WYSSLING CONSULTING
CORPORATE EXPERIENCE WITH SMALL BUSINESS VALUE

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December 1, 2022

Sustainable Energy and Lighting Solutions
8351 Palmetto Commerce Parkway, Ste. 203
Ladson, SC 29456

Scott Wyssling, PE

Digitally signed by Scott Wyssling, PE
DN: C=US, S=Utah, L=Alpine, O=Wyssling Consulting, OU=Engineering, CN="Scott Wyssling, PE", E=swyssling@wysslingconsulting.com
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Re: Engineering Services
Evans Residence
875 Troy Parker Lane, Dunn, NC
13.650 kW System

To Whom It May Concern:

We have received information regarding solar panel installation on the roof of the above referenced structure. Our evaluation of the structure is to verify the existing capacity of the roof system and its ability to support the additional loads imposed by the proposed solar system.

A. Site Assessment Information

1. Site visit documentation identifying attic information including size and spacing of framing for the existing roof structure.
2. Design drawings of the proposed system including a site plan, roof plan and connection details for the solar panels. This information will be utilized for approval and construction of the proposed system.

B. Description of Structure:

Roof Framing 1: Assumed 2x6 dimensional lumber at 16" on center.
Roof Framing 2: Assumed 2x6 dimensional lumber at 16" on center.
Roof Material 1: Composite Asphalt Shingles
Roof Material 2: Metal Roof
Roof Slope: 20 degrees
Attic Access: Inaccessible
Foundation: Permanent

C. Loading Criteria Used

- **Dead Load**
  - Existing Roofing and framing = 7 psf
  - New Solar Panels and Racking = 3 psf
  - TOTAL = 10 PSF
- **Live Load** = 20 psf (reducible) – 0 psf at locations of solar panels
- **Ground Snow Load** = 15 psf
- **Wind Load** based on ASCE 7-10
  - Ultimate Wind Speed = 115 mph (based on Risk Category II)
  - Exposure Category C

Analysis performed of the existing roof structure utilizing the above loading criteria is in accordance with the 2018 NCRC, including provisions allowing existing structures to not require strengthening if the new loads do not exceed existing design loads by 105% for gravity elements and 110% for seismic elements. This analysis indicates that the existing framing will support the additional panel loading without damage, if installed correctly.

D. Solar Panel Anchorage

1.
   i. The solar panels shall be mounted in accordance with the most recent Roof Tech installation manual. If during solar panel installation, the roof framing members appear unstable or deflect non-uniformly, our office should be notified before proceeding with the installation.
   ii. The solar panels shall be mounted in accordance with the most recent S-5! installation manual. If during solar panel installation, the roof framing members appear unstable or deflect non-uniformly, our office should be notified before proceeding with the installation.
2.
   i. The maximum allowable withdrawal force for a M5 x 60mm lag screw is 213 lbs per inch of penetration as identified in the National Design Standards (NDS) of timber construction specifications. Based on a minimum penetration depth of 2", the allowable capacity per connection is greater than the design withdrawal force (demand). Considering the variable factors for the existing roof framing and installation tolerances, the connection using two (2) M5 x 60mm lag screw with a minimum of 2" embedment will be adequate and will include a sufficient factor of safety.
   ii. System will be attached to the metal roofing material utilizing the patented S-5! Connection. Installation of the connections shall be in accordance with the manufacturer's recommendations.
3. Considering the wind speed, roof slopes, size and spacing of framing members, and condition of the roof, the panel supports shall be placed no greater than 72" on center.
4. Panel supports connections shall be staggered to distribute load to adjacent framing members.

Based on the above evaluation, this office certifies that with the racking and mounting specified, the existing roof system will adequately support the additional loading imposed by the solar system. This evaluation is in conformance with the 2018 NCRC, current industry standards, and is based on information supplied to us at the time of this report.

Should you have any questions regarding the above or if you require further information do not hesitate to contact me.

Very truly yours,

Scott E. Wyssling, PE
North Carolina License No. 46546
North Carolina COA #P-2308

Wyssling Consulting, PLLC
76 N Meadowbrook Drive Alpine UT 84004
North Carolina COA # P-2308

Signed 12/1/2022

TERRY EVANS - 13.650KW DC, 10.000KW AC

SITE PLAN

Scott Wyssling, PE

Digitally signed by Scott Wyssling, PE
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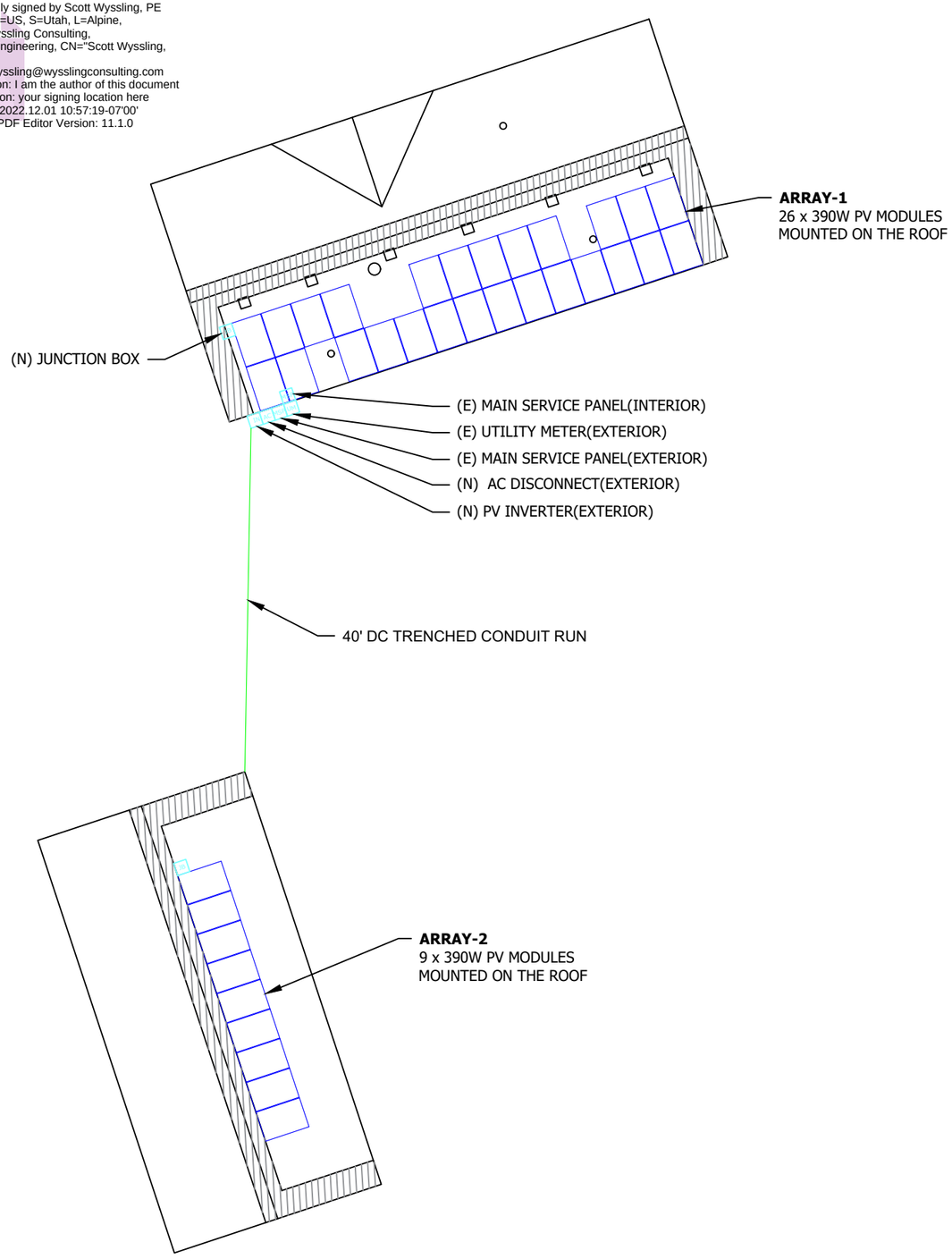
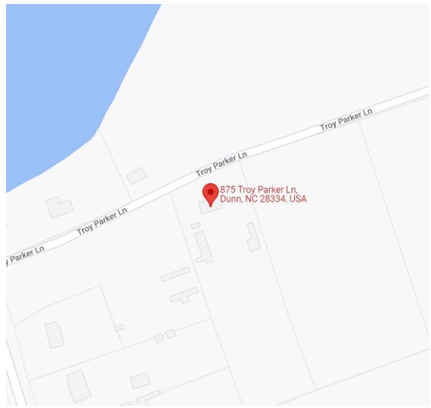


A | SITE PLAN
PV-1.0 | SCALE: 1/16"=1'-0"



A1 | VICINITY MAP
PV-1.0 | SCALE: NTS

GENERAL INFORMATION

ELECTRIC CODE	NEC 2020
FIRE CODE	NCFC 2018
RESIDENTIAL CODE	NCRC 2018
BUILDING CODE	NCBC 2018
WIND SPEED	115 MPH
SNOW LOAD	15 PSF

INDEX

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SYSTEM INFORMATION

DC SYSTEM SIZE : 13650W
AC SYSTEM SIZE : 10000W

MODULES:
(35) TRINA SOLAR TSM-390 DE09.05 390W
INVERTER:
(1) SOLAREDGE SE10000H-US
OPTIMIZER
(35) SOLAREDGE P405

ENGINEER OF RECORD

NORTH CAROLINA PROFESSIONAL SEAL 046548 ENGINEER SCOTT E. WYSSLING

Wyssling Consulting, PLLC
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North Carolina COA # P-2308

Signed 12/1/2022

CUSTOMER INFORMATION

NAME & ADDRESS:
TERRY EVANS
875 TROY PARKER LN,
DUNN, NC 28334
35°34'37.6"N 78°59'62.2"W

AHJ: HARNETT COUNTY

UTILITY: DUKE ENERGY PROGRESS

SITE PLAN

PROJECT NUMBER:

DESIGNER/CHECKED BY:
SOLAROFIX

SCALE:AS NOTED | PAPER SIZE:17"x11"

DATE:11/19/22 | REV:B | PV-1.0

GENERAL NOTES

GENERAL NOTES

1. MODULES ARE LISTED UNDER UL 1703 AND CONFORM TO THE STANDARDS.
2. INVERTERS ARE LISTED UNDER UL 1741 AND CONFORM TO THE STANDARDS.
3. DRAWINGS ARE DIAGRAMMATIC, INDICATING GENERAL ARRANGEMENT OF THE PV SYSTEM AND THE ACTUAL SITE CONDITION MIGHT VARY.
4. WORKING CLEARANCES AROUND THE NEW PV ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH NEC 110.26(A)(1).
5. ALL GROUND WIRING CONNECTED TO THE MAIN SERVICE GROUNDING IN MAIN SERVICE PANEL/ SERVICE EQUIPMENT.
6. ALL CONDUCTORS SHALL BE 600V, 75°C STANDARD COPPER UNLESS OTHERWISE NOTED.
7. WHEN REQUIRED, A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.
8. THE SYSTEM WILL NOT BE INTERCONNECTED BY THE CONTRACTOR UNTIL APPROVAL FROM THE LOCAL JURISDICTION AND/OR THE UTILITY.
9. ROOF ACCESS POINT SHALL BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREES, WIRES OR SIGNS.
10. PV ARRAY COMBINER/JUNCTION BOX PROVIDES TRANSITION FROM ARRAY WIRING TO CONDUIT WIRING

EQUIPMENT LOCATION:

11. ALL EQUIPMENT SHALL MEET MINIMUM SETBACKS AS REQUIRED BY NEC 110.26(A)(1).
12. WIRING SYSTEMS INSTALLED IN DIRECT SUNLIGHT MUST BE RATED FOR EXPECTED OPERATING TEMPERATURE AS SPECIFIED BY NEC 690.31(A),(C) AND NEC TABLES 310.15(B)(2)(A) AND 310.15(B)(3)(C).
13. JUNCTION AND PULL BOXES PERMITTED INSTALLED UNDER PV MODULES ACCORDING TO NEC 690.34.
14. ADDITIONAL AC DISCONNECT(S) SHALL BE PROVIDED WHERE THE INVERTER IS NOT WITHIN SIGHT OF THE AC SERVICING DISCONNECT.
15. ALL EQUIPMENT SHALL BE INSTALLED ACCESSIBLE TO QUALIFIED PERSONNEL ACCORDING TO NEC APPLICABLE CODES.
16. ALL COMPONENTS ARE LISTED FOR THEIR PURPOSE AND RATED FOR OUTDOOR USAGE WHEN APPROPRIATE.

STRUCTURAL NOTES:

17. RACKING SYSTEM & PV ARRAY WILL BE INSTALLED ACCORDING TO CODE-COMPLIANT INSTALLATION MANUAL. TOP CLAMPS REQUIRE A DESIGNATED SPACE BETWEEN MODULES, AND RAILS MUST ALSO EXTEND A MINIMUM DISTANCE BEYOND EITHER EDGE OF THE ARRAY/SUBARRAY, ACCORDING TO RAIL MANUFACTURER'S INSTRUCTIONS.
18. JUNCTION BOX WILL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. IF ROOF-PENETRATING TYPE, IT SHALL BE FLASHED & SEALED PER LOCAL REQUIREMENTS.
19. ROOFTOP PENETRATIONS FOR PV RACEWAY WILL BE COMPLETED AND SEALED WITH APPROVED CHEMICAL SEALANT PER CODE BY A LICENSED CONTRACTOR.
20. ALL PV RELATED ROOF ATTACHMENTS TO BE SPACED NO GREATER THAN THE SPAN DISTANCE SPECIFIED BY THE RACKING MANUFACTURER.
21. WHEN POSSIBLE, ALL PV RELATED RACKING ATTACHMENTS WILL BE STAGGERED AMONGST THE ROOF FRAMING MEMBERS.

WIRING & CONDUIT NOTES:

22. ALL CONDUIT AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING.
23. CONDUCTORS SIZED ACCORDING TO NEC 690.8, NEC 690.7.
24. DC WIRING LIMITED TO MODULE FOOTPRINT. MICRO INVERTER WIRING SYSTEMS SHALL BE LOCATED AND SECURED UNDER THE ARRAY WITH SUITABLE WIRING CLIPS.
25. AC CONDUCTORS COLORED OR MARKED AS FOLLOWS: PHASE A OR L1- BLACK PHASE B OR L2- RED, OR OTHER CONVENTION IF THREE PHASE PHASE C OR L3- BLUE, YELLOW, ORANGE**, OR OTHER CONVENTION NEUTRAL- WHITE OR GREY IN 4-WIRE DELTA CONNECTED SYSTEMS THE PHASE WITH HIGHER VOLTAGE TO BE MARKED ORANGE [NEC 110.15].

INTERCONNECTION NOTES:

26. LOAD-SIDE INTERCONNECTION SHALL BE IN ACCORDANCE WITH [NEC 690.64(B)]
27. THE SUM OF THE UTILITY OCPD AND INVERTER CONTINUOUS INPUT MAY NOT EXCEED 120% OF BUSBAR RATING [NEC 705.12(D)(2)(3)].
28. WHEN SUM OF THE PV SOURCES EQUALS >100% OF BUSBAR RATING, PV DEDICATED BACKFFED BREAKERS MUST BE LOCATED OPPOSITE END OF THE BUS FROM THE UTILITY SOURCE OCPD [NEC 705.12(D)(2)(3)].
29. AT MULTIPLE PV OUTPUT COMBINER PANEL, TOTAL RATING OF ALL OVER CURRENT DEVICES SHALL NOT EXCEED AMPACITY OF BUSBAR. HOWEVER, THE COMBINED OVER CURRENT DEVICE MAY BE EXCLUDED ACCORDING TO NEC 705.12(D)(2)(3)(C).
30. FEEDER TAP INTER CONNECTION (LOAD SIDE) ACCORDING TO NEC 705.12(D)(2)(1)SUPPLY SIDE TAP INTERCONNECTION ACCORDING TO NEC 705.12(A) WITH SERVICE ENTRANCE CONDUCTORS IN ACCORDANCE WITH NEC 230.42 BACK FEEDING BREAKER FOR UTILITY-INTERACTIVE INVERTER OUTPUT IS EXEMPT FROM ADDITIONAL FASTENING [NEC 705.12(D)(5)].

GROUNDING NOTES:

31. GROUNDING SYSTEM COMPONENTS SHALL BE LISTED FOR THEIR PURPOSE, AND GROUNDING DEVISES EXPOSED TO THE ELEMENTS SHALL BE RATED FOR SUCH USE.
32. PV EQUIPMENT SHALL BE GROUNDED ACCORDING TO NEC 690.43 AND MINIMUM NEC 250.122.
33. METAL PARTS OF MODULE FRAMES, MODULE RACKING, AND ENCLOSURES CONSIDERED GROUNDED IN ACCORD WITH 250.134 AND 250.136(A).
34. EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED ACCORDING TO NEC 690.45 AND MICRO INVERTER MANUFACTURER'S INSTRUCTIONS.
35. EACH MODULE WILL BE GROUNDED USING WEEB GROUNDING CLIPS AS SHOWN IN MANUFACTURER DOCUMENTATION AND APPROVED BY THE AHJ. IF WEEBS ARE NOT USED, MODULE GROUNDING LUGS MUST BE INSTALLED AT THE SPECIFIED GROUNDING LUG HOLES PER THE MANUFACTURERS' INSTALLATION REQUIREMENTS.
36. THE GROUNDING CONNECTION TO A MODULE SHALL BE ARRANGED SUCH THAT THE REMOVAL OF A MODULE DOES NOT INTERRUPT A GROUNDING CONDUCTOR TO ANOTHER MODULE.
37. GROUNDING AND BONDING CONDUCTORS, IF INSULATED, SHALL BE COLORED GREEN OR MARKED GREEN IF #4 AWG OR LARGER [NEC 250.119]
38. THE GROUNDING ELECTRODE SYSTEM COMPLIES WITH NEC 690.47 AND NEC 250.50 THROUGH 250.106. IF EXISTING SYSTEM IS INACCESSIBLE, OR INADEQUATE, A GROUNDING ELECTRODE SYSTEM PROVIDED ACCORDING TO NEC 250,NEC 690.47 AND AHJ.
39. GROUND-FAULT DETECTION SHALL COMPLY WITH NEC 690.5 IN GENERAL AND NEC 690.5(A)(1) SPECIFICALLY.
40. DISCONNECTION AND OVER-CURRENT PROTECTION NOTES:
41. DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING ENERGIZED ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS).
42. DISCONNECTS TO BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH
43. RAPID SHUTDOWN OF ENERGIZED CONDUCTORS BEYOND 10 FT OF PV ARRAY OR 5 FT INSIDE A BUILDING WITHIN 10 SECONDS. CONTROLLED CONDUCTORS ≤30V AND ≤240VA [NEC 690.12]. LOCATION OF LABEL ACCORDING TO AHJ.
44. ALL OCPD RATINGS AND TYPES SPECIFIED ACCORDING TO NEC 690.8,690.9 AND 240.
45. MICRO INVERTER BRANCHES CONNECTED TO A SINGLE BREAKER OR GROUPED FUSES IN ACCORDANCE WITH NEC 110.3(B). 2.6.7 IF REQUIRED BY AHJ, SYSTEM WILL INCLUDE ARC-FAULT CIRCUIT PROTECTION ACCORDING TO NEC 690.11 AND UL1699B.

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OPTIMIZER
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ENGINEER OF RECORD

NORTH CAROLINA PROFESSIONAL SEAL 046548 ENGINEER SCOTT E. WYSSLING

Wyssling Consulting, PLLC
76 N Meadowbrook Drive Alpine UT 84004
North Carolina COA # P-2308

Signed 12/1/2022

CUSTOMER INFORMATION

NAME & ADDRESS:
TERRY EVANS
875 TROY PARKER LN,
DUNN, NC 28334
35°34'37.6"N 78°59'62.2"W

AHJ: HARNETT COUNTY

UTILITY: DUKE ENERGY PROGRESS

GENERAL NOTES

PROJECT NUMBER:

DESIGNER/CHECKED BY:
SOLAROFIX

SCALE:AS NOTED	PAPER SIZE:17"x11"	
DATE:11/19/22	REV:B	PV-2.0

MODULES DATA

TRINA SOLAR TSM-390 DE09.05 390W	
MODULE DIMS	69.06"x43.15"x1.18"
LAG SCREWS	5/16"x3.5":2.5"MIN EMBEDMENT

FIRE SETBACK

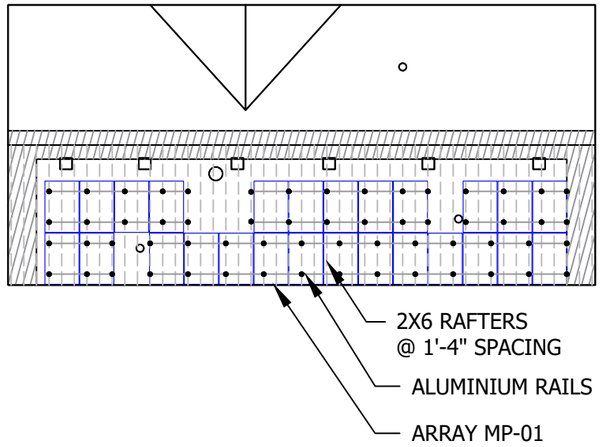
MINIMUM FIRE ACCESS PATHWAYS PER CFC 2019
RIDGE TO ARRAY: 1'-6"
EAVE TO ARRAY : 3'-0"
HIP/VALLEY W/ ADJACENT ARRAY: 1'-6"
EACH SIDE HIP/VALLEY W/O ADJACENT ARRAY: 0'-0"

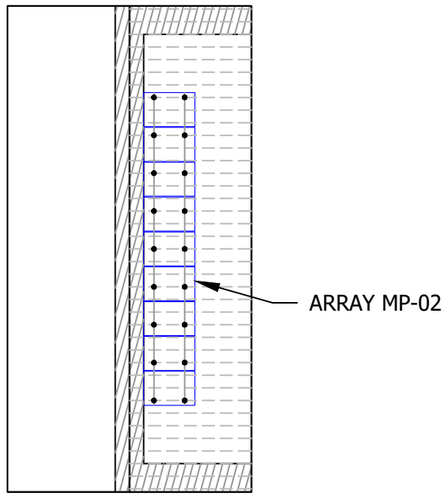
NOTE: INSTALLER TO VERIFY RAFTER SIZE, SPACING AND SLOPED SPANS, AND NOTIFY ANY DISCREPANCIES BEFORE PROCEEDING.

AERIAL VIEW

SITE INFORMATION

SR.NO	AZIMUTH	PITCH	NO. OF MODULES	ARRAY AREA (SQ. FT.)	ROOF TYPE	ATTACHMENT	ROOF EXPOSURE	FRAME TYPE	FRAME SIZE	FRAME SPACING	MAX RAIL SPAN	OVER HANG
MP-01	162°	20°	26	537.94	COMPOSITION SHINGLE	ROOF TECH/RT-MINI II	ATTIC	RAFTERS	2 X 6	1'-4"	4'-0"	2'-0"
MP-02	72°	20°	9	186.21	METAL	S-5! CORRUBRACKET	ATTIC	RAFTERS	2 X 6	1'-4"	4'-0"	2'-0"





B | MOUNTING DETAILS
PV-3.0 | SCALE: 1/16"=1'-0"

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DUNN, NC 28334
35°34'37.6"N 78°59'62.2"W

AHJ: HARNETT COUNTY

UTILITY: DUKE ENERGY PROGRESS

MOUNTING DETAILS

PROJECT NUMBER:

DESIGNER/CHECKED BY:
SOLAROFIX

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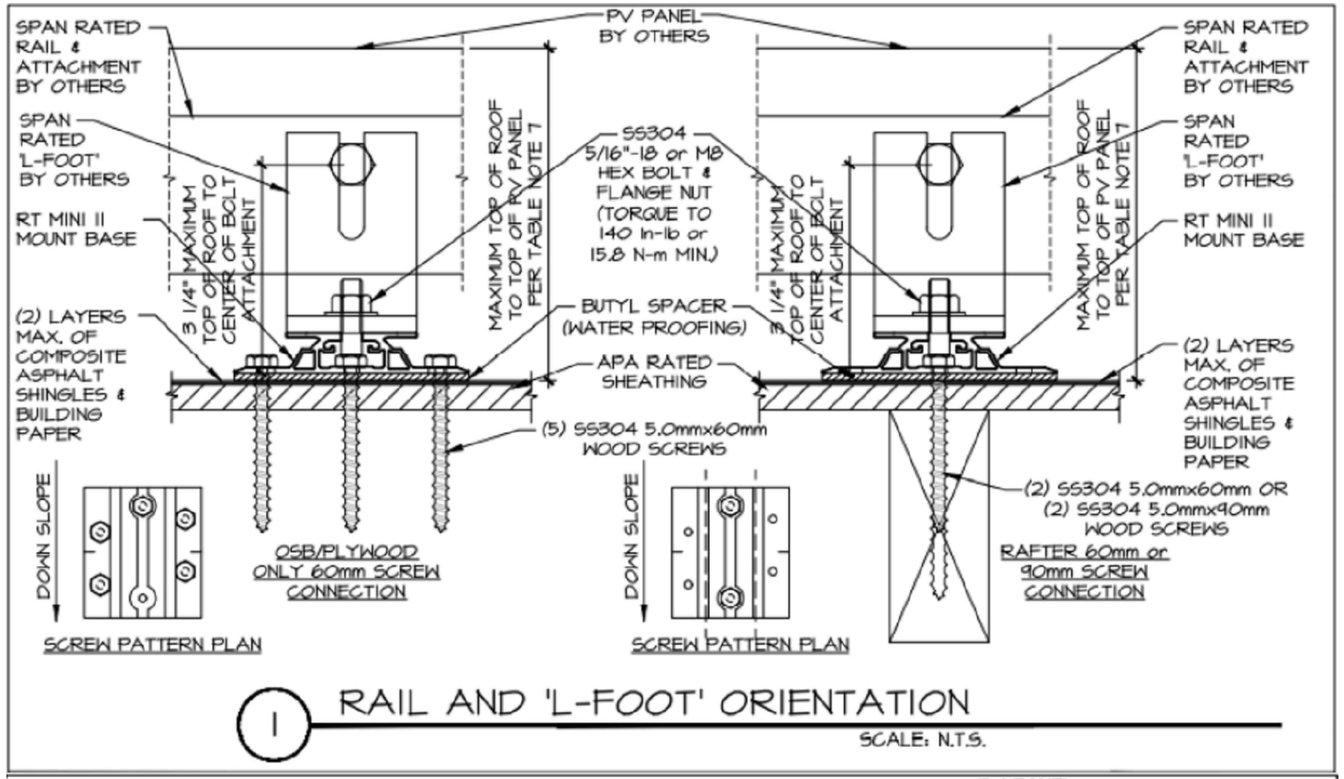

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STRUCTURAL DETAILS

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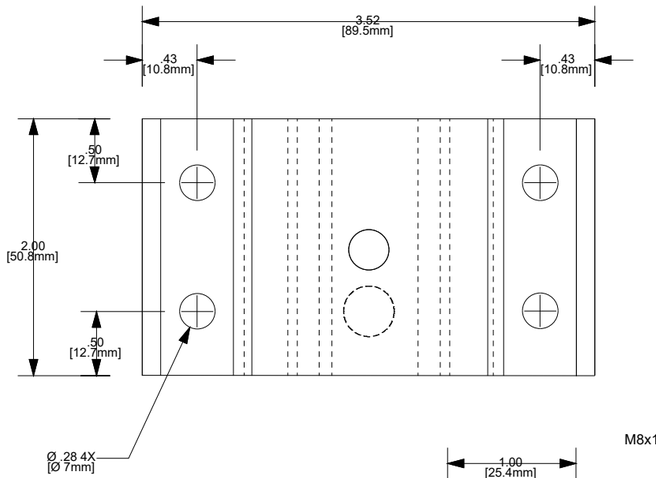

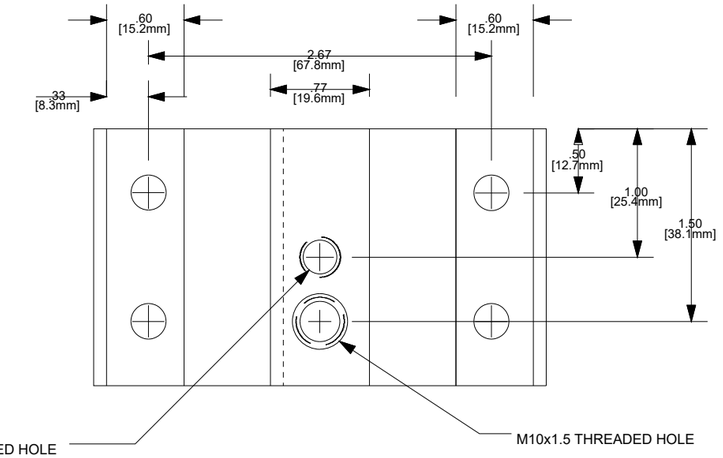

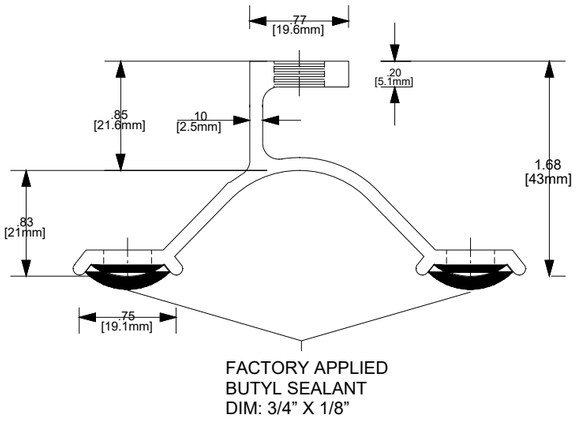

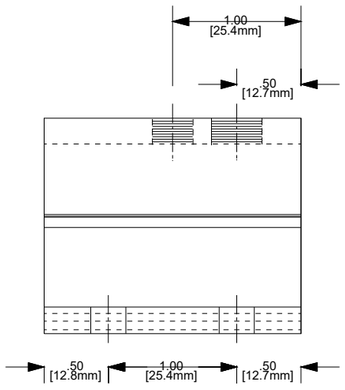

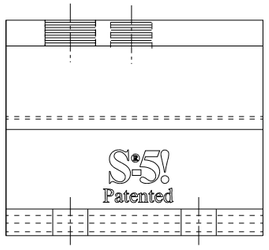

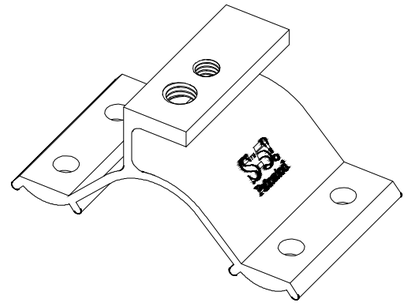

S-5! CORRUBRACKET

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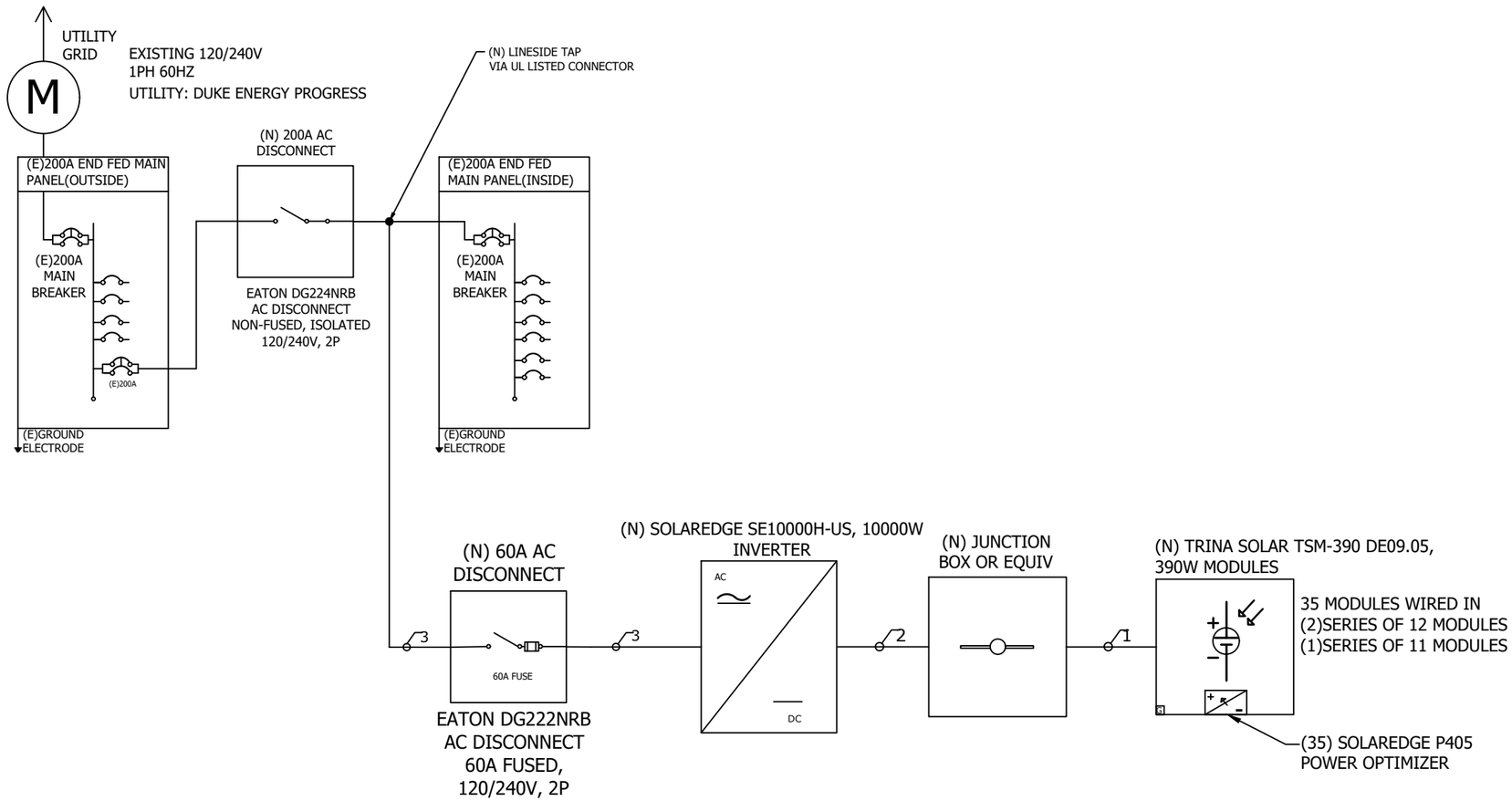
SCALE:AS NOTED	PAPER SIZE:17"x11"	
DATE:11/19/22	REV:B	PV-3.2

SINGLE LINE DIAGRAM: DC SYSTEM SIZE - 13.650KW DC, 10.000KW AC



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SINGLE LINE DIAGRAM

PROJECT NUMBER:

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SOLAROFIX

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SINGLE LINE DIAGRAM: DC SYSTEM SIZE - 13.650kW DC, 10.000kW AC

MODULE SPECIFICATION	
MODEL	TRINA SOLAR TSM-390 DE09.05 390W
MODULE POWER @ STC	390W
OPEN CIRCUIT VOLTAGE:Voc	40.8V
MAX POWER VOLTAGE:Vmp	33.8V
SHORT CIRCUIT VOLTAGE:Isc	12.14A
MAX POWER CURRENT:Imp	11.54A

INVERTER-1 SPECIFICATIONS	
MODEL	SOLAREDGE SE10000H-US INVERTER
POWER RATING	10000W
MAX OUTPUT CURRENT	42A
CEC WEIGHTED EFFICIENCY	99.2%
MAX INPUT CURRENT	27A
MAX DC VOLTAGE	480V

CONDUIT SCHEDULE

TAG ID	CONDUIT SIZE	CONDUCTOR	NEUTRAL	GROUND
1	NONE	(2) PV WIRE 12AWG THHN/THWN-2	NONE	(1) 4 AWG BARE COPPER
2	3/4"EMT OR EQUIV	(6) 10AWG THHN/THWN-2	NONE	(1) 10 AWG THHN/THWN-2
3	3/4"EMT OR EQUIV	(2) 6 AWG THHN/THWN-2	(1) 6 AWG THHN/THWN-2	(1) 6 AWG THHN/THWN-2

ELECTRICAL CALCULATION

AC WIRE CALCULATIONS:- MATERIAL:COPPER & TEMPERATURE RATING:75°C

TAG ID	REQUIRED CONDUCTOR AMPACITY									CORRECTED AMPACITY CALCULATION							TERMINAL RATING CHECK			DERATED CONDUCTOR AMPACITY CHECK		
1	15	X	1	=	15	X	1.25	=	18.75A	25	X	0.91	X	1	=	22.75A	18.75A	<	20A	18.75A	<	22.75A
2	15	X	1	=	15	X	1.25	=	18.75A	35	X	0.91	X	0.8	=	25.48A	18.75A	<	20A	18.75A	<	25.48A
3	42	X	1	=	42	X	1.25	=	52.50A	65	X	0.91	X	1	=	59.15A	52.50A	<=	60A	52.50A	<	59.15A

ELECTRICAL NOTES:

1. MAXIMUM DC/AC VOLTAGE DROP SHALL BE NO MORE THAN 2%.
2. BREAKER/FUSE SIZES CONFORMS TO NEC 240.6 CODE SECTION.
3. AC GROUNDING ELECTRODE CONDUCTOR SIZED PER NEC 250.66.
4. AMBIENT TEMPERATURE CORRECTION FACTOR IS BASED ON NEC 690.31(A).
5. AMBIENT TEMPERATURE ADJUSTMENT FACTOR IS BASED ON NEC 310.15(B)(2)(C) AND 310.15(B)(2)(B)
6. AC SYSTEM VOLTAGE CORRECTION IS PER NEC 690.7(A)
7. CONDUCTORS ARE SIZED PER WIRE AMPACITY TABLE NEC 310.15(B)(16).
8. CONDUCTORS EXPOSED TO SUNLIGHT SHALL BE LISTED AS SUNLIGHT RESISTANT PER NEC 310.10(D).
9. CONDUCTORS EXPOSED TO WET LOCATIONS SHALL BE SUITABLE FOR USE IN WET LOCATIONS PER NEC 310.10(C).

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SYSTEM INFORMATION

DC SYSTEM SIZE : 13650W
AC SYSTEM SIZE : 10000W

MODULES:
(35) TRINA SOLAR TSM-390 DE09.05 390W
INVERTER:
(1) SOLAREDGE SE10000H-US
OPTIMIZER
(35) SOLAREDGE P405

ENGINEER OF RECORD

CUSTOMER INFORMATION

NAME & ADDRESS:
TERRY EVANS
875 TROY PARKER LN,
DUNN, NC 28334
35°34'37.6"N 78°59'62.2"W

AHJ: HARNETT COUNTY

UTILITY: DUKE ENERGY PROGRESS

SINGLE LINE DIAGRAM

PROJECT NUMBER:

DESIGNER/CHECKED BY:
SOLAROFIX

SCALE:AS NOTED	PAPER SIZE:17"x11"	
DATE:11/19/22	REV:B	PV-4.1

WARNING PLACARDS

WARNING

ELECTRIC SHOCK HAZARD
THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED

LABEL LOCATION
DC DISCONNECT,INVERTER
[PER CODE: NEC 690.41)]
[To be used when inverter is ungrounded]

WARNING

ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

DC VOLTAGE IS ALWAYS PRESENT WHEN SOLAR MODULES ARE EXPOSED TO SUNLIGHT

LABEL LOCATION
AC DISCONNECT,POINT OF INTERCONNECTION
[PER CODE: NEC 690.13(B)]

WARNING

ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL LOCATION
AC DISCONNECT,POINT OF INTERCONNECTION
[PER CODE: NEC 690.13(B)]

WARNING-Electric Shock Hazard
No User Serviceable Parts inside
Contact authorized service provide for assistance

LABEL LOCATION
INVERTER, JUNCTION BOXES(ROOF),
AC DISCONNECT
[PER CODE: NEC 690.13]

WARNING:PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION
CONDUIT, COMBINER BOX
[PER CODE: NEC690.31(G)(3)]

WARNING
DUAL POWER SOURCE SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

LABEL LOCATION
POINT OF INTERCONNECTION
[PER CODE: NEC705.12(D)(4)]

PHOTOVOLTAIC SYSTEM DC DISCONNECT

MAX VOLTAGE	480	VDC
MAX CIRCUIT CURRENT	42	ADC
MAX RATED OUTPUT CURRENT OF THE CHARGE CONTROLLER OR DC TO DC CONCERTER (IF INSTALLED)		ADC

LABEL LOCATION
DC DISCONNECT SWITCH, INVERTER
[PER. CODE:NEC 690.53]

PHOTOVOLTAIC SYSTEM AC DISCONNECT SWITCH
RATED AC OPERATING CURRENT **42.00** AMPS AC
AC NOMINAL OPERATING VOLTAGE 240 VAC

LABEL LOCATION
AC DISCONNECT , POINT OF INTERCONNECTION
[PER CODE: NEC 690.54]

WARNING
INVERTER OUTPUT CONNECTION
DO NOT RELOCATE THIS OVER-CURRENT DEVICE

LABEL LOCATION
POINT OF INTERCONNECTION
(PER CODE: NEC 705.12(2)(b)
[Not Required if Panel board is rated not less than sum of ampere ratings of all overcurrent devices supplying it]

CAUTION: SOLAR CIRCUIT

LABEL LOCATION
MARKINGS PLACED ON ALL INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS, ENCLOSURES AND CABLE ASSEMBLES AT LEAST EVERY 10 FT, AT TURNS AND ABOVE/BELOW PENETRATIONS AND ALL COMBINER/JUNCTION BOXES.
(PER CODE: NEC1204.5)

SOLAR DISCONNECT

LABEL LOCATION
DISCONNECT, POINT OF INTERCONNECTION
[PER CODE: NEC 690.13(B)]

CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED

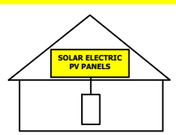
LABEL LOCATION
WEATHER RESISTANT MATERIAL, DURABLE ADHESDIVE, UL969 AS STANDARD TO WEATHER RATING (UL LISTING OF MARKINGS NOT REQUIRED), MIN ⅜" LETTER HEIGHT ARIAL OR SIMILAR FONT NON-BOLD,PLACED WITHIN THE MAIN SERVICE DISCONNECT,PLACED ON THE OUTSIDE OF THE COVER WHEN DISCONNECT IS OPERATED WITH THE SERVICE PANEL CLOSED.
(PWER CODE: NEC690.15 ,690.13(B))

RAPID SHUTDOWN SWITCH FOR SOLAR SYSTEM

LABEL LOCATION
INVERTER,POINT OF INTERCONNECTION
[PER CODE: NEC 690.56(C)(3)]

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN THE ARRAY



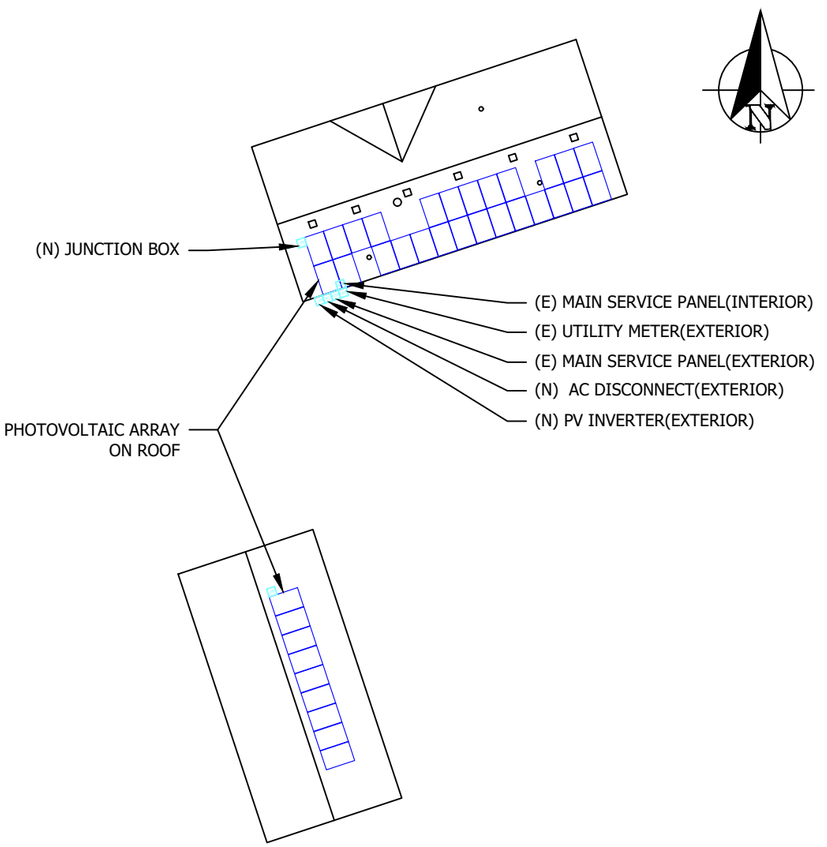
LABEL LOCATION
AC DISCONNECT, DC DISCONNECT, POINT OF INTERCONNECTION
(PER CODE: NEC690.56(C)(1)(A))

ALL PLACARDS SHALL BE OF WEATHER PROOF CONSTRUCTION, BACKGROUND ON ALL PLACARDS SHALL BE RED WITH WHITE LETTERING U.O.N.
PLACARD SHALL BE MOUNTED DIRECTLY ON THE EXISTING UTILITY ELECTRICAL SERVICE.FASTENERS APPROVED BY THE LOCAL JURISDICTION

NOTE:ALL SIGNAGE CANNOT BE HAND WRITTEN NEC 110.21

WARNING !

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN



875 TROY PARKER LN, DUNN, NC 28334

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WARNING PLACARDS

PROJECT NUMBER:

DESIGNER/CHECKED BY:
SOLAROFIX

SCALE:AS NOTED	PAPER SIZE:17"x11"	
DATE:11/19/22	REV:B	PV-5.0

Vertex S

BACKSHEET MONOCRYSTALLINE MODULE

PRODUCT: TSM-DE09.05
POWER RANGE: 380-400 W

400 W+	0/+5 W	20.8 %
MAXIMUM POWER OUTPUT	POSITIVE POWER TOLERANCE	MAXIMUM EFFICIENCY

Outstanding Visual Appearance
- Designed with aesthetics in mind
- Ultra-thin, virtually invisible busbars
- Excellent cell color control by machine selection

Small in size, big on power
- Generates up to 400 W, 20.8 % module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping, lower series resistance, improved current collection and enhanced reliability
- Excellent low light performance (IAM) with cell process and module material optimization

Universal solution for residential and C&I rooftops
- Designed for compatibility with existing mainstream inverters, optimizers and mounting systems
- Perfect size and low weight for easy handling. Optimized transportation cost
- Reduces installation cost with higher power bin and efficiency
- Flexible installation solutions for system deployment

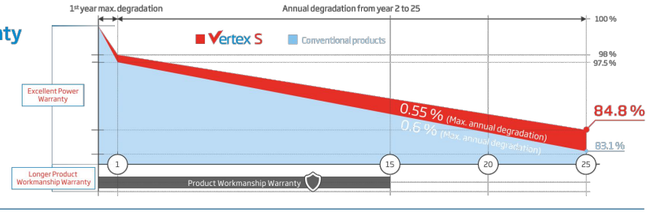
High Reliability
- 6,000 Pa snow load (test load)
- 4,000 Pa wind load (test load)

Extended Vertex S Warranty

2 %
1st year max. degradation

0.55 %
Max. annual degradation from year 2 to 25

15 Years
Product Workmanship Warranty



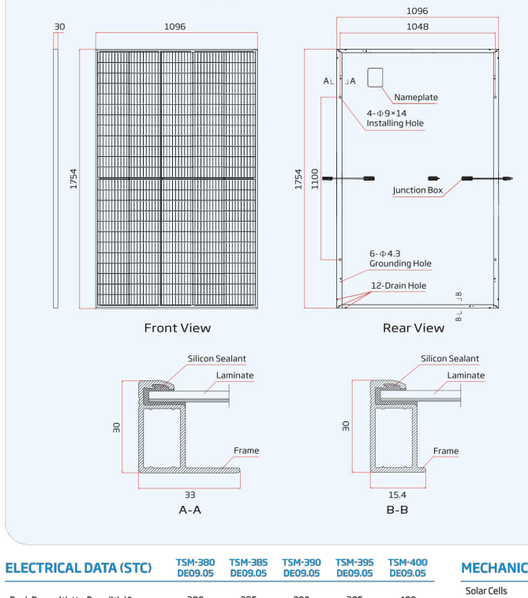
Comprehensive Product and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse Gases Emissions Verification
ISO45001: Occupational Health and Safety Management System

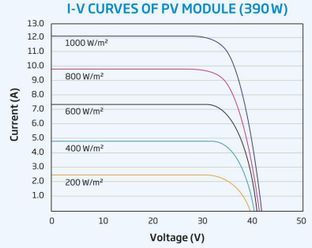
Trinasolar

Vertex S

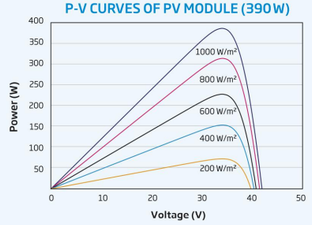
DIMENSIONS OF PV MODULE (mm)



I-V CURVES OF PV MODULE (390 W)



P-V CURVES OF PV MODULE (390 W)



ELECTRICAL DATA (STC)

ELECTRICAL DATA (STC)	TSM-380 DE09.05	TSM-385 DE09.05	TSM-390 DE09.05	TSM-395 DE09.05	TSM-400 DE09.05
Peak Power Watts-PMAX (Wp)*	380	385	390	395	400
Power Tolerance-PMAX (W)	0/+5	0/+5	0/+5	0/+5	0/+5
Maximum Power Voltage-VMPP (V)	33.4	33.6	33.8	34.0	34.2
Maximum Power Current-IMPP (A)	11.38	11.46	11.54	11.62	11.70
Open Circuit Voltage-VOC (V)	40.4	40.6	40.8	41.0	41.2
Short Circuit Current-ISC (A)	12.00	12.07	12.14	12.21	12.28
Module Efficiency η m (%)	19.8	20.0	20.3	20.5	20.8

STC: Irradiance 1000 W/m², Cell Temperature 25 °C, Air Mass AM1.5 *Measuring tolerance: ±3%

ELECTRICAL DATA (NOCT)

ELECTRICAL DATA (NOCT)	TSM-380 DE09.05	TSM-385 DE09.05	TSM-390 DE09.05	TSM-395 DE09.05	TSM-400 DE09.05
Maximum Power-PMAX (Wp)	286	290	294	298	302
Maximum Power Voltage-VMPP (V)	31.4	31.6	31.8	31.9	32.1
Maximum Power Current-IMPP (A)	9.12	9.18	9.24	9.32	9.38
Open Circuit Voltage-VOC (V)	38.0	38.2	38.4	38.6	38.8
Short Circuit Current-ISC (A)	9.67	9.73	9.78	9.84	9.90

NOCT: Irradiance at 800 W/m², Ambient Temperature 20 °C, Wind Speed 1 m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	120 cells
Module Dimensions	1754×1096×30 mm
Weight	21.0 kg
Glass	3.2 mm, High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	EVA/POE
Backsheet	Black-White
Frame	30 mm Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0 mm² Landscape: 1100/1100 mm Portrait: 280/280 mm*
Connector	TS4/MC4 EVO2*

*Special order only

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2 K)
Temperature Coefficient of PMAX	-0.34 %/K
Temperature Coefficient of VOC	-0.25 %/K
Temperature Coefficient of ISC	0.04 %/K

MAXIMUM RATINGS

Operational Temperature	-40 to +85°C
Maximum System Voltage	1500 V DC (IEC)
Max Series Fuse Rating	20 A

WARRANTY

15 Year product workmanship warranty
25 Year power warranty
2% First year degradation
0.55% Annual power degradation
(Please refer to the applicable limited warranty for details)

PACKAGING CONFIGURATION

Modules per box	36 pieces
Modules per 40' container	936 pieces

Trinasolar

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

Version number: TSM_EN_2021_C

www.trinasolar.com

Sustainable Energy & Lighting Solutions
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SYSTEM INFORMATION

DC SYSTEM SIZE : 13650W
AC SYSTEM SIZE : 10000W

MODULES:
(35) TRINA SOLAR TSM-390 DE09.05 390W
INVERTER:
(1) SOLAREDGE SE10000H-US
OPTIMIZER
(35) SOLAREDGE P405

ENGINEER OF RECORD

CUSTOMER INFORMATION

NAME & ADDRESS:
TERRY EVANS
875 TROY PARKER LN,
DUNN, NC 28334
35°34'37.6"N 78°59'62.2"W

AHJ: HARNETT COUNTY

UTILITY: DUKE ENERGY PROGRESS

MODULE SPECSHEET

PROJECT NUMBER:

DESIGNER/CHECKED BY:
SOLAROFIX

SCALE:AS NOTED	PAPER SIZE:17"x11"	
DATE:11/19/22	REV:B	PV-6.0

Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US /
SE7600H-US / SE10000H-US / SE11400H-US

INVERTERS

12-25 YEAR WARRANTY

Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking 99% weighted efficiency
- Quick and easy inverter commissioning directly from a smartphone using the SolarEdge SetApp
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014, NEC 2017 and NEC 2020 per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Small, lightweight, and easy to install both outdoors or indoors
- Built-in module-level monitoring
- Optional: Faster installations with built-in consumption metering (1% accuracy) and production revenue grade metering (0.5% accuracy, ANSI C12.20)

solaredge.com

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Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/
SE7600H-US / SE10000H-US / SE11400H-US

MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXXXH-XXXXXBXX4							
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	✓	-	✓	-	-	✓	Vac
AC Frequency (Nominal)	59.3 - 60 - 60.5(1)							Hz
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	A
Maximum Continuous Output Current @208V	-	16	-	24	-	-	48.5	A
Power Factor	1, Adjustable - 0.85 to 0.85							
GFDI Threshold	1							A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes							
INPUT								
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	W
Maximum DC Power @208V	-	5100	-	7750	-	-	15500	W
Transformer-less, Ungrounded	Yes							
Maximum Input Voltage	480							Vdc
Nominal DC Input Voltage	380				400			Vdc
Maximum Input Current @240V(2)	8.5	10.5	13.5	16.5	20	27	30.5	Adc
Maximum Input Current @208V(2)	-	9	-	13.5	-	-	27	Adc
Max. Input Short Circuit Current	45							Adc
Reverse-Polarity Protection	Yes							
Ground-Fault Isolation Detection	600kΩ Sensitivity							
Maximum Inverter Efficiency	99	99.2						%
CEC Weighted Efficiency	99						99 @ 240V 98.5 @ 208V	%
Nighttime Power Consumption	< 2.5							W

(1) For other regional settings please contact SolarEdge support
(2) A higher current source may be used; the inverter will limit its input current to the values stated

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INVERTER SPECSHEET

PROJECT NUMBER:

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Power Optimizer

For North America

P370 / P400 / P401 / P485 / P505

POWER OPTIMIZER

25 YEAR WARRANTY

PV power optimization at the module-level

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Fast installation with a single bolt
- Next generation maintenance with module-level monitoring
- Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)
- Module-level voltage shutdown for installer and firefighter safety

solaredge.com

solaredge

Power Optimizer

For North America

P370 / P400 / P401 / P485 / P505

Optimizer model (typical module compatibility)	P370 (for higher-power 60 and 72-cell modules)	P400 (for 72 & 96-cell modules)	P401 (for high power 60 and 72 cell modules)	P485 (for high-voltage modules)	P505 (for higher current modules)	
INPUT						
Rated Input DC Power(1)	370	400		485	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	60	80	60	125(2)	83(2)	Vdc
MPPT Operating Range	8 - 60	8 - 80	8-60	12.5 - 105	12.5 - 83	Vdc
Maximum Short Circuit Current (Isc)	11	10.1	11.75	11	14	Adc
Maximum DC Input Current	13.75	12.5	14.65	12.5	17.5	
Maximum Efficiency	99.5					%
Weighted Efficiency	98.8					%
Overvoltage Category	II					
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)						
Maximum Output Current	15					Adc
Maximum Output Voltage	60			80		Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)						
Safety Output Voltage per Power Optimizer	1 ± 0.1					Vdc
STANDARD COMPLIANCE						
EMC	FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3					
Safety	IEC62109-1 (class II safety), UL1741, NEC/PVRSS					
Material	UL94 V-0 , UV Resistant					
RoHS	Yes					
INSTALLATION SPECIFICATIONS						
Maximum Allowed System Voltage	1000					Vdc
Compatible inverters	All SolarEdge Single Phase and Three Phase inverters					
Dimensions (W x L x H)	129 x 153 x 27.5 / 5.1 x 6 x 1.1	129 x 153 x 33.5 / 5.1 x 6 x 1.3	129 x 153 x 29.5 / 5.1 x 6 x 1.16	129 x 159 x 49.5 / 5.1 x 6.3 x 1.9	129 x 162 x 59 / 5.1 x 6.4 x 2.3	mm / in
Weight (including cables)	630 / 1.4	750 / 1.7	655 / 1.5	845 / 1.9	1064 / 2.3	gr / lb
Input Connector	MC4(3)			MC4(3)	MC4(3)	
Input Wire Length	0.16 / 0.5					m / ft
Output Wire Type / Connector	Double Insulated / MC4					
Output Wire Length	1.2 / 3.9					m / ft
Operating Temperature Range(4)	-40 to +85 / -40 to +185					°C / °F
Protection Rating	IP68 / Type6B					
Relative Humidity	0 - 100					%

(1) Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed
(2) NEC 2017 requires max input voltage be not more than 80V
(3) For other connector types please contact SolarEdge
(4) Longer inputs wire lengths are available for use. For 0.9m input wire length order P401-xxxLxxx
(5) For ambient temperature above +85°C / +185°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details: https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf

PV System Design Using a SolarEdge Inverter(6)(7)		Single Phase HD-Wave	Single phase	Three Phase for 208V grid	Three Phase for 277/480V grid	
Minimum String Length (Power Optimizers)	P370, P400, P401	8		10	18	
	P485, P505	6		8	14	
Maximum String Length (Power Optimizers)		25		25	50	
Maximum Power per String		5700(8) (6000 with SE7600-US - SE11400-US)	5250(8)	6000(9)	12750(10)	W
Parallel Strings of Different Lengths or Orientations		Yes				

(6) For detailed string sizing information refer to: http://www.solaredge.com/sites/default/files/string_sizing_na.pdf
(7) It is not allowed to mix P485/P505 with P370/P400/P401 in one string
(8) A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement
(9) For 208V grid: it is allowed to install up to 6,500W per string when the maximum power difference between each string is 1,000W
(10) For 277/480V grid: it is allowed to install up to 15,000W per string when the maximum power difference between each string is 2,000W

Intertek RoHS

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OPTIMIZER SPECSHEET

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DESIGNER/CHECKED BY:
SOLAROFIX

SCALE:AS NOTED	PAPER SIZE:17"x11"	
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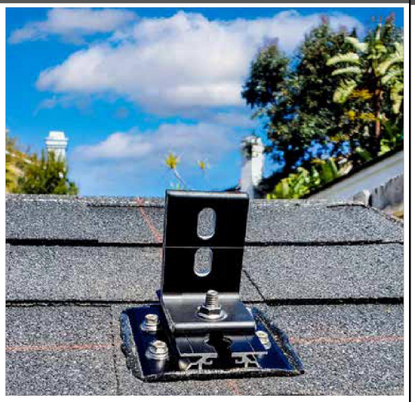
RT-MINI II

A Self-flashing PV Mount Featuring Roof Tech's AlphaSeal™ Technology



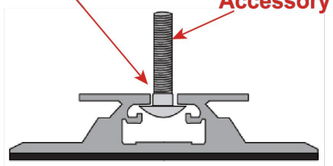
RT-MINI II is suitable for all systems with a conventional L-Foot.

- Less Aluminum
- More Efficient Design
- Additional Mounting Options
- Metal, EPDM, TPO, & Asphalt Roofs

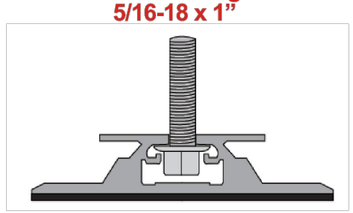
FLORIDA HVHZ APPROVED RT-MINI II #FL38617.2

1/4" x 1" Carriage Bolt

EMT Accessory



RT Serrated Hex Flange Bolt/Nut: 5/16-18 x 1"



Installation Manual

ICC ES ICC ESR 3575

RT-MINI II

Flexible Flashing Certified by the International Code Council (ICC)

Components

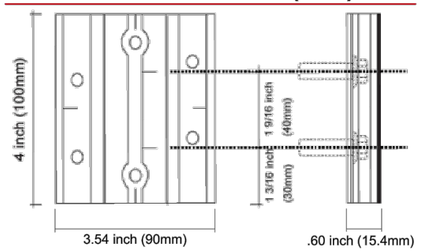
RT2-00-MINIBK2

MINI II base : 20 ea.
Screw : 40 ea.
Extra RT-Butyl : 4 ea.

Optional Items:

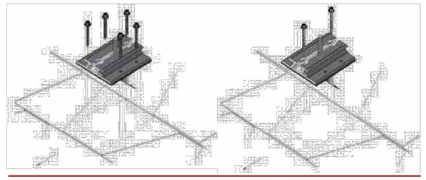
5 x 60mm Mounting Screw (RT2-04-SD5-60) : 100 ea./Bag
5/16 X 25MM Flange Bolt & Nut (RT2-04-FBN25) : 100 ea./Bag
RT-Butyl (RT2-04-MNBUTYL) : 10 ea./Box

Dimensions in (mm)

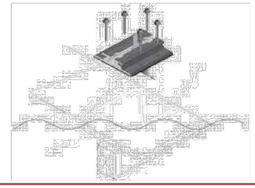


Deck Installation

Rafter Installation



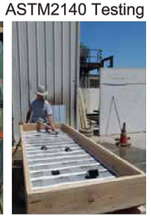
Offset Rafter Installation



RT-Butyl is Roof Tech's flexible flashing used in one million residential PV systems for the last 27 years. It is the first PV mounting system with Flexible Flashing certified by the ICC. Engineered to withstand wind speeds up to 180 mph and ground snow up to 90 psf.

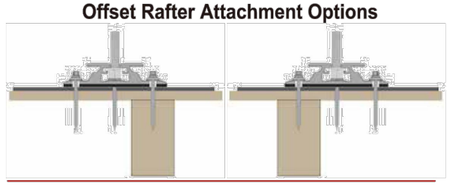
Engineered to ASTM D 1761
(Standard Test Methods for Mechanical Fasteners in Wood)

ICC ESR-3575 ASTM2140 Testing

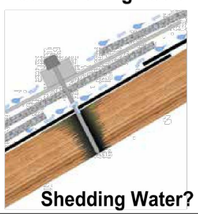


TAS 100 A on metal and asphalt roof.
P.E. Stamped Letters available at www.roof-tech.us/support

Offset Rafter Attachment Options



Metal Flashing Retrofit



Shedding Water?

Flexible Flashing

100% Waterproof

25 YEARS WARRANTY

Roof Tech
The Standard for Waterproof Flexible Flashing Since 1994
www.roof-tech.us info@roof-tech.us

North America's Most Trusted Solution AlphaSeal™ PV Mounting Technology 100% Caulk-Free

Roof Tech Inc.
www.roof-tech.us info@roof-tech.us
10620 Treena Street, Suite 230, San Diego, CA 92131
858.935.6064

January 2022

Sustainable Energy & Lighting Solutions
Your future is brighter with us!

SYSTEM INFORMATION

DC SYSTEM SIZE : 13650W
AC SYSTEM SIZE : 10000W

MODULES:
(35) TRINA SOLAR TSM-390 DE09.05 390W
INVERTER:
(1) SOLAREDGE SE10000H-US
OPTIMIZER
(35) SOLAREDGE P405

ENGINEER OF RECORD

CUSTOMER INFORMATION

NAME & ADDRESS:
TERRY EVANS
875 TROY PARKER LN,
DUNN, NC 28334
35°34'37.6"N 78°59'62.2"W

AHJ: HARNETT COUNTY

UTILITY: DUKE ENERGY PROGRESS

RACKING SPECSHEET

PROJECT NUMBER:

DESIGNER/CHECKED BY:
SOLAROFIX

SCALE:AS NOTED	PAPER SIZE:17"x11"	
DATE:11/19/22	REV:B	PV-6.3

S-5!®

The Right Way!

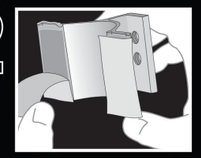
CorruBracket™

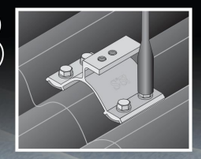
CorruBracket™ can be used to mount almost anything to corrugated metal roofing and is compatible with 7/8" and 3/4" corrugated roofing. No messy sealants to apply! No chance for leaks! The CorruBracket comes with factory-applied butyl sealant already in the base, and the S-5!® patented reservoir conceals the sealant, preventing UV degredation.

Installation is simple! CorruBracket is mounted directly into the supporting structure of the roof, i.e. roof decking, wood or steel purlins, or trusses. No surface preparation is necessary; simply wipe away excess oils and debris, peel the release paper, align, and apply. Secure through the pre-punched holes using the appropriate screws for the supporting structure.

CorruBracket is so strong, it will even support heavy-duty applications like snow retention. For corrugated profiles, the CorruBracket is the perfect match for our ColorGard® snow retention system. CorruBracket is economical and facilitates quick and easy installation.

The right way to attach almost anything to metal roofs!





CorruBracket™

S-5!® CorruBracket™ is the right way to attach almost anything to 7/8" and 3/4" corrugated roofing, including PV via DirectAttached™ or rail methods.

888-825-3432 | www.S-5.com

S-5!®

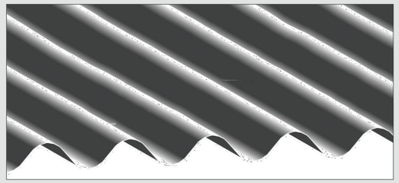
The Right Way!

CorruBracket™ is extremely versatile. It can be used for almost any attachment need on 7/8" and 3/4" corrugated metal roofing. No messy sealants to apply. The factory-applied butyl sealant waterproofs and makes installation a snap!

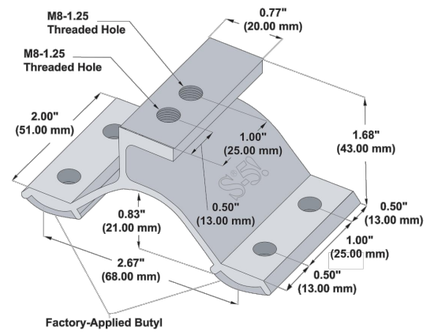
Each **CorruBracket™** comes with factory-applied butyl sealant in the base. CorruBracket is compatible with most common metal roofing materials. For design assistance, ask your distributor, or use our web-based calculator at **www.S-5.com** for job-specific system engineering and design of your next snow retention project. Also, please visit our website for more information including CAD details, metallurgical compatibilities and specifications.

The CorruBracket has been tested for load-to-failure results on wood decking, and metal and wood purlins. The independent lab test data found at www.S-5.com can be used for load-critical designs and applications. S-5!® holding strength is unmatched in the industry.

Example Profile



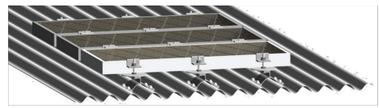
CorruBracket™



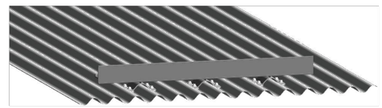
Please note: All measurements are rounded to the second decimal place. Contact your distributor for information about hardware requirements.

Example Applications

S-5-PV Kit (DirectAttached™ or Rail)



ColorGard®



S-5!® Warning! Please use this product responsibly!

Products are protected by multiple U.S. and foreign patents. For published data regarding holding strength, bolt torque, patents and trademarks visit the S-5! website at www.S-5.com.

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