



ION Solar
ION DEVELOPER, LLC
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Thursday, August 1, 2024

RE: Elaine L Finch Residence - 1131 Moorefield Hill Court Southwest, Vienna, Virginia

To Whom It May Concern:

I have evaluated the roof structural elements of the residence for the required design loads and the additional load that will be imposed by the proposed solar system. The existing roof information was provided by a site visit by an audit team at ION Solar. Based on that site visit, it is my understanding that the roof framing information is as follows:

Structural Framing Type: 2x12 Rafters @ 24" O.C.

Roofing Material: Composition Shingle

The Required codes and loads are as follows:

Codes 2018 IBC, 2018 IRC, 2018 VCC, 2018 VRC, Load Standard: ASCE 7-16

Risk Category: II
Wind Speed (3-Sec Gust, MPH): 115, Exposure Category: C
Ground Snow Load (psf): 25
Roof Snow Load (psf): 18
Roof Live Load (psf): 20

After reviewing the existing roof framing information and in accordance with the structural calculations on sheet S-5 which were performed according to the applicable codes and loads above, it is my recommendation that the existing roof framing is adequate to safely and sufficiently support the required structural design loads and the weight of the new solar system as is. Alteration or replacement of existing structural elements is not required.

This evaluation only applies to the areas of the roof that will be directly supporting the solar system and does not make any recommendations for any other structural components of the building. The racking must be installed per the manufacturer’s recommendations.

The #14 x 3" wood screw used to attach the solar system to the roof must be staggered to evenly distribute the loads over the affected area.

Sincerely,
A. Luke Rowley, PE



07/31/2024



A. Luke Rowley

Digitally signed by A. Luke Rowley
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