

EMANUEL ENGINEERING, INC.

ENGINEERING CONSULTANTS



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March 13, 2015

Mr. Jim Rozycki
Director of Facilities - Oyster River School District
36 Coe Drive
Durham, NH 03824

RE: Roof Snow Loads
SAU #5 Office Building
Oyster River Cooperative School District Buildings
Durham, NH

Dear Mr. Rozycki,

At your request, Emanuel Engineering, Inc. visited the Oyster River School District Office Building located at 36 Coe Drive, Durham, NH on February 18, 2015, to investigate possible roof problems due to snow loads on the roof. Dave Emanuel and I met with you on site. This report summarizes our observations and recommendations.

Dave Emanuel, P.E. and I performed a visual site inspection of the wood framed office facility. The building was visually inspected from the occupied office space. There was an attic scuttle hatch in the conference room. However, a meeting was in progress and access to the attic was not made. There was no inspection of roof elements from the attic. There were no reported problems or noted cracking or obvious signs of deformation, displacement, distress, or failure at the time of the inspection.

There was no apparent over burdening snow load on the single-story, wood framed building at the time of the visual inspection from the ground. Building plans of the building were not provided by the School District nor reviewed for design loads.

The current ground snow load for the Town of Durham, NH per the ASCE 7-05, "Minimum Design Loads for Buildings and Other Structures", is 55 PSF. It is our understanding that Durham currently prescribes a ground snow load of 55 PSF.

The ground snow load is converted to a flat and / or sloped roof design load using several adjustment factors. Using the present day 55 PSF ground snow load, translates to a 42 PSF for

flat roofs and include roof slopes up to 30°. Gable roofs also must contend with unbalanced snow loads, which would be 55 PSF on one side and zero on the opposite side.

Based on engineering calculations for the unit weight of snow, it is estimated that approximately 24 inches of snow represents the roof design load of 42 PSF.

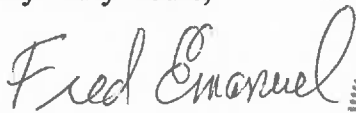
Recommendations

Without further additional review, calculations, or inspections, we recommend that snow depths on the office building roof not exceed 24 inches.

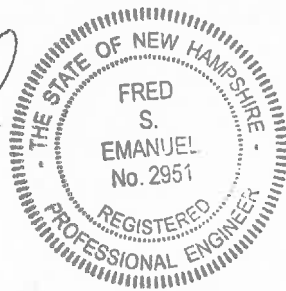
Based on the day of the visit, snow depths were within allowable depths.

See attached photographs. Should you desire further evaluation of the roof or have further questions, we are available to assist you.

Very Truly Yours,



Fred Emanuel, P.E.



Attachments: Photographs (2 pages)



SAU #5 Office Building



