

**FREIBURGER CONSTRUCTION CONSULTING, Inc.**  
**5438 County Highway M**  
**Fitchburg, WI 53575**  
**(608) 835-0001**

March 21, 2016

Woodland Montessori School  
1124 Colby St.  
Madison, WI 53715

The following report is based upon observations made at the two school buildings March 21, 2016. The object of the report is to outline the current condition of then two buildings. The final section of the report will list deferred and future maintenance with the object of allowing forward planning for the maintenance of the buildings, modification of the buildings or replacement of the former residential building.

## 114 Van Deusen

### 1. Structure:

- 1.1 Age: The city records suggest the house was constructed circa 1930 in the Dutch Colonial Revival Style. The rear addition to the house was constructed circa 1997/99.
- 1.2 Foundations: The interior of the foundations is largely covered with finishes. From the exterior it appears the foundations remain serviceable. Seepage into the basement of the original house has been an issue.
- 1.3 Framing: The floors are framed in a typical residential manner and no deflection due to dead or live loading was noted. The house attic was entered to view the lightly constructed house roof. The rafters are only two by fours and fairly long spans. Bracing has been added to reduce the deformation of the roof. This bracing causes roof loads to develop onto the house framing and main basement beam. We consider the house framing to be structurally serviceable, but if the house is retained for more than a few more years, further study is recommended.
- 1.4 Porch/entries: The now unused front entry is a poured concrete mass that has subsided over the years. This was once an open area but was enclosed at an unknown date. Now there is no landing at the top of the steps to allow safe access of the door.

The addition has a poured concrete steps, landing and ramp system that is deteriorating. The concrete is badly spalled and the long cracks may indicate rust jacking by corroding reinforcement bar. The entry has a limited future life. It may also have been poured up to the level where un protected or inadequately protected framing and sheathing exist on the west exterior wall.

There is also a rescue platform bolted to the house on the second floor west elevation. The metal is rusted and needs to be painted. We could not study the attachments, but there is no evidence of current movement.

### 2. Roof siding and Gutters:

- 2.1 Shingles: The roof is covered with laminated shingles of good quality, appearing to be in serviceable condition at sixteen to eighteen years of age. Such shingles typically have a thirty year useful life. We do not know if Ice and Water Shield was applied. Your records may indicate.
- 2.2 Siding: The addition siding is all vinyl while the house has a mix of original wood siding and 1990s vintage vinyl. Some siding nails have lost their galvanized finish and now project rust through the paint. Portions of the wood siding and trim may contain lead painted. Paint is peeling down to the wood in some areas and repairs are required.
- 2.3 Trim: Much of the trim has been clad with metal, but some exposed wood trim still exists.
- 2.4 Gutters: A portion of the north side down spout is absent, allowing uncontrolled flow from the second floor north gutter.

### 3. Windows and Doors:

- 3.1 Windows: At the ground level of the original dwelling vinyl frame replacement windows have been installed. These are double hung style windows with insulated glass units. At the upper floor of the dwelling, the original wood frame single glazed double hung windows are still in use. There are aluminum combination storms and screens at these windows.

At the addition the windows are an aluminum clad wood frame double hung type. These windows have insulated glass panels. Random windows that were tested were quite stiff to operate.

The basement windows are single glazed wood units. Cracked glass was noted at one of these windows.

- 3.2 Doors: The metal frames of the exterior doors at each side of the building are deteriorating at the base of the jambs. Moisture collecting at the landings and salt used to melt ice are contributing to this deterioration. Replacement rather than repair will be required.

The door added for the second floor jump platform was never completely installed. Open areas exist where water can and does enter the wall system. The stain on the west first floor wall is due to leaking at and around the second floor exist door. This door does not appear to have been correctly flashed and reinstallation or replacement is recommended.

The storm door at the front porch binds in the opening and does not open.

The interior doors are in fair condition reflecting normal use and their age.

### 4. Insulation & Ventilation:

- 4.1 Attic insulation: The attic is poorly insulated with fiberglass. There are also heat ducts run in the attic and they have the minimal R-5 insulation covering. The attic insulation allows significant heat loss, which can cause ice damming. If the building is to be kept in use, a retrofitted air sealing, venting and insulation plan should be devised.

We did not locate an access to the addition attic, if one exists.

- 4.2 Foundation insulation: The perimeter foundation wall at the addition crawl space is insulated on the interior with foil faced rigid foam insulation. This may be an insulation with a flame retardant coating, thus allowing it to be exposed.

The floor of the crawl space is covered with gravel. It does not appear that a vapor retarder was installed over the earthen floor to prevent soil moisture from migrating into the building. Radon intrusion may also be an issue. Further investigation is recommended.

The basement had foam insulation applied which was covered with drywall to meet the flame spread code. Due to seepage, it appears some of the drywall was removed, causing a non-compliance situation.

5. **HVAC:**

5.1 The gas fired forced air furnace is a seventeen year old unit by Bryant, model 350MAV048109, (serial #3499A01163). A tag on the furnace indicates that annual servicing has occurred for a number of years. The typical useful life for this type of equipment is twenty years so budgeting for replacement in the short term is recommended.

5.2 The air conditioning condensing unit was placed tight against the north wall of the addition. We were unable to read the identity tag. We suspect it is also a 1999 unit. We estimate the size to be a ton and a half to two tons.

5.3 The exhaust duct for one of the dryers in the basement is not connected to the dryer.

5.4 The ducts installed in the addition crawl space were insulated with fiberglass batts. This insulation is falling away on a portion of the duct.

6. **Plumbing:**

6.1 The plumbing system uses copper piping for water supply and PVC piping for the drain and vent system. There is a ¾ inch copper water service to the building with a single water meter.

6.2 The gas fired water heater is a twenty two year old unit by Ruud model PR40-7T, (serial #0594A30703). This water heater is well past the typical useful life for this type of equipment. Budgeting for replacement in the near term is recommended.

6.3 A water softener has not been installed at this building.

7. **Electrical:**

7.1 There is a 200 amp overhead electrical service with circuit breakers for overcurrent protection.

7.2 Smoke detectors were noted in several locations at each floor of the building. Several of the smoke detectors are not mounted in appropriate locations to provide early notification. Smoke detectors should be located at or near the highest point in a room. Detectors that are currently located partway up the vaulted ceiling of the addition or on the sloped ceiling of the basement stairs do not provide the highest level of protection. A complete review of the building to insure that detectors are located in all areas and in appropriate locations is recommended. A regular program for periodic testing of the detectors is also recommended.

8. **Interior:**

8.1 Since many of the painted surfaces in the original dwelling were installed prior to 1978 it is likely that lead based paint was used within this building. During any renovations contractors will need to use appropriate removal and disposal procedures. Contractors would also need to establish a containment barrier to control the spread of dust during these activities. Since removal

of all lead paint from within the building is not likely practical a program to ensure that painted surfaces are not allowed to deteriorate or are restored on a regular basis should be considered.

- 8.2 The kitchen cabinets are in fair to poor condition with damage to the doors and poorly functioning doors.
- 8.3 The finish on the wood floors in the original dwelling is very worn. The vinyl plank flooring in the addition is in much better condition.
- 8.4 Stains were noted on the second floor where the wall meets the ceiling. These are most likely ice dam caused. The age of the stains is not known.

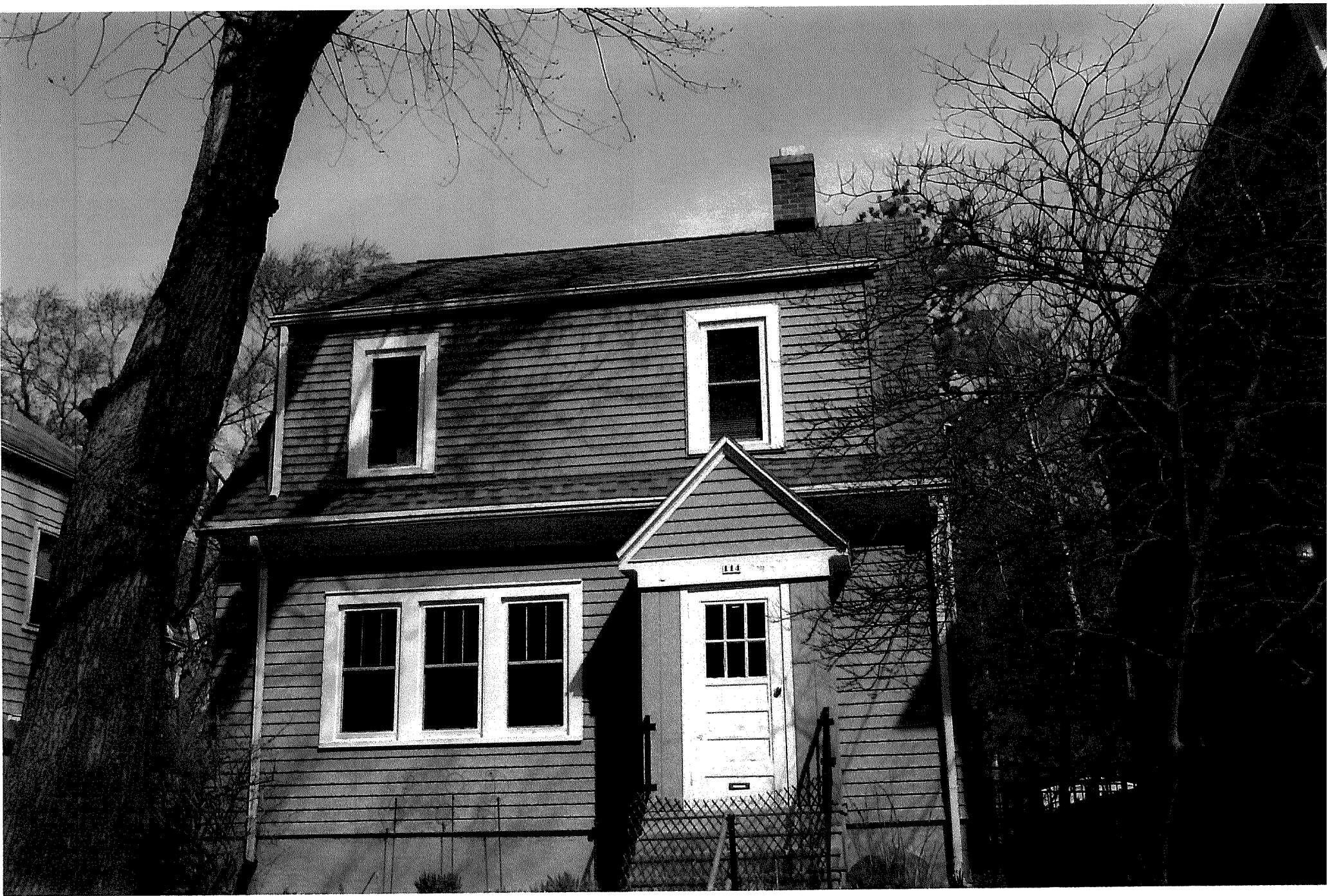
9. **Forward planning:**

- 9.1 Exposed foam: The basement exposed foam needs to be covered. You should also determine if the addition foundation insulation foam is a type allowed by code without a thermal barrier.
- 9.2 Reinstall the second floor platform door with appropriate flashing and casing.
- 9.3 Mount all detectors as required by code in the correct locations.
- 9.4 Plan to replace the west side addition entry structure with a well flashed replacement.
- 9.5 Replace the missing downspout and direct spout discharge as far from the foundation as possible.
- 9.6 Paint all exposed exterior wood where the finish is failing.
- 9.7 Plan to replace the water heater with a modern efficient unit before failure.
- 9.8 Consider an insulation and attic venting plan if the house is to remain in service.
- 9.9 If the house remains in service, study the roof framing and reinforce before insulation is added

**Photo Log: 114 Van Deusen Street**

- Photo 37:** Establishing photo of south or front elevation.
- Photo 38:** Entry porch is subsiding. The door lacks the required landing at the top of the steps.
- Photo 39:** West side of Toddler House. Note rescue platform.
- Photo 40:** Closer look at rusty platform and paint peeling from siding that may contain lead.
- Photo 41:** Threshold of platform access door where leak exists. Note that jamb is deteriorated.
- Photo 42:** Stain on wall to ceiling interface below platform door leak.
- Photo 43:** Basement window that need glazing, paint and a storm.
- Photo 44:** Missing downspout on north second floor elevation.
- Photo 45:** Ice damming damage on second floor north of Toddler House.
- Photo 46:** Braced two by four rafters constitute a weak system. Note irregular insulation.
- Photo 47:** Condensation staining on rafters in attic.
- Photo 48:** Condensation staining on sheathing due to inadequate attic venting.
- Photo 49:** Poorly insulated heat runs in the attic contribute to heat loss and ice damming.
- Photo 50:** View of a portion of the west elevation of Toddler House at addition.
- Photo 51:** Deterioration of concrete entry structure.
- Photo 52:** Corrosion of door jamb due to salt and water. Replacement will eventually be required.
- Photo 53:** Corroded light fixtures should be replaced. Weather tight fixtures are recommended.
- Photo 54:** Missing drywall thermal barrier for basement insulation.







(38)

Shady setting  
door w/peelings





(39)

leaking into  
wall below



(40)

put in new good door













★ (42)

possible mold





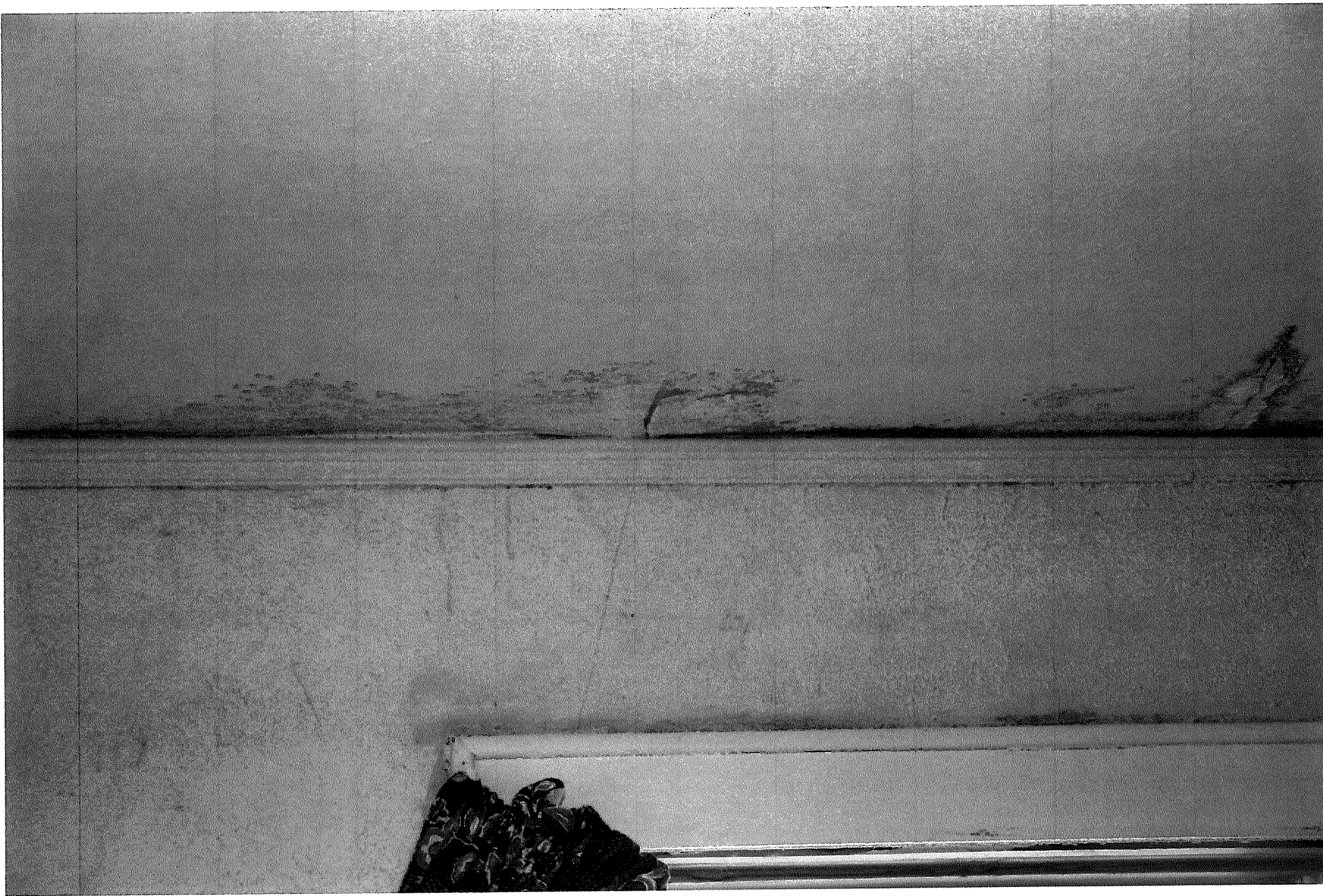
(43)

*needs a storm*



missing downspout





(45)

ice damming



(46)

not challenging load capacity  
roof framing crappy





(47)

Condensation

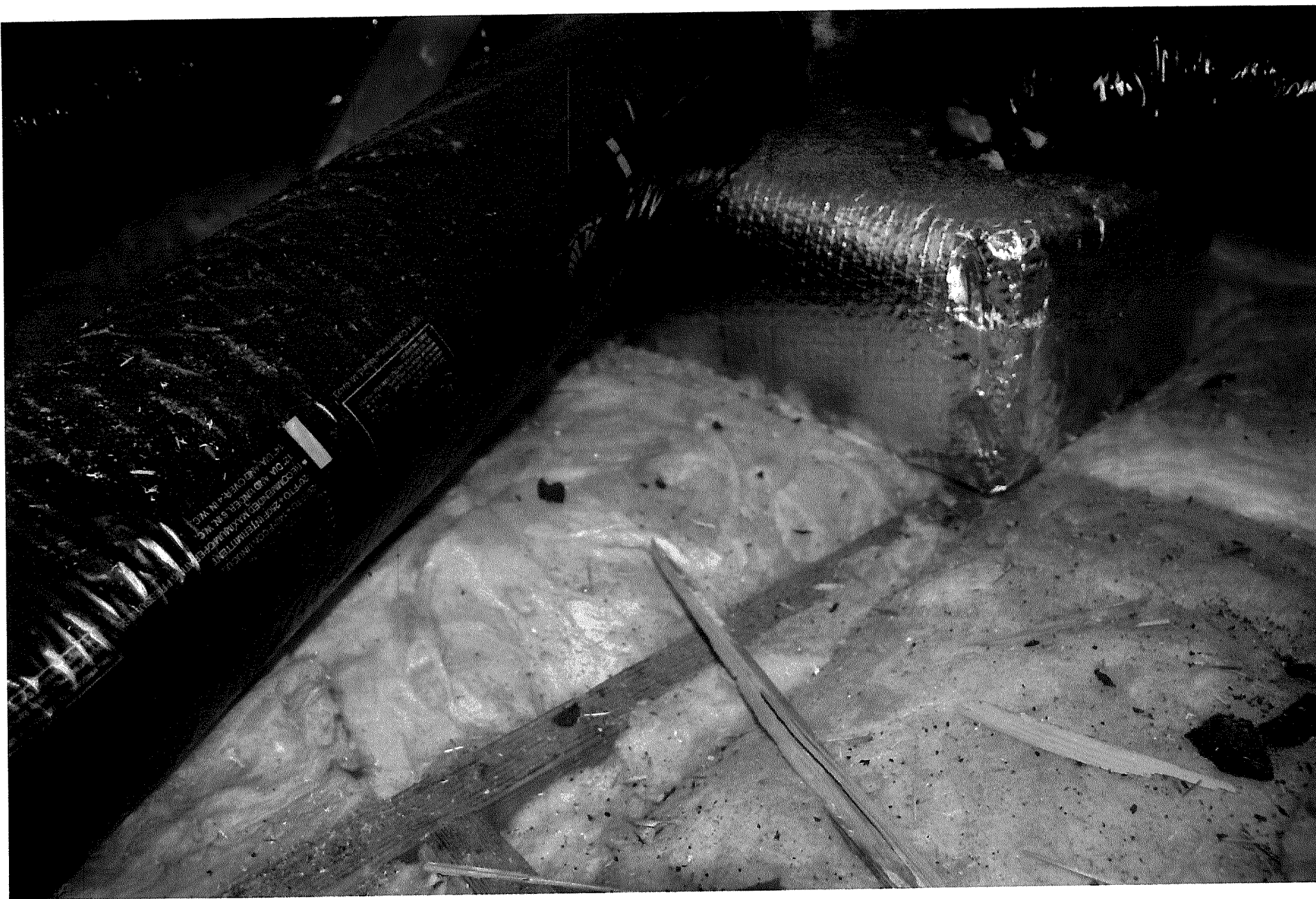




(48)

Weak  
Structure

mold + mildew - needs new roof total new roof  
25-30 thousand



49

needs insulated - heated attic → melts snow → leaks air





(51)

patch every 5 years

\$45,000 - replace stairs





(50)

Repaint door every year

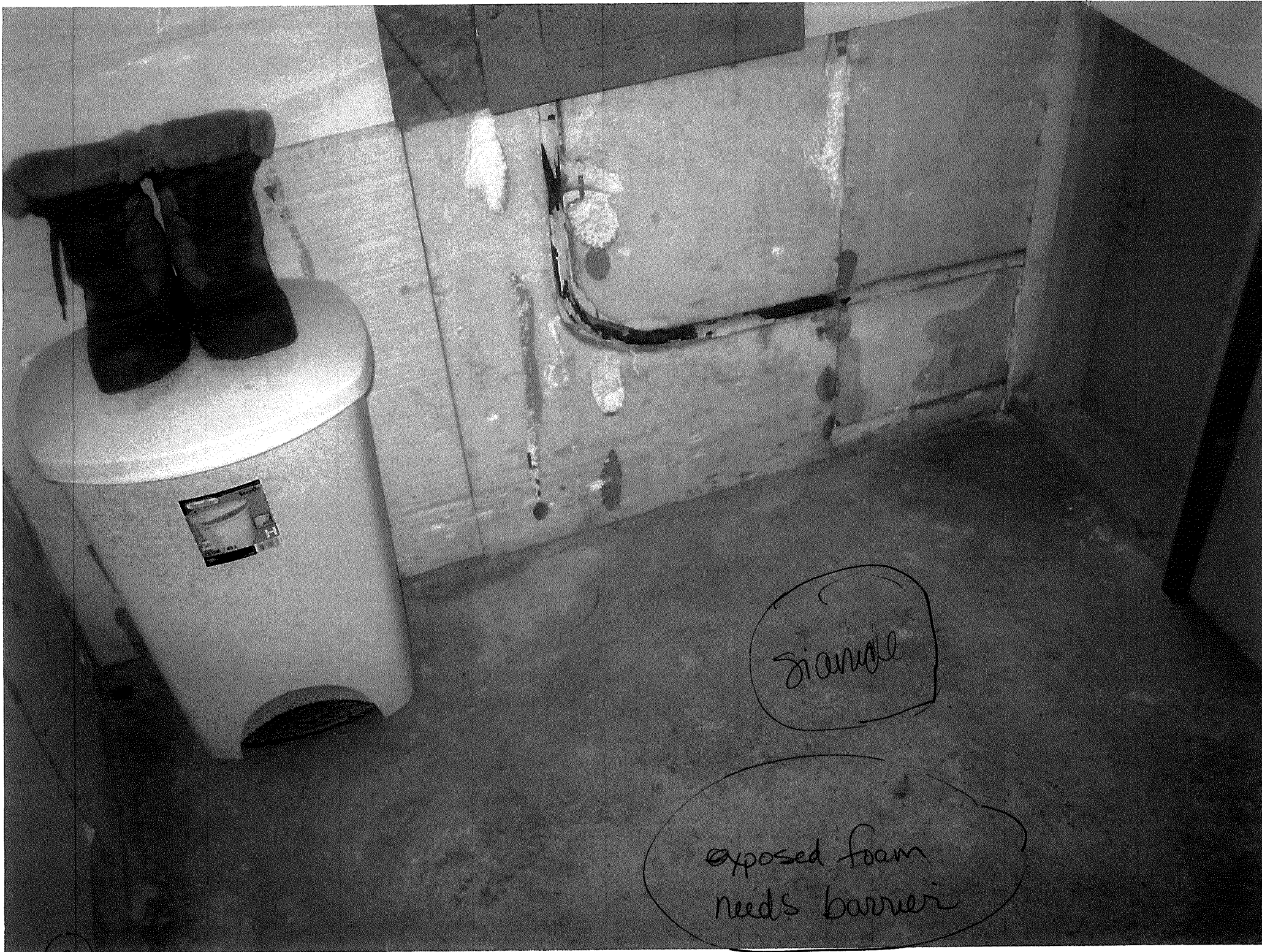












diamond

exposed foam  
needs barrier