



Structural • Consulting • Design

DATE: January 6, 2023

TO: Michele A. Fountain, P.E.
CKS Engineers, Inc.
4259 W. Swamp Rd., Suite 410
Doylestown, PA 18902

RE: Preliminary Structural Assessment Report Supplement
Cintra Mansion
181 Bridge St.
New Hope, PA 18938

WJM Engineering, Inc. conducted a preliminary structural investigation of Cintra Mansion on August 16, 2022. We issued a Preliminary Structural Assessment Report on October 28, 2022. The purpose of this communication is to supplement our report based on our meeting in the Community Room in New Hope, PA on December 8, 2022. During the meeting we discussed our report findings, conclusions, and recommendations as well as the feasibility of selective demolition of the building and potential preservation of certain components.

Our report conclusion states that due to the condition of Cintra Mansion, extensive scope of the repair and rebuild work, complexity and sequencing challenges regarding the required temporary shoring and bracing, and the significant worksite safety concerns, our recommendation is to demolish the existing building and reconstruct it utilizing new materials.

However, as stated in our report, the currently non-visible portions of the interior load-bearing stone walls and segments of the interior timber framing members can potentially be preserved. Potential preservation of these components would require extensive temporary bracing and shoring, additional structural assessment, and careful construction sequencing to ensure structural stability of the building and provide a safe work environment.

As discussed during the meeting, cost estimates will be developed by Studio Hillier for two options: complete demolition, and selective demolition of the building. The selective demolition option would require construction of steel framed bracing around the exterior perimeter of the building to stabilize the existing stone walls while the interior plaster is removed throughout the building. The steel bracing is required as the interior plaster is currently providing lateral stability to the structure, particularly at the East and West wings of the building. Removal of the interior plaster will allow a condition assessment of the interior stone walls and wood floor framing to be conducted.

The cost estimate for selective demolition will include temporary shoring of the floors, which will be required to demolish the exterior load-bearing stone walls, as the floor framing members are set into and bear on the exterior stone walls. The shoring is also required to provide a safe work surface at the structurally compromised floor areas including the stairs and failed timber window header locations where the floor framing is not supported.

If segments of the floor framing members are in good condition and can be preserved, additional structural analysis will be required to determine if the existing framing is adequate for the code prescribed design loading. The floor framing can potentially be reinforced to meet the structural design requirements if it is not adequate.

Our findings and recommendations are based on a non-invasive, visual observation of the accessible components at the time of our site visit. We reserve the right to modify or amend this communication. This communication is considered a narrative for informational purposes only and is not intended to be used as a design or bid document.

Please contact me if you have any questions or I can be of further assistance.

WJM Engineering, Inc.

A handwritten signature in black ink, appearing to read "Stephen W. Mohan". The signature is written in a cursive, flowing style.

Stephen W. Mohan, P.E.
Principal Engineer