

**SCHEDULE AGREEMENT FOR THE INTERCONNECTION OF THE TOWN OF
PRESCOTT VALLEY / 3820 N. PRESCOTT EAST HIGHWAY, PRESCOTT VALLEY, AZ
PHOTOVOLTAIC SYSTEM TO THE APS DISTRIBUTION SYSTEM**

PURSUANT TO THE

**MASTER AGREEMENT FOR THE INTERCONNECTION OF GENERATING FACILITIES
TO THE APS DISTRIBUTION SYSTEM BETWEEN ARIZONA PUBLIC SERVICE
COMPANY AND TOWN OF PRESCOTT VALLEY (APS AGREEMENT NO. 11-COM-
0009)**

This SCHEDULE, dated August 31, 2011 is entered into by the undersigned Parties, pursuant to, in accordance with and subject to the terms and conditions of the Master Agreement for the Interconnection of Generating Facilities to the APS Distribution System, dated as of August 31, 2011 (APS Agreement No. 11-COM-0009 and also referred to as the "Master Agreement").

1. This Schedule is entered into in respect to the ownership, installation, operation and maintenance of the GF described herein.
2. The GF shall be permanently located at 3820 N. Prescott East Highway, Prescott Valley and is scheduled to begin operation in electrical parallel with APS' electric distribution system, on or about October, 2011.
3. In addition to the provisions specified in Section 5 of the Master Agreement, this Schedule shall remain in effect as long as the GF referred to herein remains interconnected with the APS System.
4. The Specifications of the GF are described as follows:

Type: PV Powered – PVP 100 kW.

Fuel or Energy Source: Photovoltaic

Unit Nameplate Output Rating: 100 kW

No. of Units: 1

Total Nameplate Output of all Units: 100 kW

5. Attached to this Schedule and made a part hereof is the following Appendix:

APPENDIX A: Operating Agreement

6. Special Terms and Conditions:

- 6.1 The GF shall meet the specifications and requirements set forth in this Schedule and on the drawings provided for APS review.
- 6.2 Customer intends to net meter excess generation with APS.
- 6.3 The point of delivery for APS electric service to the Generating Facility (GF) is at the Customer's 277 /480 V Service Entrance Section (SES).
- 6.4 In accordance with the Master Agreement an acceptable visibly open and lockable isolation point will be provided by the Customer on the Customer's side of the SES meter section, to electrically isolate the Customer-owned facilities from all APS electric service equipment in order to establish a safe work area for APS personnel.

The isolation point will comprise a load break Disconnect Device. When an electrical clearance is required by APS, Customer shall provide personnel and equipment on site to open the Disconnect Device so as to provide a visible open and lockable isolation point acceptable to APS personnel.

Customer will be required to electrically isolate the GF from the APS System at the time of install and in the event that APS needs to perform subsequent maintenance on its equipment in the metering compartment or electric service equipment.

- 6.5 Where the applicable rate schedule or other APS requirement and/or agreement requires meter(s) to be installed to record the output of the GF Generator(s), Customer will provide, at its expense, a dedicated phone line to each such meter also to the SES utility meter(s) and/or sub meters if necessary. Each dedicated phone line is to be landed on the APS-provided telephone interface module, normally located within two feet of the meter.
 - 6.6 Customer shall install, or cause to be installed, and will maintain such other equipment as is specified in this Schedule, or as may mutually be agreed upon by the Customer and APS from time to time during the term of this Schedule and any extensions thereof.
7. This Schedule is entered into pursuant to, in accordance with and subject to the terms and conditions of the Master Agreement. In the event of conflicts between this Schedule and the Master Agreement the terms of this Schedule shall govern. No provision contained in this Schedule shall have the effect of amending the Master Agreement's terms and conditions as they pertain to any other Schedule entered into under the Master Agreement. The Master Agreement may only be amended or modified by a written amendment signed by the Parties.

8. Execution:

IN WITNESS WHEREOF, the Parties have caused this Schedule to be executed by their duly authorized representatives as of the date hereinabove set forth.

ARIZONA PUBLIC SERVICE COMPANY

TOWN OF PRESCOTT VALLEY

“APS”

“Customer”

Signature: _____

Signature: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

APPENDIX A (NOT APPLICABLE)

OPERATING AGREEMENT

1. Customer and APS shall jointly develop, implement and maintain an “Operating Agreement” which shall be used when either Party needs to establish a safe working area on its 12.47 kV equipment and it is necessary to isolate the affected equipment from any APS power source(s) and any power source(s) located on Customer’s Property. This Operating Agreement will also address the normal day-to-day operating requirements relating to Customer’s interconnected GF.
2. Such Operating Agreement may be modified and/or updated from time to time with the mutual consent and written agreement of both Parties without requiring any revision to the Master Agreement, this Schedule or its attachments.
3. Each Party shall keep a current copy of such Operating Agreement on file: Customer shall maintain a copy at its control center or other designated location, and APS shall maintain a copy in its designated operations center. Each Party shall be available on a 24 hour basis for the administration of the Operating Agreement.
4. In the event that any pertinent information (such as contact names, telephone numbers, safety procedures, etc) relating to a Party and contained in the Operating Agreement should change, it shall be that Party’s responsibility to contact the other Party by written notice in order to update the Operating Agreement.

PROJECT TITLE:
WATER TANK SITE
100KWAC PHOTOVOLTAIC SYSTEM
 3820 N. PRESCOTT EAST HWY
 PRESCOTT VALLEY, AZ 86314

ENGINEER'S STAMP

SMARTENERGY
 50 MAIN STREET, SUITE #812
 WHITE PLAINS, NY 10606
 (914) 618-4788
 JOB NUMBER: XXX

DATE	ISSUE	REVISIONS
08-JUNE-11	PLANS CHECK SUBMITTAL	
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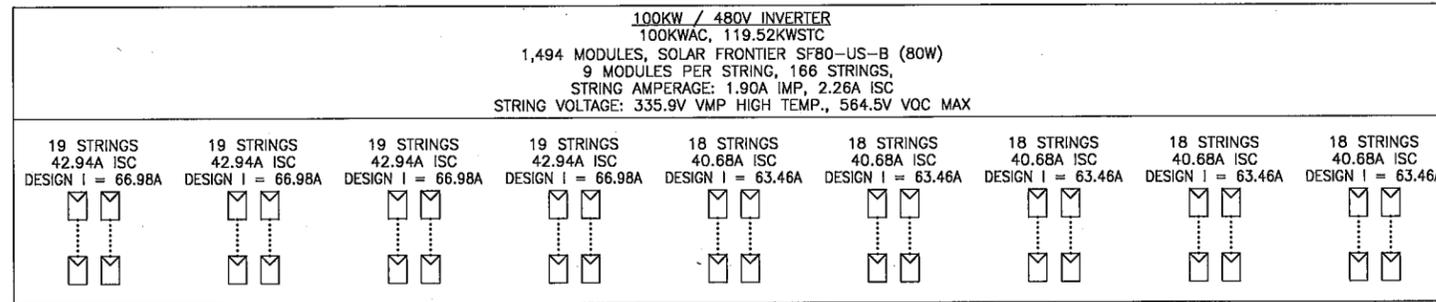
DRAWN BY: NATRON
 CHECKED BY: JHA
 APPROVED BY: JHA
 DOCUMENT DATE: 8/9/2011

SCALE: NTS

SHEET TITLE:
SINGLE LINE DIAGRAM (WTS #2)

SHEET #:
 E.2.1

INCORPORATE COMMENTS, DO NOT RESUBMIT.



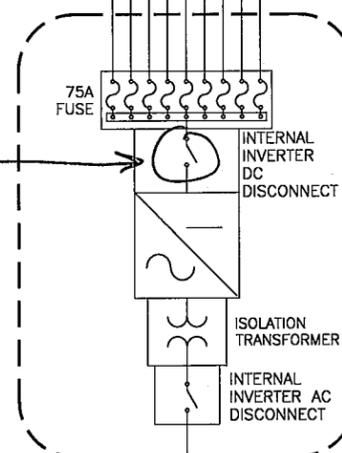
2 - #10 AWG CU-USE-2
 1 - #10 AWG CU BARE GND.
 FREE AIR OR 1/2" EMT CONDUIT EACH

PHOTOVOLTAIC DISCONNECT COMBINER BOX SOLARBOS COMBINER CS100-20-5-N3 (19) 5A FUSE DISCONNECT SWITCH 100A VOLTAGE: 564.5VDC (TYPICAL OF 4)

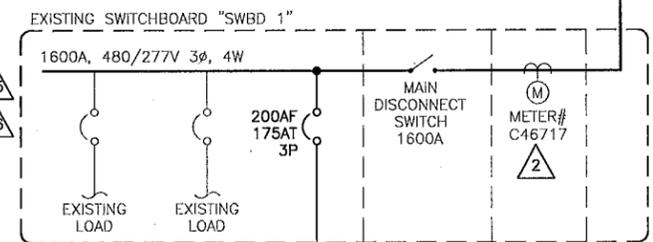
PHOTOVOLTAIC DISCONNECT COMBINER BOX SOLARBOS COMBINER CS100-18-5-N3 (18) 5A FUSE DISCONNECT SWITCH 100A VOLTAGE: 564.5VDC (TYPICAL OF 5)

2 - #4/0 AWG CU-THWN-2
 1 - #8 AWG CU-THWN-2 GND.
 1 - 1" EMT CONDUIT EACH

APS PREFERS FIXED JAWS ON SWITCH TOWARDS SOURCE SIDE OF INVERTER (DC HERE). VERIFY DIRECTION PER MANUFACTURER



PV POWERED 100KW INVERTER SYSTEM
 VOLTAGE RANGE-DC: 295-600 VDC
 VOLTAGE RANGE-AC: 422-528 VAC
 3Ø, 60Hz, GROUNDED Wye CONNECTION
INVERTER GROUNDING (NEGATIVE OR POSITIVE) SHOULD BE SPECIFIED ON INTERCONNECT DRAWINGS.



TO UTILITY 480/277V 3Ø, 4W

- NOTES:**
- ALL EQUIPMENT SHALL BE INSTALLED AND LABELED IN ACCORDANCE WITH THE NEC AND ALL APPLICABLE REQUIREMENTS OF THE SERVING ELECTRIC UTILITY COMPANY AND OF THE LOCAL AUTHORITY HAVING JURISDICTION.
 - BI-DIRECTIONAL UTILITY METER INSTALLED BY UTILITY COMPANY (AS REQUIRED).
 - LABEL BREAKER "PHOTOVOLTAIC ELECTRIC POWER SOURCE" PER NEC 705.10, AND "BREAKERS ARE SUITABLE FOR BACKFEED" PER NEC 690.64(B)(5). LABEL WITH THE MAXIMUM AC OUTPUT OPERATING CURRENT AND THE OPERATING VOLTAGE PER NEC 690.54.
 - LABEL "PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT SWITCH". SWITCH COVER TO BE LOCKED AT ALL TIMES. SWITCH TO BE VISUAL OPEN AND ACCESSIBLE PER UTILITY REQUIREMENTS AND CONFORM TO NEC 705.22.
 - LABEL "PHOTOVOLTAIC ARRAY DC DISCONNECT DEVICE #/4" PER NEC 690.14(C)(2). LABEL WITH OPERATING CURRENT, OPERATING VOLTAGE, MAXIMUM SYSTEM VOLTAGE, AND SHORT CIRCUIT CURRENT PER NEC 690.53. SWITCH TO BE LOCKED PER NEC 690.7(D).
 - LABEL "PHOTOVOLTAIC SYSTEM DEDICATED METER". METER ENCLOSURE AND SOCKET PROVIDED AND INSTALLED BY CUSTOMER PER APS ESRM. METER, CTs AND TEST SWITCHES PROVIDED BY UTILITY COMPANY WHEN REQUIRED. ~~NOTE-CUSTOMER TO SUBMIT SHOP DRAWINGS OF METERING CABINET TO APS METER SHOP FOR APPROVAL. (METER PROVIDED BY CUSTOMER) METER RESPONSIBILITY IS DEPENDENT ON APPLICABLE APS INCENTIVE PROGRAM~~
 - PROVIDE WARNING SIGN PER NEC 690.17 READING "WARNING-ELECTRIC SHOCK HAZARD-DO NOT TOUCH TERMINALS-TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OFF POSITION".
 - LABEL "WARNING INVERTER OUTPUT CONNECTION. DO NOT RELOCATE THIS OVERCURRENT DEVICE" AND LOCATE OCPD AT OPPOSITE END OF BUS FROM MAIN BREAKER LOCATION PER NEC 690.64(B)(7).
 - METALLIC CONDUIT SHALL BE USED WITHIN BUILDING PER NEC 690.31(E).
 - LABEL "DEDICATED PHOTOVOLTAIC SYSTEM COMBINER PANEL" AND "DO NOT ADD LOADS TO THIS PANEL".
 - GEC TO BE INSTALLED AS REQUIRED BY MANUFACTURER INSTRUCTIONS AND NEC 690.47
 - CUSTOMER TO PROVIDE A DEDICATED PHONE LINE TO THE PHOTOVOLTAIC SYSTEM METER. CONNECT INTO THE APS PROVIDED TELEPHONE INTERFACE MODULE WHICH WILL BE LOCATED WITHIN TWO FEET OF THE METER. ~~NOTE: ONLY REQUIRED FOR APPLICABLE APS RATES AND INCENTIVE PROGRAMS. A DEDICATED PHONE LINE MAY BE REQUIRED AT THE BI-DIRECTIONAL METER AS WELL.~~
 - DC COMBINER BOX, LABEL "WARNING, DO NOT OPEN FUSES UNDER LOAD."
 - BREAKER WITH GROUND FAULT PROTECTION HAS BEEN IDENTIFIED AND LISTED AS SUITABLE FOR BACKFEED PER NEC 690.64 (B)(3) & NEC 690.64(B)(5).
 - LABEL "BREAKER HAS BEEN SIZED TO 200A PURSUANT TO NEC 690.64(B)(2)."
 - A PLACARD OR DIRECTORY IS INSTALLED AT THE SERVICE ENTRANCE WITH EXPLICIT DIRECTIONS TO THE LOCATION OF THE PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT SWITCH AS REQUIRED BY APS.
 - ~~LABEL "PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT DEVICE" DEVICE COVER TO BE LOCKED AT ALL TIMES. CUSTOMER TO PROVIDE RACKING TOOLS AS NECESSARY TO ALLOW DISCONNECT DEVICE TO BE RACKED OUT COMPLETELY AS TO PROVIDE A LOCKABLE AND VISUAL OPEN PER APS REQUIREMENTS & CONFORM WITH NEC 705.22~~
 - GEC IS RUN INSIDE FERROUS CONDUIT. PER NEC 250.64(E), ENSURE BONDING AT THE ENTRANCE AND EXIT SO THAT THE CONDUIT AND ANY ENCLOSURES THAT THE GEC PASSES THROUGH ARE ELECTRICALLY CONTINUOUS.

3- #2/0 AWG CU-THWN-2
 1- #6 AWG CU-THWN-2 GND. 1Ø
 1- 2" EMT CONDUIT

NO CT'S, SHOULD BE 200A

PHOTOVOLTAIC SYSTEM METER
 VOLTAGE: 480/277VAC
 CURRENT: 120.2A ISC
 FORM # 165

3- #2/0 AWG CU-THWN-2
 1- #2/0 AWG CU-THWN-2 NEUT. 1Ø
 1- #6 AWG CU-THWN-2 GND. 1Ø
 1- 2" EMT CONDUIT

PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT SWITCH SQUARE D HU364R 200A DISCONNECT SWITCH, 3 POLES
 CURRENT: 120.2A ISC
 VOLTAGE: 480/277VAC

USE FORM 165 FOR 277/480V ≤ 200A (LT JAW SOCKET)

NOT REQ'D FOR MLD CONNECTION AT SWBD1 (SINCE YOU ARE CONNECTING AT A BREAKER TO THE MAIN BUS).

PHOTOVOLTAIC SYSTEM SERVICE FUSED DISCONNECT SWITCH SQUARE D H364R 200A DISCONNECT SWITCH, 3 POLES FUSE 200A
 CURRENT: 120.2A ISC
 VOLTAGE: 480/277VAC

NOT REQ'D.

COMMENTS: C. HOFFMAN 8/29/11

TO PHOTOVOLTAIC STRINGS.
(SEE SHEET E.2.1 FOR
DETAILS & DISTRIBUTION)

PHOTOVOLTAIC DISCONNECT
COMBINER BOX
SOLARBOS COMBINER
CS100-20-5-N3
(19) 5A FUSE
DISCONNECT SWITCH 100A
VOLTAGE: 574.5VDC

PV POWERED 100KW
INVERTER SYSTEM
VOLTAGE RANGE-DC: 295-600 VDC
VOLTAGE RANGE-AC: 422-528 VAC
3ø, 60Hz, GROUNDED Wye CONNECTION

DC COMBINER DC DISCONNECT PV POWERED ISOLATION INTERNAL
INTERNAL TO INVERTER 100KW INVERTER UL1741 LISTED AC DISCONNECT

2 - #10 AWG PV WIRE
1 - #10 AWG GND.
FREE AIR OR 1/2" EMT CONDUIT

2 - #4/0 AWG CU-THWN-2
1 - #8 AWG CU-THWN-2 GND.
1 - 1" EMT CONDUIT

TO OTHER COMBINER
BOXES. TYPICAL AS SHOWN
TO THE LEFT.

SPECIFY INVERTER GROUNDING

3 - #2/0 AWG CU-THWN-2
1 - #6 AWG CU-THWN-2 GND.
1 - 2" EMT CONDUIT

PHOTOVOLTAIC SYSTEM METER
VOLTAGE: 480/277VAC
CURRENT: 120.2A ISC
FORM # 95

16S

PHOTOVOLTAIC SYSTEM UTILITY
DISCONNECT SWITCH
SQUARE D HU364R
200A DISCONNECT SWITCH, 3 POLES
CURRENT: 120.2A ISC
VOLTAGE: 480/277VAC

3 - #2/0 AWG CU-THWN-2
1 - #2/0 AWG CU-THWN-2 NEUT.
1 - #6 AWG CU-THWN-2 GND.
1 - 2" EMT CONDUIT

3 - #2/0 AWG CU-THWN-2
1 - #2/0 AWG CU-THWN-2 NEUT.
1 - #6 AWG CU-THWN-2 GND.
1 - 2" EMT CONDUIT

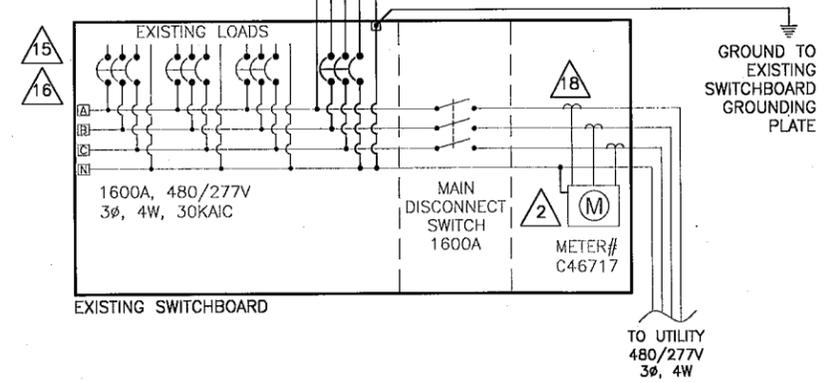
PHOTOVOLTAIC SYSTEM SERVICE
FUSED DISCONNECT SWITCH
SQUARE D H364R
200A DISCONNECT SWITCH, 3 POLES
FUSE 200A
CURRENT: 120.2A ISC
VOLTAGE: 480/277VAC

3 - #2/0 AWG CU-THWN-2
1 - #2/0 AWG CU-THWN-2 NEUT.
1 - #6 AWG CU-THWN-2 GND.
1 - 2" EMT CONDUIT

NOT RECD FOR MLO

NOTES:

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- 16 A PLACARD OR DIRECTORY IS INSTALLED AT THE SERVICE ENTRANCE WITH EXPLICIT DIRECTIONS TO THE LOCATION OF THE PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT SWITCH AS REQUIRED BY APS.
- 17 LABEL "PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT DEVICE". DEVICE COVER TO BE LOCKED AT ALL TIMES. CUSTOMER TO PROVIDE RACKING TOOLS AS NECESSARY TO ALLOW DISCONNECT DEVICE TO BE RACKED OUT COMPLETELY AS TO PROVIDE A LOCKABLE AND VISUAL OPEN PER APS REQUIREMENTS & CONFORM WITH NEC 705.22
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PROJECT TITLE
WATER TANK SITE
100KWAC PHOTOVOLTAIC SYSTEM
3820 N. PRESCOTT EAST HWY
PRESCOTT VALLEY, AZ 86314

ENGINEER'S STAMP

SMARTENERGY CAPITAL
50 MAIN STREET, SUITE #812
WHITE PLAINS, NY 10606
(914) 618-4788
JOB NUMBER: XXX

DATE	ISSUE
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04-AUG-11	APS COMMENTS
08-AUG-11	APS COMMENTS

DRAWN BY: NATRON
CHECKED BY: JHA
APPROVED BY: JHA
DOCUMENT DATE: 8/9/2011

SCALE:
NTS

SHEET TITLE:
**THREE LINE
DIAGRAM
(WTS #2)**

SHEET #
E.3.2

PHOTOVOLTAIC MODULE SPECIFICATION
SOLAR FRONTIER SF80-US-B 80 WATTS Voc = 56.5 VDC, Isc = 2.26 AMPS Vmp = 41.0 VDC, Imp = 1.9 AMPS

ONE PHOTOVOLTAIC STRING
720 WATTS 9 MODULES IN STRING PER STRING Voc = 564.5 VDC MAX, Isc = 2.26 AMPS Vmp = 335.9 VDC (HIGH TEMP), Imp = 1.9 AMPS (TYPICAL OF 166 STRINGS)

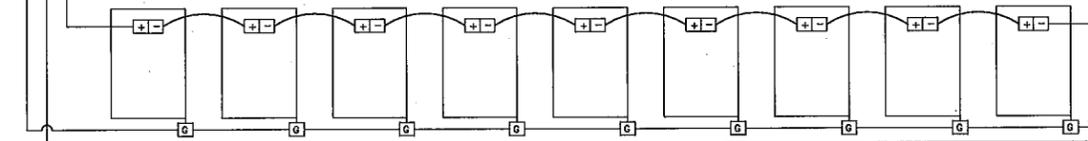
9 x 56.5 V = 508.5 VDC?

PV STRING
9 MODULES IN STRING
(TYPICAL OF 166 STRINGS)
SEE E.3.2 FOR THREE LINE



2- #10 AWG PV WIRE
1- #10 AWG CU GND.
FREE TO AIR OR 1/2" EMT

COMPLETE PHOTOVOLTAIC ARRAY
119,520 WATTS 166 STRINGS Voc = 564.5 VDC MAX, Isc = 375.16 AMPS Vmp = 335.9 VDC (HIGH TEMP), Imp = 315.4 AMPS



GROUNDING ELECTRODES NEAR PV ARRAY PER NEC 690.74(d). THE RACK STRUCTURES CAN SERVE AS THE GROUNDING ELECTRODES IF THEY ARE GROUNDED PER NEC 250.52.

NOTES: (TYPICAL)

- EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC AND ALL APPLICABLE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- GROUND WIRE MUST BE CONTINUOUS AND INSTALLED TO ALLOW FOR PANEL REMOVAL WITHOUT DISRUPTING CONTINUITY. ALL MODULE GROUND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH NEC 690-4(c)
- FOLLOW MANUFACTURERS SUGGESTED INSTALLATION PRACTICES AND WIRING SPECIFICATIONS.
- WIRES SHALL BE RATED AND LABELED "SUNLIGHT RESISTANT" WHERE EXPOSED TO AMBIENT CONDITIONS.

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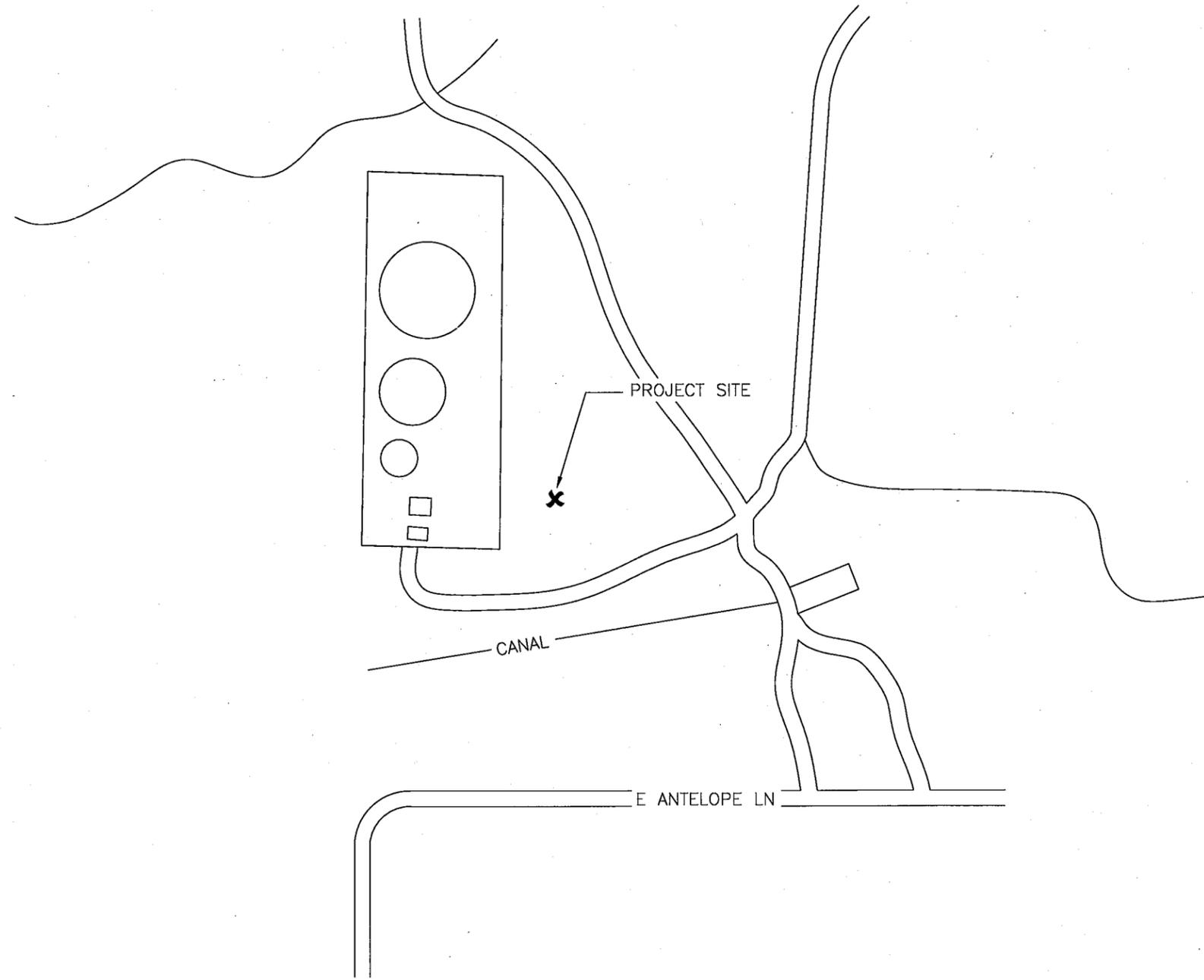
SCALE:
NTS

SHEET TITLE:
ARRAY WIRING DIAGRAM (WTS #2)

SHEET #
E.3.1

PHOTOVOLTAIC SYSTEM - WATER TANK SITE

3820 N. PRESCOTT EAST HWY, PRESCOTT VALLEY, AZ 86314



Scope of Work:

SCOPE INCLUDES INSTALLATION OF PHOTOVOLTAIC GROUND MOUNT ARRAYS WITH RELATED HARDWARE AND ELECTRICAL EQUIPMENT.

ALL ELECTRICITY GENERATED IS FOR CONSUMPTION ON SITE.

SYSTEM ELECTRICAL CONNECTION TO MAIN ELECTRICAL SERVICE IS AT 480/277V SWITCHGEAR.

PERMIT SHALL INCLUDE LABOR OF CONSTRUCTING GROUND MOUNT ARRAYS, RUNNING OF ELECTRICAL CONDUITS, INSTALLATION OF NEW ELECTRICAL EQUIPMENT AND ELECTRICAL CONNECTION TO EXISTING BUILDING SERVICE.

NO BATTERIES REQUIRED AS PART OF THIS PROJECT SCOPE.

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 100KWAC PHOTOVOLTAIC SYSTEM
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ENGINEER'S STAMP

SMARTENERGY
 CAPITAL
 50 MAIN STREET, SUITE #812
 WHITE PLAINS, NY 10606
 (914) 618-4788
 JOB NUMBER: 300

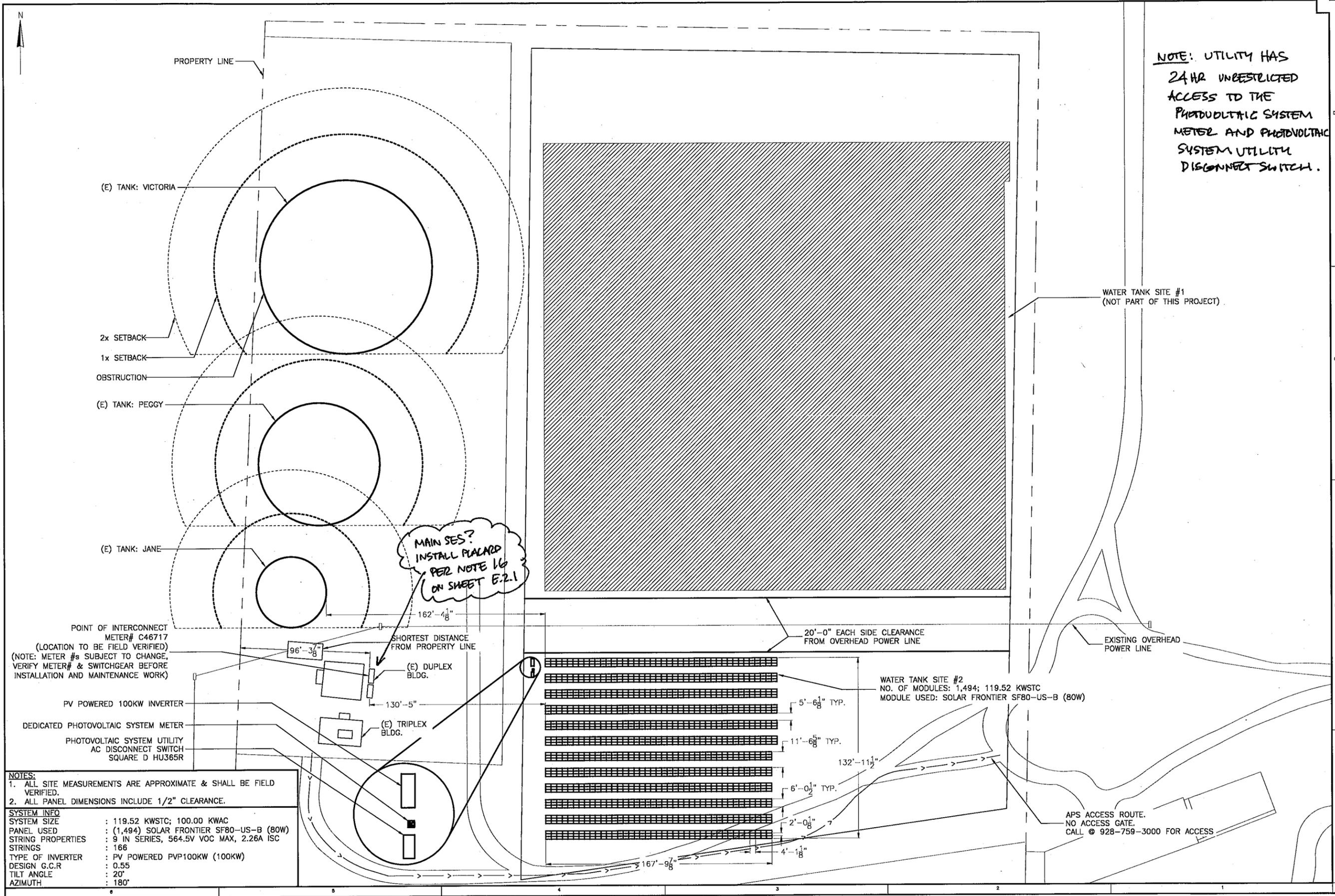
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 DOCUMENT DATE: 8/9/2011

SCALE:
 NTS

SHEET TITLE:
 TITLE SHEET

SHEET #
 01-T



NOTES:
 1. ALL SITE MEASUREMENTS ARE APPROXIMATE & SHALL BE FIELD VERIFIED.
 2. ALL PANEL DIMENSIONS INCLUDE 1/2" CLEARANCE.

SYSTEM INFO
 SYSTEM SIZE : 119.52 KWSTC; 100.00 KWAC
 PANEL USED : (1,494) SOLAR FRONTIER SF80-US-B (80W)
 STRING PROPERTIES : 9 IN SERIES, 564.5V VOC MAX, 2.26A ISC
 STRINGS : 166
 TYPE OF INVERTER : PV POWERED PVP100KW (100KW)
 DESIGN G.C.R : 0.55
 TILT ANGLE : 20°
 AZIMUTH : 180°

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5	04-AUG-11	APS COMMENTS	
6	08-AUG-11	APS COMMENTS	

DRAWN BY: NATRON
 CHECKED BY: JHA
 APPROVED BY: JHA
 DOCUMENT DATE: 8/9/2011

SCALE:
 1" = 30'-0"

SHEET TITLE:
ARRAY PLAN (WTS #2)

SHEET #:
 A.2.1