

James A. Marx, Jr. P.E.
10 High Mountain Road
Ringwood, NJ 07456
E-mail: jamlight@verizon.net

January 5, 2016

Unirac, Inc.
1411 Broadway Blvd. NE
Albuquerque, NM 87102

To: Building Department or Others:

RE: Engineer's Notice of Evaluation for UniRac SolarMount™
Solar Module Mounting System

Dear Sir:

I have reviewed Unirac SM SolarMount™ “Design & Engineering Guide – Solarmount Enhancements: Flush-To-Roof Design” and the “Installation Guide”; consisting of Unirac’s three rail types, Solarmount Light, Solarmount Rail profile 2 and Solarmount HD and certify that the information and results are accurate. To determine the design level forces, the appropriate wind speed shall be determined as prescribed by local jurisdiction requirements and applied in accordance to the 2012 North Carolina building codes. The codes require that wind and snow loading is determined based upon International Building Code-2009 or International Residential Code-2009 and ASCE 7-05. Unirac’s “Design & Engineering Guide” utilizes ASCE 7-05 -Method 2 for which Unirac’s On-Line U-Builder or Appendix B – Pressure Lookup Tables are based upon, and that is dependent upon conditions of Low-Rise Buildings with spatial form, height and other structure parameters that are specified in the code provisions for determining the applied wind and snow loading pressures imposed onto the Unirac SolarMount™ rails supporting solar panels. For snow conditions having unbalanced or drift snow, the Analytical procedures should be followed. The Unirac railing assembly requirements for the installation are properly represented in the SolarMount™ Installation Guide.

For other conditions, the determination of wind and snow pressures should be determined by Unirac’s Analytical procedures.

The International Building Code requires that wind or snow loading be determined based upon ASCE 7-05 that which is dependent upon conditions of spatial form, height and other structure parameters that are specified in the code provisions for determining the applied wind and snow loading pressures imposed onto the Unirac SolarMount™ rails supporting solar panels.

The design verification is based on:

- I. ASCE7-05 – ASCE Standard
- II. “Steel Construction Manual,” 13th Ed., American Institute of Steel Construction, Chicago, IL, 2006.
- III. “Aluminum Design Manual”, The Aluminum Association, Washington D.C., 2005.
- IV. Allowable Load Test, Unirac UTR-248 SM2 Enancements.doc

Use:

Three methods have been provided by Unirac “Design & Engineering Guide” to aide in the solar railing requirements.

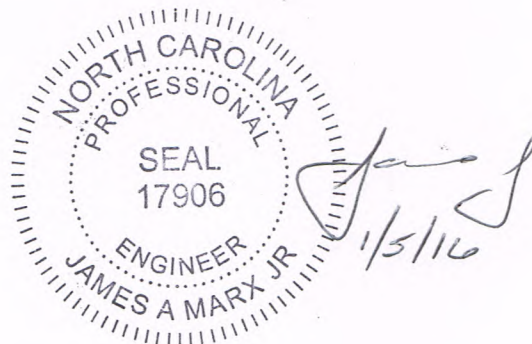
- A) On-Line U-Builder that will provide Bill of Materials & Calculations from project specific input.
- B) Prescriptive Design Method when project specific requirements are known, the project load pressures can be looked up in Tables located in Appendix B.
- C) Do it Yourself – Analytical method design approach that follows ASD calculations per ASCE 7.

By this letter, I certify that the Unirac SolarMount™ assembly, when designed in accordance with one of the 3 methods outlined in the “Design & Engineering Guide” and installed in accordance with the “Installation Guide” will meet the solar railing requirements of the building codes adopted by North Carolina. Others should evaluate the building structure to which the Unirac SolarMount™ system is to be connected on a case-by-case basis to ensure its adequacy to accept attachments and to support all applied loadings per the building code.

Please call me if you have any questions or concerns.

Sincerely,

James A. Marx, Jr.
Professional Engineer
NC License Number 17906



cc: Tom Young, Unirac