

SITE LOCATION ::



PARCEL # 025-436-047

KEN HUNTER 4380 CA-46 PASO ROBLES CA

124.2KW PHOTOVOLTAIC SYSTEM

GROUND MOUNTED GRID-TIED

AHJ MUNICIPAL CODE - CITY OF PASO ROBLES

SINGLE LINE DIAGRAMS & CALCS

GOVERNING CODES

2022 CA FIRE CODE

2022 CA ELECTRICAL CODE 2022 CA BUILDING CODE

2022 CA RESIDENTIAL CODE 2022 CA PLUMBING CODE 2022 CA ENERGY CODE

TITLE SHEET

SITE LAYOUT

SIGNAGE & DETAILS

SUPPORTING DOCUMENTS

(230) HELIENE 540W MODULES (2) SOLECTRIA PVI-60TL-480V INVERTERS (1) SUBPANEL (1) DISCONNECT

Exhibit D.1

TITLE SHEET

PV-1

PHOTOVOLTAIC SYSTEM INFORMATION:

SENSORIO PASO ROBLES KEN HUNTER PARCEL # 025-436-047 4380 CA-46 PASO ROBLES CA

124.2KW PHOTOVOLTAIC SYSTEM GROUND MOUNTED GRID-TIED (230) HELIENE 540W MODULES (2) SOLECTRIA PVI-60TL-480V INVERTERS



CONTRACTOR INFORMATION: A.M.SUN SOLAR, INC.

410 SHERWOOD RD

PASO ROBLES, CA 93446 CORY HOWE (OWNER)

PERMITTING@AMSUNSOLAR.COM OFFICE: 805-772-6786

CA LICENSE #: 969522 | C-10 WORK COMP: STATE FUND 9219151



DESIGNED BY: ADAM STEVENS

SHEET # SHEET DESCRIPTION

PVO1 TITLE SHEET PVO2 SITE LAYOUT

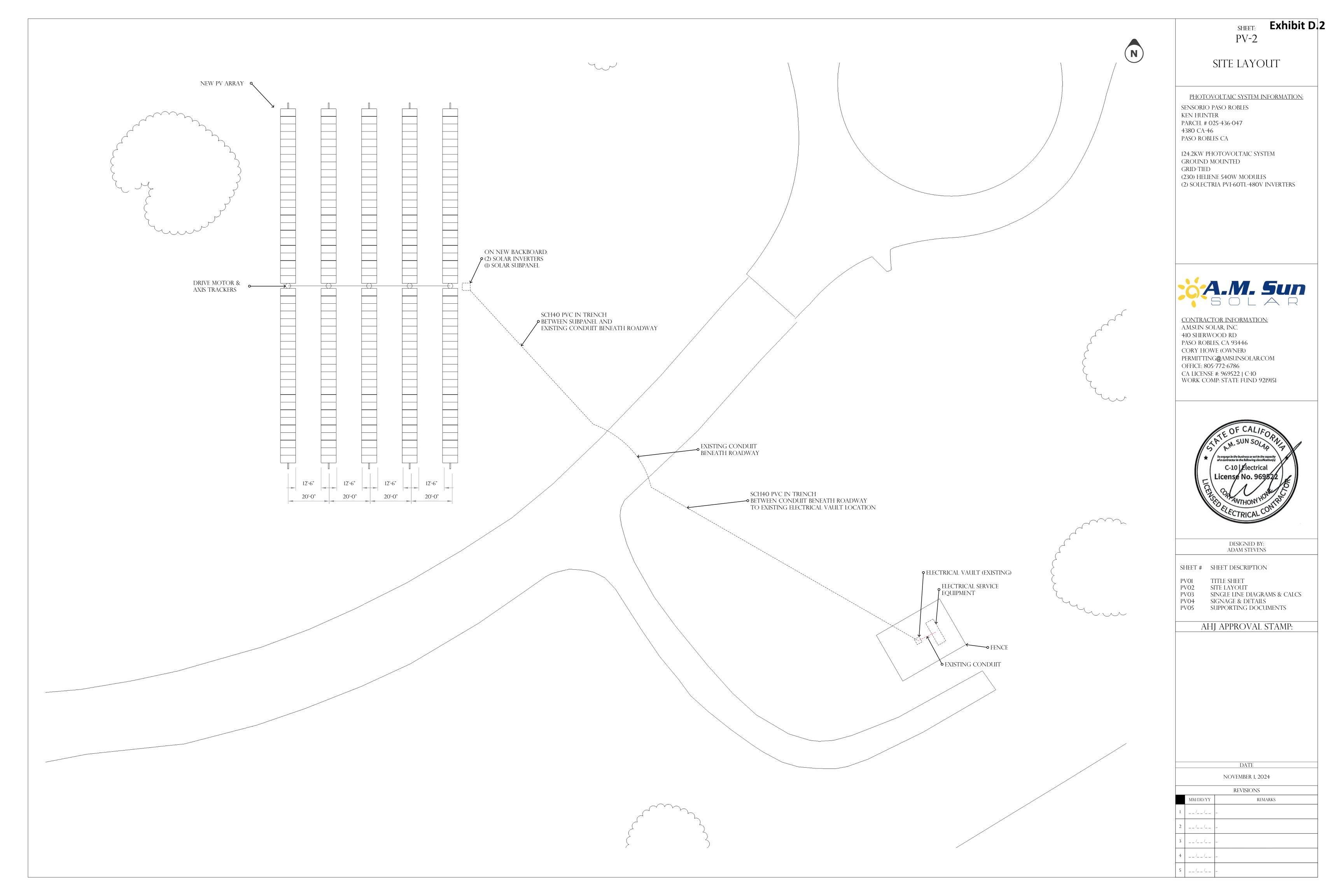
PVO3 SINGLE LINE DIAGRAMS & CALCS PVO4 SIGNAGE & DETAILS PV05 SUPPORTING DOCUMENTS

AHJ APPROVAL STAMP:

NOVEMBER 1, 2024

REVISIONS MM/DD/YY





	A F CEN AS	
LEGEND		
1	1000V USE-2 CONDUCTORS UNDER ARRAY NOT READILY ACCESSIBLE. 2 #10 WITH #8 GRND	
2	1000V THWN-2 CONDUCTORS IN 1" EMT OR SCH40 PVC (TRENCH) FROM ARRAY TO INVERTER 2 #10 PER STRING WITH #8 GRND 21.09 MAX 1000VDC MAX	
3	THWN-2 CONDUCTORS IN 1.25" EMT FROM INVERTER TO NEW SOLAR SUBPANEL 4 #2 WITH #8 GRND 100A MAX 480V MAX	
4	ALUMINUM XHHW-2 CONDUCTORS IN 2.5" EMT OR SCH40 PVC (TRENCH) FROM NEW SOLAR SUBPANEL TO A/C DISCONNECT 4 #250MCM WITH #4 GRND (UPSIZED FOR VOLTAGE DROP) 200A MAX 480V MAX	
5	THWN-2 CONDUCTORS IN 2" EMT OR SCH40 PVC (TRENCH) FROM A/C DISCONNECT TO MAIN SERVICE PANEL 4 #3/0 WITH #6 GRND 200A MAX 480V MAX	
6	THWN-2 CONDUCTORS IN I" EMT OR SCH40 PVC (TRENCH) BETWEEN EQUIPMENT 3 #IO WITH #12 GRND 20A MAX 480V MAX	

DC SYSTEM CHARACTERISTICS:	PV SYSTEM CALCULATIONS:
DC SYSTEM INFO: 124.2kW DC PV SYSTEM (230) HELIENE 540W MODULES (2) SOLECTRIA PVI-60TL-480V INVERTERS VMP = INVERTER'S FIXED STRING VOLTAGE: = 850VDC VOC = MAX INVERTER SYSTEM VOLTAGE: = 1000VDC IMP = OPERATING CURRENT: = (I)(12.77A) = 12.77A PER STRING ISC = SHORT CIRCUIT CURRENT: = (13.50)(1.25) = 16.875A	DC WIRE SIZING: MAX CIRCUIT CURRENT = (OPTIMIZER MAX POWER) X (CONTINUOUS LOAD) 16.875A X 1.25 = 21.09A CONDUCTOR AMPACITY (10 AWG) 40A AT 90°C. ADJUSTED CONDUICTOR AMPACITY = [CONDUCTOR AMPACITY(IOAWG)] X (TEMP. FACTOR) X (CONDUIT FILL) 40A X 0.96 X 0.7 = 26.88A TERMINAL RATING = 60°C RATED (IOAWG WIRE) = 30A 26.88A < 30A - ADJUSTED CONDUCTOR AMPACITY GOVERNS CONDUCTOR SIZING. 21.09 < 26.88A - 10AWG IS ALLOWABLE (NO MORE THAN 4 STRINGS IN AN INDIVIDUAL CONDUIT UNLESS CONDUCTORS ARE UPSIZED TO #8) AC WIRE SIZING: MAX CIRCUIT CURRENT = (INVERTER OUTPUT) X (CONTINUOUS LOAD) 79.4A X 1.25 = 99.25A > 100A BREAKER REQUIRED ADJUSTED CONDUICTOR AMPACITY = [CONDUCTOR AMPACITY (2AWG)] X (TEMP. FACTOR) X (CONDUIT FILL) 130A X 0.96 X 1 = 124.8A TERMINAL RATING = 75°C RATED (2 AWG WIRE) = 115A 115A < 124.8A - TERMINAL RATING GOVERNS CONDUCTOR SIZING. 99.25A < 115A - #2AWG IS ALLOWABLE
INSTALLATION NOTES: ALL D/C CONDUCTORS TO BE RATED 1000V MIN NO MORE THAN 4 STRINGS OF DC CONDUCTORS PER INDIVIDUAL CONDUIT (UNLESS WIRING UPSIZED TO #8 TO 5 STRINGS PER CONDUIT)	VOLTAGE DROP: SYSTEM LARGEST AC VOLTAGE DROP = 3% (MAX) ASSUMPTIONS: AVG AMBIENT TEMP = 89°F LOW TEMP = 10°F ALL CONDUCTORS ARE 90° RATED COPPER UNLESS OTHERWISE SPECIFIED

PG&E UTILITY SERVICE 277/480V 3 PHASE 4W

PV-3

SINGLE LINE DIAGRAM

AND CALCS

PHOTOVOLTAIC SYSTEM INFORMATION:

SENSORIO PASO ROBLES

PARCEL # 025-436-047

GROUND MOUNTED

124.2KW PHOTOVOLTAIC SYSTEM

(230) HELIENE 540W MODULES

(2) SOLECTRIA PVI-60TL-480V INVERTERS

KEN HUNTER

4380 CA-46 PASO ROBLES CA

GRID-TIED

Exhibit D.3

CONTRACTOR INFORMATION: A.M.SUN SOLAR, INC. 410 SHERWOOD RD PASO ROBLES, CA 93446 CORY HOWE (OWNER) PERMITTING@AMSUNSOLAR.COM OFFICE: 805-772-6786 CA LICENSE #: 969522 | C-10 Work Comp: State fund 9219151



SHEET # SHEET DESCRIPTION

DESIGNED BY: ADAM STEVENS

TITLE SHEET

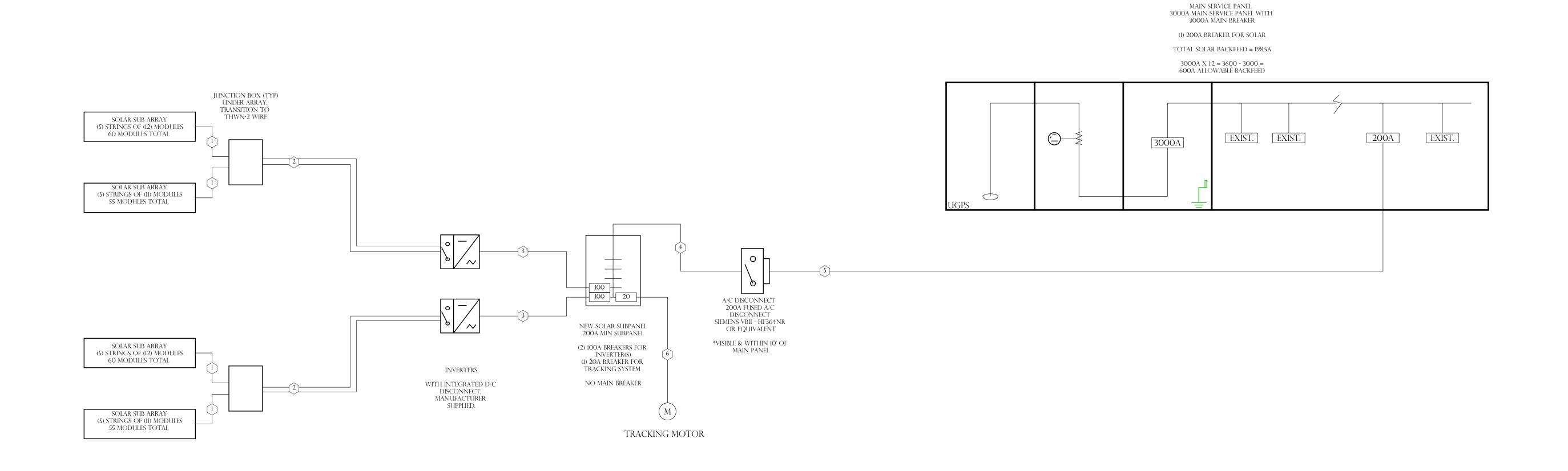
PVO2 SITE LAYOUT SINGLE LINE DIAGRAMS & CALCS PVO4 SIGNAGE & DETAILS

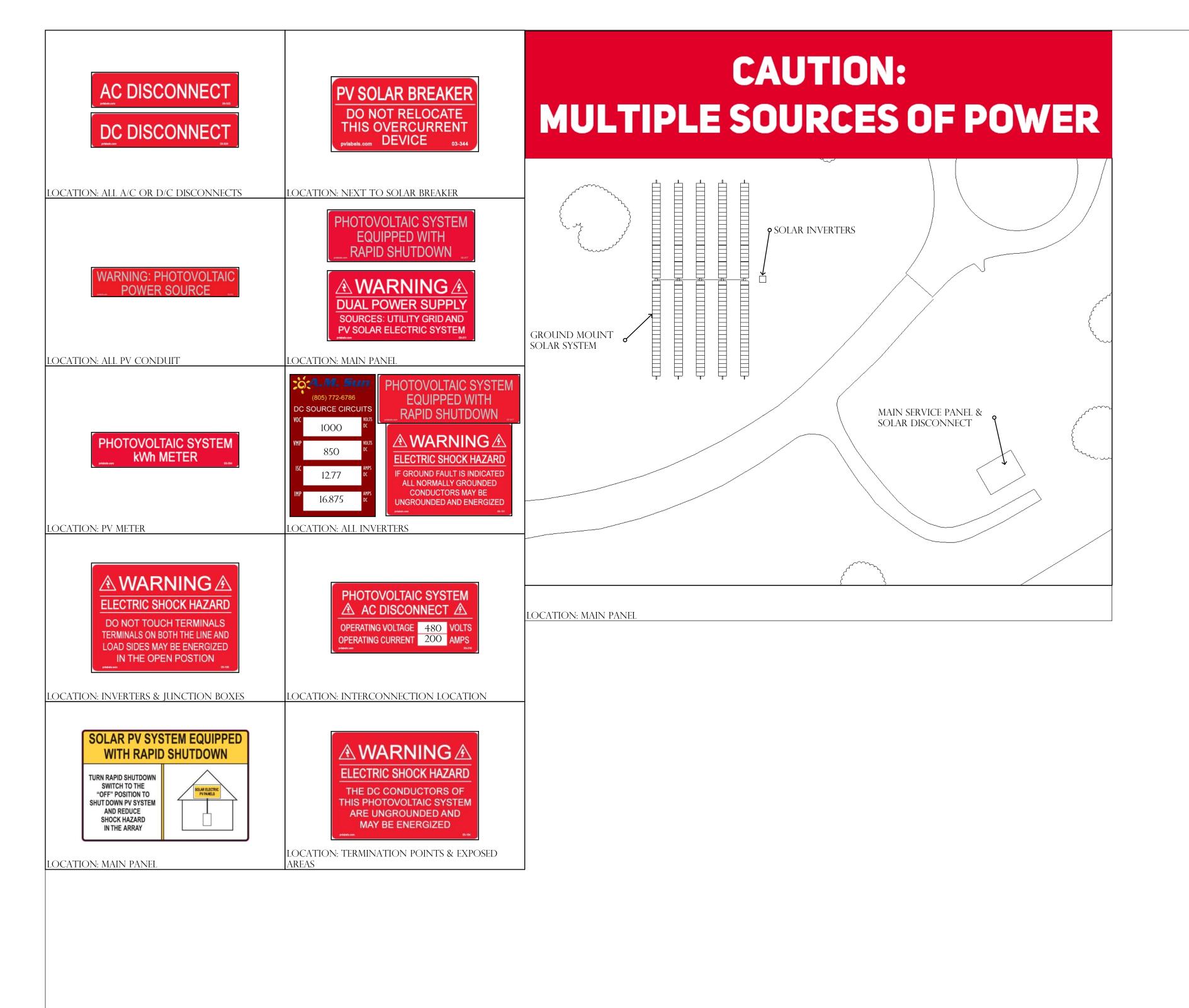
AHJ APPROVAL STAMP:

PVO5 SUPPORTING DOCUMENTS

DATE NOVEMBER 1, 2024

REVISIONS MM/DD/YY 2 | __/__/_





SIGNAGE & DETAILS

PHOTOVOLTAIC SYSTEM INFORMATION:

Exhibit D.4

SENSORIO PASO ROBLES KEN HUNTER PARCEL # 025-436-047 4380 CA-46 PASO ROBLES CA

124.2KW PHOTOVOLTAIC SYSTEM
GROUND MOUNTED
GRID-TIED
(230) HELIENE 540W MODULES
(2) SOLECTRIA PVI-60TL-480V INVERTERS



CONTRACTOR INFORMATION:
A.M.SUN SOLAR, INC.
410 SHERWOOD RD
PASO ROBLES, CA 93446
CORY HOWE (OWNER)
PERMITTING@AMSUNSOLAR.COM
OFFICE: 805-772-6786
CA LICENSE #: 969522 | C-10
WORK COMP: STATE FUND 9219151



DESIGNED BY: ADAM STEVENS

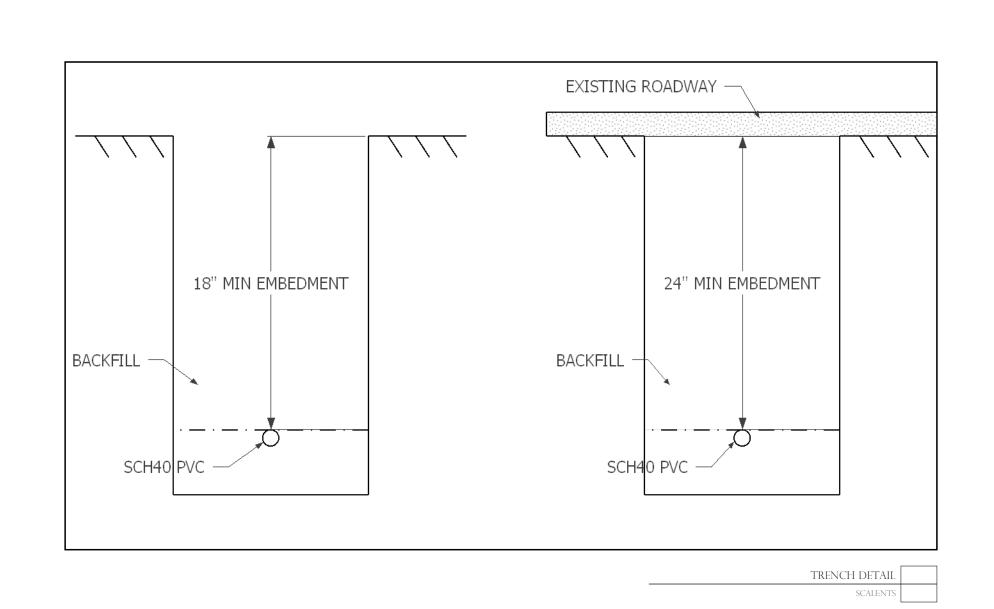
PVO1 TITLE SHEET PVO2 SITE LAYOUT

SHEET # SHEET DESCRIPTION

PVO2 SITE LAYOUT
PVO3 SINGLE LINE DIAGRAMS & CALCS
PVO4 SIGNAGE & DETAILS
PVO5 SUPPORTING DOCUMENTS

AHJ APPROVAL STAMP:

DATE NOVEMBER 1, 2024





COST VERSUS VALUE

We believe value is more than the cost of a tracking Array has spent decades designing and perfecting 3901 Midway Place NE

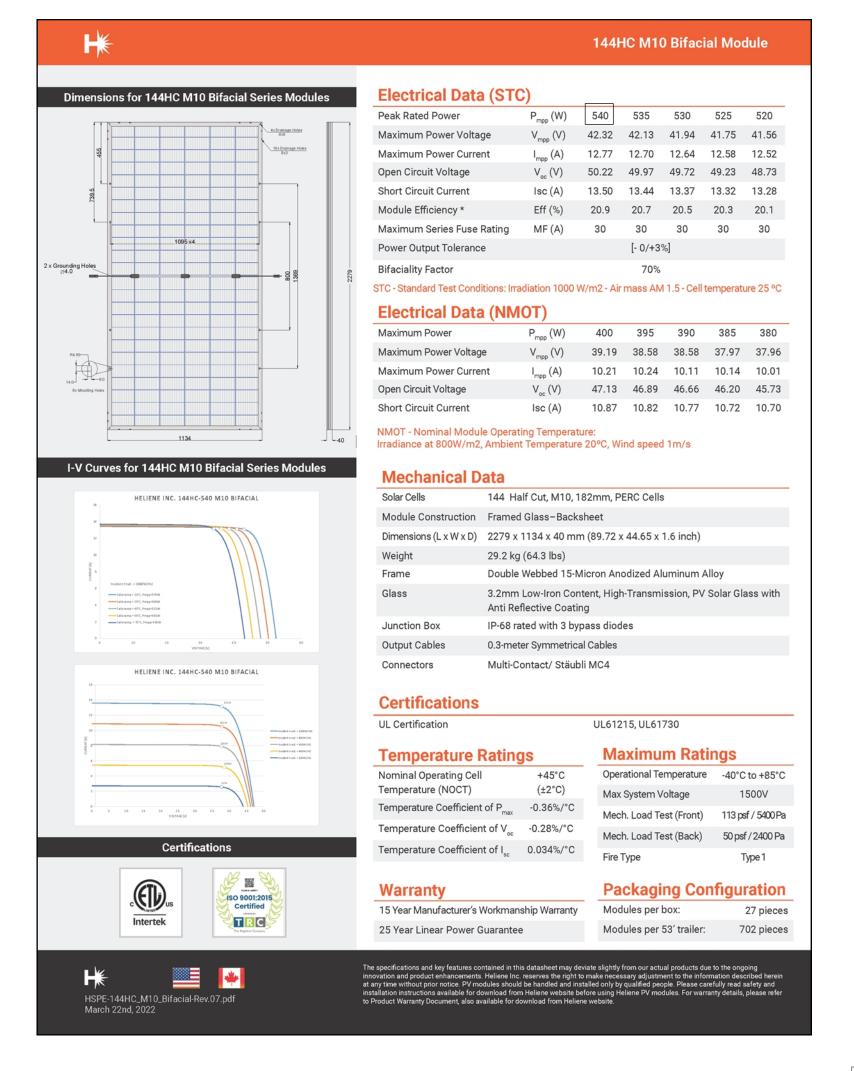
THE GLOBAL LEADER IN RELIABILITY ARRAY TECHNOLOGIES, INC.

system. It's about building with forgiving tolerances — the most reliable tracker on the planet. Fewer — Albuquerque, NM 87109 USA and fewer parts so construction crews can work moving parts, stronger components and intelligent +1.505.881.7567 efficiently. It means protecting your investment with design that protects your investment in the +1 855.TRACKPV (872.2578) a failure-free wind management system. It also harshest weather are but a few of the innovative +1 505.881.7572 includes increasing power density. But most of all, differences that keep your system running value is measured in operational uptime, or reliability. flawlessly all day and you resting easy at night. arraytechinc.com

30 GW YEARS OF 167 × FEWER COMPONENTS THAN COMPETITIVE TRACKERS

Tracking Type	g Type Horizontal single axis		Algorithm with GPS input
MW per Drive Motor	Up to 1.152 MW DC using 360W crystalline	Control Electronics	MCU plus Central Controller
String Voltage	Up to 1,500V DC		
Maximum Linked Rows	32	Data Feed	MODBUS over Ethernet
Maximum Row Size	100 modules crystalline, and bifacial: 240 modues First Solar 4: 78 modules First Solar 6	Night-time Stow	to SCADA system Yes
Drive Type	Rotating gear drive Tracking Accuracy		± 2° standard, field adjustable
Motor Type	2 HP, 3 PH, 480V AC	480V AC Backtracking	
Motors per 1 MW DC			Yes
East-West/North-South Dimensions	Site / module specific	INSTALLATION, OPERATION & MAINTENANCE Software SmarTrack optimization	
Array Height	leight 54" standard, adjustable (48" min height above grade)		SmarTrack optimization available
Ground Coverage Ratio (GCR)	Flexible, 28–45% typical, others supported on request	PE Stamped Structural	Yes Yes
Terrain Flexibility	N-S tolerance: 0° - 8.5° standard, 15° optional: Driveline: 40° in all directions	Calculations & Drawings On-site Training and	
Modules Supported	Most commercially available, including frameless crystalline, thin film, and bifacial	System Commissioning	
Tracking Range of Motion	± 52° standard, ± 62° optional	Connection Type	Fully bolted connections no welding
Operating Temperature Range	-30°F to 140°F (-34°C to 60°C)	In-field Fabrication Required	No Wording
Module Configuration available.	ule Configuration available. Single-in-portrait standard, including bifacial. Four-in-landscape (thin film) also		
Module Attachment	Single fastener, high-speed mounting clamps with integrated grounding.	Articulating Driveline Connections	No lubrication required
	Traditional rails for crystalline in landscape, custom racking for thin film and frameless crystalline and bifacial per manufacturer specs.	Scheduled Maintenance Module Cleaning Compatibility	None required Robotic, Tractor,
	Pre-galv steel, HDG steel and aluminum structural members, as required	woulde oleaning companishing	Manual
lowable Wind Load (ASCE 7-10) 140 mph, 3-second gust exposure C		GENERAL	
Wind Protection			400 kWh per MW per year, estimated

TRACKER DETAILS



PV MODULE

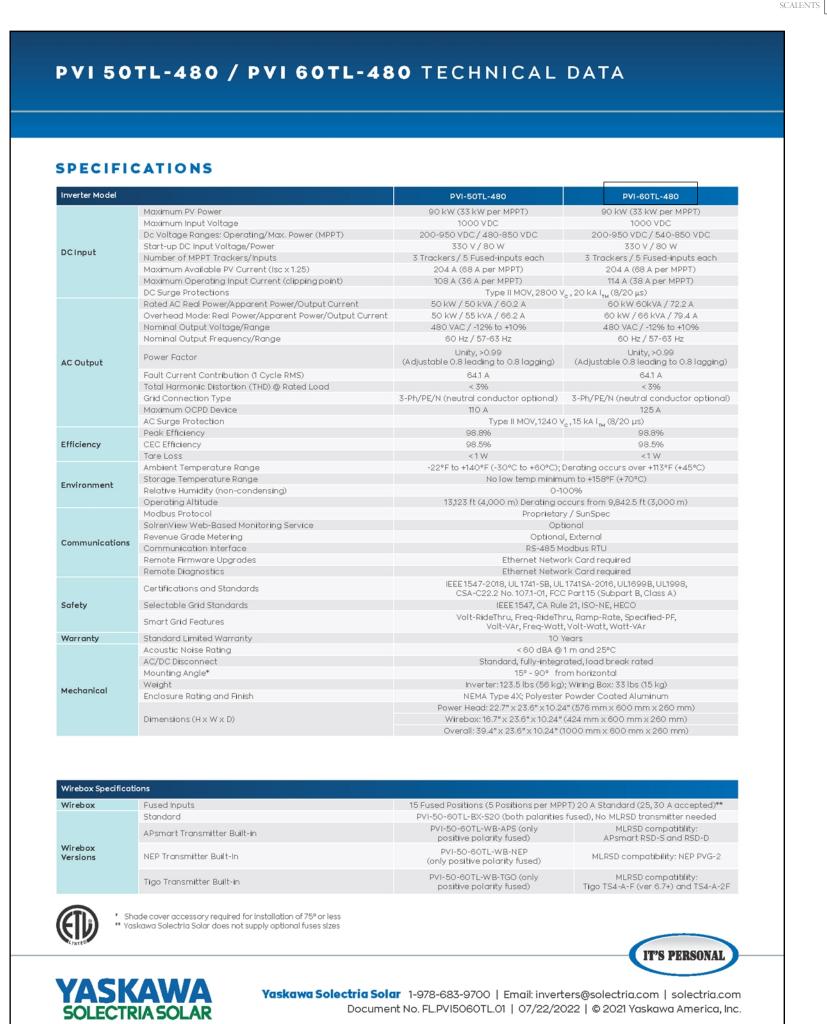


Exhibit D.5 PV-5

SUPPORTING DOCUMENTS

PHOTOVOLTAIC SYSTEM INFORMATION:

SENSORIO PASO ROBLES KEN HUNTER

PARCEL # 025-436-047 4380 CA-46 PASO ROBLES CA

124.2KW PHOTOVOLTAIC SYSTEM GROUND MOUNTED GRID-TIED (230) HELIENE 540W MODULES (2) SOLECTRIA PVI-60TL-480V INVERTERS



CONTRACTOR INFORMATION: A.M.SUN SOLAR, INC.

410 SHERWOOD RD PASO ROBLES, CA 93446 CORY HOWE (OWNER) PERMITTING@AMSUNSOLAR.COM OFFICE: 805-772-6786

CA LICENSE #: 969522 | C-10 WORK COMP: STATE FUND 9219151



ADAM STEVENS

DESIGNED BY:

SHEET # SHEET DESCRIPTION

PVO1 TITLE SHEET PVO2 SITE LAYOUT

PVO3 SINGLE LINE DIAGRAMS & CALCS PVO4 SIGNAGE & DETAILS PVO5 SUPPORTING DOCUMENTS

AHJ APPROVAL STAMP:

DATE

NOVEMBER 1, 2024

REVISIONS MM/DD/YY | --/--/--__ /_ _ /_

INVERTER