

Towner County Courthouse Wall Condition Review

315 2nd Street

Cando, North Dakota

Structural Review of Exposed Wall Conditions

The purpose of our site visit was to conduct visual observations of the facility walls and framing at locations of finish removal. Access holes were cut at locations designated in drawings provided by Icon and dated January 9, 2023. A copy of the drawings has been included with this report.

This report supplements earlier assessment reports submitted in July of 2022 and January of 2023.

We visited the site on July 24, 2024, in the presence of Mr. Bill Voight of Towner County. Photographs were taken of the observed conditions and are included in this report. Additional photographs, provided by Bill Voight, are also included.

Observations

Access Holes 1A/1B

No hole cuts were provided. The exposed areas of the wall were included in our earlier report.

Access Holes 2A/2B (Room off Commission Room)

The floor joists above rest on brick ledge. Wood floor joists are in good condition. Significant mortar deterioration was observed in both openings. Deterioration extended a minimum of 3 to 4 inches into the rock wall. Loose sand was observed at the bottom of the wall. Water staining was observed on the wood furring.

Access Holes 3A/3B and 4A/4B (Social Services)

The floor joists above rest on brick ledge. Wood floor joists are in good condition. Moderate mortar surface deterioration was observed in the lower opening. The mortar in the upper access hole was in fair condition.

Access Holes 5A/5B (Below Vault)

Surficial corrosion was observed on the vault floor support channels. The rock walls were in fair to moderate condition.

Access Holes 6A/6B (NE Corner of Records Storage)

The floor joists above rest on brick ledge. Wood floor joists are in fair to good condition. Significant mortar deterioration was observed in the lower opening. Deterioration extended well into rock wall. Rock wall in fair condition in the upper opening.

Access Holes 7A/7B (NW Corner of Records Storage)

The floor joists above rest on brick ledge. Wood floor joists are in good condition. Significant mortar deterioration was observed in the lower opening. Deterioration extended well into rock wall. Rock wall in fair condition in the upper opening.

Access Holes 8A/8B (Storage Off Commissioners' Room)

The floor joists above rest on brick ledge. Wood floor joists are in good condition. Significant mortar deterioration was observed in the lower opening. Rock wall in fair condition in the upper opening.

Access Holes 9A/9B (Registrar of Deeds SE Corner)

The brick wall was covered with original plaster. The lower access hole revealed water damage and deterioration of the plaster.

Access Holes 10A/10B (Registrar of Deeds SE Corner)

The brick wall was covered with original plaster. The lower access hole revealed water damage and deterioration of the plaster. A large portion of the plaster was gone. Surface deterioration of the brick mortar was observed.

Access Holes 11A/11B (Auditor's Office)

Plaster deterioration and falling off the backup brick due to water damage was noted.

Access Hole 13 (Ceiling of Jail)

Visible floor joists are in good condition with no water damage or cracking observed.

Access Holes 14A/14B (Sheriff's Office)

Floor joists above supported on brick ledge. Brick backup wall covered by plaster. No signs of water damage were noted.

Sheriff's Storage

Access holes were not provided in this area. However, we were provided with photographs of the exposed stone foundation wall that were taken during wall finish work. The photographs show significant deterioration of the stone foundation wall up to ground level. Deterioration of the mortar extended into the wall.

Structural Review

In our opinion, the exposed areas of the building foundation appear to range from fair to poor structural condition. Significant water damage to the mortar between the stones was observed in the lower portions of the walls. In many locations, mortar has degraded to the degree that it has lost all cementitious properties and is falling out of the joints. Stability of the walls has been compromised in several areas. If repairs are not performed in a timely manner, further deterioration of the wall stability will continue.

If the building is to stay in service, we recommend the foundation wall system be repaired by removing and replacing deteriorated mortar areas. This may require removal of loose portions of the wall stones and relaying the wall system.

Repair of stone foundations is a specialized process. We recommend a professional with extensive experience in these types of repairs be brought in to determine the proper repair type and procedures for this type of system. We recommend the repairs be formulated and implemented as soon as practical to prevent further degradation of the foundation and exterior wall systems.

We also recommend the ground adjacent to the building perimeter be regraded to provide positive drainage away from the structure. Regrading will help guard against water intrusion into the foundation system.

Based on this review, it is our opinion that estimated costs of renovating the existing courthouse will likely exceed those given in our earlier facility assessments.

Our review includes only items visible during our visit. As work is performed repair of the noted items, we recommend observations be performed to determine if any additional damage is present.

Please contact us if you have any questions or concerns.

Icon Architectural Group



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Structural Engineer

