

# McBrie, LLC

160 Sylvan Street  
Danvers, MA 01923

Structural Design & Sales  
www.mcbrie.com

Telephone: 978-646-0097  
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August 07, 2017

Town of Amesbury  
Attn: Robert Demarais, P.E.  
Director of Public Works  
39 South Hunt Road  
Amesbury, MA 01913

**RE: Visual Structural Inspection – Apparatus Bay Floor Slab**  
Amesbury Fire Station  
Elm Street, Amesbury, MA

McBrie, LLC Project # 17-197

Dear Mr. Demarais:

Per your request, McBrie, LLC performed a visual structural inspection of the above referenced location on July 27, 2017. The inspection was performed to evaluate the overall condition of the concrete floor slab and give recommendations for repairs of any structural deficiencies noted. It was indicated to us via your employees that fire personnel heard a large bang or pop while the fire truck (37200 lbs. gross plus 6600 lbs. of water) was in the apparatus bay. It was also indicated that recent concrete material was falling from the ceiling in the basement area. Directions indicated throughout this report assume the building is viewed from Elm Street.

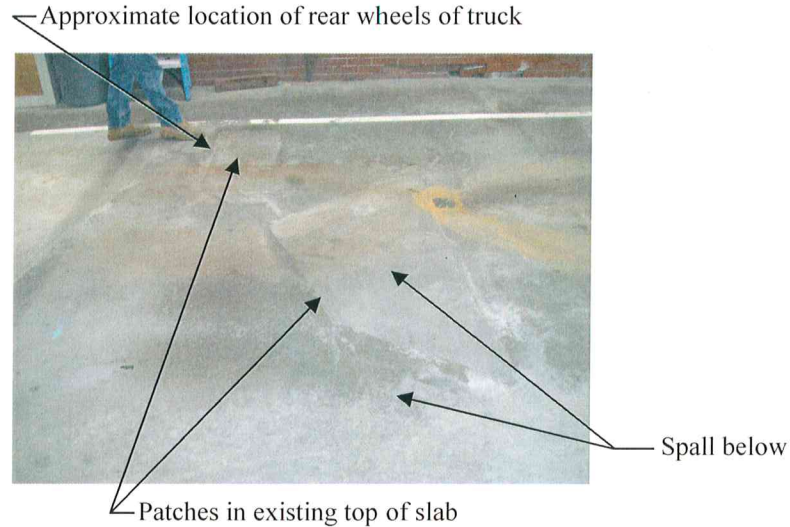


Front/Right Corner Elevation



Apparatus bay of concern

During the inspection, McBrie, LLC observed the following:



Rusted rebar with large spalled area near patch observed from above



Approximately 8½" thick slab

## CONCLUSIONS & RECOMMENDATIONS

In conclusion, based upon McBrie, LLC's observations, it is McBrie, LLC's opinion that the floor slab has deteriorated /rusting rebar that is resulting in spalling of the concrete cover and loss of bond to the surrounding concrete. McBrie, LLC recommends the following:

1. That the apparatus bays at this location not be used for vehicular storage;
2. Repairs be initiated to either replace the floor slab or to reinforce the floor from below with steel beams;
3. Installation of an epoxy waterproof membrane coated with an anti-skid top coat. This will stop water from penetrating the concrete slab and rusting additional rebar.

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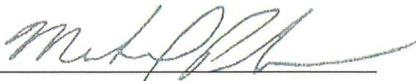
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Please be aware that waterproofing the slab now/alone will not solve the problem so reinforcing or replacement of the floor slab must occur prior to installation of an epoxy waterproof membrane

It should be noted that this report is based upon a visual inspection of exposed foundation and framing members to assess their current condition(s). It does not imply that the foundation/framing/structure meets or does not meet any previous or current structural requirements of the Massachusetts State Building Code except as noted specifically in this report.

Please do not hesitate to contact our office if you require additional information.

Sincerely,



Michael Perham, PE  
Structural Engineer / Managing Member

