November 02, 2026

Richard Hicks
Intern Town Manager
Town of Black Mountain
116 Midland Avenue
Black Mountain, NC

RE: Public Safety Building Assessment
106 Montreat Road
Black Mountain, NC
Stewart Project Number S6077

Dear Richard,

Thank you for the opportunity to provide you with structural assement on the above noted property,

PROJECT SCOPE

Our scope on the project is to review the structural issues and determine if the building is safe to occupy based on our observations. Our scope is limited to the office building and not the PEMB fire apparatus structure.

City official has provided us with the following information about the building.

- Construction date of the building – Approximately 40 years ago. (We confirmed via Google Earth the building in 1994 satellite imagery)
- The building was flooded during Hurricane Helene in 2024 approximately 2' high in the basement. No water intruded the first floor.
- The building has been deemed unsafe by the Town of Black Mountain in May of 2026 and has posted notice on the building. The notice cites structural compromise of the foundation and a part of the roof system.

EXISTING BUILDING DESCRIPTION

The existing building is a two-story structure that is set into surrounding grade at the front and has a walk out basement with an overhead and man doors. Some windows along the basement south wall were observed, but they have been covered with plywood. The windows were covered as a public security concern observed to prevent access into the building.

The main roof consists of steel roof trusses with wood decking. The truss spacing could not be determined but appears to be approximately 12' – 15' feet based on our visual observations.

The floor framing above the basement is steel joists with steel wire mesh and barrier fabric with concrete topping for most of the building. The basement walls are constructed of concrete masonry unit (CMU) and brick veneer.

Existing drawings were not made available. Stewart was in receipt of the assessment by Moseley dated February 5, 2026. Our goal is to make our own assessment of the building based on our visual observations, and we will not be addressing the comments in the report.

BUILDING OBSERVATIONS

- Basement – Walls, Slab & Columns
  - The interior face of basement walls are concrete masonry blocks with brick veneer on the exterior.
  - Step cracking was observed in two locations, but cracks travelled to the joist bearing condition. The joist bear on 2 courses of brick on top of the masonry wall. Based on the age of the building, we suspect that the masonry is not reinforced and block fill below grade was not able to be determined during the visit.
  - Step cracking appears to be isolated. Each crack was located in the mid-span of the basement wall at the south wall and one at the east wall.
  - Horizontal crack along the south CMU was observed but the veneer was not cracking at the exterior of this wall. Appears that earth surcharge is causing the wall to lean in at the masonry. (See page 7 and 11)
  - Slab on grade appeared to be in good condition. There were segments removed that were infilled with just stone. No signs of settlement, moisture or other defects were observed.
  - Interior steel columns in good condition with no signs of settlement around the columns.

- First Floor Framing
  - Steel bar joists spaced approximately 24” OC with steel mesh to contain concrete slab spanning between joists.
  - Drape of the deck was observed not to be consistent.
  - Mesh had a membrane layer to contain concrete. Condition of concrete was not visible.
  - Joists have light rusting but not deterioration or loss of section. One area that was near mechanical equipment appeared to have more exposure to moisture and is different in appearance, but joists and bearing are intact.
  - The floor framing of the basement does not cover the entire first floor so it is believed that the north side of the building is more than likely slab on grade or inaccessible joist framing.
  - A crack in the floor is located 12’ from the exterior north wall on the north side of the building runs thru bathroom, bunk and a large room space. The floor in the large open room was noted to be about ½” lower than trim at the wall.
  - No interior drywall along this north side. This indicates that the slab and wall are not connected and the slab possibly settled and is causing the crack over the bearing condition 12’ from the exterior wall.
  - The north side of the exterior wall did have horizontal veneer cracking, and what appears to be tie backs at the exterior wall, below the slab elevation. This could have been a repair to help tie back the veneer, but a wall issue is undetermined.

- Roof Framing
  - Roof observed is a black membrane.
  - Some small pooling at the edges noted. Was only able to obtain roof access to the main roof from low entry roof. Needed ladder from low roof to high roof. Approximately 40% of roof was visible from viewpoint.
  - No visible damage to roof membrane.
  - No roof drains noted.
  - From one attic access location and the stairs to the basement (see pictures), roof was able to be viewed. Wood decking and steel truss framing appeared in good condition.
  - Hard ceiling is installed throughout the building with no access except as noted above.
  - Chief's office at corner building had water damage to the drywall ceiling that caused the light fixture to fail. Drywall stained but still intact.

- Exterior Walls & Perimeter
  - Some horizontal cracking along the north side of the building noted.
  - Door frame appears to have slipped down in the basement long east side. No adjacent cracking noted.
  - Sewer intake noted at north side of building which running water could be heard. Weather was clear so other source was draining upstream into the civil structure. Town representative noted that the sewer is unable to be scoped due to blockage that is under the building, but that was not verified.

CONCLUSIONS

Our observations revealed some issues that need to be addressed with repairs and general maintenance. However, what I observed on site, in my professional opinion, is not a life safety concern.

The foundation and walls could have settled in isolated areas during or after Hurricane Helene causing the step cracks. But based on the locations those cracks could have been present prior to the hurricane event or be from the leaking sewer line that travels under the building. The north side of the basement wall obviously had some previous issues that were addressed with tie backs being installed. This is the same location where the slab cracks are noted 12' from the wall. I believe that these items are connected. However, I don't believe these conditions are unsafe.

Regarding the roof structure stability, I found no evidence of current leaking or a substantial roof failure. I believe the roof leaked during a high wind event or numerous events to the gypsum ceiling which weakened the light fixture connection.

In addition, I found no evidence of the first floor framing unsafe. The floor framing, support girders, and columns that were visible were all in good condition.

RECOMMENDATIONS

We recommend that the building have the following repairs completed

1. Roofing contractor should review the roofing to find possible leak and provide repair if needed. Perhaps a new roof is required, however we are not qualified to comment on the life expectancy of the current roofing assembly. Full access to the roof framing should be provided for a more thorough

structural evaluation.

2. Infill the existing slab on grade in the basement.
3. Infill the cracks in the basement wall and install crack meters. Review the crack meters every 6 months for 2 years to monitor movement if any by a registered professional structural engineer. A town employee should photograph and record measurements every three months during the same time frame.
4. Review the north side wall at the tie backs with some limited demolition. A possible solution is to post install some veneer ties that may be missing from the original construction. In addition, the slab in this area could be "lifted" using high pressure grout and remove the cracking found 12' from the exterior wall. Again, we recommend limited demolition be completed at the first-floor crack. Further review should be done by a registered professional structural engineer. The floor covering was present during my visit and prevented a review of the structural slab.
5. Remove and re-install the door at the basement.

Thank you for reaching out to us to provide this assessment. Do not hesitate to contact us if you have any questions. We are pleased to have the opportunity to provide these structural engineering services.

Sincerely,

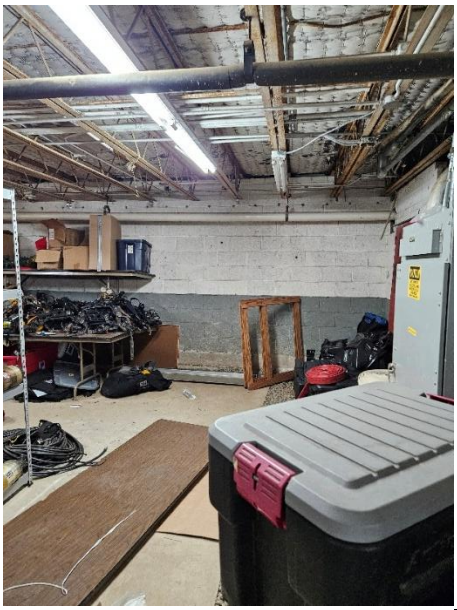


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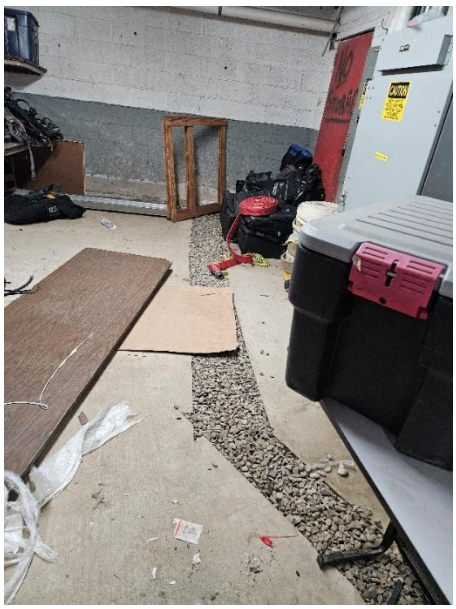
Attachments: Photos



OVERALL SITE AERIAL - 106 MONTREAT ROAD



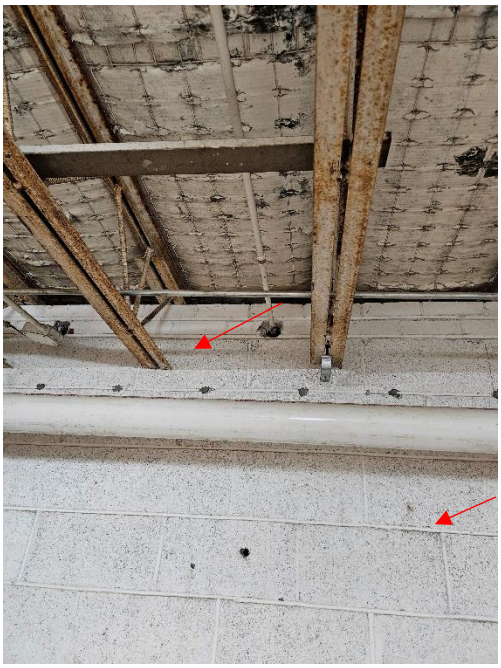
Overall basement construction photo



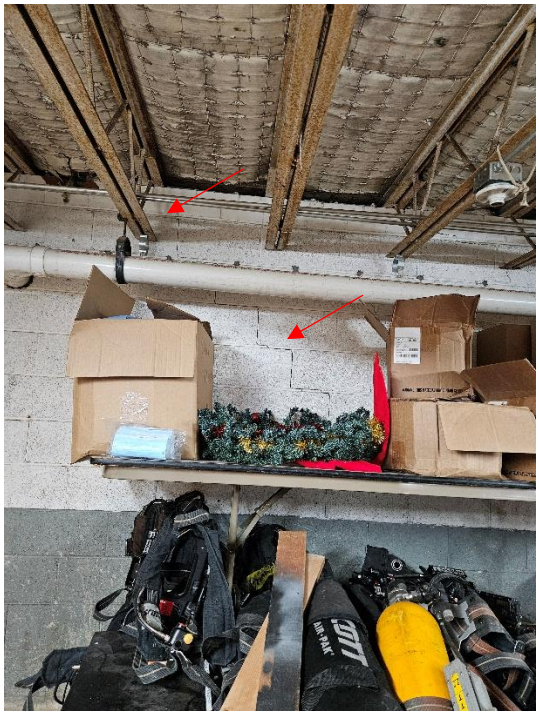
Slab removed at basement



Basement Photo (West wall)



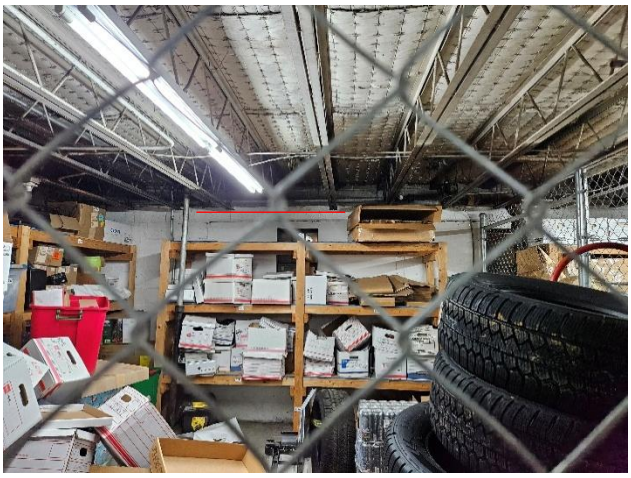
First floor framing – joist bearing, slab, wall With step crack.

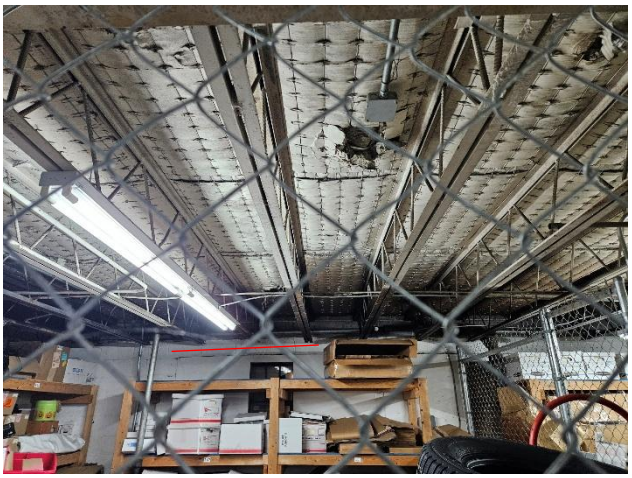


First floor framing – joist bearing, slab, wall with step crack.



View of roof framing from basement stairs.





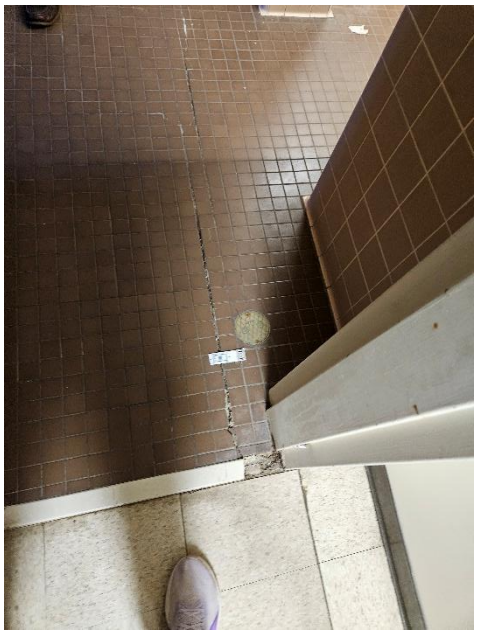
Basement photos – facing south wall (enclosed window) Crack located below red line.



Basement photo – Joist in MEP area. Facing North



Basement Photo – non load bearing wall





First floor Cracking – with crack broken crack meter. Crack located about 12’ from north wall.



First floor Cracking



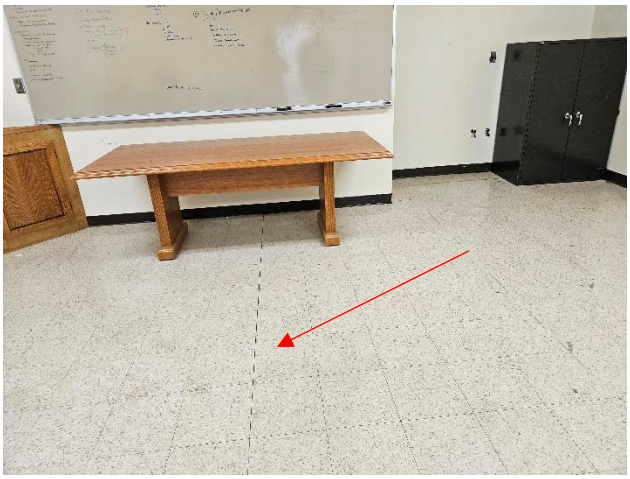
Broken crack meter at flooring



Slab at north wall lower than molding at flooring. (Bunk room)



Slab at north wall lower than molding at flooring. (Big room)



Crack at big room – 12’ from north wall.



Crack in flooring. Molding lower than flooring – ½”



Exterior north side of building.



Exterior north side – drain at cone. Tie Back



Close up running sewer travels under building.



Tie backs at north wall. No access. Horizontal crack



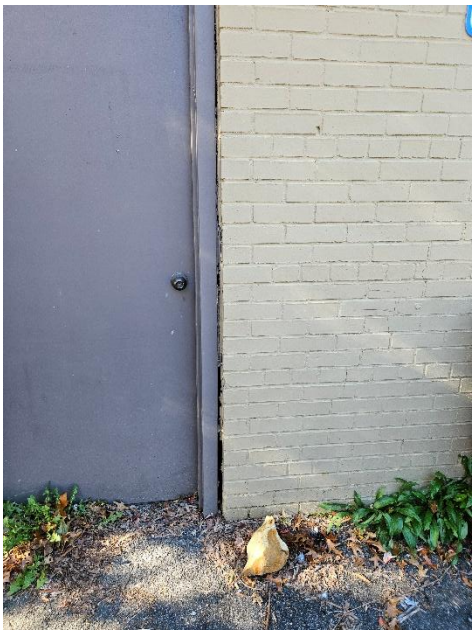
Building not built at same time.



Building at PEMB intersection.
PEMB building not reviewed.



Exterior east side (man and overhead door in shadow at left)



East side – Door frame slipped down. No cracks in veneer.



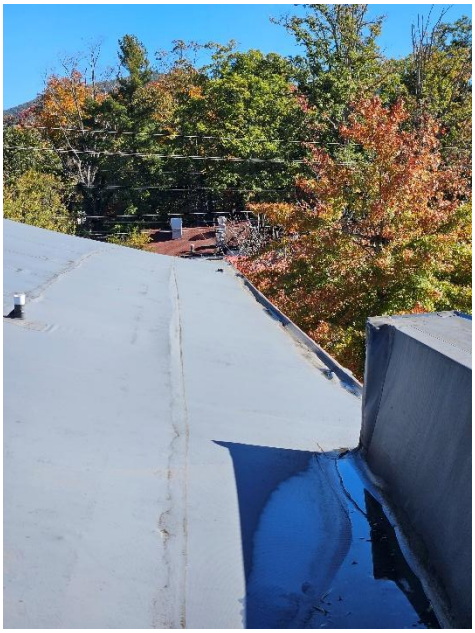
Exterior south. Infilled window in basement.
No cracks in veneer noted.



Exterior south face.
No cracks in veneer noted.



Roof photo 1



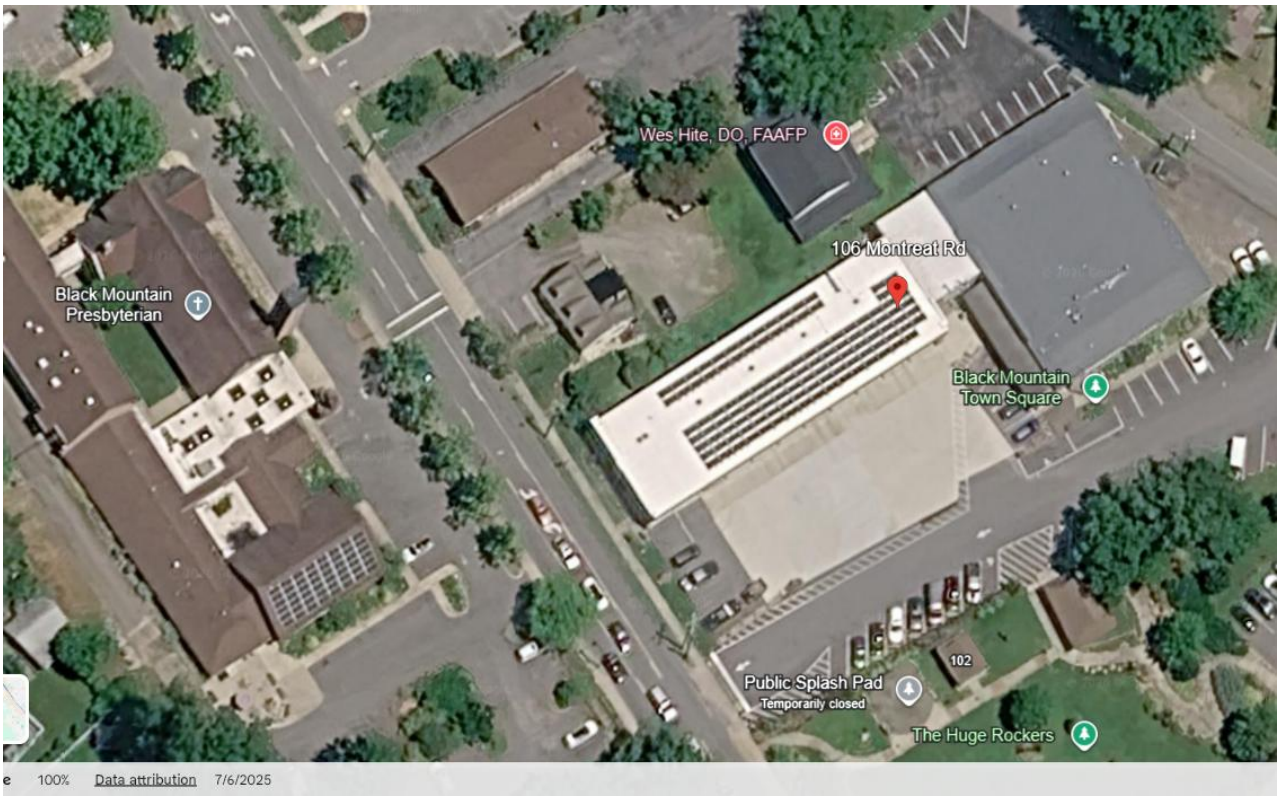
Roof Photo 2



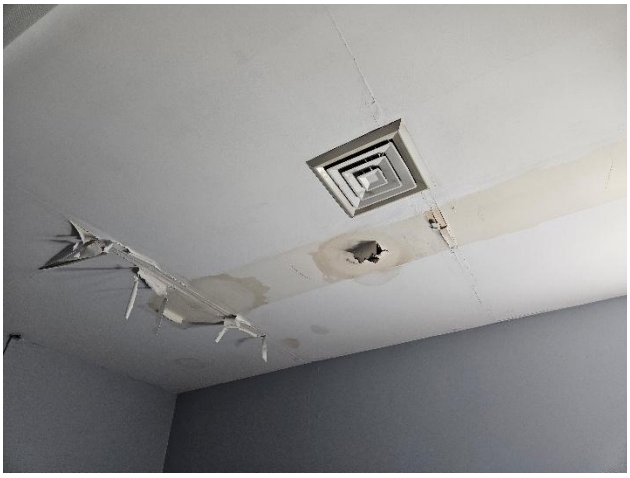
Roof Photo 3



Roof Photo 4



Google Earth roof image 07-06-2025 – No visible roof damage.


Water leak in chief's office causing light fixture attachment to fail.