

PHOTOVOLTAIC SYSTEM

SYSTEM SIZE: 43.5 KW DC / 34.2 KW AC
NAMEPLATE: JINKO SOLAR JKMS60N-72HL-4-BDV (580W) SOLAR MODULES
EQUIPMENT: JINKO SOLAR JKMS60N-72HL-4-BDV (580W) SOLAR MODULES
PV MODULES: (75) JINKO SOLAR JKMS60N-72HL-4-BDV (580W) SOLAR MODULES
MICROINVERTER(S): (3) SOLAREDGE SE11400H-US HOME WAVE INVERTERS
AC COMPONENT(S): (1) 200A FUSED AC DISCONNECT
 (1) 200A UNFUSED AC DISCONNECT
 (1) 200A LOAD CENTER

TYPE OF INTERCONNECTION: LINE SIDE TAP IN THE MSP
SCOPE OF WORK: INSTALLATION OF A CODE COMPLIANT, UTILITY INTERACTIVE PHOTOVOLTAIC ELECTRIC SYSTEM.

- 2017 NATIONAL ELECTRICAL CODE
- 2020 FIRE CODE OF NYS
- 2020 RESIDENTIAL CODE OF NYS
- 2020 BUILDING CODE OF NYS

APPLICABLE CODE PER LOCAL AUTHORITY HAVING JURISDICTION

APPLICABLE CODES

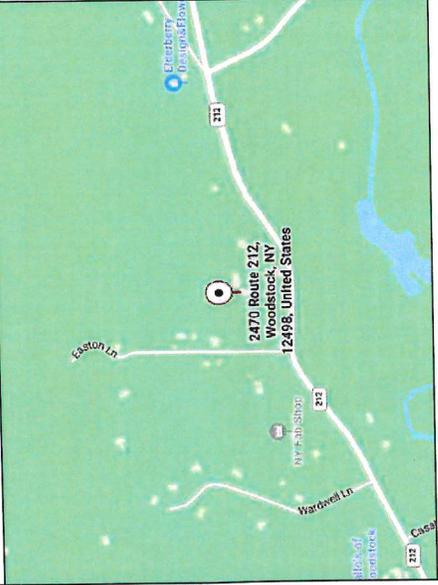
- PV1 COVER PAGE
- PV2.2.1 SITE PLAN
- PV3 - 3.1 ELECTRICAL DIAGRAMS
- PV4 MARKING & LABELS

*ATTACHMENTS
 MANUFACTURER'S SPECIFICATIONS

INDEX



AERIAL VIEW 42.040623, -74.094025



VICINITY MAP

WOODSTOCK SCHOOL OF ART: 2470 NY-212, WOODSTOCK, NY 12498, USA

GENERAL NOTES:

1. DRAWINGS ARE DIAGNAMATIC ONLY. THE LOCATION AND ROUTING OF RACEWAYS SHALL BE DETERMINED BY THE CONTRACTOR UNLESS OTHERWISE NOTED OR STANDARDIZED.
2. ALL EQUATIONS ACCOUNT FOR WORST CASE CONDITIONS.
3. IF A DISCREPANCY IN QUANTITY OR SIZE OF CONDUIT, RACEWAY, EQUIPMENT DEVICES, OVERCURRENT PROTECTION, OR GROUNDING MATERIALS IS IDENTIFIED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIALS AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS IN THE SPECIFICATIONS OR NOTED ON THE PLANS TO ENSURE COMPLETE COMPLIANCE WITH ALL CODES AND TO ENSURE THE LONGEVITY AND SAFETY OF THE SYSTEM.
4. ALL OUTDOOR EQUIPMENT SHALL BE MIN. NEMA 3R RATED.
5. METAL CONDUIT AND ENCLOSURES SHALL BE USED WHERE PV SOURCE OR OUTPUT CIRCUITS ARE RUN INSIDE A BUILDING.
6. MODULES SHALL NOT BE PLACED OVER ANY PLUMBING VENTS AND AT LEAST 6" ABOVE FLOOR FINISH.
7. ALL RACEWAYS SHALL COMPLY WITH ANY AND ALL REQUIREMENTS GIVEN BY UTILITY COMPANIES.
8. FOR ADDITIONAL EQUIPMENT SPECIFICATIONS, SEE PROVIDED CUT SHEETS.
9. ALL LABELS AND MARKINGS SHALL BE ATTACHED ACCORDING TO REQUIREMENTS BY NEC AND THE MANUFACTURER. ALL MAY HAVE SPECIAL LABELING REQUIREMENTS THAT ARE BEYOND THE SCOPE OF THIS DOCUMENT. THIS MAY ENCOMPASS LANGUAGE INCLUDING, BUT NOT LIMITED TO, THAT FOUND IN NEC ARTICLES 690.5 (C), 690.14 (C)(2), 690.17, 690.53, 690.35(F), 690.54, 690.64(B)(7) and 705.10. ALL NEC REFERENCES SHALL BE DIRECTLY INTERCHANGEABLE WITH CEC REFERENCES.

STRUCTURAL NOTES:

1. MOUNTS ARE DIAGNAMATIC AND EXACT LOCATION MAY CHANGE, BUT SHALL BE ACCURATELY SPACED.
2. MOUNTS SHALL BE STAGGERED WHEN NECESSARY TO EVENLY DISTRIBUTE LOAD AMONGST RAFTERS.
3. DO NOT SPICE RAFTS IN MIDDLE 50% OF SPAN BETWEEN TWO MOUNTS.

ELECTRICAL NOTES:

1. ALL EQUIPMENT IS LISTED FOR USE.
2. MAXIMUM VOLTAGE DOES NOT EXCEED 600VDC.
3. ANY EQUIPMENT OR ELECTRICAL MATERIALS USED FOR THE INSTALLATION SHALL BE NEW AND LISTED BY A RECOGNIZED ELECTRICAL TESTING AGENCY.
4. AN INVERTER IN AN INTERACTIVE SOLAR PV SYSTEM SHALL AUTOMATICALLY DE-ENERGIZE ITS OUTPUT TO THE CONNECTED ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK UPON LOSS OF VOLTAGE IN THAT SYSTEM AND SHALL REMAIN IN THAT STATE UNTIL THE ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK VOLTAGE HAS BEEN RESTORED.
5. ALL PV SYSTEMS SHALL BE EQUIPPED WITH DC GROUND FAULT PROTECTION.
6. ANY AC COMPONENT SHALL MEET OR EXCEED THE AVAILABLE FAULT CURRENT CALCULATED AT THAT COMPONENT.
7. ALL MODULES AND ANY RELATED ROOF MOUNTED METALLIC EQUIPMENT SHALL BE PROPERLY GROUNDING.
8. DC EQUIPMENT SHALL BE PROVIDED TO INDICATE THAT ALL CONTACTS OF THE DISCONNECT EQUIPMENT SHOULD BE ENERGIZED.
9. CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT WEATHERPROOF FULL BOXES OR JUNCTION BOXES/COMBINER BOXES PER APPROPRIATE JURISDICTIONAL REQUIREMENTS.
10. FOR ANY UNGROUNDING OF CONDUCTORS, A LABEL READING "WARNING - ELECTRICAL UNGROUNDING AND MAY BE ENERGIZED" SHALL BE PLACED AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT AND DEVICE WHERE ENERGIZED, UNGROUNDING CIRCUITS MAY BE EXPOSED DURING SERVICE.
11. INVERTER(S) SHALL CONTAIN A GROUND FAULT DETECTION AND INTERRUPTION DEVICE.
12. ALL RACEWAYS AND EQUIPMENT SHALL BE BONDED AND ELECTRICALY CONTINUOUS.
13. THE POINT OF CONNECTION COMPLIES WITH APPLICABLE CEC/NEC.
14. BACKFED SOLAR BREAKER(S) SHALL BE INSTALLED AT THE OPPOSITE END OF THE CIRCUIT OR FURTHER AWAY FROM THE MAIN BREAKER.
15. ALL WIRE, VOLTAGES, AMPERAGES AND EQUIPMENT IS SIZED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.
16. COPPER (CU) CONDUCTORS SHALL BE USED. CONDUCTORS SHALL BE STRANDED OR SOLID WITH PROPERLY RATED CONNECTORS.
17. DISCONNECT SHALL BE GROUND AS PER MANUFACTURER'S SPECIFICATIONS.
18. ALL EQUIPMENT SHALL BE GROUND AS PER MANUFACTURER'S SPECIFICATIONS.
19. ALL EQUIPMENT SHALL BE GROUND AS PER MANUFACTURER'S SPECIFICATIONS.
20. NECESSARY ACROSS-RAIL SPICE PLATES TO BOND INDIVIDUAL PIECES OF RAIL.

GENERAL NOTES



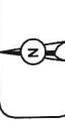
COVER PAGE
 WOODSTOCK SCHOOL OF ART
 2470 NY-212, WOODSTOCK,
 NY 12498, USA

SYSTEM
 DC KW: 43.5
 AC KW: 34.2
 MODULES: 75

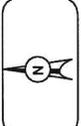
CONTRACTOR
 PLUGPV LLC
 630 7TH AVE, TROY,
 NY 12182, USA

DATA
 10/13/2025

DESIGNED BY:
 OSP



PV1



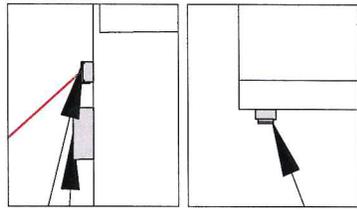
ARRAY 1
 TILT: 25°
 AZIMUTH: 180°

ARRAY SPECIFICATIONS

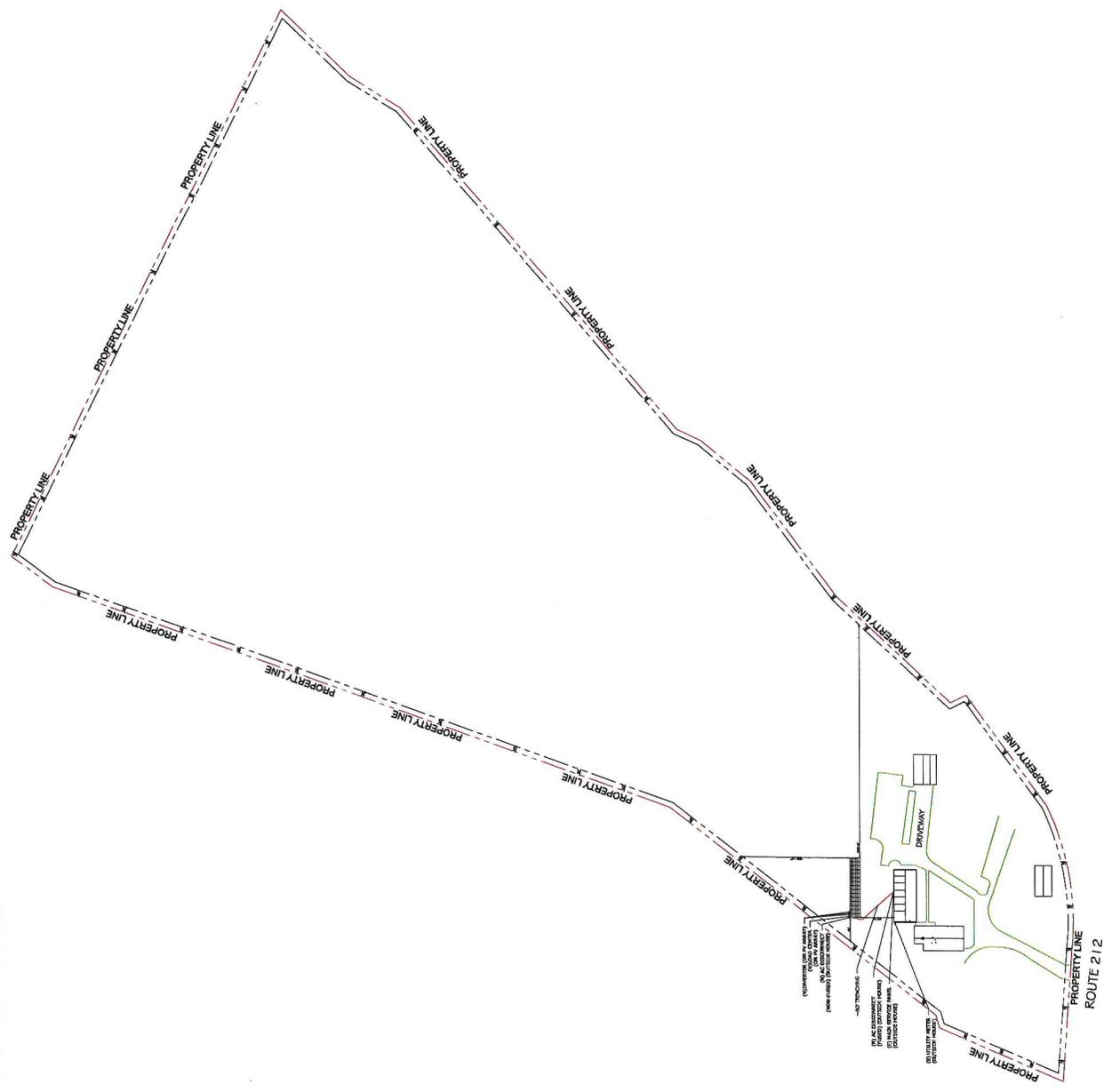
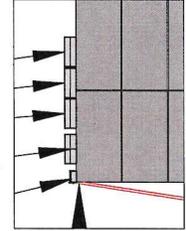
	UTILITY METER
	AC DISCONNECT FUSED
	AC DISCONNECT UNFUSED
	INVERTER
	LOAD CENTER
	MAIN SERVICE PANEL
	18" VENTILATION SETBACK
	3'x3' GROUND LADDER ACCESS PATHWAY
	TRENCHING

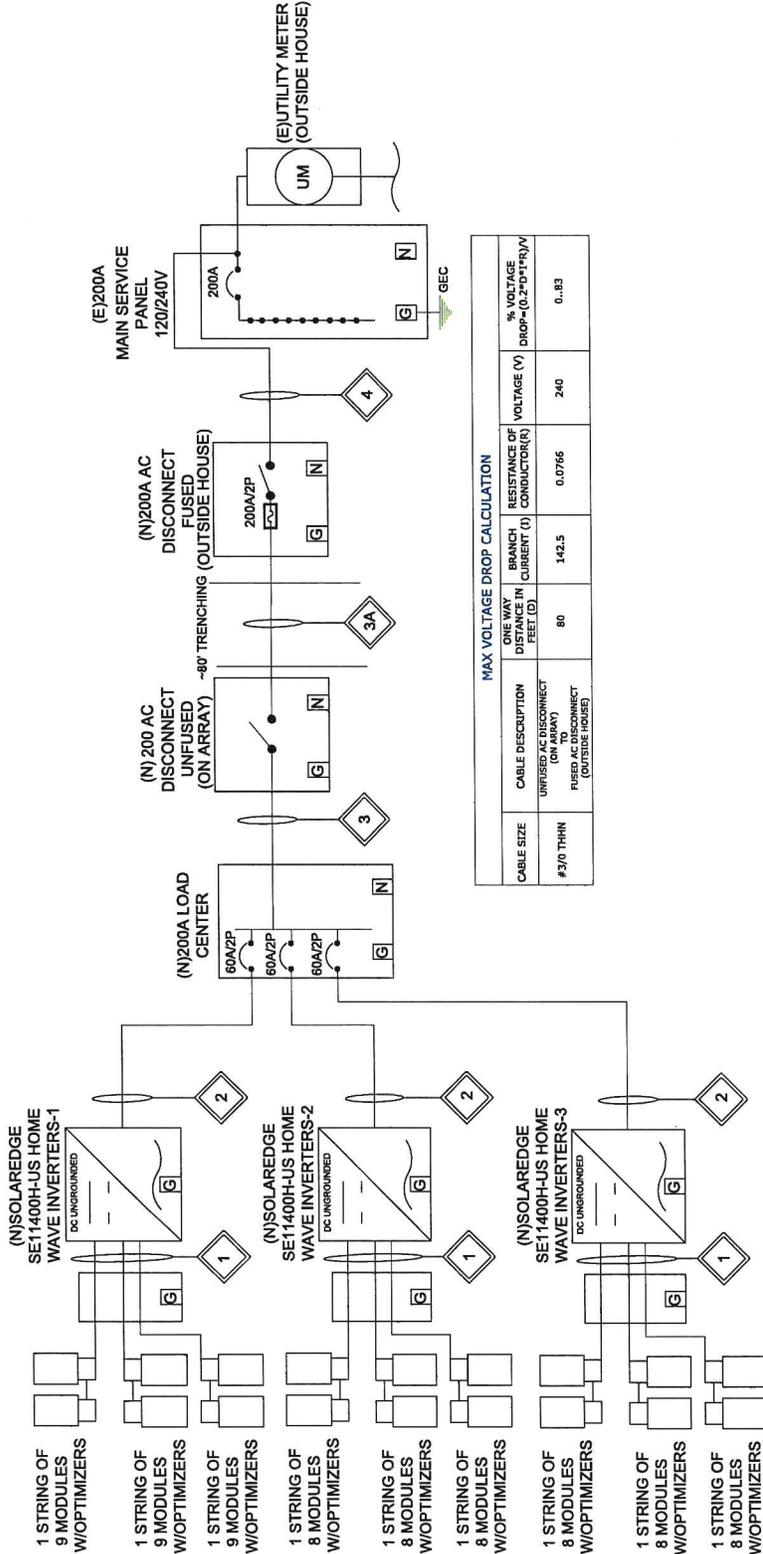
LEGEND

ON HOUSE EQUIPMENTS



ON ARRAY EQUIPMENTS





MAX VOLTAGE DROP CALCULATION

CABLE SIZE	CABLE DESCRIPTION	ONE WAY DISTANCE IN FEET (D)	BRANCH CURRENT (I)	RESISTANCE OF CONDUCTOR(S)	VOLTAGE (V)	% VOLTAGE DROP = (0.2 * I * R) / V
#3/0 THHN	UNFUSED AC DISCONNECT (ON ARRAY) FUSED AC DISCONNECT (OUTSIDE HOUSE)	80	142.5	0.0766	240	0.83

OTHER EQUIPMENT
(1) 200A FUSED AC DISCONNECT
(1) 200A UNFUSED AC DISCONNECT
(1) 200A LOAD CENTER

INVERTER(S)
(3) SOLAREEDGE SE11400H-US HOME WAVE INVERTERS
INVERTER OUTPUT CURRENT: 47.5 A
INVERTER OCPD CALC: (47.5 X 3) X 1.25 = 178.12A
MIN OCPD: 200A
WIRE AMPACITY: 200A @75° C TERMINAL
TEMPERATURE CORRECTION FACTOR: 31°-35° C = 0.96
CORRECTED WIRE AMPACITY: 192.00A

MODULES
(75) JINKO SOLAR JKM580N-72HL4-BDV (580W) SOLAR MODULES
WATTS STC: 580W
ISC: 13.95A
IMP: 13.22A
VOC: 52.50V
VMP: 43.88V

CONDUCTORS AND CONDUIT

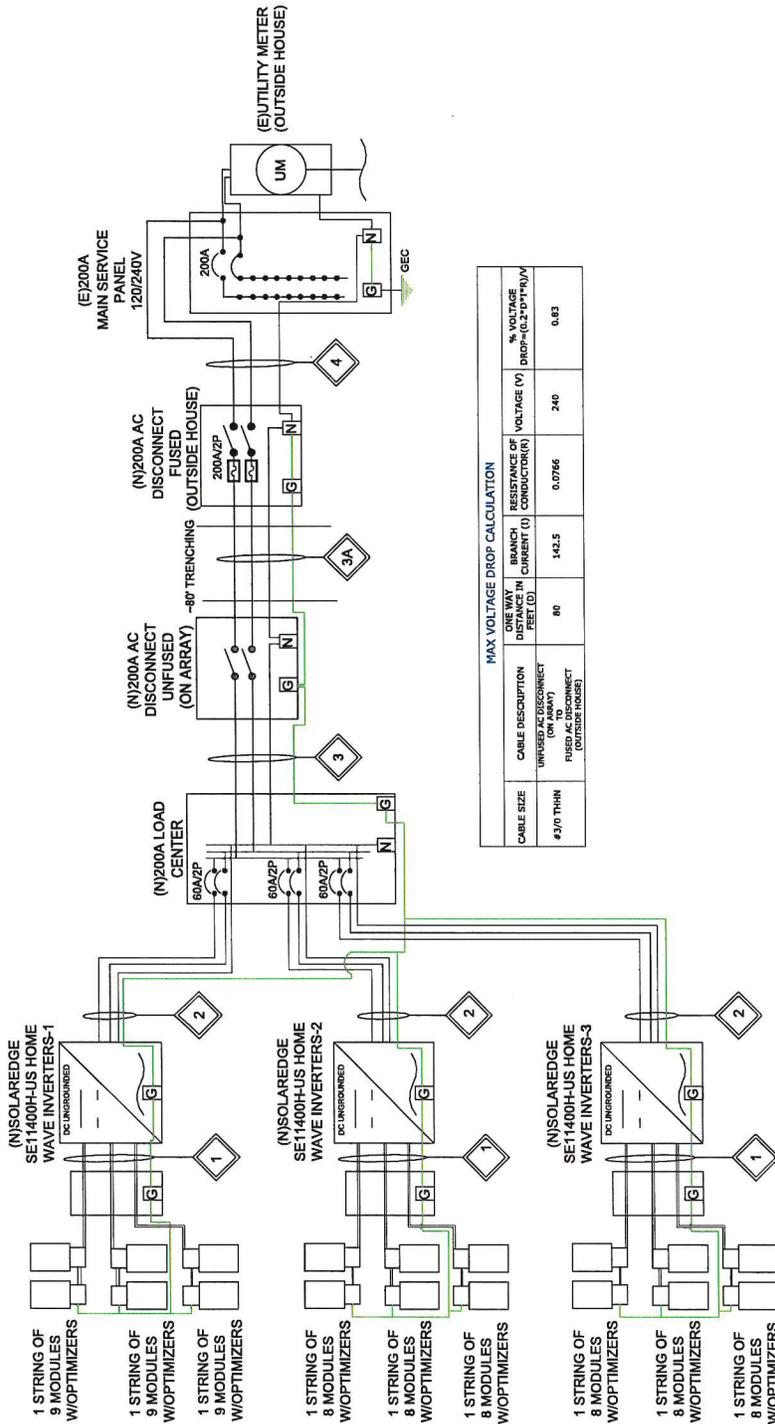
1 (6) #10 PV WIRE
1 (1) #6 THHN GND
1 3/4" EMT

2 (6) #10 THHN
1 (1) #6 THHN GND
1 3/4" EMT

3 (3) #3/0 THHN
1 (1) #6 THHN GND
1 2" EMT

3A (3) #3/0 THHN
1 (1) #6 THHN GND
1 2" PVC SCH40

4 (3) #3/0 THHN
1 (1) #6 THHN GND
1 2" EMT



MAX VOLTAGE DROP CALCULATION

CABLE SIZE	CABLE DESCRIPTION	ONE WAY DISTANCE FEET (D)	BRANCH CURRENT (I)	RESISTANCE OF CONDUCTOR(S)	VOLTAGE (V)	% VOLTAGE DROP=(0.2*DP*100)/V
#3/0 THHN	UNFUSED AC DISCONNECT PIPED AS TO DISCONNECT (OUTSIDE HOUSE)	80	142.5	0.0766	240	0.83

OTHER EQUIPMENT
(1) 200A FUSED AC DISCONNECT
(1) 200A UNFUSED AC DISCONNECT
(1) 200A LOAD CENTER

INVERTER(S)
(3) SOLAREdge SE11400H-US HOME WAVE INVERTERS
INVERTER OUTPUT CURRENT: 47.5 A
INVERTER OCPD CALC: (47.5 X 3) X 1.25 = 178.12A
MIN OCPD: 200A
WIRE AMPACITY: 200A @ 75° C TERMINAL TEMPERATURE CORRECTION FACTOR: 31°-35° C = 0.96
CORRECTED WIRE AMPACITY: 192.00A

MODULES
(75) JINKO SOLAR JKM580N-72HL4-BDV (580W) SOLAR MODULES
WATTS STC: 580W
ISC: 13.95A
IMP: 13.22A
VOC: 52.50V
VMP: 43.88V

CONDUCTORS AND CONDUIT

1	(6) #10 PV WIRE (1) #6 THHN GND 3/4" EMT
2	(6) #10 THHN (1) #6 THHN GND 3/4" EMT
3	(3) #3/0 THHN (1) #6 THHN GND 2" EMT
3A	(3) #3/0 THHN (1) #6 THHN GND 2" PVC SCH40
4	(3) #3/0 THHN 2" EMT

INVERTER

NEC 690.13(4)

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

**PHOTOVOLTAIC
SYSTEM EQUIPPED WITH
RAPID SHUTDOWN**

NEC 690.52

PHOTOVOLTAIC ARRAY DC DISCONNECT
NOMINAL OPERATING AC VOLTAGE: 240 V
NOMINAL OPERATING AC FREQUENCY: 60HZ
MAX. AC POWER: 320 VA
MAX AC CURRENT: 1.33 A
MAX OVERCURRENT DEVICE RATING FOR AC
MODULE PROTECTION PER CIRCUIT:20A

AC DISCONNECT

NEC 690.14(C)(2)

PHOTOVOLTAIC DISCONNECT
FOR UTILITY OPERATIONS

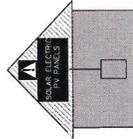
NEC 690.54

RATED AC OUTPUT CURRENT: 142.5 A
NOMINAL AC VOLTAGE: 240 V

NEC 690.56

**EMERGENCY RESPONDER
THIS SOLAR PV SYSTEM
EQUIPPED
WITH RAPID SHUTDOWN**

TURN RAPID SHUTDOWN
SWITCH TO THE
"OFF" POSITION ONLY
CONDUCTORS INSIDE
BUILDING OR OFF THE
ROOF WILL SHUT DOWN
Sections of the PV system that
shut down switch is operated.
Sections of the PV system that
shut down switch is operated.



CONDUIT, RACEWAYS, ENCLOSURES, CABLE ASSEMBLIES & JUNCTION BOXES

NEC 690.31(D)(2) CONDUIT

Warning: Photovoltaic Power Source

NEC 690.35(F) UNGROUNDED SYSTEMS JUNCTION BOX

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

MAIN SERVICE PANEL

NEC 705.12(D)(4), 690.56(B)

WARNING
POWER IS BEING SUPPLIED TO THIS
PANEL FROM THE UTILITY AND A
SOLAR PV SYSTEM.

NEC 705.12(D)(7)

WARNING
INVERTER OUTPUT CONNECTION
DO NOT RELOCATE THIS
OVERCURRENT DEVICE

LABEL TO BE INSTALLED DIRECTLY NEXT TO PV BACKFEED
BREAKER. IF INSTALLED ANYWHERE ELSE ON DEADFRONT
THEN A PERMANENT ARROW FROM LABEL POINTING TO
PV BACKFEED BREAKER REQUIRED.

NEC 690.54

RATED AC OUTPUT CURRENT: 142.5 A
NOMINAL AC VOLTAGE: 240 V

NEC 690.14(C)(2)

PHOTOVOLTAIC AC DISCONNECT



MARKING & LABELS
WOODSTOCK SCHOOL OF ART
WOODSTOCK, NY 12498, USA

SYSTEM
DC KW: 43.5
AC KW: 34.2
MODULES: 75

CONTRACTOR
PLUGPV LLC
630 7TH AVE, TROY,
NY 12182, USA

DATA
10/13/2025

DESIGNED BY:
OSP

PV4

James C
 Douglas
 Digitally signed by
 James C Douglas
 Date: 2025.10.24
 17:04:04 -04'00'

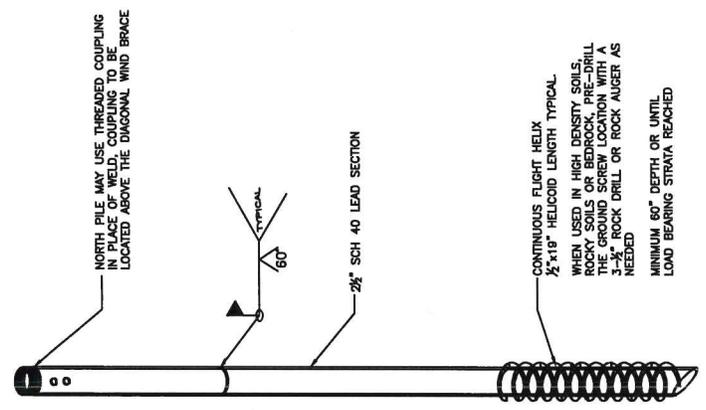


INSTALLATION REQUIREMENT NOTES:

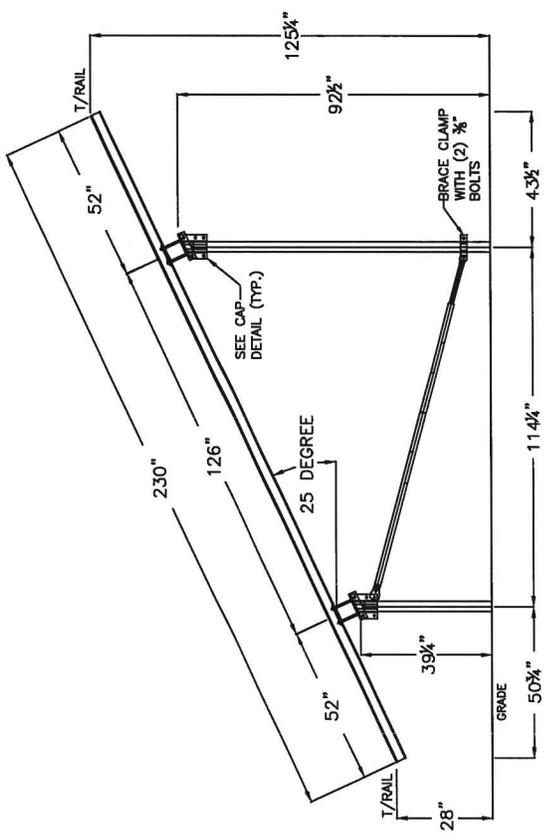
- THE MINIMUM AVERAGE INSTALLATION TORQUE REQUIRED TO OBTAIN THE REQUIRED INDICATED CAPACITIES AND THE MINIMUM INSTALLATION DEPTH SHOWN ON THE PLANS SHALL BE SATISFIED PRIOR TO INSTALLATION. TORQUE SHALL BE AN AVERAGE OF THE INSTALLATION TORQUES INDICATED DURING THE LAST ONE FOOT OF INSTALLATION.
- THE TORSIONAL STRENGTH RATING OF THE GROUND SCREW SHALL NOT EXCEED THE TORSIONAL STRENGTH RATING OF THE GROUND SCREW HAS BEEN REACHED, BUT THE SCREW HAS NOT REACHED THE TARGET DEPTH, PERFORM THE FOLLOWING:
 - REVIEW DEVELOPED TORQUE AND GROUND SCREW DEPTH REQUIREMENTS FOR THIS INSTALLATION BASED UPON MINIMUM FROST DEPTH FOR INSTALLATION INTO HIGHLY COMPACTED SOIL. CREW SHALL PRE-DRILL THE GROUND SCREW LOCATION WITH A 3/8" CARBIDE TIPPED ROCK AUGER TO FULL GROUND SCREW DEPTH PRIOR TO INSTALLATION OF THE GROUND SCREW.
 - FOR INSTALLATION INTO SOID ROCK, CREW SHALL PRE-DRILL THE GROUND SCREW LOCATION WITH A 3/8" PNEUMATIC DRIVEN ROCK DRILL. DEPTH OF DRILLED HOLE INTO THE ROCK SHALL BE A MINIMUM OF 30" TO ALLOW THE GROUND SCREW TO BE INSTALLED A MINIMUM OF 24" INTO THE ROCK FOR FULL FLIGHT ENGAGEMENT.
- IF THE TARGET DEPTH IS ACHIEVED, BUT THE TORSIONAL REQUIREMENT HAS NOT BEEN MET THE INSTALLER PERFORM ONE OF THE FOLLOWING:
 - INSTALL THE GROUND SCREW DEEPER TO OBTAIN THE REQUIRED CAPACITY.
 - REMOVE THE GROUND SCREW AND INSTALL AN APPROVED SINGLE FLIGHT PILE WITH A LARGER DIAMETER HELICAL PLATE OR ONE WITH MULTIPLE HELICAL PLATES.
 - REMOVE THE GROUND SCREW AND INSTALL A GROUND SCREW WITH ADDITIONAL GROUND SCREWS AT A REDUCED SPACING. CONTACT ENGINEER OF RECORD FOR DETERMINATION OF MAXIMUM PILE SPACING BASED UPON DEVELOPED TORQUE.

SPECIFICATION REQUIREMENT NOTES:

- THE FOLLOWING MATERIAL SPECIFICATION REQUIREMENTS PERTAIN TO THE FABRICATION OF THE SOLAR FOUNDATIONS USA® GROUND MOUNT SOLAR SUPPORT STRUCTURE AS INDICATED ON THESE DRAWINGS.
- SFUSA® ALUMINUM PAILS SHALL CONFORM TO ASTM B221.
 - STRUCTURAL STEEL TUBING SHALL BE ASTM A500 HIGH YIELD STEEL.
 - STEEL PIPE FOR PILES SHALL CONFORM TO ASTM A500 GRADE B.
 - STEEL PIPE EXTENSIONS SHALL BE ASTM A53 GRADE B.
 - STEEL PIPE FOR DIAGONAL BRACING SHALL BE ASTM A53 GRADE B.
 - FABRICATED STEEL PLATE FOR PILE CAP ASSEMBLIES, BRACING CLAMPS, ETC SHALL BE ASTM A36 OR A1011.
 - STEEL BOLTS SHALL CONFORM TO SAE J429 GRADE 5 OR BETTER.
 - STEEL U-BOLTS SHALL CONFORM TO ASTM 1018.
 - U.S. PIPER STEEL WAGNERS SHALL CONFORM TO ASTM F844 AND SHALL CONFORM TO ASTM A563 GRADE A.
 - ALL FIELD WELDING SHALL CONFORM TO AWS D1.1/D1.1M - STRUCTURAL WELDING CODE REQUIREMENTS.
 - ALL STEEL SHALL BE HOT-DIP GALVANIZED PER ASTM A123 OR A153 AFTER ALL FABRICATION HAS BEEN COMPLETED.

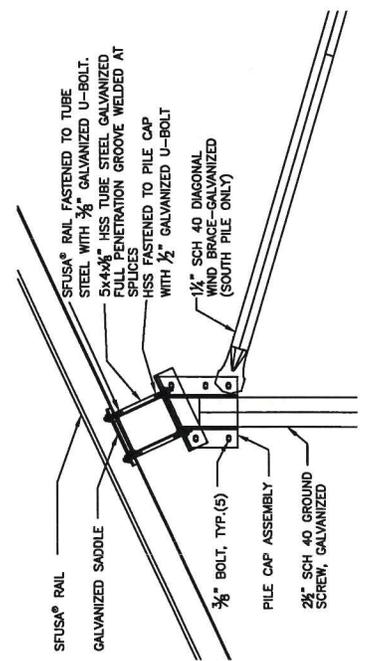


GROUND SCREW DETAIL
 N.T.S.



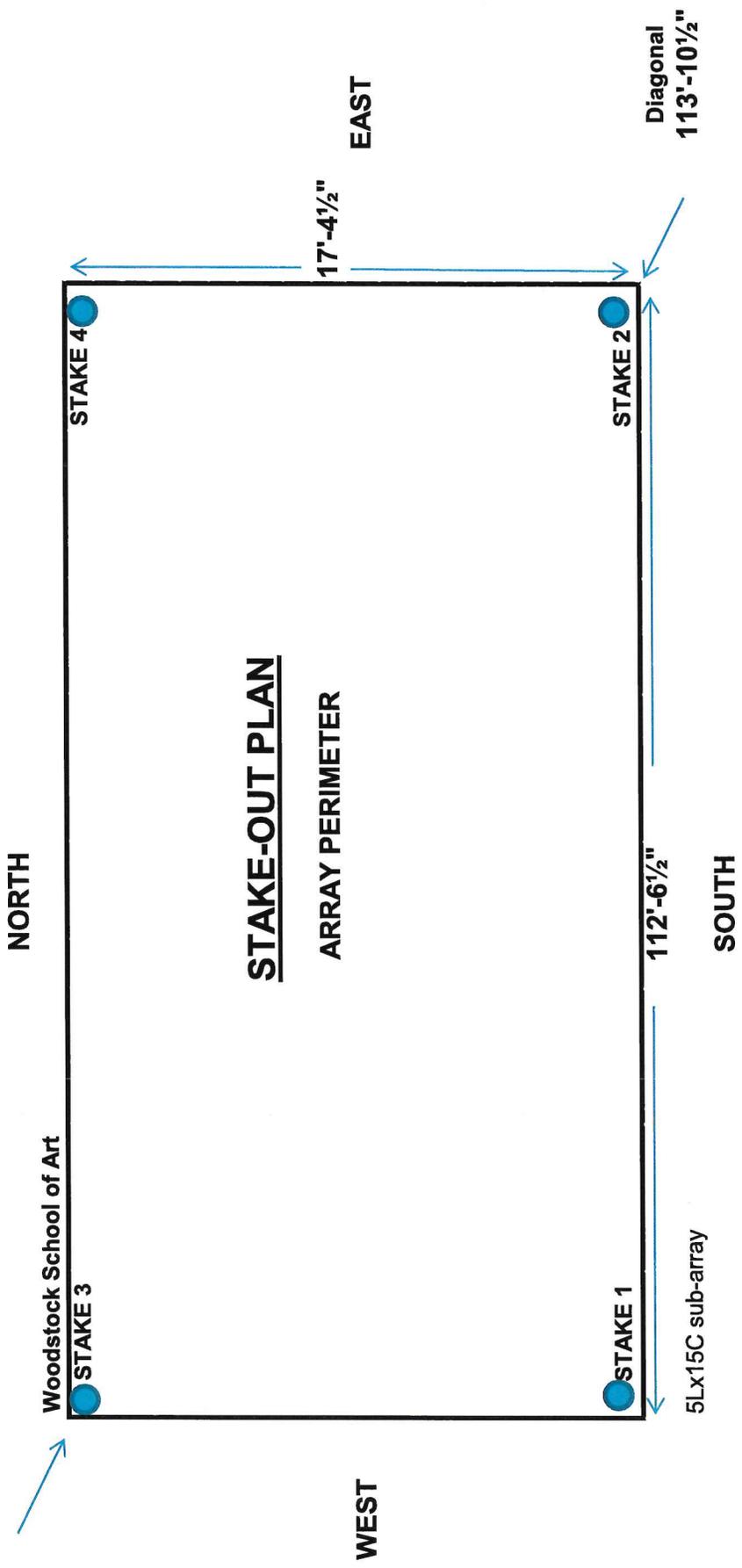
EAST ELEVATION
 N.T.S.

- NOTE:**
- ARRAY HEIGHT DIMENSIONS ASSUME LEVEL GRADE



CAP DETAIL
 N.T.S.

DATE	REVISION	DRAWN BY	REVIEW BY
10/21/2025	ORIGINAL		



NORTH

Woodstock School of Art

STAKE 3

STAKE 4

STAKE-OUT PLAN

ARRAY PERIMETER

WEST

17'-4 1/2"

EAST

STAKE 1

STAKE 2

112'-6 1/2"

5Lx15C sub-array

SOUTH

Diagonal
113'-10 1/2"