

STEFFENSEN ENGINEERING ASSOCIATES, INC

CONSULTING STRUCTURAL ENGINEERS

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February 10, 2011

Ellis School
432 Main Street
Freemont, NH 03044

Attention: John Sasina

Re: Structural Review – Roof Framing
Modular Classrooms – Ellis School
Freemont, NH

Dear Mr. Sasina,

At your request, on February 9, 2011 I viewed the roof framing of the above named location while accompanied by Scott Brown. The following are my observations:

The roof framing was measured and found to be composed of pre-engineered wood gable trusses spaced at 24" oc. A timber beam at the centerline of the building supports the trusses at each side of the roof.

Current Code indicates ground snow load at this location is to be 50 psf, therefore the design roof live load should be 35 psf uniformly distributed. The roof framing is apparently designed to meet current Code therefore the roof snow loading should be limited to 35 psf by shoveling any excess.

The leaking encountered is due to the formation of ice dams and the subsequent backing up of snow melt or rain that finds its way through the roofing. Ice dams must be removed. A permanent solution would be to improve the insulation envelope to reduce heat loss and snow melting and to install an ice and water shield membrane 6 feet up the slope from the edge of the eaves

Thank you for this opportunity to be of service to you. If you have any questions or comments, please do not hesitate to call or write.

Yours truly,


Peter H. Steffensen, P.E.

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