

September 8, 2016

Brad Finlay Monaghan Woodworks, Inc. 100 Commercial St. Suite 212 Portland, Maine 04101

Reference: 11 Brown Street – Rusted Steel Entry Framing Structural Integrity Job Number: 16-0157

Dear Brad,

As requested, I am writing you this letter regarding the framing below the entry at the above referenced location. The opinions and comments included in this letter are based on our visit to the site. Physical strength testing, calculations and professional instrument based elevation and location surveys have not been performed. No warranty expressed or implied, as to the condition of the complete structure, is intended.

It is evident that the area had been experiencing moisture infiltration for some time, and the existing steel framing was rusted. However, it appears mildly deteriorated and we did not observe section loss great enough to raise concerns about capacity. The steel framing supports concrete decks below the sidewalk and entry. The slab under the sidewalk appears to have been cast on metal form deck, which leads us to believe that the deck is reinforced and does not depend on the metal deck for support. The metal deck is rusting where it connects to the existing beam, and wooden blocks have been placed in the flutes to support it. Some of the blocks are rotted and/or missing and we recommend that they be replaced.

Overall, the structure generally appears to be performing as it should. The rusting steel should be scraped clean, and painted with a zinc-rich primer and Rustoleum enamel appropriate for industrial applications and preventing rust. The area should be waterproofed above to minimize further deterioration.

Please let me know if you have any questions or comments.

Sincerely,

Ben D. Heidebrink, E.I.T. Project Engineer

Aaron C. Jones, P.E., SECB, LEED AP President

