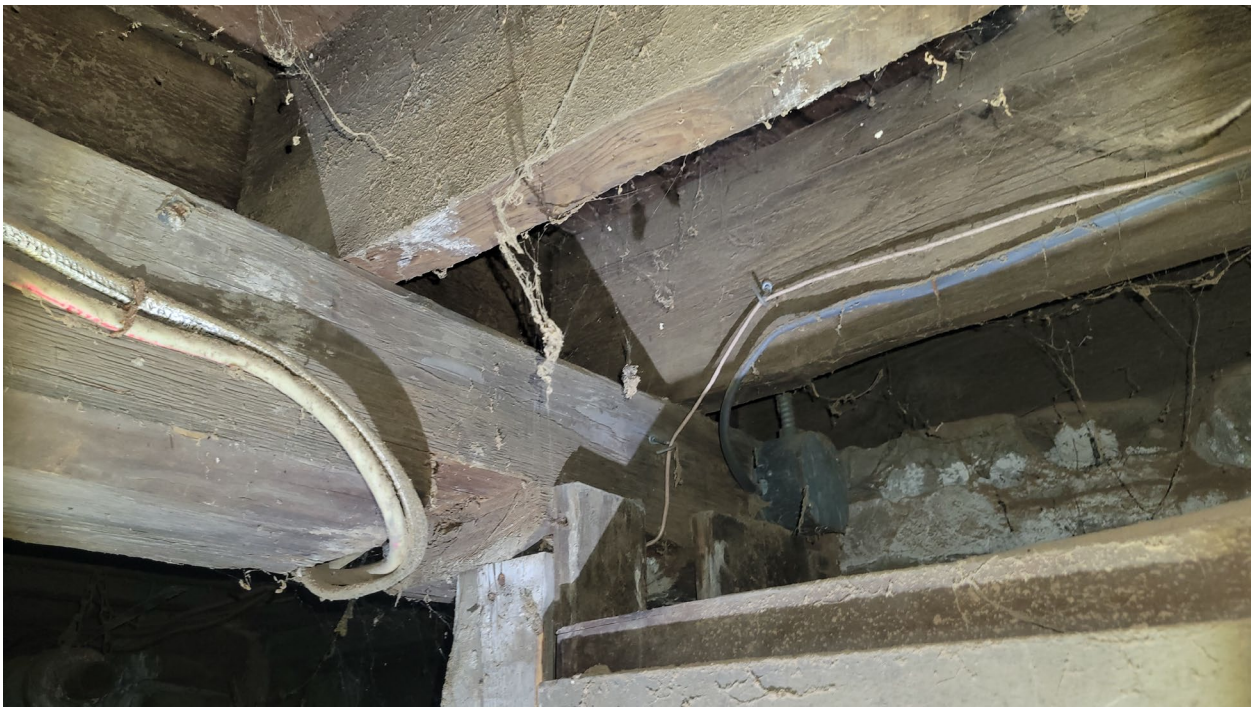

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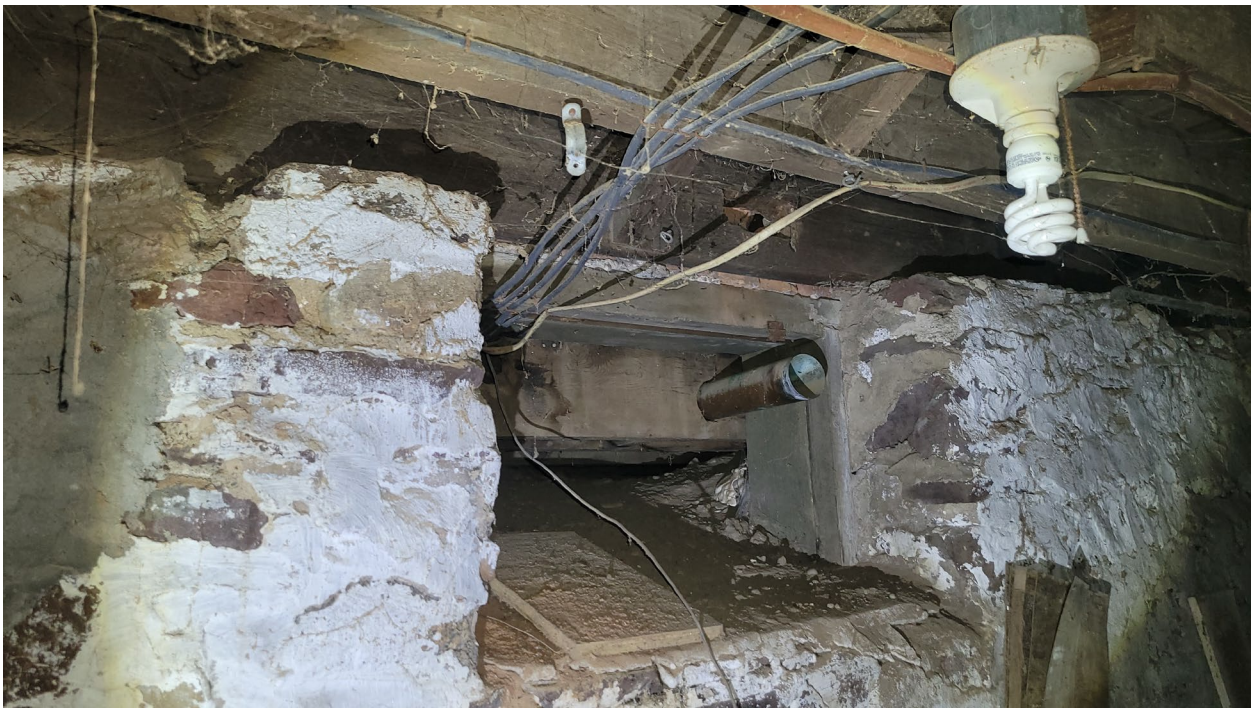

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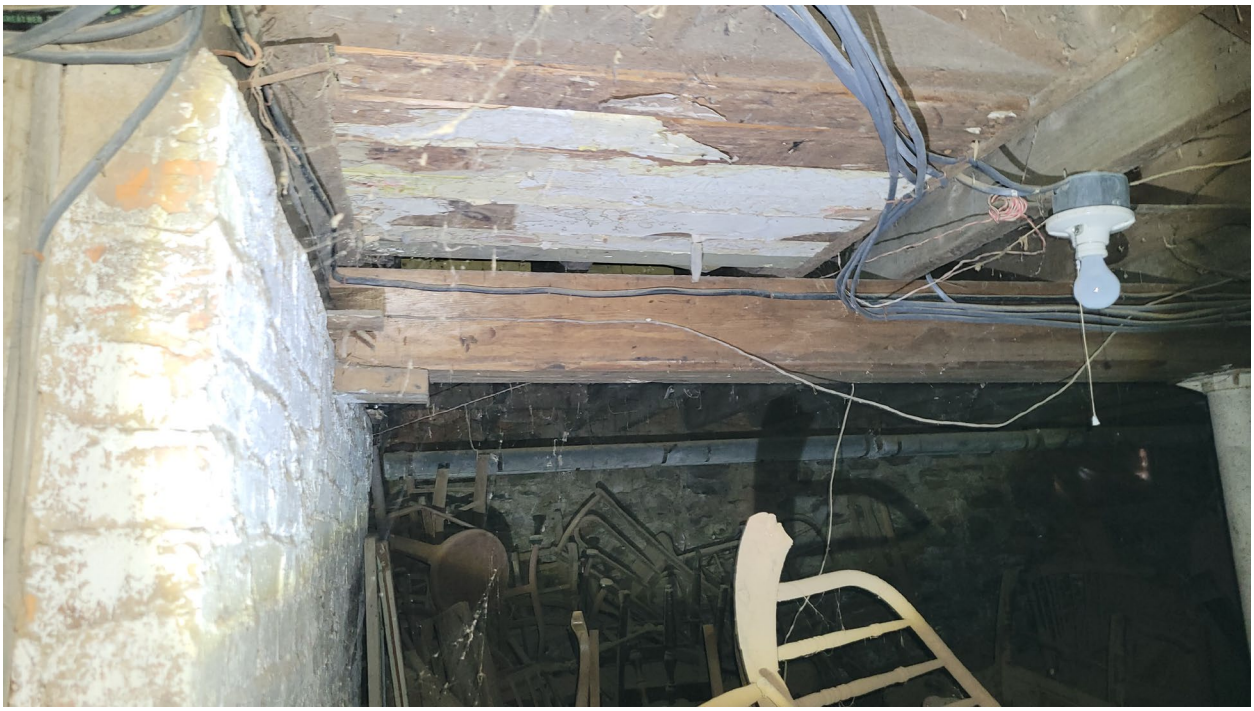

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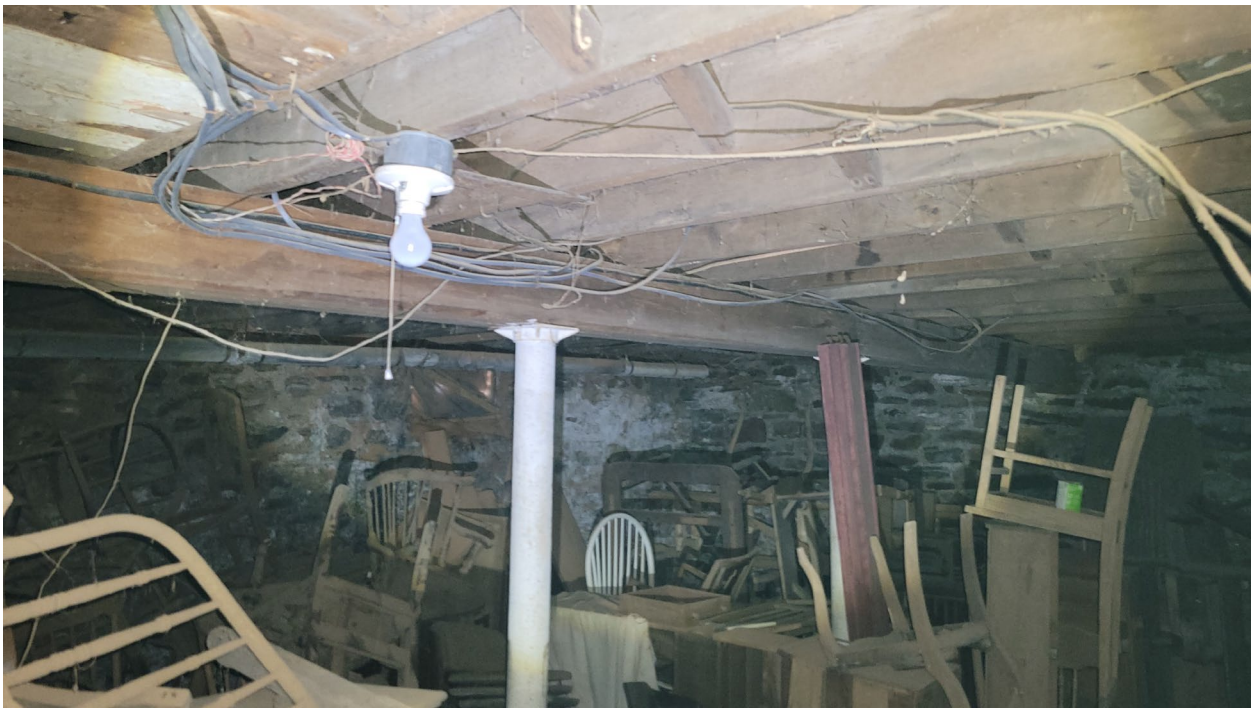

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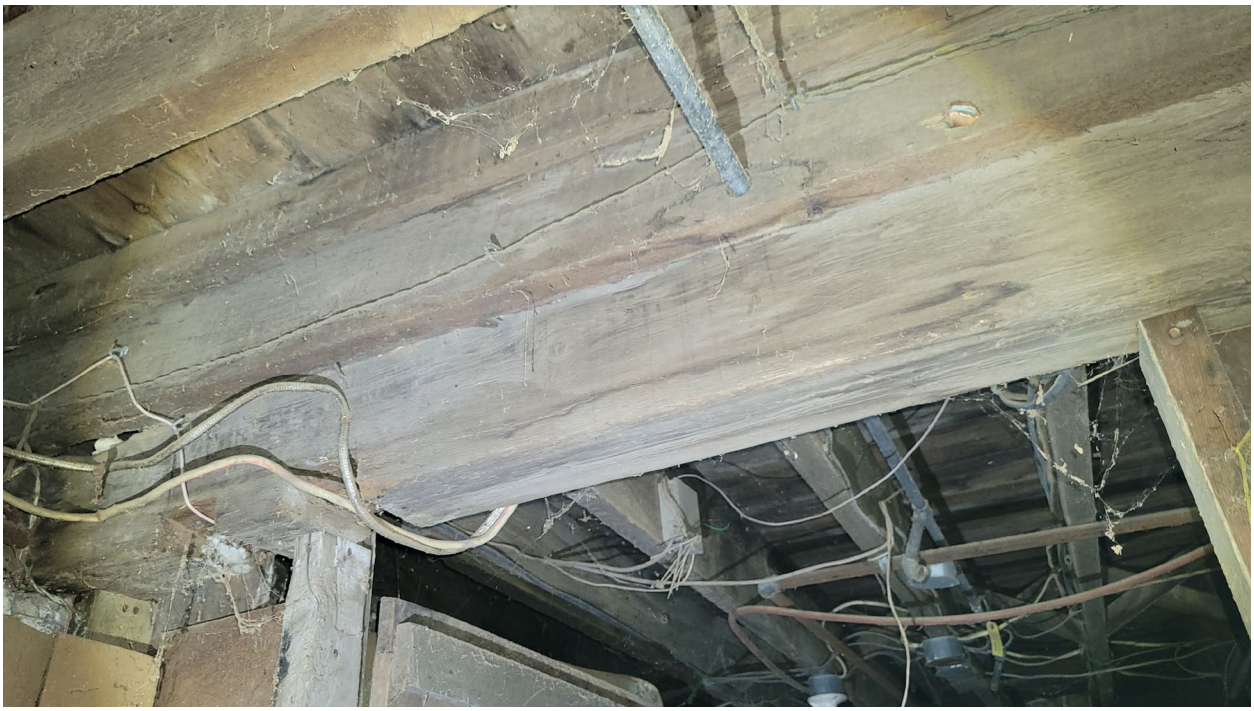

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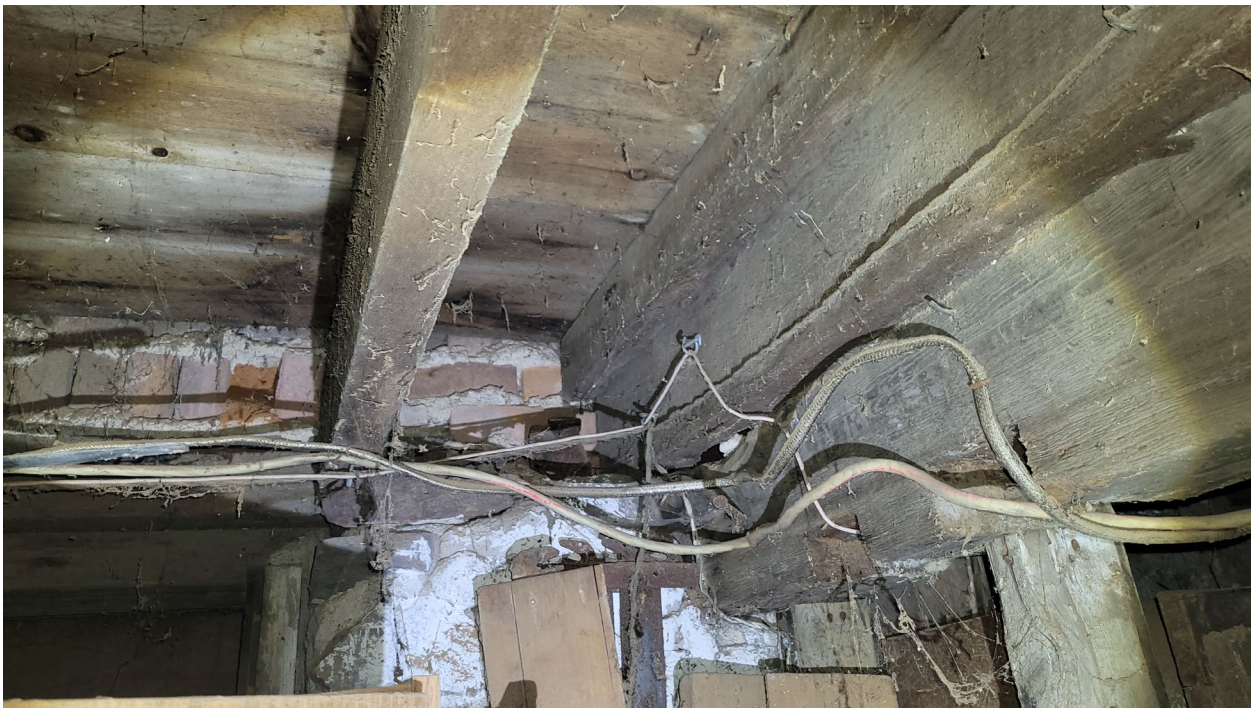

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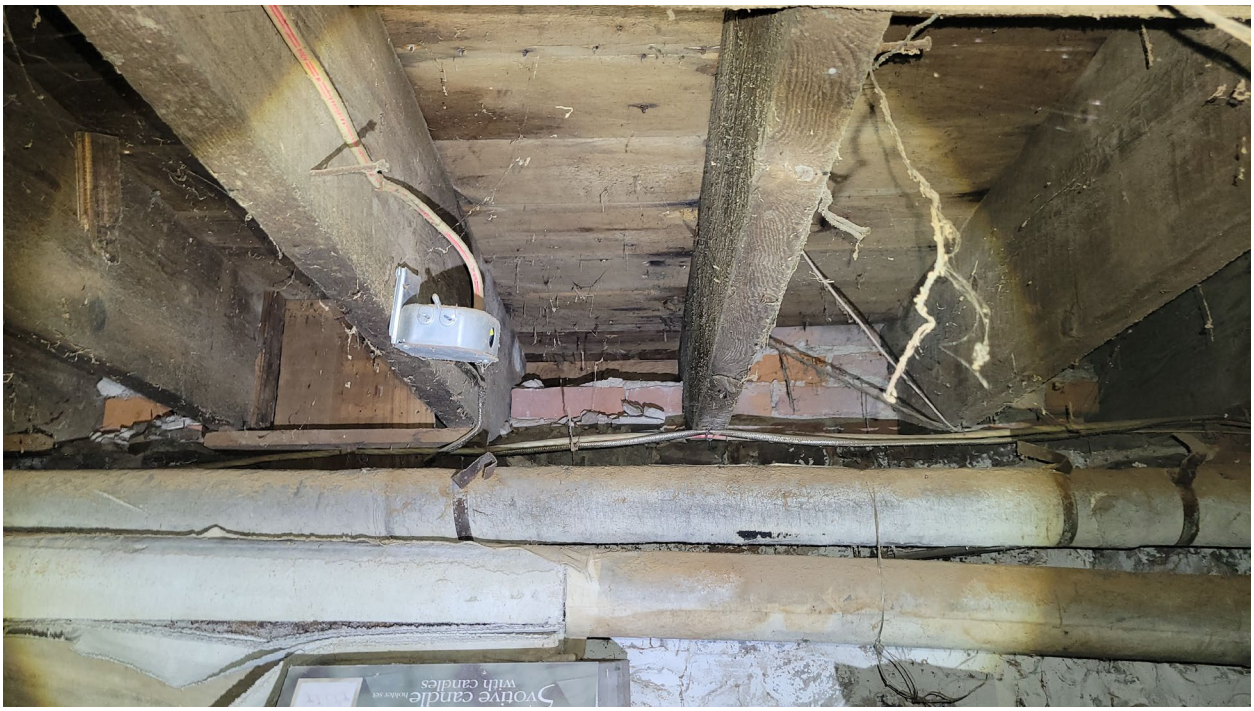

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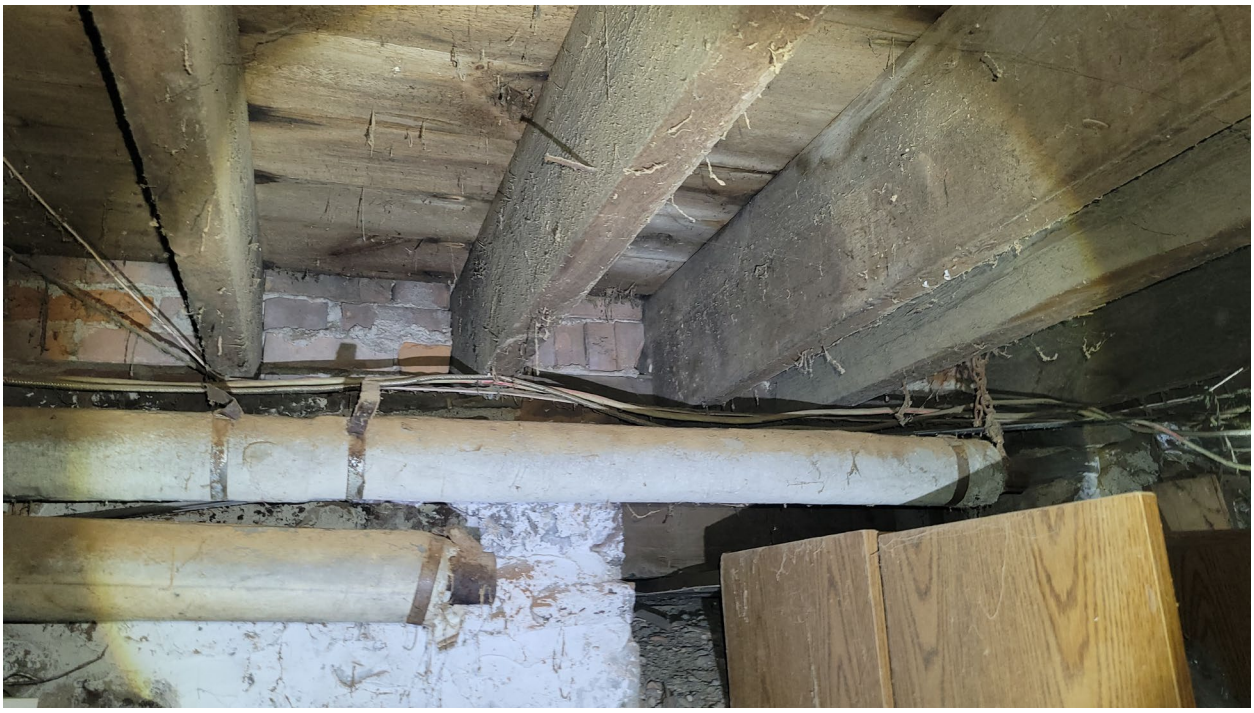

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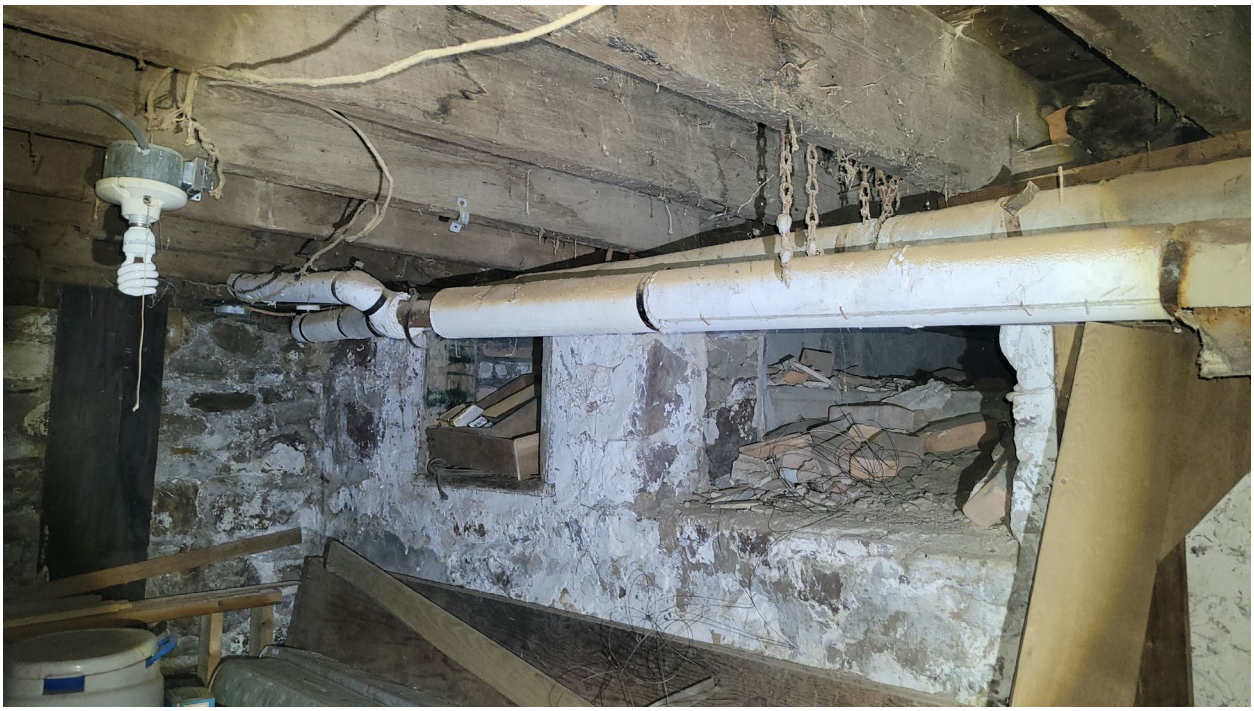

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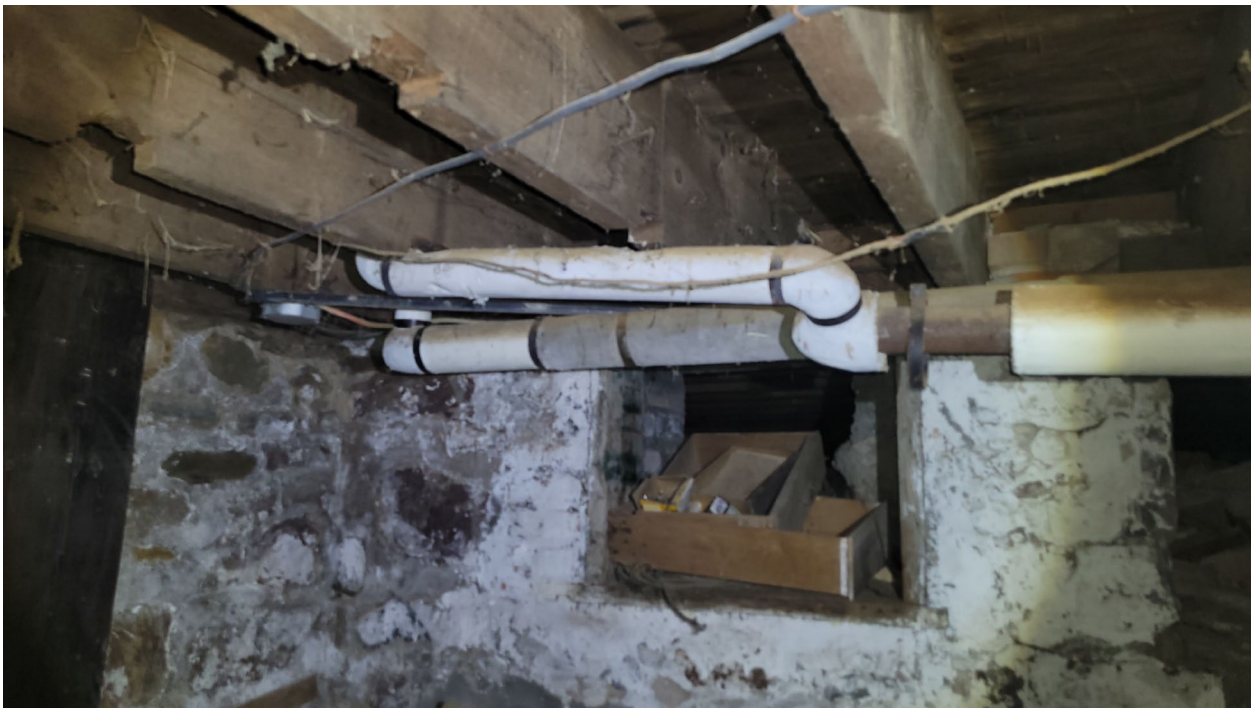

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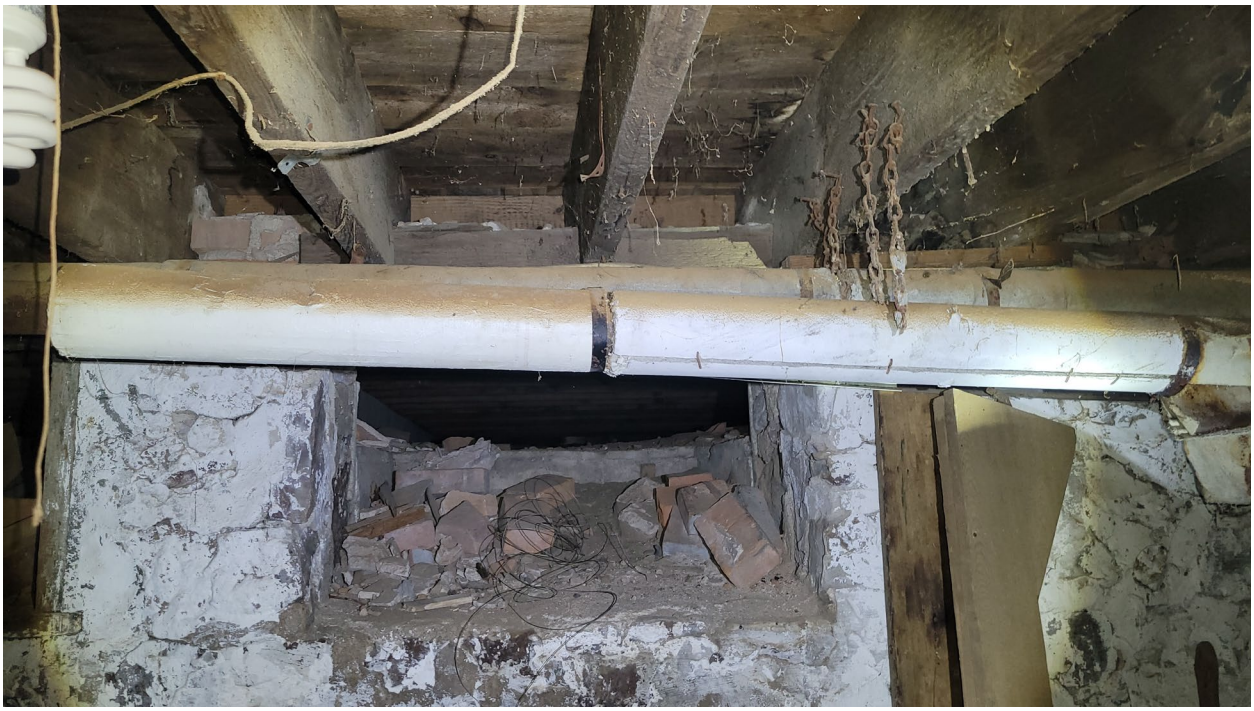


Photo 31: Pipe coverings could have asbestos in them. It is recommended to either test the insulation for asbestos, or have removed by an asbestos remediation professional.

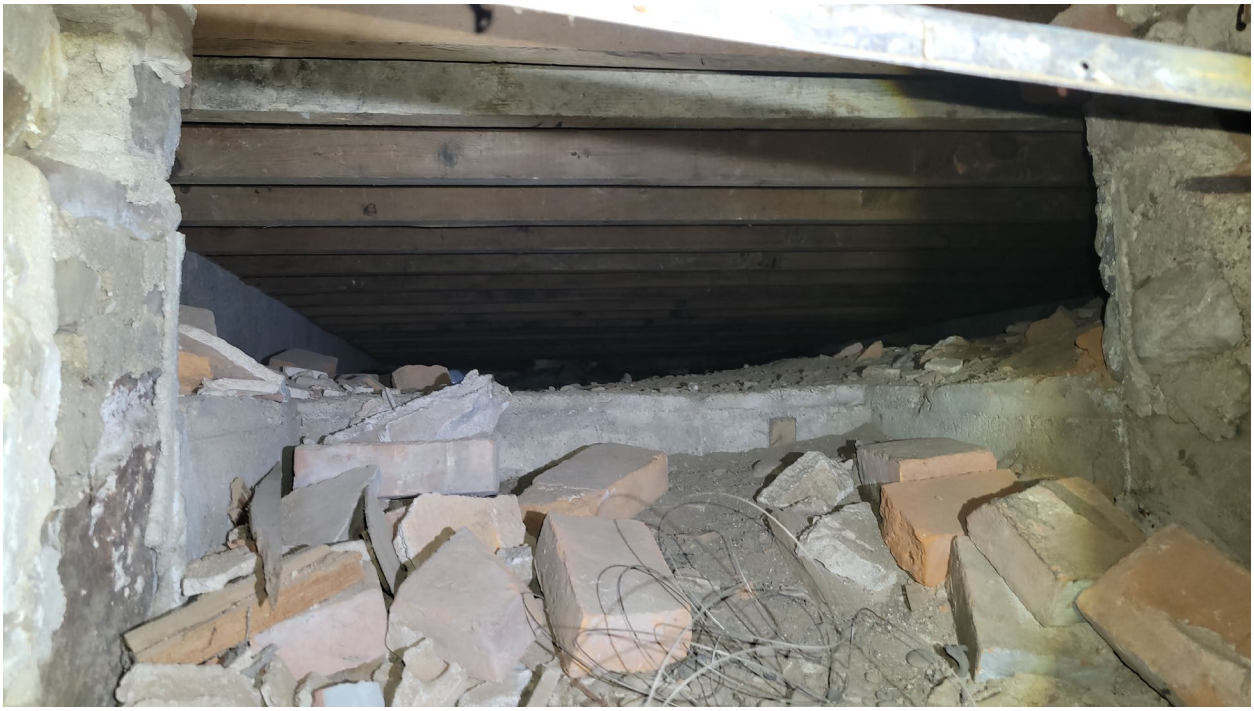
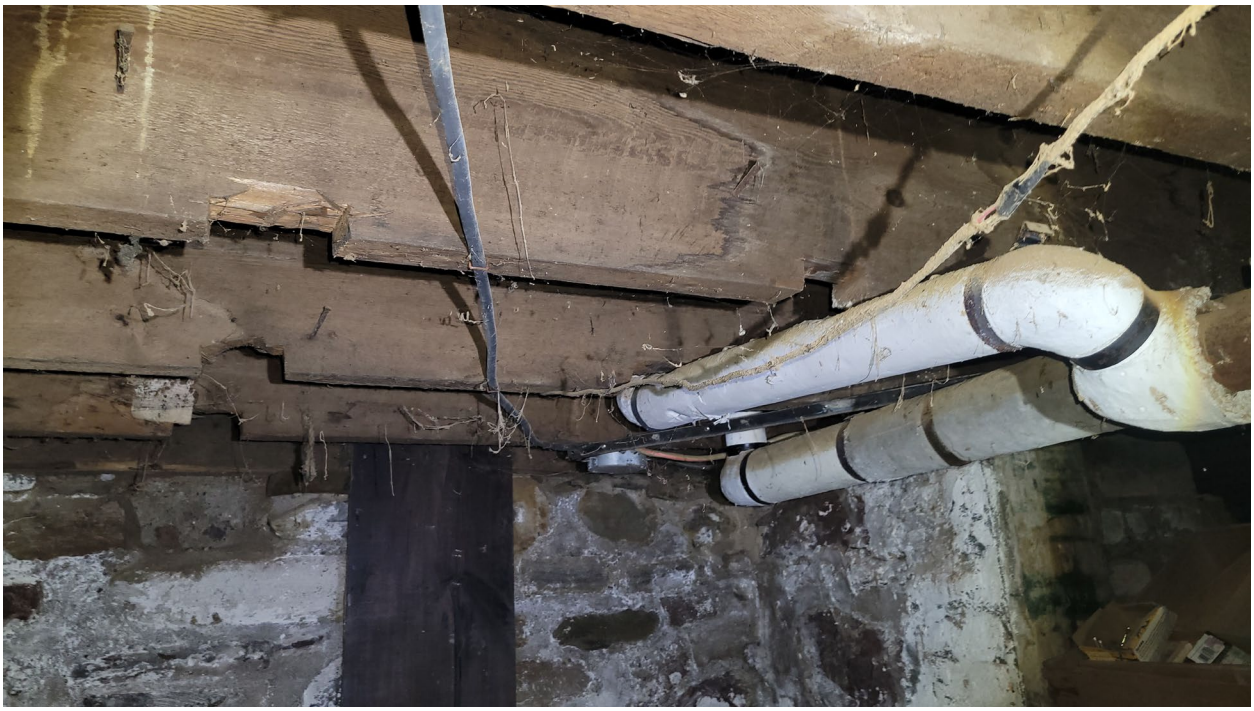


Photo 32: It is recommended to run a dehumidifier in the crawl space to prevent any moisture or mold build up in this area.



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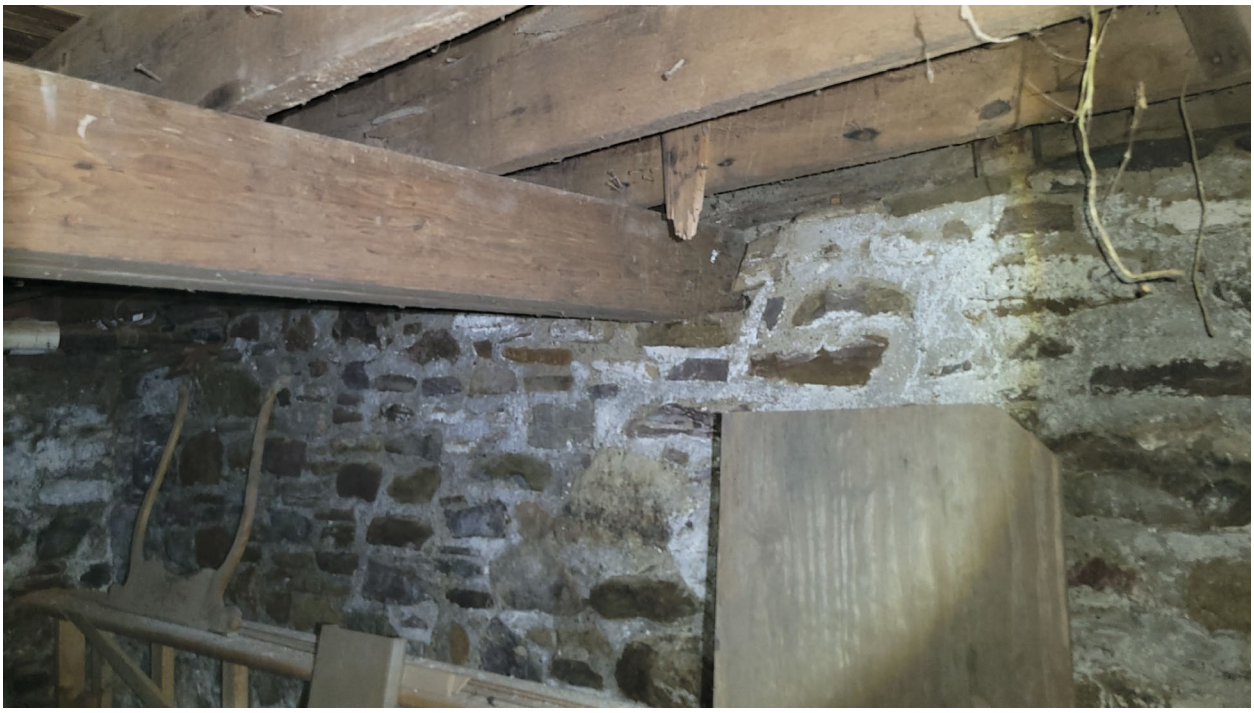

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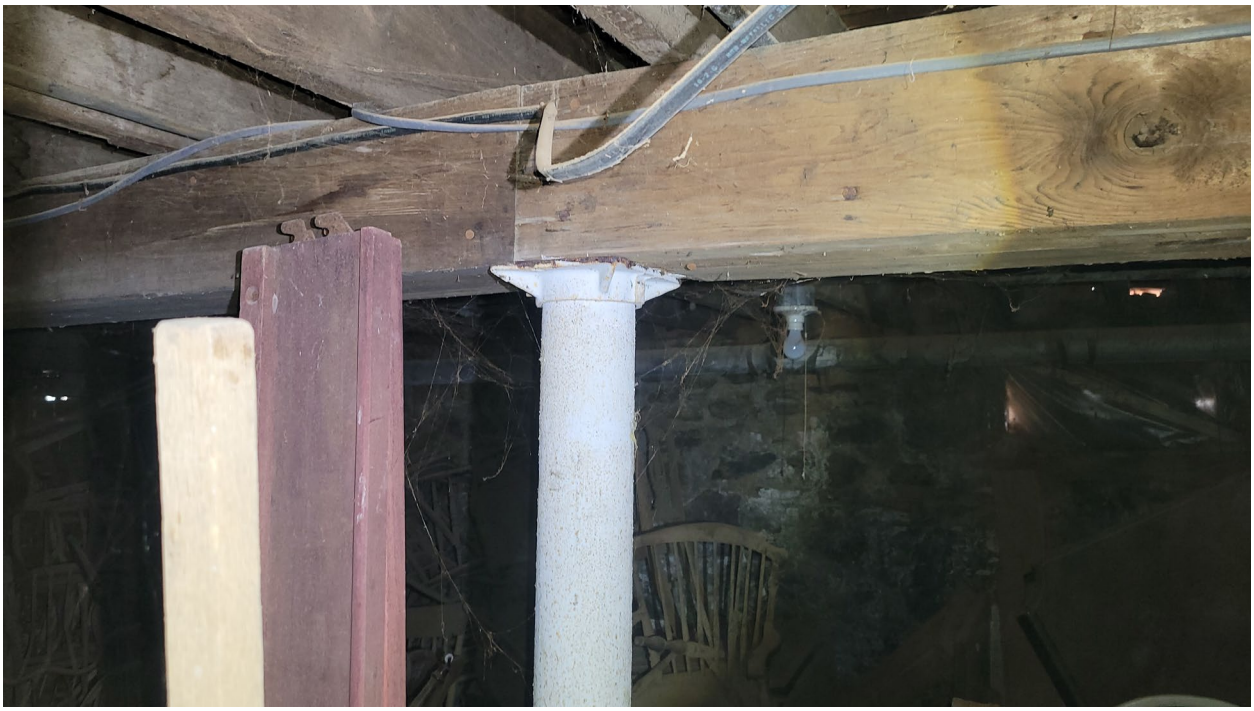

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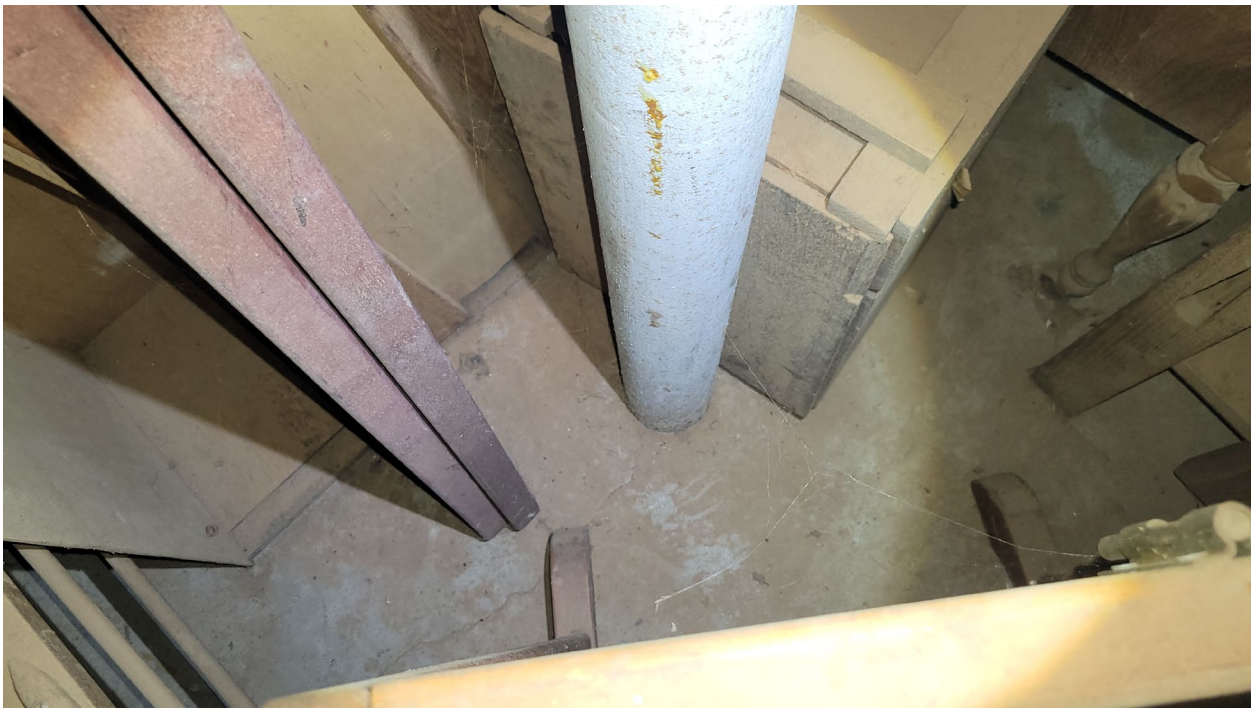

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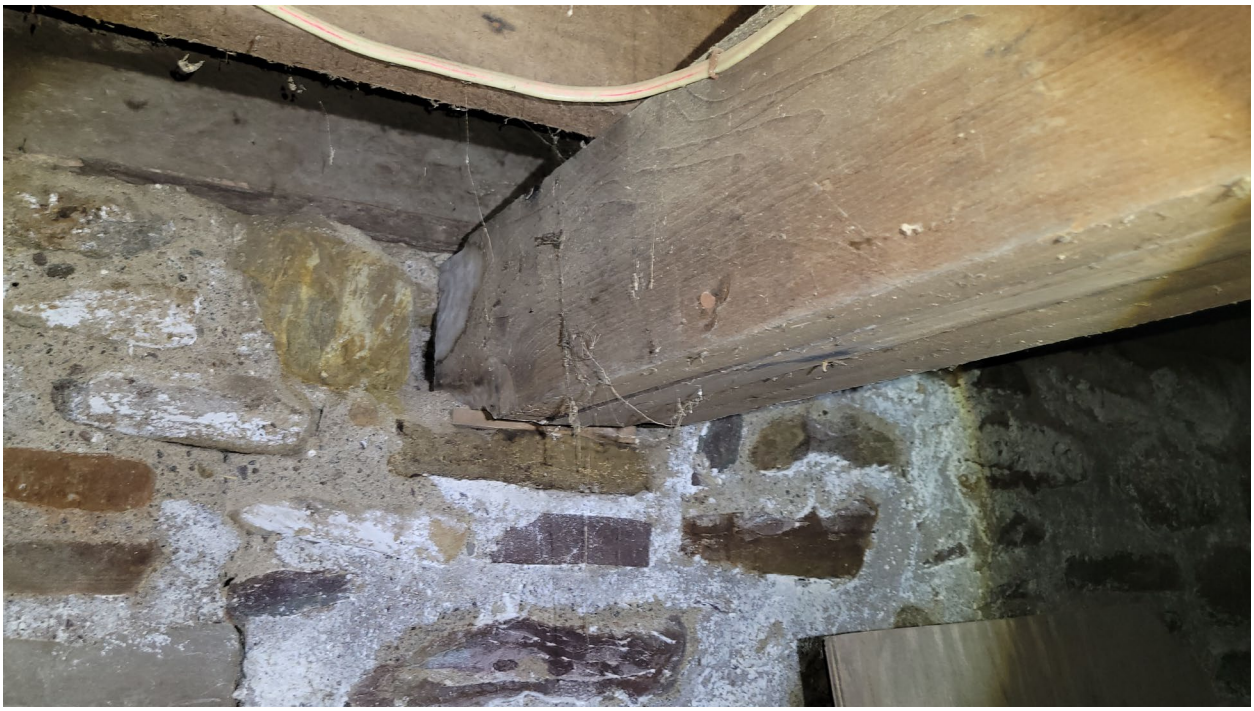

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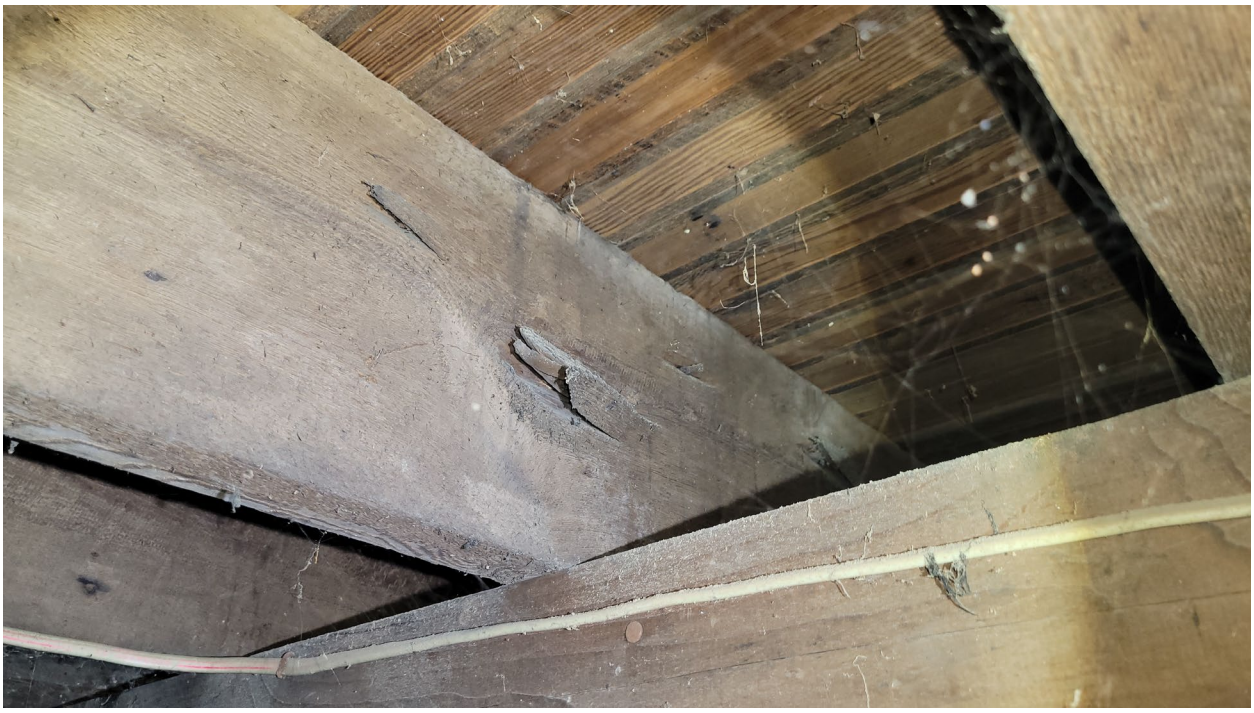

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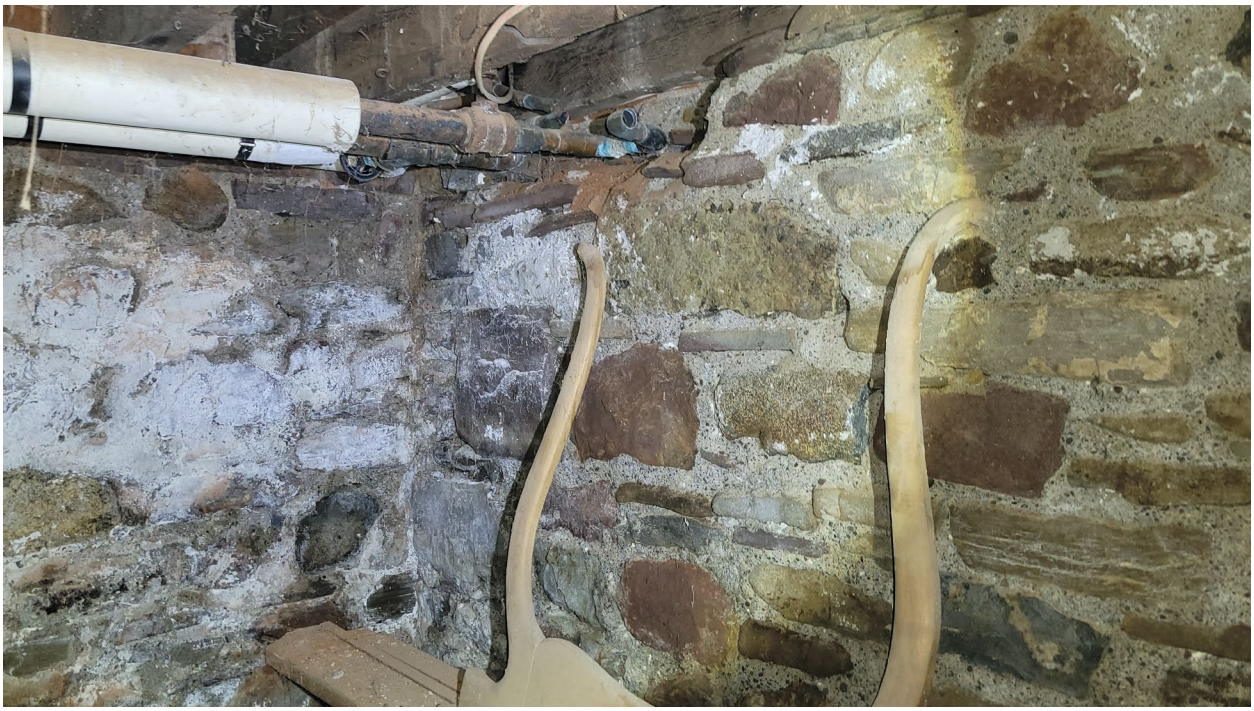

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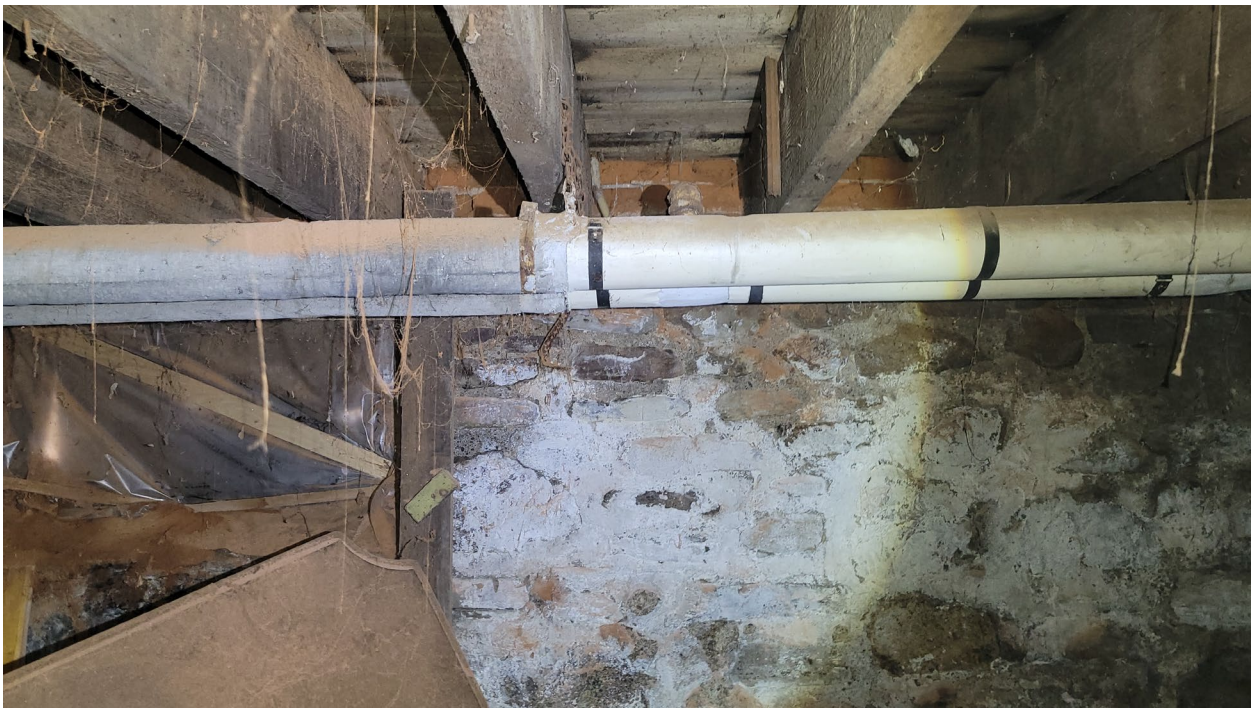

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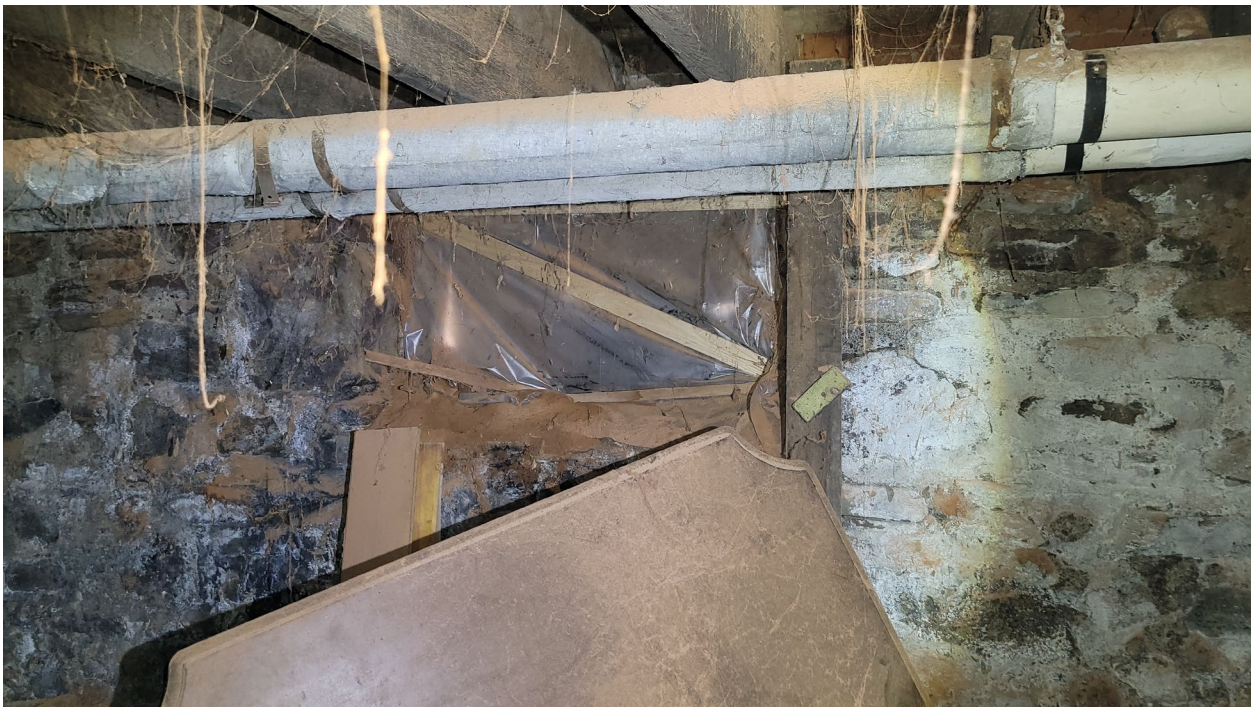

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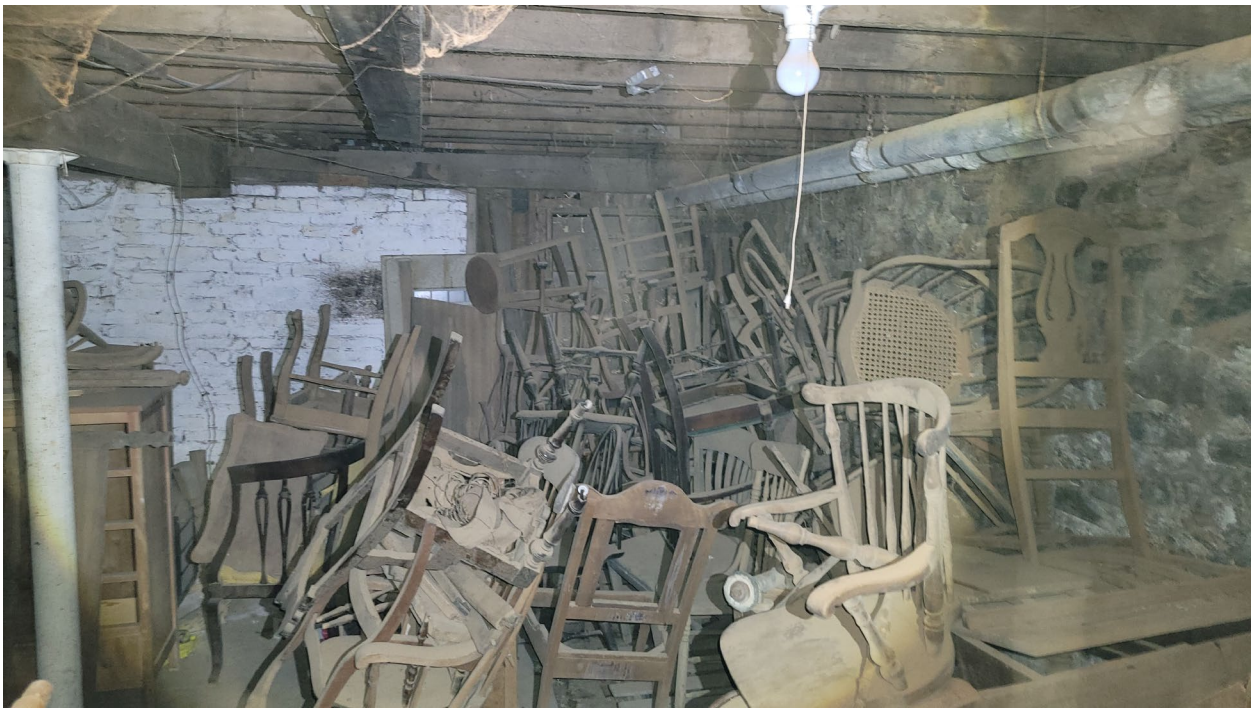

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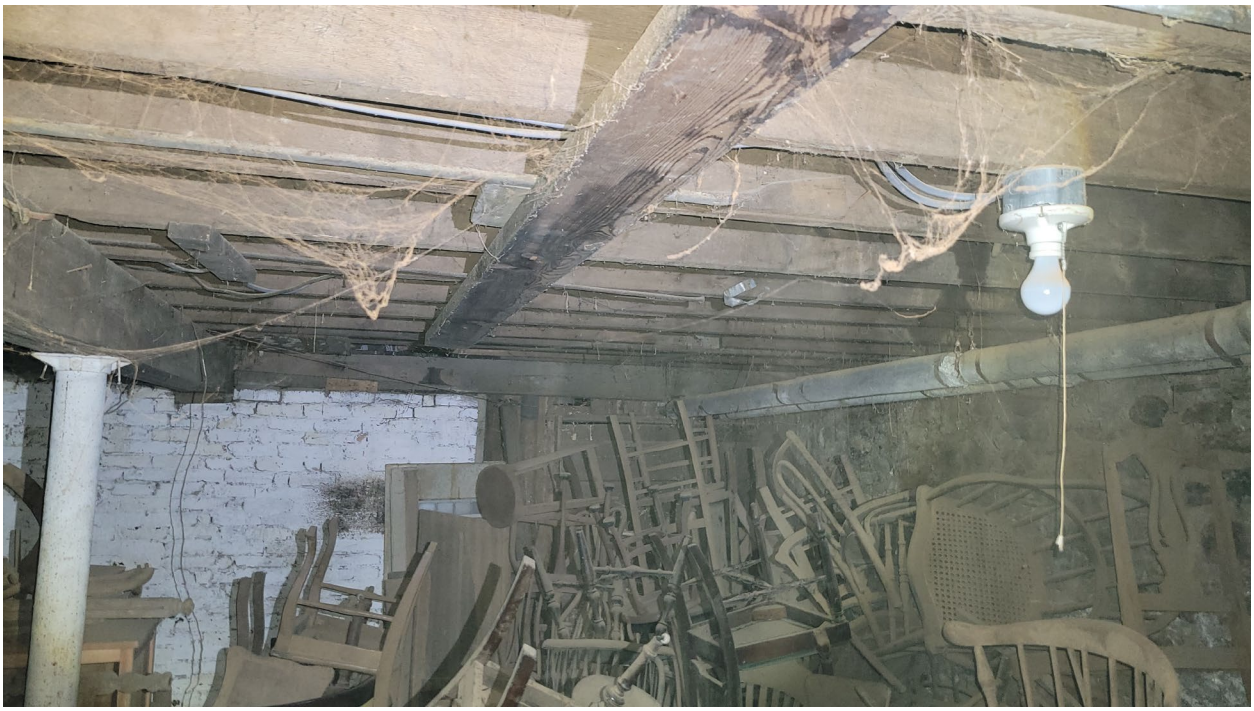

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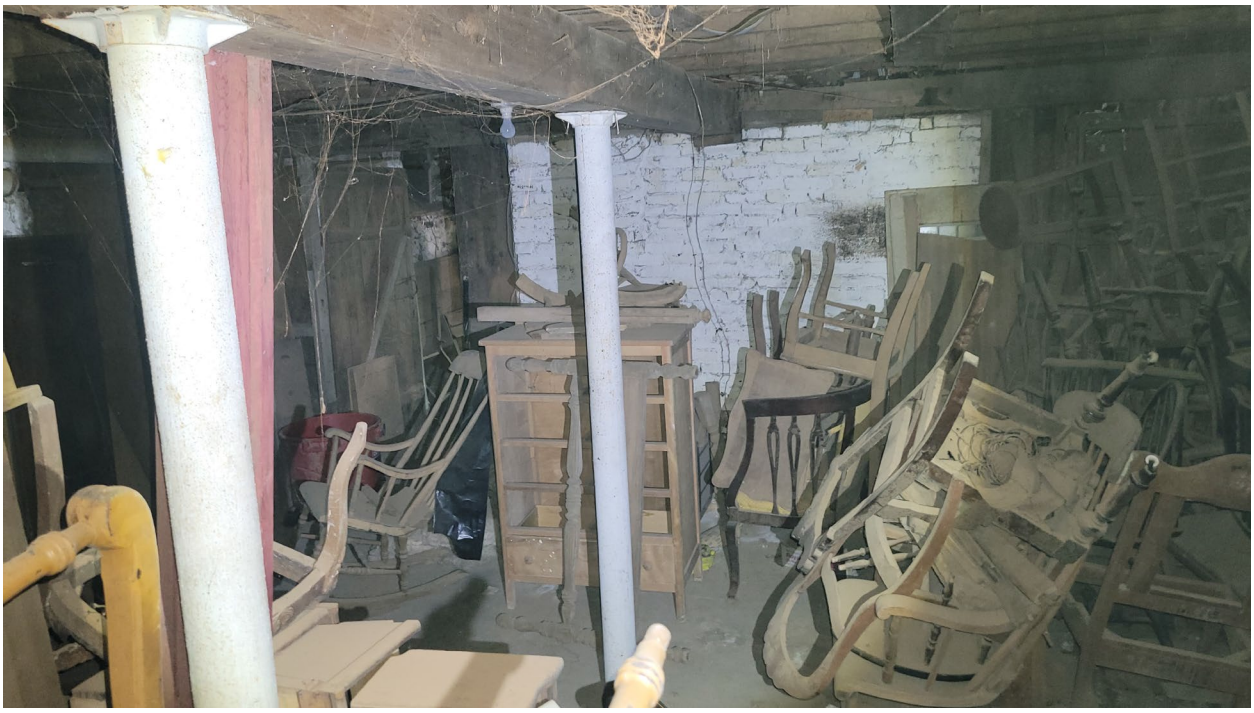

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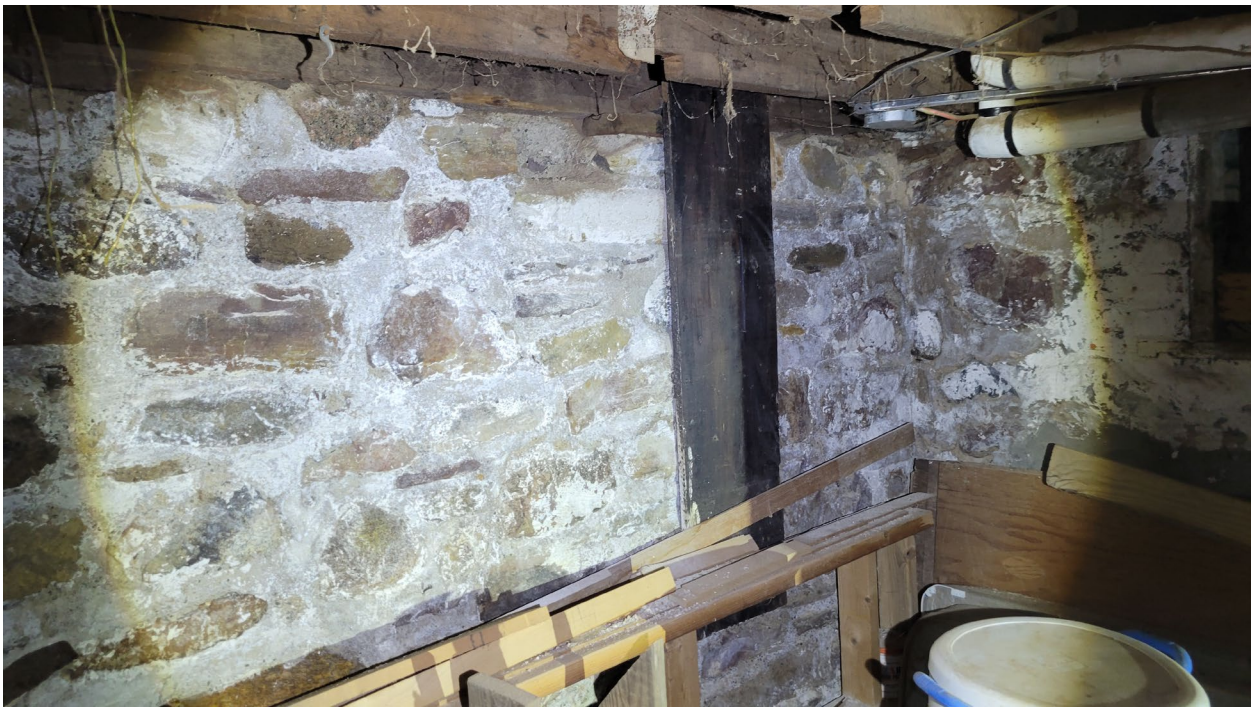

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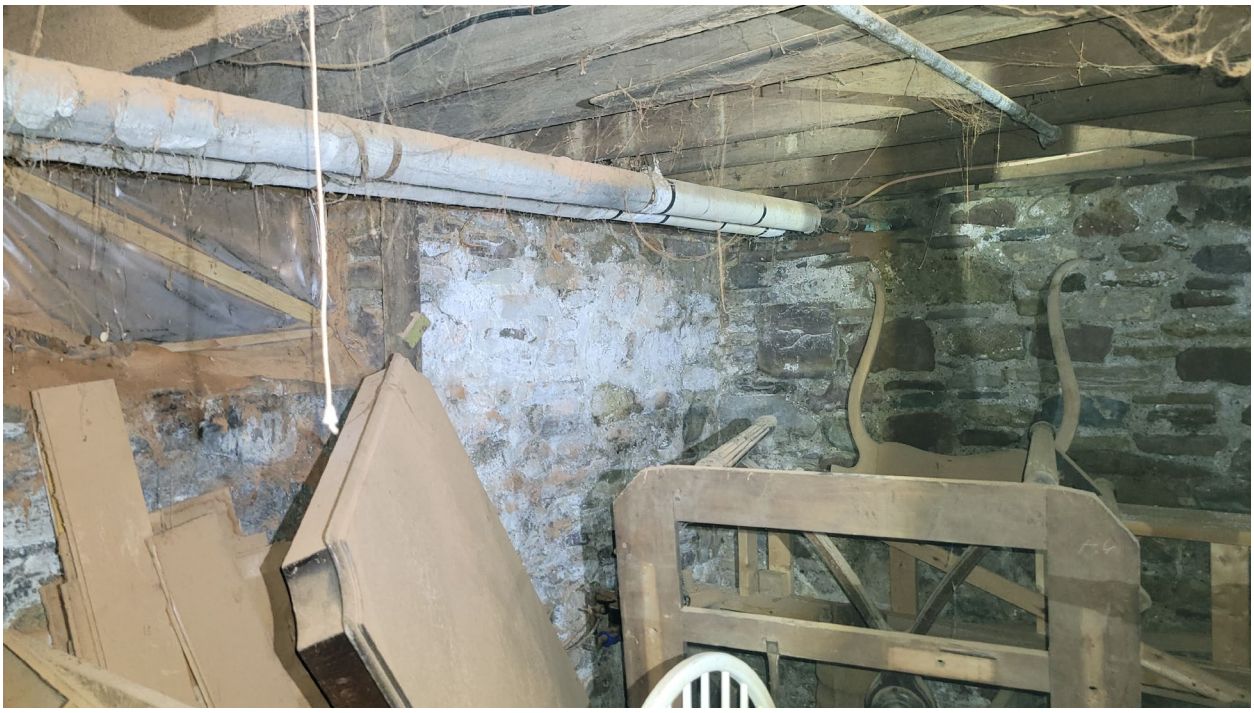


Photo 46:

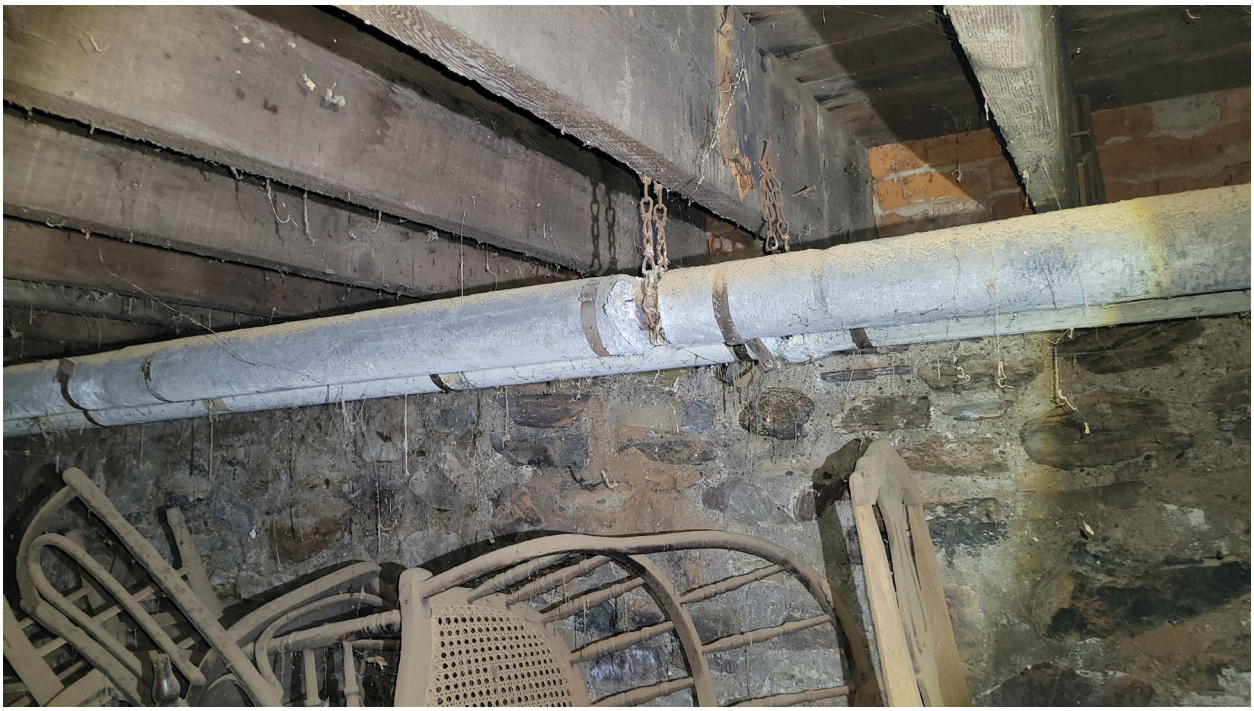


Photo 47:

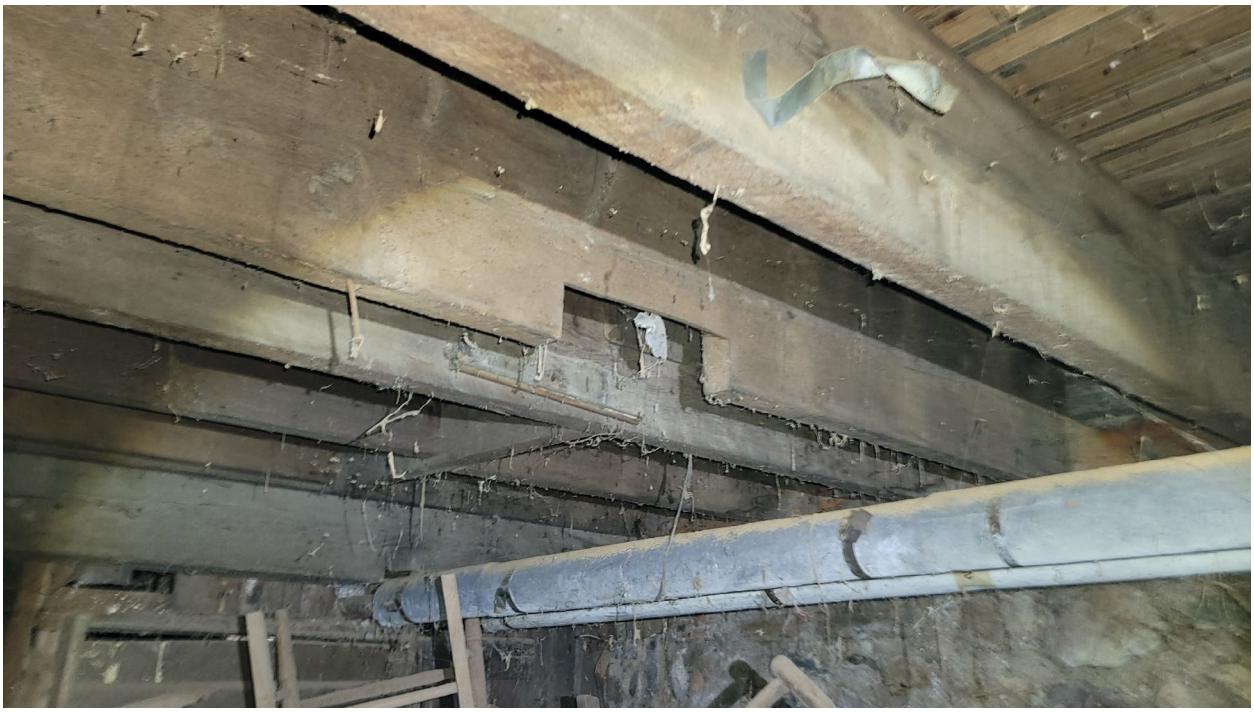


Photo 48: Sister 2x10 joist at all cut floor joists. Extend past 24" with #8 screws @ 12" o.c.

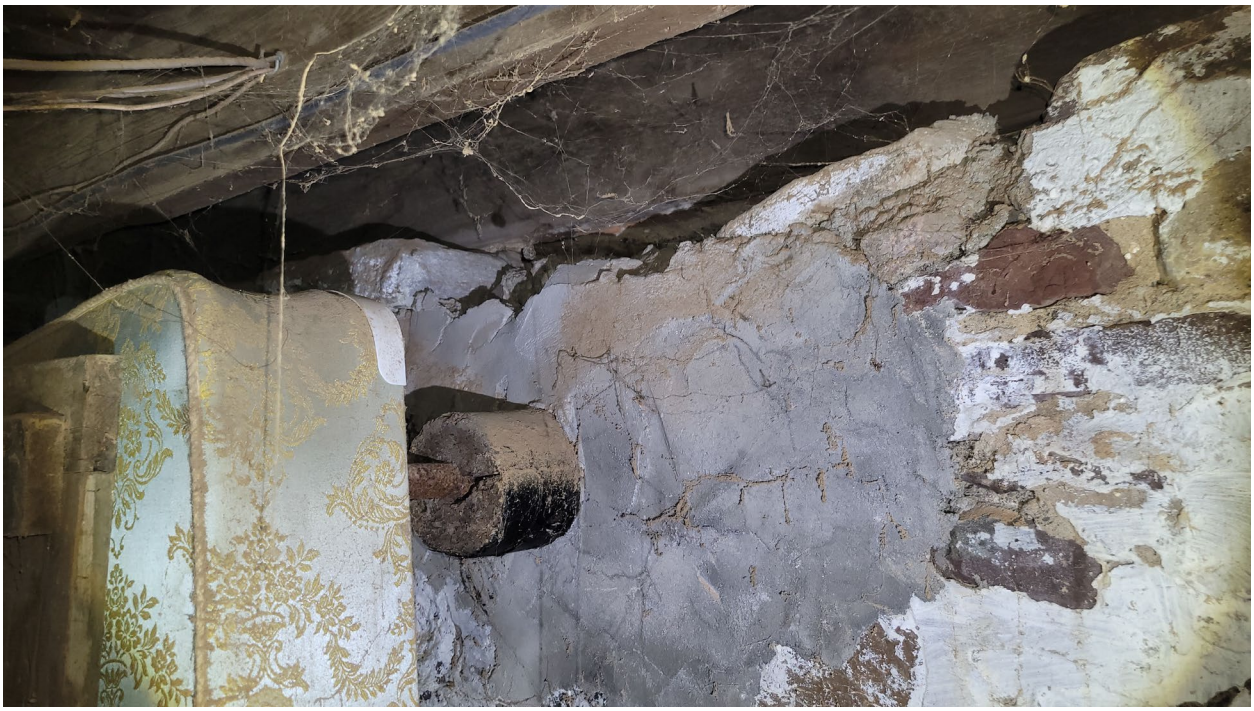


Photo 49:

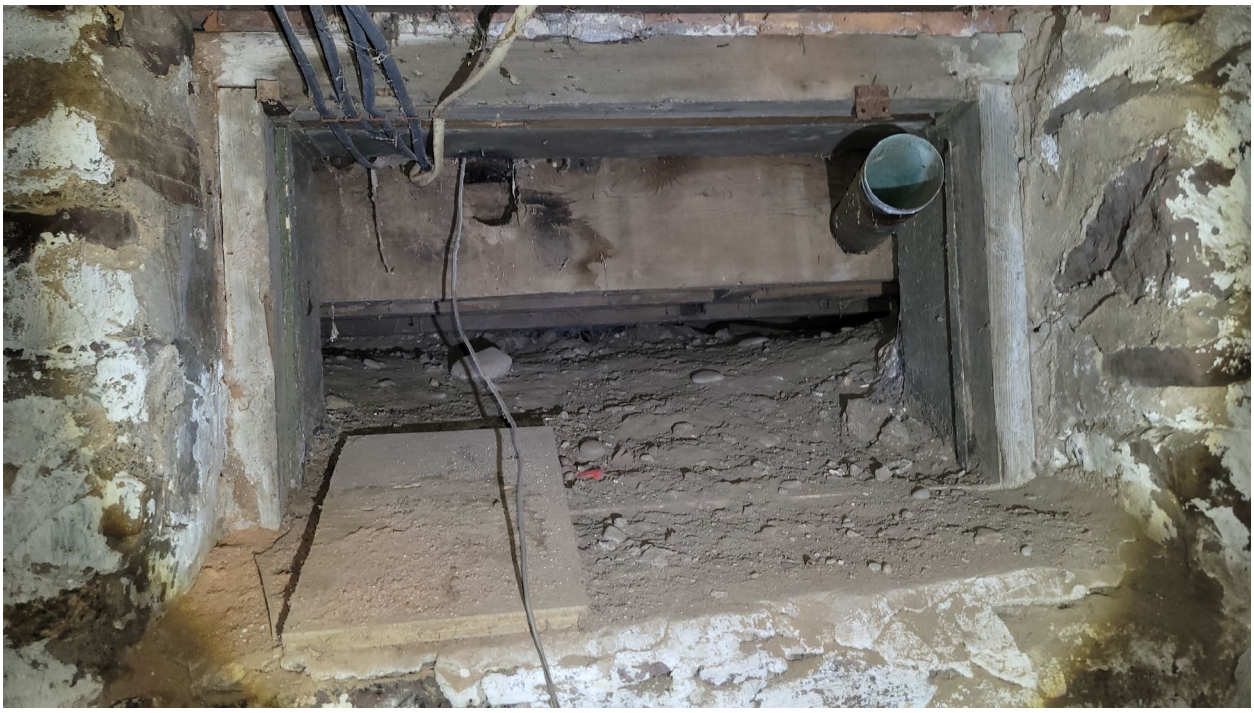


Photo 50:

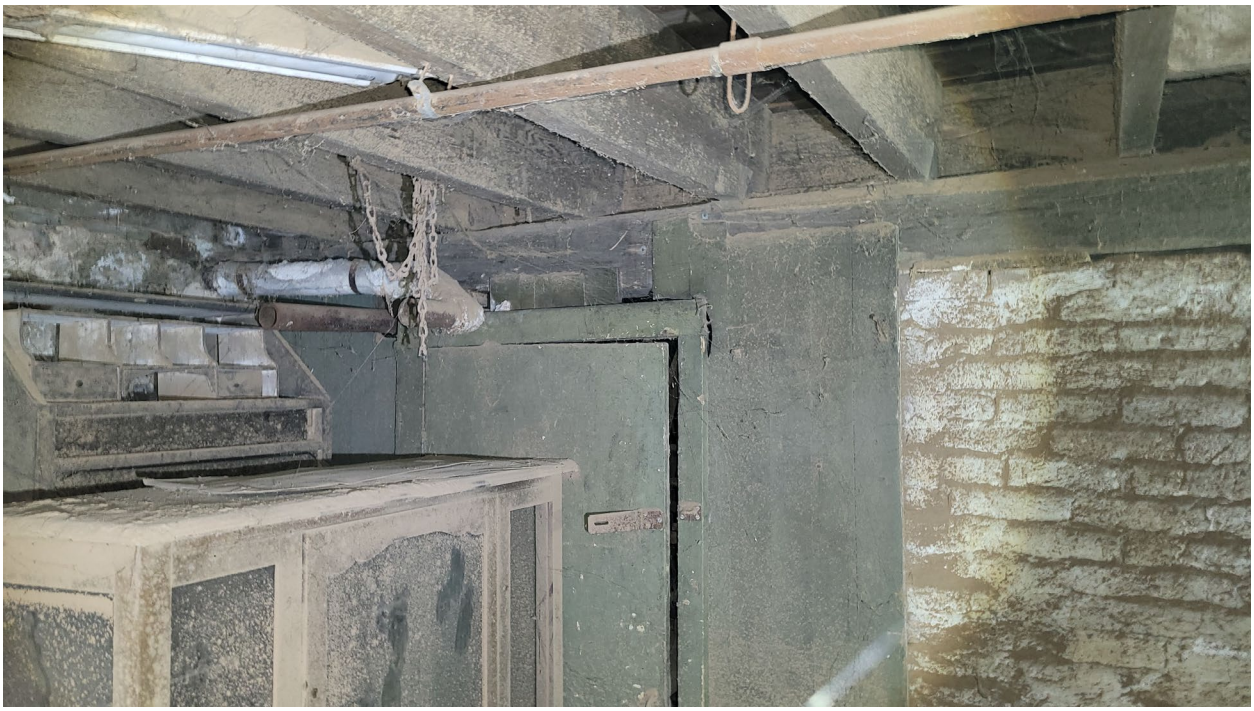


Photo 51:

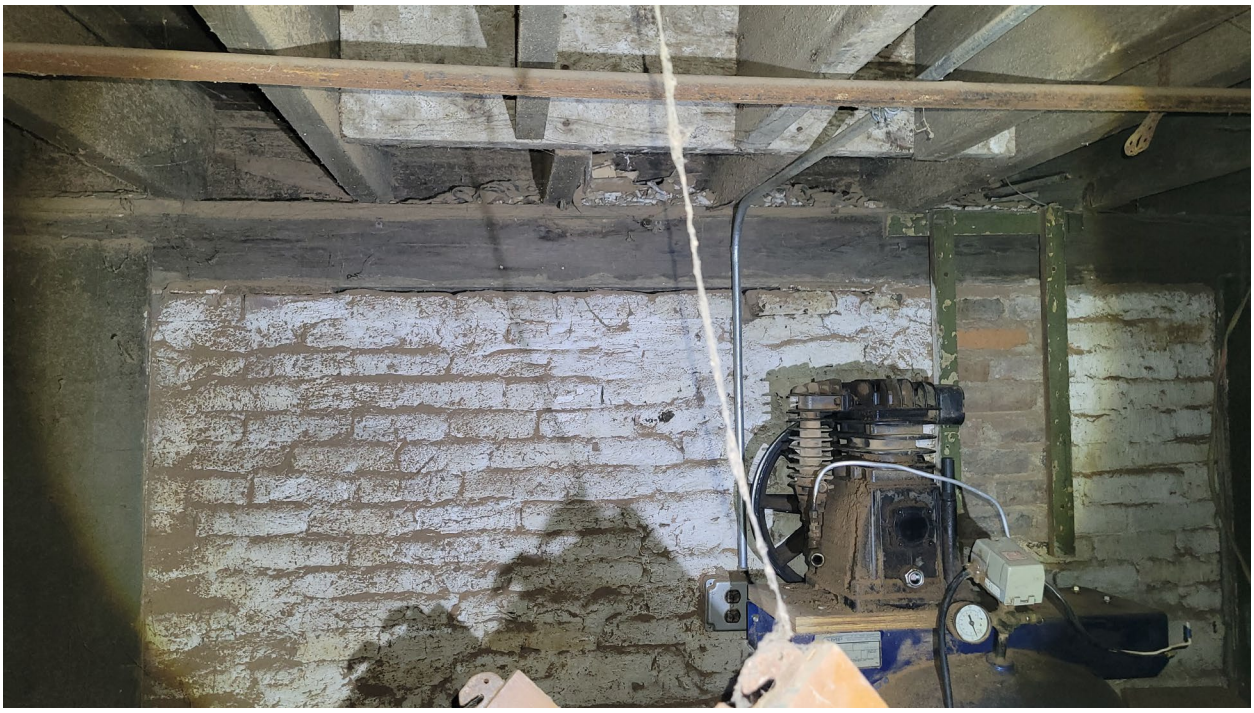


Photo 52:

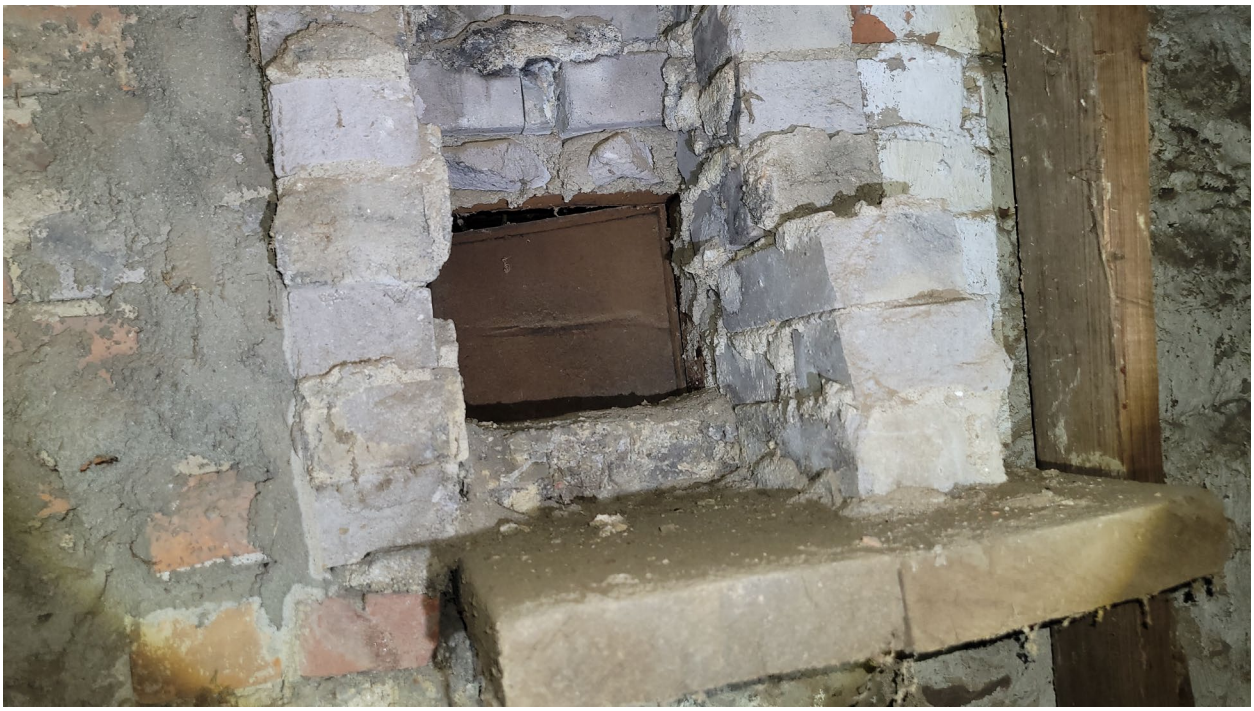


Photo 53:

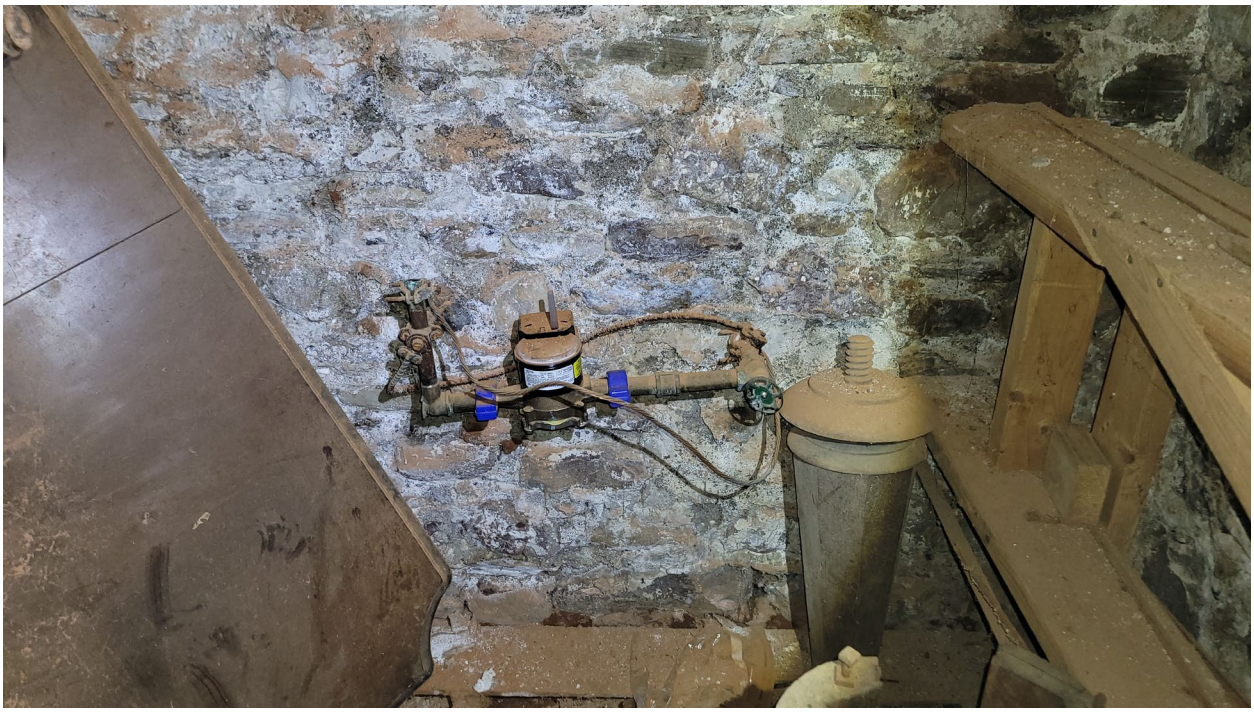


Photo 54: Water main location is in the south east corner of the building (near intersection of Ridge Road and Gravel Road)

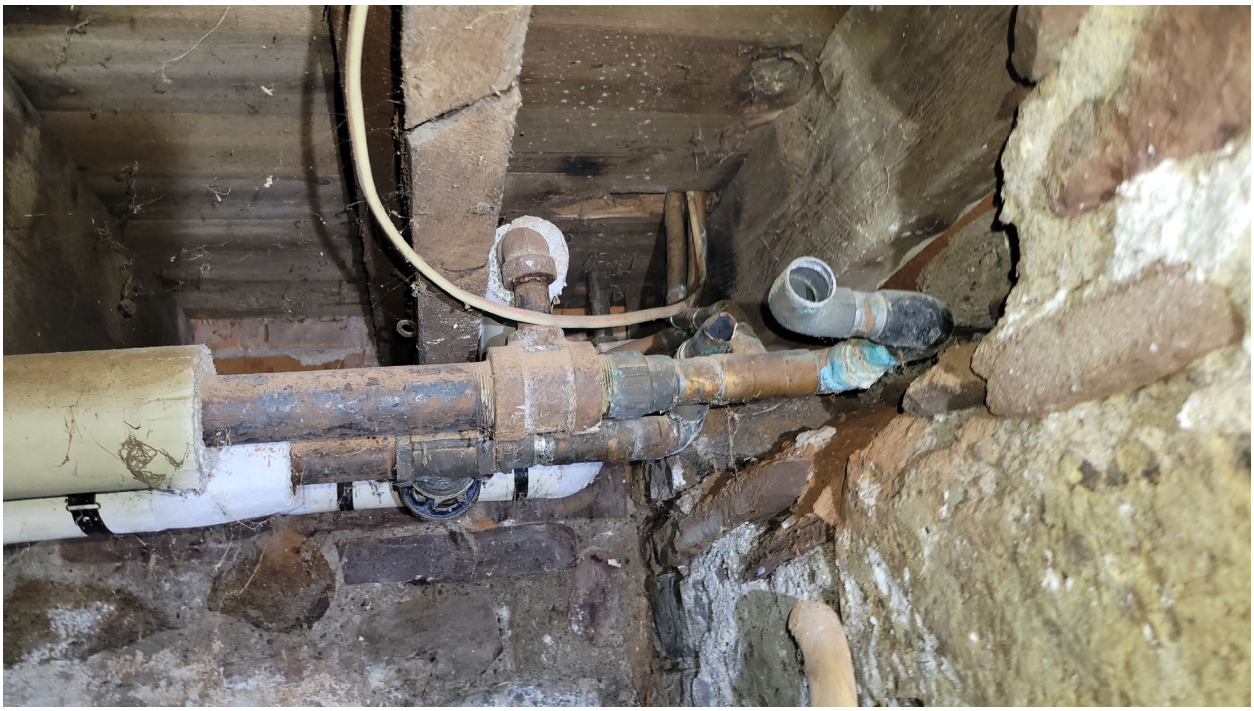


Photo 55: Cap or remove all abandoned piping.

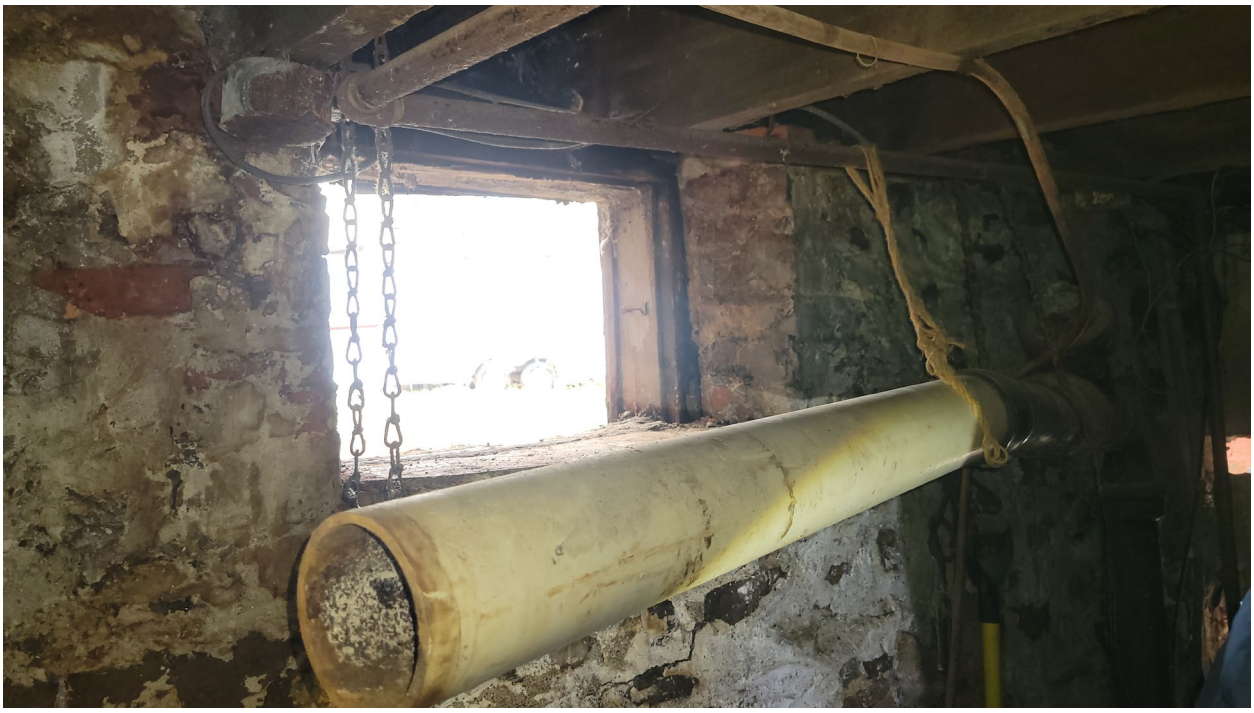


Photo 56:

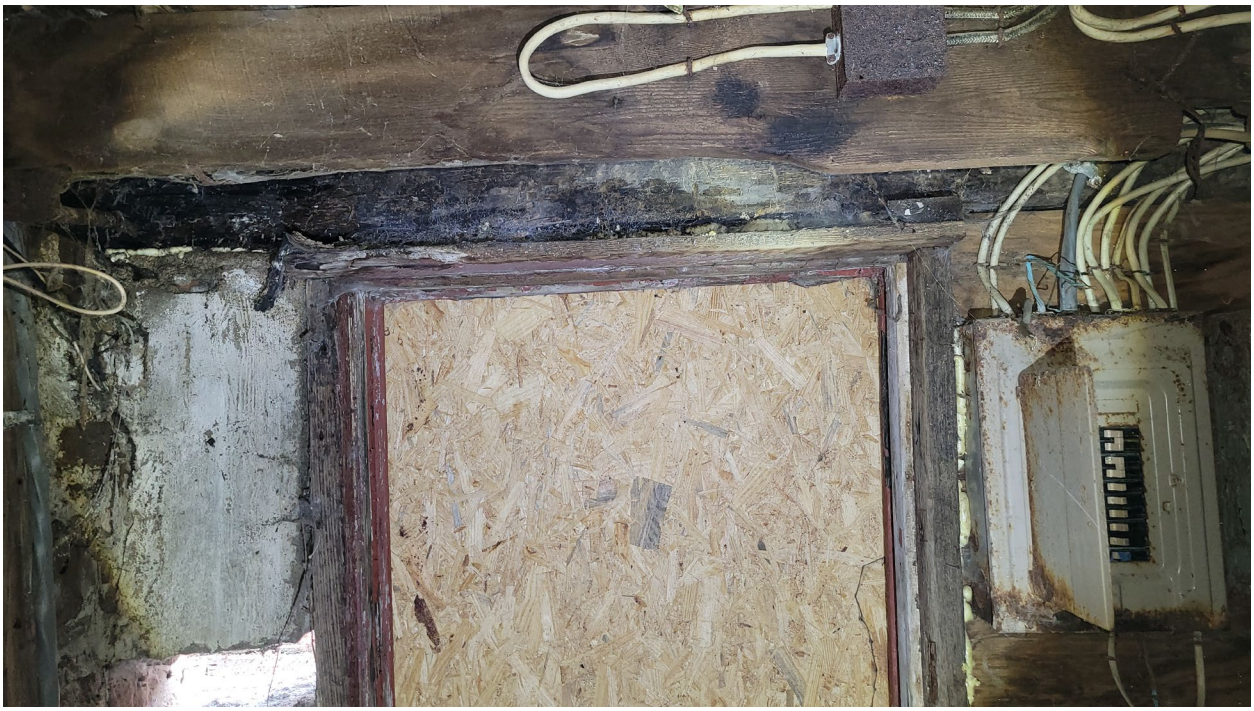


Photo 57: Area 5, needs extensive repair work done to foundation. See Note 7

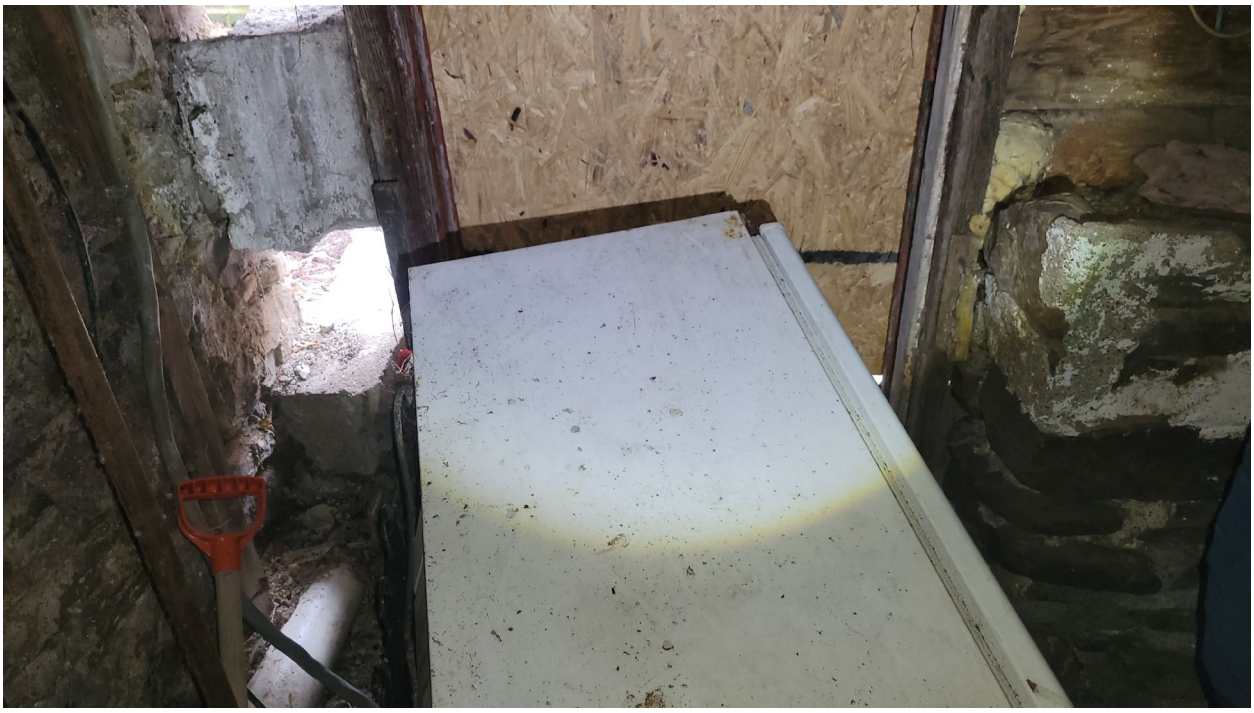


Photo 58:

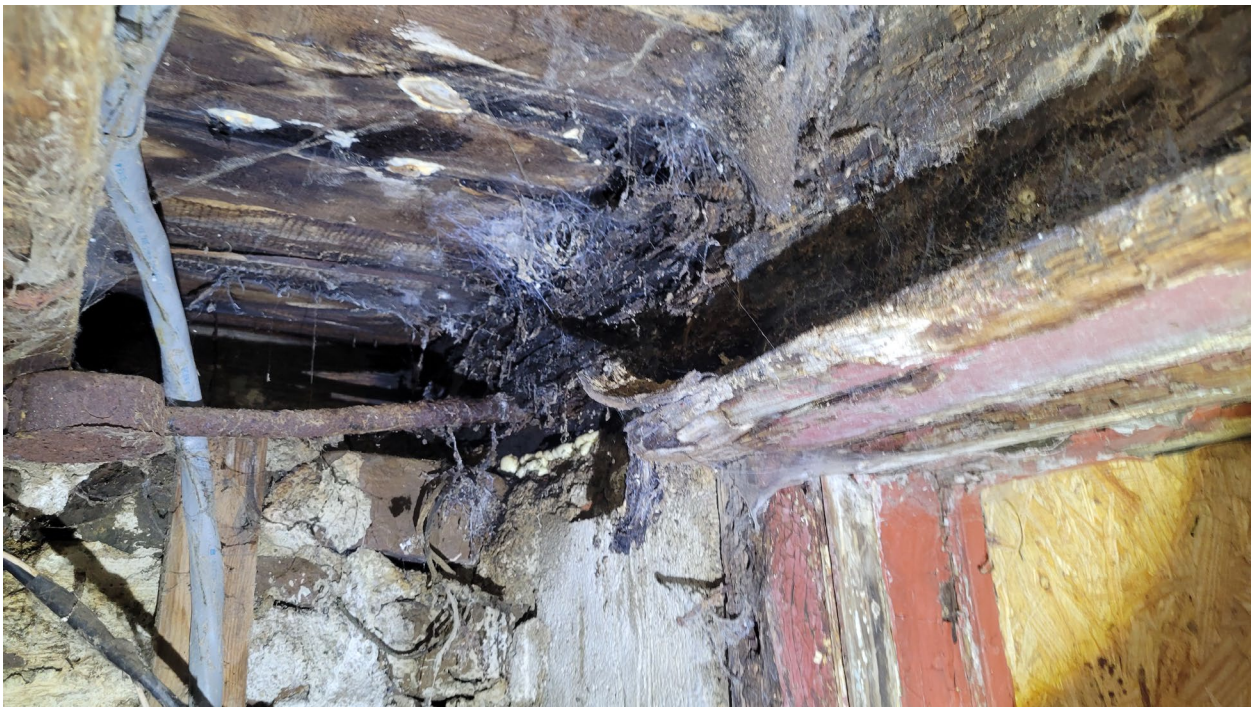
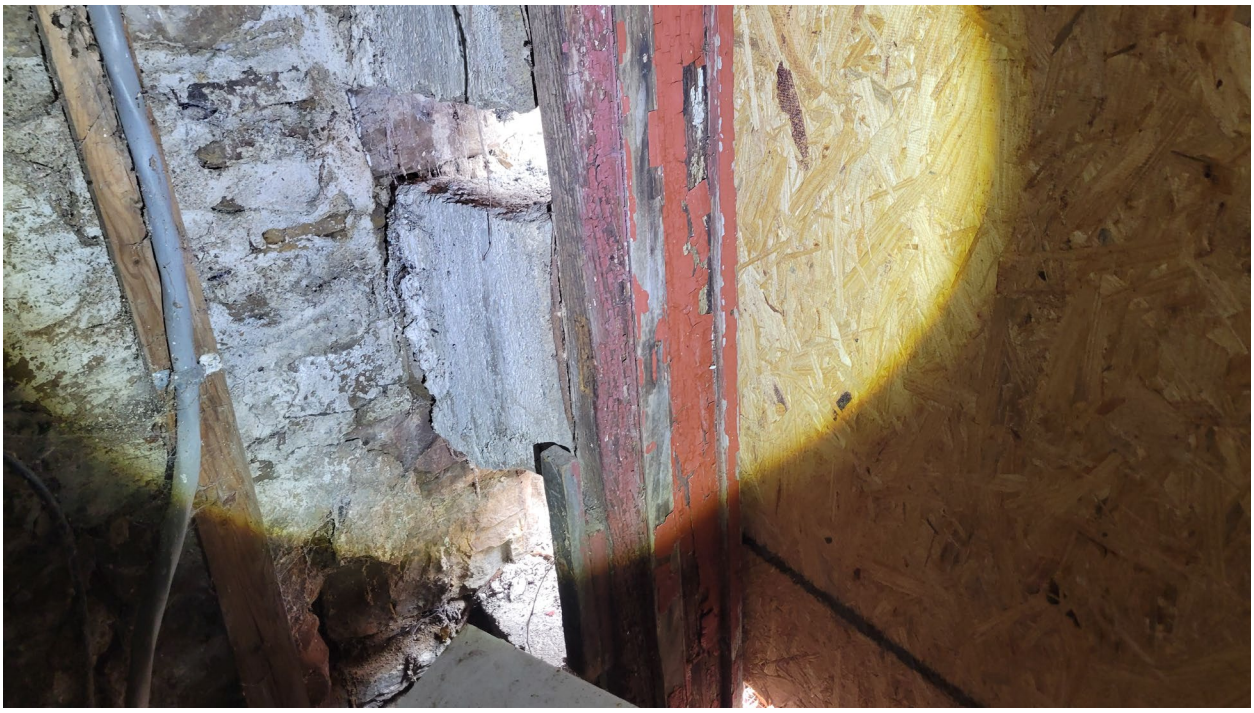


Photo 59:



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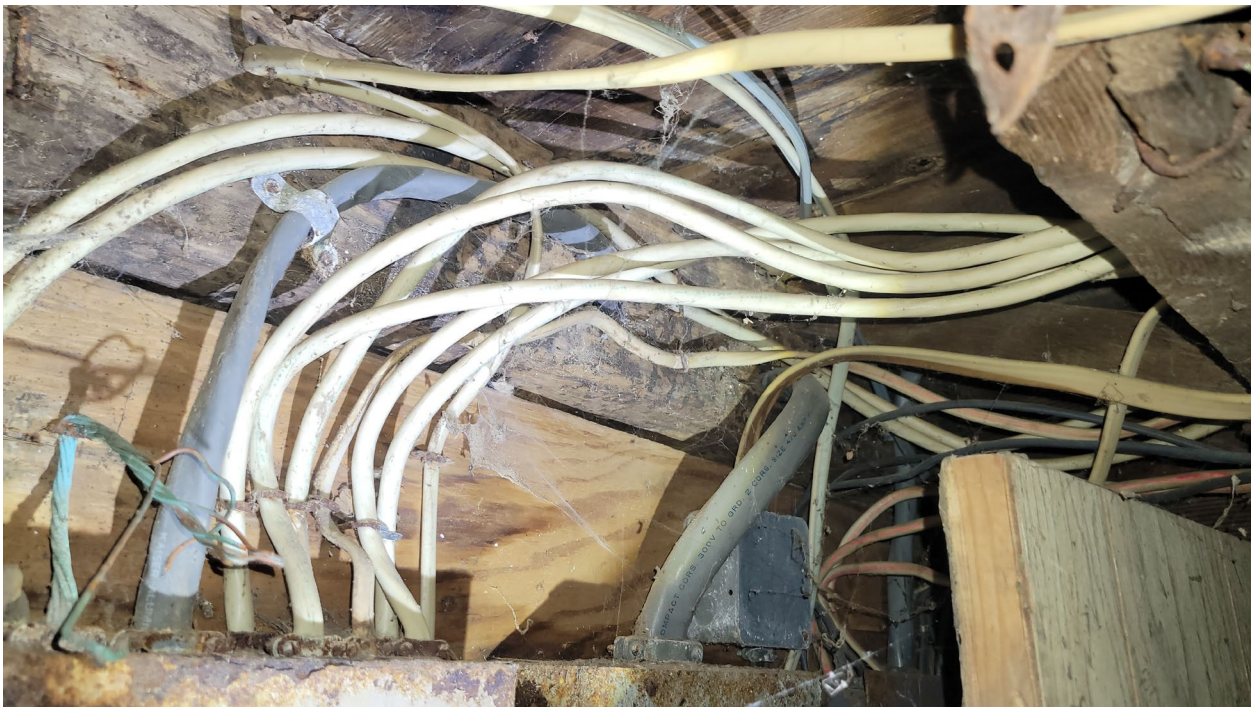


Photo 61:

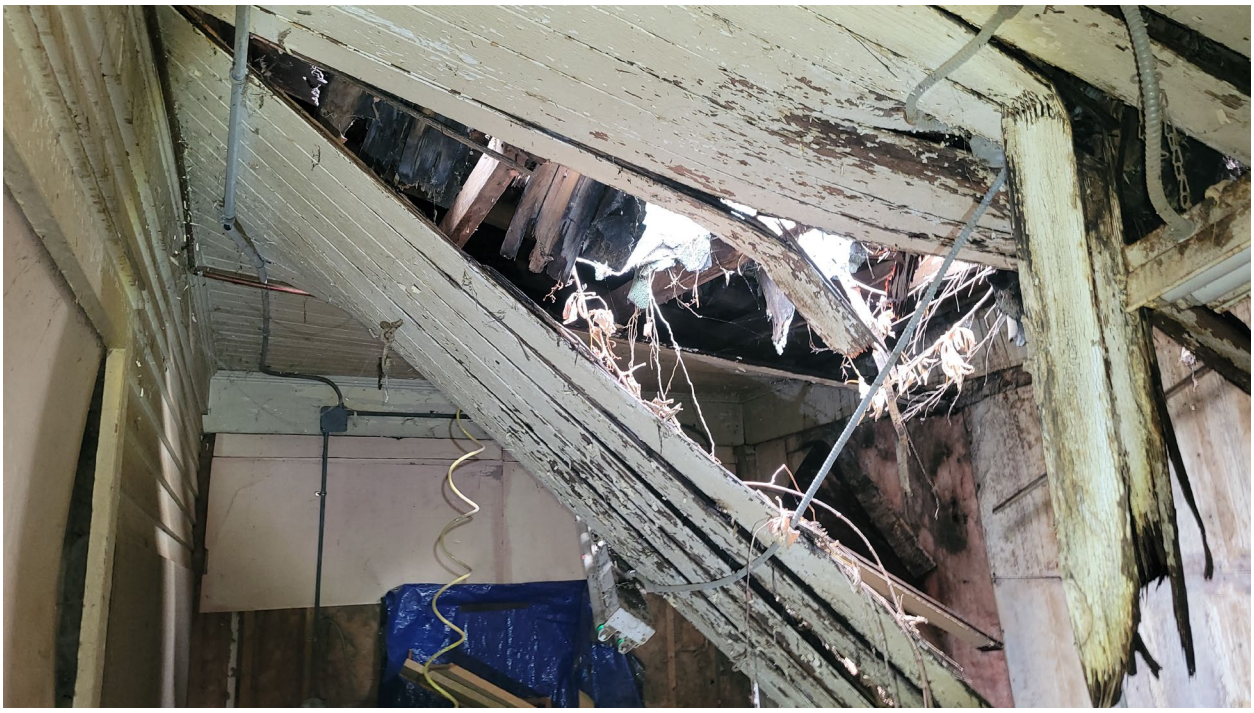


Photo 62: Collapsed roof of Area 3.

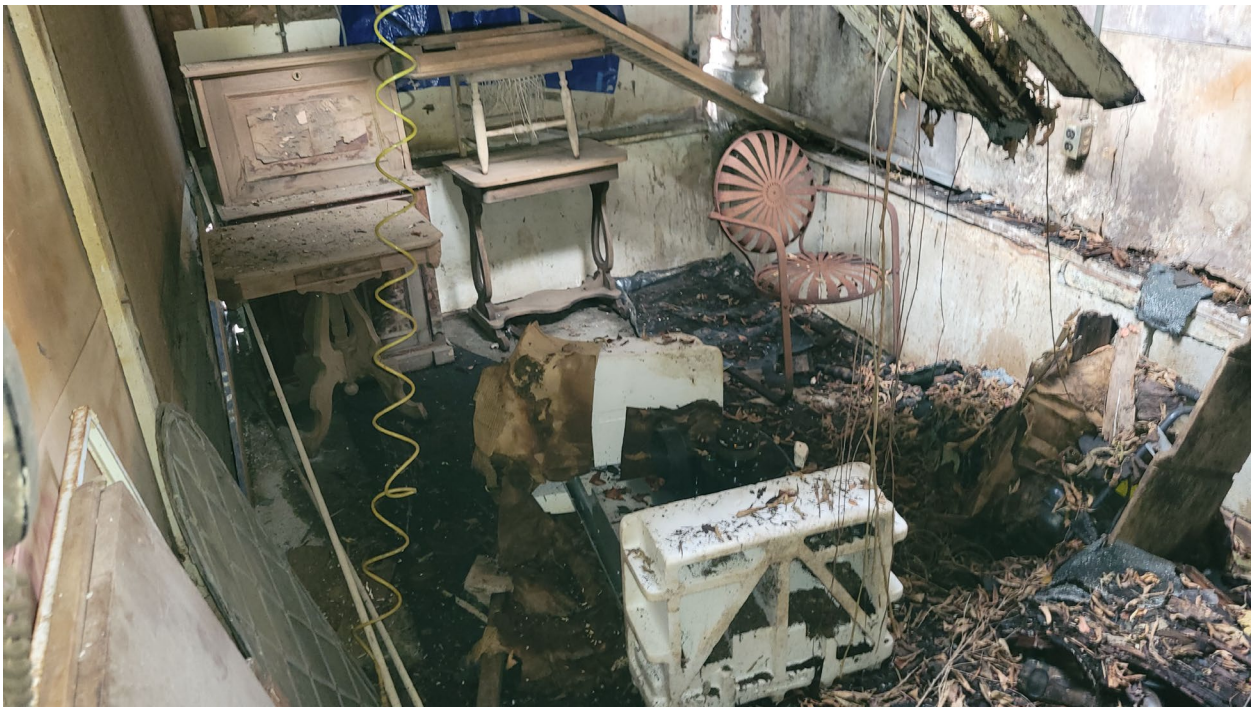


Photo 63:

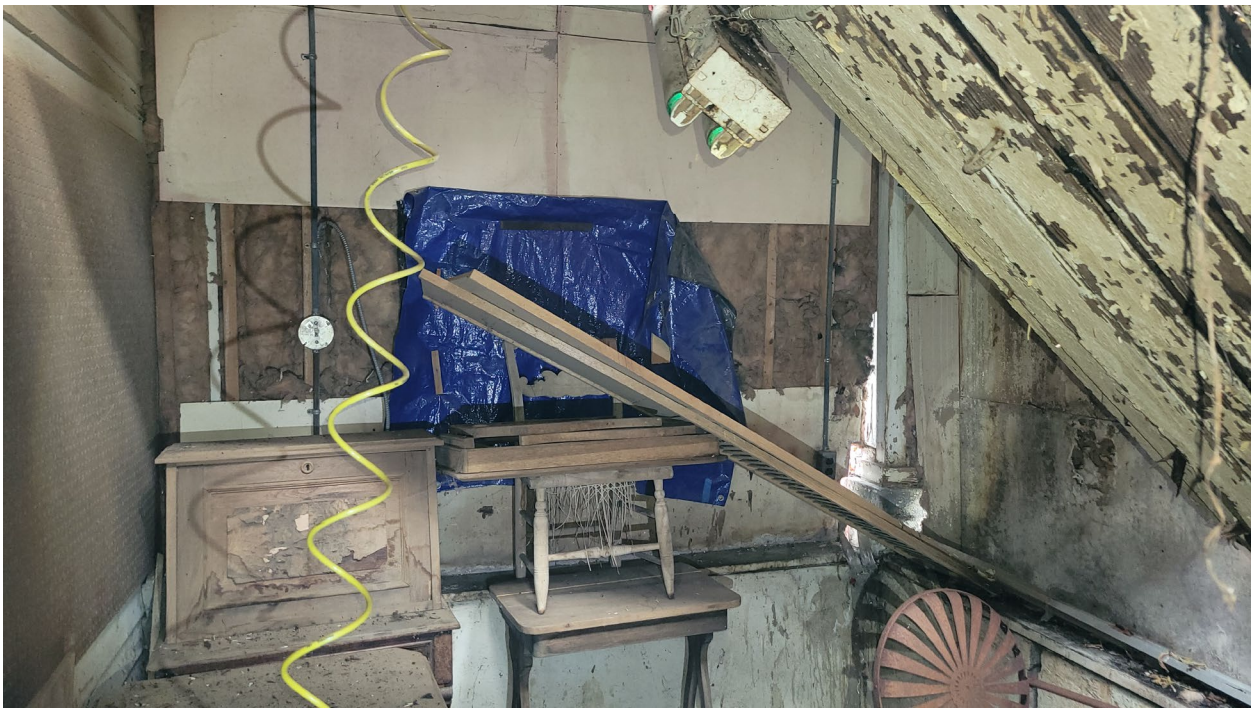


Photo 64:

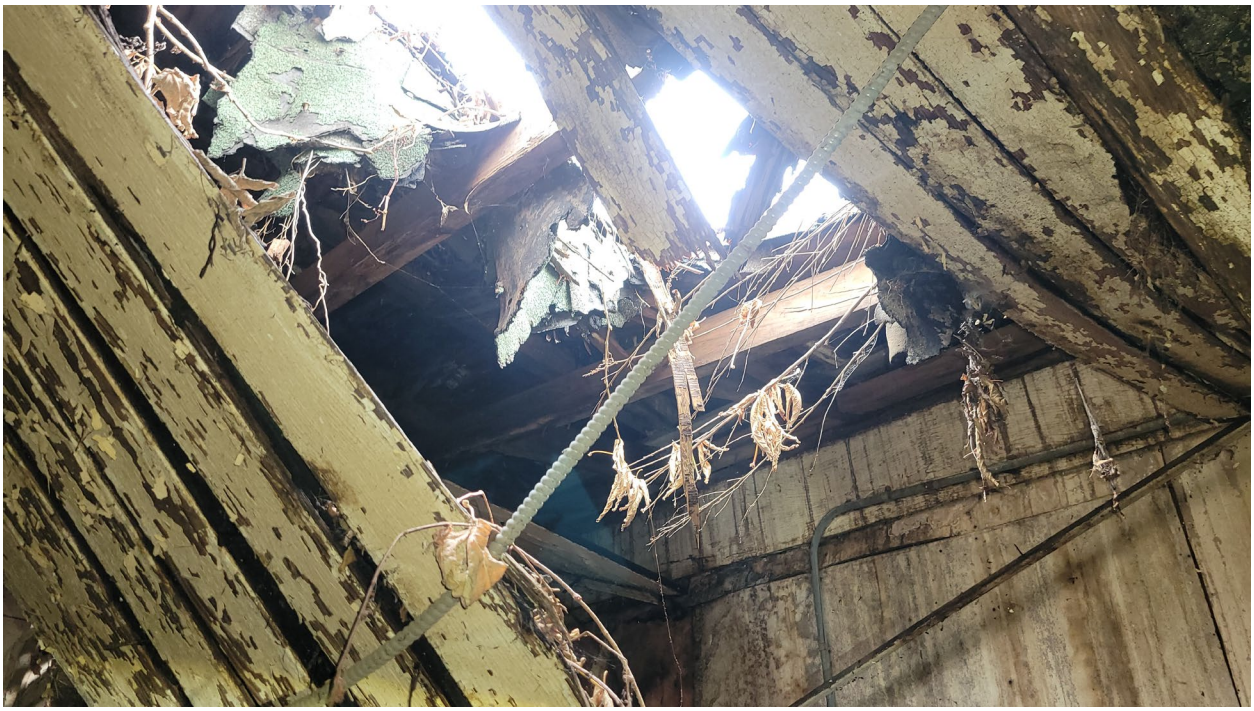


Photo 65:

Photo 66:

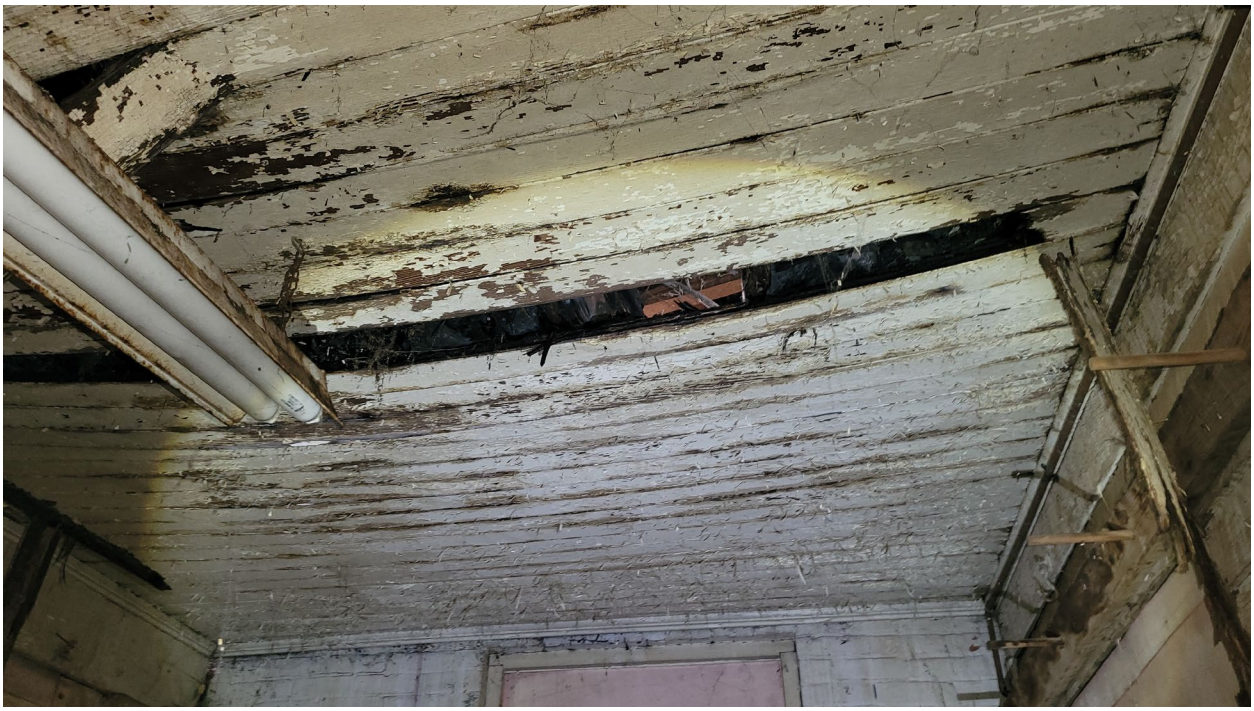


Photo 67:

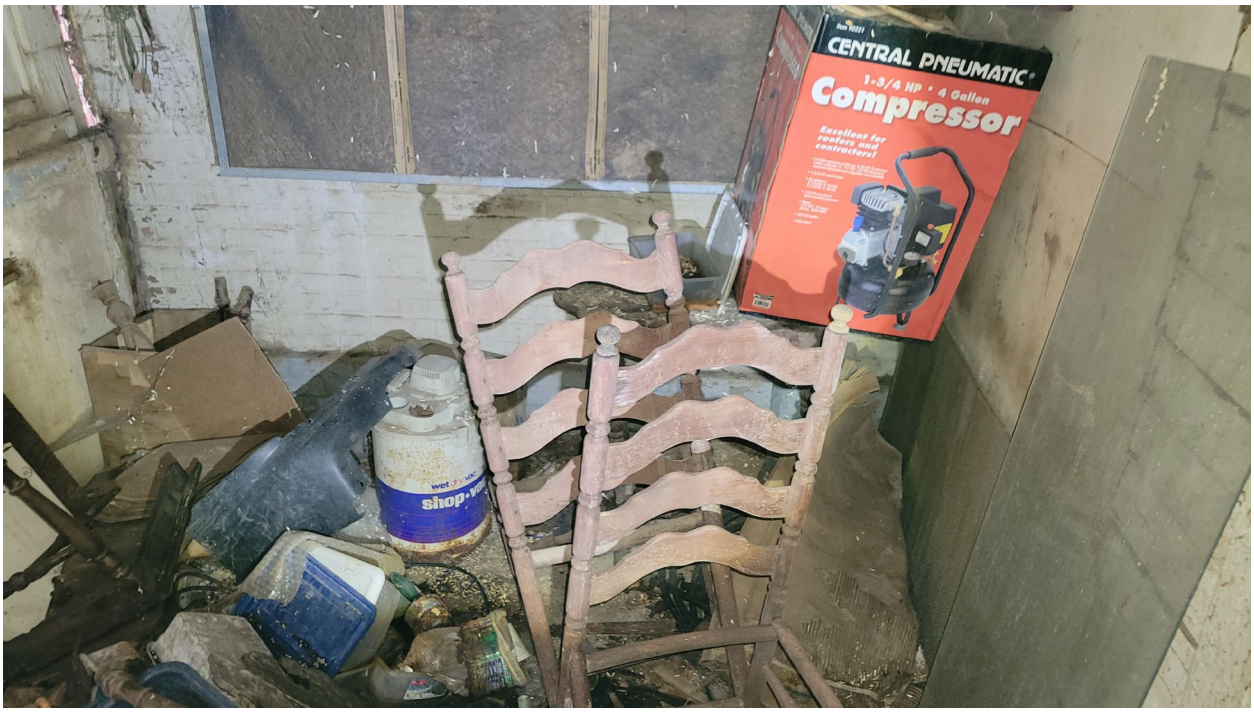


Photo 68:

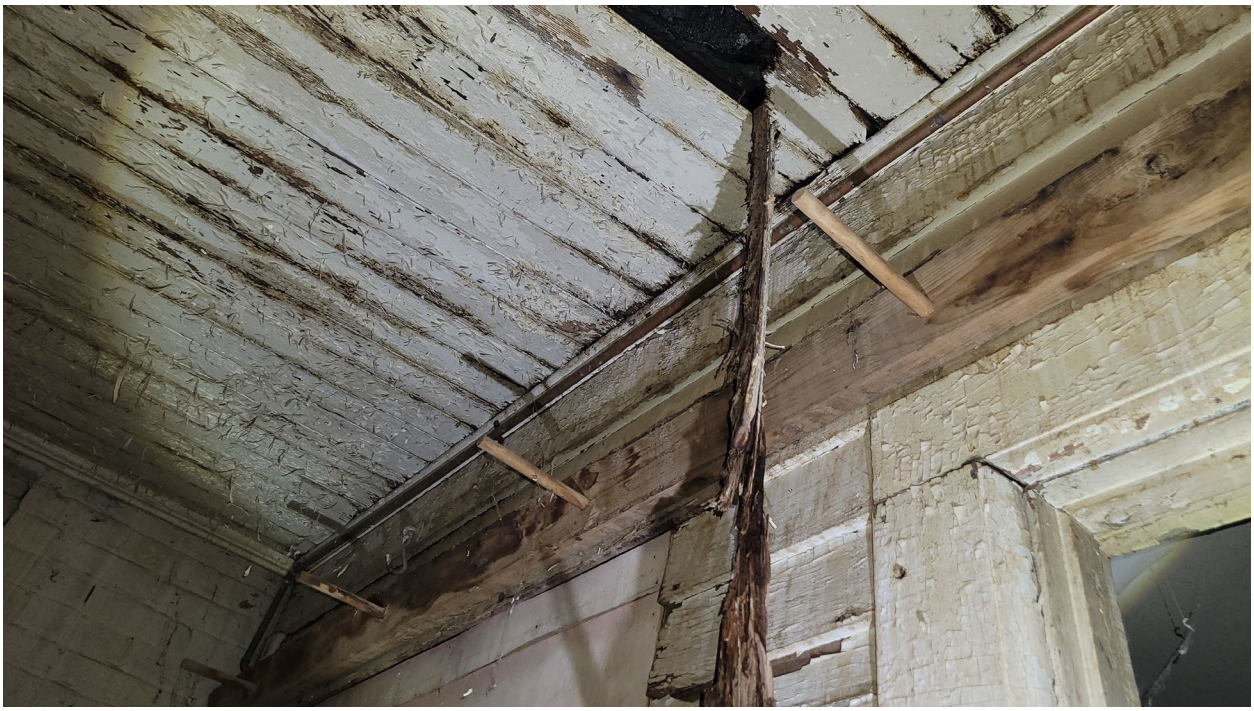


Photo 69:

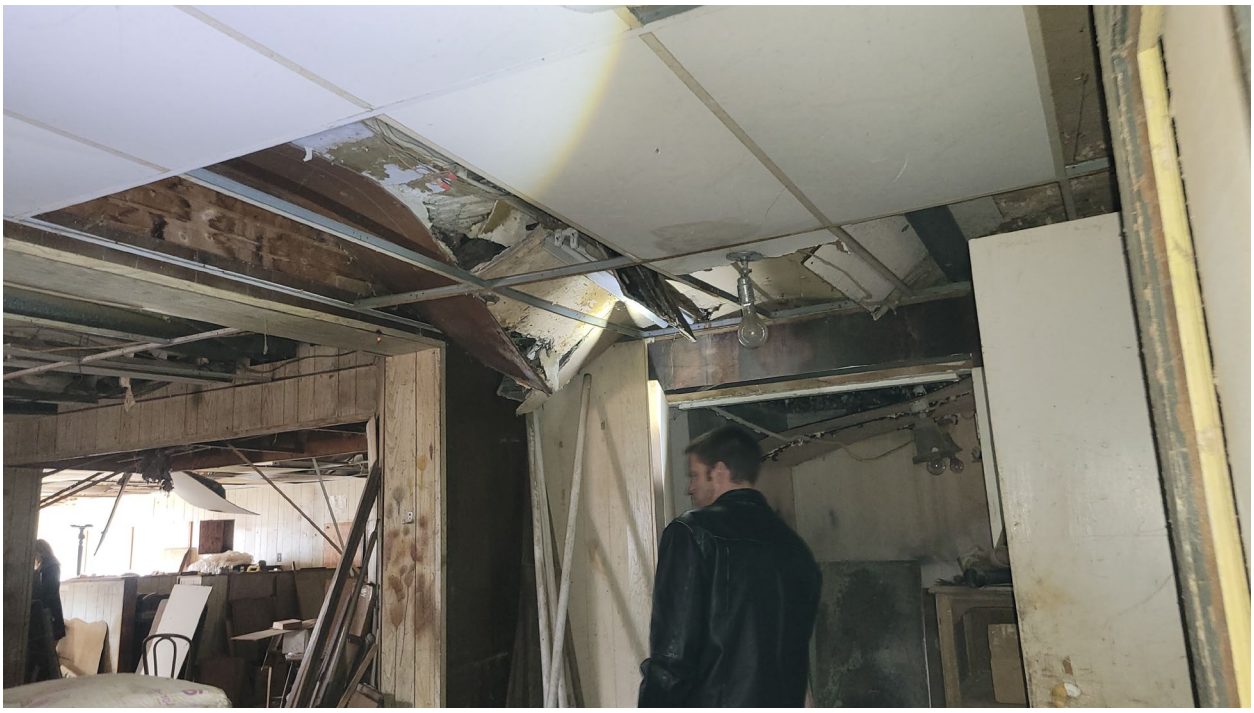


Photo 70:

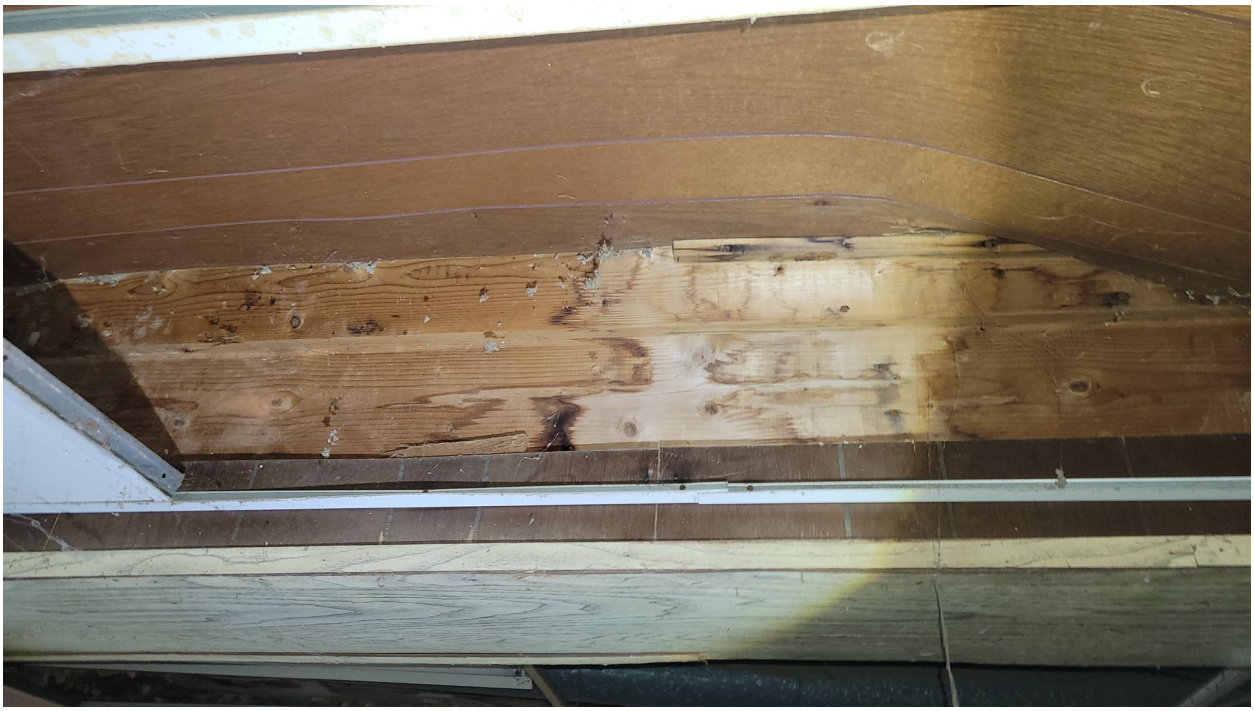


Photo 71:

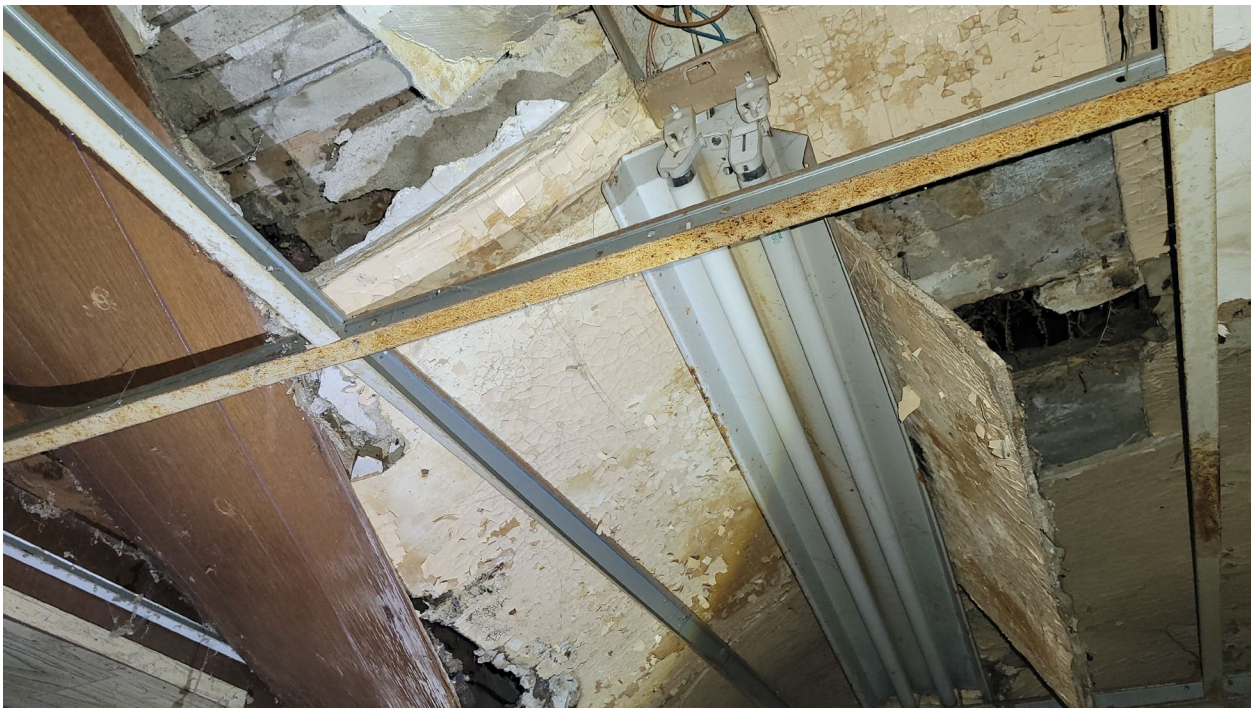


Photo 72: Remove all fallen or delaminated ceiling panels.

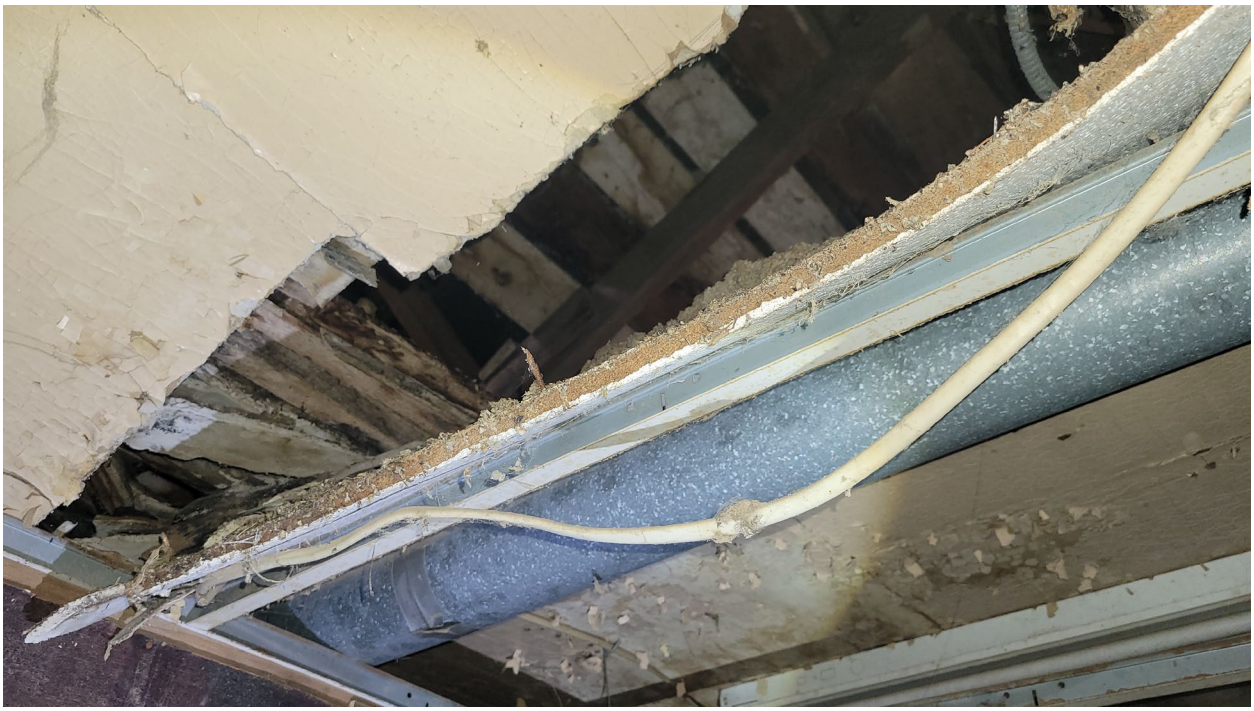


Photo 73:

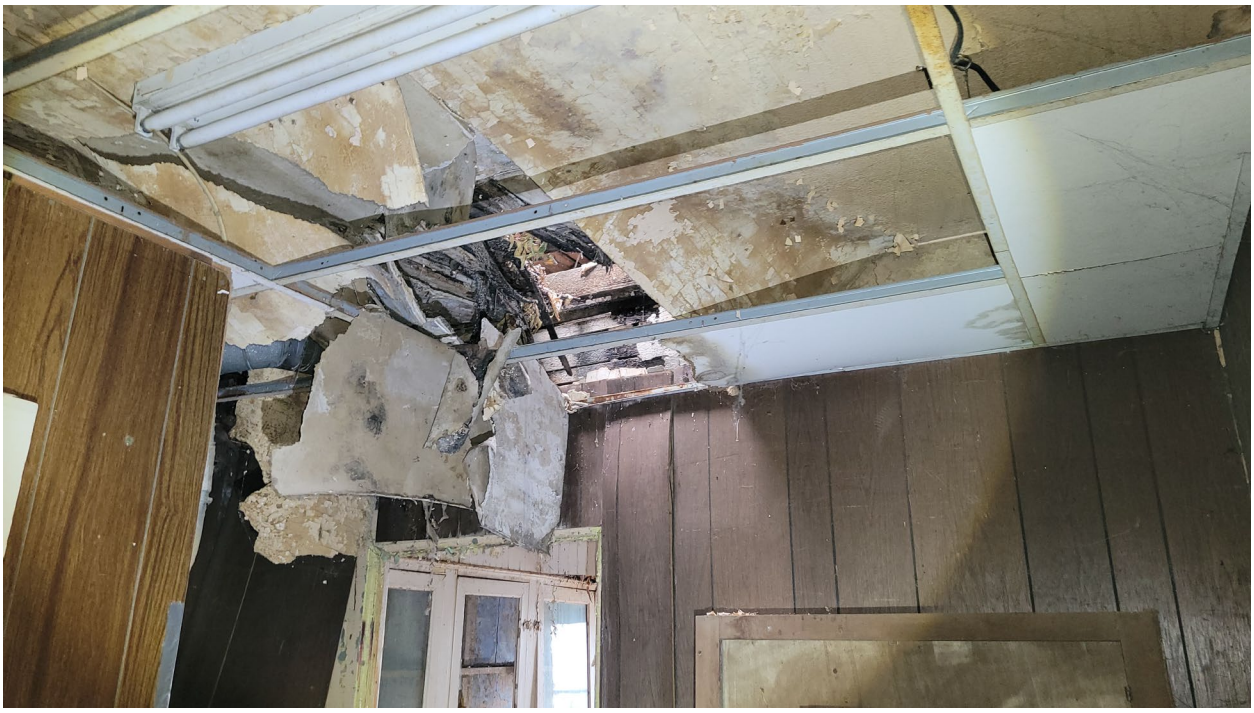


Photo 74:

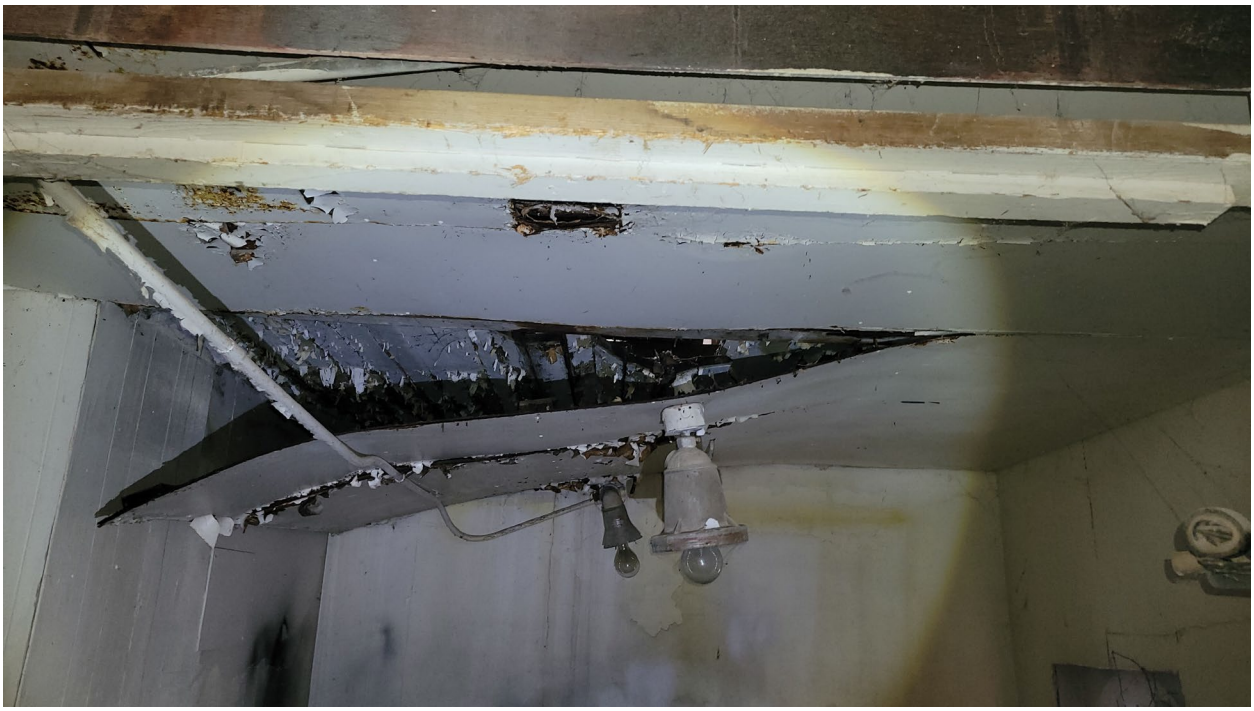


Photo 75:

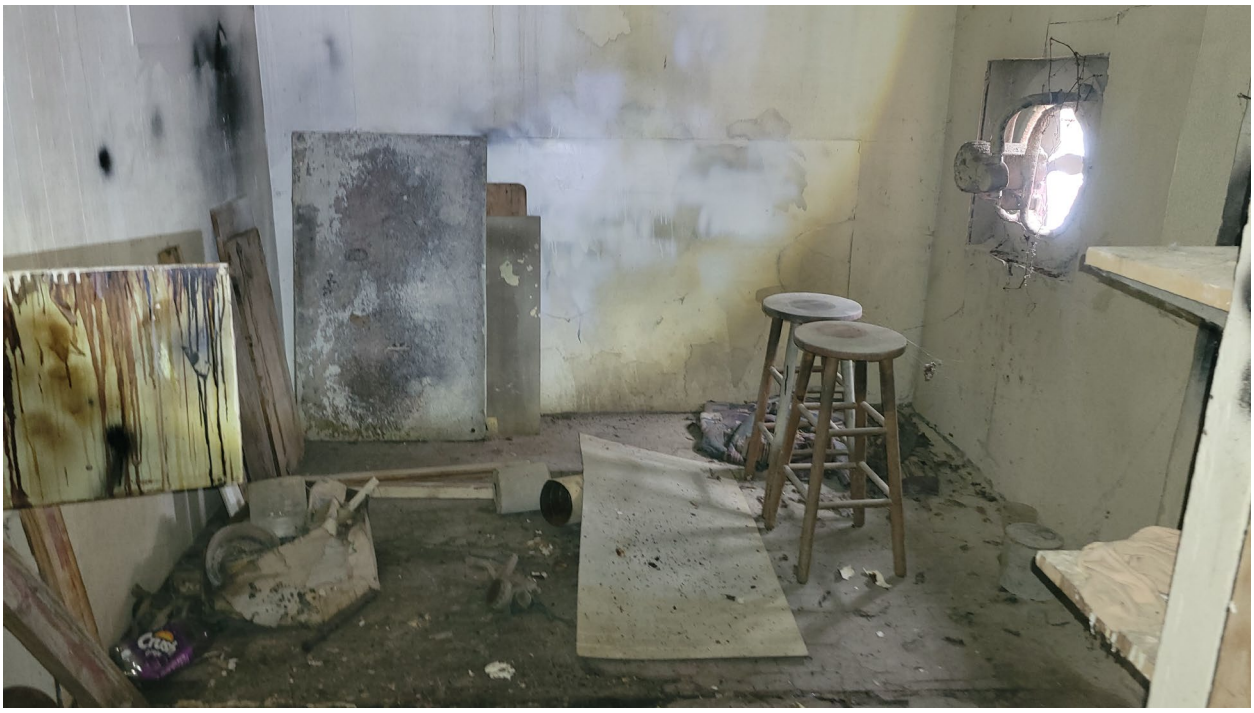


Photo 76:

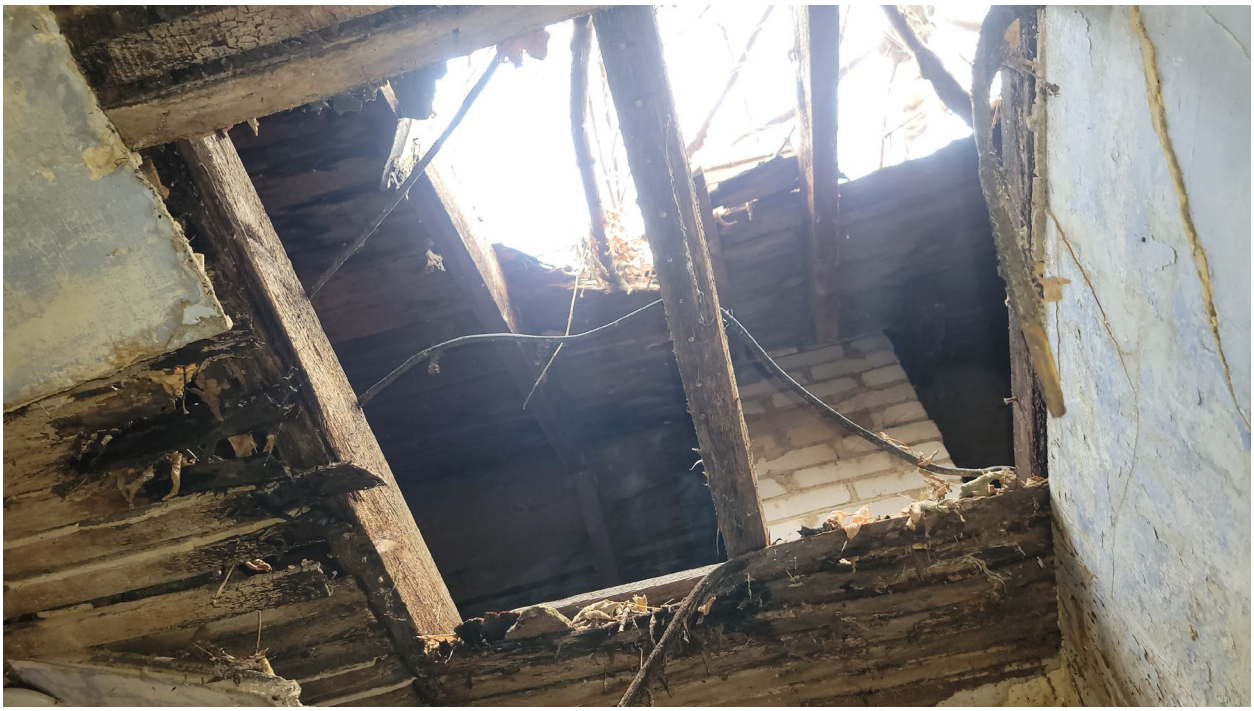


Photo 77: Roof of Area 4 needs to be repaired or replaced.

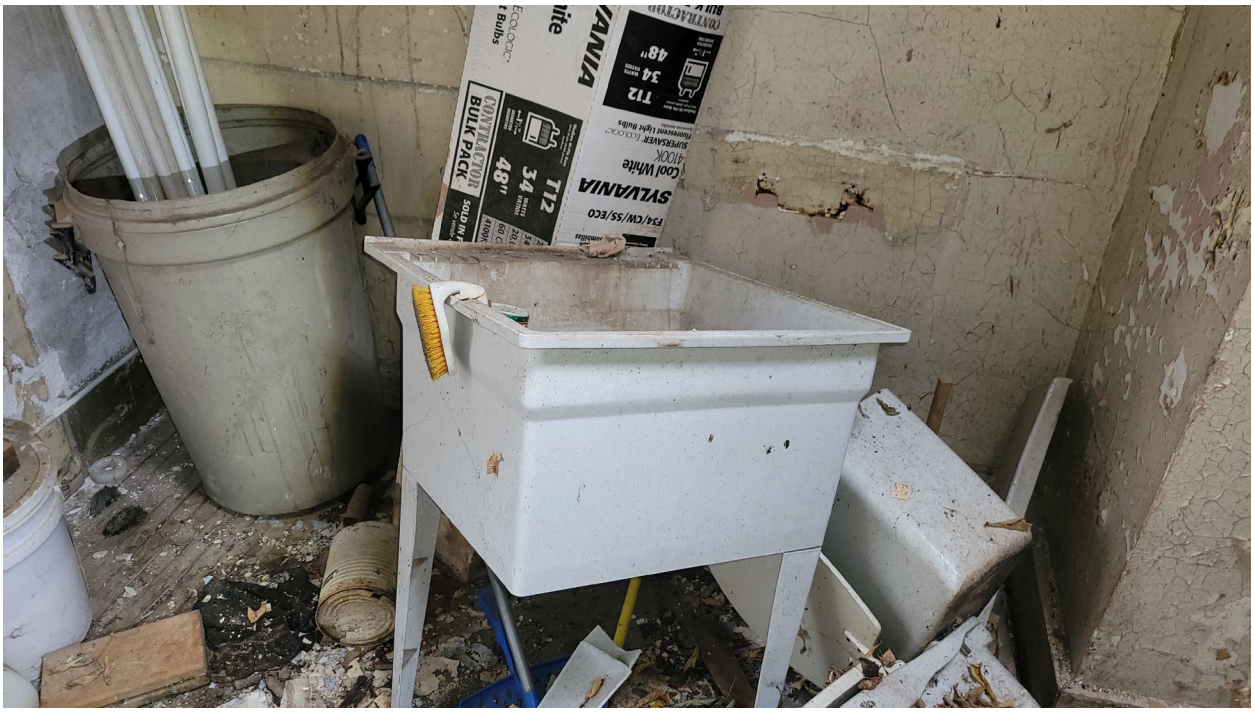


Photo 78:

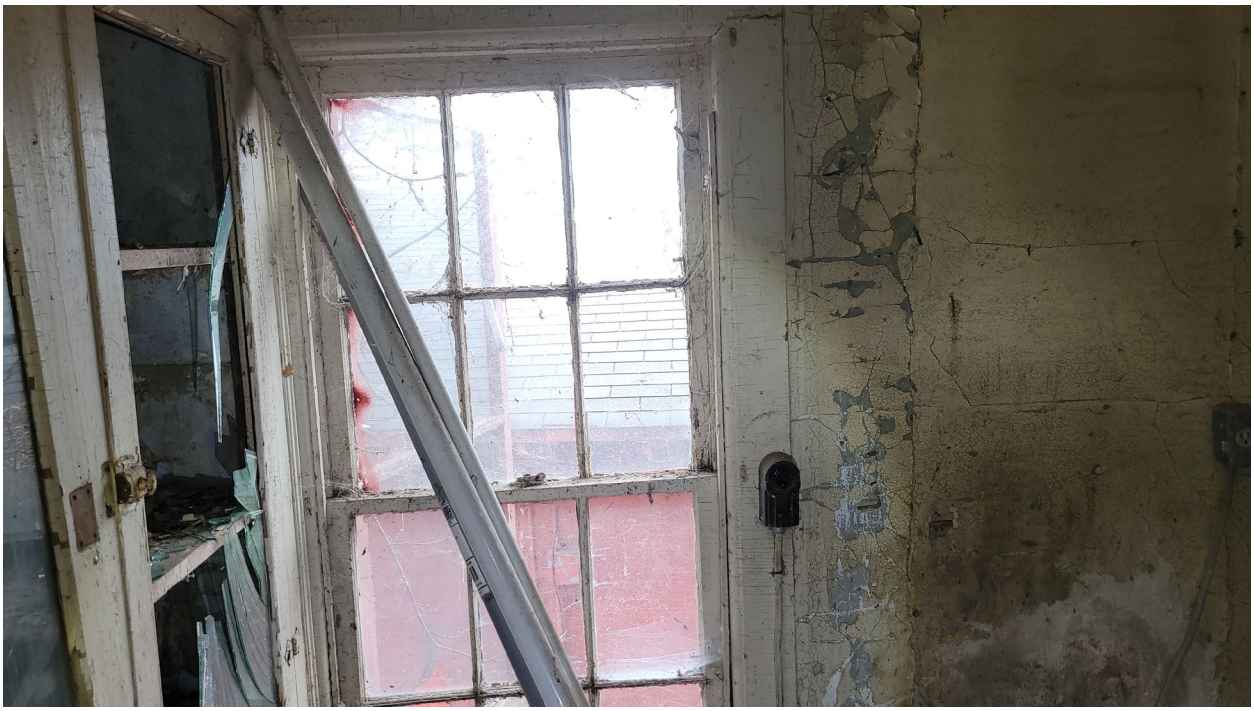
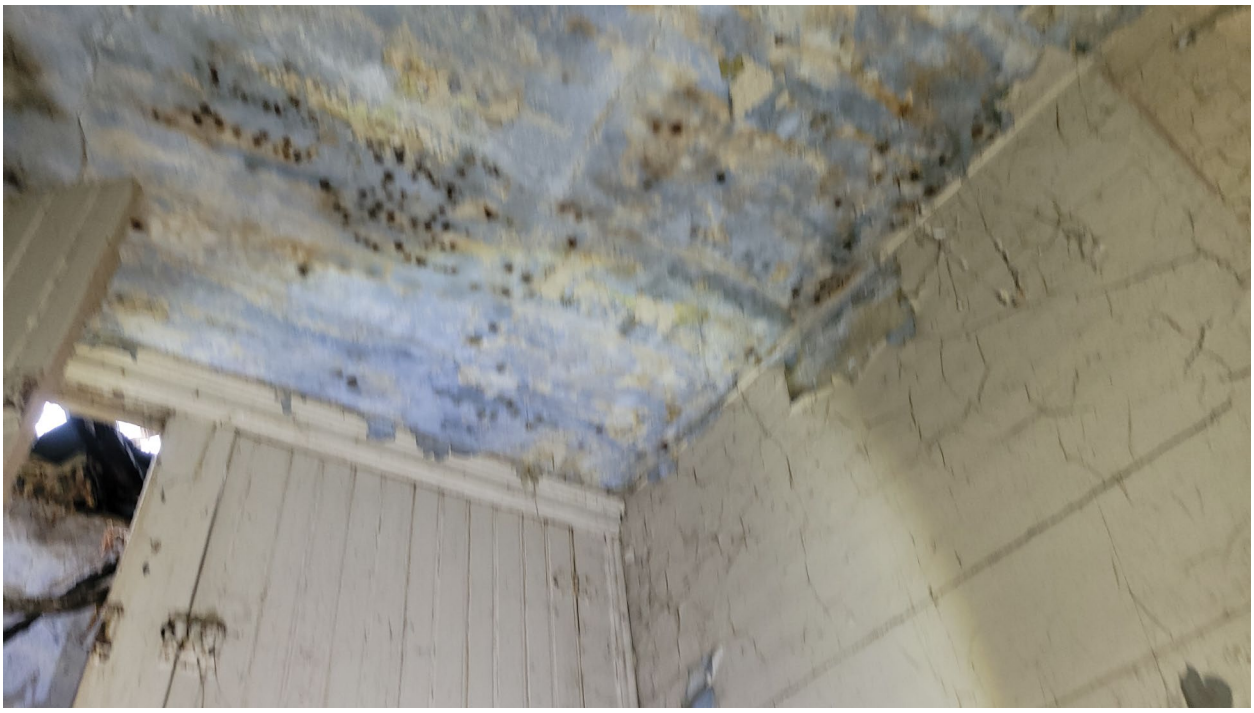


Photo 79:



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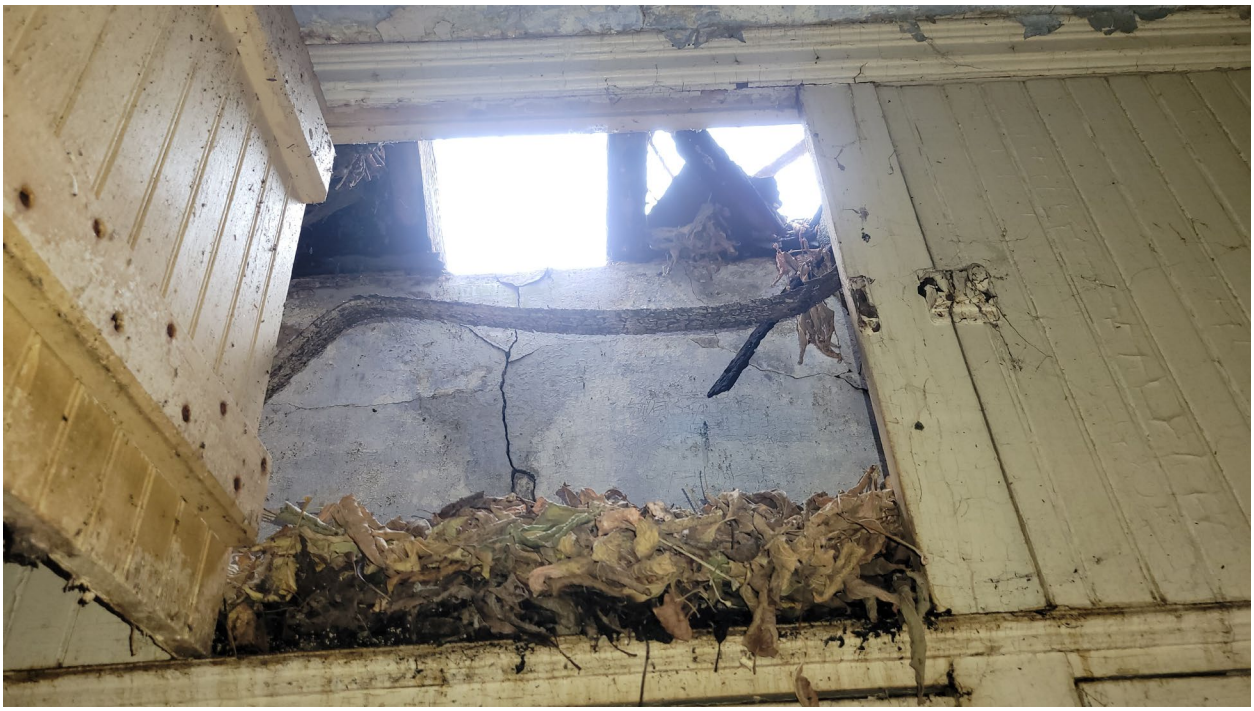


Photo 81:

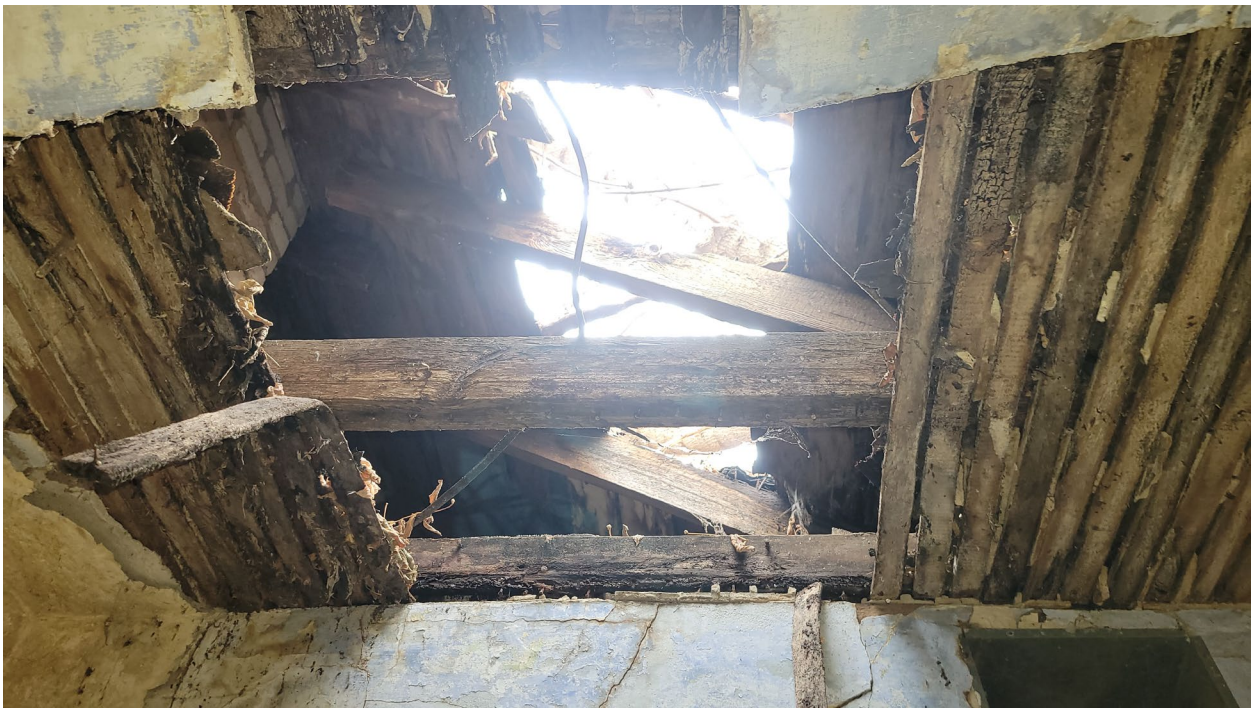


Photo 82:

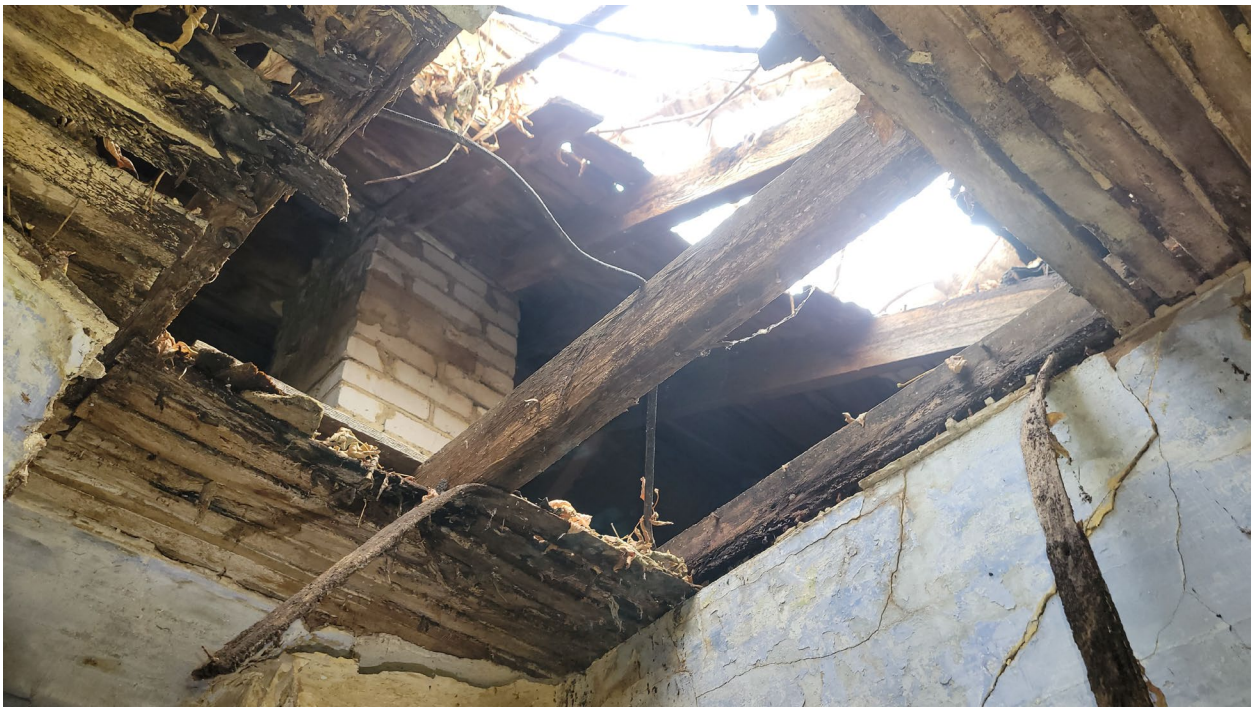
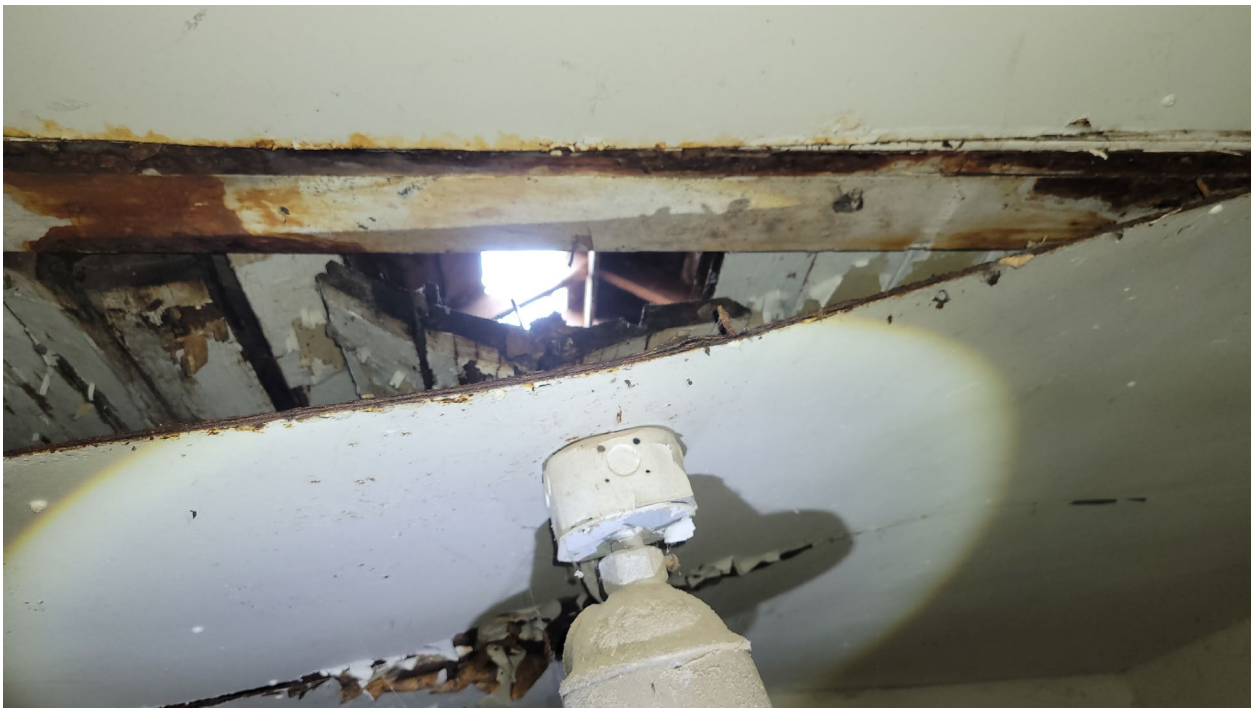


Photo 83:



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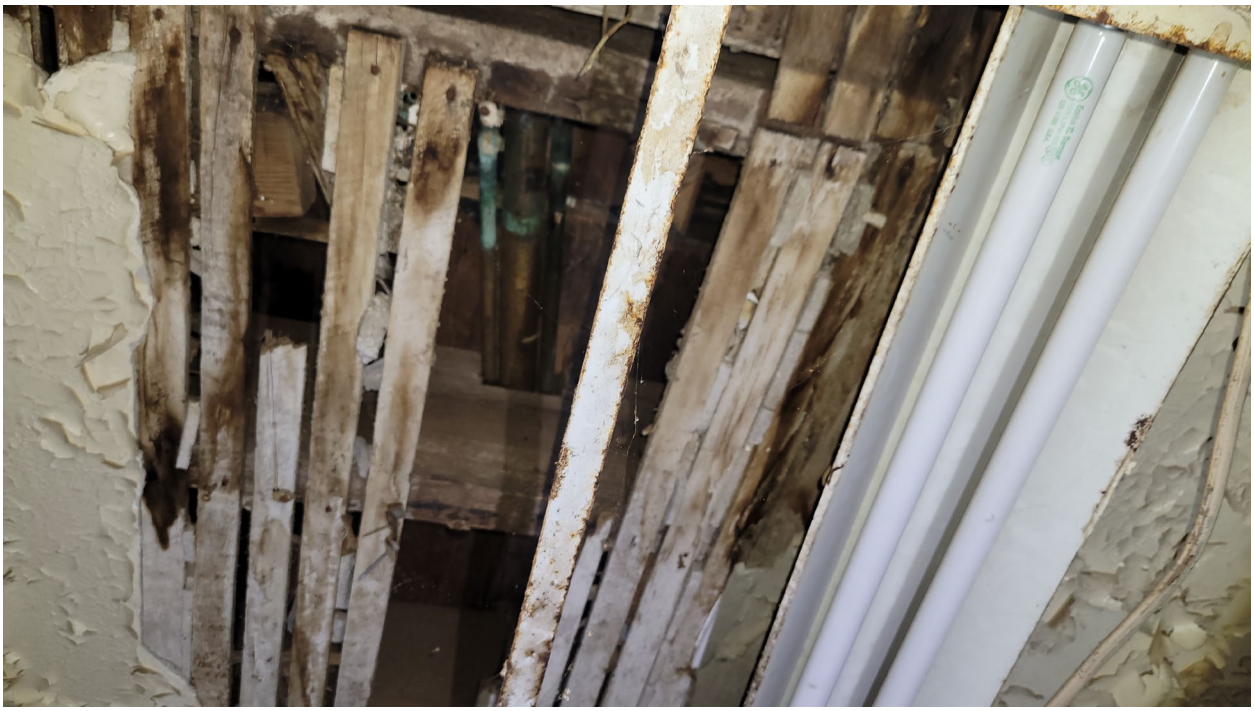

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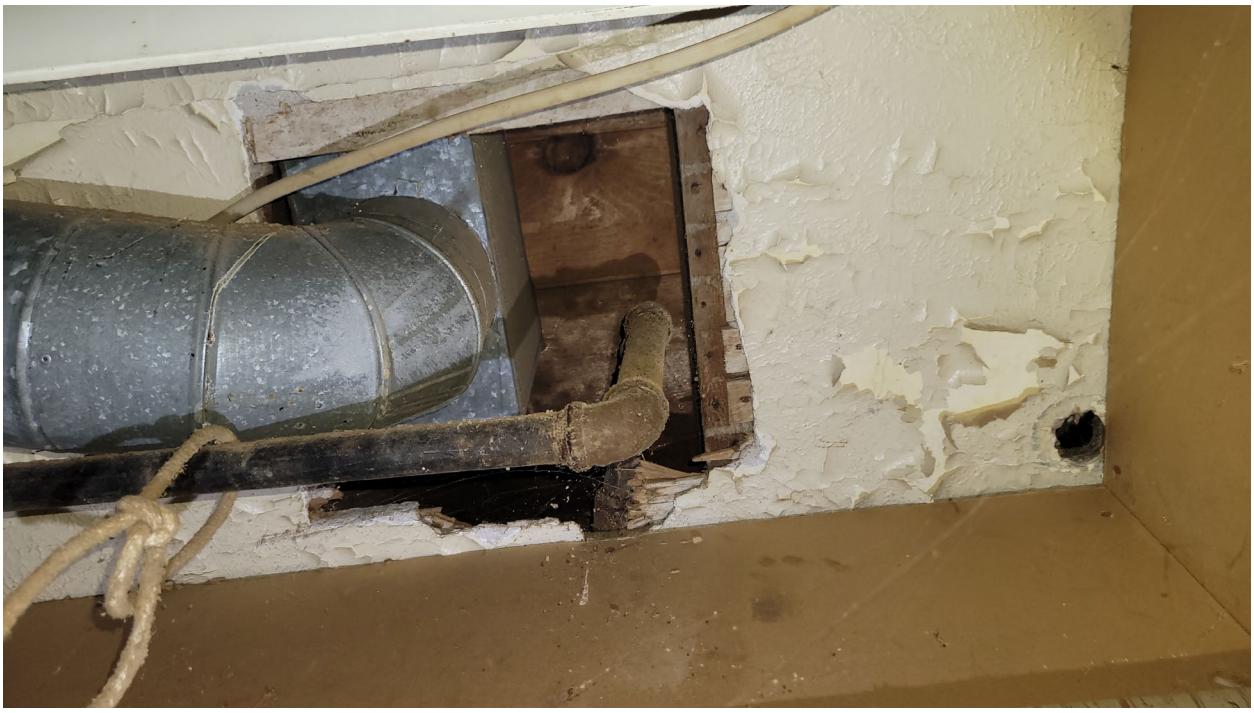
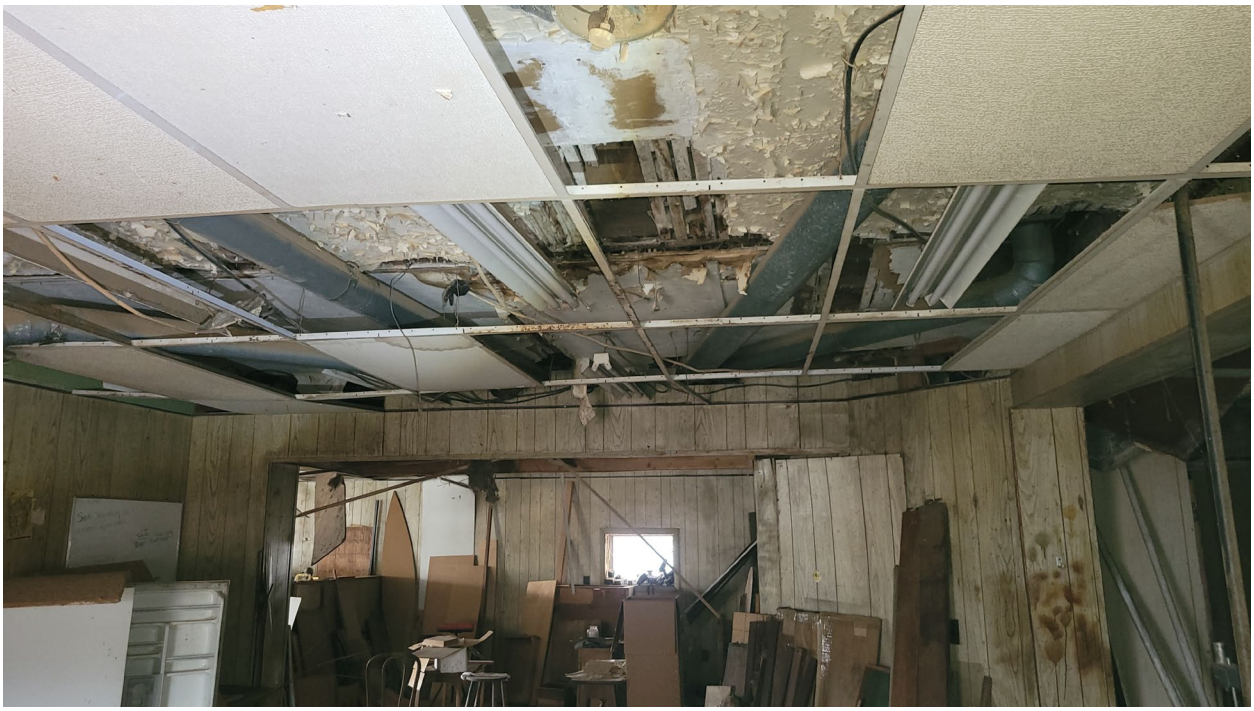


Photo 86:



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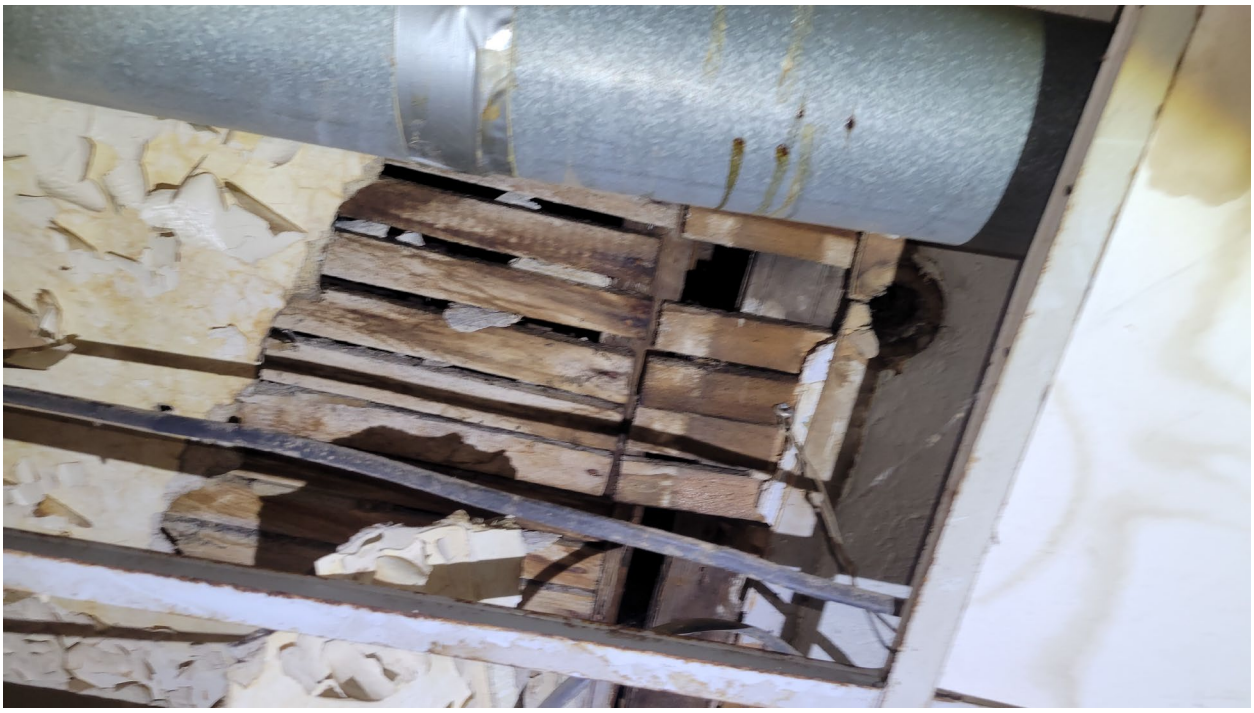


Photo 88:

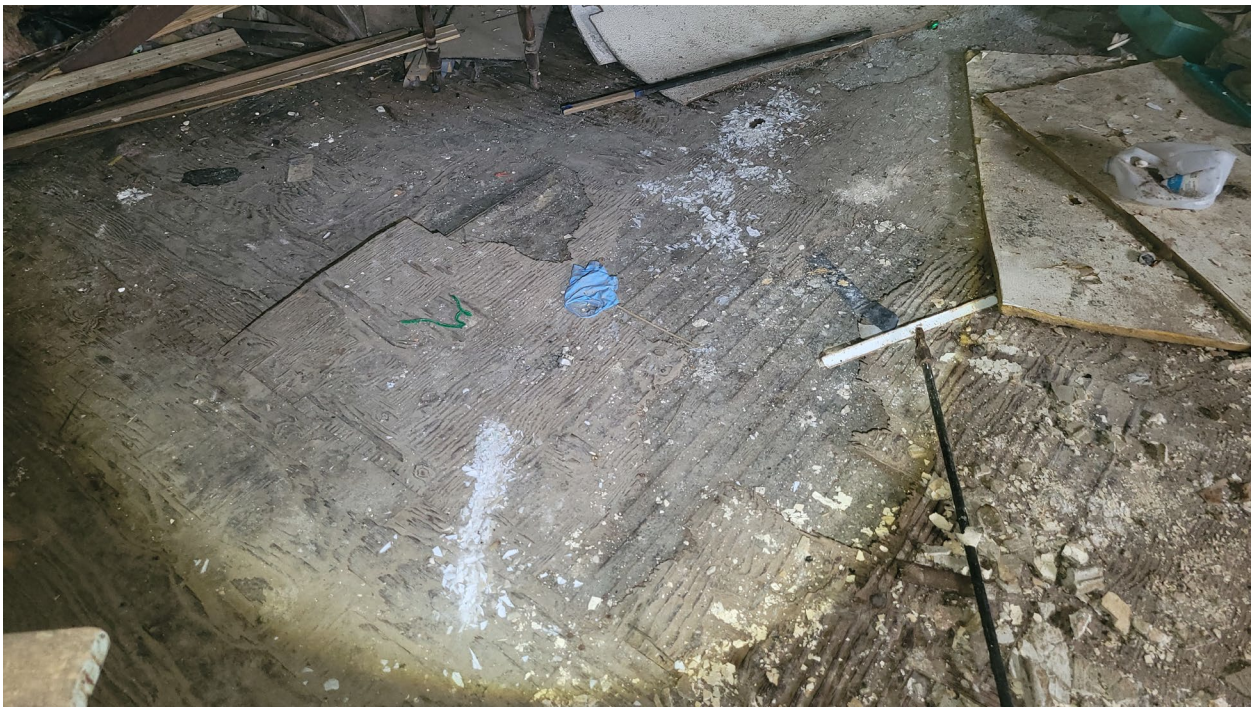


Photo 89: Remove and replace in kind existing subfloor,

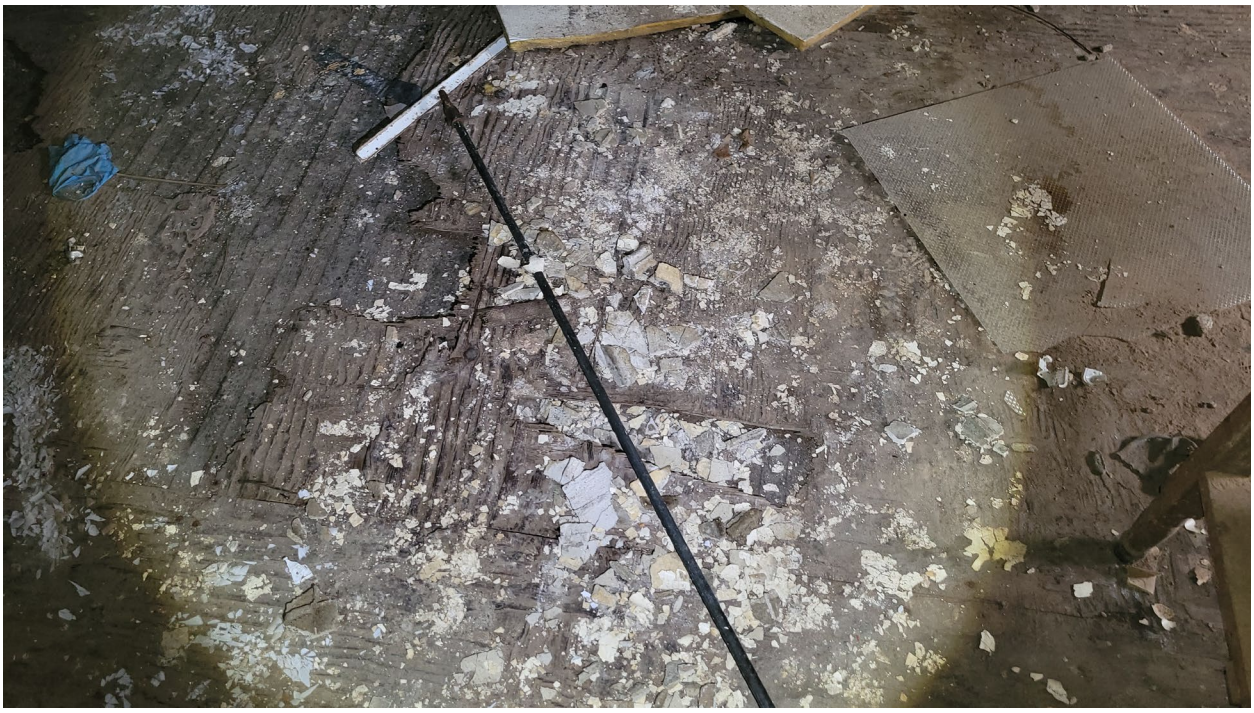


Photo 90:

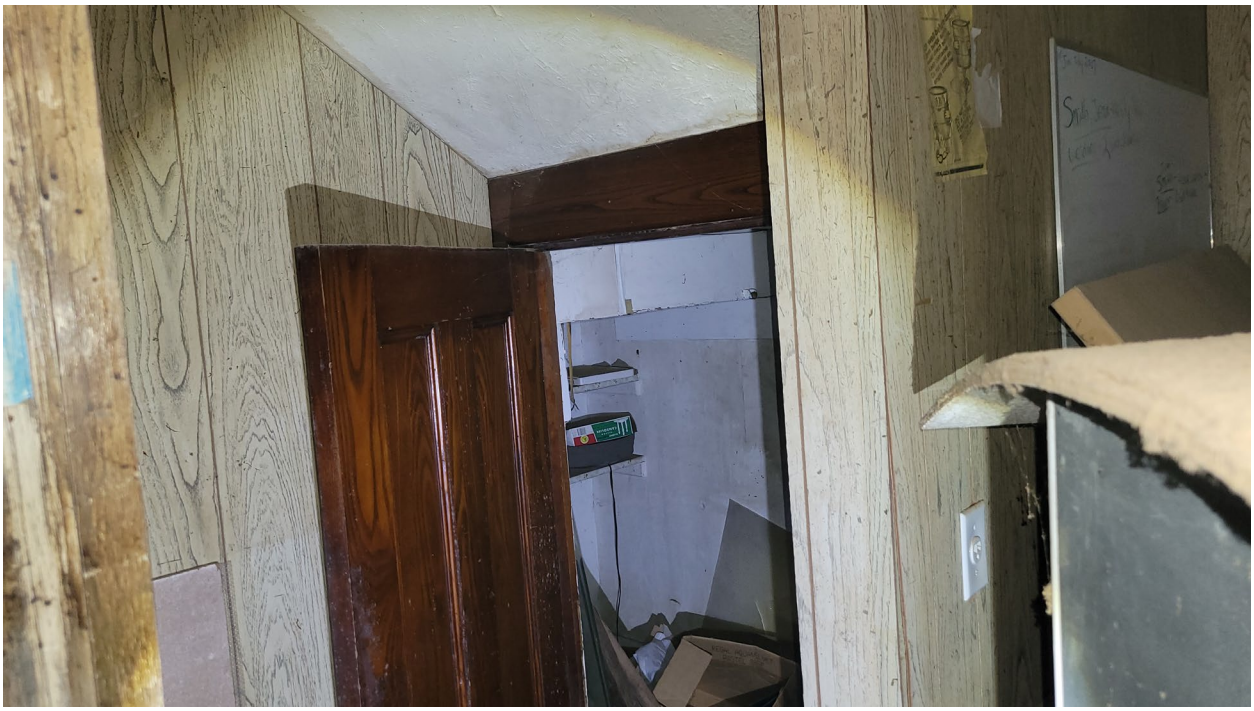


Photo 91:

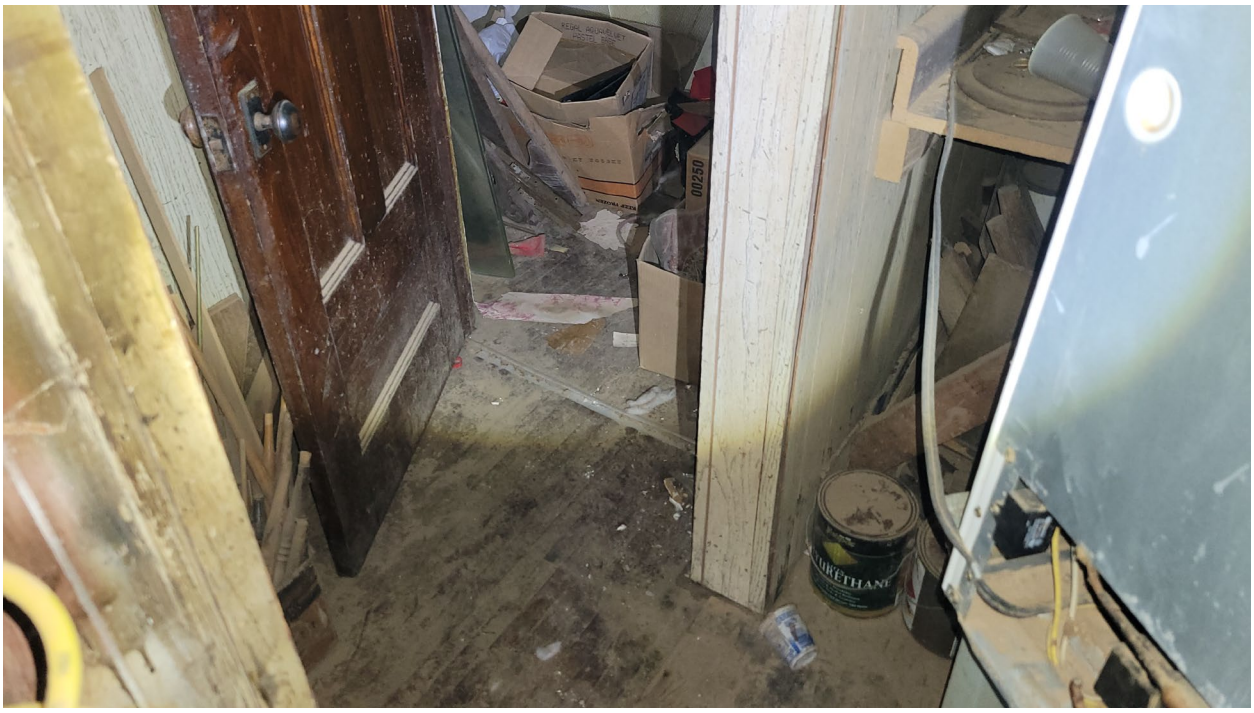


Photo 92:

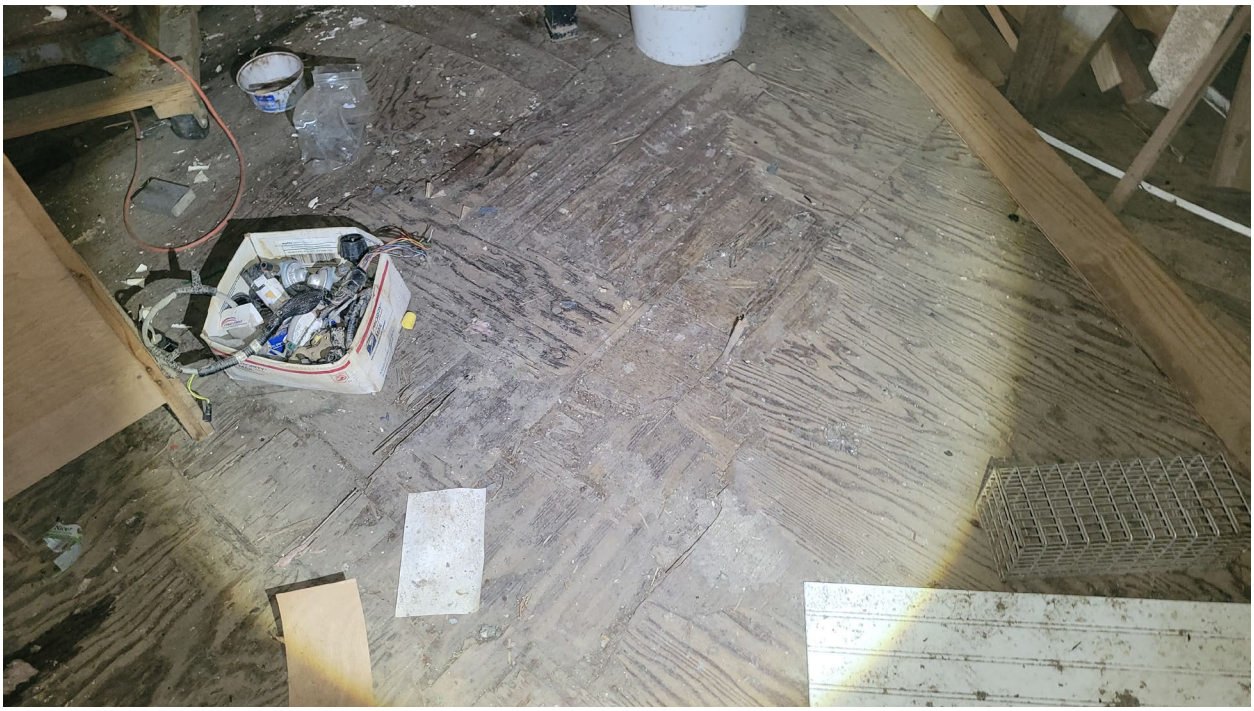


Photo 93:

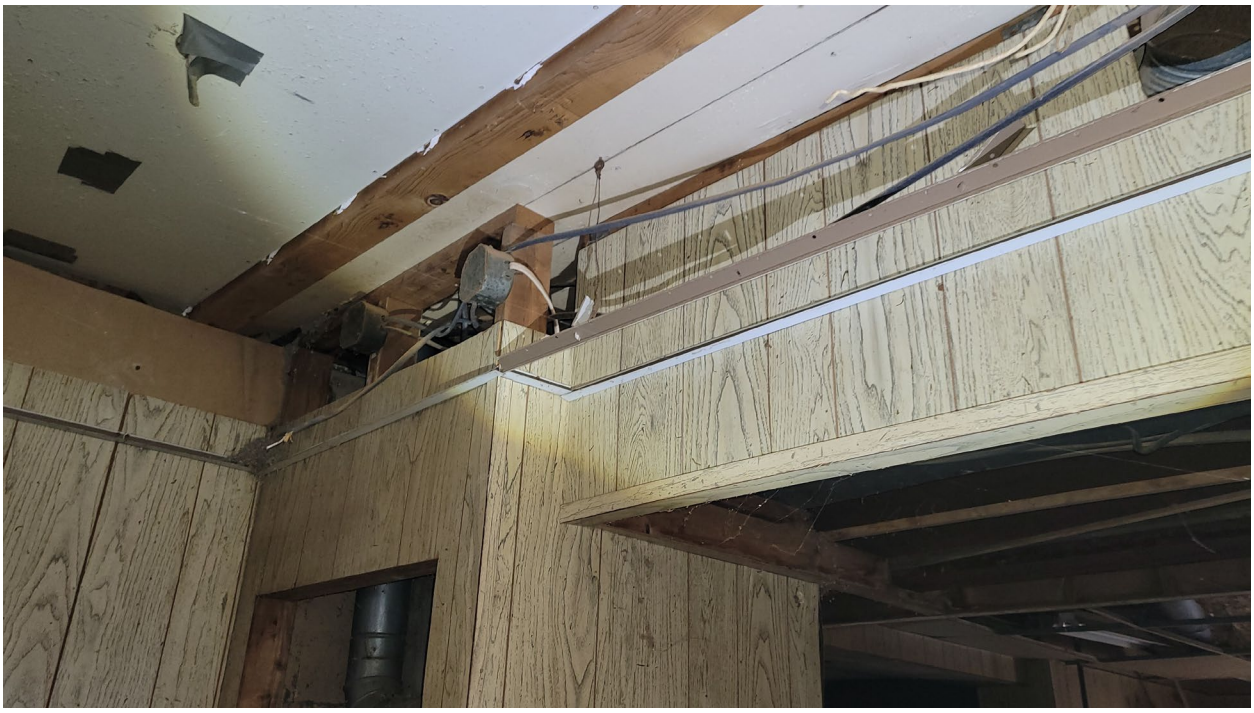


Photo 94:

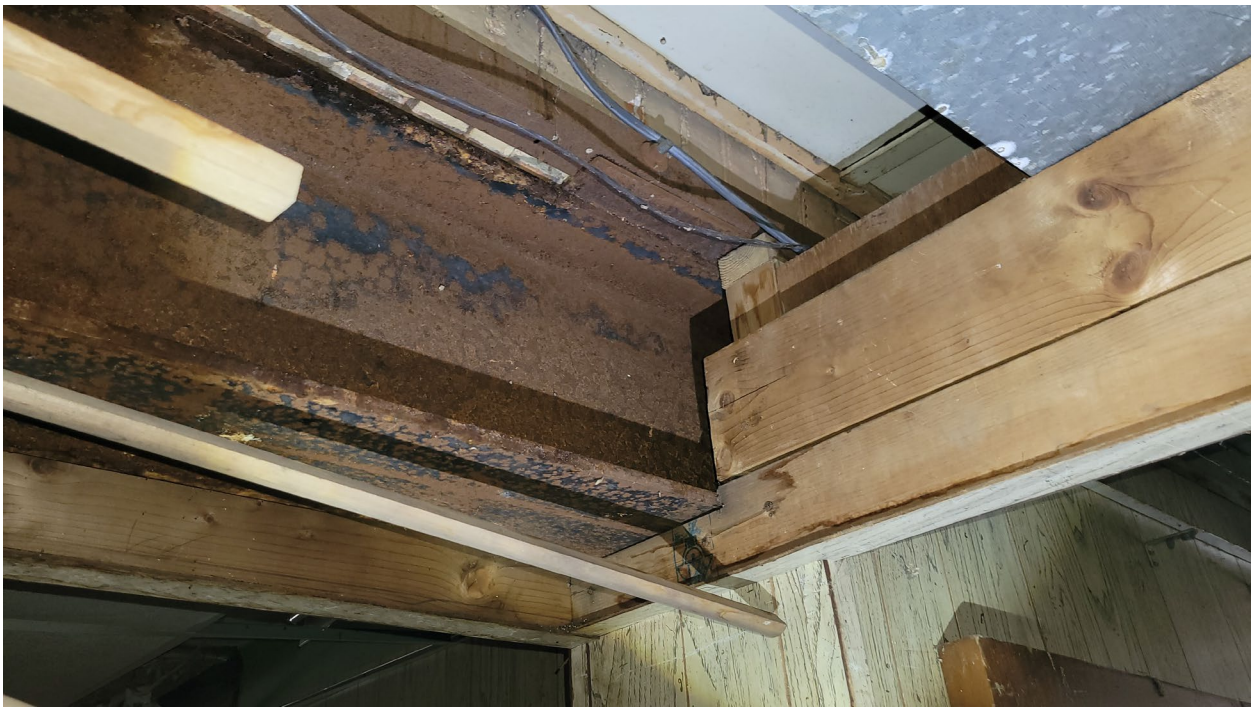


Photo 95:

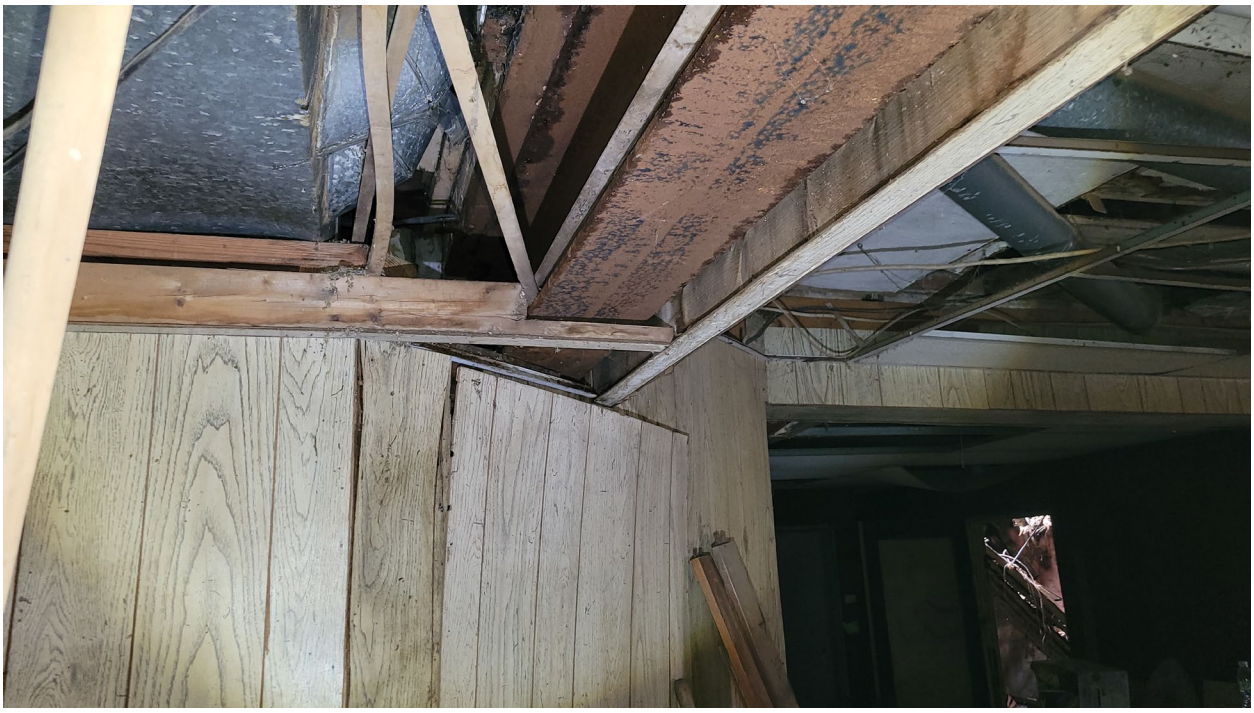


Photo 96:

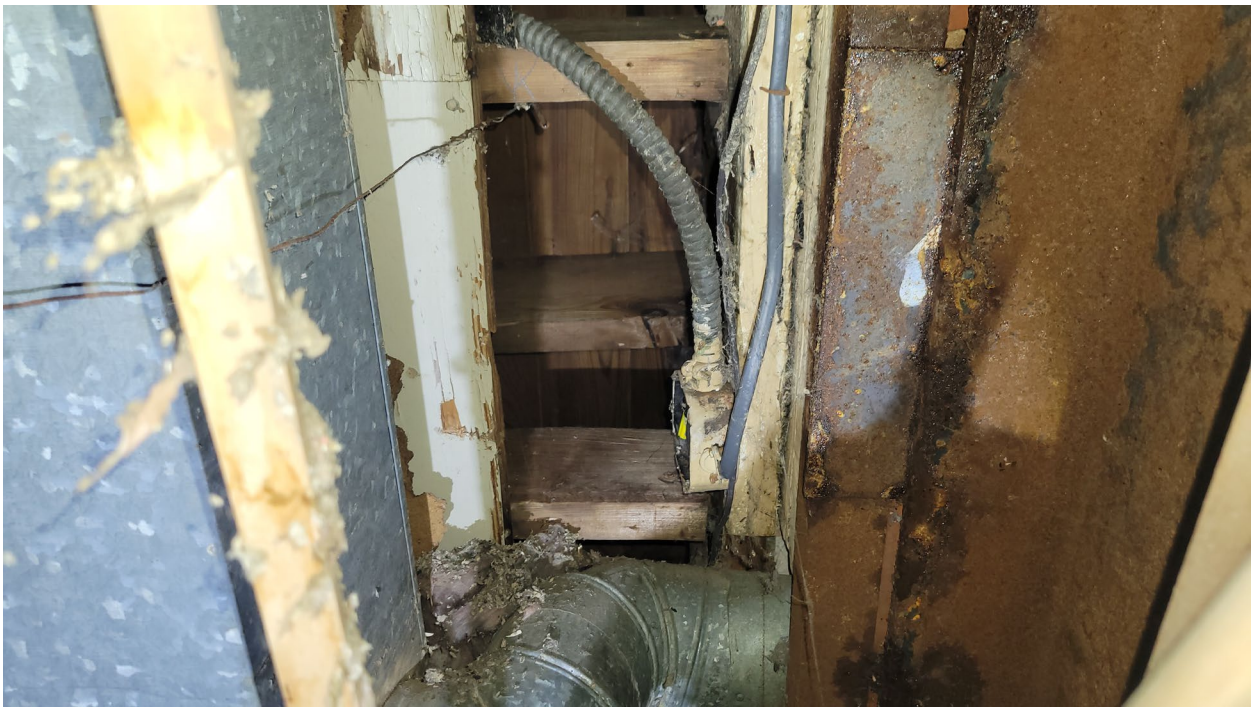


Photo 97:

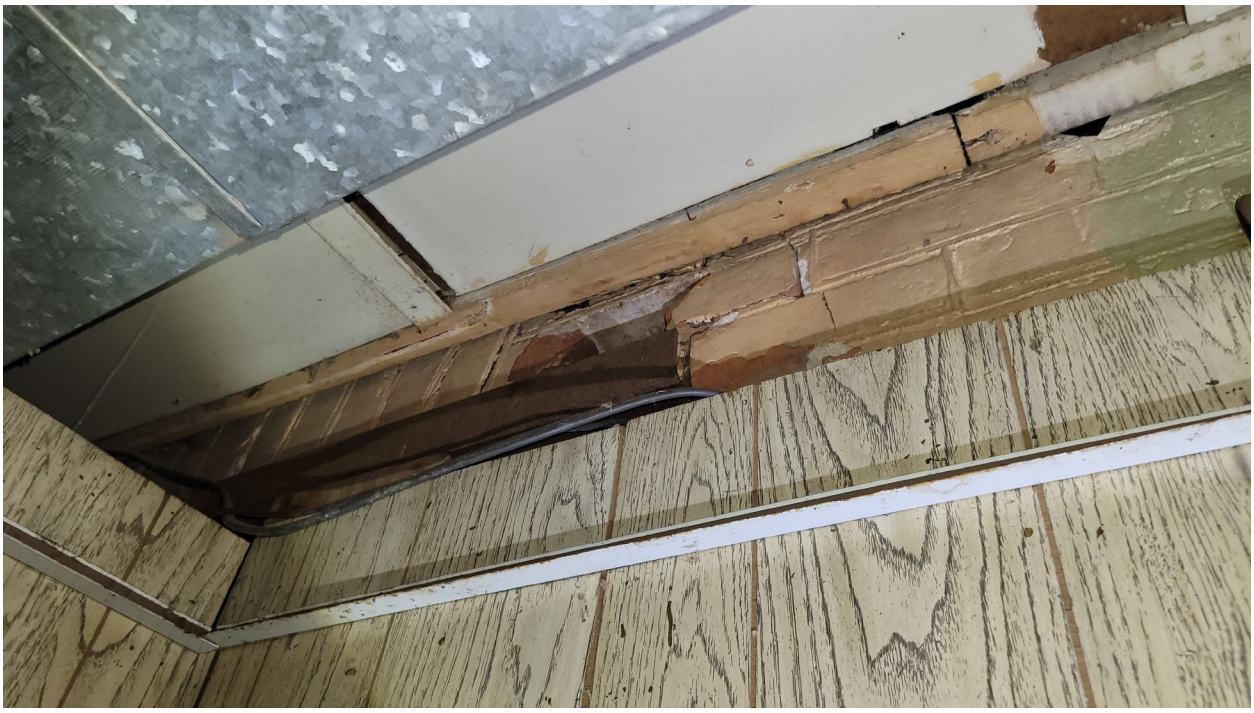


Photo 98:

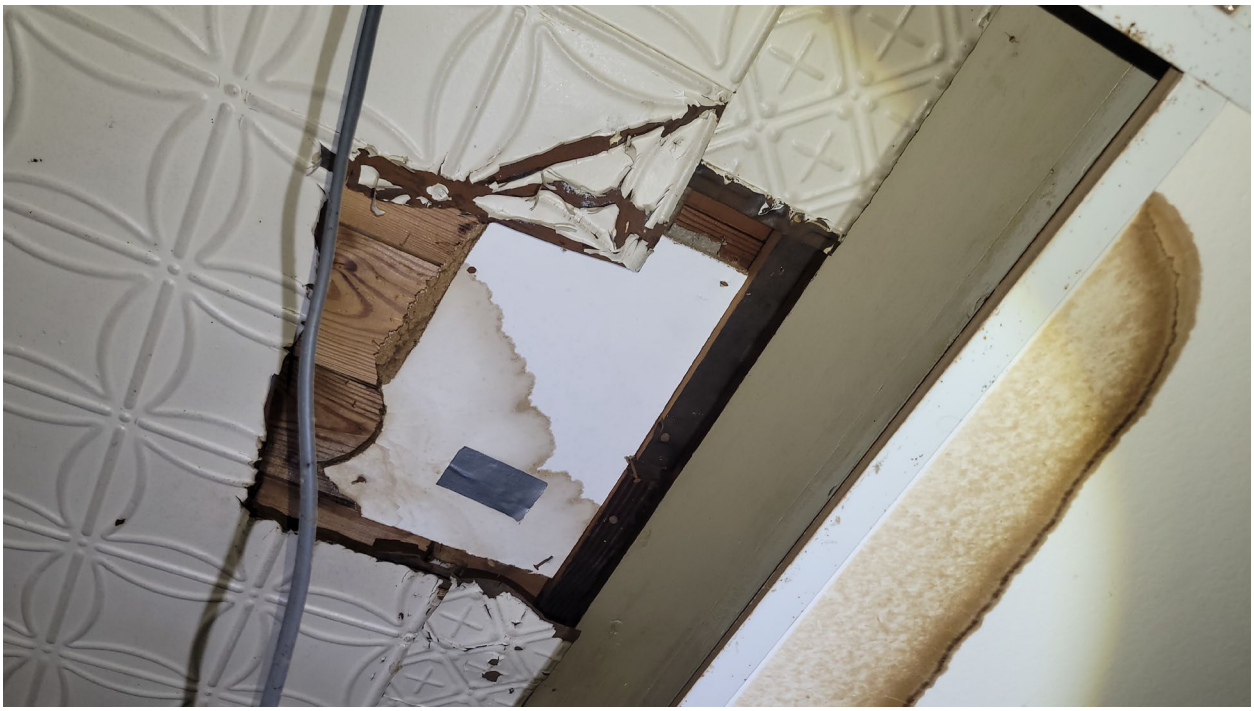


Photo 99:

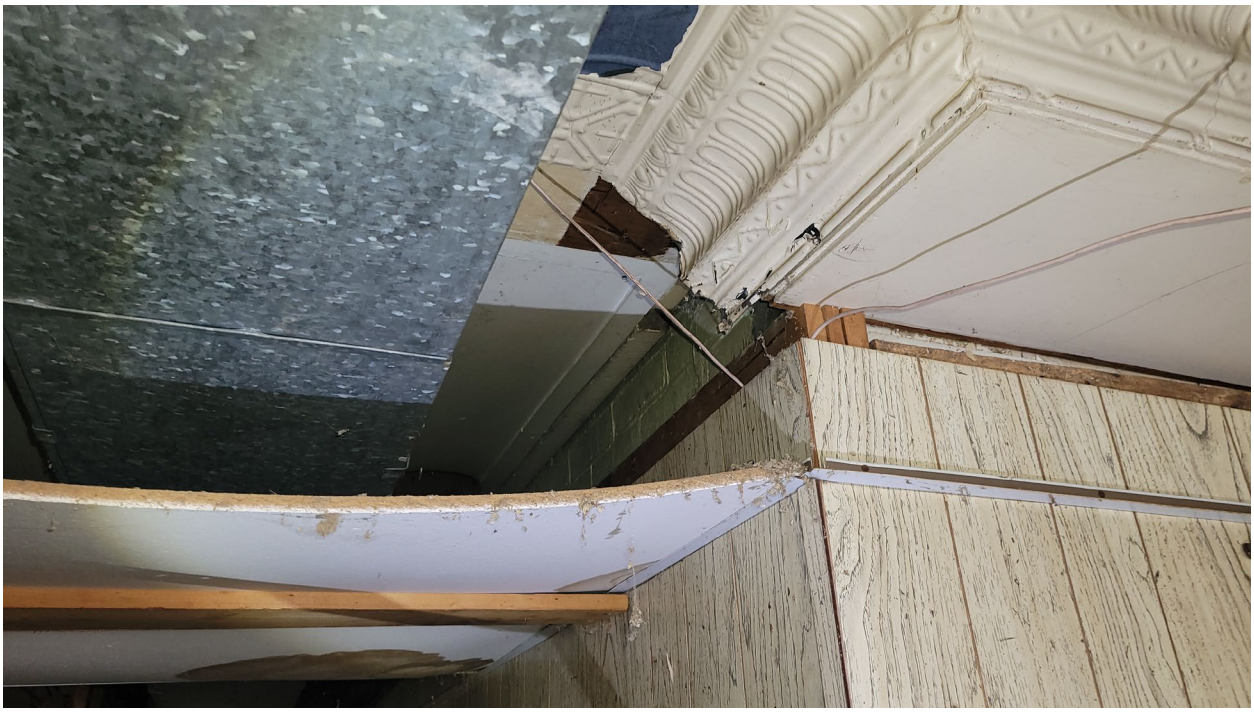


Photo 100:

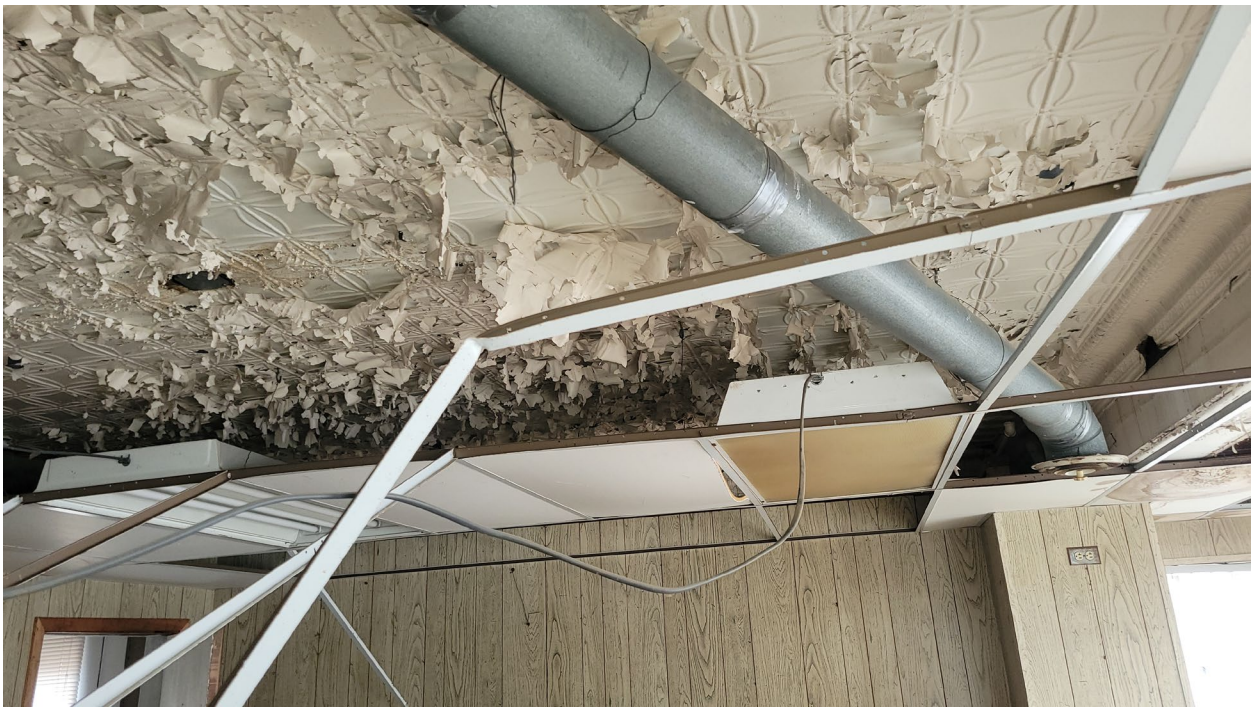


Photo 101:

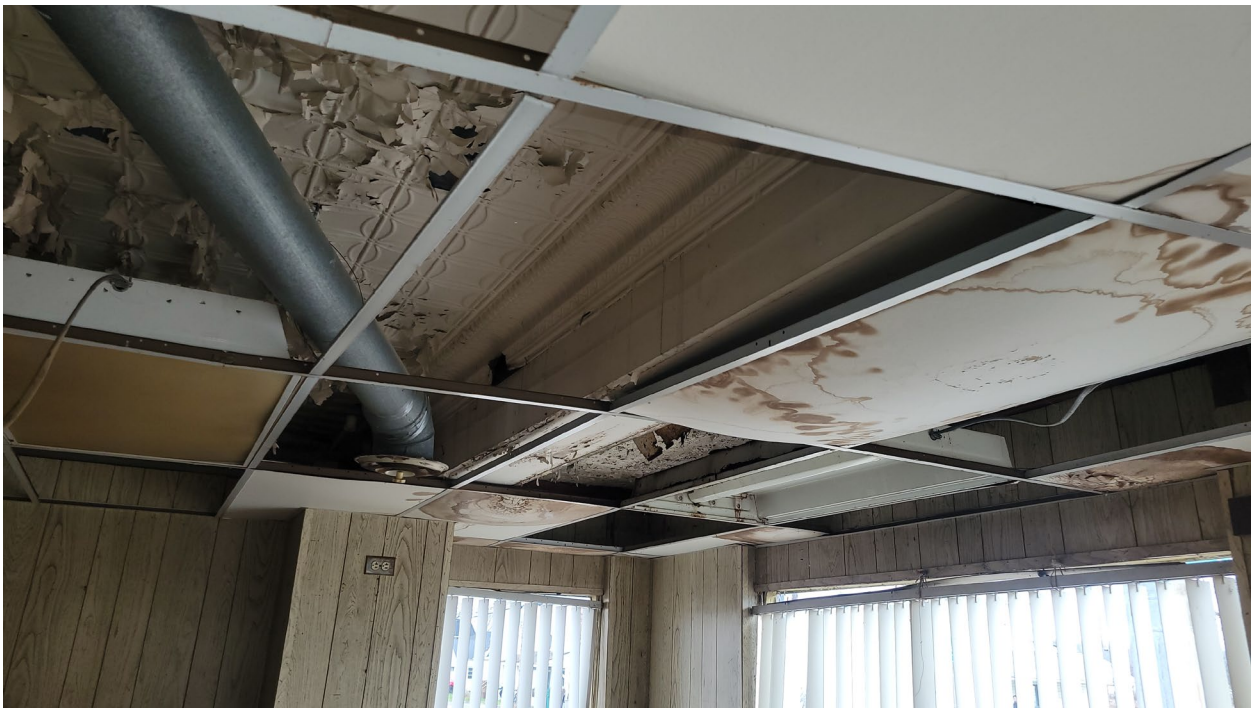


Photo 102:

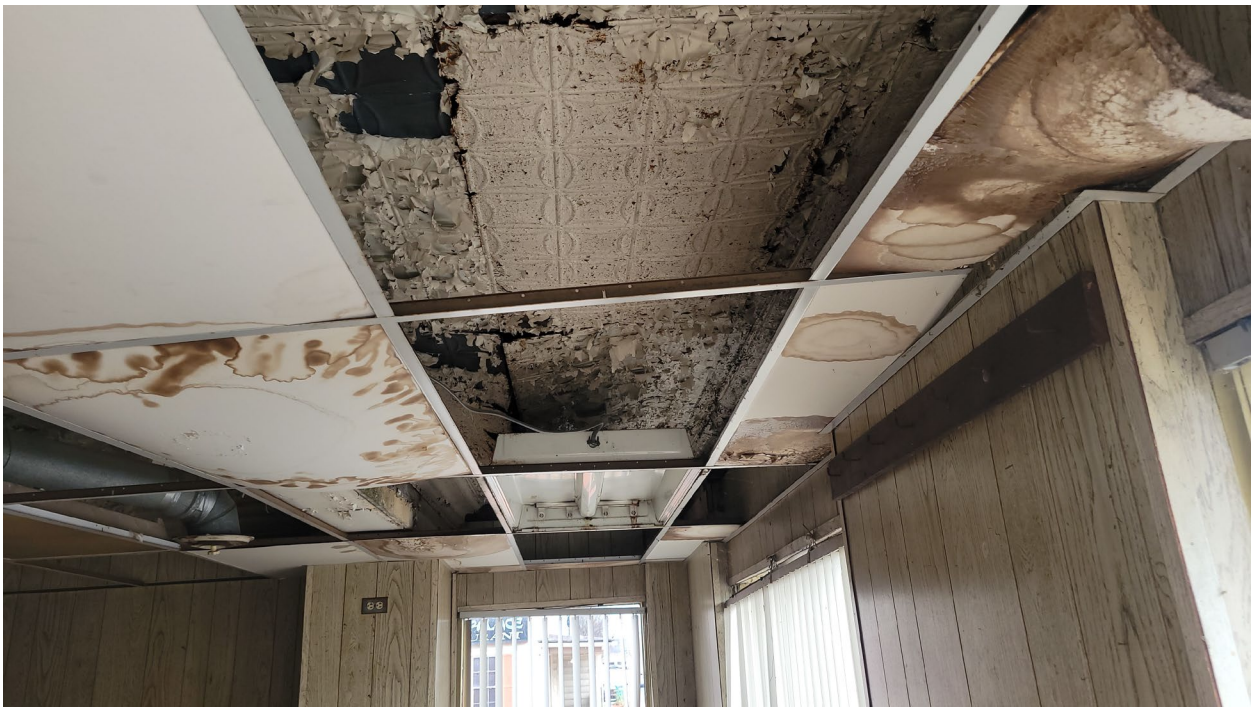


Photo 103:

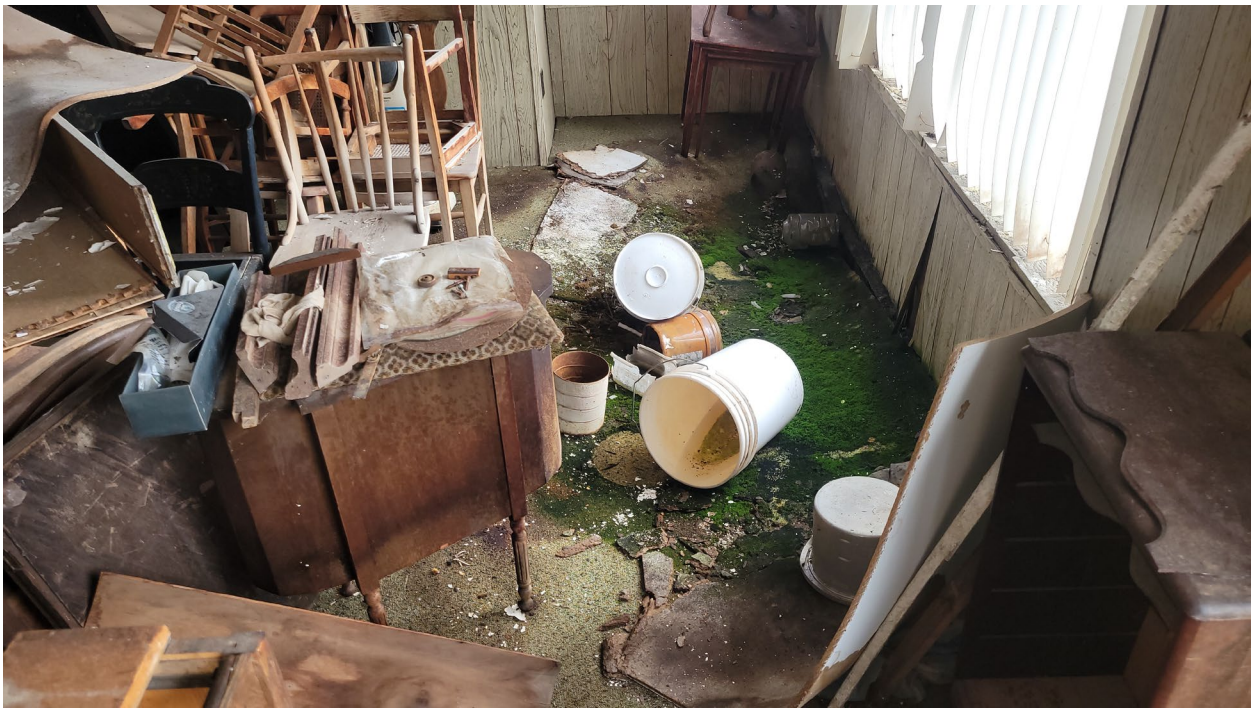


Photo 104: Area 1. See note 3.

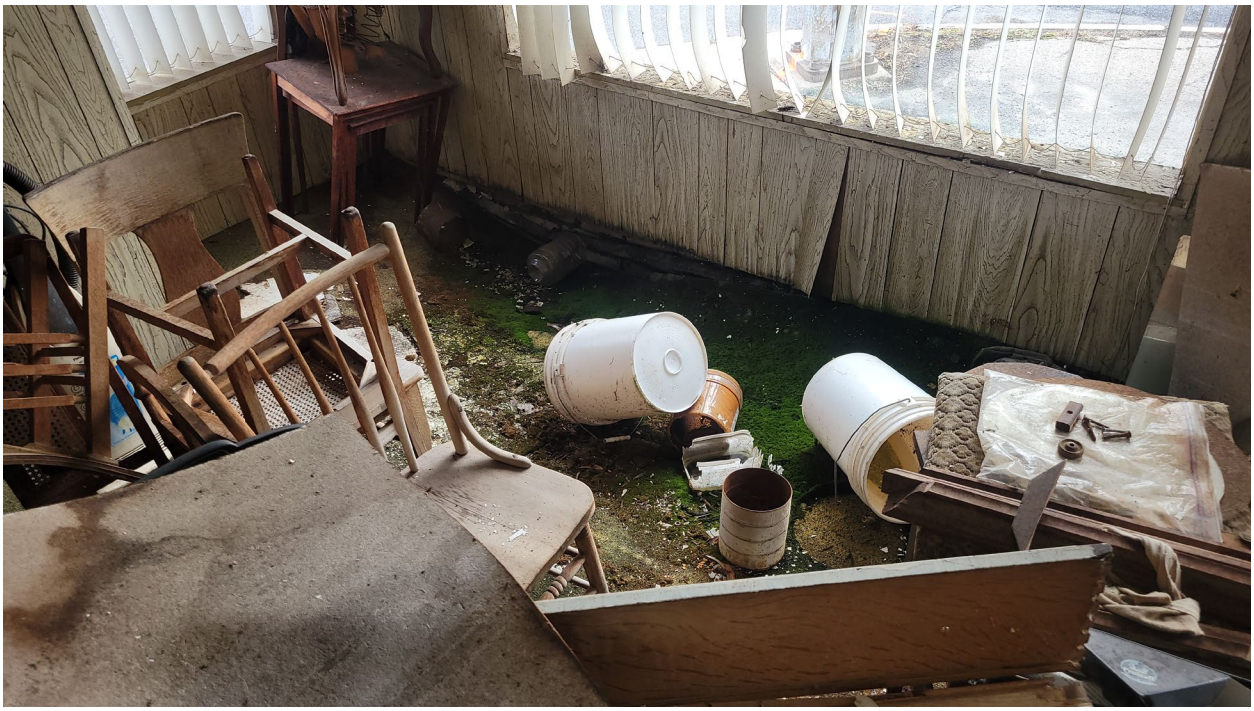


Photo 105:

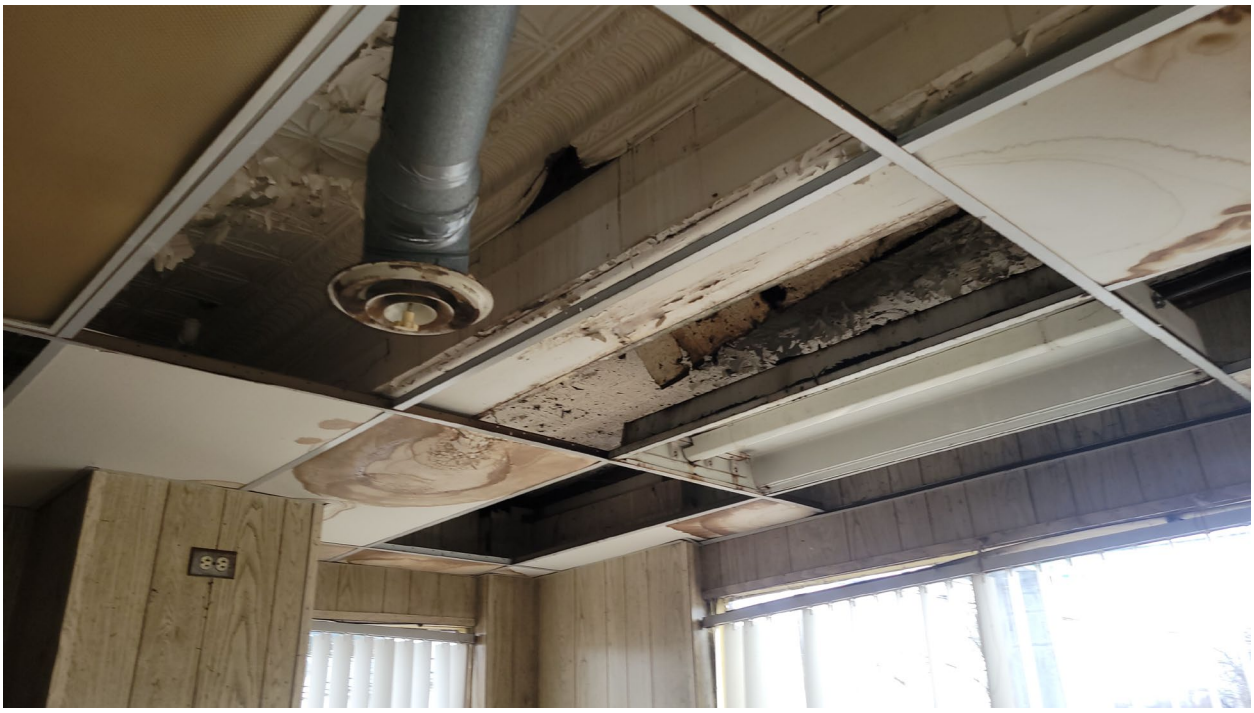


Photo 106:

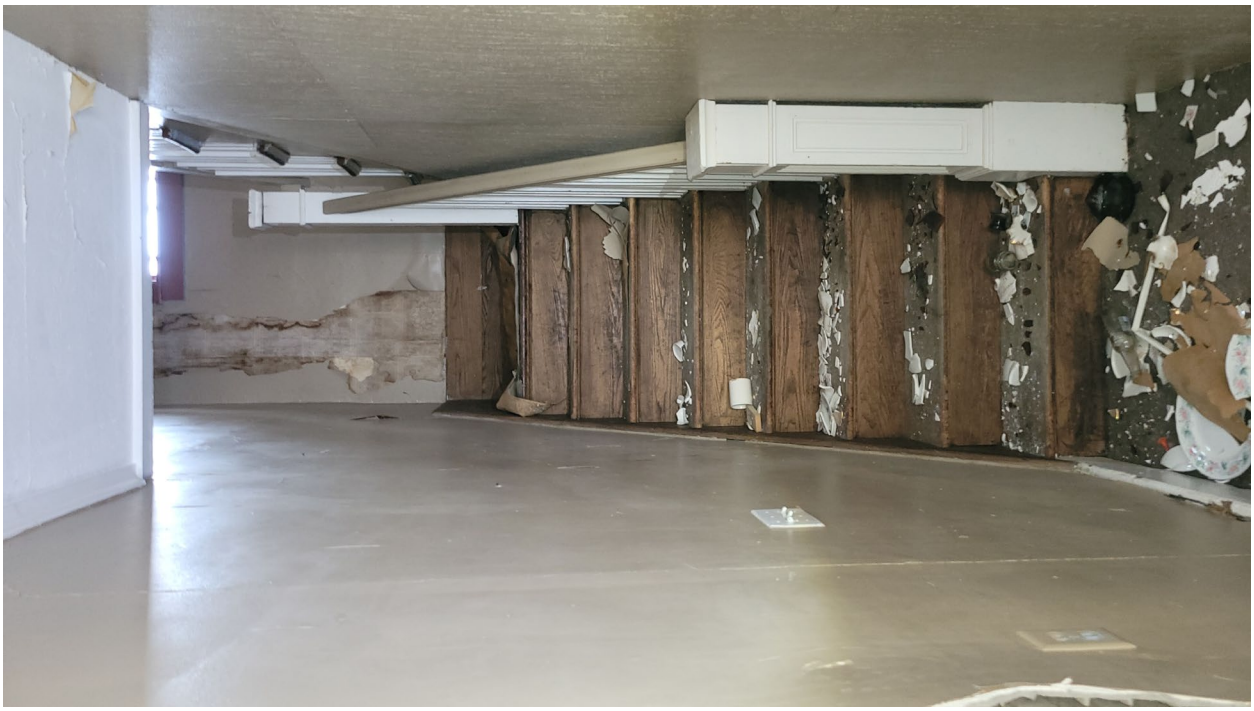
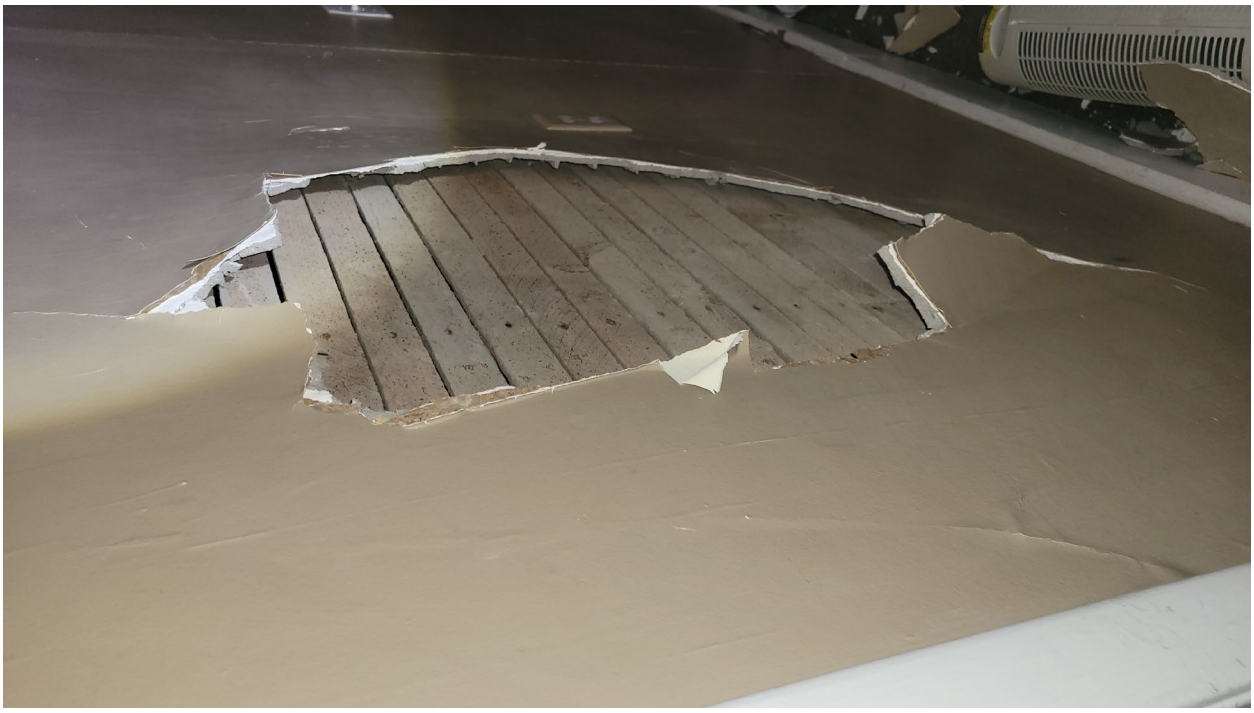


Photo 107:



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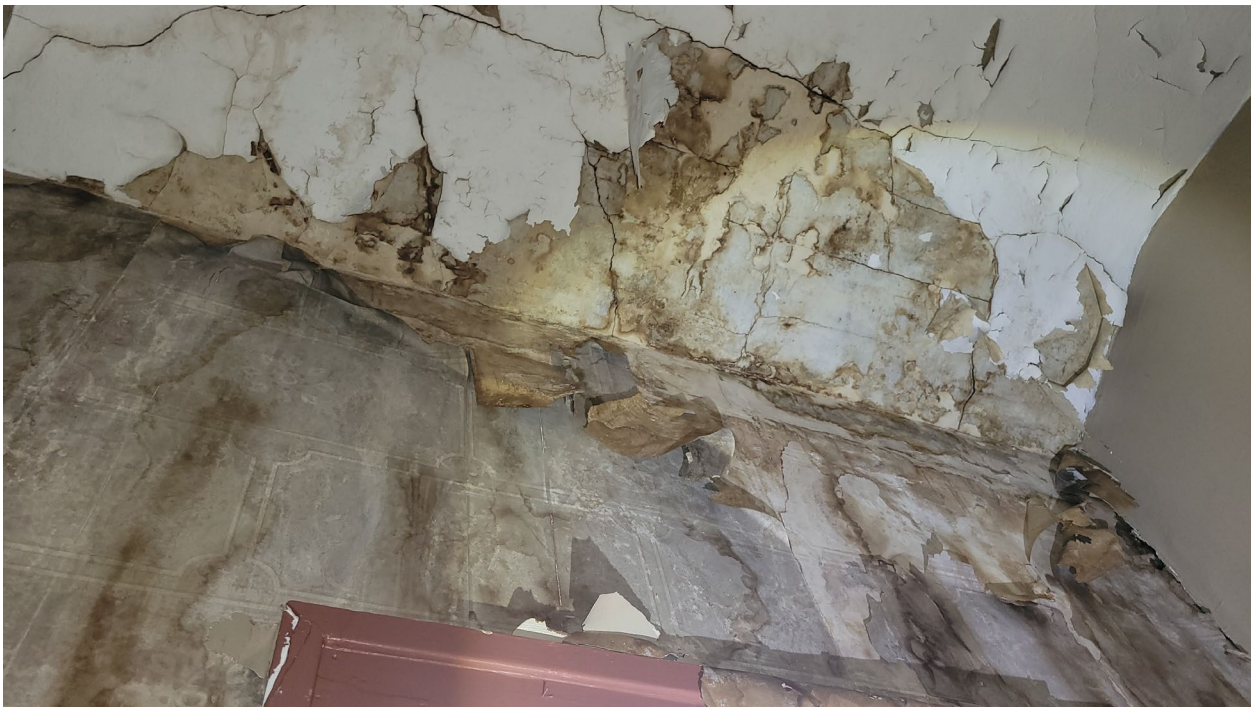


Photo 109:

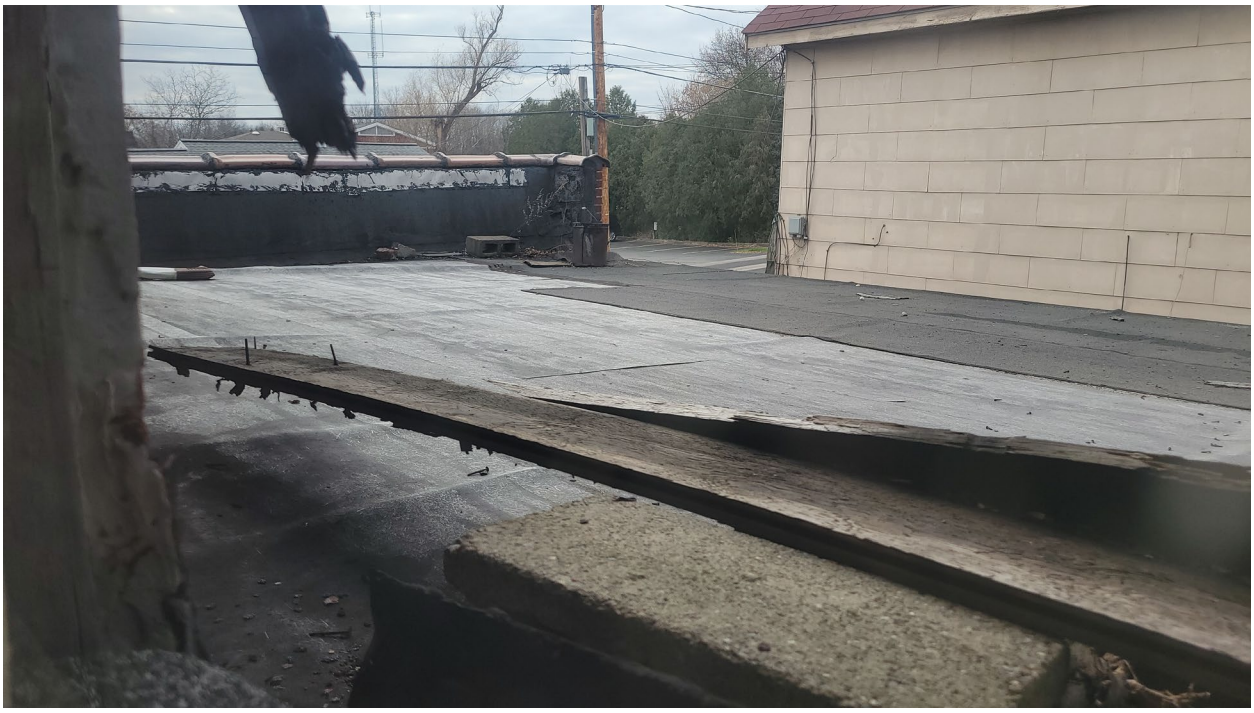


Photo 110:

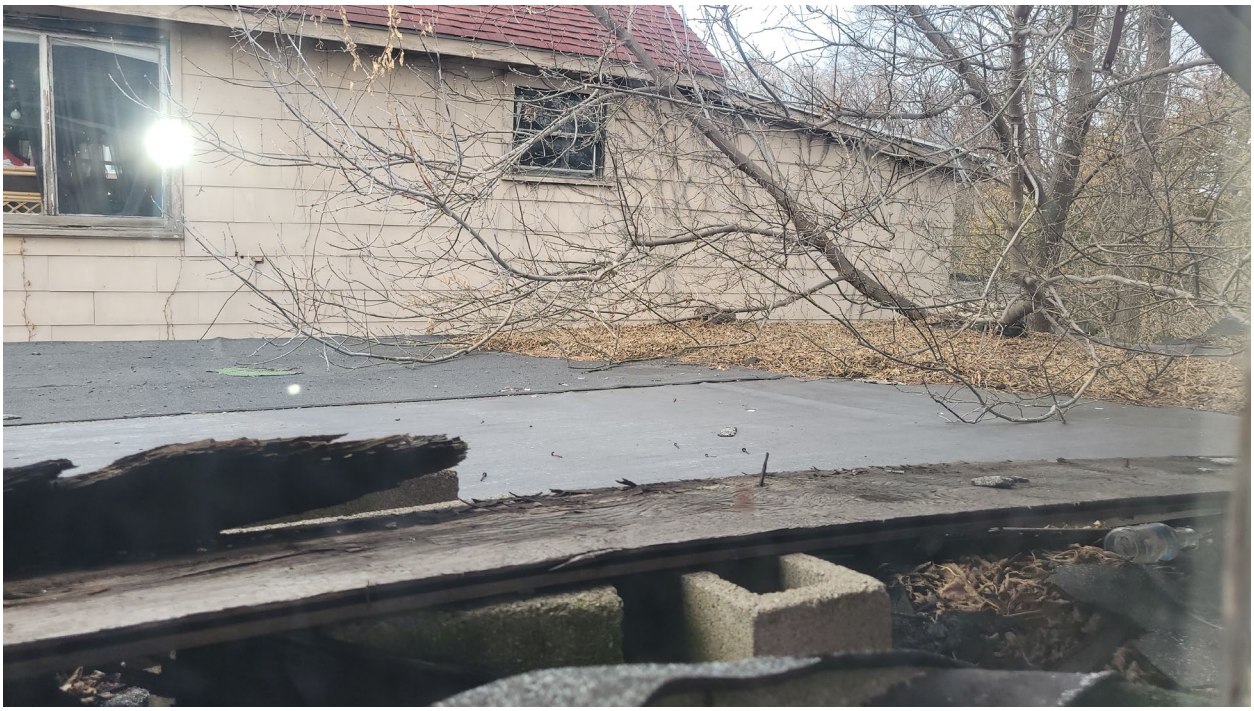


Photo 111:

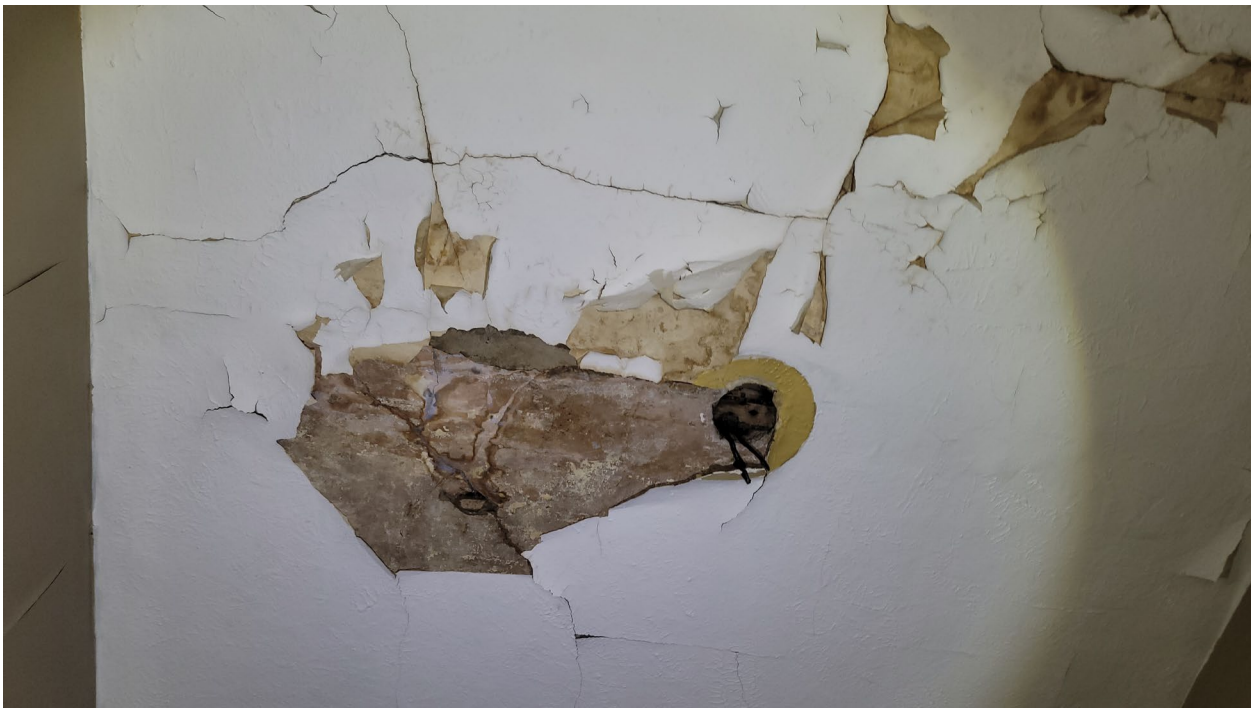


Photo 112:

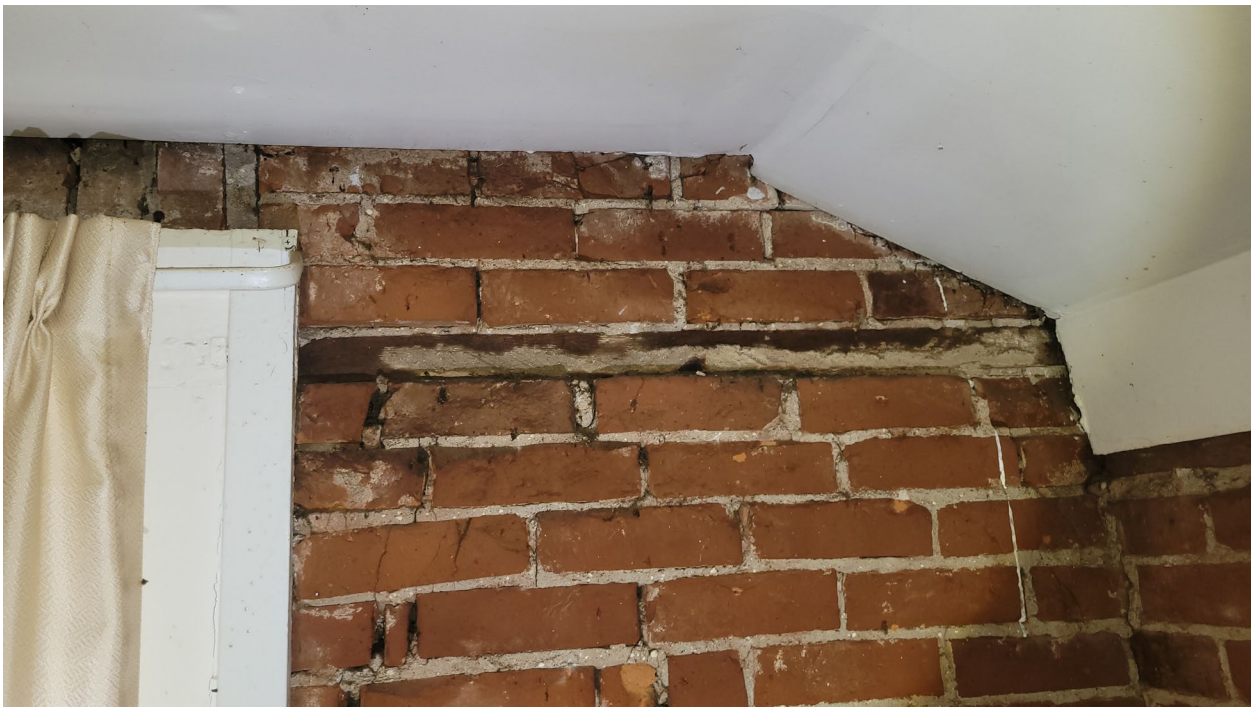


Photo 113: Repoint all existing brick

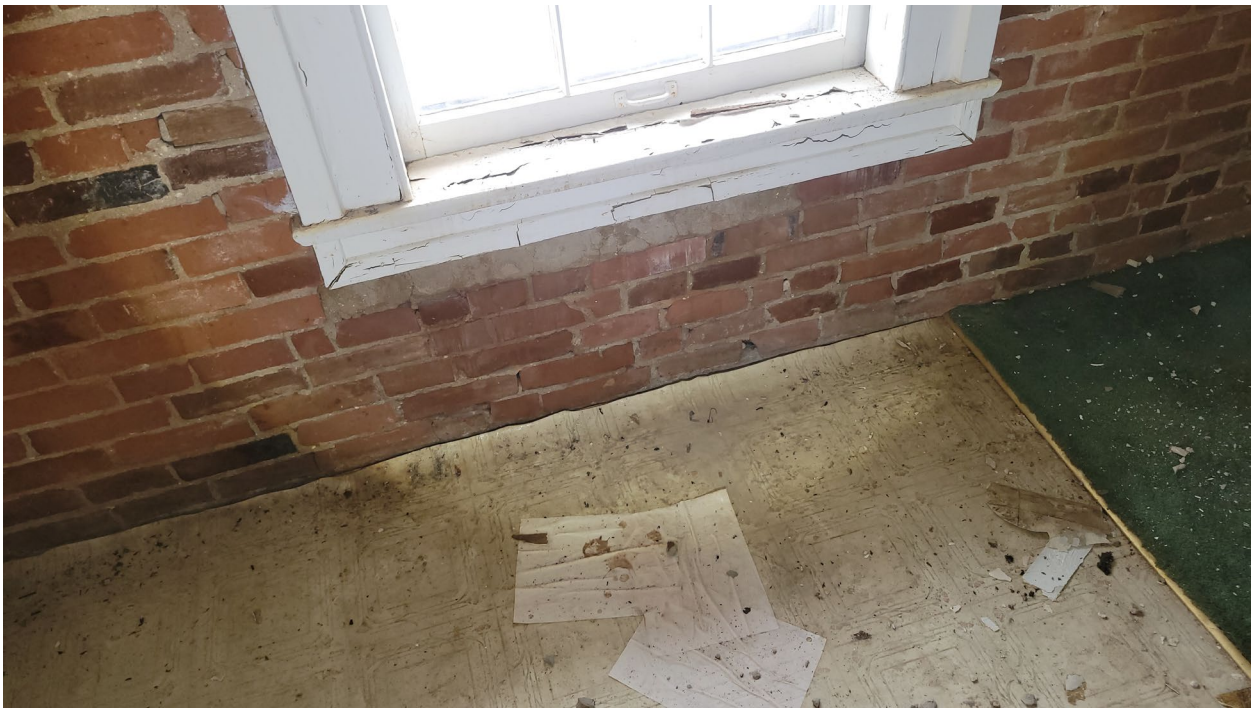


Photo 114:

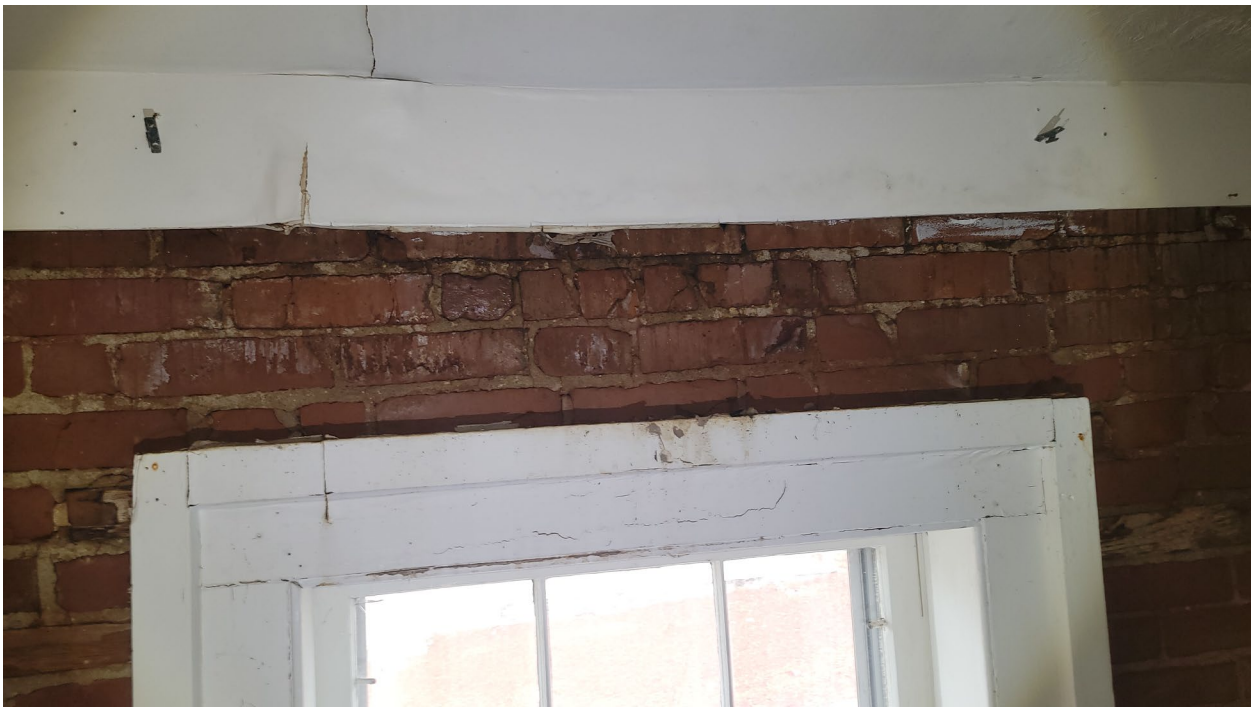


Photo 115:

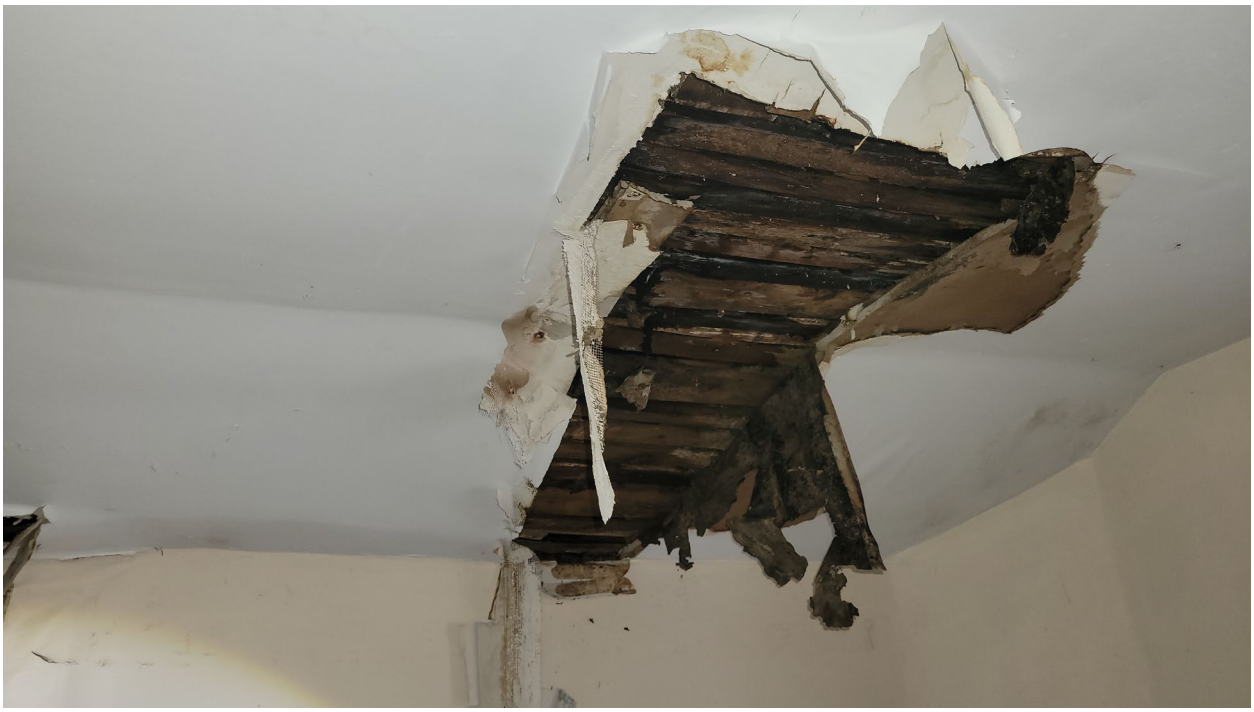


Photo 116: Remove and replace all existing ceiling lathe that is water damaged.

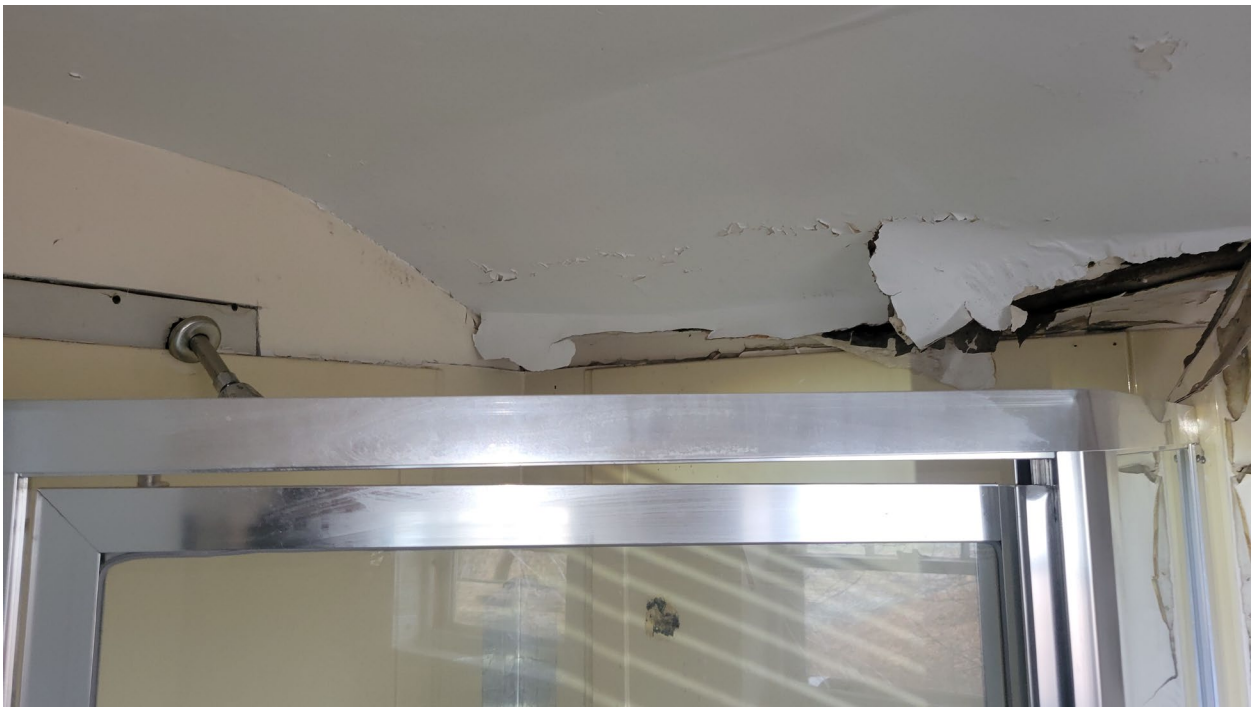


Photo 117:

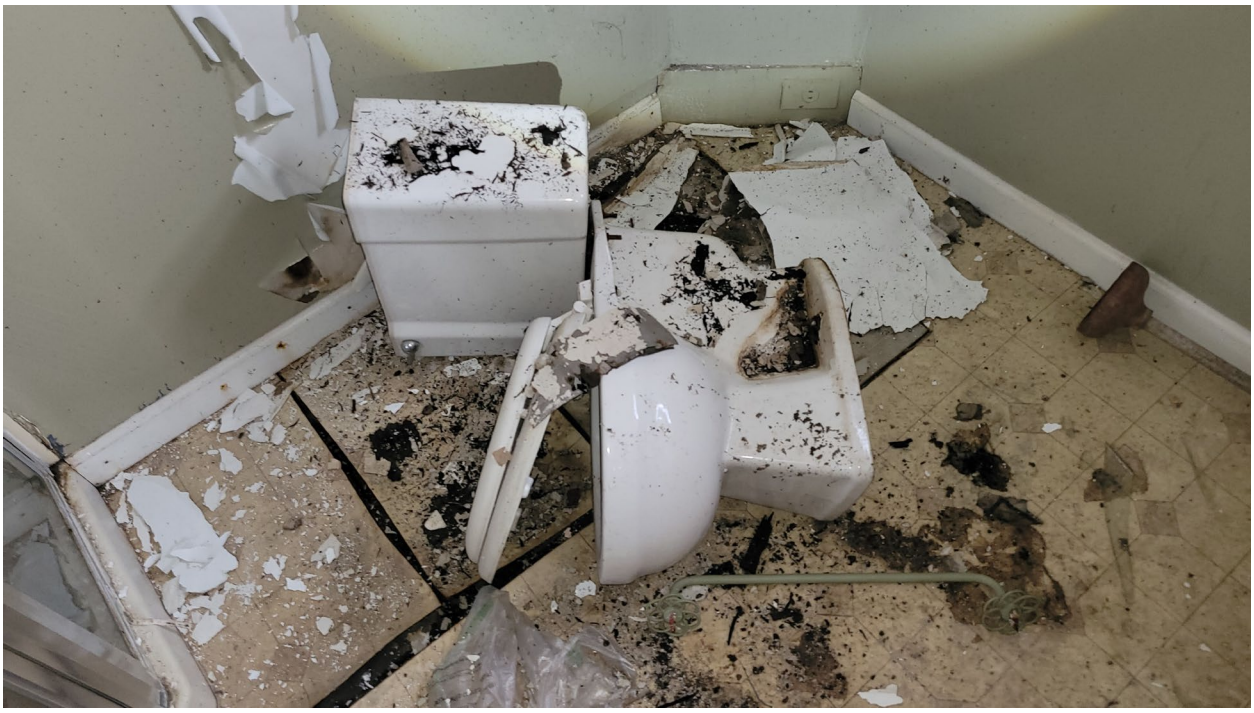


Photo 118:

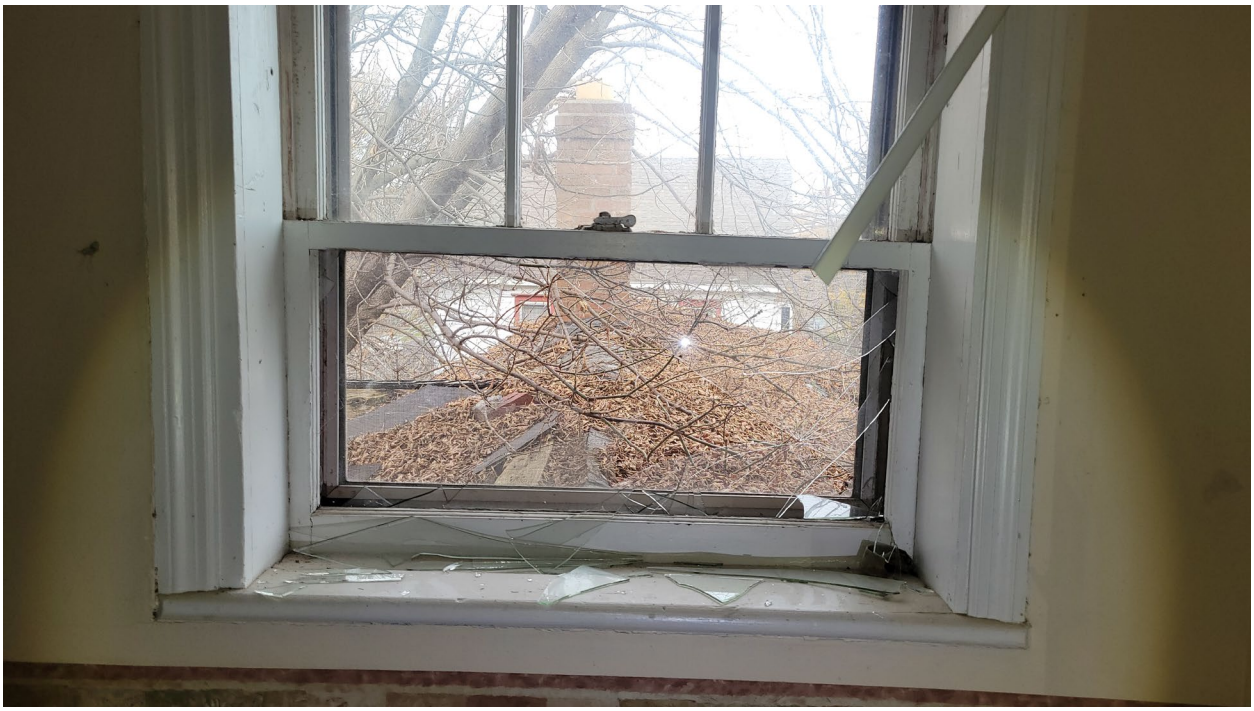


Photo 119: Replace all windows on Second floor that are broken.

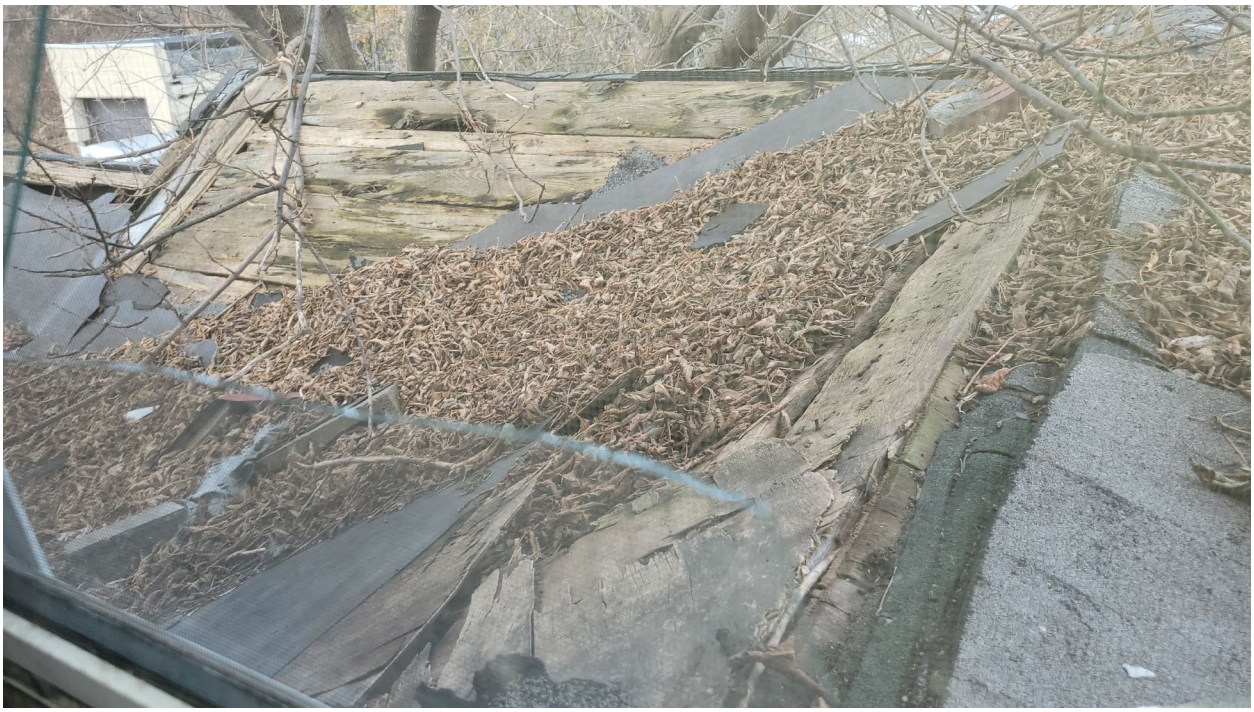


Photo 120: Roof needs a full tear off and replacement. Existing rafters that are not rotted can be salvaged.

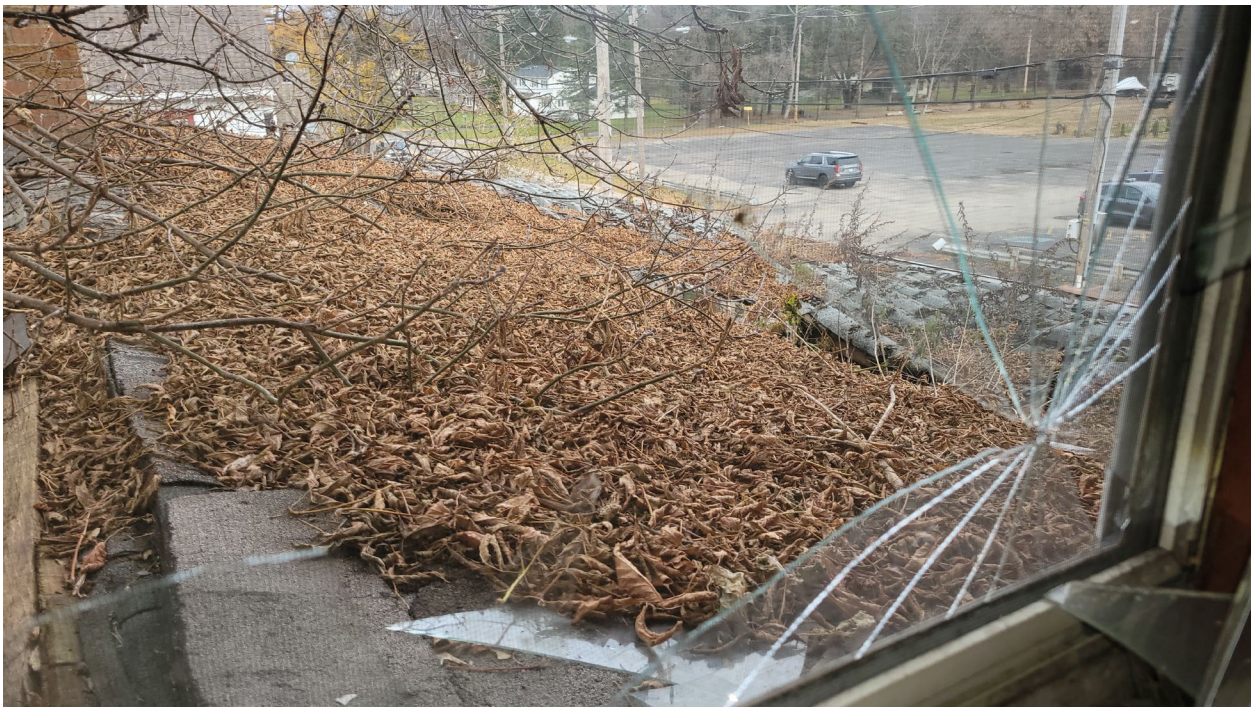


Photo 121: Area 3 roof.

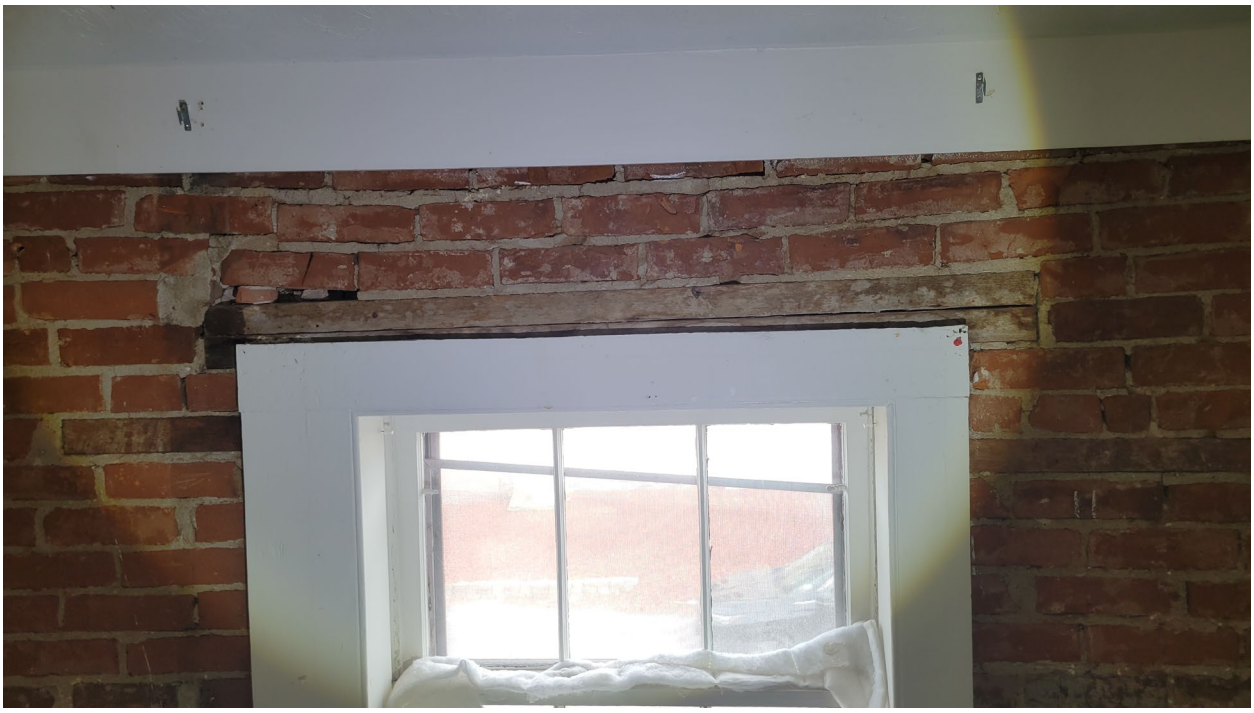


Photo 122:

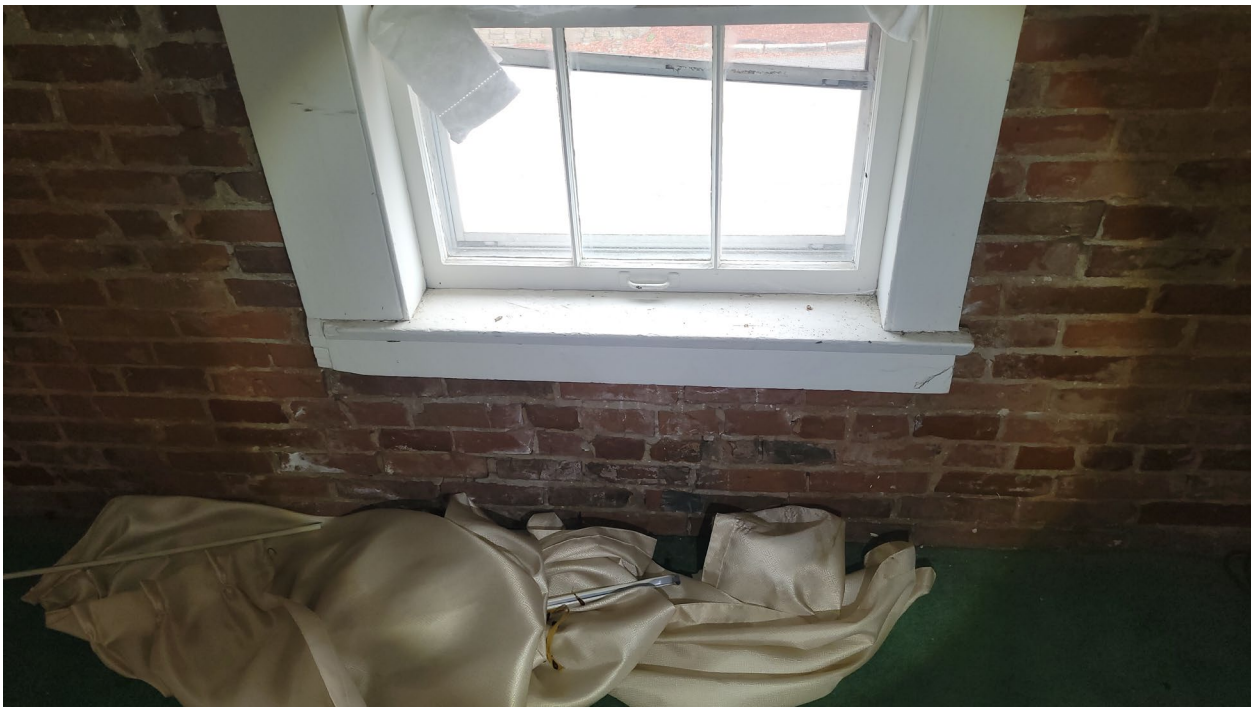


Photo 123:

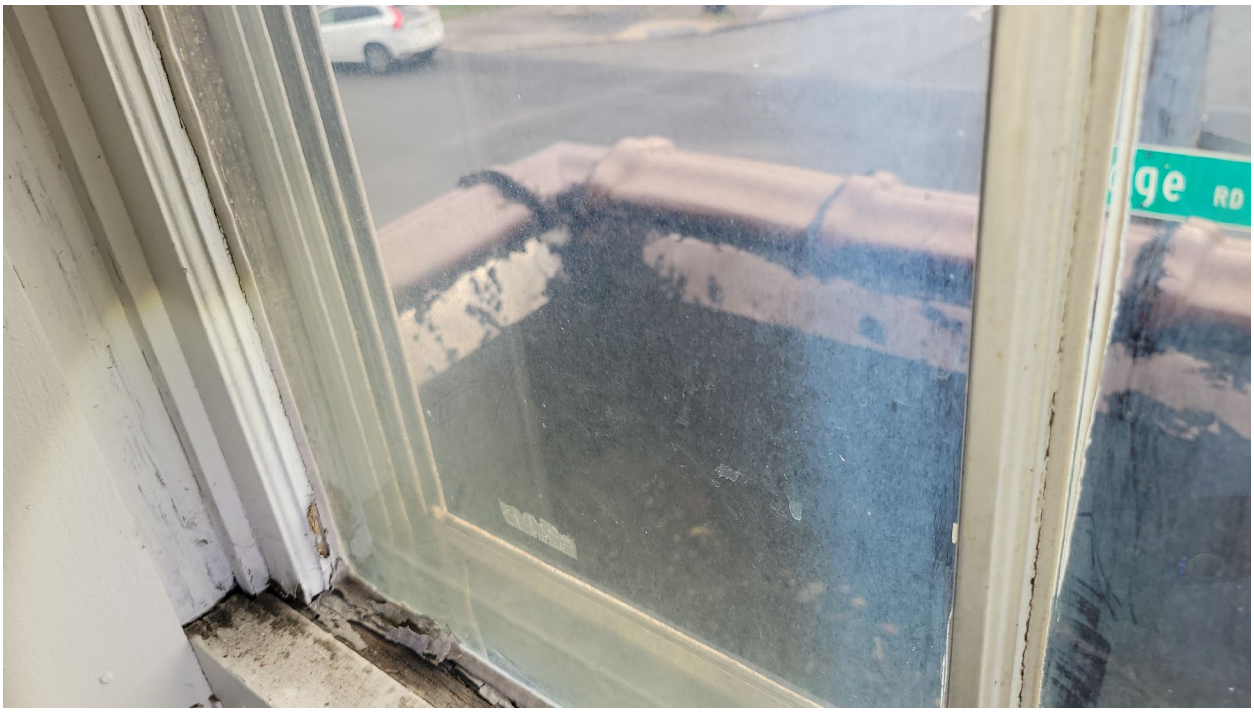


Photo 124:

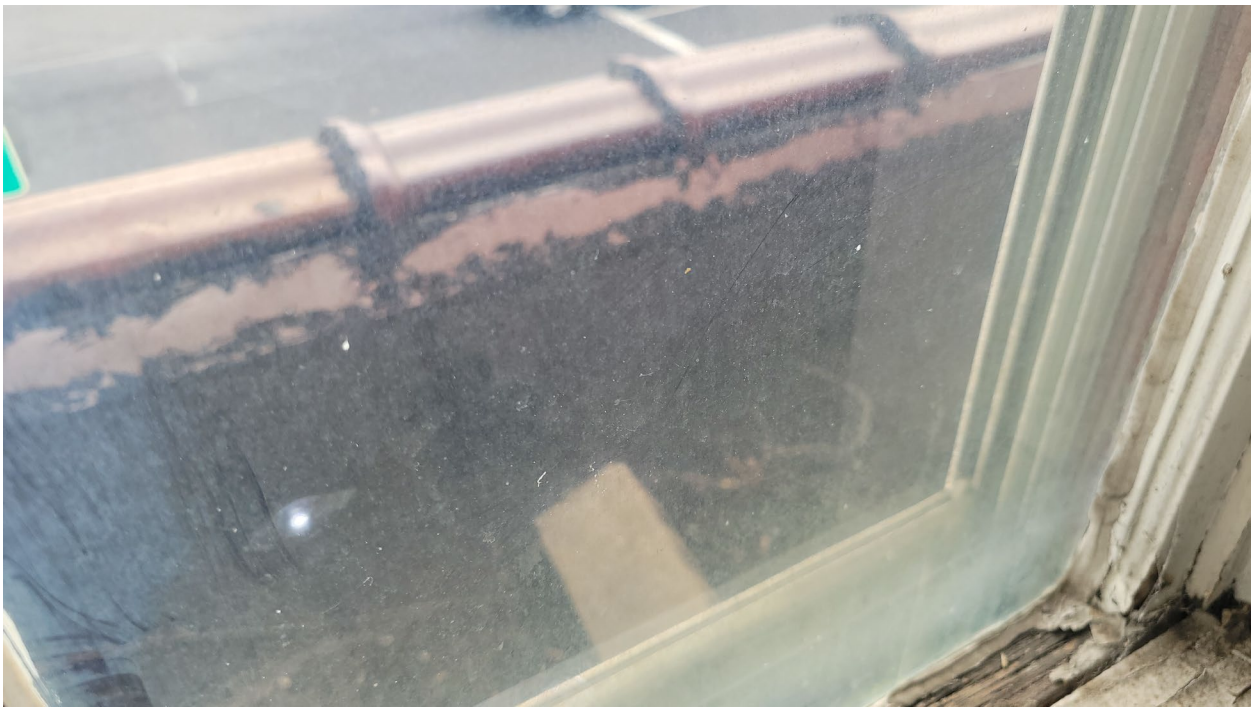


Photo 125:

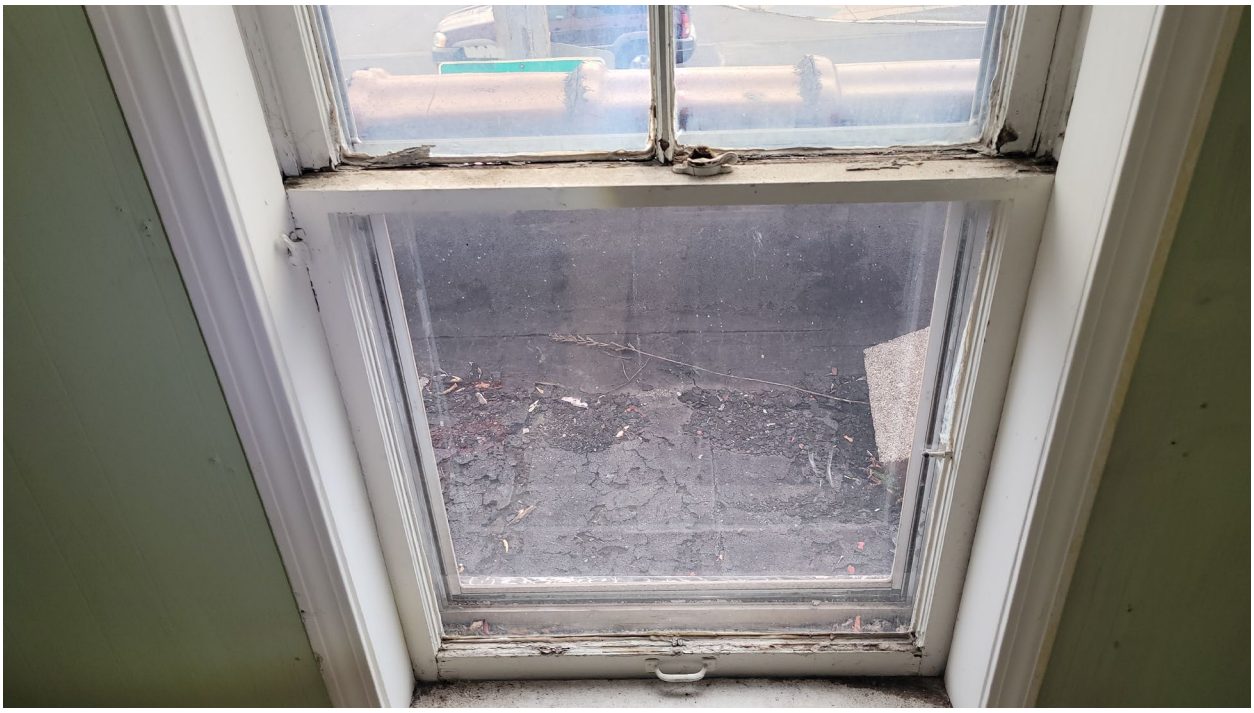


Photo 126:

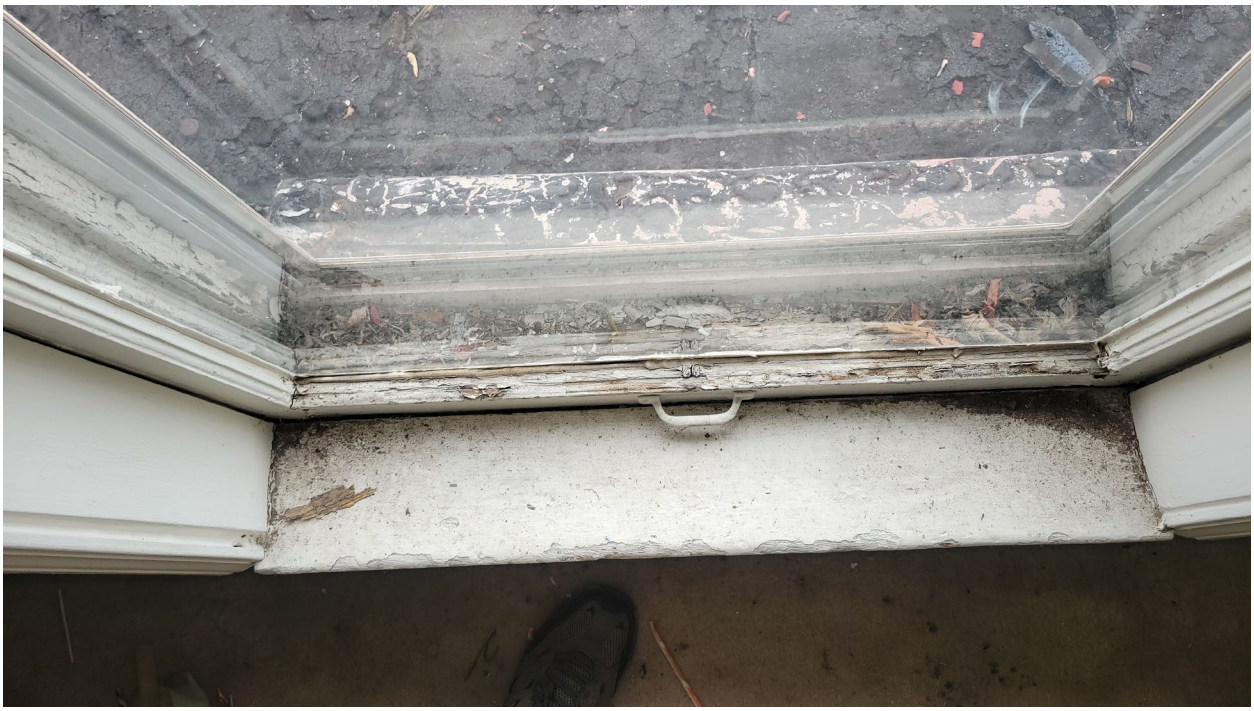


Photo 127:

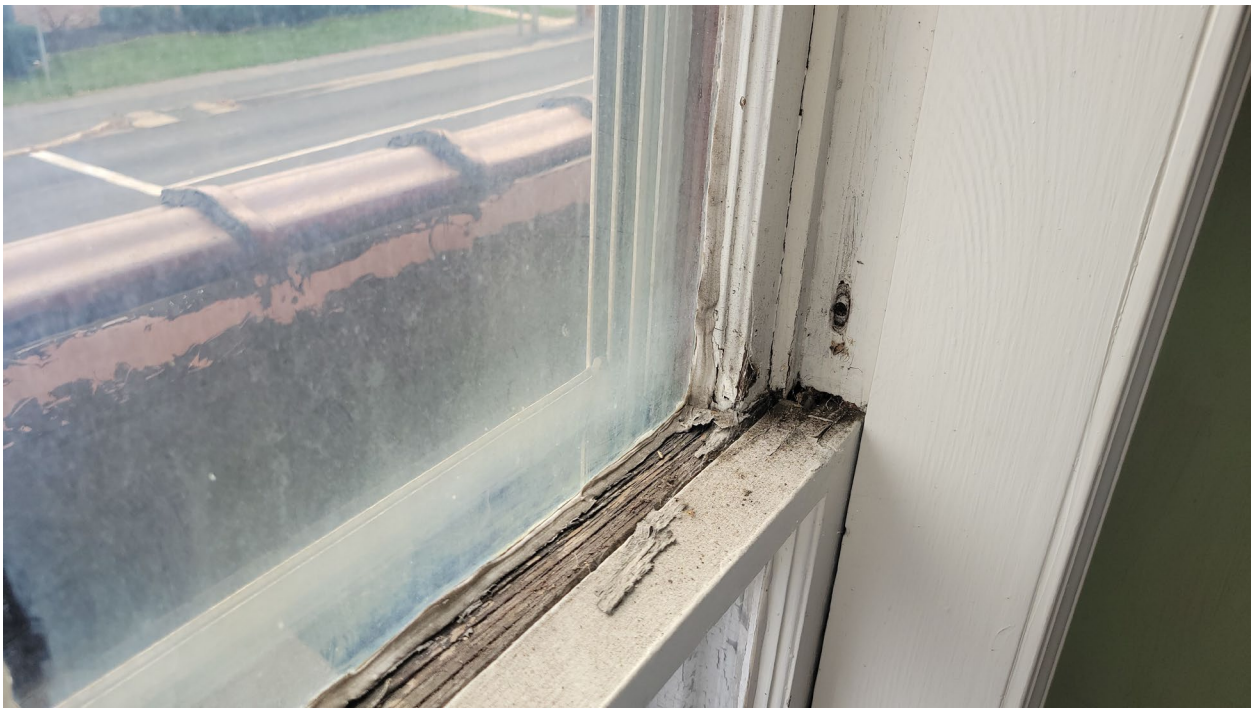
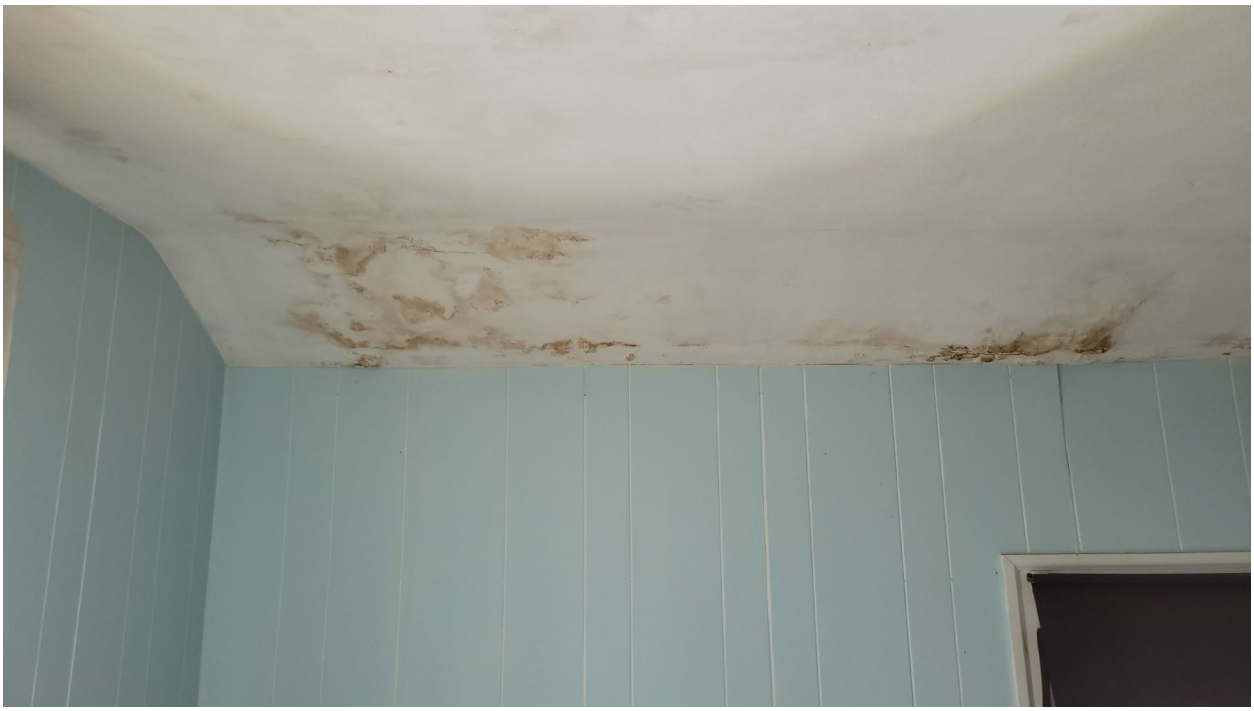


Photo 128:



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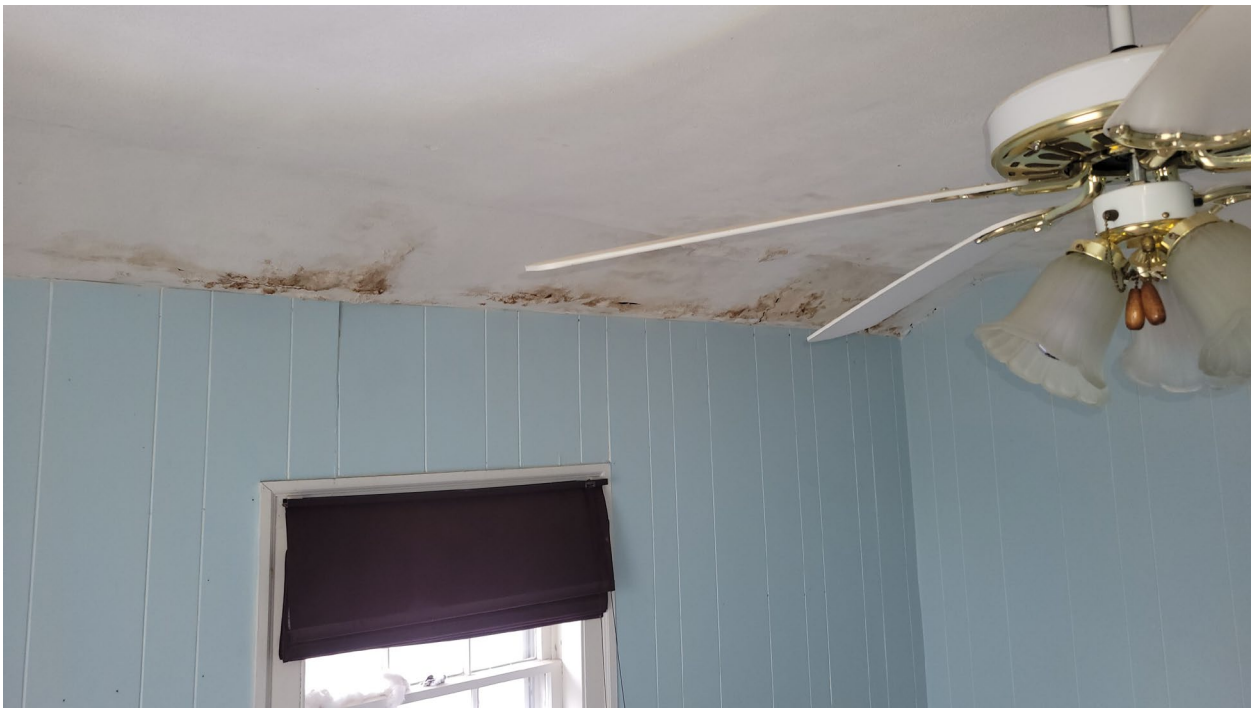


Photo 130:

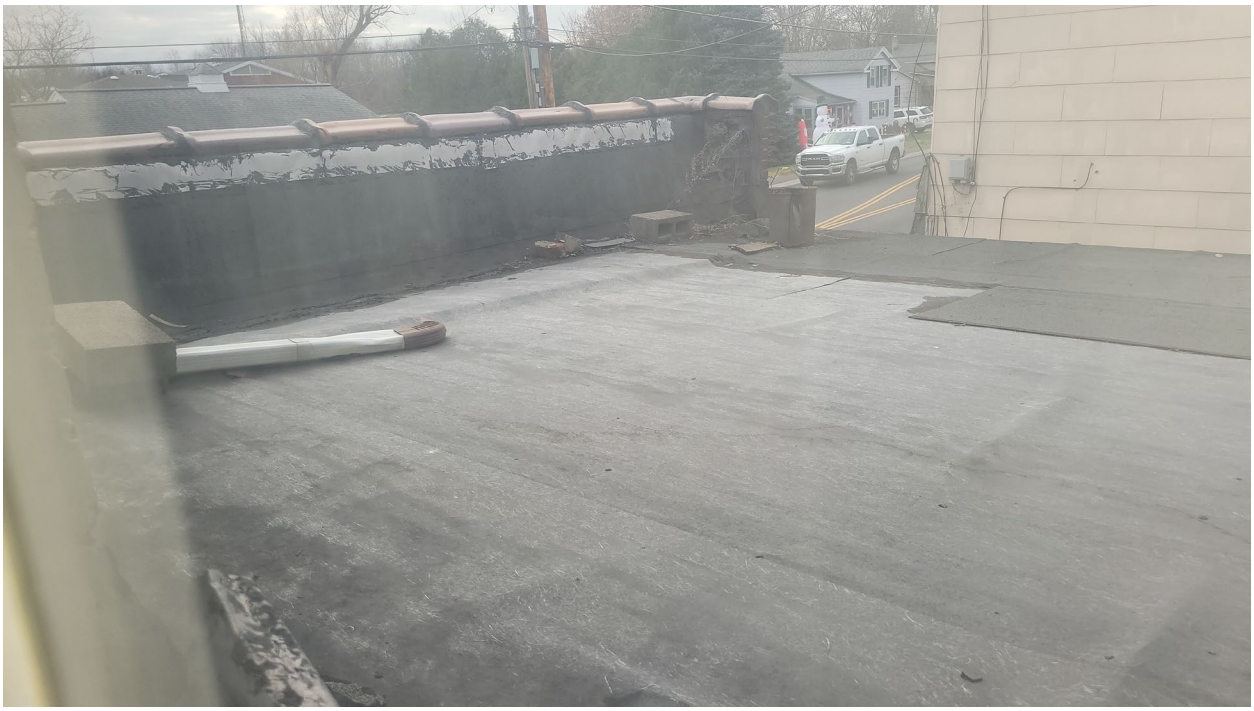


Photo 131:

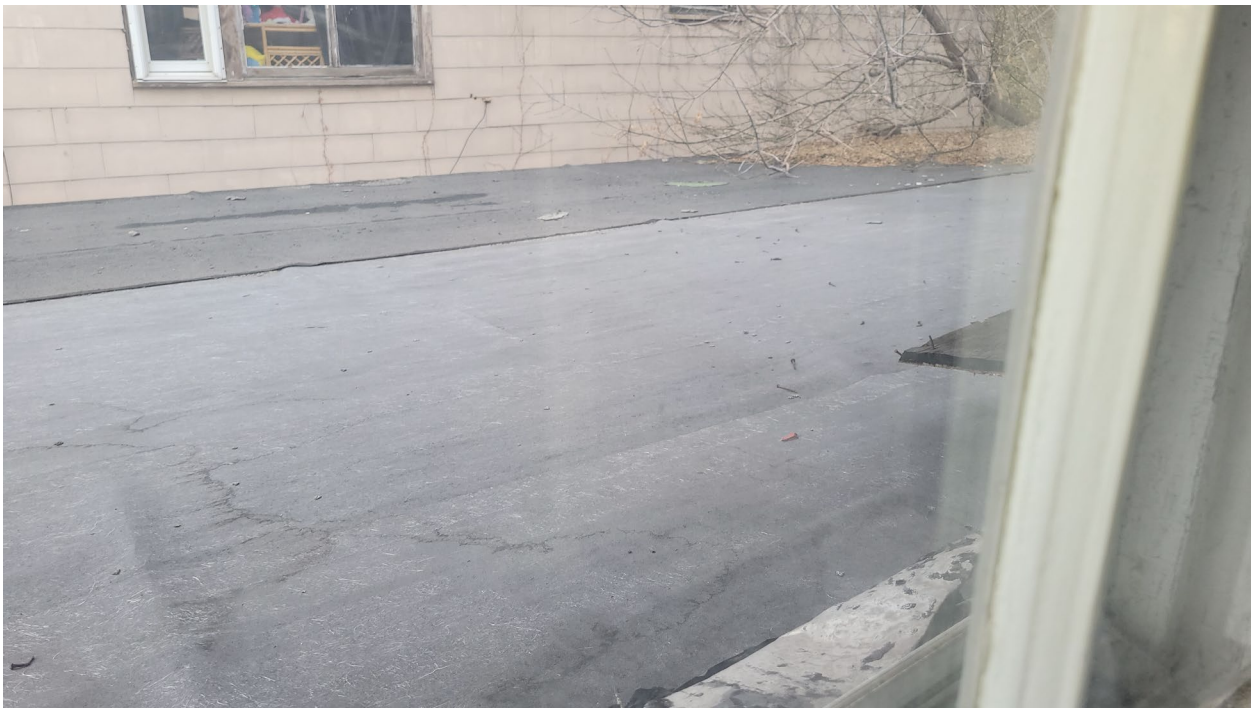


Photo 132:

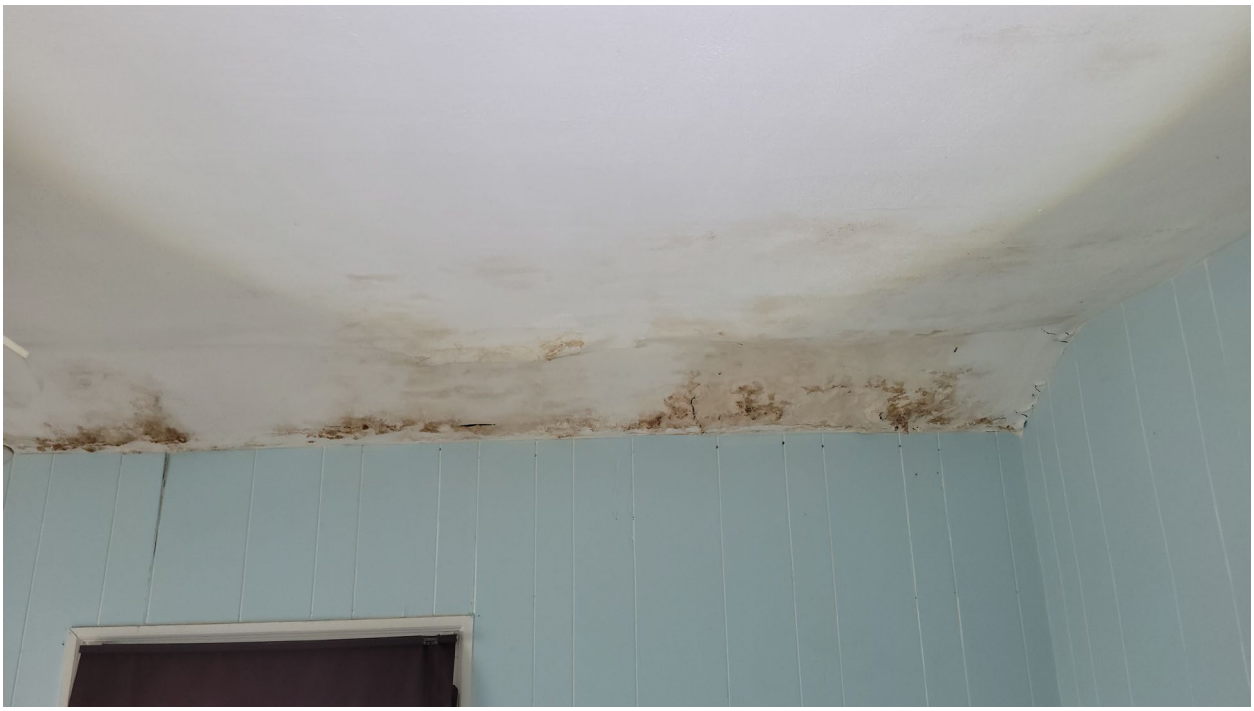


Photo 133:

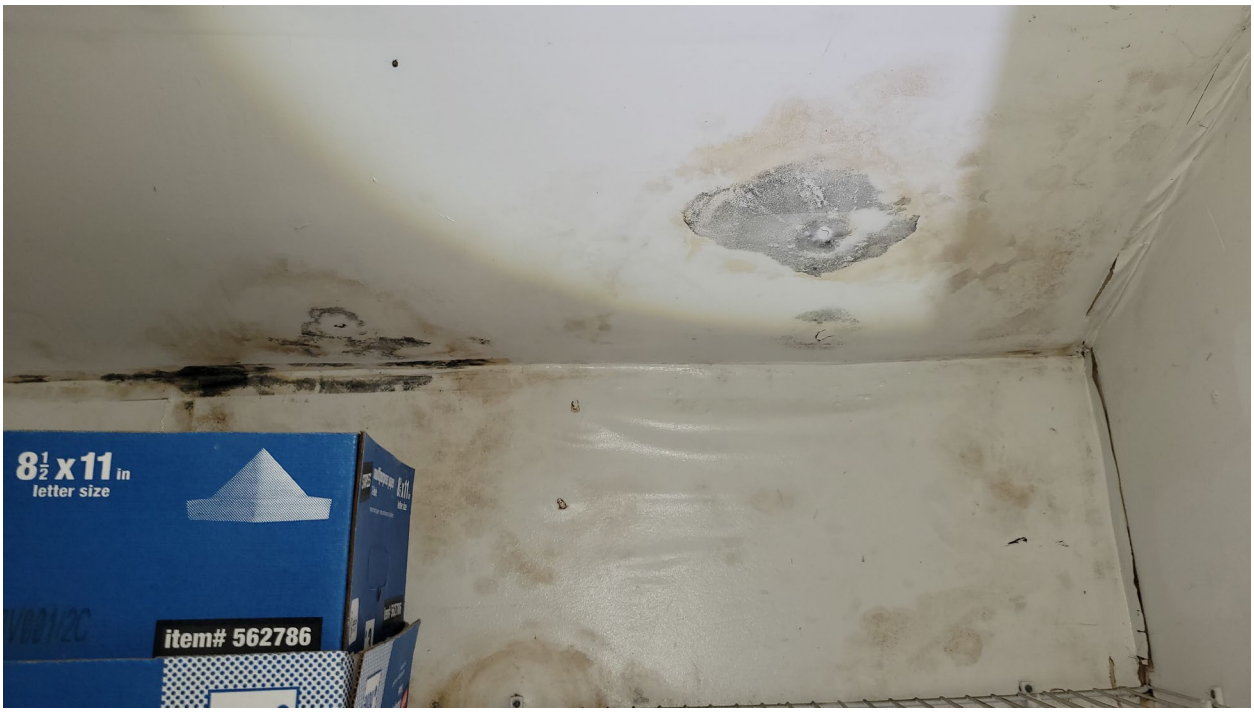
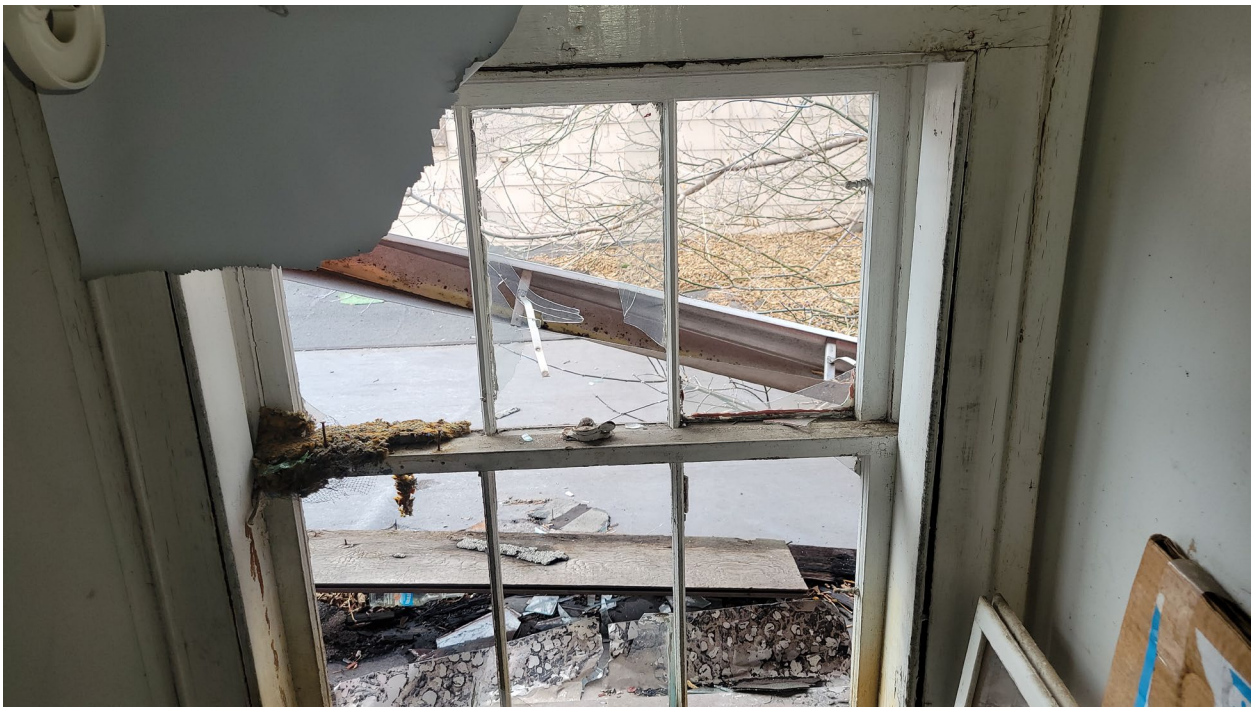


Photo 134:



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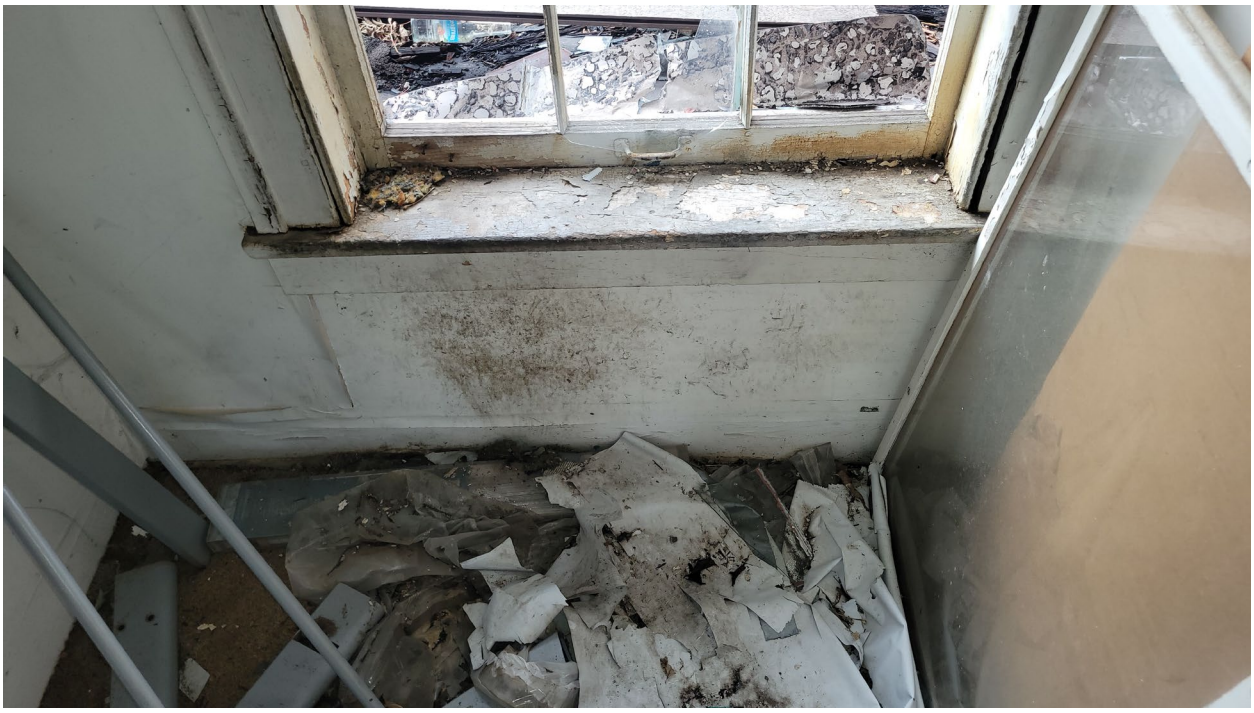

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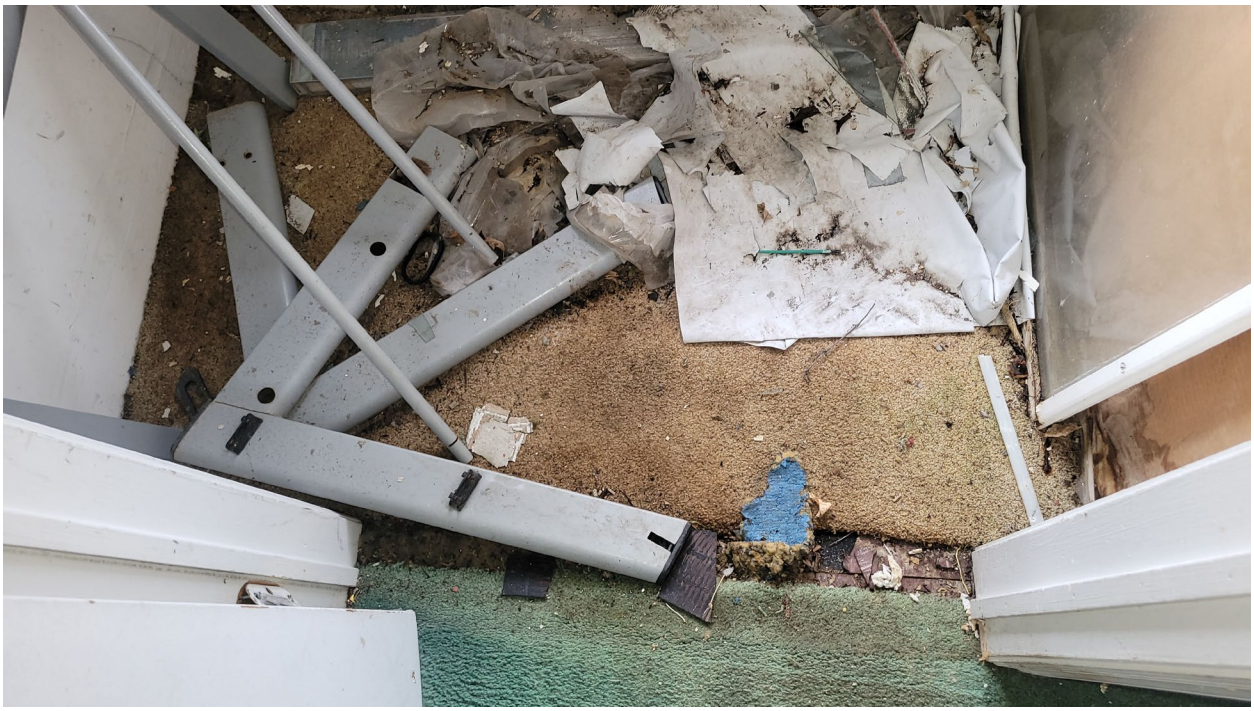

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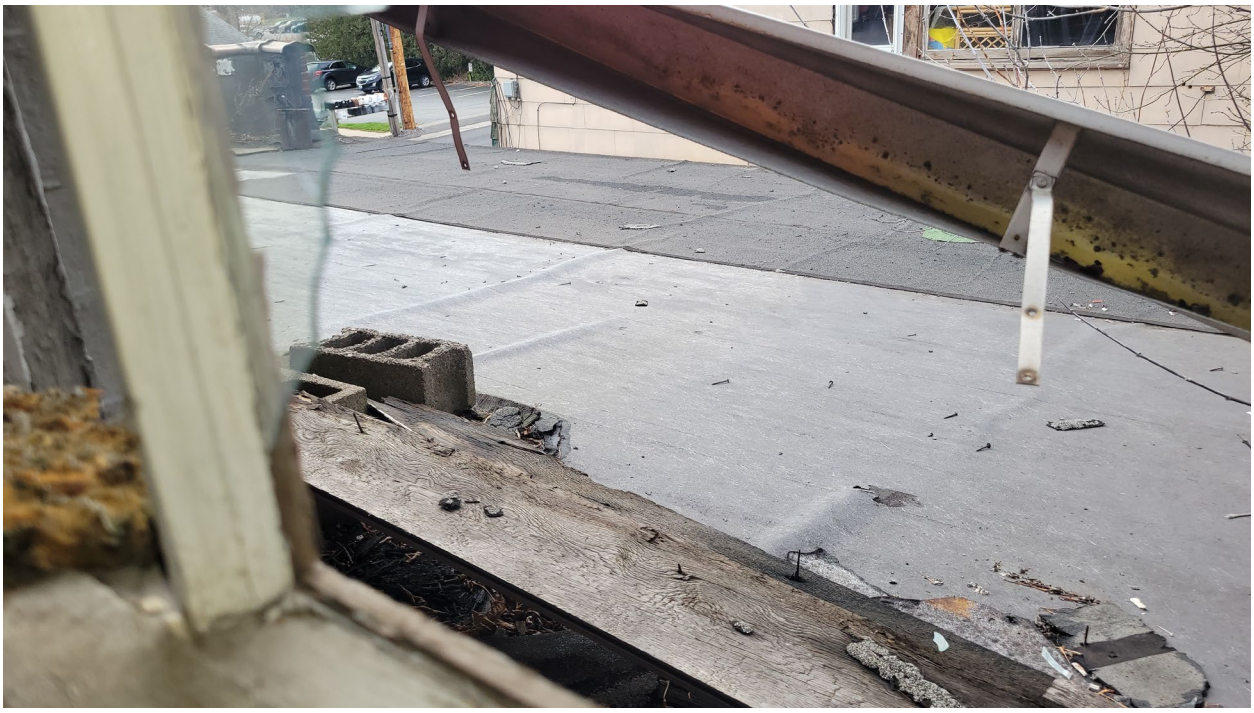

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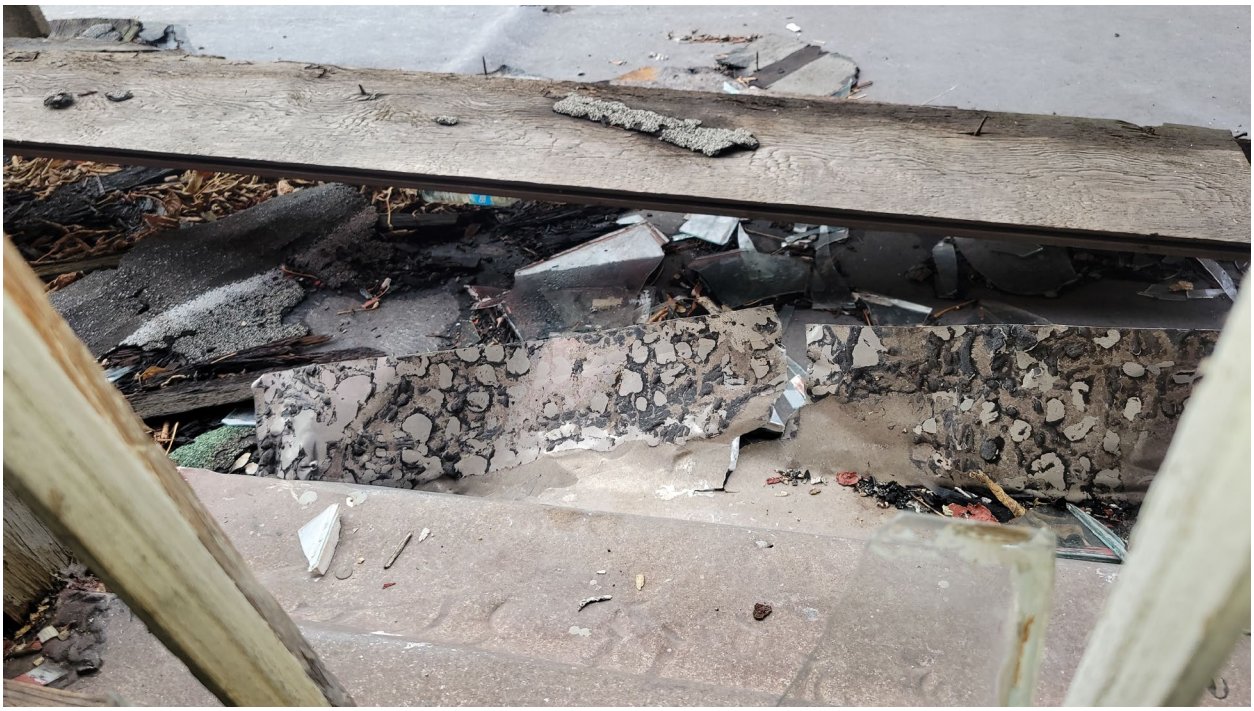


Photo 139:

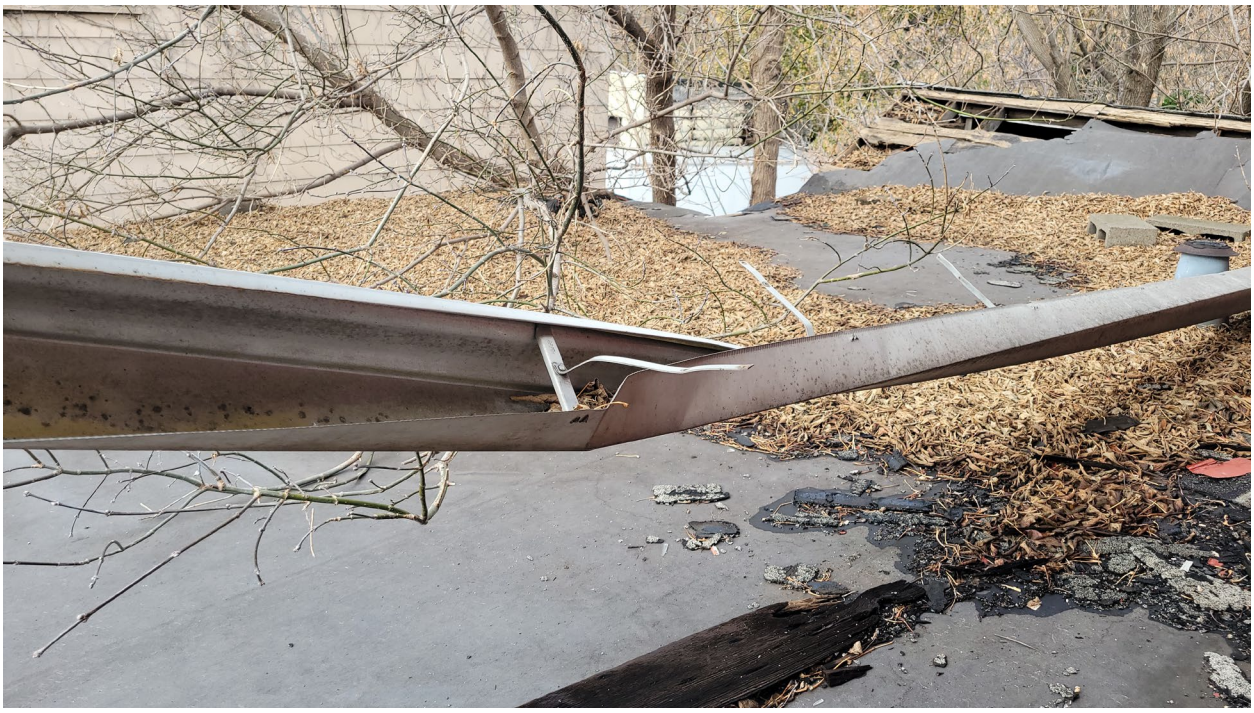


Photo 140: Area 4 roof.

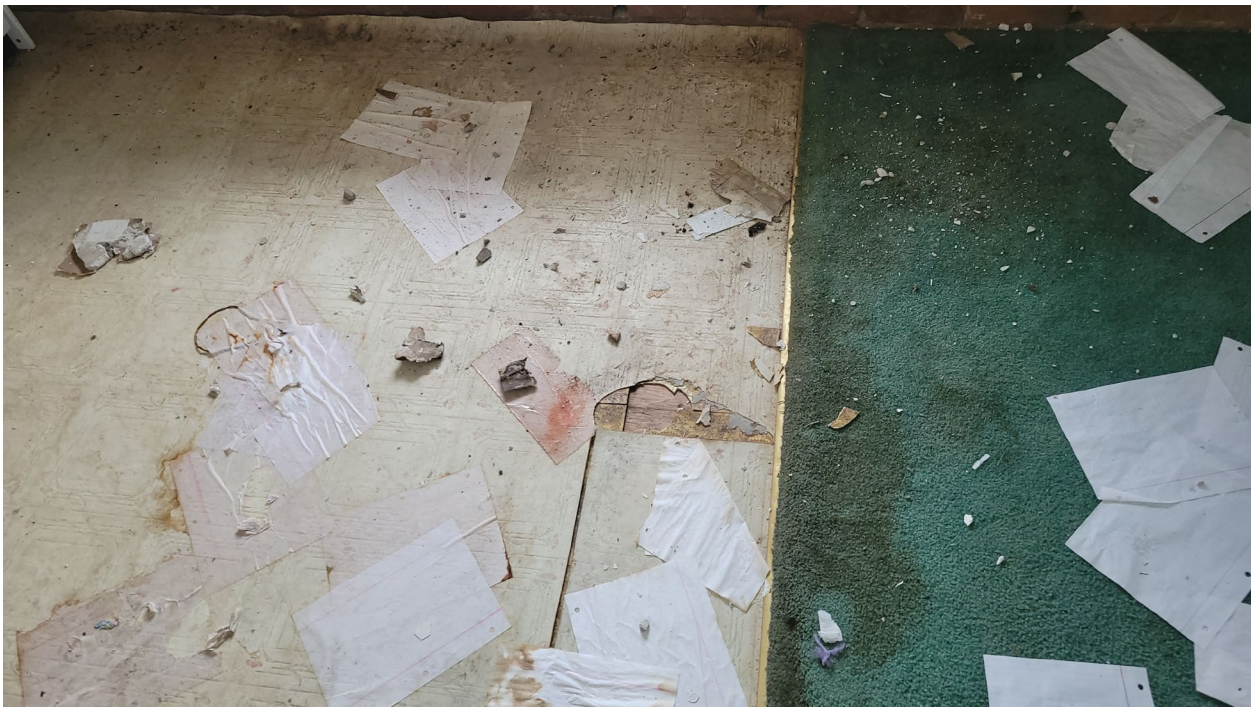


Photo 141:

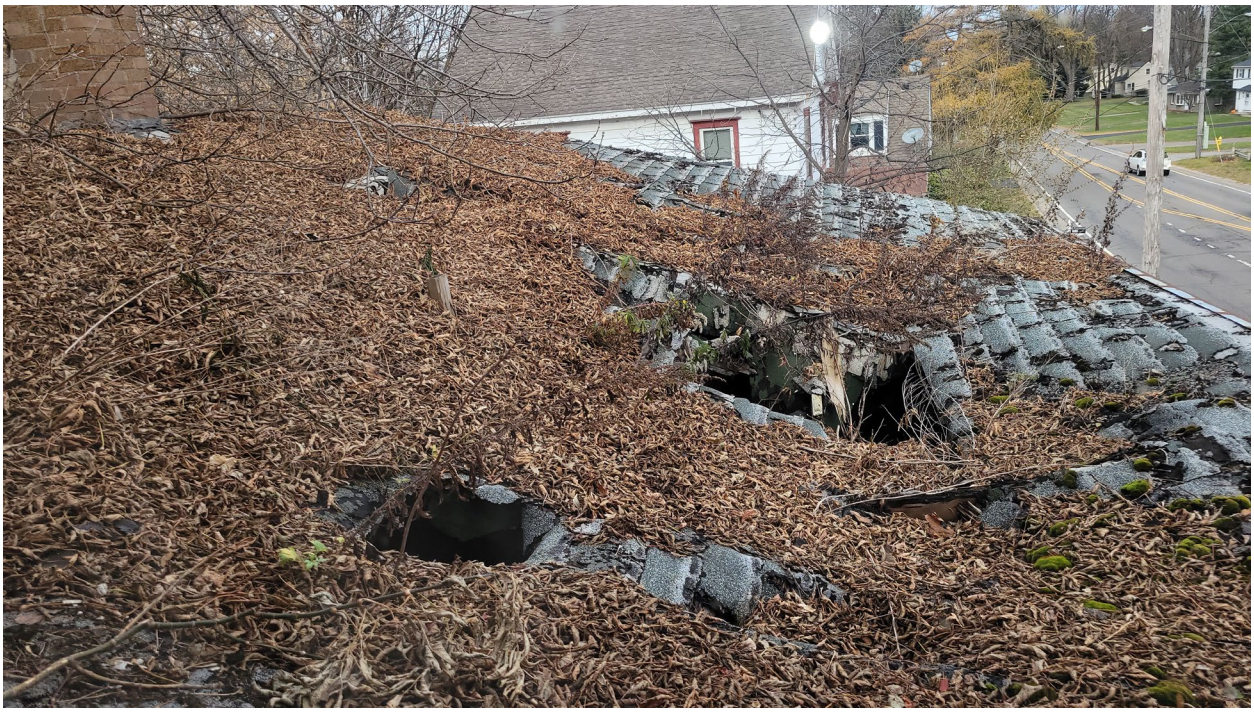


Photo 142: Area 3 roof.

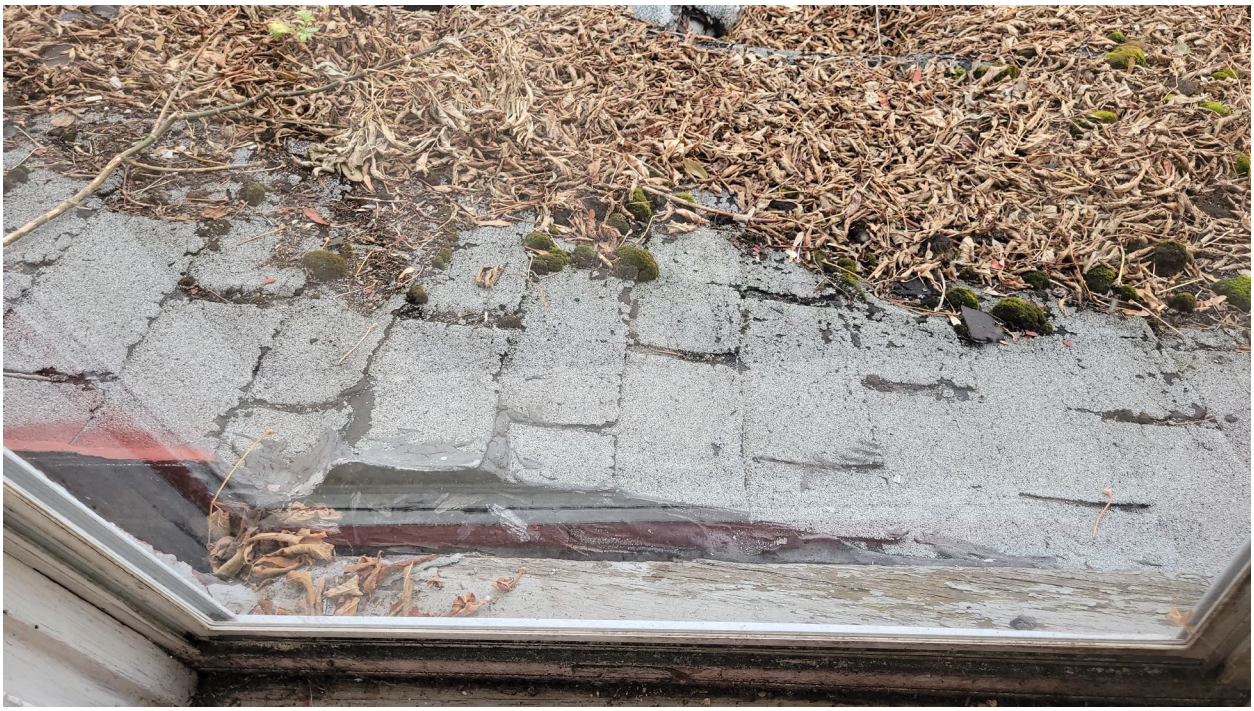


Photo 143:

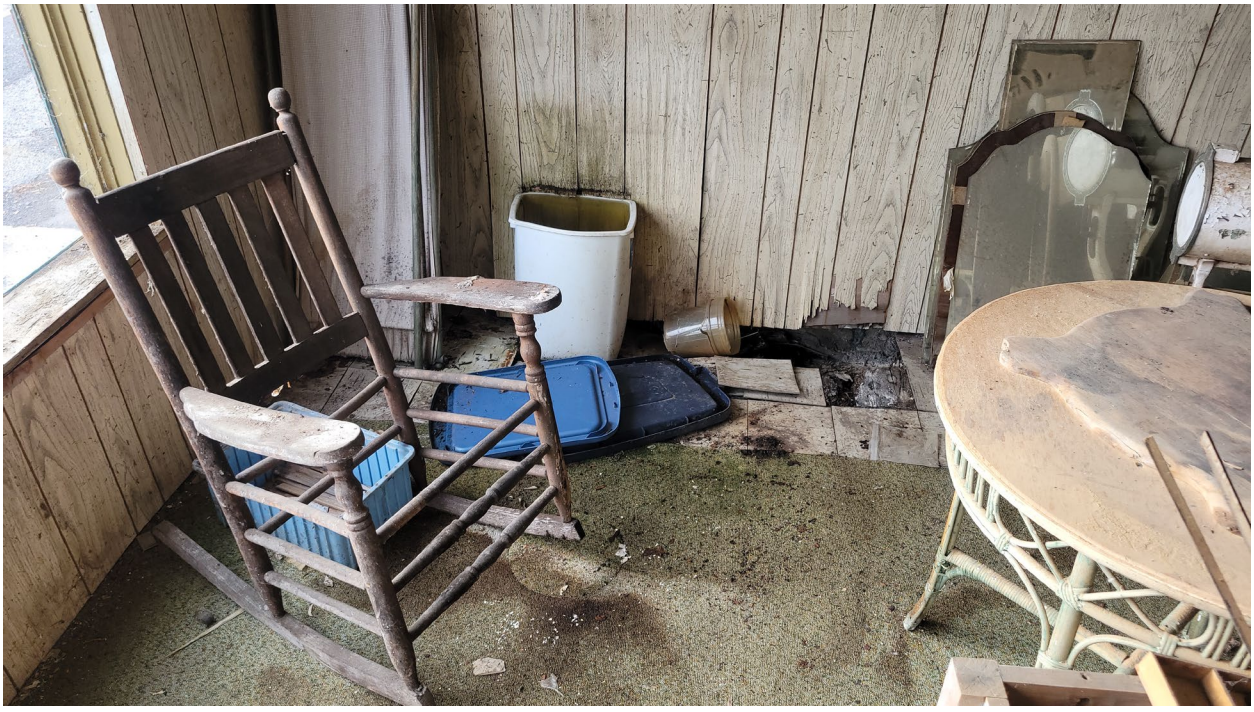


Photo 144: Area 2, see note 4.

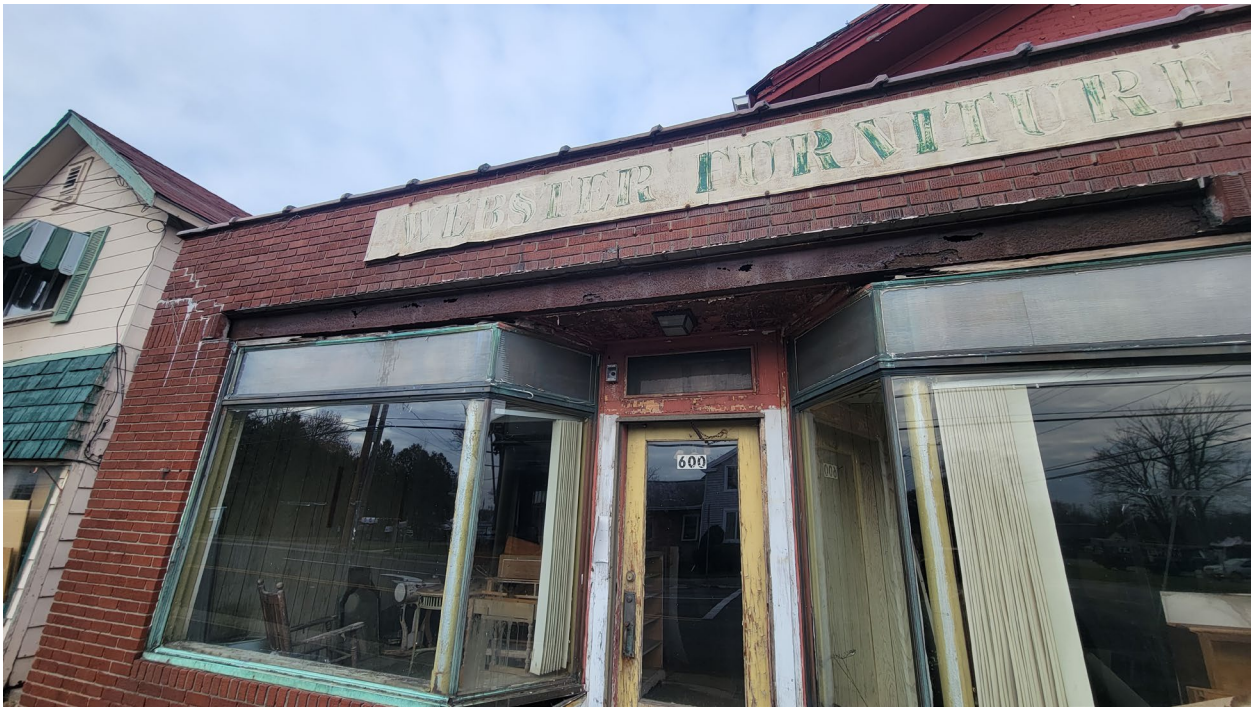


Photo 145: Steel lintel needs to be replaced, see note 8.

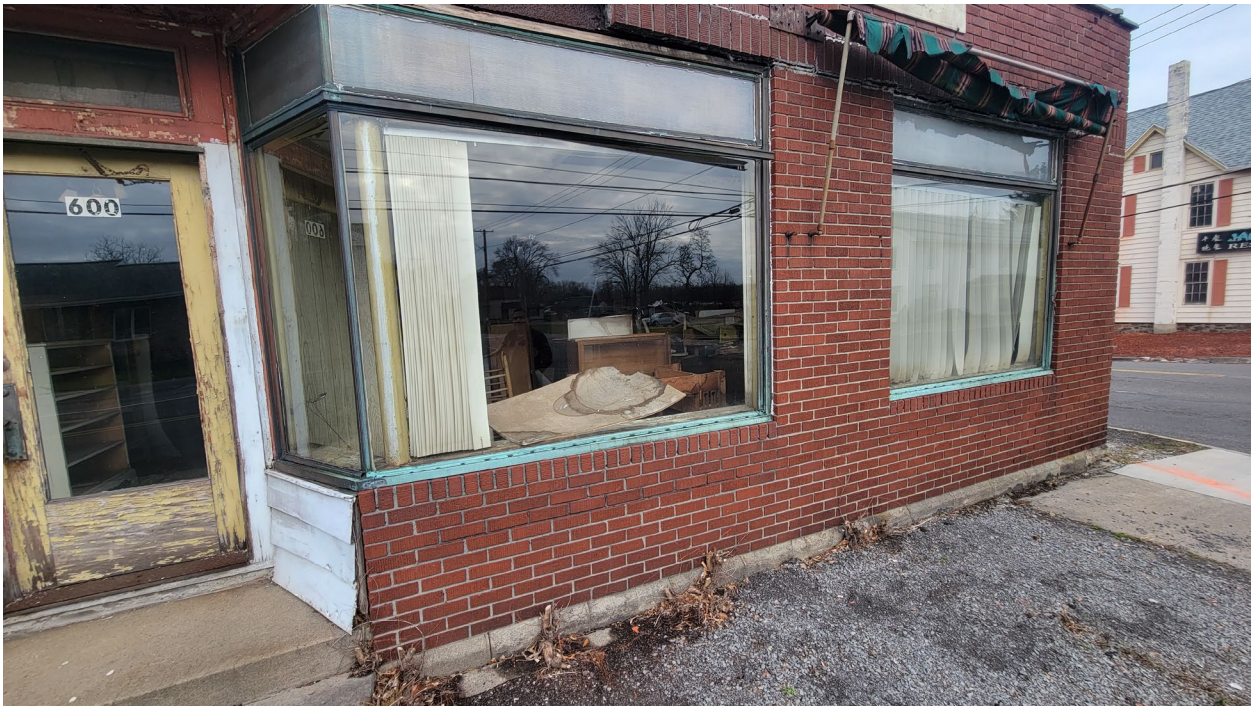


Photo 146:

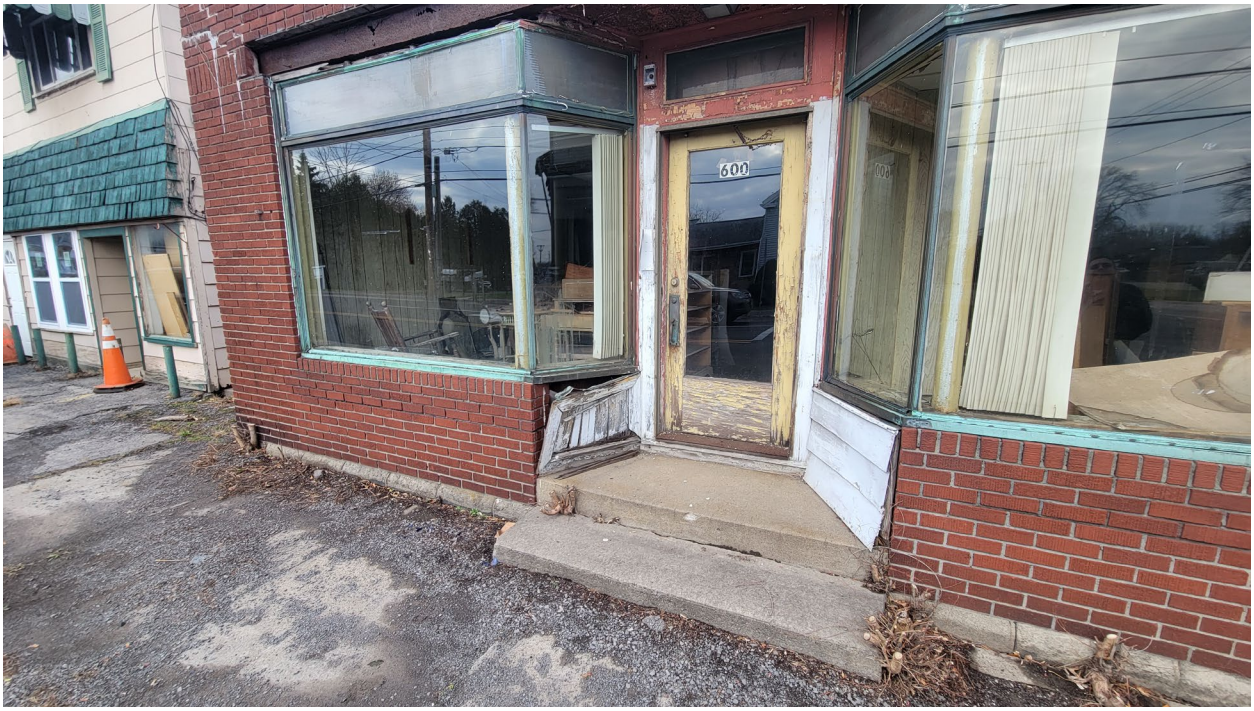
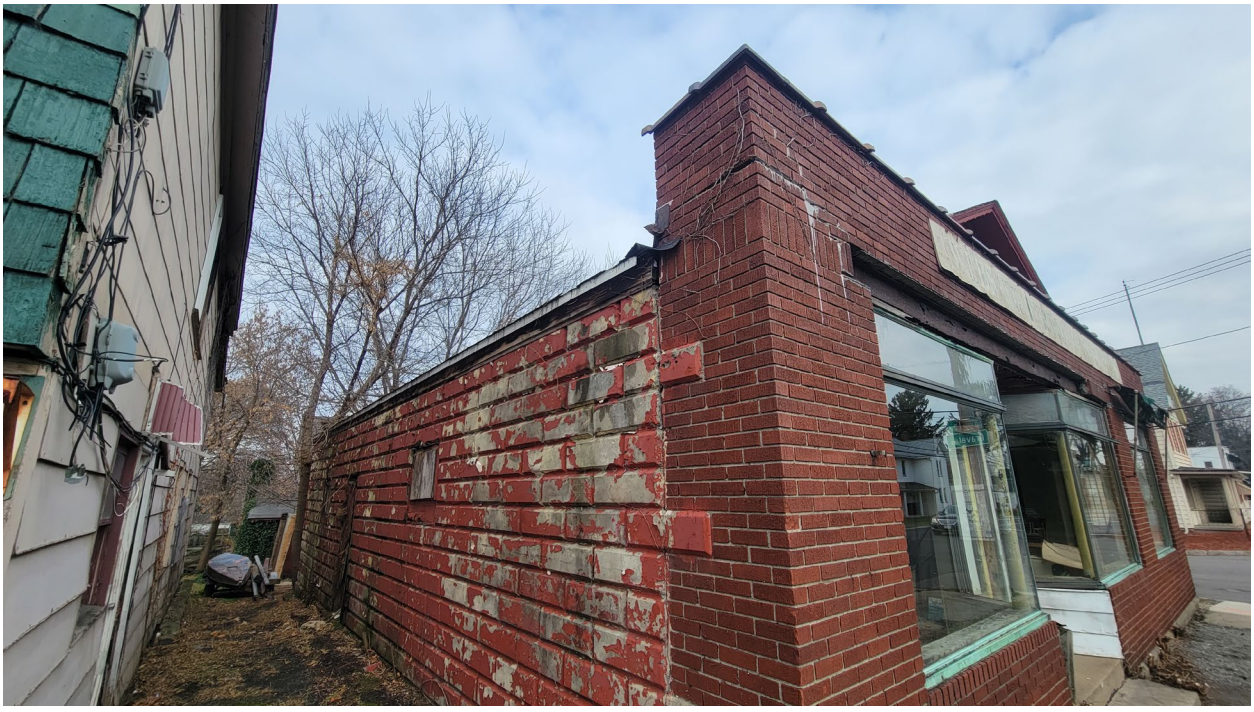


Photo 147:



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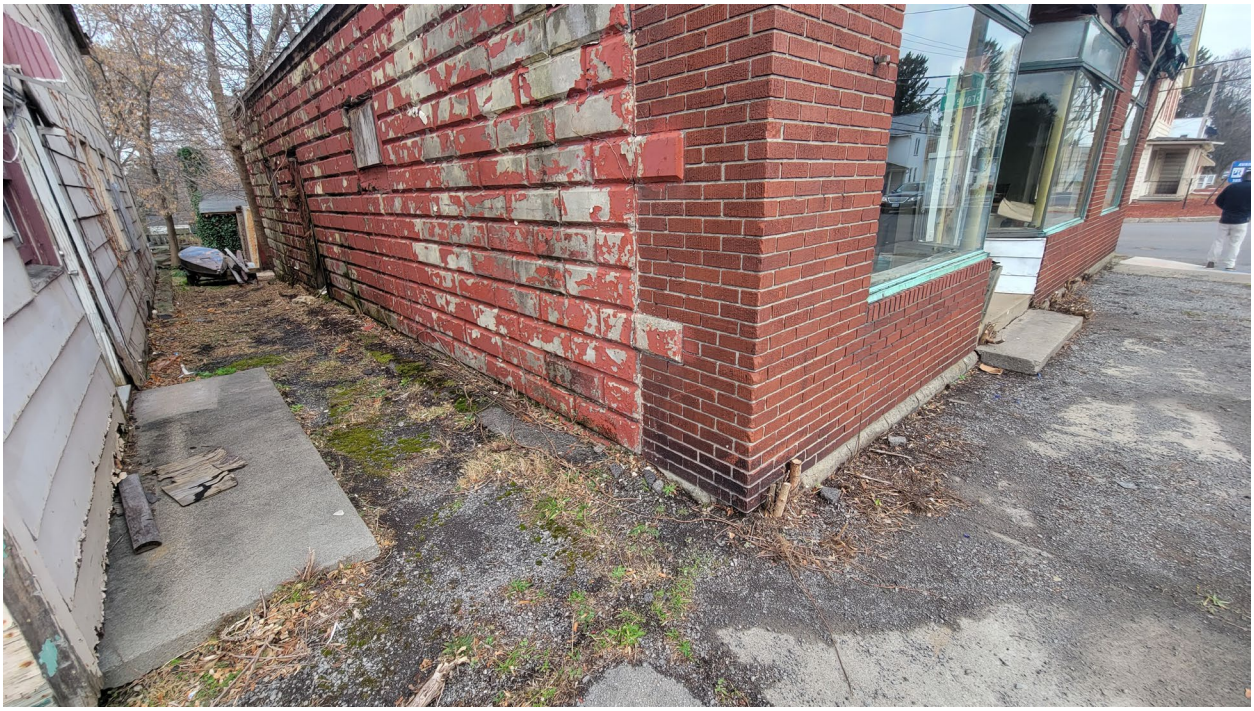

Photo 149:

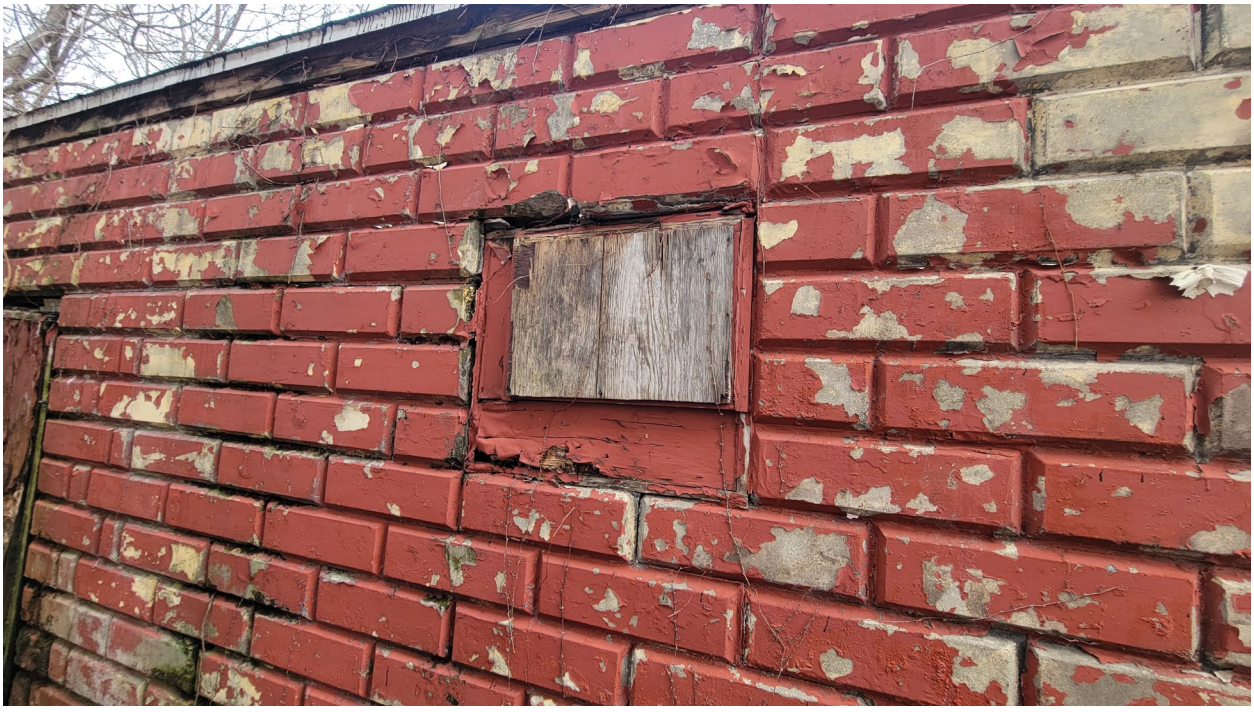

Photo 150:

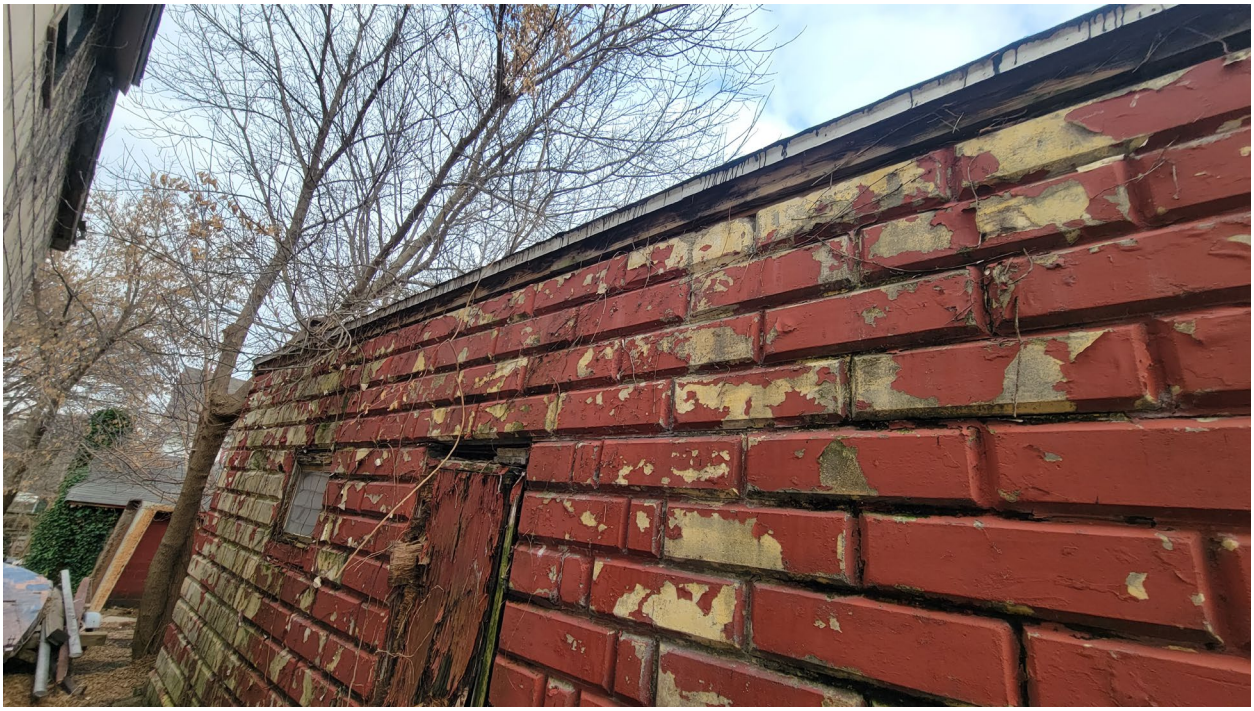

Photo 151:

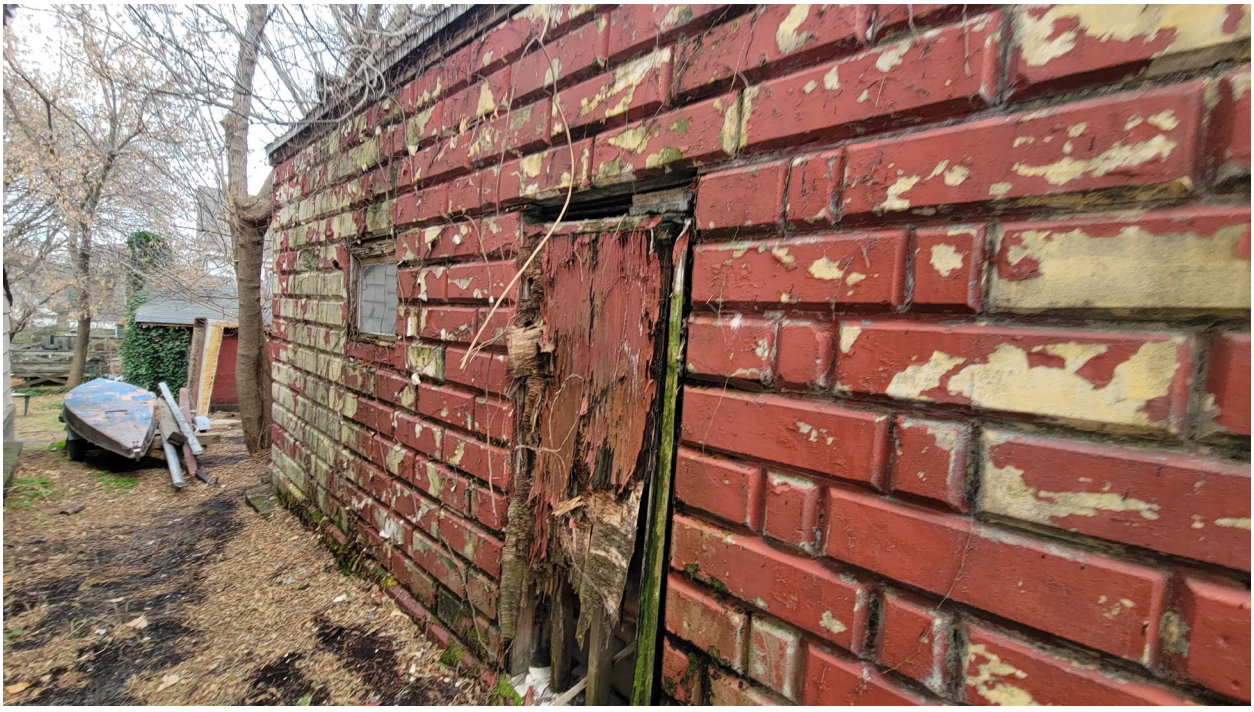

Photo 152: Remove all rotted wood from exterior and infill opening to be watertight.

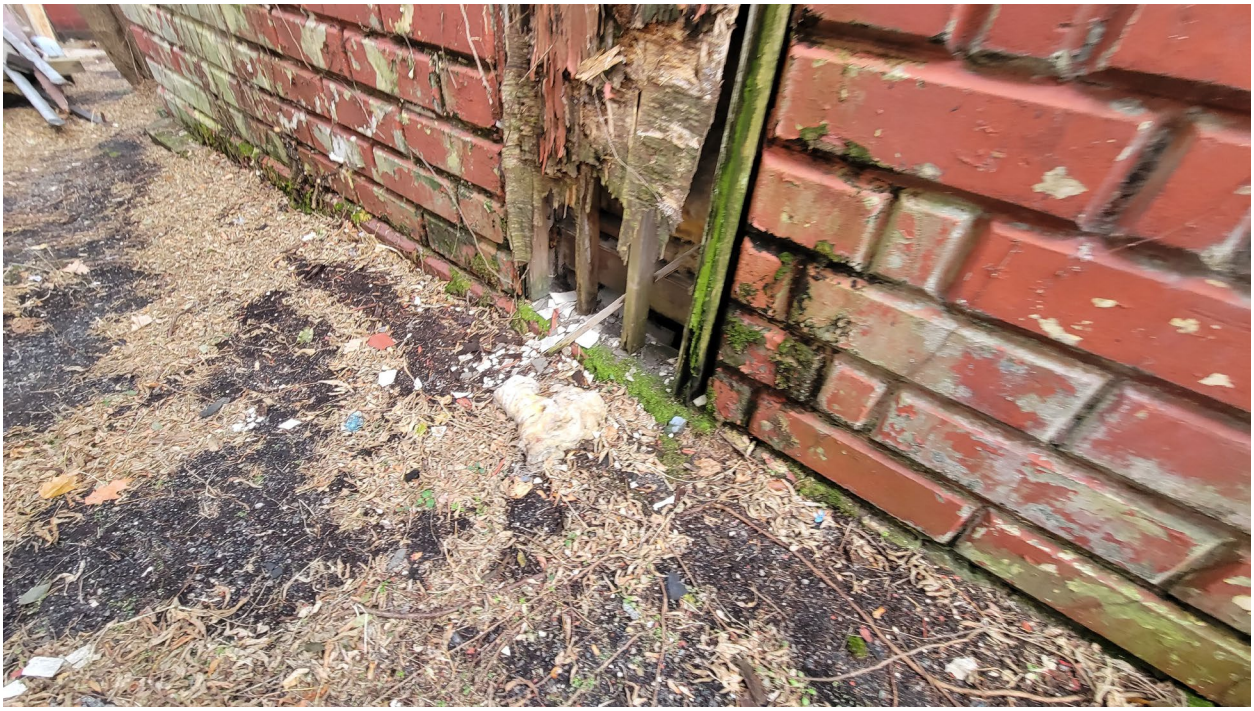

Photo 153:

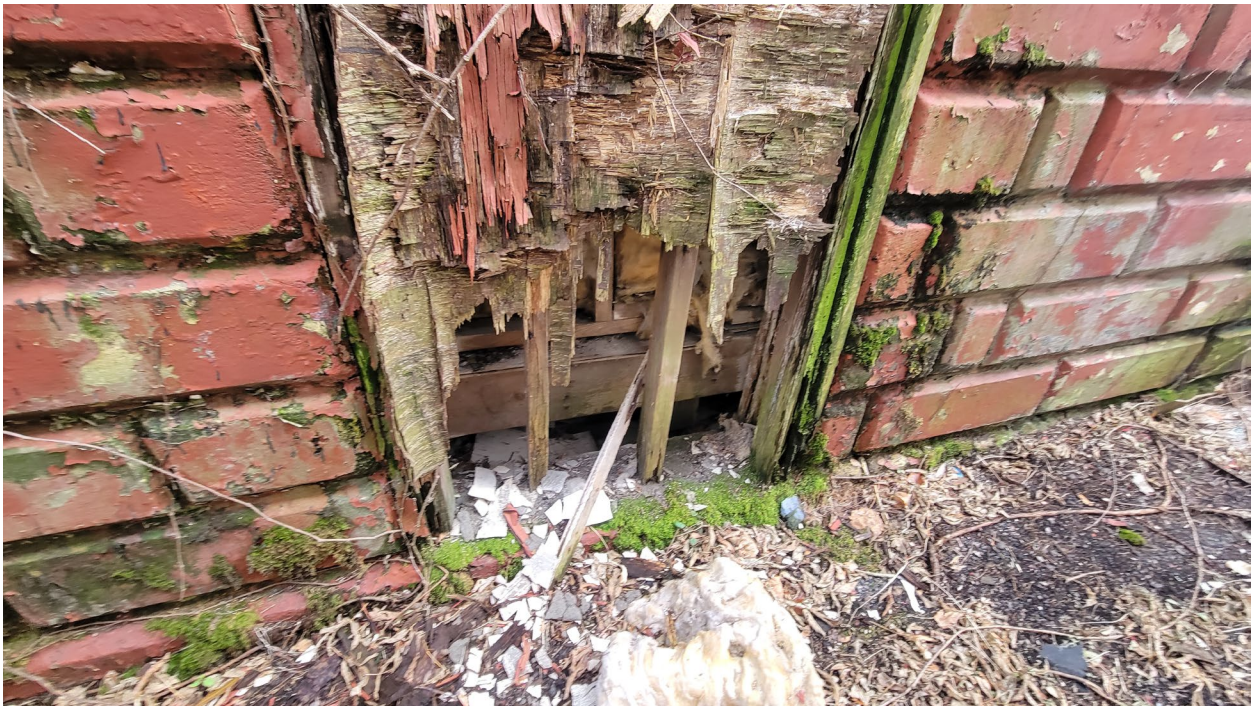

Photo 154:

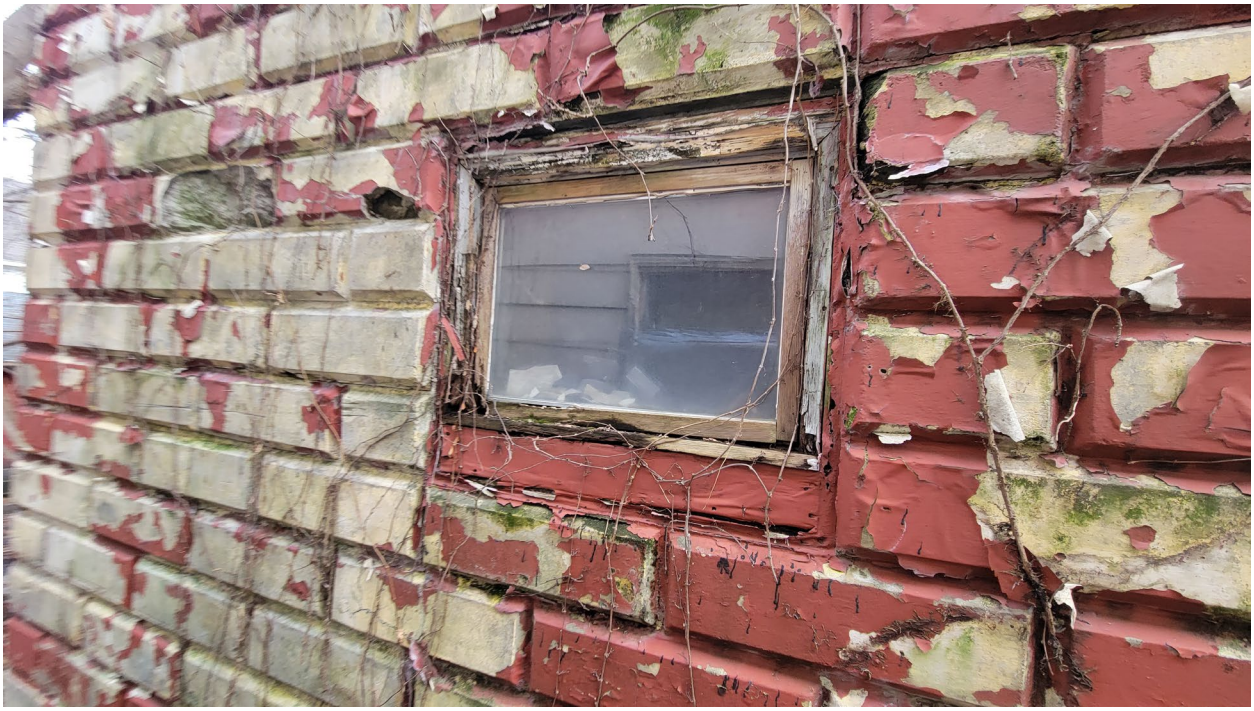

Photo 155: Recommended to replace window with glass block.

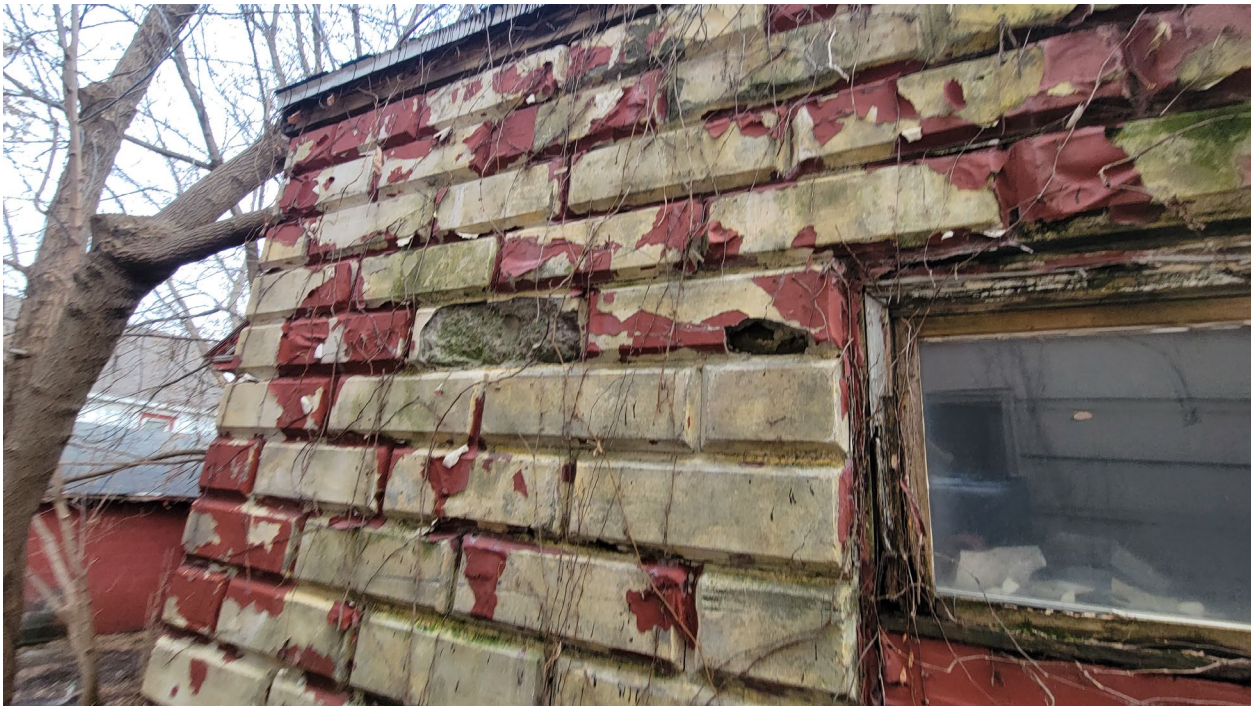

Photo 156: Repoint face of exterior block to prevent moisture degradation.

Photo 157: It is recommended to install gutters and replace the rotted eave plate with new pressure treated lumber in kind.

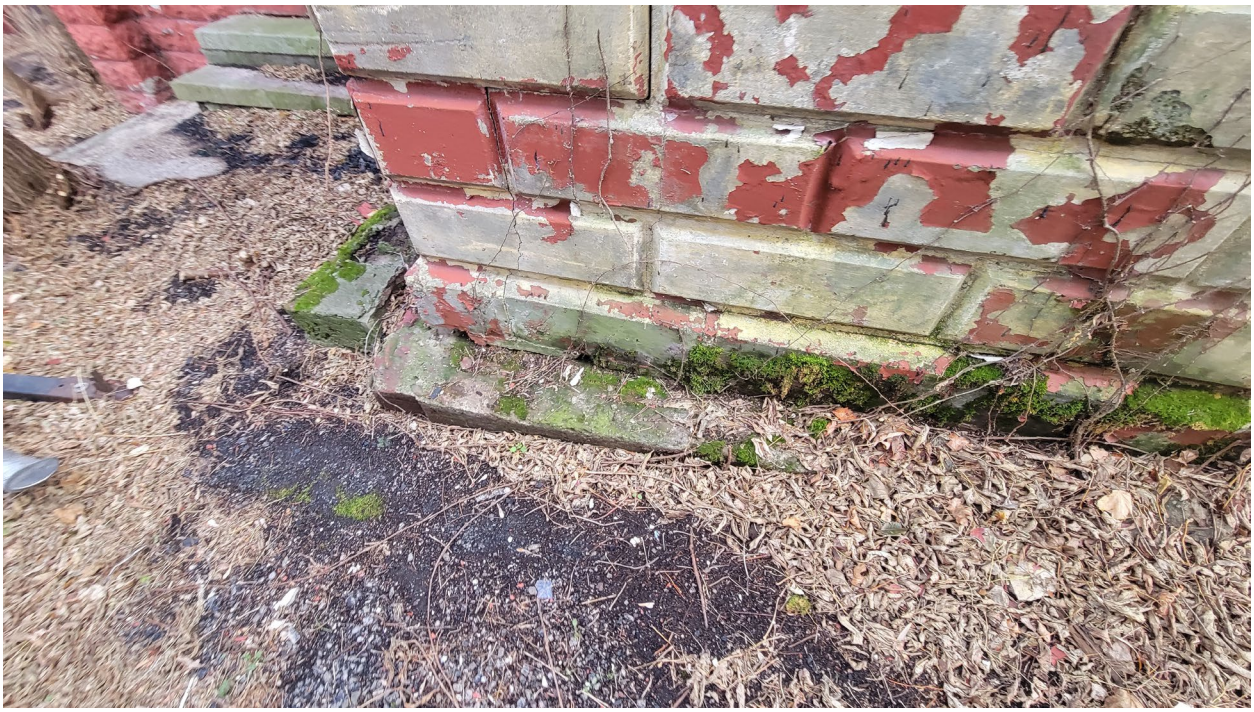

Photo 158: Clean all moss off of foundation blocks and repoint cracks or fill with an epoxy sealant.

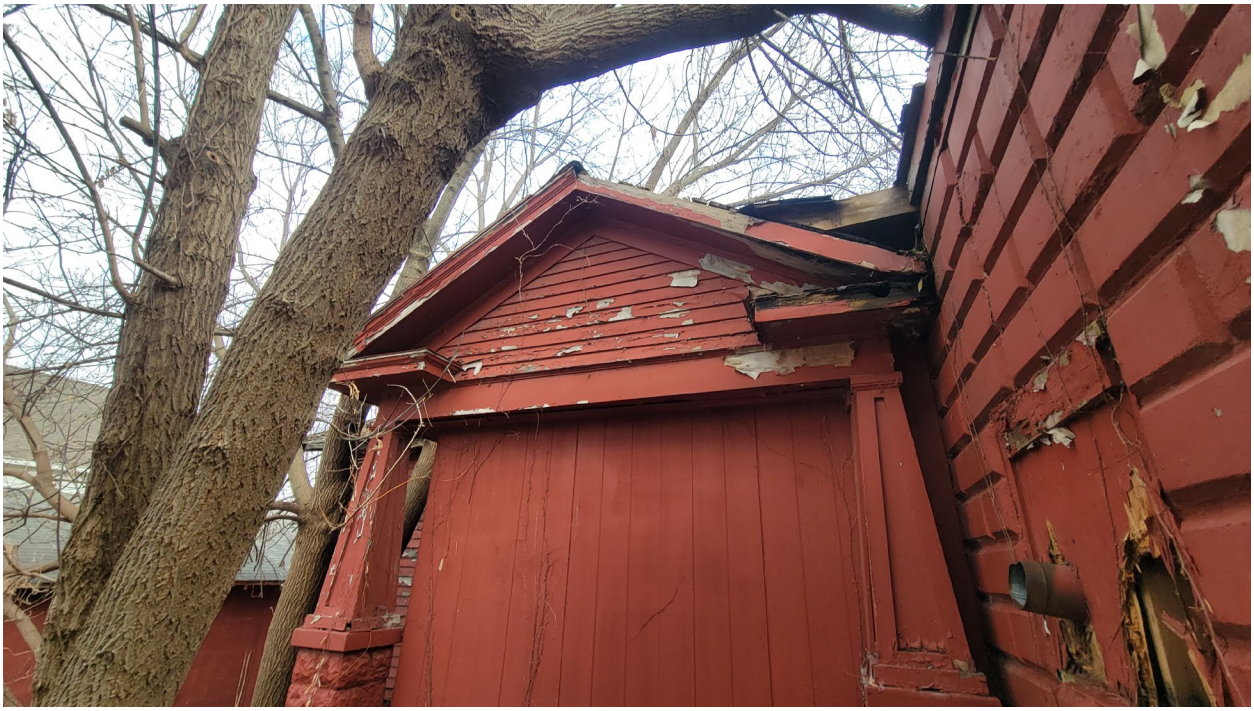

Photo 159:

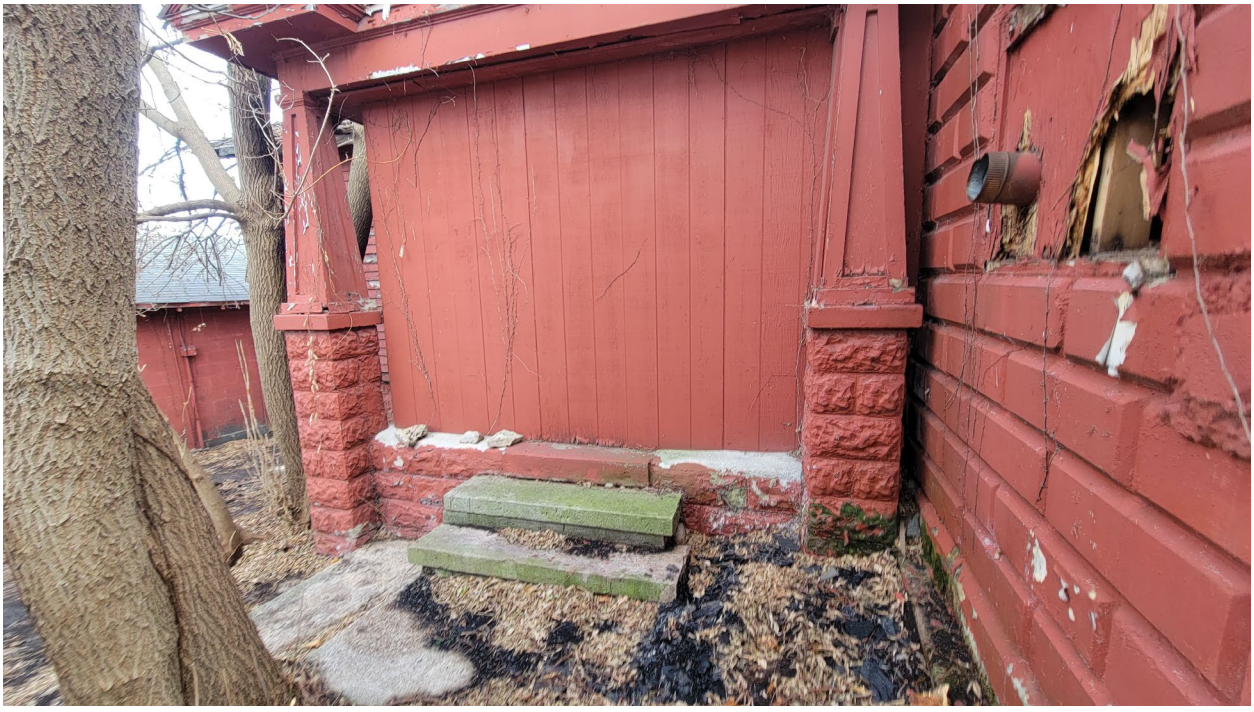

Photo 160:

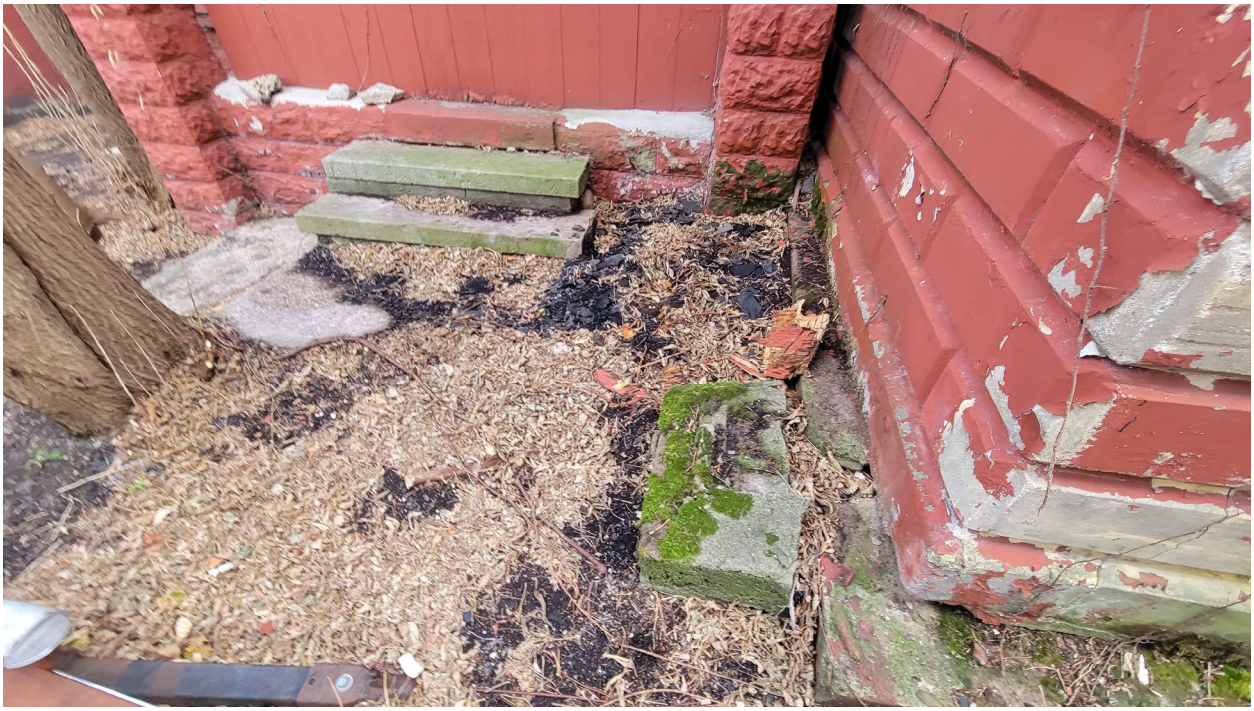

Photo 161:

Photo 162:

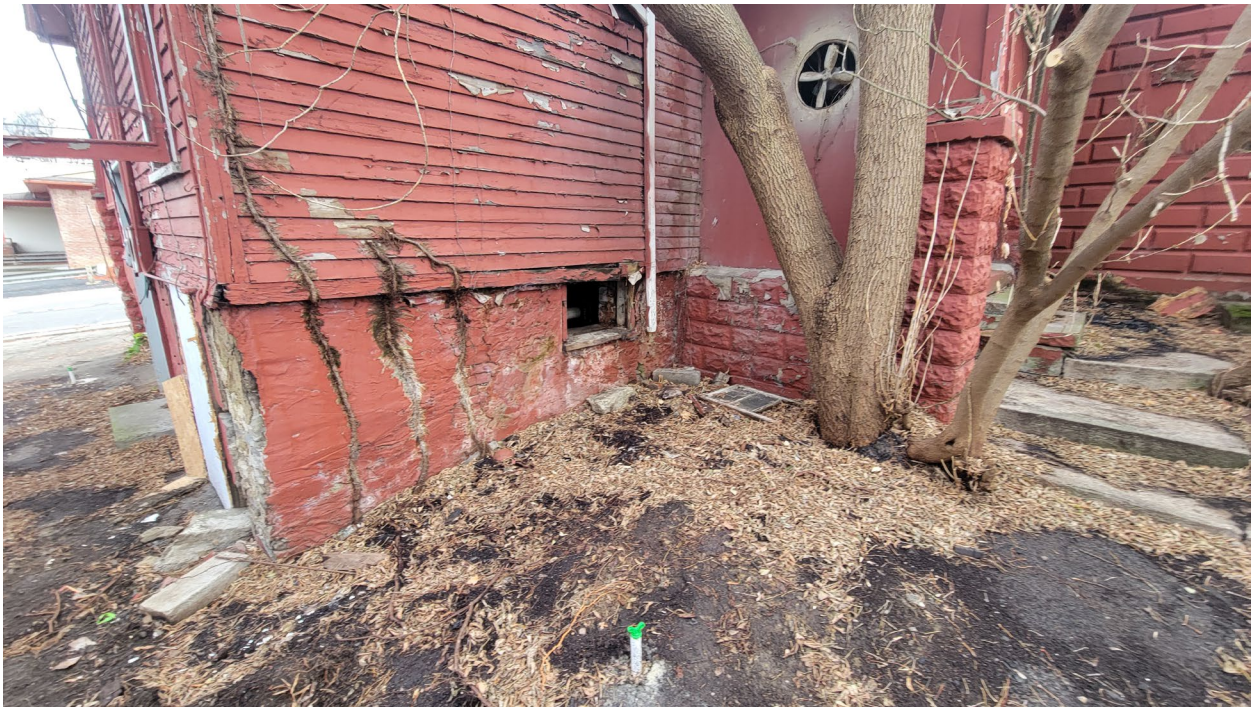

Photo 163:

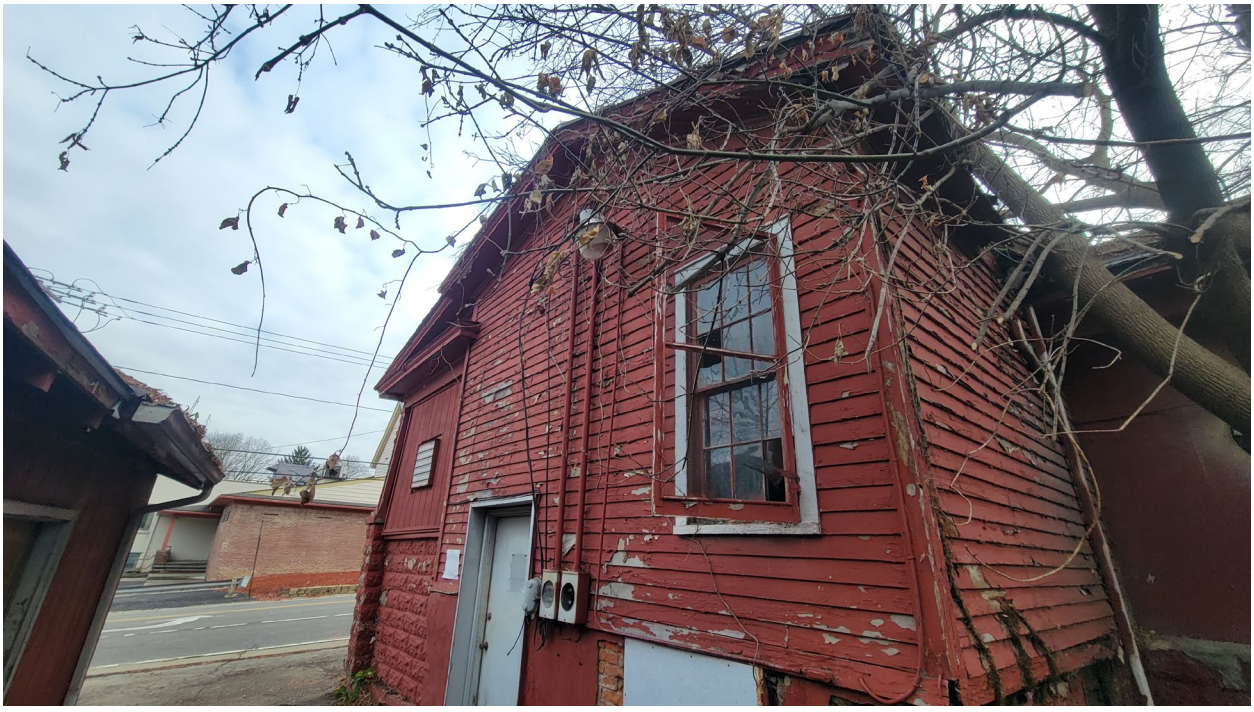

Photo 164:

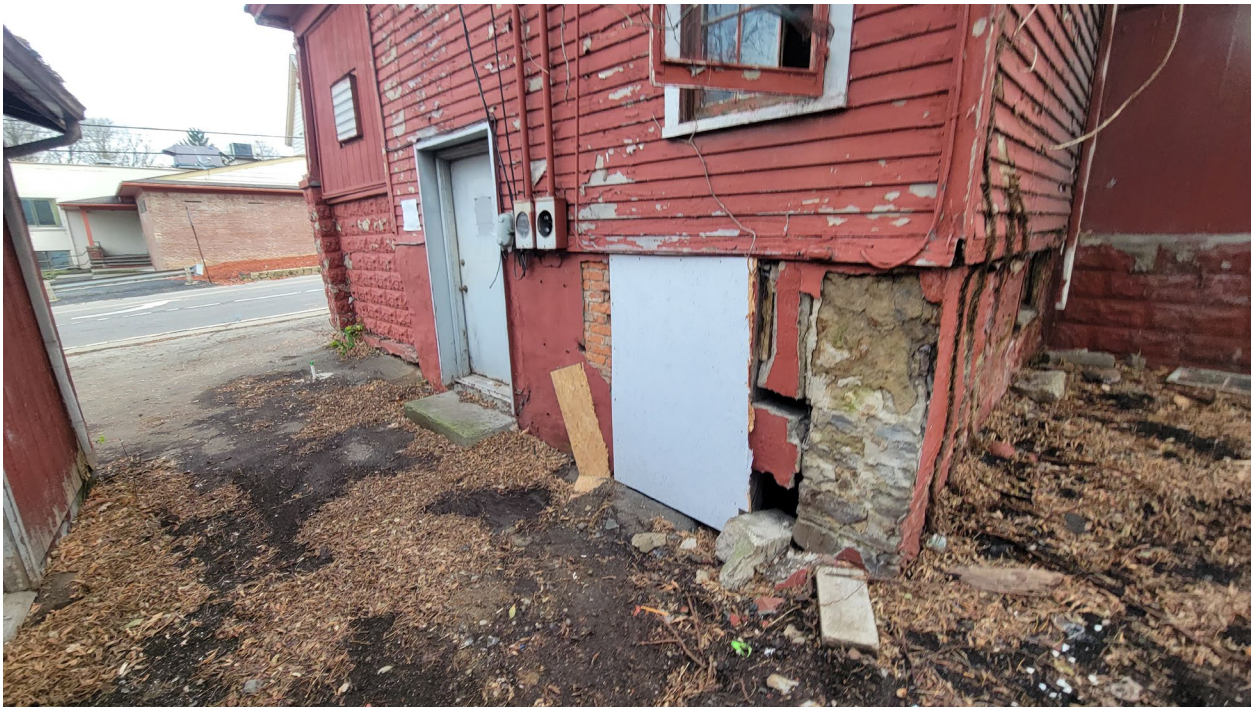

Photo 165: Area 5, see note 7.

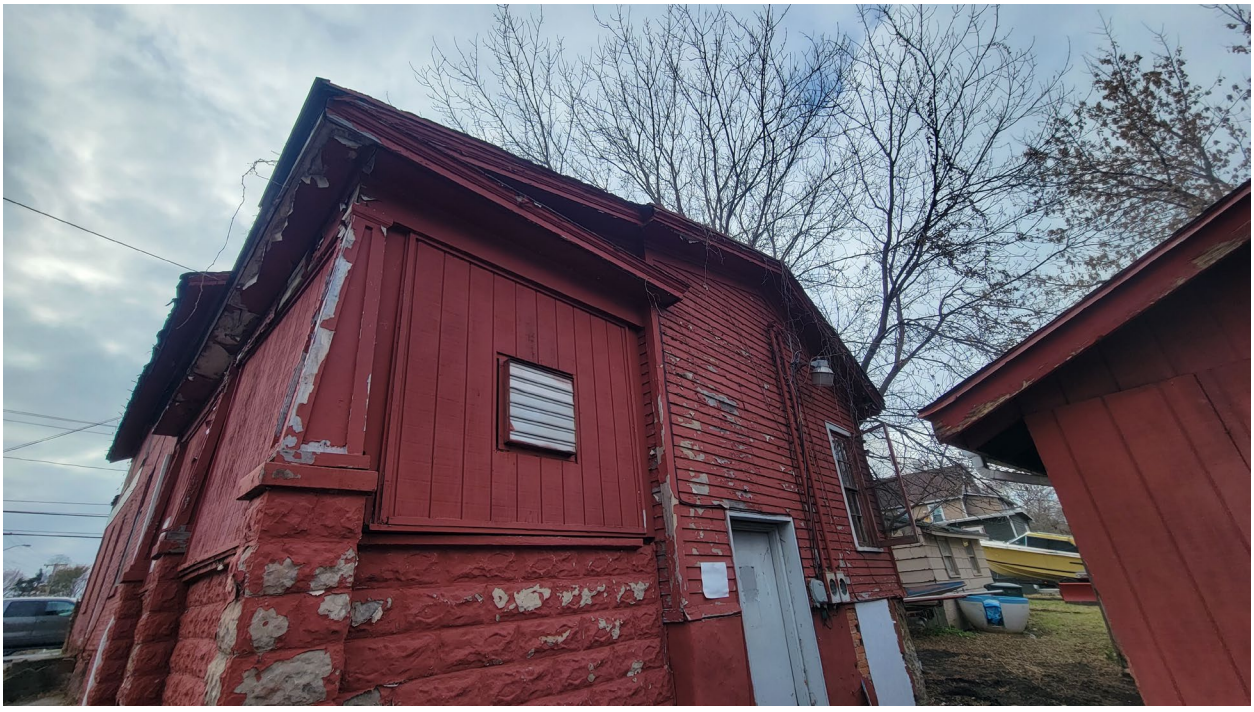

Photo 166:

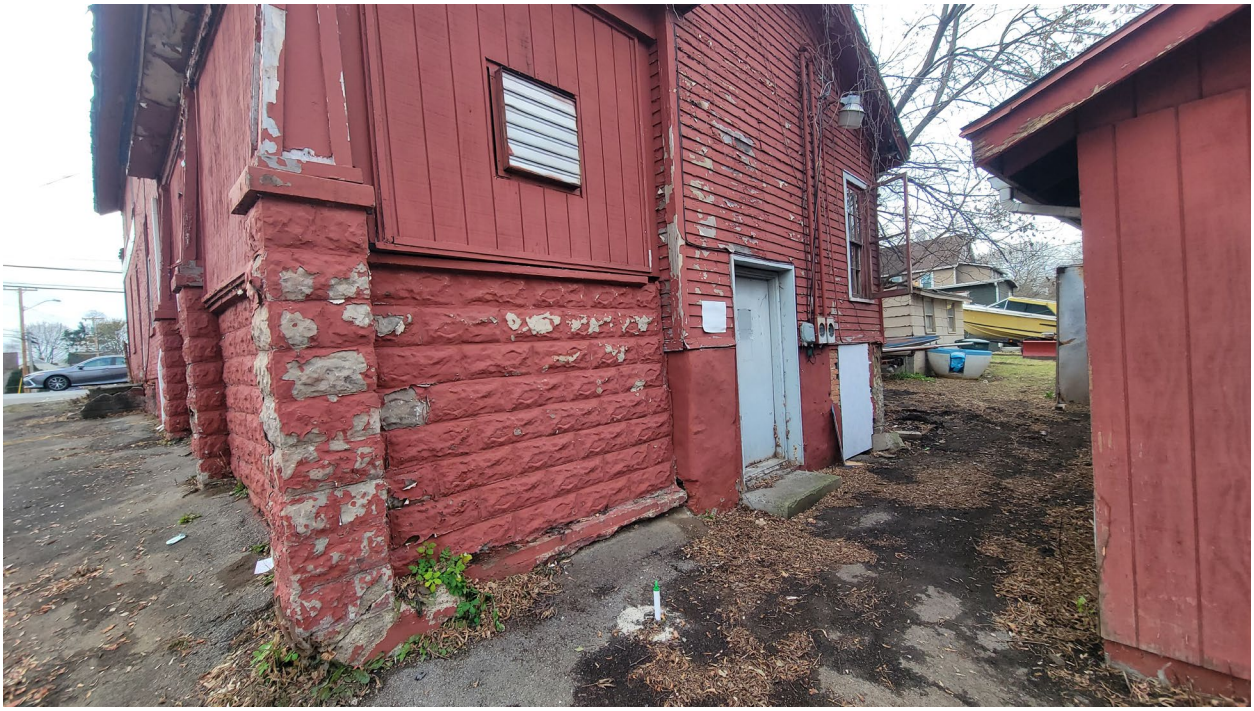

Photo 167:

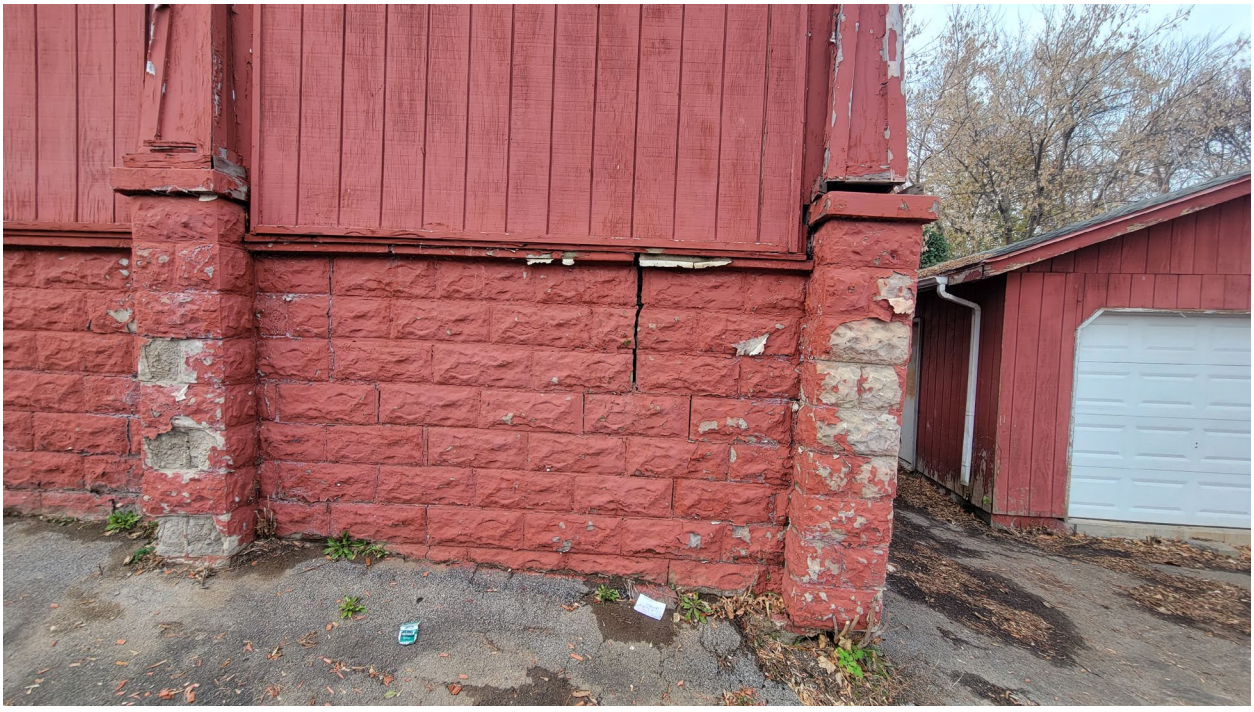

Photo 168: Evidence of settlement. It is recommended to seal the cracks with a non-shrink grout and then seal the face of the crack lines with an epoxy sealant. Monitor if there is any crack propagation over the next 6 months. If cracks return, contact the Engineer (Grefrath, 716-491-0019) for reinforcement recommendations.

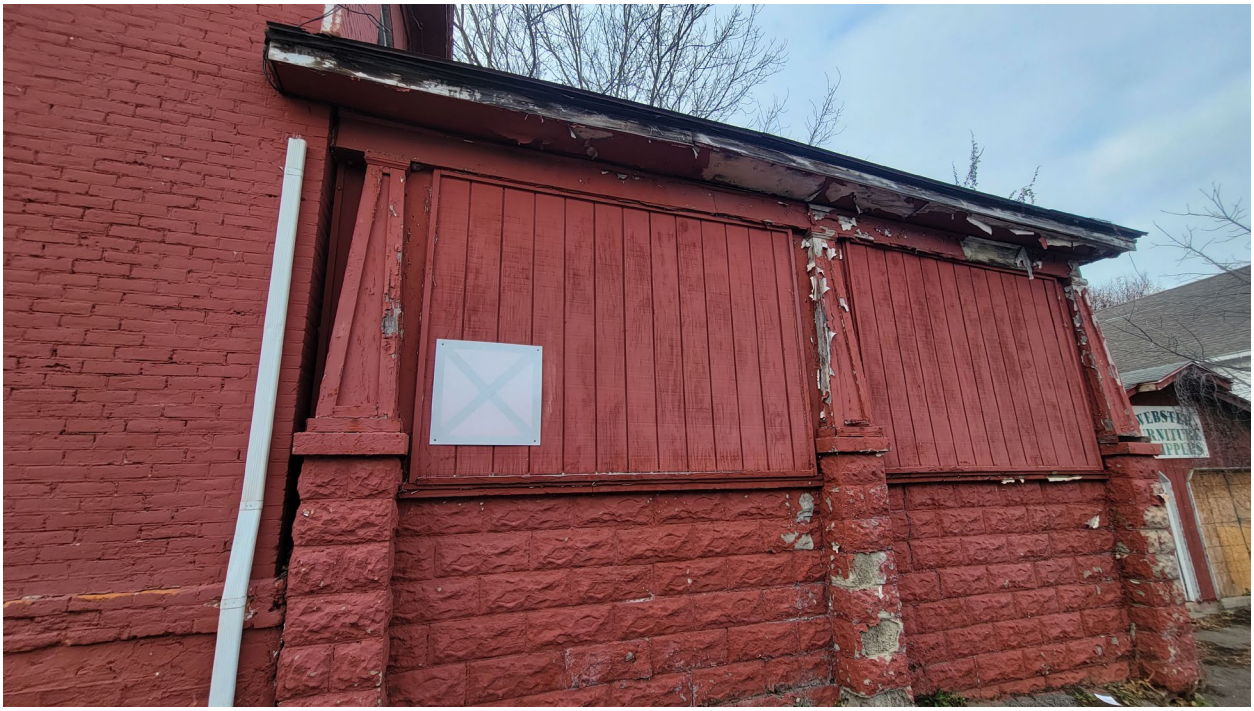

Photo 169:

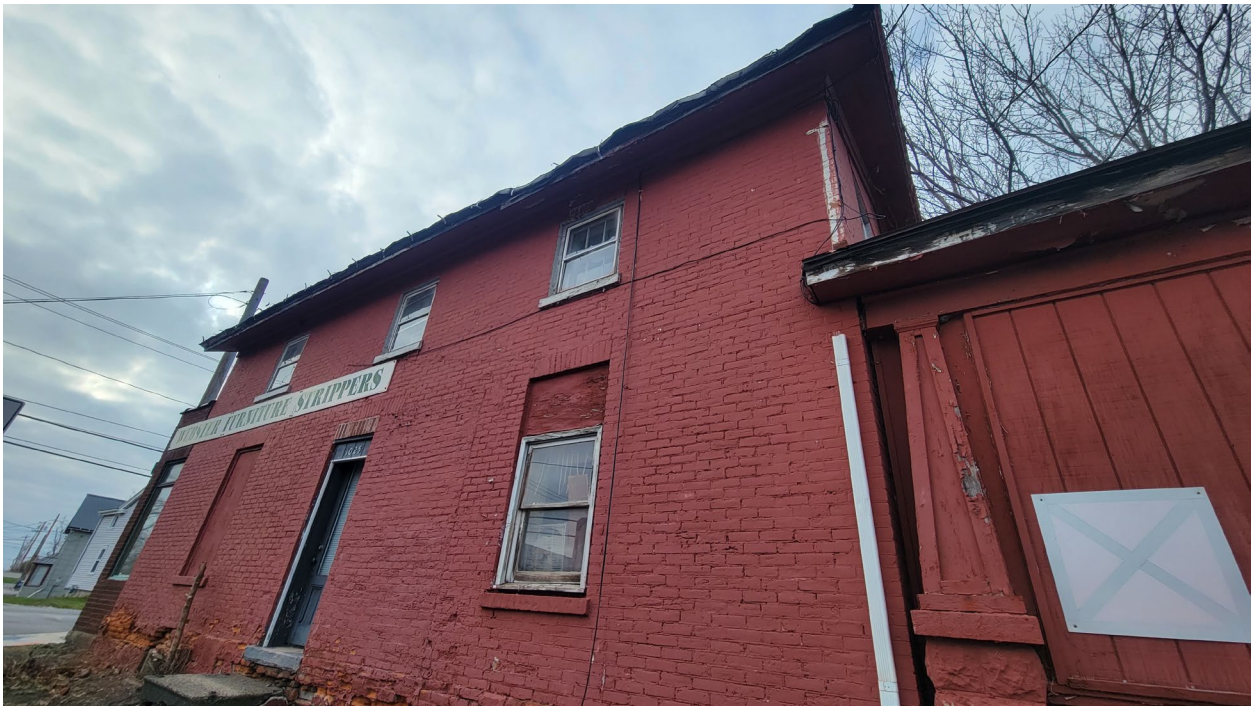

Photo 170:

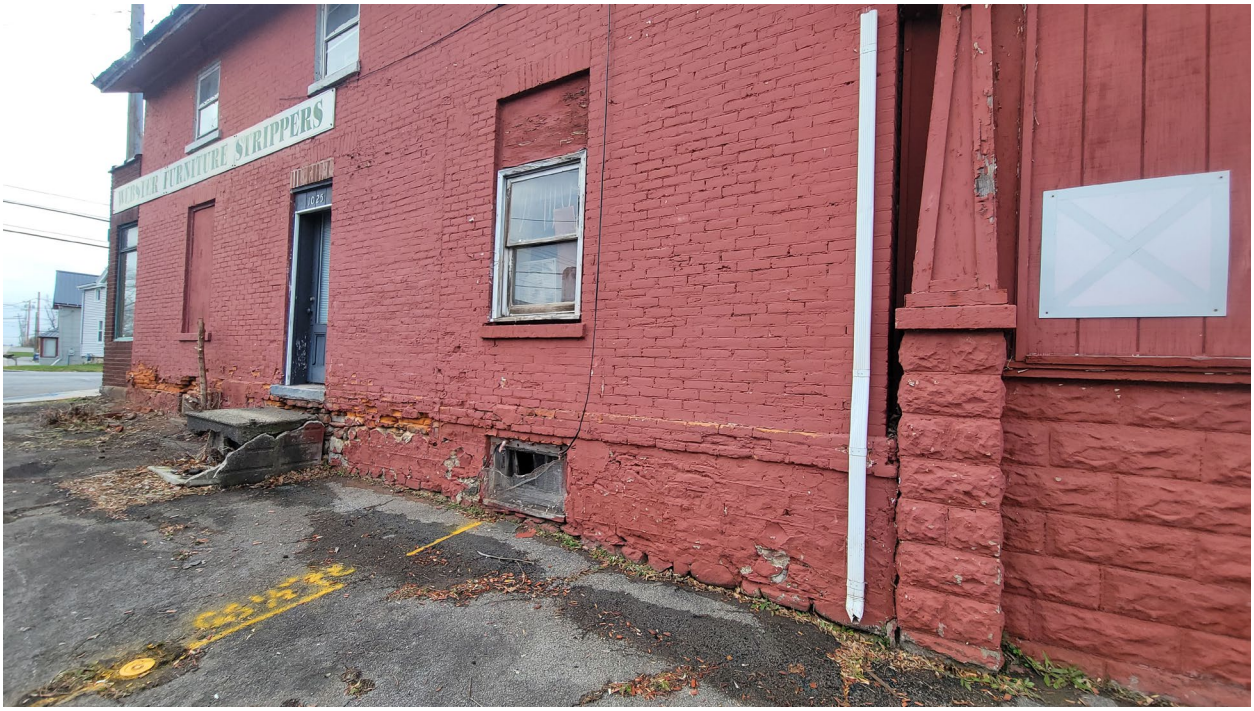

Photo 171:

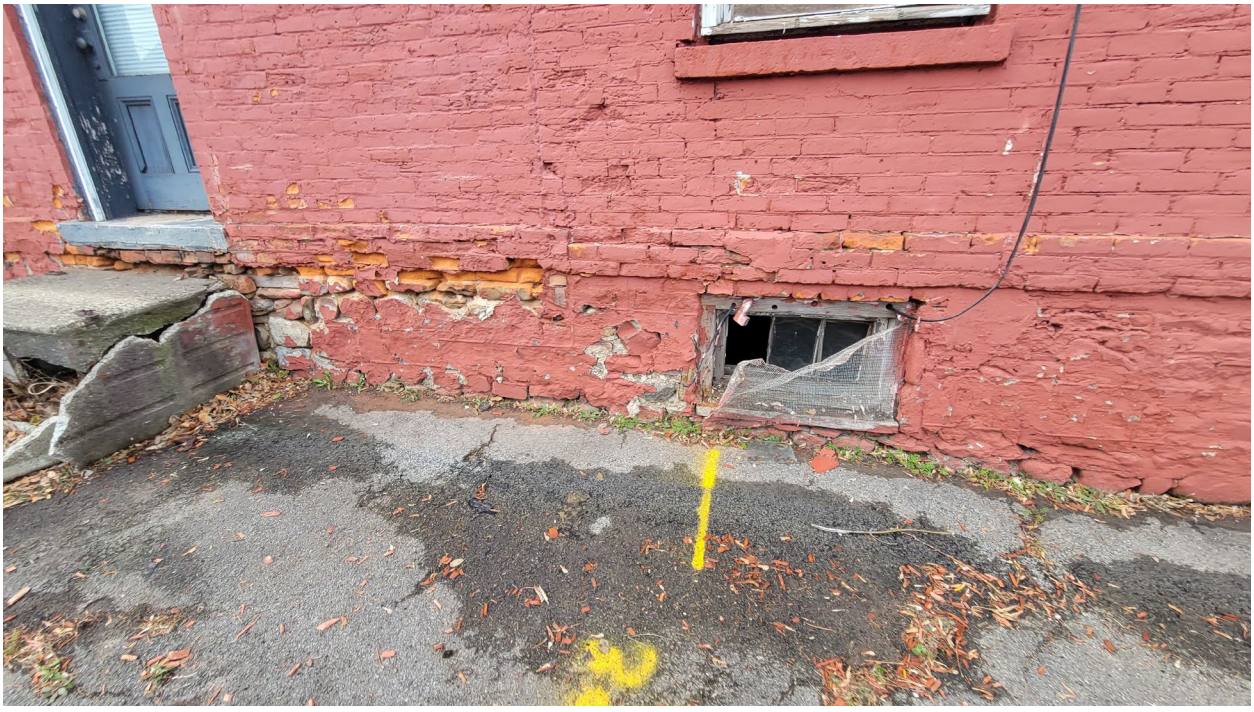

Photo 172:

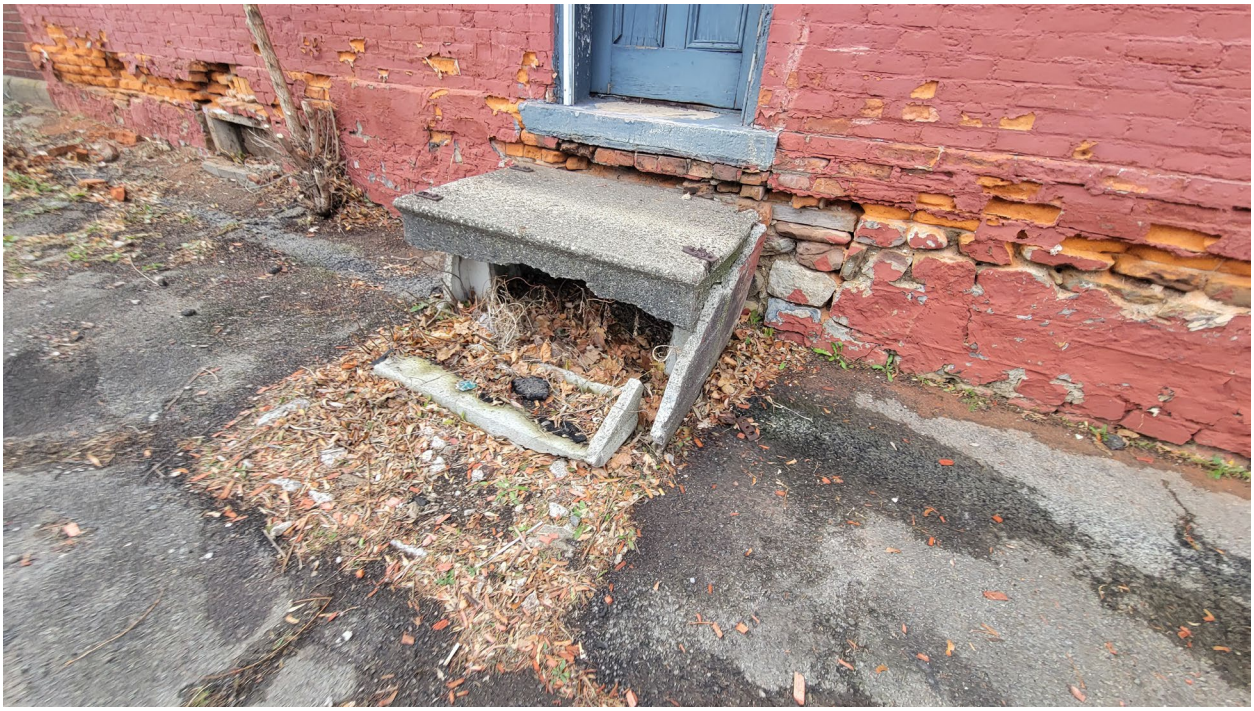

Photo 173: Remove and replace steps.

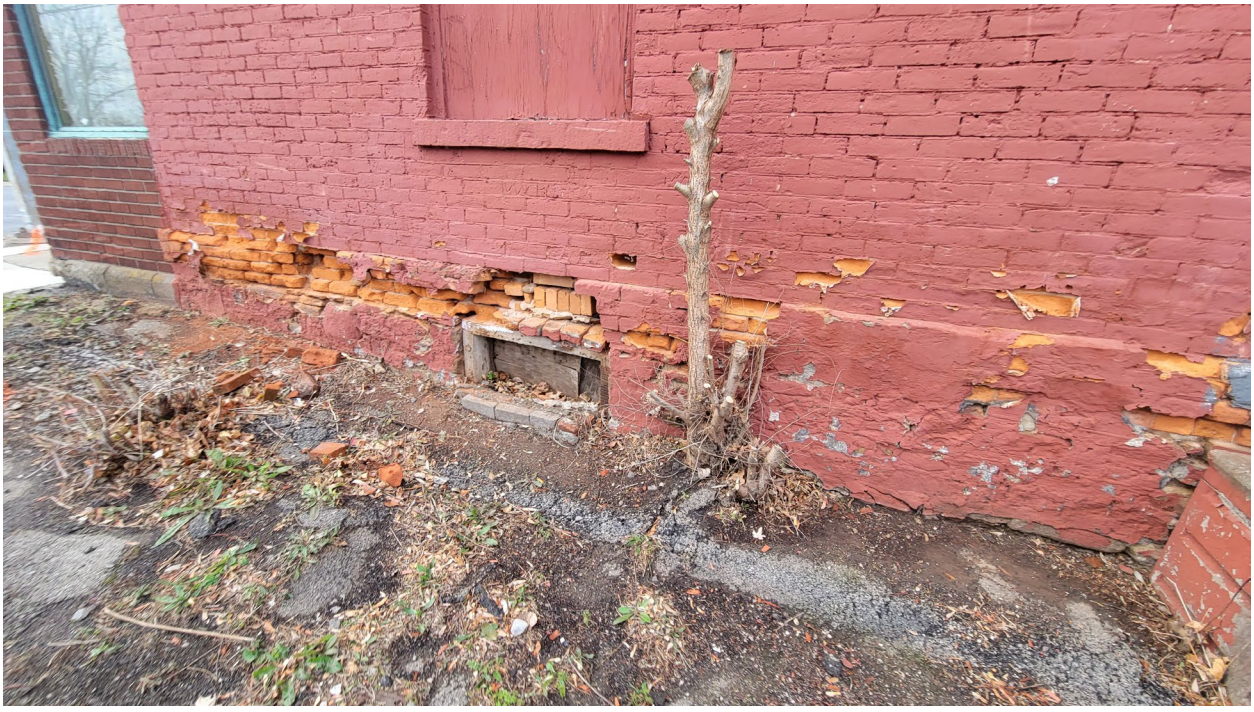

Photo 174: Repair and repoint all exterior brick.

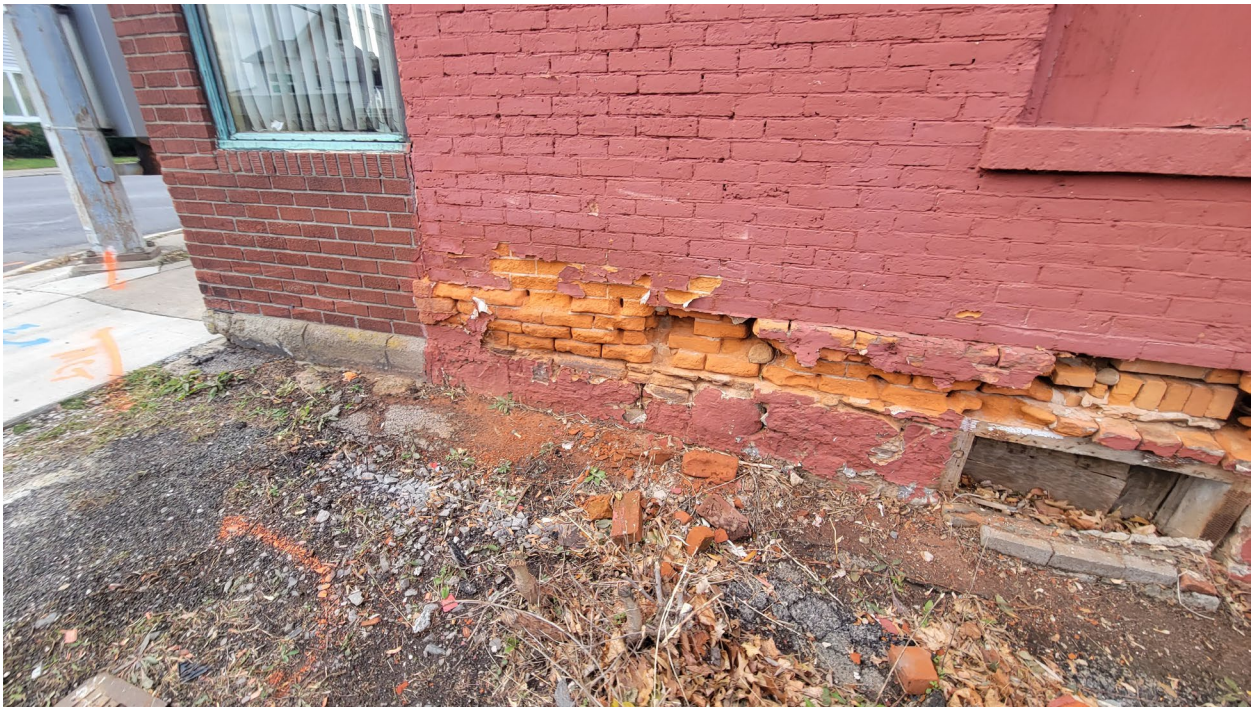

Photo 175:

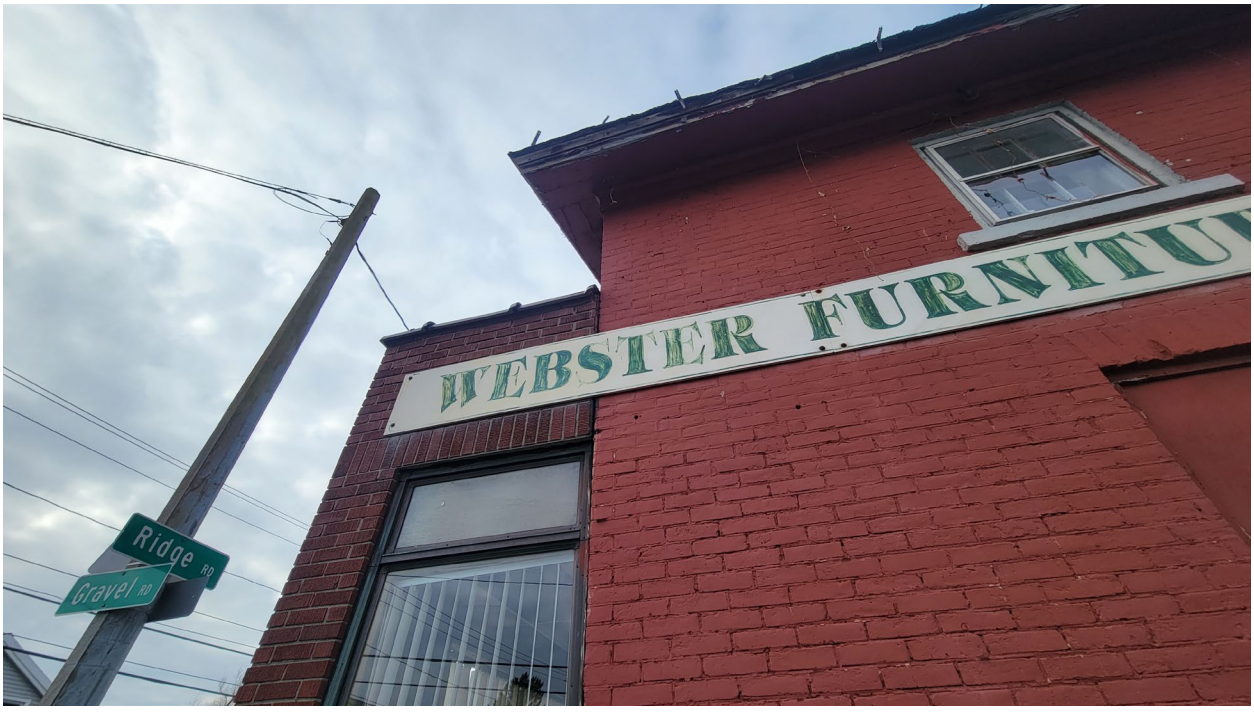

Photo 176:

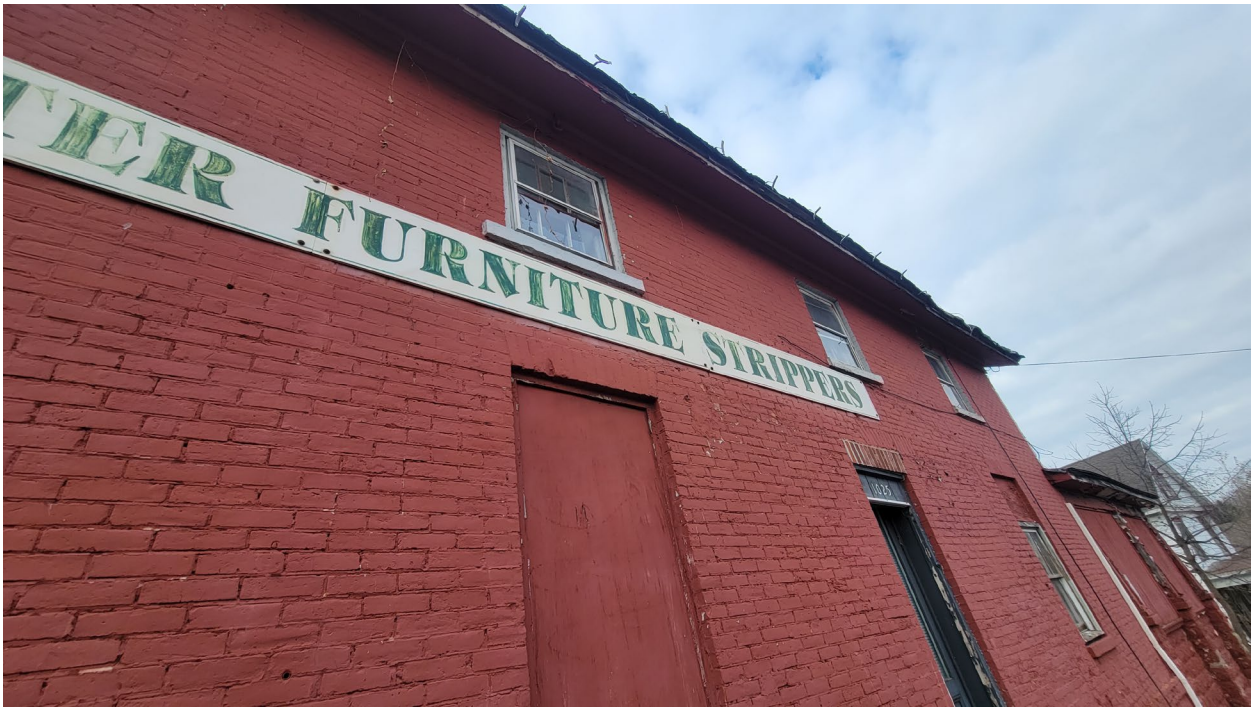

Photo 177:

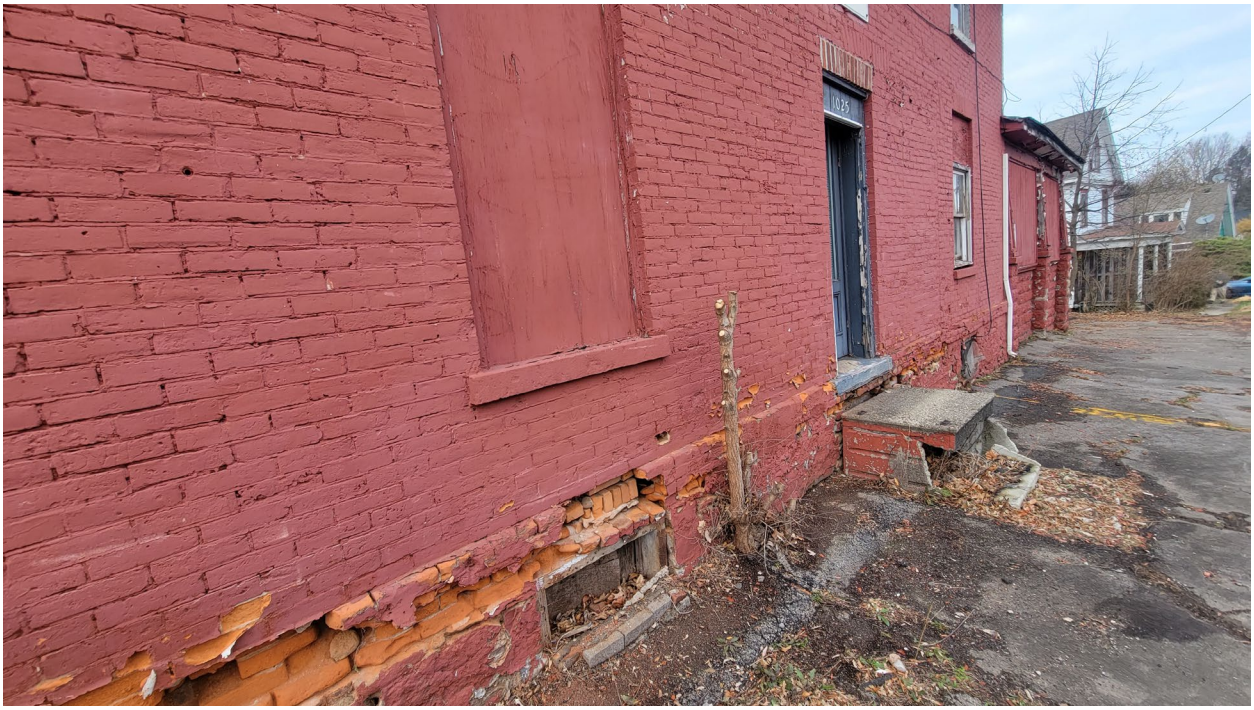

Photo 178:

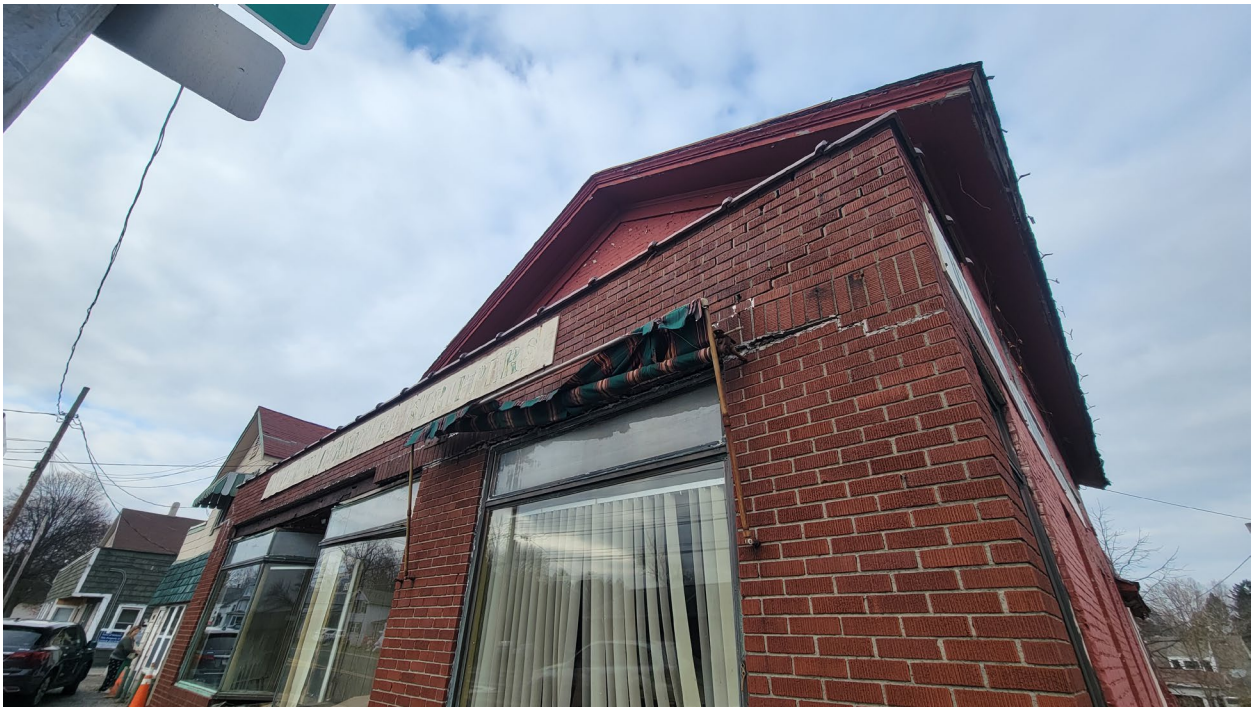

Photo 179:

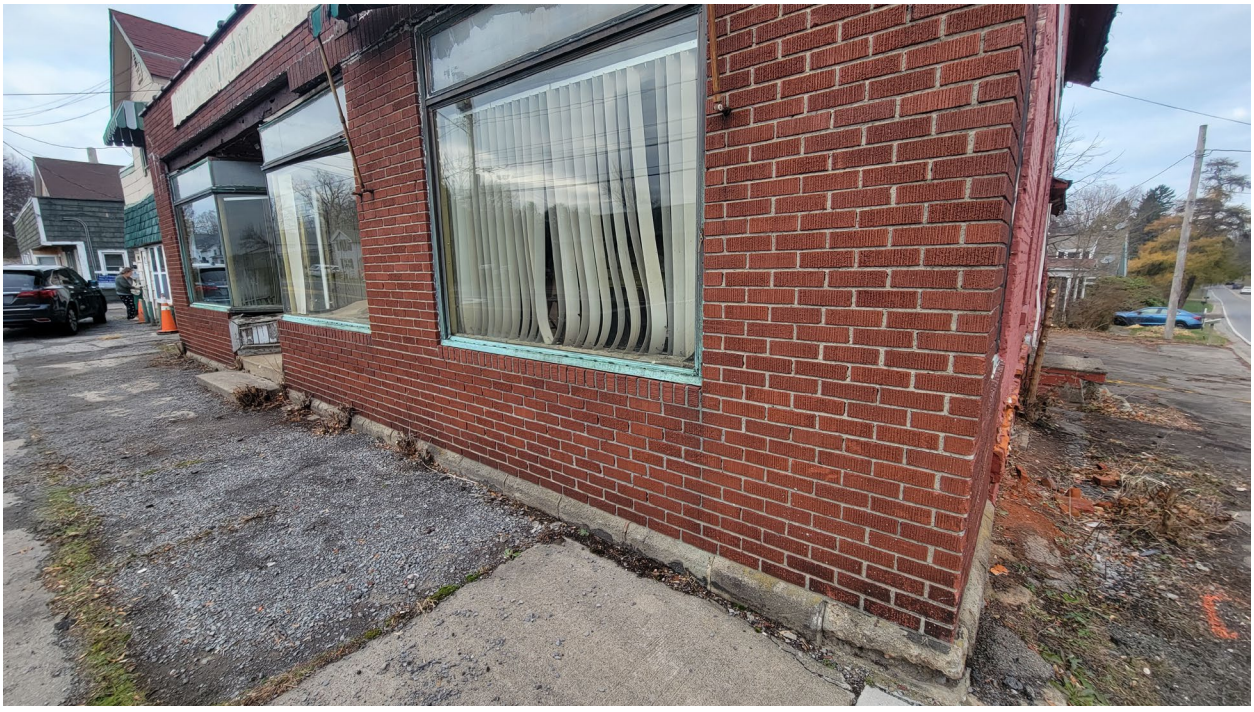

Photo 180: