



Readers Respond

Gentlemen:

The December issue of *SBC* contains a question and answer concerning the installation of solar panels on a truss supported roof. While I agree with the bulk of the answer, there are two comments I have regarding the answer.

The dead loads given in the answer are for a square foot of the materials laid horizontally. These dead loads should be increased because of the slope when designing the inclined top chord members supporting those materials. It could be argued that the truss dead load already contains such an increase, but for simplicity in calculating the truss dead load would normally be increased along with the other materials. The increase involved is usually not great, but can be great enough for steeper slopes (20 percent for 8:12 for example) that it should not be ignored.

The solar panels were to be attached and supported on the roof by rails placed four feet on center, i.e., on every other truss. A check of the top chord of these support trusses should include the entire tributary weight of the solar panels without an assumption that the intermediate trusses carry an equal share of the load. This may be overly conservative, but avoids any argument over the load sharing capabilities of trusses in a normal roof, specifically whether such sharing can relieve loads applied directly to other trusses.

Very truly yours,

Edward F. Diekmann, Consulting Structural Engineer, OK

Editor's Note: We would like to thank Mr. Diekmann for commenting on the December 2007 **Technical Q&A** column about the loading conditions of solar panels in trussed roofs. We agree with his responses. Regarding his first comment, TPI 1 also addresses the effect of pitch in Section 6.2.1.2: When dead loads are applied on a projected horizontal area basis, the effect of the pitch shall be taken into account.

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