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February 23, 2021
Project No. F100220

Ms. B. Lynn Tillman and Mr. Paul Anderson
580 CR 914
Nacogdoches, TX 75964

Reference: Supplemental Questions Concerning Snow and Ice Loads

Ms. Tillman and Mr. Anderson,

You reported that your studio building roof received 8-inches of wet snow, then an additional inch of ice during the week of February 16, 2021. You asked the following questions: 1) In your professional opinion, what would be the condition of the structure you examined be with this snow and ice load? 2) Would this building have collapsed? The answer to both of your questions is essentially the same. In my professional opinion, the structure I inspected in October 2020, would surely have catastrophically collapsed, without significant structural modifications, or supplemental shoring to prevent collapse.

Wet snow density is typically about 20-pcf, or more. Ice density is typically about 57-pcf. I estimate the total load from ice and snow was about 18-psf, or 90-percent of the typical design load in this area. The roof framing was constructed in a discontinuous manner, and the weak joints would have failed catastrophically. As I stated in my letter of October 9, 2020, the roof structure was already collapsing, and it was already DANGEROUS at that time.

I hope this helps. If you have any questions or need additional information, please call me at (903) 474-4260.

Sincerely,



David W. Knight, PE
TBPE #62959

