

Innovative Engineering Design Services, Inc.
P. O. Box 30014
Knoxville, Tennessee 37932
865-693-5971

January 28, 2025

Ms. Cheryl Cardwell
10408 Victoria Drive
Knoxville, Tennessee 37922

Re: **Limited Structural Evaluation**
Site Location: 10408 Victoria Drive, Knoxville, TN 37922
Project No: 52024201A (Cardwell)

Dear Ms. Cardwell,

At your request, I visited the above property on Friday, January 24, 2025 at approximately 9:00 AM. The purpose of my visit was to assess the structural findings contained in a home inspection report, dated January 20, 2025 for the above listed property. Based on my limited visual inspection, I note the following.

- **Exterior Surface and Components** (report pages 1 and 2 of 58)

- **Item #2A** – As noted in the report, the west side of the building is constructed of a concrete block foundation wall with wood structural framing and an outer (partial) brick veneer wall. The brick veneer showed signs of an outward bow which was visible at the entrance to the crawl space opening. A horizontal gap was also noticed between the grout and brick. The concrete block foundation wall in this section of the building was viewed from inside the crawl space and no signs of structural distress were noted.

RECOMMENDATION: *The bow was visually estimated to be less than 1" and no loose bricks were observed. The Owner should extend existing roof drainage pipes at least 10' beyond the foundation and monitor this wall for future cracks. If there are changes in the bow gap or if new cracking / joint separations are observed, a more in-depth structural evaluation and repair of this wall should occur.*

- **Item #2B** – Joint separations and stair-step cracking were observed in the brick veneer wall around the upper corner of the first-floor window opening on the north west corner of the building. This cracking indicates some type of differential foundation movement or settlement – most likely due to impacts from inadequate surface water drainage. The concrete block foundation wall in this section of the building was viewed from inside the crawl space and no signs of structural distress were noted.

RECOMMENDATION: *The cracks and brick joint separations are considered to be minor and pose no immediate structural concern for the building. However, the stability of the wall and the risk of possible future structural damage is unknown. The owner should have a contractor tuckpoint the joint cracks with new mortar and replace all drain pipes at the northwest corner of*

the building to carry water at least 10' beyond the existing foundation. If brick cracking and joint separation continue, the owner should consult with a foundation repair specialist for a stabilization / repair plan.

- **Structure** (report page 3 of 58)

- **Item #23** – When viewed from the crawl space, the south side of the perimeter concrete block foundation wall exhibited vertical cracks that most likely stemmed from geometric stress concentrations and differential foundation settlement.

RECOMMENDATION: *The owner should have a contractor tuckpoint the joint cracks with new mortar and monitor the crawl space for future cracks. If additional foundation cracks occur, the owner should consult with a foundation repair specialist for a stabilization / repair plan.*

Conclusion: The above listed recommendations represent IDES' evaluation of the conditions observed. The recommended repairs are to be made by a licensed contractor in accordance with local building codes to match the same size, spacing, and quantity of existing materials. It is my opinion that these recommendations, or equivalent repair solutions, if implemented, will resolve the structural issues observed.

This letter is being provided for information only and represents an opinion of the structural condition of the building structure based on the visible inspection and information available at the time of visit. The scope of this evaluation was very limited and focused solely on the items noted above. No other components of the structure were evaluated and no surface materials were removed for exploratory evaluation. IDES has not prepared any detailed plans or specifications; and no warranty regarding the future performance of any repair or modification is intended, implied, or expressed.

Since IDES has no control over the repair contractor; and due to the fact that site conditions can change beyond our control, this letter is only valid for 6 months from the date of this report. Our maximum liability for loss suffered by the client for any cause is limited to our inspection fee.

Copies of this letter will not be released to anyone without your permission and only at your discretion. Please call with any questions you may have. Thank you for the opportunity to be of service.

David Mosby
Structural Engineer, TN PE #18346

CC: Jeff Gray, Project Manager

