#### SCOPE OF WORK:

TO INSTALL A ROOF MOUNTED SOLAR PHOTOVOLTAIC SYSTEM AT THE OWNER RESIDENCE LOCATED AT 148 SUNNYBROOK LANE LILLINGTON, NC 27546. THE POWER GENERATED BY THE PV SYSTEM WILL BE INTERCONNECTED WITH THE UTILITY GRID THROUGH THE EXISTING ELECTRICAL SERVICE EQUIPMENT. THE PV SYSTEM DOES NOT INCLUDE STORAGE BATTERIES

EQUIPMENT SUMMARY
15 SILFAB SIL-370NX MODULES
01 SOLAREDGE SE5000H-US INVERTER
15 SOLAREDGE POWER OPTIMIZER P370



#### **GENERAL NOTES:**

- THESE CONSTRUCTION DOCUMENTS HAVE BEEN BASED ON FIELD INSPECTIONS AND OTHER INFORMATION AVAILABLE AT THE TIME. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS IN CONSTRUCTION DETAILS.
- ARCHITECT HAS NOT BEEN RETAINED TO SUPERVISE ANY CONSTRUCTION OR INSTALLATION OF ANY EQUIPMENT AT SITE.
- CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT, TOOLS, OBTAINS ALL PERMITS, LICENSES AND PAY ALL REQUIRED FEES AND COMPLETE INSTALLATION.
- CONTRACTOR HAS THE FULL RESPONSIBILITY TO CHECK AND VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ANY WORK STARTED BEFORE CONSULTATION AND ACCEPTANCE BY THE ENGINEER SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBJECT TO CORRECTION BY THEM WITHOUT ADDITIONAL
- DAMAGE CAUSED TO THE EXISTING STRUCTURE, PIPES, DUCTS, WINDOWS, WALL FLOORS, ETC. SHALL BE REPAIRED TO THE ORIGINAL CONDITION OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE PROPER INSTALLATION AND COMPLETION OF THE WORK WITH APPROVED MATERIALS.
- NO CHANGES ARE TO BE MADE WITHOUT THE CONSULTATION AND APPROVAL OF THE ARCHITECT.
- CONTRACTOR SHALL OBTAIN BULDING PERMIT. NO WORK TO START UNLESS BUILDING PERMIT IS PROPERLY DISPLAYED.
- ALL WORKMANSHIP AND MATERIALS SHALL BE OF FIRST QUALITY AND IN COMPLIANCE WITH THE REQUIREMENTS OF THE NC BUILDING CODE, THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ALL PERTINENT AGENCIES.
- IT IS ESSENTIAL THAT ALL WORK PROCEED WITH THE MAXIMUM COOPERATION OF ALL PARTIES AND WITH MINIMUM INTERFERENCE TO THE OCCUPANTS WITHIN THE BUILDING. THE OWNER'S DIRECTIONS IN THIS REGARD SHALL BE FULLY COMPLIED WITH
- ALL EXPOSED PLUMBING, HVAC, ELECTRICAL DUCTWORK, PIPING AND CONDUITS ARE TO BE PAINTED BY GENERAL CONTRACTOR.
- THE CONTRACTOR SHALL PERFORM THE WORK IN STRICT CONFORMANCE WITH THE LOCAL LAWS, REGULATIONS AND THE NATIONAL ELECTRIC CODE.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS, APPROVALS, AFFIDAVITS, CERTIFICATIONS, ETC. AND PAY ALL FEES AS REQUIRED BY THE LOCAL AUTHORITIES.
- CONTRACTORS SHALL OBTAIN FIRE CERTIF. UPON COMPLETION OF WORK.

#### **ELECTRICAL NOTES:**

- THE EQUIPMENT AND ALL ASSOCIATED WIRING AND INTERCONNECTION SHALL BE INSTALLED ONLY BY QUALIFIED PEOPLE. A QUALIFIED PERSON IS ONE WHO HAS SKILLS AND KNOWLEDGE RELATED TO THE CONSTRUCTION AND OPERATION OF THE ELECTRICAL EQUIPMENT AND INSTALLATIONS AND HAS RECEIVED SAFETY TRAINING TO RECOGNIZE AND AVOID THE HAZARDS INVOLVED. (NEC 690.4(E) AND 705.6)
- LOCAL UTILITY PROVIDER SHALL BE NOTIFIED PRIOR TO USE AND ACTIVATION OF ANY SOLAR PHOTOVOLTAIC INSTALLATION. FOR A LINE SIDE TAP CONNECTION, UTILITY NEEDS TO BE NOTIFIED WELL IN ADVANCE TO COORDINATE BUILDING ELECTRICAL SHUT OFF.
- NEW CONDUIT ROUTING SHOWN IS ESSENTIALLY SCHEMATIC. SUBCONTRACTOR SHALL LAY OUT RUNS TO SUIT FIELD CONDITIONS AND THE COORDINATION REQUIREMENTS OF OTHER TRADES.
- ARRAY WIRING SHOULD NOT BE READILY ACCESSIBLE EXCEPT TO QUALIFIED PERSONNEL
- ALL EXTERIOR CONDUIT, FITTINGS, AND BOXES SHALL BE WATERTIGHT AND APPROVED FOR USE IN WET LOCATIONS. (NEC 314.15A)
- WIRING METHODS FOR PV SYSTEM CONDUCTORS AREN'T PERMITTED WITHIN 10 IN. OF THE ROOF DECKING OR SHEATHING EXCEPT WHERE LOCATED DIRECTLY BELOW THE ROOF SURFACE THAT'S COVERED BY PV MODULES AND ASSOCIATED EQUIPMENT WIRING
- BACK-FED BREAKER MUST BE AT THE OPPOSITE END OF BUS BAR FROM THE MAIN BREAKER OR MAIN LUG SUPPLYING CURRENT FROM THE UTILITIES.
- ALL CONDUCTORS AND WIRE TIES EXPOSED TO SUNLIGHT ARE LISTED AS UV RESISTANT.
- CONTRACTOR SHALL FOLLOW ALL ELECTRICAL EQUIPMENT LABELING REQUIREMENTS IN NEC 690 AND IFC 2018
- MEASURE THE LINE-TO-LINE AND LINE-TO-NEUTRAL VOLTAGE OF ALL SERVICE ENTRANCE CONDUCTORS PROIR TO INSTALLING ANY SOLAR EQUIPMENT. THE VOLTAGES FOR THE 240VAC RATED.

#### **GOVERNING CODES**

2017 NATIONAL ELECTRICAL CODE 2018 INTERNATIONAL FIRE CODE

2018 INTERNATIONAL BUILDING CODE

2018 INTERNATIONAL RESIDENTIAL CODE

2018 INTERNATIONAL ENERGY CONSERVATION CODE

2018 INTERNATIONAL EXISTING BUILDING CODE

2018 INTERNATIONAL SWIMMING POOL AND SPA CODE

2018 UNIFORM MECHANICAL CODE 2018 UNIFORM PLUMBING CODE

AUTHORITY HAVING JURISDICTION (AHJ):HARNETT COUNTY

#### WIRING AND CONDUIT NOTES:

- ALL CONDUIT SIZES AND TYPES, SHALL BE LISTED FOR ITS PURPOSE AND APPROVED FOR THE SITE APPLICATIONS
- ALL PV CABLES AND HOMERUN WIRES BE #10AWG \*USE-2, PV WIRE, OR PROPRIETARY SOLAR CABLING SPECIFIED BY MFR, OR EQUIVALENT; ROUTED TO SOURCE CIRCUIT COMBINER **BOXES AS REQUIRED**
- ALL CONDUCTORS AND OCPD SIZES AND TYPES SPECIFIED ACCORDING TO [NEC 690.8 (A)(1) & (B)(1)], [NEC 240] [NEC 690.7] FOR MULTIPLE CONDUCTORS
- ALL PV DC CONDUCTORS IN CONDUIT EXPOSED TO SUNLIGHT SHALL BE DERATED ACCORDING TO [NEC TABLE 310.15 (B)(2)(C)] BLACK ONLY\*\*
- EXPOSED ROOF PV DC CONDUCTORS SHALL BE USE-2, 90°C RATED, WET AND UV RESISTANT, AND UL LISTED RATED FOR 600V, UV RATED SPIRAL WRAP SHALL BE USED TO PROTECT WIRE FROM SHARP EDGES
- PHASE AND NEUTRAL CONDUCTORS SHALL BE DUAL RATED THHN/THWN-2 INSULATED, 90°C RATED, WET AND UV RESISTANT, RATED FOR 600V PER NEC 2008 OR 1000V PER **NEC 2011**
- 4-WIRE DELTA CONNECTED SYSTEMS HAVE THE PHASE WITH THE HIGHER VOLTAGE TO GROUND MARKED ORANGE OR **IDENTIFIED BY OTHER EFFECTIVE MEANS**
- ALL SOURCE CIRCUITS SHALL HAVE INDIVIDUAL SOURCE **CIRCUIT PROTECTION**
- VOLTAGE DROP LIMITED TO 2% FOR DC CIRCUITS AND 1% FOR AC CIRCUITS
- NEGATIVE GROUNDED SYSTEMS DC CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS: DC POSITIVE - RED (OR MARKED RED), DC NEGATIVE - GREY (OR MARKED GREY)
- POSITIVE GROUNDED SYSTEMS DC CONDUCTORS COLOR CODED: DC POSITIVE - GREY (OR MARKED GREY), DC NEGATIVE - BLACK (OR MARKED BLACK)
- AC CONDUCTORS >4AWG COLOR CODED OR MARKED: PHASE A OR L1- BLACK, PHASE B OR L2- RED, PHASE C OR L3- BLUE. **NEUTRAL-WHITE/GRAY**

# (421) (401) (421) (501) [1]

VICINITY MAP

PHOTOVOLTAIC SYSTEM **SYSTEM RATING** FIRE CLASSIFICATION 5.55 KWDC LISTING IN ACCORDANCE WITH UL 1703 STANDARD **5.0 KWAC** 

	SHEET INDEX
PV-0	COVER PAGE
PV-1	SITE PLAN
PV-2	ROOF PLAN & MODULES
PV-2A	STRING LAYOUT & BOM
PV-3	ATTACHMENT DETAIL
PV-3A	ATTACHMENT DETAIL
PV-4	ELECTRICAL LINE DIAGRAM & CALCS.
PV-4A	ELECTRICAL LINE DIAGRAM & CALCS.
PV-4B	SPECIFICATIONS & NOTES
PV-5	SIGNAGE
PV-6	JOB SAFETY PLAN
PV-7+	EQUIPMENT SPECIFICATIONS





SCALE: NTS

#### TITAN SOLAR POWER

210 N Sunway Dr, Gilbert, AZ 85233 www.titansolarpower.com ELECTRICAL LIC#: U.33714

REVISIONS										
DESCRIPTION	DATE	REV								

Signature with Sea

DATE: 09/23/2021

PROJECT NAME & ADDRESS

SHELDON EMAIL ID: bill8950107@yahoo 835-6123

SUNNYBROOK LANE LILLINGTON, NC 27546 RESIDENC (775) PH NO. 148

WILLIAM

SHEET NAME **COVER PAGE** 

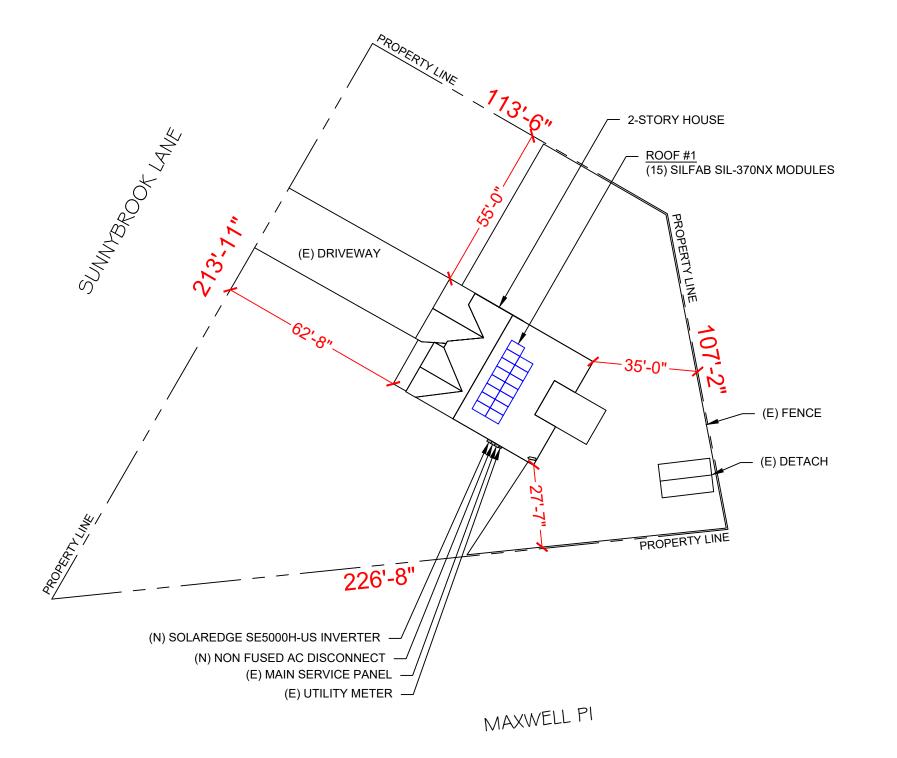
SHEET SIZE

**ANSI B** 11" X 17"

SHEET NUMBER

#### SITE NOTES

- A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.
- THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE AND THIS SYSTEM IS AN UTILITY INTERACTIVE SYSTEM WITH NO STORAGE BATTERIES.
- THE SOLAR PV INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.
- PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED AS PER SECTION [NEC 110.26]





#### **TITAN SOLAR POWER**

210 N Sunway Dr, Gilbert, AZ 85233 www.titansolarpower.com ELECTRICAL LIC#: U.33714

REVI	SIONS	
DESCRIPTION	DATE	REV

Signature with Seal

DATE: 09/23/2021

PROJECT NAME & ADDRESS

WILLIAM SHELDON

PH NO. (775) 835-6123 EMAIL ID: bill8950107@yahoo 148 SUNNYBROOK LANE LILLINGTON, NC 27546 RESIDENCE

SHEET NAME SITE PLAN

SHEET SIZE

**ANSI B** 11" X 17"

SHEET NUMBER

PV-1

PLOT PLAN WITH ROOF PLAN

PV-1

SCALE: 1/32" = 1'-0"

											1						
DESIGN SPECIFIC	CATION	MODULE TYPE, DI	MENSIONS & WEIGHT				ROOF D	ESCRIP			ARI	RAY ARE	A & ROO	F AREA	CALC'S		
RISK CATEGORY:	II	NUMBER OF MODULES:	15 MODULES		ROOF	ROOF TILT	AZIMUTH	TRUSS SIZE	TRUSS SPACING	ROOF MATERIAL					ROOF	(I) T I T	ΓΔΝ
CONSTRUCTION:	SFD	MODULE TYPE:	SILFAB SIL-370NX		#1	33°	120°	2"X4"	24" O.C.	COMP. SHINGLE	ROOF	# OF MODULES	ARRAY AREA	ROOF AREA	AREA COVERED	SOLA	FAN
ZONING:	RESIDENTIAL	MODULE WEIGHT:	44.0 LBS								_	MODULES	(Sq. Ft.)	(Sq. Ft.)	BY ARRAY (%)	TITAN SOLAR	POWER
SNOW LOAD (ASCE 7-10):	10 PSF	MODULE DIMENSIONS:	72.13" X 39.37" = 19.72 SF								#1	15	249.92	1128.98	22	210 N Sunwa Gilbert, AZ 8	ay Dr, 35233
EXPOSURE CATEGORY:	В	UNIT WEIGHT OF AREA:	2.23 PSF										<u>SEND</u>			www.titansolar	power.com
WIND SPEED (ASCE 7-10):  PANEL HEIGHT OFF ROOF	117 MPH											JB		ox		ELECTRICAL LIC	C#: U.33714
	SUMMBROOK LANK	The state of the s			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\							ACD MSP UM SD O	- MAIN SERVIC - UTILITY MET -SERVICE DIS - VENT, ATTIC	CE PANEL  ER  CONNECT  FAN (ROOF O	BSTRUCTION)	REVISION DESCRIPTION Signature w	DATE REV
																DATE: 09/23	& ADDRESS
		(N) JUNCTION I (N) 3/4" EMT CO	30X — 70; -							And			SIDEN	43 <sub>A</sub> ,	0.27"	WILLIAM SHELDON RESIDENCE 148 SUNNYBROOK LANE	LILLINGTON, NC 27546 PH NO. (775) 835-6123 EMAIL ID: bill8950107@yahoo.com
1 ROOF PLA	AN & MODULES SCALE: 1/8"	(N) SOLAREDGE SE (N) NON FU (E)  MAHMELL P	E5000H-US INVERTER SED AC DISCONNECT SED MAIN SERVICE PANEL	7,	>,0"			(1) (N)	5) SOLAREI ) K2 CROS	SIL-370NX MODUI DGE POWER OPT SRAIL 48-X FOOT X @ 48"O.C	ΓIMIZER	P370	OF RESIDEN	SILFAB	9.37" SIL-370NX DULES	SHEET N ROOF PI MODU SHEET S ANSI 11" X SHEET NU	LAN & LES SIZE I B 17"

		BILL OF MATERIALS
EQUIPMENT	QTY	DESCRIPTION
SOLAR PV MODULE	15	SILFAB SIL-370NX
OPTIMIZER	15	SOLAREDGE POWER OPTIMIZER P370
INVERTER	1	SOLAREDGE SE5000H-US
AC DISCONNECT	1	EATON DG221URB PV SYSTEM AC DISCONNECT SWITCH NON FUSED VISIBLE OPEN 30A, 120/240V 2P NEMA 3R
JUNCTION BOX	1	JUNCTION BOX, NEMA 3R, UL LISTED
ATTACHMENT	30	SPLICE FOOT X
ATTACHMENT	30	K2 SOLAR SEAL BUTYL PAD
ATTACHMENT	60	MS X 60 LAG SCREWS
ATTACHMENT	30	CAP SCREW, HEX HEAD, 5/16"-18" X 1"
RAILS	8	K2 CROSSRAIL 48-X RAIL (166")
BONDED SPLICE	4	SPLICE KIT
CLAMPS	34	MODULES CLAMPS (MID CLAMPS & END CLAMPS)
GROUNDING LUG	2	GROUNDING LUG

(E) BACK OF RESIDENCE



210 N Sunway Dr, Gilbert, AZ 85233 www.titansolarpower.com ELECTRICAL LIC#: U.33714

REVISIONS							
DESCRIPTION	DATE	REV					

Signature with Seal

MODULE STRINGING

DATE: 09/23/2021

PROJECT NAME & ADDRESS

PH NO. (775) 835-6123 EMAIL ID: bill8950107@yahoo.com 148 SUNNYBROOK LANE LILLINGTON, NC 27546 RESIDENCE

WILLIAM SHELDON

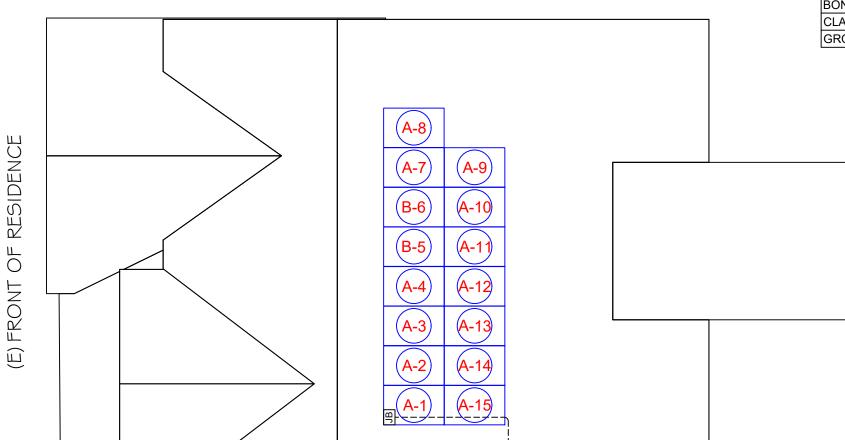
SHEET NAME STRING LAYOUT & BOM

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

PV-2A



MAXWELL PI

INV ACD MSP UM

**ROOF PLAN WITH STRING LAYOUT & BOM** 

PV-2A

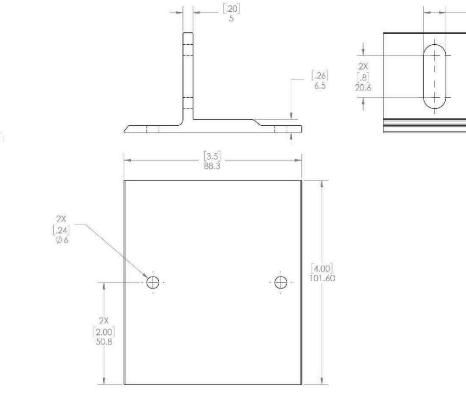
SUNNYBROOK LANE

SCALE: 1/8" = 1'-0"

# We support PV systems Formerly Everest Solar Systems



Units: [in] mm





TITAN SOLAR POWER

210 N Sunway Dr, Gilbert, AZ 85233 www.titansolarpower.com ELECTRICAL LIC#: U.33714

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Signature with Seal

DATE: 09/23/2021

PROJECT NAME & ADDRESS

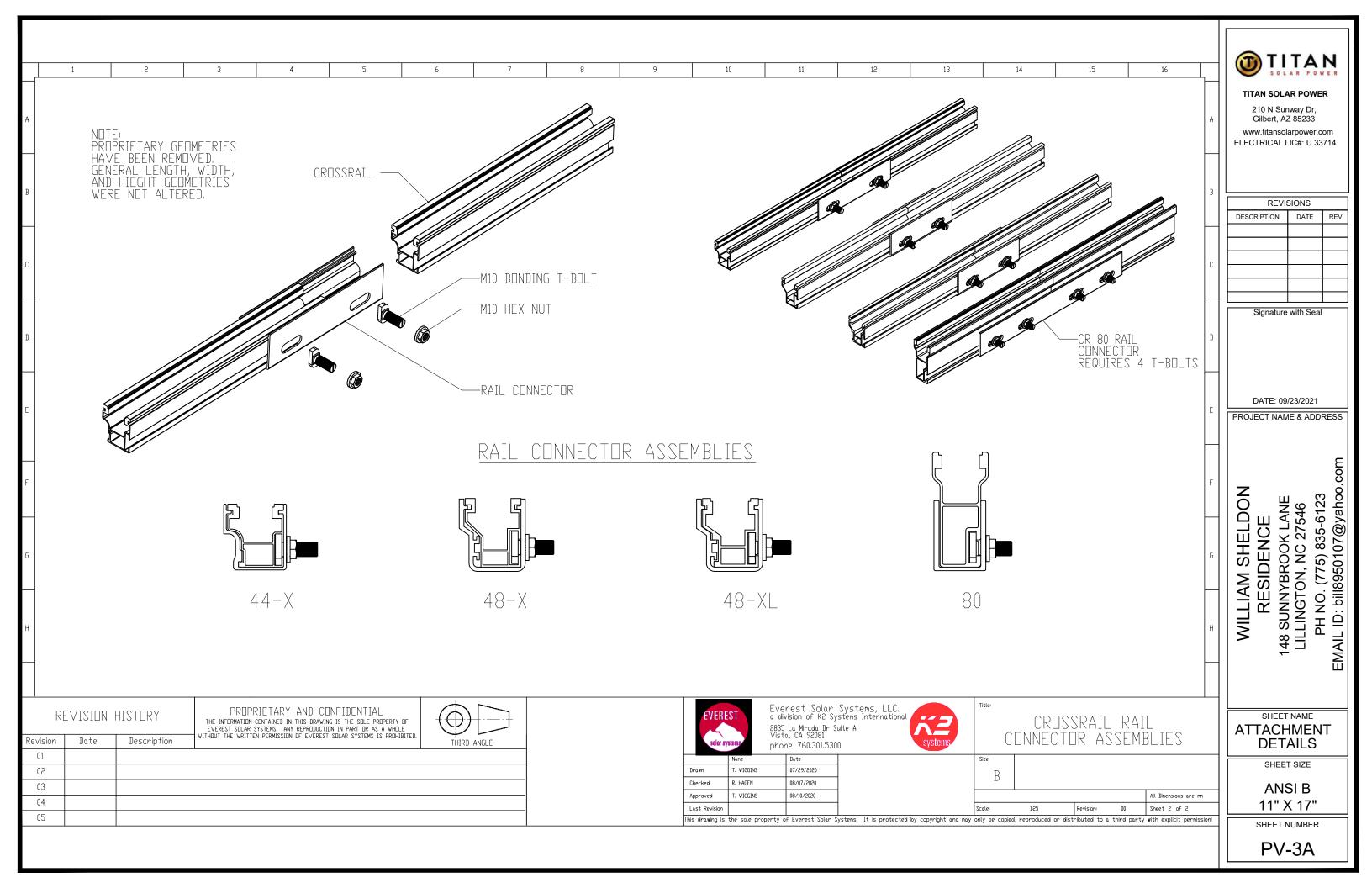
148 SUNNYBROOK LANE LILLINGTON, NC 27546 PH NO. (775) 835-6123 EMAIL ID: bill8950107@yahoo.com WILLIAM SHELDON RESIDENCE

SHEET NAME ATTACHMENT DETAILS

SHEET SIZE

ANSI B <u>11"</u> X 17"

SHEET NUMBER



ID	TYPICAL	INITIAL CONDUCTOR LOCATION	FINAL CONDUCTOR LOCATION		CONDUCTO	DR	CONDUIT	# OF PARALLEL CIRCUITS	CURRENT-CARRYI NG CONDUCTORS IN CONDUIT	CONDUIT FILL PERCENT	OCPD	E	GC		. CORR. CTOR	CONDUIT FILL FACTOR	CONT. CURRENT	MAX. CURRENT	BASE AMP.	DERATED AMP.	TERM. TEMP. RATING	LENGTH	VOLTAGE DROP	
1	1	STRING	JUNCTION BOX	10 AWG	PV WIRE	COPPER	Open Air	1	2	N/A	N/A	6 AWG	BARE COPPER	0.71	(58°C)	N/A	15.0A	18.8A	40A	28.4A	90°C	52FT	0.02%	
2	1	JUNCTION BOX	INVERTER	10 AWG	THWN-2	COPPER	MIN 0.75" Dia EMT	1	2	11.45%	N/A	8 AWG	THWN-2, COPPER	0.91	(36°C)	1	15.0A	18.8A	40A	36.4A	90°C	40FT	0.13%	
3	1	INVERTER	NON FUSED AC DISCONNECT	10 AWG	THWN-2	COPPER	MIN 0.75" Dia EMT	1	3	15.27%	N/A	8 AWG	THWN-2, COPPER	0.91	(36°C)	1	21.0A	26.3A	40A	36.4A	90°C	5FT	0.16%	ı
4	1	NON FUSED AC DISCONNECT	MSP	10 AWG	THWN-2	COPPER	MIN 0.75" Dia EMT	1	3	15.27%	30A	8 AWG	THWN-2, COPPER	0.91	(36°C)	1	21.0A	26.3A	40A	36.4A	90°C	5FT	0.16%	



#### TITAN SOLAR POWER

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DATE: 09/23/2021

PROJECT NAME & ADDRESS

WILLIAM SHELDON PH NO. (775) 835-6123 EMAIL ID: bill8950107@yahoo 148 SUNNYBROOK LANE LILLINGTON, NC 27546 RESIDENCE

SHEET NAME

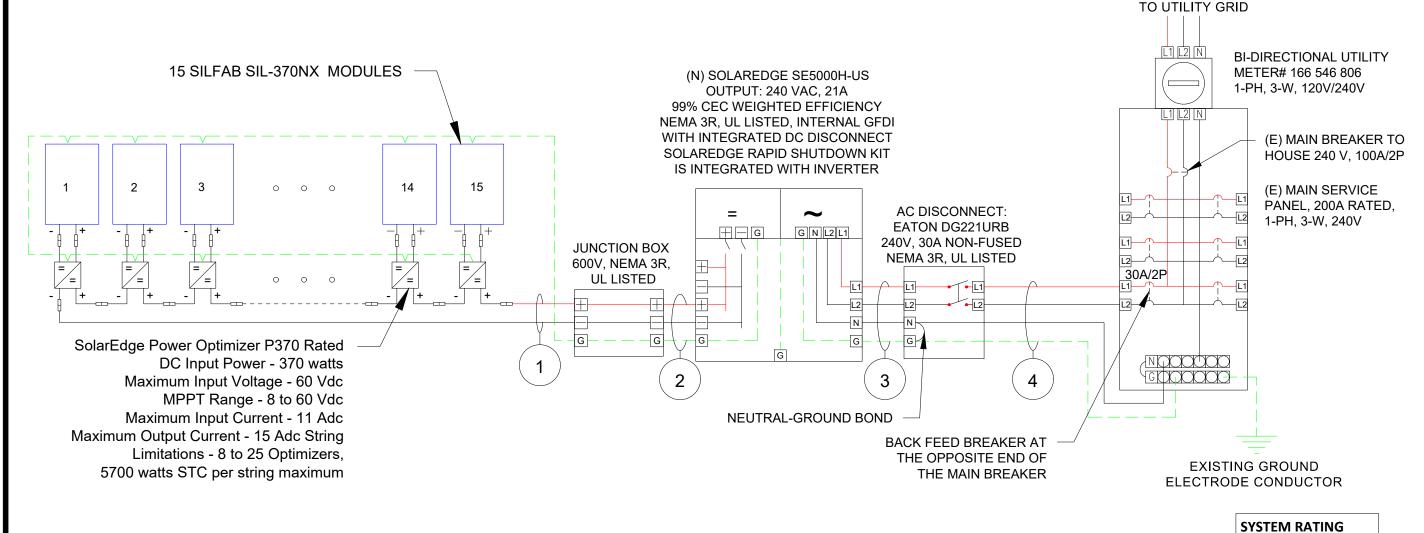
**ELECTRICAL LINE** & CALCS.

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

PV-4



**ELECTRICAL LINE DIAGRAM** 

SCALE: NTS

BUSS RATING x 120%

INTERCONNECTION

120% RULE - NEC 705.12(B)(2)(3)(b)

UTILITY FEED + SOLAR BACKFEED

100 A + 30A = 130A

200 A x 120% = 240A

SERVICE INFO

UTILITY PROVIDER: CENTRAL ELECTRIC MEMBERSHIP CORPORATION

5.55 KWDC

5.0 KWAC

MAIN SERVICE VOLTAGE: 240V MAIN PANEL BRAND: SQUARE D MAIN SERVICE PANEL: 200A MAIN CIRCUIT BREAKER RATING: 100A MAIN SERVICE LOCATION: SOUTH SERVICE FEED SOURCE: UNDERGROUND

ID	TYPICAL	INITIAL CONDUCTOR LOCATION	FINAL CONDUCTOR LOCATION		CONDUCTO	)R	CONDUIT	# OF PARALLEL CIRCUITS	CURRENT-CARRYI NG CONDUCTORS IN CONDUIT	( '( )KII )I II I   LII I	OCPD	E	GC		. CORR. CTOR	CONDUIT FILL FACTOR	CONT. CURRENT	MAX. CURRENT	BASE AMP.	DERATED AMP.	TERM. TEMP. RATING	LENGTH	VOLTAGE DROP	
1	1	STRING	JUNCTION BOX	10 AWG	PV WIRE	COPPER	Open Air	1	2	N/A	N/A	6 AWG	BARE COPPER	0.71	(58°C)	N/A	15.0A	18.8A	40A	28.4A	90°C	52FT	0.02%	
2	1	JUNCTION BOX	INVERTER	10 AWG	THWN-2	COPPER	MIN 0.75" Dia EMT	1	2	11.45%	N/A	8 AWG	THWN-2, COPPER	0.91	(36°C)	1	15.0A	18.8A	40A	36.4A	90°C	40FT	0.13%	
3	1	INVERTER	NON FUSED AC DISCONNECT	10 AWG	THWN-2	COPPER	MIN 0.75" Dia EMT	1	3	15.27%	N/A	8 AWG	THWN-2, COPPER	0.91	(36°C)	1	21.0A	26.3A	40A	36.4A	90°C	5FT	0.16%	
4	1	NON FUSED AC	MSP	10 AWG	THWN-2	COPPER	MIN 0.75" Dia EMT	1	3	15.27%	30A	8 AWG	THWN-2,	0.91	(36°C)	1	21.0A	26.3A	40A	36.4A	90°C	5FT	0.16%	



#### TITAN SOLAR POWER

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REVI	SIONS	
DESCRIPTION	DATE	REV

Signature with Seal

DATE: 09/23/2021

PROJECT NAME & ADDRESS

PH NO. (775) 835-6123 EMAIL ID: bill8950107@yahoo RESIDENCE

148 SUNNYBROOK LANE LILLINGTON, NC 27546

WILLIAM SHELDON

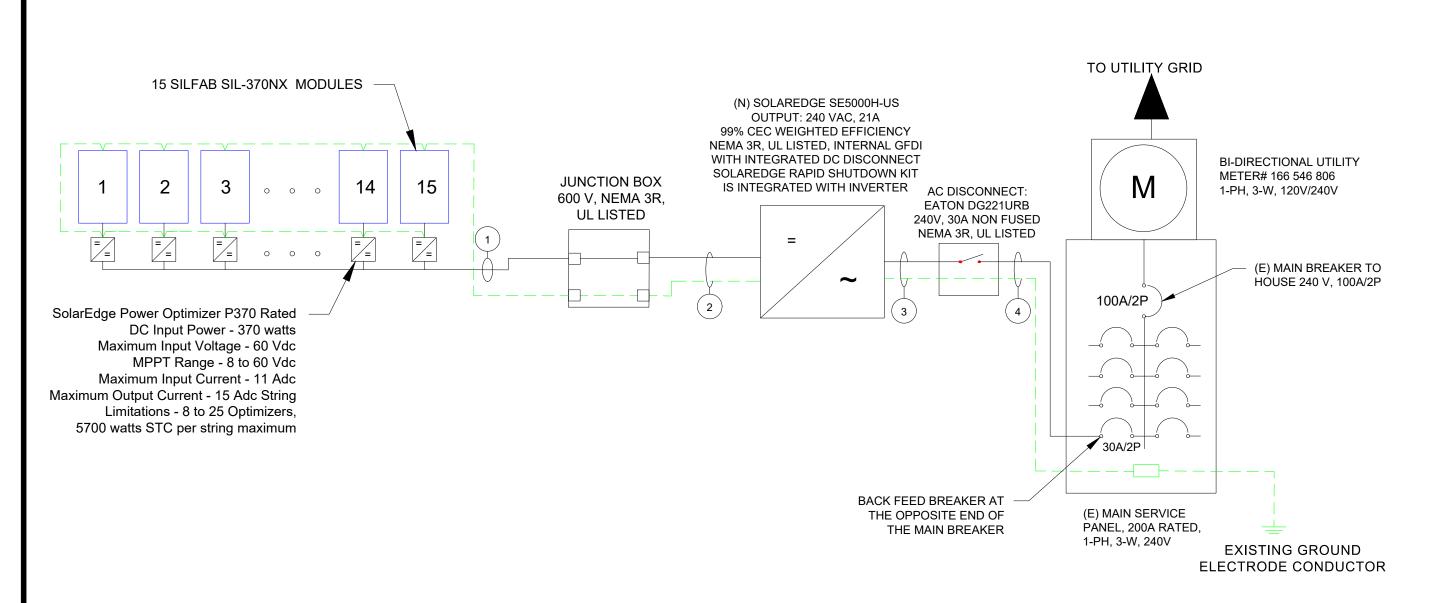
**ELECTRICAL LINE** CALCS.

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

PV-4A



**ELECTRICAL LINE DIAGRAM** SCALE: NTS SYSTEM RATING 5.55 KWDC

5.0 KWAC

120% RULE - NEC 705.12(B)(2)(3)(b) UTILITY FEED + SOLAR BACKFEED

INTERCONNECTION

100 A + 30A = 130A

BUSS RATING x 120% 200 A x 120% = 240A

SERVICE INFO

UTILITY PROVIDER: CENTRAL ELECTRIC MEMBERSHIP CORPORATION

MAIN SERVICE VOLTAGE: 240V MAIN PANEL BRAND: SQUARE D MAIN SERVICE PANEL: 200A MAIN CIRCUIT BREAKER RATING: 100A MAIN SERVICE LOCATION: SOUTH SERVICE FEED SOURCE: UNDERGROUND

PV-4A

SOLAR MODULE SPECIFICATIONS				
MANUFACTURER / MODEL	SILFAB SIL-370NX			
VMP	37.2 V			
IMP	10.0 A			
voc	44.8 V			
ISC	10.6 A			
TEMP. COEFF. VOC	-0.28%/°C			
PTC RATING	340.3 W			
MODULE DIMENSION	72.13"(L) x 39.37"(W)			
PANEL WATTAGE	370W			

INVERTER SPECIFICATION			
MANUFACTURER / MODEL	SOLAREDGE SE5000H-US		
NOMINAL AC POWER	5000 W		
NOMINAL OUTPUT VOLTAGE	240 VAC		
NOMINAL OUTPUT CURRENT	21 A		

POWER OPTIMIZER (SOLAREDGE P370)		
MAXIMUM INPUT POWER	370 W	
MAXIMUM INPUT VOLTAGE	60 VDC	
MAXIMUM INPUT ISC	11 ADC	
MAXIMUM OUTPUT CURRENT	15 ADC	
WEIGHTED EFFICIENCY	98.80%	

AMBIENT TEMPERATURE	SPECS
RECORD LOW TEMP	-10°C
AMBIENT TEMP (HIGH TEMP 2%)	36°C
CONDUIT HEIGHT	0.75"
ROOF TOP TEMP	90°C
CONDUCTOR TEMPERATURE RATE	58°C
MODULE TEMPERATURE COEFFICIENT OF VOC	-0.28%/°C

PERCENT OF VALUES	NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT
0.80	4-6
0.70	7-9
0.50	10-20



#### TITAN SOLAR POWER

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REVISIONS			
DESCRIPTION	DATE	REV	

Signature with Seal

DATE: 09/23/2021

PROJECT NAME & ADDRESS

WILLIAM SHELDON RESIDENCE 148 SUNNYBROOK LANE LILLINGTON, NC 27546 PH NO. (775) 835-6123 EMAIL ID: biil8950107@yahoo.com

SHEET NAME
SPECIFICATIONS
& NOTES

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

PV-4B

#### **ELECTRIC SHOCK HAZARD**

**TERMINALS ON BOTH LINE AND** LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

COMBINER BOX/ EMT ENCLOSURES/ AC DISCONNECT/ MAIN SERVICE PANEL (PER CODE: NEC 2017, 690.13(B))

2

## ! WARNING!

INVERTER OUTPUT CONNECTION. DO NOT RELOCATE THIS OVERCURRENT DEVICE.

<u>LABEL LOCATION:</u> POINT-OF-INTERCONNECTION OR AT MAIN SERVICE DISCONNECT (MSP) PER CODE: NEC 705.12(B)(2)(3)(b)

3

### WARNING PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION: CONDUIT, RACEWAY, ENCLOSURES, COMBINER BOX & AC DISCONNECT (PER CODE: NEC2017, 690.31(G)(3)(4)

4

#### **PHOTOVOLTAIC**

### **AC DISCONNECT**

LABEL LOCATION: AC DISCONNECT/ BREAKER/ POINTS OF CONNECTION (PER CODE: NEC2017, 690.13(B)

5

# PHOTOVOLTAIC AC DISCONNECT

RATED AC OUTPUT CURRENT 21A NOMINAL OPERATING AC VOLTAGE 240V

LABEL LOCATION: AC DISCONNECT

(PER CODE: NEC2017, 690.53)

6

## **RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM**

LABEL LOCATION: RAPID SHUTDOWN (AC DISCONNECT) PER CODE: NEC 690.58 (C)(3)

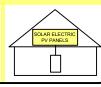
- ANSI Z535.4-2011 PRODUCT SAFETY SIGNS AND LABELS, PROVIDES GUIDELINES FOR SUITABLE FONT SIZES, WORDS, COLORS, SYMBOLS, AND LOCATION REQUIREMENTS FOR LABELS. NEC 110.21(B)(1)
- THE LABEL SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. NEC 110.21(B)(3)
- ADHESIVE FASTENED SIGNS MAY BE ACCEPTABLE IF PROPERLY ADHERED. VINYL SIGNS SHALL BE WEATHER RESISTANT.

WARNING: DUAL POWER SOURCE SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

> LABEL LOCATION: POINT OF INTERCONNECTION (PER CODE: NEC 2017, 705.12(B)

#### SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

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



LABEL LOCATION: RAPID SHUTDOWN (AC DISCONNECT) PER CODE: NEC 690.56 (C)(1)

9

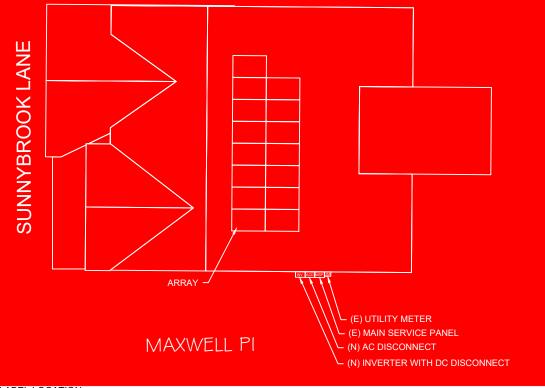
**RATED MAXIMUM POWER-POINT CURRENT (Imp) RATED MAXIMUM POWER-POINT VOLTAGE (Vmp) MAXIMUM SYSTEM VOLTAGE (VOC) MAXIMUM CIRCUIT** 15 CURRENT (Isc)

LABEL LOCATION: INVERTER (PER CODE: NEC 690.53)



# **CAUTION**

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



EACH SERVICE EQUIPMENT LOCATION AND AT THE LOCATION(S) OF THE SYSTEM DISCONNECT(S) FOR ALL ELECTRIC POWER PRODUCTION SOURCES CAPABLE OF BEING INTERCONNECTED (PER CODE: NEC 705.10)



#### **TITAN SOLAR POWER**

210 N Sunway Dr, Gilbert, AZ 85233

www.titansolarpower.com ELECTRICAL LIC#: U.33714

REVISIONS			
DESCRIPTION	DATE	REV	

Signature with Seal

DATE: 09/23/2021

PROJECT NAME & ADDRESS

WILLIAM SHELDON 48 SUNNYBROOK LANE LILLINGTON, NC 27546 RESIDENCE

EMAIL ID: bill8950107@yahoo

PH NO. (775) 835-6123

SHEET NAME **SIGNAGE** 

148

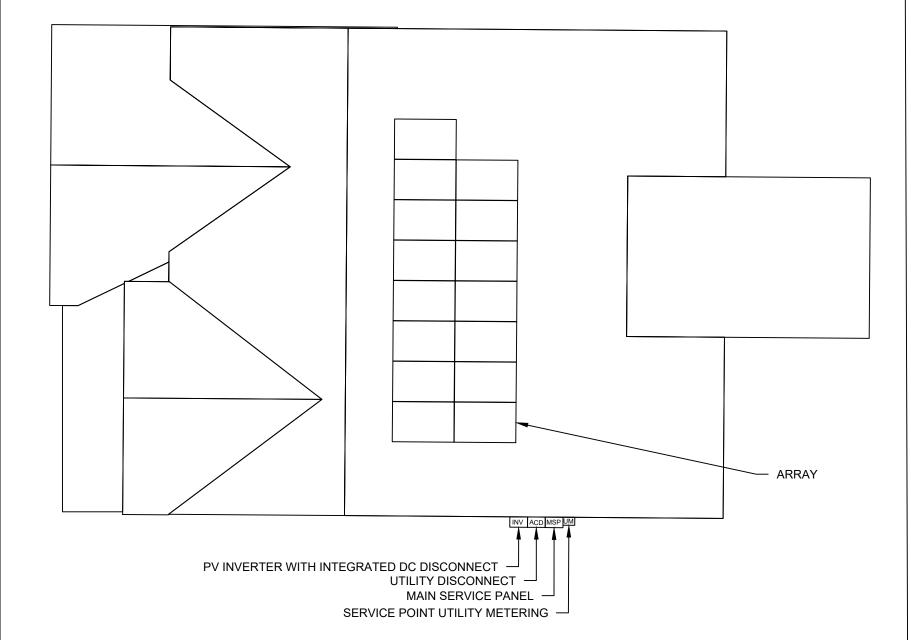
SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

# **JOB SAFETY PLAN**





### **LOCATION OF NEAREST URGENT CARE FACILITY:**

NAME :

ADDRESS : PHONE NUMBER :

NOTES:

- INSTALLER SHALL DRAW IN DESIGNED SAFETY AREA AROUND HOME.
- INSTALLER SHALL UPDATE NAME, ADDRESS, AND PHONE NUMBER OF NEAREST URGENT CARE FACILITY RELATIVE TO THE JOB SITE BEFORE STARTING WORK.

TITAN

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RESIDENCE
148 SUNNYBROOK LANE
LILLINGTON, NC 27546
PH NO. (775) 835-6123
EMAIL ID: bill8950107@yahoo.cor

INJURED AT WORK TODAY ?
INTIAL YES OR NO

PRINT NAME INITIAL YES NO

PERSON COVERED BY THIS JOB SAFETY PLAN

SHEET NAME

JOB SAFETY

SHEET SIZE

**PLAN** 

ANSI B 11" X 17"

SHEET NUMBER

PV-6

148 SUNNYBROOK LANE LILLINGTON, NC 27546













omission insurance to Silfab Solar Inc

CHUBB

**SIL-370 NX** POWERED BY

















The Titan Solar Panel is manufactured by Silfab Solar and includes an industry leading 25-year product workmanship and 30-year performance warranty.

**INDUSTRY LEADING WARRANTY** 

#### MAXIMUM ENERGY OUTPUT

Leveraging over 35+ years of worldwide experience in the solar industry, Silfab is dedicated to superior manufacturing processes and innovations such as Bifacial and Back Contact technologies, to ensure our partners, such as Titan Solar have the latest in solar innovation.

### **NORTH AMERICAN QUALITY**

Silfab is the leading automated solar module manufacturer in North America. Utilizing premium quality materials and strict quality control management to deliver the highest efficiency, premium quality PV modules.



#### **III** BAA / ARRA COMPLIANT

These panels are designed and manufactured to meet Buy American Act Compliance. The US State Department, US Military and FAA have all utilized Silfab panels in their solar installations.

#### **III** LIGHT AND DURABLE

Engineered to accommodate high wind load conditions for test loads validated up to 4000Pa uplift. The light-weight frame is exclusively designed for wide-ranging racking compatibility and durability.

### **III QUALITY MATTERS**

Total automation ensures strict quality controls during the entire manufacturing process at ISO certified facilities.

#### **III DOMESTIC SUPPORT / SERVICES**

Our 500+ North American team is ready to help Titan Solar win the hearts and minds of customers, providing customer service and product delivery that is direct, efficient and local.

#### **## AESTHETICALLY PLEASING**

All black sleek design, ideal for high-profile residential or commercial applications.

#### **## PID RESISTANT**

PID Resistant due to advanced cell technology and material selection. In accordance to IEC 62804-1.

Electrical Specifications		SIL-370 NX mono PERC		
Test Conditions		STC	NOCT	
Module Power (Pmax)	Wp	370	266	
Maximum power voltage (Vpmax)	V	37.2	33.7	
Maximum power current (Ipmax)	A	10.0	7.9	
Open circuit voltage (Voc)	V	44.8	40.7	
Short circuit current (Isc)	Α	10.6	8.3	
Module efficiency	%	20.2	18.2	
Maximum system voltage (VDC)	V	1000		
Series fuse rating	Α	20		
Power Tolerance	Wp	+/-3%		

Measurement conditions: STC 1000 W/m2  $\cdot$  AM 1.5  $\cdot$  Temperature 25  $^{\circ}$ C  $\cdot$  NOCT 800 W/m²  $\cdot$  AM 1.5  $\cdot$  Measurement uncertainty  $\leq$  3%  $\cdot$  Sun simulator calibration reference modules from Fraunhofer Institute. Electrical characteristics may vary by  $\pm$  5% and power by  $\pm$  4/-3%.

Temperature Ratings	SIL-370 NX mono PERC			
Temperature Coefficient Isc	0.064 %/°C			
Temperature Coefficient Voc	-0.28 %/°C			
Temperature Coefficient Pmax	-0.36 %/°C			
NOCT (± 2°C)	46 °C			
Operating temperature	-40/+85 °C			
Mechanical Properties and Components	SIL-370 NX mono PERC			
Module weight	44±0.4 lbs			
Dimensions (H x L x D)	72.13 in x 39.4 in x 1.5 in			
Maximum surface load (wind/snow)*	83.5/112.8 lb/ft^2			
Hail impact resistance	ø 1 in at 51.6 mph			
Cells	66 - Si mono-PERC - 5 busbar, 62.25 x 62.25 in			
Glass	0.126 in high transmittance, tempered, DSM anti-reflective coating			
Cables and connectors (refer to installation manual)	47.2 in, ø 0.22 in, MC4 from Staubli			
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, fluorine-free PV backsheet			
Frame	Anodized Aluminum (Black)			
Bypass diodes	3 diodes-30SQ045T (45V max DC blocking voltage, 30A max forward rectified current)			
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP67 rated			
Warranties	SIL-370 NX mono PERC			
Module product workmanship warranty	25 years**			
	30 years			
Linear power performance guarantee	$\geq$ 97.1% end 1st year $\geq$ 91.6% end 12th year $\geq$ 85.1% end 25th year $\geq$ 82.6% end 30th year			
Certifications	SIL-370 NX mono PERC			

ULC ORD C1703, UL1703, CEC listed\*\*\*, UL 61215-1/-1-1/-2, UL 61730-1/-2, IEC 61215-1/-1-1/-2\*\*\*. IEC 61730-1/-2\*\*\*, CSA C22.2#61730-1/-2, IEC 62716 Product Ammonia Corrosion; IEC61701:2011 Salt Mist Corrosion Certifed, UL Fire Rating: Type 2 ISO9001:2015

Factory All states except California Modules Per Pallet: 26 Modules Per Pallet: 26
Pallets Per Truck: 34 Pallets Per Truck: 32 Modules Per Truck: 832 Modules Per Truck: 884 \*A Warning. Read the Safety and Installation Manual for

mounting specifications and before handling, installing and operating modules. \*\*12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at www.silfabsolar.com.

\*\*\*Certification and CEC listing in progress.

PAN files generated from 3rd party performance data are available for download at: www.silfabsolar.com/downloads

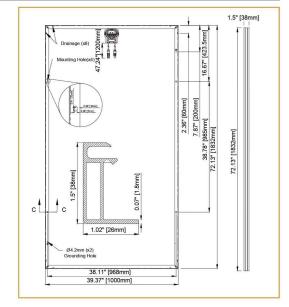


Titan Solar Power 525 W Baseline Rd Mesa, AZ 85210 Tel 855 SAY-SOLAR Titansolarpower.com info@titansolarpower



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Silfab Solar Inc. 800 Cornwall Ave Bellingham WA 98225 USA Tel +1360-569-4733



(I) TITAN

#### **TITAN SOLAR POWER**

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DATE: 09/23/2021

PROJECT NAME & ADDRESS

SHELDON

PH NO. (775) 835-6123 EMAIL ID: bill8950107@yahoo 148 SUNNYBROOK LANE LILLINGTON, NC 27546 RESIDENC

WILLIAM

SHEET NAME **EQUIPMENT SPECIFICATION** 

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

# **Single Phase Inverter** with HD-Wave Technology

## for North America

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





# Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking 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 and 2017, per article 690.11 and 690.12

- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Extremely small
- Built-in module-level monitoring
- / Outdoor and indoor installation
- / Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)



**NVERTERS** 

# / 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	VΑ
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
AC Output Voltage MinNomMax. (211 - 240 - 264)	V	✓	¥	✓	✓	1	✓	Vac
AC Output Voltage MinNomMax. (183 - 208 - 229)	=	1	=	7	:=:	*	✓	Vac
AC Frequency (Nominal)			4,0	59.3 - 60 - 60.5 <sup>(1)</sup>				Hz
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	А
Maximum Continuous Output Current @208V	<u> </u>	16	=:	24	-		48.5	А
Power Factor		1, adjustable -0.85 to 0.85						
GFDI Threshold	1						Δ	
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	a	7750	87.8	=	15500	V
Transformer-less, Ungrounded			111	Yes	1			
Maximum Input Voltage				480				Vo
Nominal DC Input Voltage		380			400			Vo
Maximum Input Current @240V <sup>2</sup>	8.5	10.5	13.5	16.5	20	27	30.5	Ad
Maximum Input Current @208V <sup>(2)</sup>	12	9	=	13.5		=	27	Ac
Max. Input Short Circuit Current			7.	45		· · · · · · · · · · · · · · · · · · ·		Ac
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					V		

(III) TITAN

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DATE: 09/23/2021

PROJECT NAME & ADDRESS

PH NO. (775) 835-6123

**EQUIPMENT SPECIFICATION** 

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

PV-8

solaredge.com

<sup>☐</sup> For other regional settings please contact SolarEdge support
☐ A higher current source may be used; the inverter will limit its input current to the values stated.

# / 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	
ADDITIONAL FEATURES					_			
Supported Communication Interfaces			RS485, Etherne	et, ZigBee (optional), (	ellular (optional)			
Revenue Grade Data, ANSI C12.20				Optional <sup>(3)</sup>				
Inverter Commissioning		with the Se	etApp mobile applicat	ion using built-in Wi-F	i Access Point for loc	al connection	41	
Rapid Shutdown - NEC 2014 and 2017 690.12			Automatic Rap	id Shutdown upon AC	Grid Disconnect			
STANDARD COMPLIANCE								
Safety		UL1741	1, UL1741 SA, UL1699B	, CSA C22.2, Canadia	AFCI according to T	I.L. M-07		
Grid Connection Standards			IEE	E1547, Rule 21, Rule 1	(HI)			
Emissions				FCC Part 15 Class B				
INSTALLATION SPECIFICAT	TIONS							
AC Output Conduit Size / AWG Range		1	'' Maximum / 14-6 AV	VG		1" Maximur	n /14-4 AWG	
DC Input Conduit Size / # of Strings / AWG Range		1" Max	imum / 1-2 strings / 1-	4-6 AWG		1" Maximum / 1-3	strings / 14-6 AWG	
Dimensions with Safety Switch (HxWxD)		17.7 x	(14.6 x 6.8 / 450 x 37	0 x 174		21.3 x 14.6 x 7.3	/ 540 x 370 x 185	in / mm
Weight with Safety Switch	22	/10	25.1 / 11.4	26.2	/ 11.9	38.8	/17.6	lb/kg
Noise		<	25			<50		dBA
Cooling				Natural Convection				
Operating Temperature Range	-40 to +140 / -40 to +60 <sup>(4)</sup>				°F/°C			
Protection Rating			NEMA	4X (Inverter with Safe	y Switch)			



#### TITAN SOLAR POWER

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	REVI	SIONS	
	DESCRIPTION	DATE	REV

Signature with Seal

DATE: 09/23/2021

PROJECT NAME & ADDRESS

148 SUNNYBROOK LANE LILLINGTON, NC 27546 PH NO. (775) 835-6123 EMAIL ID: bill8950107@yahoo.co

**EQUIPMENT SPECIFICATION** 

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

PV-8A

<sup>#</sup> Revenue grade inverter P/N: SExxxxH-US000BNC4
# Full power up to at least 50°C / 122°F; for power de-rating information refer to: https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf

# **Power Optimizer**

For North America

P320 / P340 / P370 / P400 / P405 / P505





# PV power optimization at the module-level

- Specifically designed to work with SolarEdge
- / 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 modulelevel monitoring
- / Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)
- Module-level voltage shutdown for installer and firefighter safety



POWER OPTIMIZER

# / Power Optimizer For North America

P320 / P340 / P370 / P400 / P405 / P505

Optimizer model (typical module compatibility)	P320 (for 60-cell modules)	P340 (for high- power 60-cell modules)	P370 (for higher- power 60 and 72-cell modules)	P400 (for 72 & 96- cell modules)	P405 (for thin film modules)	P505 (for higher current modules)	
INPUT							
Rated Input DC Power <sup>(1)</sup>	320	340	370	400	405	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	9	48	60	80	125 <sup>(2)</sup>	87(2)	Vdc
MPPT Operating Range	8-	- 48	8 - 60	8 - 80	12.5 - 105	12.5 - 87	Vdc
Maximum Short Circuit Current (Isc)		11		10	0.1	14	Adc
Maximum DC Input Current		13.75		12	2.5	17.5	Adc
Maximum Efficiency			99	9.5		W1	%
Weighted Efficiency			98.8			98.6	%
Overvoltage Category				1		70	
OUTPUT DURING OPER	ATION (POWER	OPTIMIZER CO	NNECTED TO	PERATING SOL	AREDGE INVER	TER)	
Maximum Output Current			1	5			Adc
Maximum Output Voltage		(6	50		8	5	Vdc
Safety Output Voltage per Power Optimizer STANDARD COMPLIANO	PF.	1 ± 0.1					
EMC COMPLIANC	<b>4</b> €3	-	CD HEEL DIEG	1000 5 2 15551000 1			Ť
Safety		FC	C Part15 Class B, IEC6	OF THE PERSON NAMED IN COLUMN	)-3		
Material				s II safety), UL1741 UV Resistant			-
RoHS				ov Kesistarit es			_
1	ATTONIC		- 11	25			
INSTALLATION SPECIFIC	AHONS						1
Maximum Allowed System Voltage			10	00			Vdc
Compatible inverters		All S	olarEdge Single Phase	and Three Phase inv	erters		
Dimensions (W x L x H)	129	) x 153 x 27.5 / 5.1 x 6	x1.1	129 x 153 x 33.5 / 5.1 x 6 x 1.3	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	845 / 1.9	1064 / 2.3	gr/lb
Input Connector			Single or o	dual MC4 <sup>(3)</sup>			
Input Wire Length			0.16 /	0.52			m/ft
Output Wire Type / Connector			Double Insu	lated / MC4			
Output Wire Length	0.9	/ 2.95		1.2	/ 3.9		m/ft
Operating Temperature Range <sup>(4)</sup>			-40 - +85 /	-40 - +185			°C / °F
Protection Rating		IP68 / NEMA6P					
Relative Humidity			0 -	100			%

- 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 
  NEC 2017 requires max input voltage be not more than 80V
  For other connector types please contact Solaf Edge
  For other connector types please contact Solaf Edge
  For armbient temperature above +85°C / +185°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details.

PV System D a SolarEdge	esign Using Inverter <sup>(5)(6)</sup>	Single Phase HD-Wave	Single phase	Three Phase 208V	Three Phase 480V	
Minimum String Length	P320, P340, P370, P400	8	4	10	18	
(Power Optimizers)	P405 / P505	6		8	14	
Maximum String Length (Power Optimizers)		25	5	25	50(7)	
Maximum Power per String		5700 (6000 with SE7600-US - SE11400- US)	5250	6000 <sup>(g)</sup>	12750 <sup>g</sup>	W
Parallel Strings of Different Lengths				Yes		

- In For detailed string sizing information refer to: http://www.solaredge.com/sites/default/files/string\_sizing\_na.pdf

  It is not allowed to mix P40S/P505 with P320/P340/P370/P400 in one string

  A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement

  For SE14.4KUS/SE43.2KUS; It is allowed to install up to 6,500W per string when 3 strings are connected to the inverter (3 strings per unit for SE43.2KUS) and when the maximum power difference between the strings is up to 1,000W

  For SE30KUS/SE33.3KUS/SE66.6KUS/SE100KUS; It is allowed to install up to 15,000W

  For SE30KUS/SE33.3KUS/SE66.6KUS/SE100KUS; It is allowed to install up to 15,000W

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**CE RoHS** 



#### **TITAN SOLAR POWER**

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PH NO. (775) 835-6123

SHEET NAME **EQUIPMENT SPECIFICATION** 

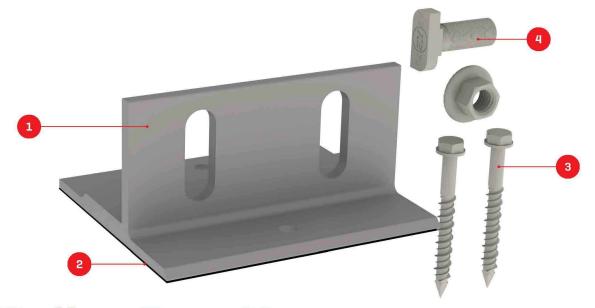
SHEET SIZE

**ANSI B** 11" X 17"

SHEET NUMBER

# We support PV systems Formerly Everest Solar Systems





# **Splice Foot X**

# TECHNICAL SHEET

Item Number	Description	Part Number
1	Splice Foot X	4000113   Splice Foot X Kit, Mill
2	K2 Solar Seal Butyl Pad	
3	M5 x 60 lag screws	
4	T-Bolt & Hex Nut Set	

### Technical Data

	Splice Foot X
Roof Type	Composition shingle
Material	Aluminum with stainless steel hardware
Finish	Mill
Roof Connection	M5 x 60 lag screws
Code Compliance	UL 2703
Compatibility	CrossRail 44-X, 48-X, 48-XL, 80

TITAN

#### TITAN SOLAR POWER

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RESIDENCE
148 SUNNYBROOK LANE
LILLINGTON, NC 27546
PH NO. (775) 835-6123
EMAIL ID: bill8950107@yahoo.com

SHEET NAME
EQUIPMENT
SPECIFICATION

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

# We support PV systems Formerly Everest Solar Systems



# CROSSRAIL 48-X



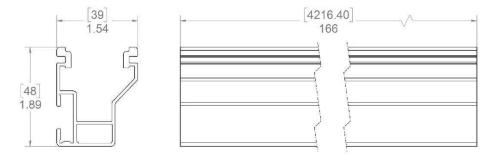
### Mechanical Properties

	CrossRail 48-X
Material	6000 Series Aluminum
Ultimate Tensile Strength	37.7 ksi (260 MPa)
Yield Strength	34.8 ksi (240 MPa)
Weight	0.56 lbs/ft (0.833 kg/m)
Finish	Mill or Dark Anodized

### Sectional Properties

	CrossRail 48-X
Sx	0.1980 in³ (3.245 cm³)
Sy	0.1510 in³ (2.474 cm³)
A (X-Section)	0.4650 in² (2.999 cm²)

## Units: [mm] in



#### Notes

- Structural values and span charts determined in accordance with Aluminum Design Manual and ASCE 7-16
- UL2703 Listed System for Fire and Bonding



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