May 09, 2022

Unirac
1411 Broadway Boulevard NE
Albuquerque, New Mexico 87102-1545
TEL: (505) 242- 6411

Attn.: Engineering Department,

Re: Engineering Certification for the Unirac GridFlex Ballasted Photovoltaic Panel Support System.

The Unirac GridFlex Ballasted Photovoltaic Panel Support System is a proprietary framed ballasted assembly which supports Photovoltaic panels. The "grid" rail frames hold the PV panels and are ballasted with concrete blocks or secure by attachments as required for the wind loads. The wind uplift loads are resisted directly by the ballast and or attachment. Lateral forces, both wind and seismic, are resisted by friction between the ballast and the roof surface. For wind forces, the system is designed for no lateral or vertical displacement of the array. For seismic forces, the system is designed per SEAOC PV1-2012 requirements for lateral movement/displacement.
The ballasting and or attachment requirements are determined using the Unirac online "U-Builder" Design Assistant tool. The Design Assistant covers a wide range of system configurations and loading and allows the user to customize the input to match the specific project conditions.

We have reviewed the Unirac GridFlex Ballasted Photovoltaic Panel Support System, the IFI wind tunnel test results and the Unirac ballasted system design methodology and have determined that the Unirac RM ballasted system design methodology is a rational approach and is in compliance with the structural requirements of the following Reference Documents:

Codes: ASCE/SEI 7-10 and ASCE/SEI 7-16 Minimum Design Loads for Buildings and other Structures
2020 Building Code of New York State
Other: Aluminum Design Manual, 2010 & 2015 Edition
IFI Wind Pressure Study Report #UNA01-3
Unirac Friction Report M585
SEAOC PV1-2012 Report – Structural Seismic Requirements and Commentary for Rooftop Solar PV Arrays
SEAOC PV2-2012 Report - Wind Design for Low-Profile Solar Photovoltaic Arrays on Flat Roofs
AC428, Acceptance Criteria for Modular Framing Systems Used to support Photovoltaic (PV) Panels, by ICC-ES

This letter certifies that the Unirac GridFlex Ballasted Photovoltaic Panel Support System and the Unirac online "U-Builder" Design Assistant tool are in compliance with the above Reference Documents.

If you have any questions on the above, do not hesitate to call.

DIGITALLY SIGNED

Prepared By:
PZSE, Inc. - Structural Engineers
Roseville, CA