

October 17, 2022

Mr. Robert Rulli Office of Planning & Community Development 514 Main Street Warren, RI 02885

RE: Peer Review of Structural Assessment 119 Water Street, Warren, RI Fuss & O'Neill Project No. 20110817.A40

Dear Mr. Rulli:

Thank you for requesting engineering services to perform a peer review of the structural assessment and structural rehabilitation cost estimates submitted by the owner/developer for the existing structure at 119 Water Street in Warren, RI.

The following tasks were completed as part of the peer review process:

- Task 1. Site Visit: A Fuss & O'Neill (F&O) senior structural engineer (Engineer) conducted a site visit on October 11, 2022. The Engineer observed the building exterior, basement, and first floor framing.
- Task 2. Peer Review: The Engineer reviewed the materials submitted to the Town by the owner/developer for the existing structure, namely:
  - 1. Structural Narrative of basement foundation walls and floor framing by Structures Engineering and Design (dated 10/6/21)
  - 2. Updated Structural Narrative by Structures Engineering and Design (dated 8/5/22)
  - 3. Building Restoration Evaluation and Cost Order of Magnitude dated 8/1/22 provided by J2 Construct supporting photographic documentation

The existing structure is a two-story wood framed building with a habitable attic. The first floor is currently occupied by a retail store. Some of residential tenant spaces are currently occupied. Overall, the building envelope and structure were observed to be in poor condition. The building exhibits evidence of long-term neglect and deferred maintenance. During the site visit, the Engineer was able to observe the building exterior, basement, and first floor framing.

The Engineer's observations of the exterior, foundations, and first floor were consistent with those described in Documents 1 and 2 listed above. The anticipated structural renovation work described in Documents 1 and 2 is also consistent with the Engineer's observations.

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In addition to the conditions noted in Documents 1 and 2, the Engineer observed severe deterioration of the first-floor framing, likely due to insects and moisture. Some floor joists are severed due to deterioration that has extended through the full member cross section. Due to the observed deterioration of the first-floor framing, the load carrying capacity of the first-floor framing is compromised and is a safety risk to any occupants. F&O recommends restricting access to the first floor.

Document 3 lists a detailed scope and cost of work estimate based on the current building being temporarily supported, lifted, placed on new foundation walls, and repaired. The scope of construction work appears to capture the structural improvements required. The following questions and comments are offered:

- 1. The scope of work includes temporarily supporting and lifting the existing building structure and subsequently reconstructing a large portion of the elements that were temporarily supported (floors and walls). While this sequence seems reasonable, maintaining select elements of the existing structure only to replace them later in the construction sequence seems uneconomical. Based on the observed condition of the existing structure, full replacement of the existing building may be a more economical approach.
- 2. Does the project cost account for the complexity of working within an existing structure and effort required to maintain elements of the existing building to remain (utilities, finishes, structure)? Based on the observed condition of the existing building, additional contingency is recommended to cover this effort.
- 3. The project scope and cost do not appear to account for the following items:
  - Professional design efforts required to restore the existing structure and comply with applicable building codes.
  - New fire escapes.
  - New exterior doors and windows.
  - Utility work required due to the framing replacement work.
  - New finishes required due to the framing replacement work.
  - New basement bulkhead.



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The observations and scope of structural work described in Documents 1, 2, and 3 are consistent with the Engineer's observations of the building structure located at 119 Water Street. The complete scope and cost of work required to repair the building is anticipated to exceed the scope and cost identified in Document 3.

Thank you for requesting structural engineering services from Fuss & O'Neill. Please contact us with any questions regarding this letter.

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Sincerely,

Tiffany Cartier, PE Senior Structural Engineer Arnold N. Robinson, AICP Associate | Client Manager