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Texas Registered Engineering Firm F-11352

Code Evaluation and Certification of Sol Attach Roof Mounting System

Prepared by:

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Evaluation Subject:

Sol Attach Roof Mounting System manufactured by:

Sol Attach, LLC

16238 Bear Run

San Antonio, TX 78247

1.0 Evaluation Scope

Compliance with the following building codes:

-2006 International Residential Code

-2006 International Building Code

-ASCE 7-10 Minimum Design Loads for Buildings and Other Structures

2.0 Description: The Sol Attach roof mounting system consists of hardware for mounting photovoltaic (PV) modules on low-rise residential structures. Sol Attach roof mounting hardware consists of extruded aluminum components (PV Mount) and specified mounting screws (#12 Woodgrip XG fasteners manufactured by SFS Intec) for attaching the PV Mount component to roof surfaces. The Sol Attach mounting system is designed to be installed directly on roof surfaces consisting of composition shingles attached to minimum thickness 7/16" OSB.

3.0 Evaluation: The Sol Attach roof mounting system was evaluated for resistance from wind loads in accordance with the provisions of the *ASCE 7-10 Minimum Design Loads for Buildings and Other Structures* and the *2006 International Residential Code*. The following conditions and limits apply to the approved use of the Sol Attach roof mounting system;

1. One and two story buildings with a mean roof height of <30 ft.
2. Roof Slopes from 15 to 45 degrees (3:12 to 12:12).
3. Roof sheathing minimum thickness of 7/16".
4. Roof sheathing in dry service conditions.
5. Four PV mounts per PV module such that adjacent modules share two PV mounts.
6. PV modules of up to 39 inches by 77 inches.
7. Four #12 Woodgrip XG fasteners are installed per Sol Attach PV mount.
8. Fasteners installed correctly and not over tightened.



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The Sol Attach roof mounting system was evaluated for pull-out resistance of the fasteners and the ultimate tensile strength of the PV Mount. Design wind pressures resulting from wind speeds of up to 110 mph were evaluated. Design wind pressures were calculated using Method 1 of the ASCE 7-10 for Exposure B. In each case the Sol Attach roof mounting system exceeds the requirements of the codes and analytical methods listed in this report.

4.0 Certification

When designed, manufactured and installed according to the provisions of this report, applicable building codes, and accepted engineering practice, the Sol Attach roof mounting system can be used in residential and commercial construction. This product evaluation certifies the uses and limitations prescribed herein.

Further, I certify that I am a registered professional engineer in the State of Texas in good standing.

Respectfully Submitted,

Mark McIlheran, P.E.



January 2, 2013