RE-INSTALLATION OF EXISTING PV SOLAR SYSTEM MODULES ONLY

22 WINDYBUSH WAY
TITUSVILLE, NJ 08560

WINDYBUSH WAY

VICINITY MAP
SCALE: NTS

SITE

GENERAL NOTES

1. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL EQUIPMENT AND FOLLOWING ALL DIRECTIONS AND INSTRUCTIONS CONTAINED IN THE DRAWING PACKAGE AND INFORMATION RECEIVED FROM TRINITY.
2. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL EQUIPMENT AND FOLLOWING ALL DIRECTIONS AND INSTRUCTION CONTAINED IN THE COMPLETE MANUAL.
3. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR READING AND UNDERSTANDING ALL DRAWINGS, COMPONENT AND INVERTER MANUALS PRIOR TO INSTALLATION. THE INSTALLATION CONTRACTOR IS ALSO REQUIRED TO HAVE ALL COMPONENT SWITCHES IN THE OFF POSITION AND FUSES REMOVED PRIOR TO THE INSTALLATION OF ALL FUSE BEARING SYSTEM COMPONENTS.
4. ONCE THE PHOTOVOLTAIC MODULES ARE MOUNTED, THE INSTALLATION CONTRACTOR SHOULD HAVE A MINIMUM OF ONE ELECTRICIAN WHO HAS ATTENDED A SOLAR PHOTOVOLTAIC INSTALLATION COURSE ON SITE.
5. FOR SAFETY, IT IS RECOMMENDED THAT THE INSTALLATION CREW ALWAYS HAVE A MINIMUM OF TWO PERSONS WORKING TOGETHER AND THAT EACH OF THE INSTALLATION CREW MEMBERS BE TRAINED IN FIRST AID AND CPR.
6. THIS SOLAR PHOTOVOLTAIC SYSTEM IS TO BE INSTALLED FOLLOWING THE CONVENTIONS OF THE NATIONAL ELECTRICAL CODE. ANY LOCAL CODE WHICH MAY SUPERSEDE THE NEC SHALL GOVERN.
7. ALL SYSTEM COMPONENTS TO BE INSTALLED WITH THIS SYSTEM ARE TO BE "UL" LISTED. ALL EQUIPMENT WILL BE NEMA 3R OUTDOOR RATED UNLESS INDOORS.

GENERAL NOTES CONTINUED

8. THE DC VOLTAGE FROM THE PANELS IS ALWAYS PRESENT AT THE DC DISCONNECT ENCLOSURE AND THE DC TERMINALS OF THE INVERTER DURING DAYLIGHT HOURS. ALL PERSONS WORKING ON OR INVOLVED WITH THE PHOTOVOLTAIC SYSTEM ARE WARNED THAT THE SOLAR MODULES ARE ENERGIZED WHENEVER THEY ARE EXPOSED TO LIGHT.
9. ALL PORTIONS OF THIS SOLAR PHOTOVOLTAIC SYSTEM SHALL BE MARKED CLEARLY IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 690 & 705.
10. PRIOR TO THE INSTALLATION OF THIS PHOTOVOLTAIC SYSTEM, THE INSTALLATION CONTRACTOR SHALL ATTEND A PRE-INSTALLTION MEETING FOR THE REVIEW OF THE INSTALLATION PROCEDURES, SCHEDULES, SAFETY AND COORDINATION.
11. PRIOR TO THE SYSTEM START UP THE INSTALLATION CONTRACTOR SHALL ASSIST IN PERFORMING ALL INITIAL HARDWARE CHECKS AND DC WIRING CONDUCTIVITY CHECKS.
12. FOR THE PROPER MAINTENANCE AND ISOLATION OF THE INVERTERS REFER TO THE ISOLATION PROCEDURES IN THE OPERATION MANUAL.
13. THE LOCATION OF PROPOSED ELECTRIC AND TELEPHONE UTILITIES ARE SUBJECT TO FINAL APPROVAL OF THE APPROPRIATE UTILITY COMPANIES AND OWNERS.
14. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREIN SHALL BE IN ACCORDANCE WITH:
    A) CURRENT PREVAILING MUNICIPAL AND/OR COUNTY SPECIFICATIONS, STANDARDS AND REQUIREMENTS

GENERAL NOTES CONTINUED

14. B) CURRENT PREVAILING UTILITY COMPANY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS
15 THIS SET OF PLANS HAVE BEEN PREPARED FOR THE PURPOSE OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DRAWINGS UNTIL REVISED TO INDICATE "ISSUED FOR CONSTRUCTION".
16 ALL INFORMATION SHOWN MUST BE CERTIFIED PRIOR TO USE FOR CONSTRUCTION ACTIVITIES.

ABBREVIATIONS

AMP	AMPERE
AC	ALTERNATING CURRENT
AL	ALUMINUM
AF	AMP. FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AWG	AMERICAN WIRE GAUGE
C	CONDUIT (GENERIC TERM OF RACEWAY, PROVIDE AS SPECIFIED)
CB	COMBINER BOX
CKT	CIRCUIT
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DISC	DISCONNECT SWITCH
DWG	DRAWING
EC	ELECTRICAL SYSTEM INSTALLER
EMT	ELECTRICAL METALLIC TUBING
FS	FUSIBLE SWITCH
FU	FUSE
GND	GROUND
GFI	GROUND FAULT INTERRUPTER
HZ	FREQUENCY (CYCLES PER SECOND)

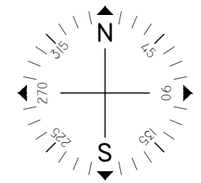
ABBREVIATIONS CONTINUED

JB	JUNCTION BOX
kCMIL	THOUSAND CIRCULAR MILS
kVA	KILO-VOLT AMPERE
kW	KILO-WATT
kWH	KILO-WATT HOUR
L	LINE
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUG ONLY
MTD	MOUNTED
MTG	MOUNTING
N	NEUTRAL
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NO #	NUMBER
NTS	NOT TO SCALE
OCP	OVER CURRENT PROTECTION
P	POLE
PB	PULL BOX
PH ∅	PHASE
PVC	POLY-VINYL CHLORIDE CONDUIT
PWR	POWER
QTY	QUANTITY
RGS	RIGID GALVANIZED STEEL
SN	SOLID NEUTRAL
JSWBD	SWITCHBOARD
TYP	TYPICAL
U.O.I.	UNLESS OTHERWISE INDICATED
WP	WEATHERPROOF
XFMR	TRANSFORMER
+72	MOUNT 72 INCHES TO BOTTOM OF ABOVE FINISHED FLOOR OR GRADE

SHEET INDEX

GENERAL NOTES

IF ISSUED DRAWING IS MARKED WITH A REVISION CHARACTER OTHER THAN "A", PLEASE BE ADVISED THAT FINAL EQUIPMENT AND/OR SYSTEM CHARACTERISTICS ARE SUBJECT TO CHANGE DUE TO AVAILABLITY OF EQUIPMENT.



Issued / Revisions		
P2	RE-ISSUED TO TOWNSHIP FOR PERMIT	
P1	ISSUED TO TOWNSHIP FOR PERMIT	12/11/2017
NO.	DESCRIPTION	DATE

Project Title:

HAZZARD, MARK

TRINITY ACCT #: 2009-06-0042

Project Address:

22 WINDYBUSH WAY
TITUSVILLE, NJ 08560

Drawing Title:

PROPOSED RE-INSTALLATION OF EXISTING PV SOLAR SYSTEM

Drawing Information

DRAWING DATE:	12/11/2017
DRAWN BY:	RTC
REVISED BY:	RTC

System Information:

DC SYSTEM SIZE:	6kW
AC SYSTEM SIZE:	5.5kW
TOTAL MODULE COUNT:	30
MODULES USED:	SUNTECH POWER 200
MODULE SPEC #:	STP200-18/UD
UTILITY COMPANY:	PSE&G
UTILITY ACCT #:	
UTILITY METER #:	
DEAL TYPE:	

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P2	PV - 1

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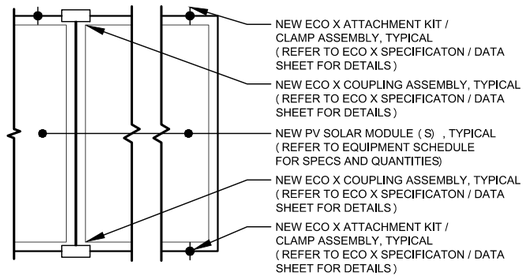
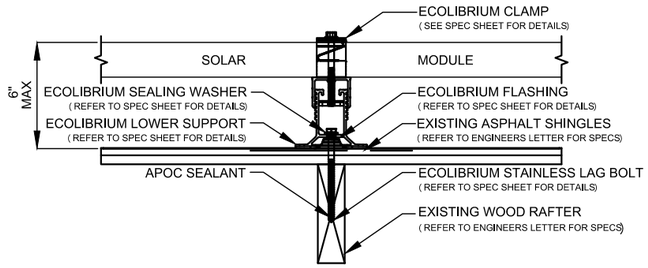
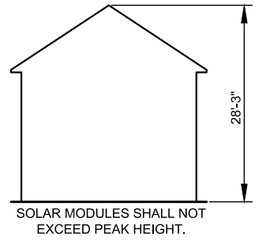
NOTES : *REFER TO MODULE SPECS FOR MODULE DIMENSIONS
*DEPICTED MODULES MAY BE PORTRAIT OR LANDSCAPE



ATTACHMENT & CLIP DETAIL
SCALE: NOT TO SCALE



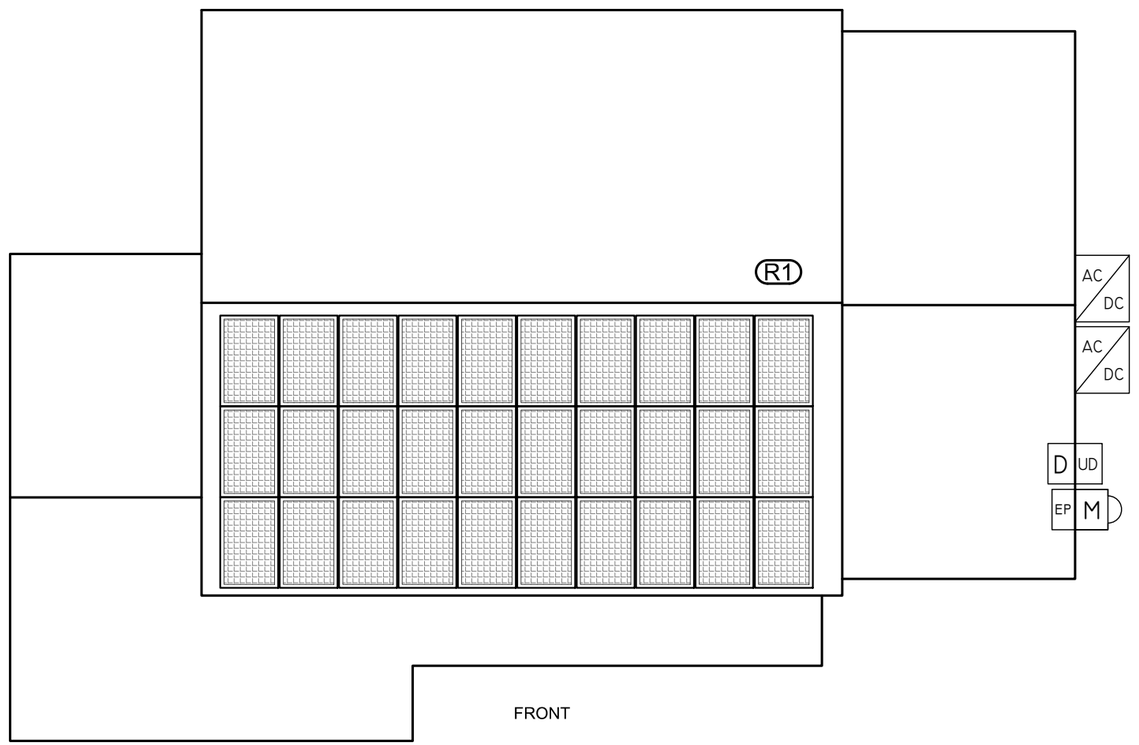
PV MODULE ATTACHMENT ON ASPHALT SHINGLE ROOF
SCALE: NOT TO SCALE



HEIGHT FROM GROUND LEVEL TO PEAK OF ROOF
SCALE: NOT TO SCALE

***NOTE: ALL EQUIPMENT IS EXISTING PRIOR TO REINSTALLATION OF MODULES ONLY

BACK



FRONT

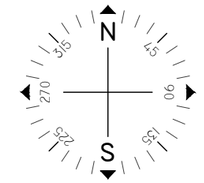
NOTES:
1.) ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2.) ARRAY BONDING TO COMPLY WITH MANUFACTURER SPECIFICATION.
3.) ALL LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.
4.) AN AC DISCONNECT SHALL BE GROUPED WITH INVERTER (S) NEC 690.13 (E) .
5.) ALL OUTDOOR EQUIPMENT SHALL BE RAIN TIGHT WITH MINIMUM NEMA 3R RATING.
6.) ROOFTOP SOLAR INSTALLATION ONLY PV ARRAY SHALL NOT EXTEND BEYOND THE EXISTING ROOF EDGE.

ARRAY SCHEDULE
R1 ARRAY ORIENTATION = 168° MODULE PITCH = 20°

SYMBOL LEGEND			
R1	INDICATES ROOF DESIGNATION . REFER TO ARRAY SCHEDULE FOR MORE INFORMATION	UD	INDICATES EXISTING UTILITY DISCONNECT TO BE INSTALLED OUTSIDE
M	INDICATES EXISTING METER LOCATION		INDICATES EXISTING PV SOLAR MODULE.
EP	INDICATES EXISTING ELECTRICAL PANEL LOCATION: INSIDE	P	INDICATES EXISTING PRODUCTION METER TO BE INSTALLED OUTSIDE.
D	INDICATES EXISTING MAIN DISCONNECT	DC / AC	INDICATES EXISTING INVERTER TO BE INSTALLED OUTSIDE. REFER TO EQUIPMENT SCHEDULE FOR SPECS.

PLUMBING SCHEDULE
OTHER OBSTRUCTIONS

EQUIPMENT SCHEDULE	
QTY	SPEC #
30	SUNTECH POWER 200 (STP200-18/UD)
1	PV POWERED 2500
1	PV POWERED 3000



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DRAWN BY:	RTC
REVISED BY:	RTC

System Information:

DC SYSTEM SIZE:	6kW
AC SYSTEM SIZE:	5.5kW
TOTAL MODULE COUNT:	30
MODULES USED:	SUNTECH POWER 200
MODULE SPEC #:	STP200-18/UD
UTILITY COMPANY:	PSE&G
UTILITY ACCT #:	
UTILITY METER #:	
DEAL TYPE:	

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Modules to be mounted flat on roof
30 - 200W Suntech Modules
2 strings of 8 modules - 323V Max
2 strings of 7 modules - 282V Max
10.1 ADC Max per string
1 Array

Suntech 200W modules	
Imp	7.63A
Vmp	26.2V
Voc	33.6V
Isc	8.1A

#8 AWG Bare Copper
Bond to rails and Modules

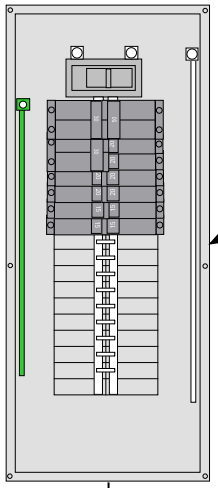
6" X 6"
PVC
Junction Box

#10 USE-2 RHH or
RHW2 (CU) Sunlight,
Gas, Oil Res, 600V
RW90 XLPE
ULE105667 -H

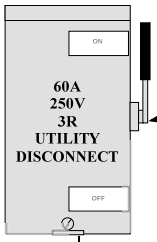
Conduit to be metal
after point of
penetration

1" PVC/EMT
8- #10 THWN-2
1- #8 THWN-=2

6 THWN-2 GEC
To Existing Ground Rod



Existing 200A
120/240V 1Ø
Main Breaker
Loadcenter
Insulated Line Taps to be
installed on main feeders



Utility disconnect to
located next to Utility
meter

Inverters to be
located in basement

5" X 5"
Metal
Pull Box

1" FMC
3 - #6 THHN

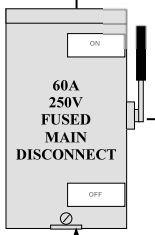
1" EMT
4 - #8 THHN
1 - #10 THHN

1"EMT
2 - #8 THHN
1 - #10 THHN

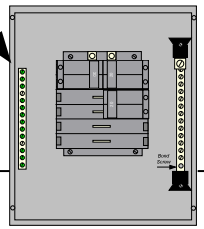
3/4" EMT
4- #10 THWN-2
1 - #8 THWN-2

3/4" EMT
4 - #10 THWN-2
1 - #8 THWN-2

100A Main Lug Subpanel
2- 2p20A Breakers



5" X 5"
Metal
Junction Box



PV Powered
2500W Inverter
with AC and DC
Disconnect

2 strings of
7 modules

Internal
Ground Fault Protection

PV Powered
3000W Inverter
with AC and DC
Disconnect

2 strings of
8 modules

Internal
Ground Fault Protection

Main disconnect to be
grouped with existing
Main Disconnect

1" EMT
2 - #8 THHN
1 - #10 THHN

1" EMT
6- #10 THWN-2

Trinity SOLAR
800 US Highway 9 South
Freehold, NJ 07728
TEL. 732-780-3779
FAX. 732-780-6671

CUSTOMER:
Hazzard
22 Windybush Way
Ewing, NJ 08560

6 KW Solar System
30- 200W Suntech modules

Electrical One Line Diagram
Revision No. 01
Date: 7/21/09