



# Building Permit Application

Howard County Maryland  
Department of Inspections, Licenses and Permits  
3430 Court House Drive  
Permits: 410-313-2455  
www.howardcountymd.gov

Date Received: \_\_\_\_\_

Permit No.: \_\_\_\_\_

Building Address: 14705 Triadelphia Mill Rd.  
City: Dayton State: MD Zip Code: 21036  
Suite/Apt. #: \_\_\_\_\_ SDP/WP/BA #: \_\_\_\_\_  
Census Tract: \_\_\_\_\_ Subdivision: 0000  
Section: \_\_\_\_\_ Area: \_\_\_\_\_ Lot: 3  
Tax Map: 0027 Parcel: 0124 Grid: \_\_\_\_\_  
Zoning: \_\_\_\_\_ Map Coordinates: \_\_\_\_\_ Lot Size: 3,660 AC

Existing Use: \_\_\_\_\_

Proposed Use: \_\_\_\_\_

Estimated Construction Cost: \$ 39,000

Description of Work: Install 51 ground MTD PV solar Panels, 2 inverters, 1 80 Amp line side TAP

Occupant or Tenant: \_\_\_\_\_

Was tenant space previously occupied?  Yes  No

Contact Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Property Owner's Name: Joseph Pack  
Address: 14705 Triadelphia Mill Rd.  
City: Dayton State: MD Zip Code: 21036  
Phone: 202-437-9131 Fax: \_\_\_\_\_  
Email: jpacksr@netscape.net

Applicant's Name & Mailing Address, (If other than stated herein)  
Applicant's Name: Benjamin Molina  
Address: 5681 Main St.  
City: Elkridge State: MD Zip Code: 21075  
Phone: 410-579-2009 Fax: \_\_\_\_\_  
Email: jprovin@solarenergyworld.com

Contractor Company: Solar Energy world  
Contact Person: ~~Jeff Provan~~ Geoff Mickin  
Address: 5681 Main St.  
City: Elkridge State: MD Zip Code: 21075  
License No.: 127353  
Phone: 410-579-2009 Fax: \_\_\_\_\_  
Email: jprovin@solarenergyworld.com

Engineer/Architect Company: \_\_\_\_\_

Responsible Design Prof.: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Commercial Building Characteristics	Residential Building Characteristics	
Height:	<input type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	
No. of stories:	Depth	Width
Gross area, sq. ft./floor:	1 <sup>st</sup> floor:	
	2 <sup>nd</sup> floor:	
Area of construction (sq. ft.):	Basement:	
	<input type="checkbox"/> Finished Basement	
Use group:	<input type="checkbox"/> Unfinished Basement	
	<input type="checkbox"/> Craw Space	
<b>Construction type:</b>	<input type="checkbox"/> Slab on Grade	
<input type="checkbox"/> Reinforced Concrete	No. of Bedrooms:	
<input type="checkbox"/> Structural Steel	<b>Multi-family Dwelling</b>	
<input type="checkbox"/> Masonry	No. of efficiency units:	
<input type="checkbox"/> Wood Frame	No. of 1 BR units:	
<input type="checkbox"/> State Certified Modular	No. of 2 BR units:	
	No. of 3 BR units:	
	Other Structure:	
	Dimensions:	
<input checked="" type="checkbox"/> Roadside Tree Project Permit	Footings:	
<input type="checkbox"/> Yes <input type="checkbox"/> No	Roof:	
Roadside Tree Project Permit #	<input type="checkbox"/> State Certified Modular	
	<input type="checkbox"/> Manufactured Home	

Utilities	
<b>Water Supply</b>	
<input type="checkbox"/> Public	
<input type="checkbox"/> Private	
<b>Sewage Disposal</b>	
<input type="checkbox"/> Public	
<input type="checkbox"/> Private	
Electric: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Gas: <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Heating System</b>	
<input type="checkbox"/> Electric <input type="checkbox"/> Oil	
<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas	
<input type="checkbox"/> Other:	
<b>Sprinkler System:</b>	
<input type="checkbox"/> Yes <input type="checkbox"/> No	
Grading Permit Number:	
Building Shell Permit Number:	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature: [Signature]  
Email Address: jprovin@solarenergyworld.com  
Title/Company: Solar Energy World

Print Name: Benjamin Molina  
Date: 1/11/16

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY  
\*\*PLEASE WRITE NEATLY & LEGIBLY\*\*  
-FOR OFFICE USE ONLY-

AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA ( Zoning )		
PSZA ( Engineering )		
Health	<u>1/11/16</u>	<u>[Signature]</u>

Is Sediment Control approval required for issuance?  Yes  No  
 CONTINGENCY CONSTRUCTION START

DPZ SETBACK INFORMATION
Front:
Rear:
Side:
Side St.:
All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone:
SDP/Red-line approval date:

Filing Fee	\$
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$
Add'l per Fee	\$
Total Fees	\$
Sub-Total Paid	\$
Balance Due	\$
Check	#

Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA

SITE INSPECTION SHEET

OWNER: Joseph Pack PHONE #: 202-437-9139  
ADDRESS: 14705 Triadelphia Mill Rd. CONTRACTOR: Geoff Mirkin  
Peyton MD 21036 WELL TAG #: \_\_\_\_\_  
SUBDIVISION: \_\_\_\_\_ LOT: \_\_\_\_\_ COUNTY #: \_\_\_\_\_  
PROPOSAL: Need site loc for well and septic

LOCATION DIAGRAM

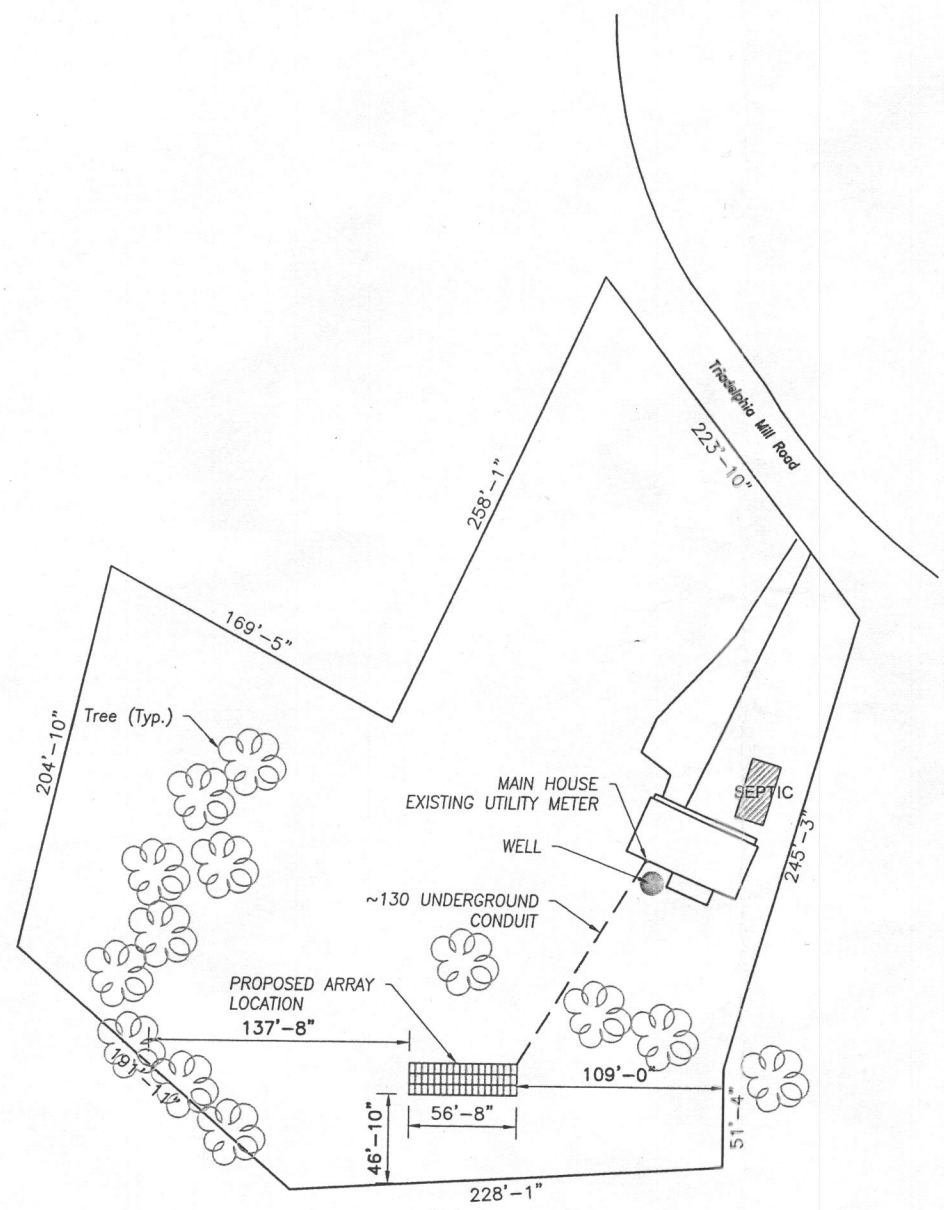


COMMENTS: Septic tank is a terracotta pipe 37ft from  
the back of the house on an angle. Found no sign  
of well outside the house were proposed.

DATE: 1/12/16 INSPECTOR: Spencer Freeman



SolarEnergyWorld  
Tomorrow's Energy Today  
Solar Energy World LLC.  
5681 Main Street  
Elkridge, MD 21075  
(888) 497-3233



APPROVED  
WALK-THRU BUILDING PERMIT  
BP# \_\_\_\_\_ A# \_\_\_\_\_  
APP. SAN *for the total* DATE: *1/11/16*  
DESC. OF WORK: *Install Ground Solar Panels as shown.*  
*\*No well & septic records found.*  
*Ready Site Inspection.*



SITE PLAN

- NOTES:
1. THIS DRAWING IS TO PROVIDE REFERENCE FOR THE INSTALLATION OF GROUND MOUNT PHOTOVOLTAIC ARRAYS.
  2. THE SYSTEM SHALL INCLUDE [51] TRINA TSM-260W MODULES [DIMENSIONS:64.95 (L) x 39.05(W) x 1.37 (D)] AND WEIGHING 41.0 LBS (PANEL DEAD LOAD = 2.67PSF)]

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 41161, EXPIRATION DATE: OCTOBER 18, 2017.

Stamp

Project Name and Address  
Joseph Pack (SR)  
14705 Triadelphia Mill Rd,  
Dayton, MD, 21036  
13.26 kw

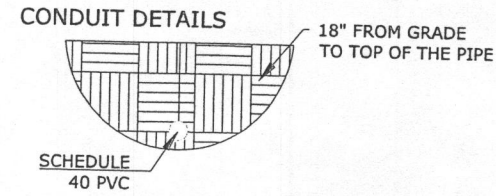
Drawn by  
AAA  
Date  
25-NOV-2015  
Scale  
1" = 100'

Sheet  
01

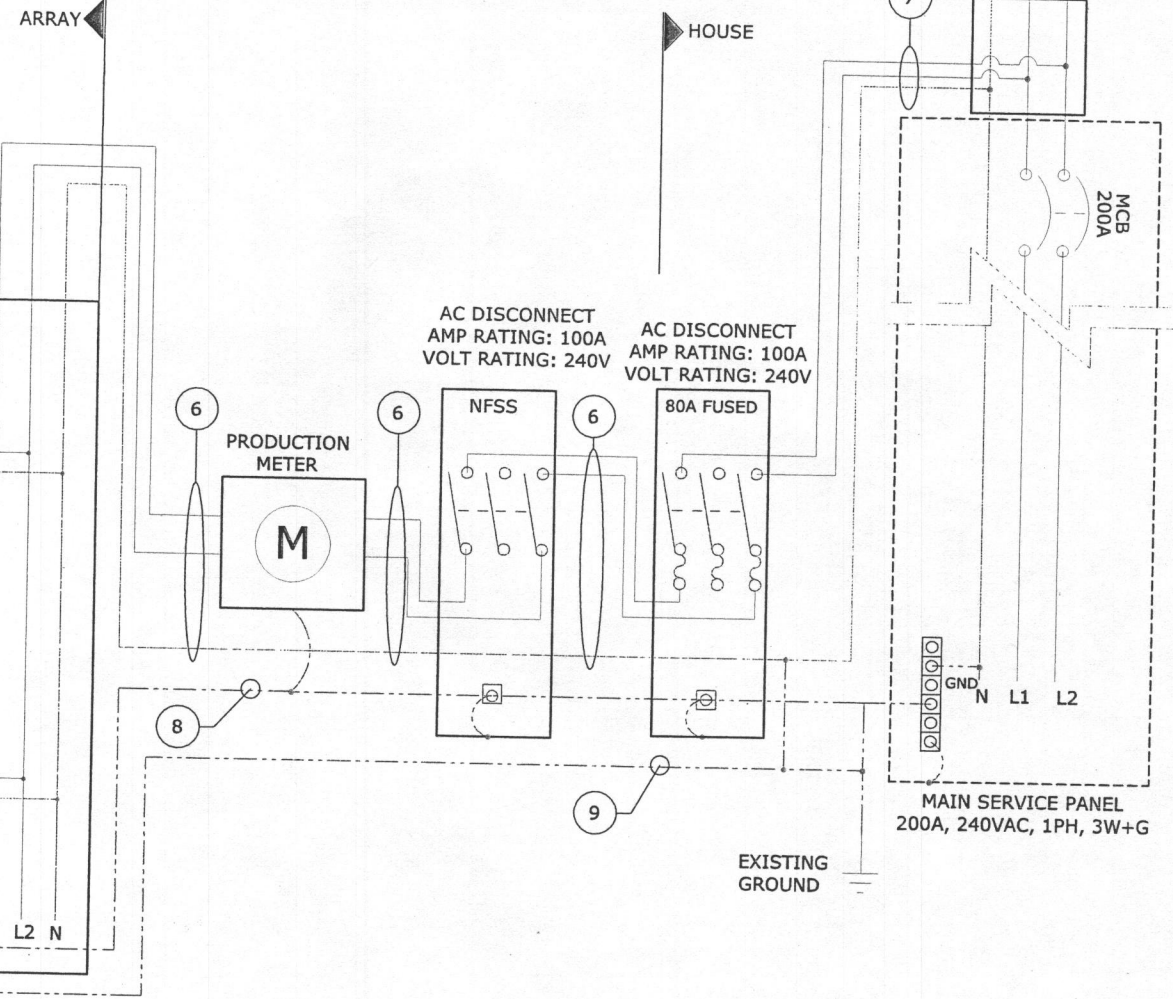


ARRAY A  
MPPT1: 1 STRING OF 13 MODULES  
MPPT2: 1 STRING OF 13 MODULES

ARRAY B  
MPPT1: 1 STRING OF 13 MODULES  
MPPT2: 1 STRING OF 12 MODULES



~130' ARRAY TO INTERCONNECTION POINT



INVERTER #1  
DC INTERFACE Sunny Boy 7000TL-US-22  
INTEGRATED DC 7000W, 96.5% CEC  
DISCONNECT 240AC, 29.2A AC INTERFACE

INVERTER #2  
DC INTERFACE Sunny Boy 7000TL-US-22  
INTEGRATED DC 7000W, 96.5% CEC  
DISCONNECT 240AC, 29.2A AC INTERFACE

SOLAR LOAD CENTER 100A,  
240VAC, 1PH 3W+G

AC DISCONNECT  
AMP RATING: 100A  
VOLT RATING: 240V

MAIN SERVICE PANEL  
200A, 240VAC, 1PH, 3W+G

1 SINGLE LINE DIAGRAM  
SCALE: NA

Module Specs	
Model Type	TSM-PD05.08 TRINA 260
Power	260 W
Rated Voltage (Vmp)	30.6 V
Rated Current (Imp)	8.50 A
Open Circuit Voltage (Voc)	38.20 V
Short Circuit Current (Isc)	9.0 A
Maximum Sys Voltage	600VDC

	Inverters Spec's		SB7000TL-US-22		SB7000TL-US-22	
	MPPT 1	MPPT2	MPPT 1	MPPT2	MPPT 1	MPPT2
Maximum DC Voltage	600 V	600 V	600 V	600 V	5000 W	5000 W
Maximum Power Output	7680 W	7680 W	7680 W	7680 W	240 V	240 V
Nominal AC Voltage	240 VAC	240 VAC	240 VAC	240 VAC	32 A	22 A
Maximum AC Current	32 A	22 A	32 A	22 A	ARRAY A DETAILS	
					ARRAY B DETAILS	
NO. OF MODULE PER STRING	12	13	13	13		
NO. OF STRINGS	1	1	1	1		
ARRAY WATTS AT STC	3120	3380	3380	3380		
ARRAY WATTS AT PTC	3010	3261	3261	3261		
MAX. VOLTAGE	517	560	560	560		
	690.53 Label Info					
Rated Voltage	414.20 V	448.72 V	448.72 V	448.72 V		
Rated Current	10.63 A	10.63 A	10.63 A	10.63 A		
Maximum System Voltage	517.08 V	560.16 V	560.16 V	560.16 V		
Short Circuit Current	11.25 A	11.25 A	11.25 A	11.25 A		

WIRE/CONDUIT SCHEDULE ARRAY			
TAG	DESCRIPTION	WIRE SIZE/TYPE	NOTES
1	Panel to Transition Box	#10 USE-2	
2	Transition Box to DC Disconnect	#10 THHN/THWN IN EMT	
3	DC Disconnect to Inverter	NA	Integrated
4	Inverter to Solar Load Center	#8 THHN/THWN IN EMT	
5	Inverter to Solar Load Center	#8 THHN/THWN IN EMT	
6	Solar Load Center to Fused AC Disconnect	#4 THHN/THWN IN EMT OR #2 SER ALUMINUM	
7	Fused AC Disconnect to Interconnection Point	#4 Cu	
8	Equipment Grounding Conductor	#8 Cu	
9	Grounding Electrode Conductor	#8 Cu	
10	Bare Copper Wire	#10 Cu	Equipment Grounding Conductor

- GENERAL ELECTRICAL NOTES:
- EQUIPMENT USED SHALL BE NEW, UNLESS OTHERWISE NOTED.
  - EQUIPMENT USED SHALL BE UL LISTED, UNLESS OTHERWISE NOTED.
  - EQUIPMENT SHALL BE INSTALLED PROVIDING ADEQUATE PHYSICAL WORKING SPACE AROUND THE EQUIPMENT AND SHALL COMPLY WITH NEC.
  - MODULES SHALL BE NEGATIVELY GROUNDED. GROUNDED (NEGATIVE) CONDUCTORS SHALL BE UN-FUSED AND UN-BROKEN FROM THE ARRAY TO THE INVERTER DC TERMINAL. UN-GROUNDED (POSITIVE) CONDUCTORS SHALL BE FUSED AND/OR SWITCHED.
  - COPPER CONDUCTORS SHALL BE USED AND SHALL HAVE INSULATION RATING 600V, 90°C, UNLESS OTHERWISE NOTED.
  - CONDUCTORS SHALL BE SIZED IN ACCORDANCE TO NEC. CONDUCTORS AMPACITY SHALL BE DE-RATED FOR TEMPERATURE INCREASE, CONDUIT FILL AND VOLTAGE DROP.
  - ALL CONDUCTORS, EXCEPT USE-2, SHALL BE INSTALLED IN APPROVED CONDUITS OR RACEWAY. CONDUITS SHALL BE ADEQUATELY SUPPORTED AS PER NEC.
  - AC DISCONNECT SHOWN IS REQUIRED IF THE UTILITY REQUIRES VISIBLE-BLADE SWITCH.
  - EXPOSED NON-CURRENT CARRYING METAL PARTS SHALL BE GROUNDED AS PER NEC.
  - LOAD SIDE INTER-CONNECTION SHALL COMPLY WITH NEC
  - ASHRAE FUNDAMENTALS OUTDOOR DESIGN TEMPERATURES DO NOT EXCEED 47°C IN THE U.S. (PHOENIX, AZ or PALM SPRINGS, CA)
  - FOR LESS THAN 9 CURRENT-CARRYING CONDUCTORS IN ROOF MOUNTED SUNLIGHT CONDUIT USING THE OUTDOOR TEMPERATURE OF 47°C
  - 12.1. 12AWG CONDUCTOR ARE GENERALLY ACCEPTABLE FOR MODULES WITH AN Isc OF 6.4 AMPS WITH A 10 AMP FUSE.
  - 12.2. 10AWG CONDUCTOR ARE GENERALLY ACCEPTABLE FOR MODULES WITH AN Isc OF 9.6 AMPS WITH A 15 AMP FUSE.
  - BREAKER SHALL BE INSTALLED IN ACCORDANCE WITH 690.94
- Wire sizing for OCPD  
Ex(Isc\*(1.25)/(1.25)(# of strings in parallel))= wire ampacity or using NEC table 690.8)

Solar World  
5661 Main Street  
Elkridge, MD 21075  
(888) 497-3233

ENGINEER'S STAMP

Pack, Joseph Residence (SR)  
13.26 kW  
14705 Triadelphia Mill Rd,  
Dayton, MD, 21036

SINGLE LINE DIAGRAM

REV	QUOTE #	DESCRIPTION	DATE	BY	CB

OPPORTUNITY -

PROJECT -

DATE DRAWN 11/30/15

DRAWN BY DTK

DMS #: REV. \*\*

SHEET E1