ENGINEERED POWER SOLUTIONS

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GENERIC APPROVAL MEMO – TAMARACK SIDE-OF-POLE MOUNT

Date: 3/23/2023

Project: Tamarack Side-of-Pole Mount
Generic Approval Memo

EPS Job Number: 19-TAM003

To: David Katz
Tamarack Solar Products

From: Matthew Gilliss
Engineered Power Solutions, Inc.

3/23/23

Engineered Power Solutions, Inc. (EPS) certifies that the Tamarack Solar Side-of-Pole Mount System, when constructed with the materials specified and supplied by Tamarack Solar and referenced in this approval memo, meets or exceeds the minimum design parameters specified in this memo and by the 2022 *California Building Code* (CBC – 2022 Edition) which is based on the 2021 *International Building Code* (IBC) and references the 2016 *Minimum Design Loads for Buildings and Other Structures* by the American Society of Civil Engineers (ASCE 7-16).

Parameters included in this Approval Memo are limited to:

- Tilt range from 30˚ to 60˚
- Max module sizes and wind speeds corresponding to the combinations listed on the following page.
- Wind Exposure B or C
- Maximum allowed design ground snow load of 10 psf.
- Maximum top mount height of 20 ft. above grade.

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Allowable ASCE 7-16[1] wind speeds based on total module area (consists of the combined area of the mounted module(s) in square inches)[2, 3, 4]:

- 2640 in^2 (18.33 ft^2): 100 MPH
- 1534 in^2 (10.65 ft^2): 130 MPH
- 984 in^2 (6.83 ft^2): 150 MPH
- 693 in^2 (4.81 ft^2): 180 MPH

1: Wind speeds are ASCE 7-16 (3) second gust wind speeds. EPS shall be consulted if a different code wind speed is used.

2: Multiple modules can be used on a single mount, but the total module area must not exceed the area limitations above.

3: For module areas between the area categories listed above, the next area size up shall be used.

4: Modules larger than 2640 in^2 (standard 60 cell module) are not included in this approval memo. EPS shall be consulted if a module size larger than those listed is required.

Component configurations included in this Approval Memo are limited to:

- UNI-SP/01XX
- UNI-SP/02A
- UNI-SP/03
- UNI-SP/02
- UNI-SP/02X
- UNI-SP/03W

New poles will need to be fully embedded into a 12" diameter or larger concrete drilled pier embedded:

- 6ft. with a 4" SCH40 pipe at pole heights less than 10ft. above grade
- 7ft. with a 4" SCH40 pipe at pole heights between 10ft. and 15ft. above grade
- 9ft. with a 6" SCH40 pipe at pole heights between 15ft. and 20ft. above grade

EPS confirms that the concrete shall consist of Type II cement and have a minimum compressive strength (f'c) of 3500 psi (at 28 days). Aggregates shall be per ASTM C33 (Max size 1-1/2") and all concrete work shall conform to ACI standards and specifications. Based on the expected design forces, no additional rebar is required as the steel pipe will provide adequate bending capacity assuming it is embedded into the concrete pier to within 12" of the bottom of the pier.

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EPS certifies that the Side-of-Pole Mounts listed above will be structurally adequate when installed in accordance with Tamarack Solar Products Installation Manual (UNI-SP02-MAN Edition v4.1) that is provided with the product.

It shall be noted that the bucket to pole connection as specified in Tamarack Solar's drawings utilizes hose (band) clamps which resists sliding and twisting through friction and can lose capacity over time. EPS recommends the use of through bolts or screws when possible to reduce the potential for twisting/shifting of the band clamps over time. However, since band clamps are an industry standard for solar pole mount products, they may be exclusively used at the installers own risk.

EPS's scope of work is limited to the items listed above. The structure or other existing surface to which the Mounting System is connected, shall be evaluated on a case-by-case basis to ensure the adequacy of the supporting structure to support the newly applied loading per the CBC. All other structural items and all non-structural issues including but not limited to waterproofing, corrosion protection, construction means/methods, electrical, and mechanical issues are not the responsibility of EPS and shall be addressed by others.

Please feel free to contact me with any questions. Thank you.

Sincerely,

Matthew B. Gilliss, P.E., LEED AP
Engineered Power Solutions, Inc.