



RATHGEBER/GOSS ASSOCIATES

Consulting Structural Engineers

12 October 2022

Christine Benjamin
WSSC Water
14501 Sweitzer Lane
Laurel, MD 20707

RE: Equestrian Center at Avenel - Barn Assessment
10010 Oaklyn Drive
Potomac, MD 20854

Dear Tina,

Rathgeber/Goss Associates has performed a limited structural review of the existing building at the address noted above on 28 September 2022. Our review was limited to visual observations of the structure that was readily accessible. We did not perform any demolition or any type of materials testing. Please note that there are no warranties, expressed or implied, included with this report.

GENERAL DESCRIPTION

The existing horse barn located at the address noted above is a gable style, post and beam, braced frame, wood barn with vertical wood siding and a concrete floor. There is a large, two story, shed dormer extension near the middle of the barn on the south face leading to several outbuildings. Some of the wood posts bear below the slab and others bear on concrete pedestals above the slab. The barn is approximately 278' long in the east-west direction and 54' wide in the north-south direction. The original structural drawings were not available for review. The age of the barn is unknown but may have been built in the early 1900's. RGA was retained to review specific damage in the northwest corner of the barn as well as comment on the overall condition of the barn. Drawings have been provided to stabilize and repair the rotten beam and two posts at the northwest corner. What follows is a list of additional items that need to be repaired and associated priorities.

STRUCTURAL OBSERVATIONS

Repairs to be made soon:

- Locate any posts that have rotted off at the base and splice/repair the posts.
- The barn is leaning towards the south. Install exterior bracing at the column lines connected to concrete foundations to prevent further movement.
- Install any missing wind braces that have been removed in the past.
- Reinstall the two posts in the loft that were removed and supported with transfer beams. The transfer beams supporting the cut posts appear to be overstressed. The beams would not have to be removed.

Repair items of intermediate priority (next few months):

- Remove vegetation from the exterior of the barn and replace rotten/damaged siding.
- Inspect the barn for additional rotten/damaged members and repair/replace.
- Repair any roof leaks.
- Stabilize the leaning retaining wall at the west end and repair the heaved slab at the door.

Repairs to be made for long term stability and function of the barn:

- Analyze the barn for wind loads and provide additional bracing as needed.
- Repair any damaged floorboards in the loft and provide safe hatches or rails around all floor openings for safety.
- It appears that the south face of the barn on the east end originally had an overhanging roof like the current west end. The CMU block wall supporting the south wall that was infilled below this roof is damaged and has shifted out of place. Install a new foundation wall to support the exterior wall or remove the wall and reclad the original exterior wall.

CONCLUSIONS AND RECOMMENDATIONS

In our professional opinion, the barn condition is similar to what would be expected of a barn this age and is salvageable. We have provided details for repairs that must be made immediately for safety as well as a list of items that should be addressed in order to preserve the use of the barn for the future.

See the photos below for a graphic representation of our observations.

Please do not hesitate to contact us if you have questions or concerns.

Sincerely,

RATHGEBER/GOSS ASSOCIATES, P.C.

Bill Duvall, P.E.
22001.082

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 27100, EXPIRATION DATE: 1-25-2024



PHOTOS



Rotten members at the north west end.



Damaged post in loft



Additional Rotten post.



Leaning to left in photo (south). Note vegetation.



West foundation wall is a retaining wall and leaning outward.



South west foundation wall out of place.



Transferred post to be stabilized.



Note limited internal bracing.



View of loft framing. Small posts on the floor indicate openings.