MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION
STAFF REPORT

Address:	4920 Griffith Rd., Gaithersburg	**Meeting Date:**	08/16/17
Resource:	Edgehill **Master Plan Site**	**Report Date:**	08/09/17
Review:	HAWP	**Public Notice:**	08/02/17
Case Number:	23/17-17A	**Tax Credit:**	None
Applicant:	Becker Frances Elizabeth Et. Al.	**Staff:**	Dan Bruechert
Proposal:	Ground Mounted Solar Panel Array Installation		

RECOMMENDATION

Staff recommends that the Historic Preservation Commission **approve** the HAWP application.

PROPERTY DESCRIPTION

SIGNIFICANCE: Individually Listed Master Plan Site
STYLE: Greek Revival
DATE: c.1780, Mid 1800, 1841

From *Places From the Past*:
Edgehill Farm is a rare surviving example of an intact and cohesive complex of domestic and agricultural buildings from the 18th and 19th centuries. The property includes a telescope-type farmhouse and several outbuildings, including a log slave quarters, log smokehouse, a frame chicken house, a corncrib, a bank bar rebuilt in 1933, and a 20th century dairy building. In addition, there are three cemeteries on the property.

Henry Griffith II, one of the largest landowners in the county, built the oldest section of the house c1780-5. The frame house was a room-over-room dwelling. The structure may contain brick noggin used for insulation and stability. Set on a low foundation, the house has a gable roof with a brick chimney. A shed porch extends across the full width of the front elevation. At the south end of this original building is the kitchen, originally constructed as a one-story, detached frame structure, and sharing the chimney of the house. About 1841, Henry's grandson, Thomas Griffith, expanded the house with a side-passage, Greek Revival frame section built about 1841. The house, which retains a high degree of original features, is, especially on the interior, a lesson in vernacular Greek Revival detailing. The kitchen was later raised to two stories mid-19th century. The Griffith family of Edgehill donated land for St. Bartholomew's Church, dedicated in 1819.

The complex of outbuildings on the property are well maintained and contribute greatly to the overall significance. They are excellent examples of period ancillary agricultural

structures and are today rarely found intact.

PROPOSAL

The applicant proposes to install a ground mounted solar array with 66 solar panels.

APPLICABLE GUIDELINES

Proposed alterations to individual Master Plan Sites are reviewed under Montgomery County Code Chapter 24A (Chapter 24A) and the *Secretary of the Interior's Standards for Rehabilitation.* Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features, which convey its historical, cultural, or architectural values.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, space and spatial relationships that characterize a property will be avoided.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportions, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Montgomery County Code, Chapter 24A Historic Resources Preservation

(b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to insure conformity with the purposes and requirements of this chapter, if it finds that:

(1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or

(2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter; or

(3) The proposal would enhance or aid in the protection, preservation and public or private utilization of the historic site or historic resource located within an historic district in a manner compatible with the historical, archeological, architectural or cultural value of the historic site or historic district in which an historic resource is located; or

(4) The proposal is necessary in order that unsafe conditions or health hazards be remedied; or

STAFF DISCUSSION

The applicant is proposing to install a 66-panel, ground mounted, solar array several hundred feet from the historic house. The array will be placed to the north of a two-acre fenced-in field and will not be visible from the historic house. The panels will be connected to the house through a buried conduit.

The solar array will not have a significant impact on the historic character of the historic house in compliance with Standard 2. Additionally, the panels will be installed on a framework that could be removed at a future date with no impact on the site, per Standard 10. The design and placement of this array are consistent with the set of best-practices the Historic Preservation Commission has adopted (*Design Guidelines for Historic Sites and Districts in Montgomery County, Maryland, General Rehabilitation Design Guidelines, 9.0 Solar Panels, page 68*). Staff supports this proposal.

STAFF RECOMMENDATIONS

Staff recommends that the Commission **approve** the HAWP application; and with the general condition applicable to all Historic Area Work Permits that **the applicant will present *3 permit sets* of drawings to HPC staff for review and stamping prior to submission for permits (if applicable).** After issuance of the Montgomery County Department of Permitting Services (DPS) permit, the applicant will arrange for a field inspection by calling the DPS Field Services Office at 240-777-6370 prior to commencement of work and not more than two weeks following completion of work.

[redacted]

DPS - #8

HISTORIC PRESERVATION COMMISSION
301/563-3400

APPLICATION FOR HISTORIC AREA WORK PERMIT

Contact Email: permitting.md@trinitysolarsystems.com Contact Person: ( ) Josh Smith

Daytime Phone No.: 410-571-4488

Tax Account No.: 01 - 00009088

Name of Property Owner: BECKER FRANCES ELIZABETH ET AL Daytime Phone No.: (301) 253-2688

Address: 4920 (Street Number) Gaithersburg (City) Griffith Road (Street) 20882-2011 (Zip Code)

Contractor: Trinity Solar Phone No.: 410-571-4488

Contractor Registration No.: MHIC109285, ME222965, EB222966

Agent for Owner: Agent: Joshua Bertaux Daytime Phone No.: 410-571-4488

LOCATION OF BUILDING/PREMISE

House Number: 4920 Street: Griffith Road

Town/City: Gaithersburg Nearest Cross Street: Damascus Road

Lot: _____ Block: _____ Subdivision: 0001

Liber: _____ Folio: _____ Parcel: P600

PART ONE: TYPE OF PERMIT ACTION AND USE

1A. CHECK ALL APPLICABLE:

☐ Construct ☐ Extend ☐ Alter/Renovate

☐ Move ☑ Install ☐ Wreck/Raze

☐ Revision ☐ Repair ☐ Revocable

CHECK ALL APPLICABLE:

☐ A/C ☐ Slab ☐ Room Addition ☐ Porch ☐ Deck ☐ Shed

☑ Solar ☐ Fireplace ☐ Woodburning Stove ☐ Single Family

☐ Fence/Wall (complete Section 4) ☐ Other: _____

1B. Construction cost estimate: $ 56,430.00

1C. If this is a revision of a previously approved active permit, see Permit # N/A

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 ☐ WSSC 02 ☑ Septic 03 ☐ Other: _____

2B. Type of water supply: 01 ☐ WSSC 02 ☑ Well 03 ☐ Other: _____

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height N/A feet N/A inches

3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:

☐ On party line/property line ☐ Entirely on land of owner ☐ On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

_____ Signature of owner or authorized agent

_____ Date

Approved: _____ For Chairperson, Historic Preservation Commission

Disapproved: _____ Signature: _____ Date: _____

Application/Permit No.: _____ Date Filed: _____ Date Issued: _____

Edit 6/21/99

SEE REVERSE SIDE FOR INSTRUCTIONS

807925

THE FOLLOWING ITEMS MUST BE COMPLETED AND THE REQUIRED DOCUMENTS MUST ACCOMPANY THIS APPLICATION.

1. **WRITTEN DESCRIPTION OF PROJECT**

   a. Description of existing structure(s) and environmental setting, including their historical features and significance:
   Open field on 190+ acre farm surrounded by trees with home built in 1860 nearby. Field and residence are off of a back road.

   b. General description of project and its effect on the historic resource(s), the environmental setting, and, where applicable, the historic district:
   Installation of solar panel ground mount system to provide green energy for residence in open field with trees surrounding field still. Solar system will not be visible from the road nor any nearby properties due to trees. Existing house on property will not be affected.

2. **SITE PLAN**

   Site and environmental setting, drawn to scale. You may use your plat. Your site plan must include:

   a. the scale, north arrow, and date;

   b. dimensions of all existing and proposed structures; and

   c. site features such as walkways, driveways, fences, ponds, streams, trash dumpsters, mechanical equipment, and landscaping.

3. **PLANS AND ELEVATIONS**

   You must submit 2 copies of plans and elevations in a format no larger than 11" x 17". Plans on 8 1/2" x 11" paper are preferred.

   a. ***Schematic construction plans***, with marked dimensions, indicating location, size and general type of walls, window and door openings, and other fixed features of both the existing resource(s) and the proposed work.

   b. Elevations (facades), with marked dimensions, clearly indicating proposed work in relation to existing construction and, when appropriate, context. All materials and fixtures proposed for the exterior must be noted on the elevations drawings. An existing and a proposed elevation drawing of each facade affected by the proposed work is required.

4. **MATERIALS SPECIFICATIONS**

   General description of materials and manufactured items proposed for incorporation in the work of the project. This information may be included on your design drawings.

5. **PHOTOGRAPHS**

   a. Clearly labeled photographic prints of each facade of existing resource, including details of the affected portions. All labels should be placed on the front of photographs.

   b. Clearly label photographic prints of the resource as viewed from the public right-of-way and of the adjoining properties. All labels should be placed on the front of photographs.

6. **TREE SURVEY**

   If you are proposing construction adjacent to or within the dripline of any tree 6" or larger in diameter (at approximately 4 feet above the ground), you must file an accurate tree survey identifying the size, location, and species of each tree of at least that dimension.

7. **ADDRESSES OF ADJACENT AND CONFRONTING PROPERTY OWNERS**

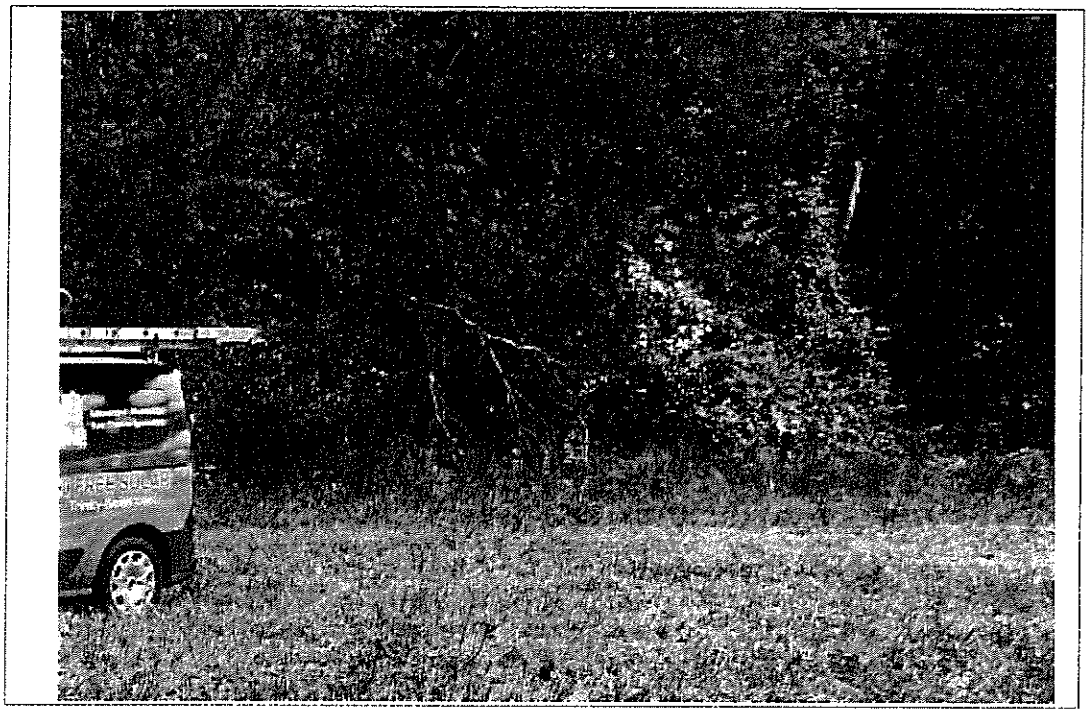
   For **ALL** projects, provide an accurate list of adjacent and confronting property owners (not tenants), including names, addresses, and zip codes. This list should include the owners of all lots or parcels which adjoin the parcel in question, as well as the owner(s) of lot(s) or parcel(s) which lie directly across the street/highway from the parcel in question.

PLEASE PRINT (IN BLUE OR BLACK INK) OR TYPE THIS INFORMATION ON THE FOLLOWING PAGE.
PLEASE STAY WITHIN THE GUIDES OF THE TEMPLATE, AS THIS WILL BE PHOTOCOPIED DIRECTLY ONTO MAILING LABELS.

HAWP APPLICATION: MAILING ADDRESSES FOR NOTIFING
[Owner, Owner's Agent, Adjacent and Confronting Property Owners]

Owner's mailing address	**Owner's Agent's** mailing address
Frances Becker 4920 Griffith Road Gaithersburg, MD 20882-2011	Trinity Solar 7455 New Ridge Road Hanover, MD 21076
Adjacent and confronting Property Owners mailing addresses	
Richard Ellison 5025 Griffith Rd Gaithersburg, MD 20882	Methrod Javan 4800 Damascus Rd Gaithersburg, MD 20882
Evan Nudd 4920 Damascus Rd Gaithersburg, MD 20882	Steven Ofriel 4810 Damascus Rd Gaithersburg, MD 20882
Nicole Noland 4900 Damascus Rd Gaithersburg, MD 20882	Ravi Chedalavada 4910 Damascus Rd Gaithersburg, MD 20882

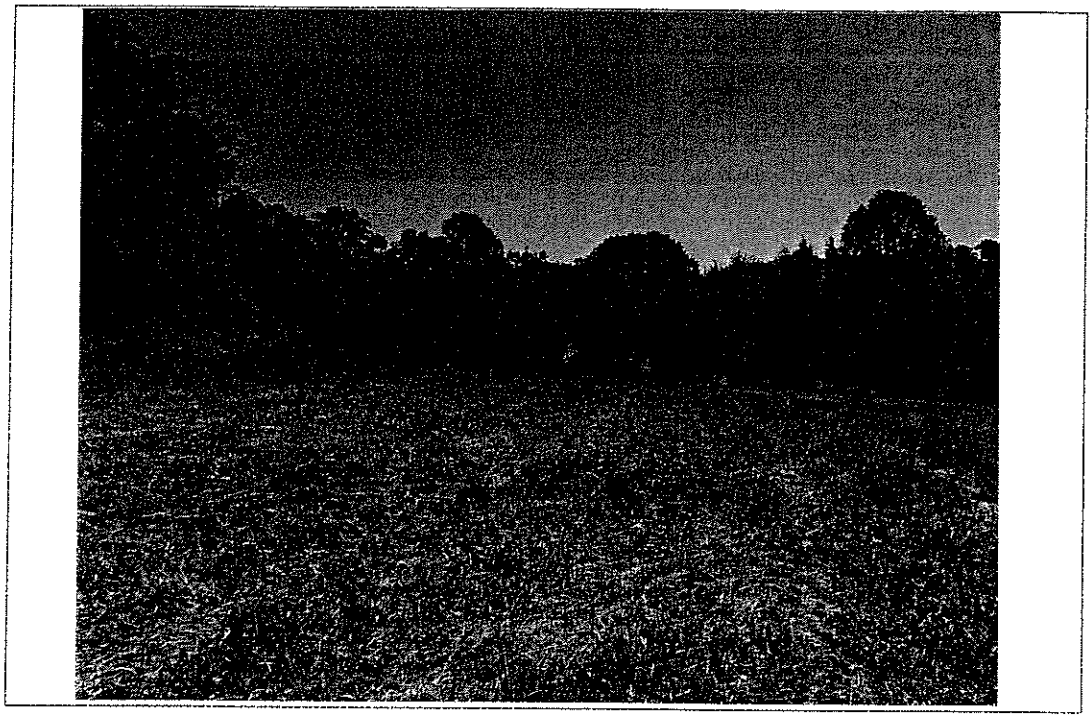
Existing Property Condition Photographs (duplicate as needed)



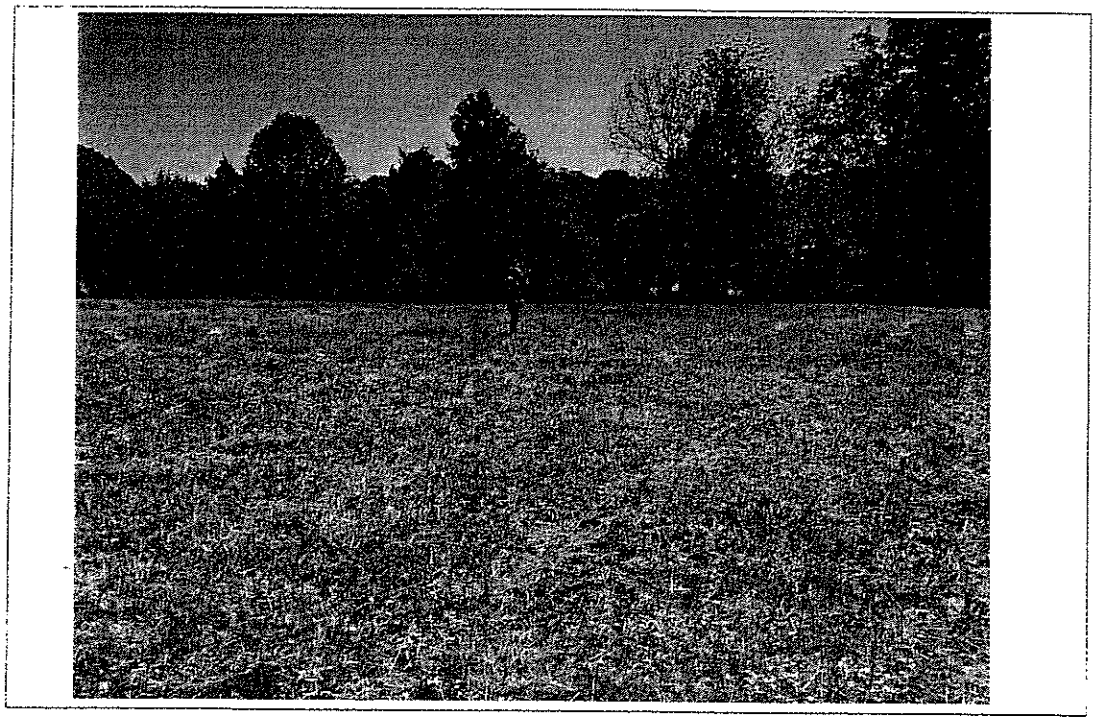
Detail: View of Field looking west

Detail: View of Field looking south

Existing Property Condition Photographs (duplicate as needed)

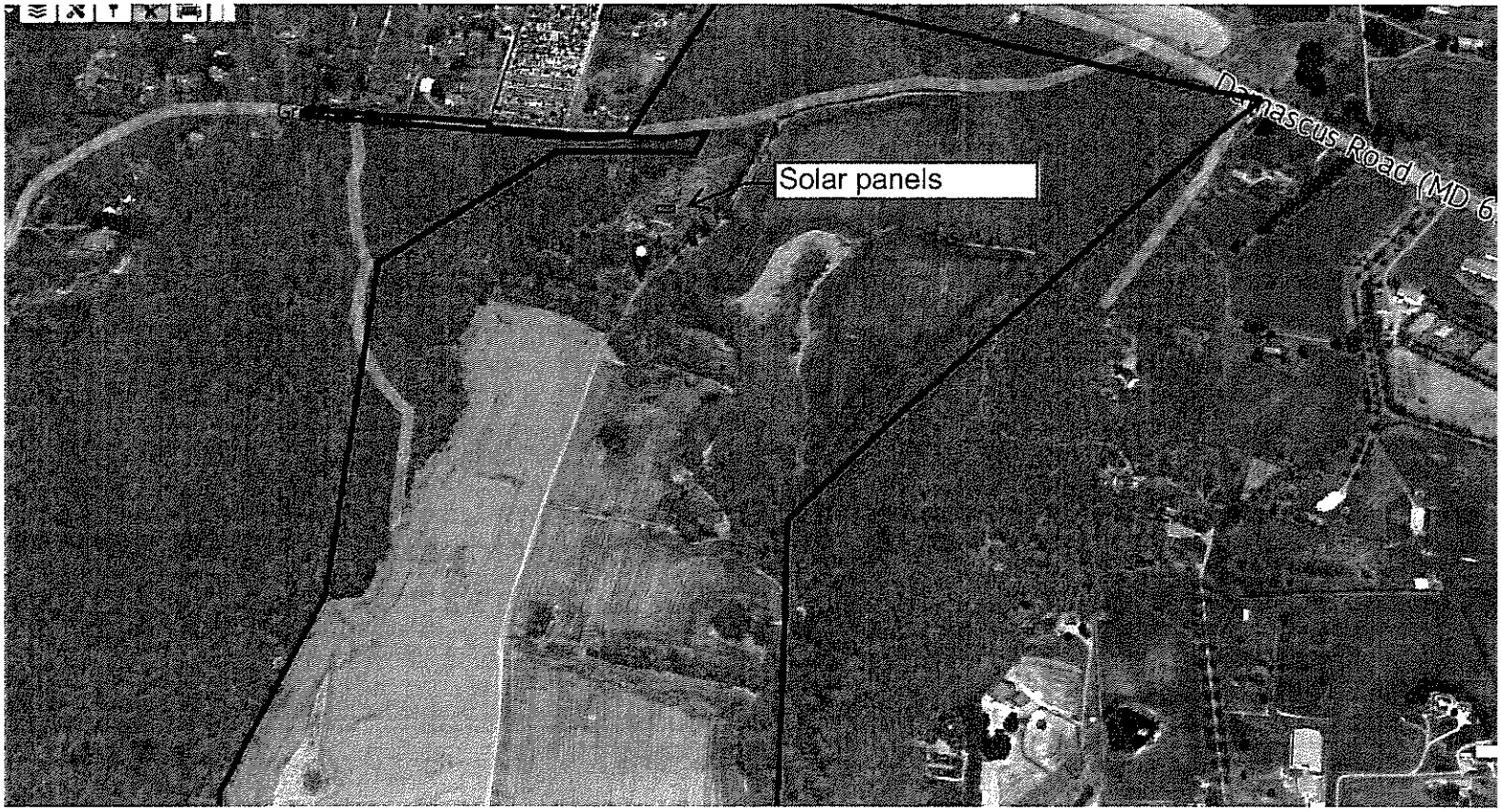


Detail: View of Field looking north



Detail: View of Field looking east

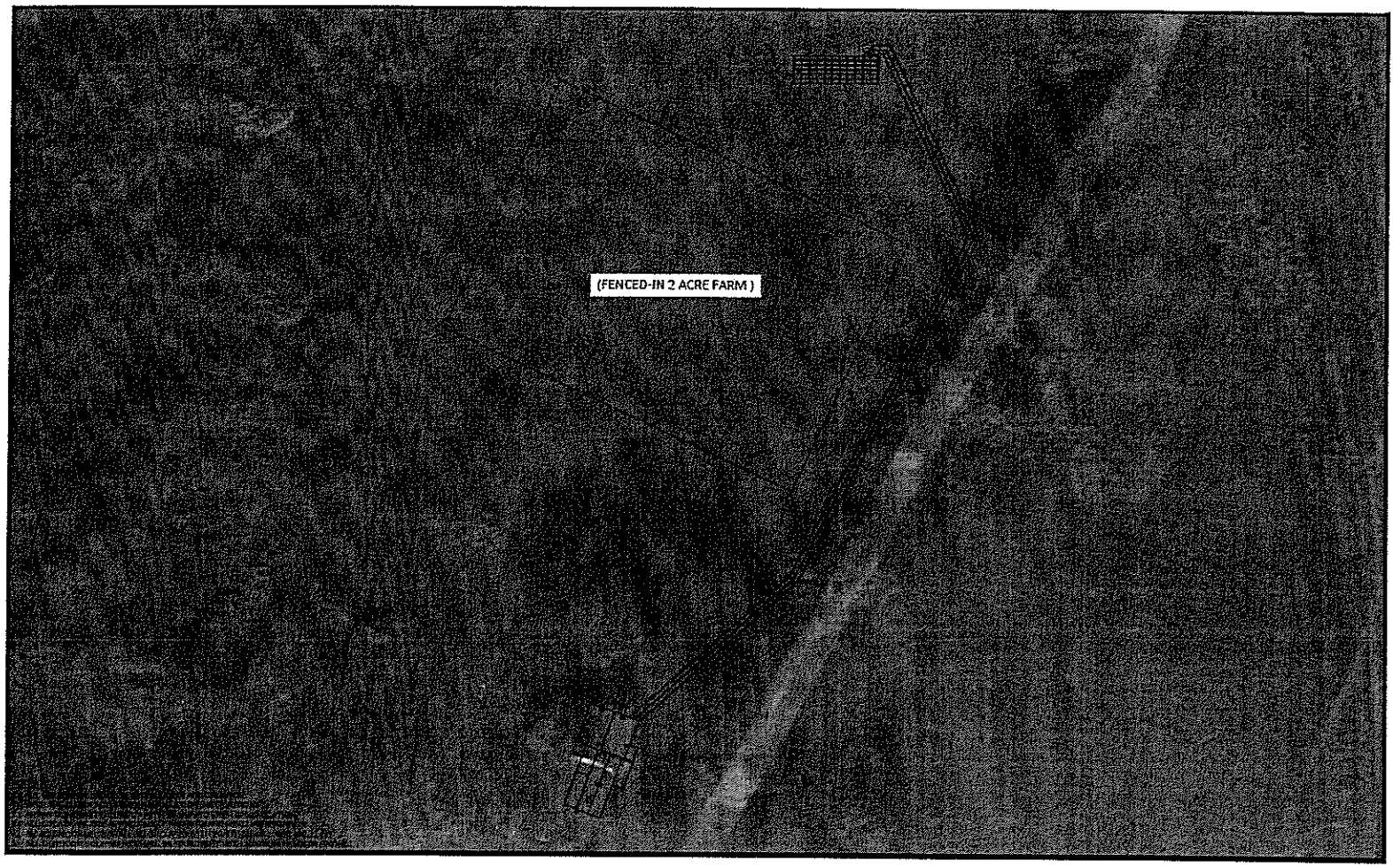
Site Plan



Shade portion to indicate North

Applicant: Joshua Bertaux

Site Plan



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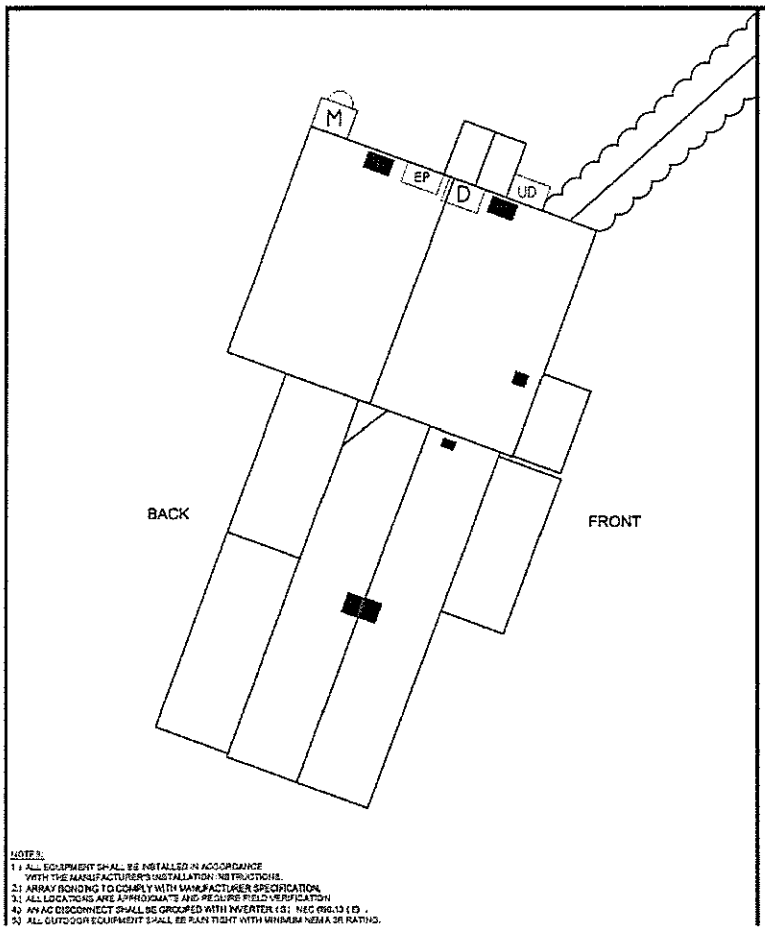
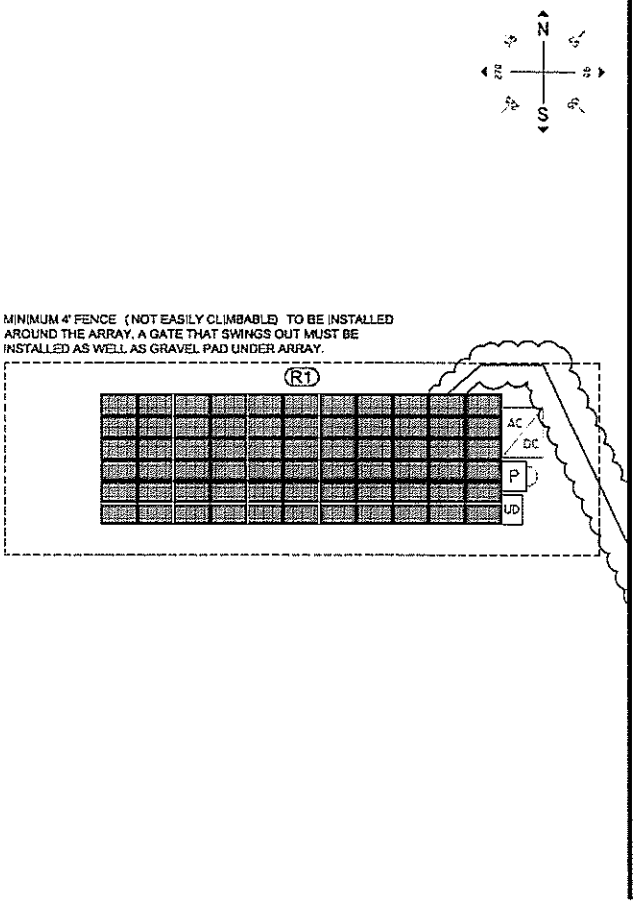


NOTES:
1.) ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2.) ARRAY BONDING TO COMPLY WITH MANUFACTURER SPECIFICATION.
3.) ALL LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION
4) AN AC DISCONNECT SHALL BE GROUPED WITH INVERTER (S) NEC 690.13 (E)
5) ALL OUTDOOR EQUIPMENT SHALL BE RAIN TIGHT WITH MINIMUM NEMA 3R RATING.



Shade portion to indicate North

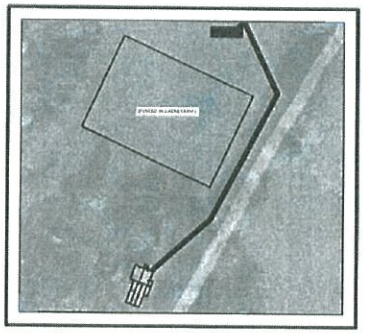
Applicant: Joshua Bertaux

INSTALLATION OF NEW
ROOF MOUNTED PV SOLAR SYSTEM
4920 GRIFFITH ROAD,
GAITHERSBURG, MD 20882

GRIFFITH ROAD

VICINITY MAP
SCALE: NTS

SITE



SATELLITE VIEW
SCALE: NTS

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 AVAILABILITY OF EQUIPMENT.

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 Ø	PHASE
PVC	POLY-VINYL CHLORIDE CONDUIT
PWR	POWER
QTY	QUANTITY
RGS	RIGID GALVANIZED STEEL
SN	SOLID NEUTRAL
SWBD	SWITCHBOARD
TYP	TYPICAL
U.O.I.	UNLESS OTHERWISE INDICATED
WP	WEATHERPROOF
X'FMR	TRANSFORMER
+72	MOUNT 72 INCHES TO BOTTOM OF ABOVE FINISHED FLOOR OR GRADE

STATE OF MARYLAND
RICHARD BRIAN GORDON
37741
PROFESSIONAL ENGINEER

SHEET INDEX

*PLANS COMPLY WITH 2010 RCNYS ASCE 7-05, 2001 IFCM AS PER REFERENCED STANDARDS. WIND SPEED DESIGN IS 110 MPH

RICHARD B. GORDON, P.E.
MD.P.E. LIC. # 37741

Issued / Revisions

NO.	DESCRIPTION	DATE
R1	LAYOUT REVISED / RAILING DETAILS ADDED	7/3/2017
R2	ISSUED TO ENGINEER FOR STAMP	7/5/2017

Project Title:
BECKER, FRANCES
TRINITY ACCT #: 2017-03-133033

Project Address:
4920 GRIFFITH ROAD,
GAITHERSBURG, MD 20882

Drawing Title:
PROPOSED PV SOLAR SYSTEM

Drawing Information

DRAWING DATE:	6/5/2017
DRAWN BY:	RF
REVISED BY:	DMR

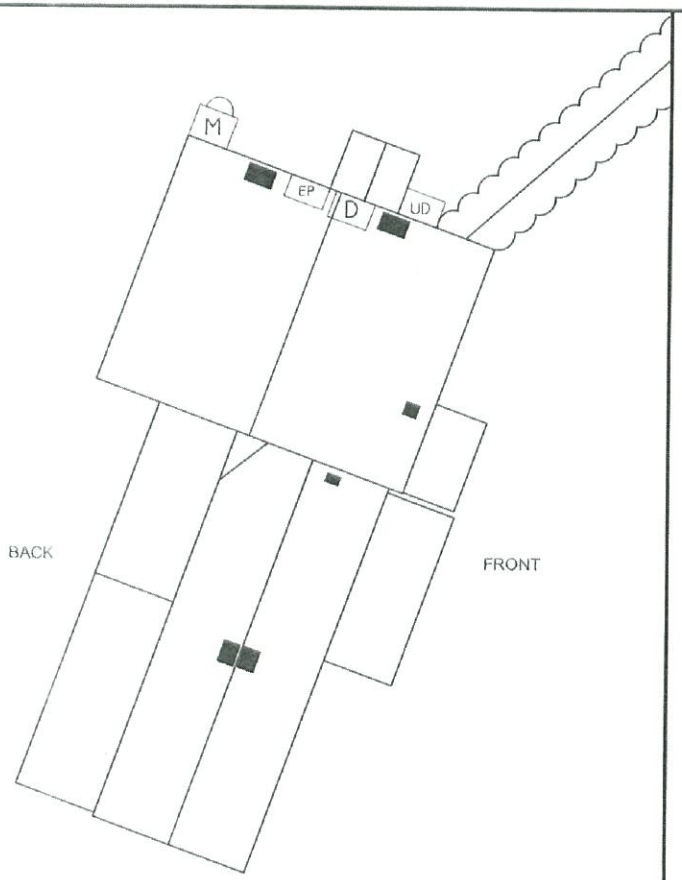
System Information:

DC SYSTEM SIZE:	18.81kW
AC SYSTEM SIZE:	15.2kW
TOTAL MODULE COUNT:	66
MODULES USED:	HANWHA 285
MODULE SPEC #:	Q.PEAK-BLK-G4.1 285
UTILITY COMPANY:	PEPCO
UTILITY ACCT #:	5501494142
UTILITY METER #:	NNA116051002
DEAL TYPE:	CASH

Rev. No.	Sheet
R1	PV - 1

Trinity® SOLAR

2711 Allenwood Road
Wall, New Jersey 07719
877-797-2978
www.Trinity-Solar.com



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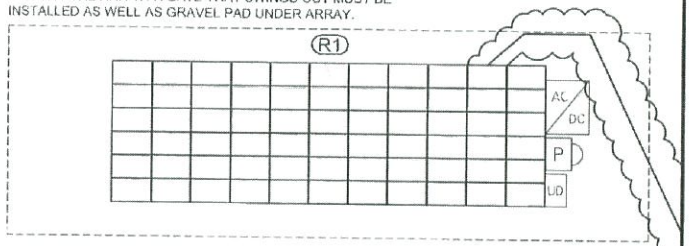
4.) AN AC DISCONNECT SHALL BE GROUPED WITH INVERTER (S). NEC 690.13 (E).
5.) ALL OUTDOOR EQUIPMENT SHALL BE RAIN TIGHT WITH MINIMUM NEMA 3R RATING.

MINIMUM 4' FENCE (NOT EASILY CLIMBABLE) TO BE INSTALLED AROUND THE ARRAY. A GATE THAT SWINGS OUT MUST BE INSTALLED AS WELL AS GRAVEL PAD UNDER ARRAY.



ARRAY SCHEDULE	SYMBOL LEGEND			
R1 ARRAY ORIENTATION = 180 MODULE PITCH = 30°		INDICATES 24" DEEP TRENCHED.	UD	INDICATES NEW UTILITY DISCONNECT TO BE INSTALLED OUTSIDE
	M	INDICATES EXISTING METER LOCATION		INDICATES NEW PV SOLAR MODULE. NEG MODULES INDICATE PANELS THAT USE MICRO INVERTERS. REFER TO EQUIPMENT SCHEDULE FOR SPECS.
	EP	INDICATES EXISTING ELECTRICAL PANEL. LOCATION: INSIDE	P	INDICATES NEW PRODUCTION METER TO BE INSTALLED OUTSIDE.
	D	INDICATES NEW MAIN DISCONNECT TO BE GROUPED WITH MAIN PANEL	DC/AC	INDICATES NEW INVERTER TO BE INSTALLED OUTSIDE. REFER TO EQUIPMENT SCHEDULE FOR SPECS.

EQUIPMENT SCHEDULE	
QTY	SPEC #
66	HANWHA 285 (Q.PEAK-BLK G4.1 285)
1	SE7600A-US
1	SE7600A-US

RICHARD B. GORDON, P.E.
MD.P.E. LIC. # 37741

Issued / Revisions		
R1	LAYOUT REVISED / RACKING DETAILS ADDED	7/5/2017
R1	ADDED TO RUNNING COMMENTS	6/5/2017
NO.	DESCRIPTION	DATE

Project Title:
BECKER, FRANCES
TRINITY ACCT #: 2017-03-133033

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REVISED BY:	DMR

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UTILITY ACCT #:	55014947142
UTILITY METER #:	NXA1160B1002
DEAL TYPE:	CASH

Rev. No.	Sheet
R1	PV - 2

Trinity® SOLAR
2211 Allenwood Road
Wall, New Jersey 07719
877-797-2978
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NOTES:
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ARRAY SCHEDULE

R1
ARRAY ORIENTATION = 180°
MODULE PITCH = 30°

SYMBOL LEGEND

Symbol	Description
(trench)	INDICATES 24" DEEP TRENCHED
M	INDICATES EXISTING METER LOCATION
EP	INDICATES EXISTING ELECTRICAL PANEL LOCATION: INSIDE
D	INDICATES NEW MAIN DISCONNECT TO BE GROUPED WITH MAIN PANEL
UD	INDICATES NEW UTILITY DISCONNECT TO BE INSTALLED OUTSIDE
(module)	INDICATES NEW PV SOLAR MODULE. RED MODULES INDICATE PANELS THAT USE MICRO INVERTERS. REFER TO EQUIPMENT SCHEDULE FOR SPECS.
P	INDICATES NEW PRODUCTION METER TO BE INSTALLED OUTSIDE.
DC/AC	INDICATES NEW INVERTER TO BE INSTALLED OUTSIDE. REFER TO EQUIPMENT SCHEDULE FOR SPECS.

EQUIPMENT SCHEDULE

QTY	SPEC #
66	HANWHA 285 (Q PEAK-BLK G4 1 285)
1	SE7600A-US
1	SE7600A-US

RICHARD B. GORDON, P.E.
MD.P.E. LIC. # 37741

Issued / Revisions

NO.	DESCRIPTION	DATE
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

Project Title:
BECKER, FRANCES
TRINITY ACCT #: 2017-03-133033

Project Address:
4920 GRIFFITH ROAD,
GAITHERSBURG, MD 20882

Drawing Title:
PROPOSED PV SOLAR SYSTEM

Drawing Information

DRAWING DATE:	6/5/2017
DRAWN BY	RF
REVISED BY:	DMR

System Information:

DC SYSTEM SIZE:	18.81kW
AC SYSTEM SIZE:	15.2kW
TOTAL MODULE COUNT:	66
MODULES USED:	HANWHA 285
MODULE SPEC #:	Q.PEAK-BLK G4.1 285
UTILITY COMPANY:	PEPCO
UTILITY ACCT #:	5501494?142
UTILITY METER #:	NXA116051002
DEAL TYPE:	CASH

Rev. No. R1
Sheet PV - 3

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ARRAY CIRCUIT WIRING NOTES

1.) LICENSED ELECTRICIAN ASSUMES ALL RESPONSIBILITY FOR DETERMINING ONSITE CONDITIONS AND EXECUTING INSTALLATION IN ACCORDANCE WITH NEC 2014

2.) LOWEST EXPECTED AMBIENT TEMPERATURE BASED ON ASHRAE MINIMUM MEAN EXTREME DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION. LOWEST EXPECTED AMBIENT TEMP = -16°C

3.) HIGHEST CONTINUOUS AMBIENT TEMPERATURE BASED ON ASHRAE HIGHEST MONTH 2% DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION. HIGHEST CONTINUOUS TEMP = 53°C

4.) 2005 ASHRAE FUNDAMENTALS 2% DESIGN TEMPERATURES DO NOT EXCEED 47°C IN THE UNITED STATES (PALM SPRINGS, CA IS 44.3°C). FOR LESS THAN 4 CURRENT-CARRYING CONDUCTORS IN A ROOF-MOUNTED SUNLIT CONDUIT AT LEAST 0.5" ABOVE ROOF AND USING THE OUTDOOR DESIGN TEMPERATURE OF 47°C OR LESS (ALL OF UNITED STATES)

5.) PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION THAT CONTROLS SPECIFIC CONDUCTORS IN ACCORDANCE WITH NEC 690.12(1) THROUGH (5)

6.) PHOTOVOLTAIC POWER SYSTEMS SHALL BE PERMITTED TO OPERATE WITH UNGROUNDED PHOTOVOLTAIC SOURCE AND OUTPUT CIRCUIT AS PER NEC 690.35

7.) UNGROUNDED DC CIRCUIT CONDUCTORS SHALL BE IDENTIFIED WITH THE FOLLOWING OUTER FINISH:
POSITIVE CONDUCTORS = RED
NEGATIVE CONDUCTORS = BLACK
NEC 210.5(C)(2)

8.) ARRAY AND SUB ARRAY CONDUCTORS SHALL BE #10 PV WIRE (TYP) RHW-2 OR EQUIVELANT AND SHALL BE PROTECTED BY CONDUIT WHERE EXPOSED TO DIRECT SUNLIGHT. SUB ARRAY CONDUIT LONGER THAN 24" SHALL CONTAIN 3 (OR LESS) CURRENT CARRYING CONDUCTORS AND WHERE EXPOSED TO DIRECT SUNLIGHT SHALL CONTAIN 5 (OR LESS) CURRENT CARRYING CONDUCTORS

9.) ALL WIRE LENGTHS SHALL BE LESS THAN 100' UNLESS OTHERWISE NOTED

10.) FLEXIBLE CONDUIT SHALL NOT BE INSTALLED ON ROOFTOP AND SHALL BE LIMITED TO 12" IF USED OUTDOORS

11.) OVERCURRENT PROTECTION FOR CONDUCTORS CONNECTED TO THE SUPPLY SIDE OF A SERVICE SHALL BE LOCATED WITHIN 10' OF THE POINT OF CONNECTION NEC 705.31

12.) WHERE TWO SOURCES FEED A BUSSBAR, ONE A UTILITY AND THE OTHER AN INVERTER, PV BACKFEED BREAKER(S) SHALL BE LOCATED OPPOSITE FROM UTILITY NEC 705.12(D)(2)(3)(b)

13.) ALL SOLAR SYSTEM LOAD CENTERS TO CONTAIN ONLY GENERATION CIRCUITS AND NO UNUSED POSITIONS OR LOADS

14.) ALL EQUIPMENT INSTALLED OUTDOORS SHALL HAVE A NEMA 3R RATING

CALCULATIONS FOR CURRENT CARRYING CONDUCTORS

REQUIRED CONDUCTOR AMPACITY PER STRING
(NEC 690.8(B)(1)): (15.00*1.25)1 = 18.75A

AWG #10, DERATED AMPACITY
AMBIENT TEMP: 33°C, TEMP DERATING FACTOR: .96
RACEWAY DERATING = 8 CCC: 0.70
(40*.96)0.70 = 26.88A

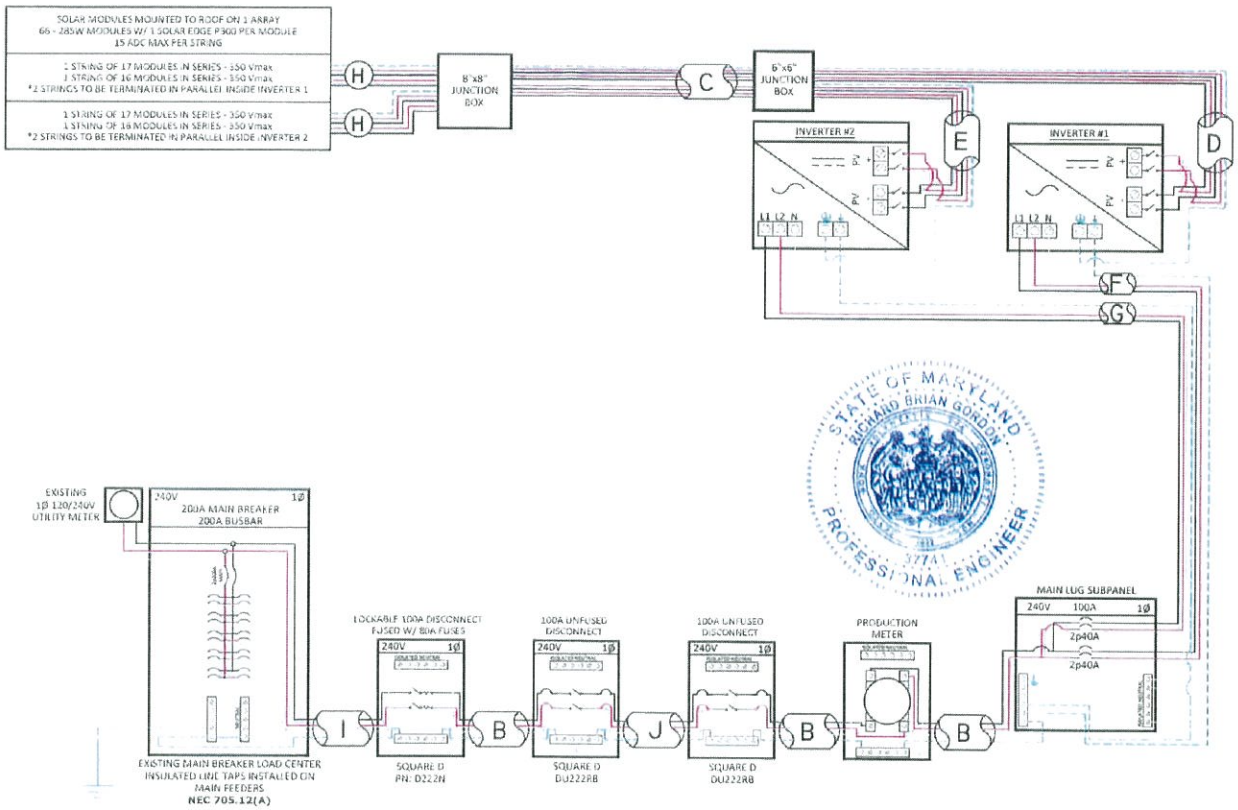
26.88A ≥ 18.75A, THEREFORE WIRE SIZE IS VALID

TOTAL AC REQUIRED CONDUCTOR AMPACITY
64.00A*1.25 = 80.00A

AWG #4, DERATED AMPACITY
AMBIENT TEMP: 30°C, TEMP DERATING: 1.0
RACEWAY DERATING: 3 CCC: N/A
95A*1.0 = 95A

95A ≥ 80.00A, THEREFORE AC WIRE SIZE IS VALID

CALCULATION FOR PV OVERCURRENT PROTECTION
TOTAL INVERTER CURRENT: 64.00A
64.00A*1.25 = 80.00A
→ 80A OVERCURRENT PROTECTION IS VALID



STATE OF MARYLAND
RICHARD BRIAN GORDON
3774
PROFESSIONAL ENGINEER

PV MODULE SPECIFICATIONS	
HANWHA 285 (Q PEAK-BLK G4.1 285)	
Imp	9.98
Vmp	31.72
Voc	38.91
isc	9.56

INVERTER #1 - SE7600A-US			
DC		AC	
Imp	25	Pout	7600
Vmp	350	Imax	32
Voc	500	OCPDmin	40
isc	30	Vnom	240

INVERTER #2 - SE7600A-US			
DC		AC	
Imp	23	Pout	7600
Vmp	350	Imax	32
Voc	500	OCPDmin	40
isc	30	Vnom	240

NOTE: CONDUIT TYPE SHALL BE CHOSEN BY THE INSTALLATION CONTRACTOR TO MEET OR EXCEED NEC AND LOCAL AHJ REQUIREMENTS

A	#6 THWN-2 CEC TO EXISTING GROUND ROD	G	3/4" CONDUIT W/ 2-#8 THWN-2, 1-#10 THWN-2, 1-#10 THWN-2 GROUND
B	1" CONDUIT W/ 2-#4 THWN-2, 1-#8 THWN-2, 1-#8THWN-2 GROUND	H	#10 PV WIRE (FREE AIR) W/ #6 BARE COPPER BOND TO ARRAY
C	3/4" CONDUIT W/ 8 #10 THWN-2, 1 #10 THWN-2 GROUND	I	1" CONDUIT W/ 3-#4 THWN-2, 1-#8 THWN-2 GROUND
D	3/4" CONDUIT W/ 4-#10 THWN-2, 1-#10 THWN-2 GROUND	J	3" PVC W/ 2-400kcmil ALU, 2-1/0 THWN-2 (TRENCHED APPROX. 450')
E	3/4" CONDUIT W/ 4-#10 THWN-2, 1-#10 THWN-2 GROUND		
F	3/4" CONDUIT W/ 2-#8 THWN-2, 1-#10 THWN-2, 1-#10 THWN-2 GROUND		

RICHARD B. GORDON, P.E.
MD.P.E. LIC. # 37741

Issued / Revisions

NO.	DESCRIPTION	DATE
#2	SYSTEM REVISED / ADDED ON THIS REVISION	6/8/2017
#1	SCOPE REVISED / ADDED ON THIS REVISION	6/5/2017

Project Title:
BECKER, FRANCES
TRINITY ACCT #: 2017-03-133033

Project Address:
4920 GRIFFITH ROAD,
GAITHERSBURG, MD 20882

Drawing Title:
PROPOSED PV SOLAR SYSTEM

Drawing Information

DRAWING DATE:	6/5/2017
DRAWN BY:	RF
REVISED BY:	DNR

System Information:

DC SYSTEM SIZE:	19.81KW
AC SYSTEM SIZE:	15.2KW
TOTAL MODULE COUNT:	66
MODULES USED:	HANWHA 285
MODULE SPEC #:	Q.PEAK-BLK G4.1 285
UTILITY COMPANY	PEPCO
UTILITY ACCT #:	9501494214?
UTILITY METER #:	NXA116051002
DEAL TYPE:	CASH

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R1	PV - 4

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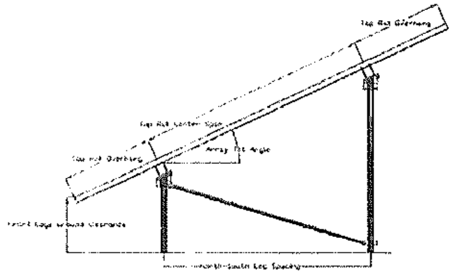
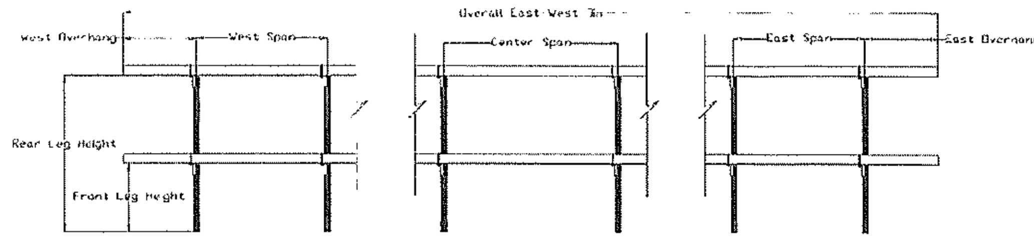
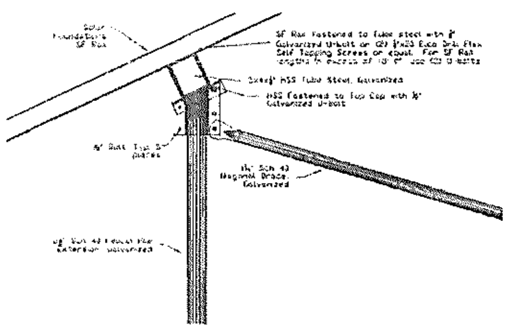


SIDE ELEVATION DETAIL
NOT TO SCALE



POST SPACING ELEVATION DETAIL
NOT TO SCALE



LOWER CAP DETAIL
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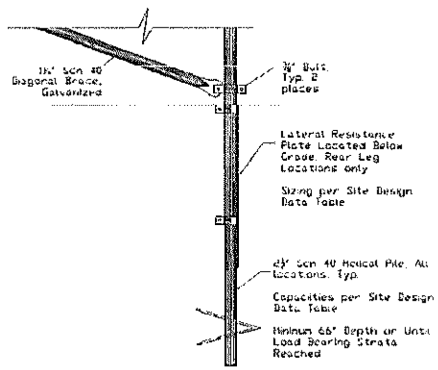

HELICAL PILE AND LATERAL RESISTANCE PLATE DETAIL
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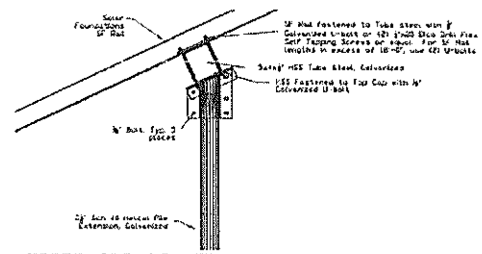

UPPER CAP DETAIL
NOT TO SCALE

Sheet 2 of 3			
Date	Revision	Drawn By	Review By
	Original		

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Project
Becker Residence
4920 Griffith Road
Gaithersburg, MD 20882

Solar Foundations USA

Issued Revisions		
No.	DESCRIPTION	DATE

Project Title:
BECKER, FRANCES

Project Address:
4920 GRIFFITH ROAD,
GAITHERSBURG, MD 20882

Drawing Title:
PROPOSED PV SOLAR SYSTEM

Drawing Information

System Information

Rev. No.: R1

Sheet: PV - 5

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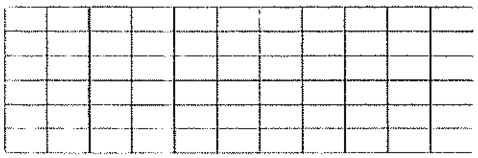
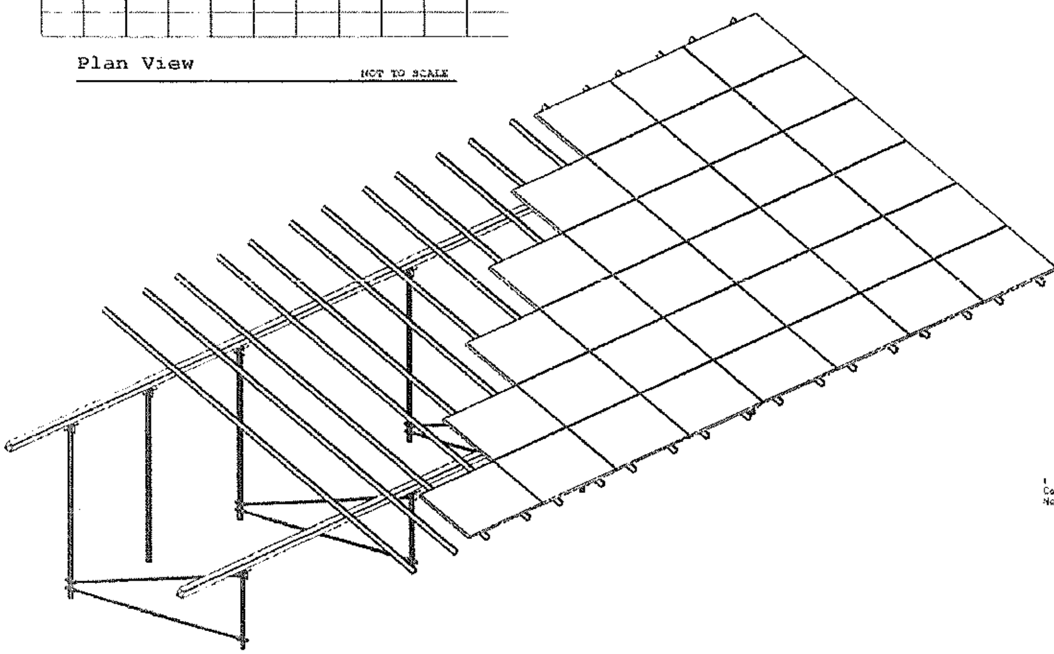


Plan View

NOT TO SCALE



Site Design Conditions

Basic Wind Speed:	105 MPH (Risk Category I)	Max. Leg Axial Bearing:	4,535 lbs.
Ground Snow Load:	30 PSF	Max. Leg Uplift:	2,850 lbs.
Exposure Category:	C	Max. Lateral Resistance:	2,715 lbs.
Site Contour:	<5 Degree Slope	Top Rail Max Loading:	99.4 plf
Helical Pile Depth:	60" Min	Lateral Resistance Plate Size:	Not Req'd

All design work has been performed in accordance with the Maryland Building Performance Standards List of Applicable Codes and Standards dated January 1 2018 including, but not limited to, the 2015 International Building Code with the Department of Housing and Community Development modifications (ref: COMAR 05.02.07).

Net design pressures were calculated in accordance with ASCE 7-10 section 27.4.3, "Open Buildings with Monoslope, Pitched, or Troughed Roofs". All load cases were evaluated in determining the limiting design conditions. The data table above provides the results for the limiting load case. Maximum leg reaction forces represent the highest load condition seen by any leg in the structure. All legs in the structure are designed to meet the maximum load conditions.

6Lx11C Sub-Array Design Conditions

Front Leg Height:	40⅜"	Array Tilt Angle:	30 Degrees
Rear Leg Height:	107⅞"	Overall Array East-West Dim:	60'-6"
North South Leg Spacing:	118"	Number of Modules/Sub-Array:	66
West Span Leg Spacing:	12'-9"	Number of Sub-Arrays:	1
East Span Leg Spacing:	12'-9"	Module Columns/Sub-Array:	11
Quantity Center Spans:	2	Number of Module Rows:	6
Center Span Leg Spacing:	12'-8"	Module Orientation:	Landscape
East & West Overhang:	4'-1"	Module Column Spacing:	1"
Overall Beam Length:	58'-8"	Module Row Spacing:	1"
Front Edge Ground Clearance:	24"	Module Model:	Q.Peak-G4.1
Horizontal Rail Material:	5"x4"x¼" HSS	Module Size:	39.37" x 65.75"
Top Rail Material:	SF Rails	Individual Module Rating:	285 watt
Qty Rails per Panel:	2	Sub Array Power Rating:	18.81 kw
Top Rail Length:	242"	Total Power Rating:	18.81 kw
Top Rail Center Span:	134"		
Top Rail Overhangs:	54"		

1 Additional North Column is to be installed per field direction. The Column is to support equipment mounting needs. It is not required for North beam support.

Sheet 1 of 3

Date	Revision	Drawn By	Review By
	Original		MJ

Trinity Solar

Project
Becker Residence
4920 Griffith Road
Gaithersburg, MD 20882

Solar Foundations USA

Issued / Revisions

No.	DESCRIPTION	DATE

Project Title:
BECKER, FRANCES

Project Address:
4920 GRIFFITH ROAD,
GAITHERSBURG, MD 20882

Drawing Title:
PROPOSED PV SOLAR SYSTEM

Drawing Information

System Information

	18.81kW

Rev. No.: R1

Sheet: PV - 7

Trinity® SOLAR

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MATERIAL LIST

(FOR INTERNAL USE ONLY)

Trinity® SOLAR
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Wall, New Jersey 07719
877-797-2978
www.Trinity-Solar.com

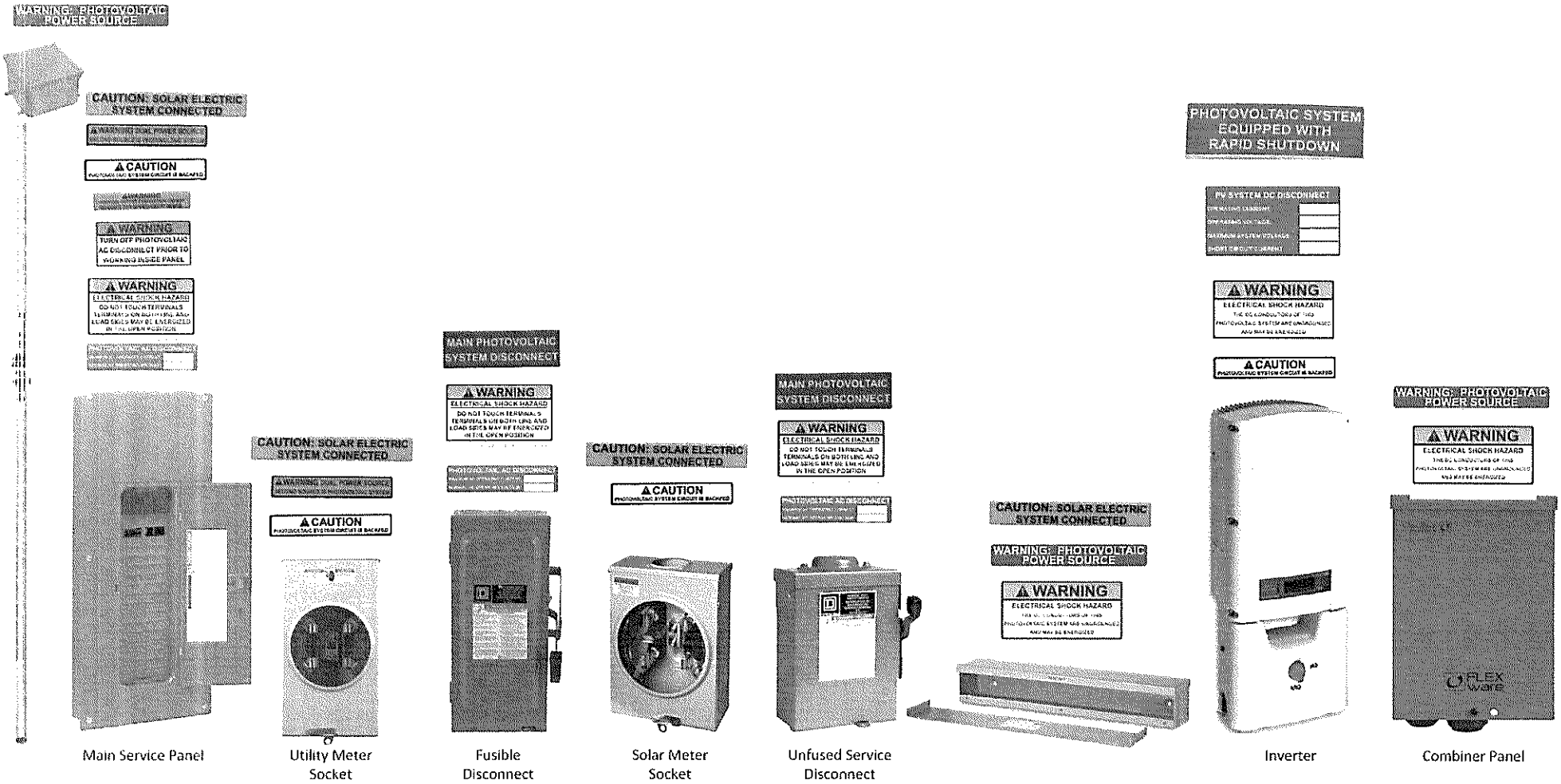
JOB NAME: BECKER, FRANCES
ADDRESS: 4920 GRIFFITH ROAD,
GAITHERSBURG, MD 20882

129.25 ESTIMATED MAN HOURS	5.39 DAYS (3 MEN)	4.04 DAYS (4 MEN)	2.69 DAYS (6 MEN)

- 66 HANWHA 285's (18.81KW)
- 1 ARRAY

- 0 PORTRAIT & 66 LANDSCAPED
- NO PIPES OR VENTS BEINGS RELOCATED OR REMOVED
- 2 INVERTERS INSTALLED OUTSIDE
- 400' TRENCH

		ESTIMATED	SENT TO JOB	USED
☐	HANWHA 285 (Q.PEAK-BLK G4.1 285) --- P300 SE OPTIMIZERS	66	___	___
☐	SE7600A-US	1	___	___
☐	SE7600A-US	1	___	___
☐	4-SPACE SUBPANEL (OUTDOOR)	1	___	___
☐	100A INDOOR FUSED DISCONNECT W/ (2) 80A FUSES	1	___	___
☐	2p40A BREAKER	1	___	___
☐	2p40A BREAKER	1	___	___
☐	(CASH) METER AND METER PAN	1	___	___
☐	100A OUTDOOR NON-FUSED DISCONNECT	1	___	___
☐	SOLADECK BOX(ES) & HAYCO CONNECTOR(S)	1	___	___
☐	14' SECTIONS OF RAIL	0	___	___
☐	INSULATED BUG BITES (LINE TAPS)	2	___	___
☐	FLASHINGS	132	___	___
☐	CASE(S) OF BLACK SPRAY PAINT	3	___	___
☐	CASE(S) OF TAR	3	___	___
☐	PV LEAD WIRE	200'	___	___
☐	T-BOLTS	___	___	___
☐	MID CLIPS	___	___	___
☐	END CLIPS	___	___	___
☐	SPLICE KITS	___	___	___
☐	GROUND LUGS	___	___	___



Main Service Panel | Utility Meter Socket | Fusible Disconnect | Solar Meter Socket | Unfused Service Disconnect | Inverter | Combiner Panel

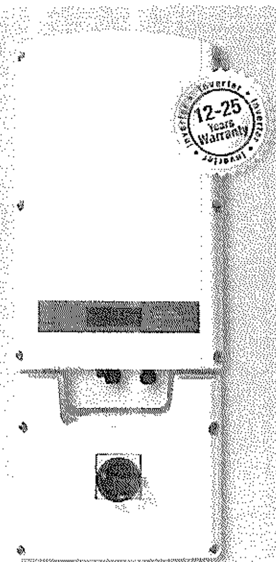
solaredge

SolarEdge Single Phase Inverters

For North America

SE3000A-US / SE3800A-US / SE5000A-US / SE6000A-US / SE7600A-US / SE10000A-US / SE11400A-US

INVERTERS



The best choice for SolarEdge enabled systems

- Integrated arc fault protection for NEC 2011 690.11 compliance
- Rapid shutdown for NEC 2014 690.12
- Superior efficiency (98%)
- Small, lightweight and easy to install on provided bracket
- Built-in module-level monitoring
- Internet connection through Ethernet or Wireless
- Outdoor and indoor installation
- Fixed voltage inverter, DC/AC conversion only
- Pre-assembled Safety Switch for faster installation
- Optional – revenue grade data, ANSI C12.1

[illegible]

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Single Phase Inverters for North America

SE3000A-US / SE3800A-US / SE5000A-US / SE6000A-US / SE7600A-US / SE10000A-US / SE11400A-US

	SE3000A-US	SE3800A-US	SE5000A-US	SE6000A-US	SE7600A-US	SE10000A-US	SE11400A-US	
OUTPUT								
Nominal AC Power Output	3000	3800	5000	6000	7600	9980 @ 208V 10000 @ 240V	11400	VA
Max. AC Power Output	3300	4150	5400 @ 208V 5450 @ 240V	6000	8350	10800 @ 208V 10950 @ 240V	12000	VA
AC Output Voltage Min.-Nom.-Max. 183 - 208 - 229 Vac			✓			✓		
AC Output Voltage Min.-Nom.-Max. 211 - 240 - 264 Vac	✓	✓	✓	✓	✓	✓	✓	
AC Frequency Min.-Nom.-Max.				59.3 - 60 - 60.5				Hz
Max. Continuous Output Current	12.5	16	24 @ 208V 21 @ 240V	25	32	48 @ 208V 42 @ 240V	47.5	A
GFDI Threshold				1				A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds				Yes				Yes
INPUT								
Maximum DC Power (STC)	4050	5100	6750	8100	10250	13500	15350	W
Transformer-less, Ungrounded				Yes				
Max. Input Voltage				500				Vdc
Nom. DC Input Voltage				325 @ 208V / 350 @ 240V				Vdc
Max. Input Current	9.5	13	16.5 @ 208V 15.5 @ 240V	18	23	33 @ 208V 30.5 @ 240V	34.5	Adc
Max. Input Short Circuit Current				45				Adc
Reverse-Polarity Protection				Yes				
Ground-Fault Isolation Detection				600kΩ Sensitivity				
Maximum Inverter Efficiency	97.7	98.2	98.3	98.3	98	98	98	%
CEC Weighted Efficiency	97.5	98	97 @ 208V 98 @ 240V	97.5	97.5	97 @ 208V 97.5 @ 240V	97.5	%
Nighttime Power Consumption			< 2.5			< 4		W
ADDITIONAL FEATURES								
Supported Communication Interfaces				RS485, RS232, Ethernet, ZigBee (optional)				
Revenue Grade Data, ANSI C12.1				Optional[1]				
Rapid Shutdown – NEC 2014 690.12				Yes				
STANDARD COMPLIANCE								
Safety				UL1741, UL1699B, UL1998, CSA 22.2				
Grid Connection Standards				IEEE1547				
Emissions				FCC part15 class B				
INSTALLATION SPECIFICATIONS								
AC output conduit size / AWG range			3/4" minimum / 16-6 AWG			3/4" minimum / 8-3 AWG		
DC input conduit size / # of strings / AWG range			3/4" minimum / 1-2 strings / 16-6 AWG			3/4" minimum / 1-3 strings / 14-6 AWG		
Dimensions with Safety Switch (HxWxD)			30.5 x 12.5 x 7.2 / 775 x 315 x 184			30.5 x 12.5 x 10.5 / 775 x 315 x 260		in / mm
Weight with Safety Switch	51.2 / 23.2			54.7 / 24.7		88.4 / 40.1		lb / kg
Cooling			Natural convection		Natural convection and internal fan (user replaceable)	Fans (user replaceable)		
Noise			< 25			< 50		dBA
Min.-Max. Operating Temperature Range				-13 to +140 / -25 to +60 (-40 to +60 version available)				°F / °C
Protection Rating				NEMA 3R				

[illegible]

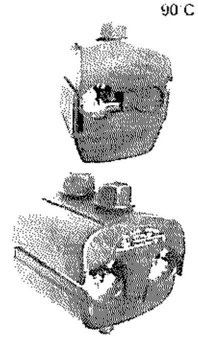
RoHS

GREAVES

POWER DISTRIBUTION

BUG•BITES™

CU9AL
90°C



Insulation Piercing Connectors
Eliminates need for conductor insulation stripping
No taping required after installation
For copper to copper, copper to aluminum, or aluminum to aluminum applications
For use on insulated conductor only

IPC SERIES

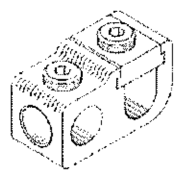
NAED NUMBER	CATALOG NUMBER	WIRE RANGE MAIN	WIRE RANGE TAP	VOLTS	BOLTS	TORQUE FT-LBS	CTN QTY	EST. SHIPPING WEIGHT	UNIT
[illegible]	IPC 1002	[illegible]	[illegible]	[illegible]		16	12	[illegible]	CTN
[illegible]	IPC 4006	[illegible] - 4	[illegible] - 14	[illegible]		11	12	1.90	CTN
[illegible]	IPC 4020	[illegible]	[illegible]	[illegible]		25	12	[illegible]	CTN
[illegible]	IPC 2540	[illegible]	[illegible] - 6	600		30	6	4.17	CTN
[illegible]	IPC 3540	[illegible]	[illegible] - 10	300		25	6	4.17	CTN
[illegible]	IPC 3525	[illegible]	350 - 4.0	200	2	25	6	7.63	CTN
[illegible]	†IPC 5012	[illegible]	[illegible] - 12	[illegible]		25	4	2.65	CTN
[illegible]	†IPC 5025	500 - [illegible]	250 - 4	600		55	4	4.56	CTN
[illegible]	†IPC 5050	500 - [illegible]	500 - 250	600		75		2.64	EA
[illegible]	†IPC 7550	750 - [illegible]	[illegible]	600		75		7.62	EA

[illegible] 480 Volts (for 480V grounded Y systems)
[illegible] CSA certified

CAUTION
Use Bug•Bites on insulated cable only!
Do not install on bare cable

GUTTER TAP CONNECTORS

Dual-Rated
CU9AL
600V 90°C



High strength aluminum alloy 6061-T6, tin-plated
Lay-in designed main conductor remains continuous
Tap parallel or perpendicular to main

GP SERIES

NAED NUMBER	CATALOG NUMBER	CONDUCTOR RANGE MAIN	CONDUCTOR RANGE TAP	APPROX. DIMENSIONS (IN) H	W	L	CTN QTY	EST. SHIPPING WEIGHT	UNIT
[illegible]	GP 2*	[illegible]	[illegible] - 12 SOL	7/8	5/8	[illegible]	24	[illegible]	CTN
[illegible]	GP 10	1/0 - 2	1/0 - 12 SOL	[illegible]	3/4	[illegible]	12	[illegible]	CTN
[illegible]	GP 250	250 - [illegible]	250 - 6	[illegible]	[illegible]	[illegible]	12	[illegible]	CTN
[illegible]	GP 350	350 - 4/0	350 - 6	[illegible]	[illegible]	[illegible]	6	[illegible]	CTN
[illegible]	GP 500	500 - 250	500 - 2	[illegible]	[illegible]	[illegible]	6	[illegible]	CTN
[illegible]	GP 750	750 - 500	500 - 2	2	[illegible]	[illegible]	3	2.5	CTN

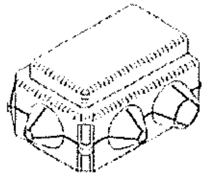
[illegible] slotted screws
[illegible] recommended for added corrosion protection

For copper-to-copper,
copper-to-aluminum,
aluminum-to-aluminum

600V 90°C
For indoor use only

Snap-on insulating covers for use with GP connectors

GPC SERIES



NAED NUMBER	CATALOG NUMBER	FOR USE WITH CONNECTOR	COLOR	APPROX. DIMENSIONS (IN) H	W	L	CTN QTY	EST. SHIPPING WEIGHT	UNIT
[illegible]	GPC 2	GP2	YELLOW	[illegible]	[illegible]	[illegible]	12	0.46	CTN
[illegible]	GPC 10	GP10	GRAY	[illegible]	[illegible]	[illegible]	6	0.36	CTN
[illegible]	GPC 250	GP250	RED	[illegible]	[illegible]	[illegible]	6	0.40	CTN
[illegible]	GPC 350	GP350	YELLOW	[illegible]	[illegible]	[illegible]	3	0.42	CTN
[illegible]	GPC 500	GP500	BLUE	[illegible]	[illegible]	[illegible]	3	0.46	CTN
[illegible]	GPC 750	GP750	ORANGE	[illegible]	[illegible]	[illegible]	3	0.65	CTN

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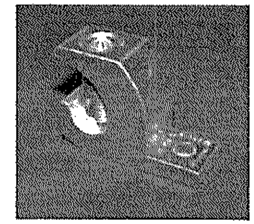
TOLL FREE 1-800-243-1130 (Outside CT)

Grounding Connectors

TYPE: LI Lay-In Connector



90°C RATING (4868 LISTED)

CMC® LI-S ground connectors are manufactured from high strength 6061-T6 aluminum alloy to insure both maximum strength and conductivity. They are dual rated for both copper and aluminum conductors and are electro tin plated to provide low contact resistance and protection against corrosion. They are designed for use on conduit grounding bushings. The open-faced design allows the installer to quickly lay-in the grounding conductor as a jumper to multiple conduits with no break in the ground conductor.

Catalog Number	Fig. No.	Cond. Range AWG	Stud Size*	Dimensions, Inches H	W	L
LI-50S	1	4 - 14	0.22	0.78	0.38	1.07
LI-112S	1	1/0 - 14	0.27	1.17	0.6	1.5
LI-200S	2	3/0 - 6	0.33	1.56	0.8	2
LI-252S	2	250 - 6	0.33	1.79	0.8	2.2