

SPAULDING ASSOCIATES
CONSULTING ENGINEERS

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19 NORWICH STREET SUITE 402
WORCESTER, MASSACHUSETTS 01608
(508) 754-1177 FAX (508) 754-7385

Town of Sterling Historical Commission
Maryanne MacLeod
45 Sweat Hill Road
Sterling, MA 01564

Re: Old Sterling Town Hall, Project No. 22045

Dear Ms. MacLeod,

As you requested we have reviewed the work that was done by Mr. Paul De Salvo, P.E. regarding the structural capacity of the first floor of the referenced building. I understand that Mr. De Salvo was fully aware we were hired to review his work and that he had in fact encouraged you to do so. I also understand that it is your intent to use the first floor of the building to act as an interim library while renovations are being done at the Sterling Town Library, and the second floor will be used to accommodate offices during this period.

On May 15 I met with you at the building and did a walk through inspection of the structural components of the first floor that were exposed to view. You gave me a copy of scaled diagram of the first floor dividing it into areas according to load capacity. This diagram had been prepared by Mr. De Salvo and represented the results of his study. I later obtained directly from Mr. De Salvo a copy of his field notes and calculations that relate to the load capacity numbers on his diagram.

We reviewed Mr. De Salvo's hand calculations and made calculations of our own using computer spread sheets. Our results were consistent with Mr. De Salvo's when we assumed simple span joist reactions. We then made calculations assuming 2-span continuous joist reactions, which resulted in somewhat lower load capacity numbers for the beams.

We agree with the load capacity values shown on Mr. De Salvo's diagram if the joist loads are all applied as single span members. However, because the assumptions are based on conditions seen only in select locations through view holes we feel that it would be better to limit the load capacity to what it would be if all the joists are 2-span continuous. This would be approximately 160 lbs per square foot, which is still higher than the 150 lbs per square foot Massachusetts State Building Code prescribed value for library stack rooms.

I trust this will address your questions regarding the floor capacity of the Old Sterling Town Hall, and hope you will call if there are any issues we have not made clear.

Very Truly yours,



Westbrook H. Spaulding, P.E.

cc Mr. Paul De Salvo, P.E.

