



Project Number: U2716-0352-221
December 27, 2022

SunModo
14800 NE 65th Street
Vancouver, WA 98682

ATTENTION: Peter Abou Chacra
REFERENCE: **Florida Product Approval of SMR Roof Mount Systems
Allowable Span Quick Guide**

To Whom It May Concern:

The purpose of this letter is to serve as a quick guide reference for determining allowable spans for the SunModo SMR100 roof-mounted PV system, when used in conjunction with the Florida Project Approval (FPA) documents for this system. The design requirements and criteria used for this guide are as follows:

Design Approach (ASD):

- Building Code: 2020 Florida Building Code (2018 IBC) and ASCE 7-16
- Risk Category II
- Wind Speeds: 100 – 180 mph
- Ground Snow Load, $P_g = 0$ psf
- Exposure Categories: B and C
- Mean Roof Height: 22 ft
- Roof Type: Gable Roof, Slopes from 7° to 20°
- Assumed PV Panel size is 79in x 39in (see notes on next page)
- PV Panels are considered to be installed in roof zones 1 and 2e only per ASCE 7-16 Figure 30.3-2B
- PV Panels are considered to be non-exposed per ASCE 7-16 Section 29.4.4
- PV Panel pressure equalization factor, $\gamma_a = 0.75$ per ASCE 7-16 Figure 29.4-8

Per the above listed criteria, the SunModo SMR100 roof mount system may be installed with the allowable spans listed in the table below.

Allowable Spans		
Wind Speed (mph)	Exp B	Exp C
100	8'-0"	7'-6"
110	8'-0"	6'-6"
120	7'-6"	6'-0"
130	6'-6"	5'-6"
140	6'-0"	5'-0"
150	5'-6"	4'-6"
160	5'-0"	4'-0"
170	5'-0"	4'-0"
175	4'-6"	4'-0"
180	4'-6"	3'-6"



Limitations:

- The span table provided in this letter applies only to the SMR100 rails. Attachment components, clamps, roofing, roof framing and PV panels themselves are not considered.
- Each PV panel is assumed to be supported by a minimum of two rails. The spans listed may be conservatively applied to three rail configurations if desired.
- PV Panels are assumed to be installed in a portrait orientation. The spans listed may be conservatively applied to Landscape orientations as well.
- Allowable spans for PV Panels larger than those listed on the previous page may be calculated as follows:

$$L2 = L1 * \sqrt{\frac{D1}{D2}}$$

Where:

- L2 = Allowable span for new panel size (in)
- L1 = Span listed in table (in)
- D1 = PV Panel length used in table (in)
- D2 = New PV Panel length (in)

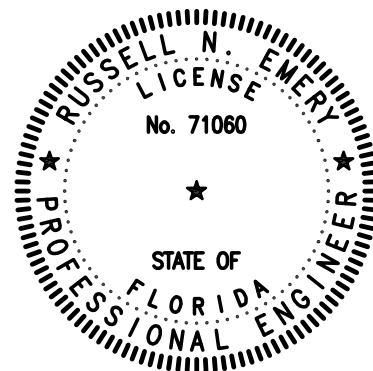
- Installations are to be installed in accordance with all applicable requirements of ASCE 7-16 Section 29.4.4.
- The information provided in this letter and any associated design drawings shall not be used for site-specific projects without prior review and approval by a Florida licensed professional engineer.

We hope that this letter meets your needs. For additional questions or concerns regarding this letter or any information not provided, please contact our office at your convenience.

Very truly yours,
VECTOR STRUCTURAL ENGINEERING, LLC

Russell Emery, P.E.
Project Engineer

RNE/mih
Enclosures



12/28/2022

This item has been digitally signed and sealed by Russell N. Emery on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.