

May 8, 2020

Mr. Karlo Meave  
SunSmart Technologies  
701 NE 76<sup>th</sup> St.  
Gladstone, MO 64118  
[Karlo@SunSmartUSA.com](mailto:Karlo@SunSmartUSA.com)

**RE: SALLEE REAL ESTATE  
200 NE MISSOURI ROAD  
LEES SUMMIT, MO 64086**

**JOB #2020-0836**

Dear Mr. Meave;

This letter is in regard to the addition of solar panel equipment on the roof of the above referenced address. The purpose of this letter is to determine if structural modifications are required due to the additional weight of the new equipment. I would like to present my findings and these opinions for your information.

Information provided to our office for this review is as follows:

1. The weight of the panel system is 2.42 psf.

Evaluation of the existing framing is based on the following design assumptions:

1. The existing framing is structurally adequate to carry the current live and dead loads imposed on the framing.
2. There is no damage or deterioration to the existing framing members that would reduce their load carrying capacity.
3. Snow load or live load is unreduced at 20 psf and the dead weight of the roof is 10 psf for a total load of 30 psf.

Section 1607.13.5.1 of the 2018 International Building Code states:

**1607.13.5.1 Roof Live Load.** Roof structures that support photovoltaic panel systems shall be designed to resist each of the following conditions:

1. Applicable uniform and concentrated roof loads with the photovoltaic panel system dead loads.

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**Exception:** Roof live loads need not be applied to the area covered by photovoltaic panels where the clear space between the panels and the roof surface is 24 inches (610 mm) or less.

2. Applicable uniform and concentrated roof loads without the photovoltaic panel system present.

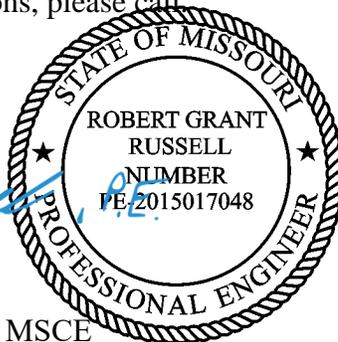
The added roof weight is considerably under the allowable roof live load. Also, these panels are under the 24" clear height. The attached diagram is the approved layout method.

This evaluation was based on the information provided and the design assumptions listed above. When evaluating building components, it is required that certain assumptions be made regarding the existing conditions. Because these assumptions may not be verifiable without expending added sums of money, or destroying adequate or serviceable portions, the owner or recipient of this report agrees that, except for negligence on the part of the engineer, we will be held harmless, and indemnified and defended, by you from and against all claims, loss, liability or expense, including legal fees arising out of the services provided by this report.

If we do not receive a response from you within 5 days of this letter, it will be assumed that the assumptions listed within this letter are correct. If discrepancies with the assumptions are discovered, they will be brought to the immediate attention of the Engineer.

If there are any questions, please call

Sincerely,



R. Grant Russell, P.E., MSCE  
Principal