



## HISTORIC PRESERVATION COMMISSION

**Marc Elrich**  
*County Executive*

**Robert Sutton**  
*Chairman*

Date: November 15, 2024

### MEMORANDUM

TO: Rabbiah Sabbakhan  
Department of Permitting Services

FROM: Laura DiPasquale  
Historic Preservation Section  
Maryland-National Capital Park & Planning Commission

SUBJECT: Historic Area Work Permit #1092457 – Solar panel installation

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The Montgomery County Historic Preservation Commission (HPC) has reviewed the attached application for a Historic Area Work Permit (HAWP). This application was **Approved** by HPC staff.

The HPC staff has reviewed and stamped the attached submission materials.

THE BUILDING PERMIT FOR THIS PROJECT SHALL BE ISSUED CONDITIONAL UPON ADHERENCE TO THE ABOVE APPROVED HAWP CONDITIONS AND MAY REQUIRE APPROVAL BY DPS OR ANOTHER LOCAL OFFICE BEFORE WORK CAN BEGIN.

Applicant: Charles Bergmann; Tina Crouse (Agent)  
Address: 920 Old Bucklodge Lane, Boyds

This HAWP approval is subject to the general condition that the applicant will obtain all other applicable Montgomery County or local government agency permits. After the issuance of these permits, the applicant must contact this Historic Preservation Office if any changes to the approved plan are made. Once work is complete, the applicant will contact Laura DiPasquale at 301-495-2167 or [laura.dipasquale@montgomeryplanning.org](mailto:laura.dipasquale@montgomeryplanning.org) to schedule a follow-up site visit.





HISTORIC PRESERVATION COMMISSION

HAWP #: \_\_\_\_\_ at: \_\_\_\_\_
submitted on: \_\_\_\_\_
has been reviewed and determined that the proposal fits into the following category/categories:

- Repair or replacement of a masonry foundation with new masonry materials that closely match the original in appearance;
Installation of vents or venting pipes in locations not visible from the public right-of-way;
New gutters and downspouts;
Removal of vinyl, aluminum, asbestos, or other artificial siding when the original siding is to be repaired and/or replaced in kind;
Removal of accessory buildings that are not original to the site or non-historic construction;
Repair or replacement of missing or deteriorated architectural details such as trim or other millwork, stairs or stoops, porch decking or ceilings, columns, railings, balusters, brackets shutters, etc., with new materials that match the old in design, texture, visual characteristics, and, where possible materials, so long as the applicant is able to provide one extant example, photographic evidence, or physical evidence that serves as the basis for the work proposed;
Construction of wooden decks that are at the rear of a structure and are not visible from a public right-of-way;
Roof replacement with -compatible roofing materials, or with architectural shingles replacing 3-Tab asphalt shingles;
Installation of storm windows or doors that are compatible with the historic resource or district;
Repair, replacement or installation of foundation-level doors, windows, window wells, and areaways, or foundation vents, venting pipes, or exterior grills that do not alter the character-defining features and/or the historic character of the resource;
Construction of fences that are compatible with the historic site or district in material, height, location, and design;
Fence is lower than 48" in front of rear wall plane;

- Construction of walkways, parking pads, patios, driveways, or other paved areas that are not visible from a public right-of-way and measure no more than 150 square feet in size;
Replacement of existing walkways, parking pads, patios, driveways, or other paved areas with materials that are compatible with the visual character of the historic site and district and that are no greater than the dimensions of the existing hardscape;
Construction of small accessory buildings no larger than 250 square feet in size that are not visible from the public right-of-way;
Installations of skylights on the rear of a structure that will not be visible from the public right-of-way, and would not remove or alter character-defining roof materials;
Installation of solar panels and arrays in locations that are not readily visible from the public right-of-way or that are designed so as to have a minimal impact on the historic resource or the historic district (e.g., systems that are ground-mounted in areas other than the front or side yard of a corner lot, located on accessory or outbuildings, on non-historic additions, or on rear facing roof planes);
Installation of car charging stations in any location on a property or in the right-of-way;
Installation of satellite dishes;
Removal of trees greater than 6" in diameter (d.b.h.) that are dead, dying, or present an immediate hazard.
Removal of trees greater than 6" in diameter (d.b.h.) in the rear of the property that will not impact the overall tree canopy of the surrounding district or historic site;
Replacement tree required as a condition; and,
Other minor alterations that may be required by the Department of Permitting Services post-Commission approval that would have no material effect on the historic character of the property.

Staff finds the proposal complies with Chapter 24A, the Secretary of the Interior's Standards for Rehabilitation, and any additional requisite guidance. Under the authority of COMCOR No. 24A.04.01, this HAWP is approved by Laura D. Paguale on 11/15/2024. The approval memo and stamped drawings follow.



APPLICATION FOR HISTORIC AREA WORK PERMIT
HISTORIC PRESERVATION COMMISSION
301.563.3400

FOR STAFF ONLY:
HAWP# 1092457
DATE ASSIGNED

APPLICANT:

Name: E-mail:
Address: City: Zip:
Daytime Phone: Tax Account No.:

AGENT/CONTACT (if applicable):

Name: E-mail:
Address: City: Zip:
Daytime Phone: Contractor Registration No.:

LOCATION OF BUILDING/PREMISE: MIHP # of Historic Property

Is the Property Located within an Historic District? Yes/District Name
No/Individual Site Name

Is there an Historic Preservation/Land Trust/Environmental Easement on the Property? If YES, include a map of the easement, and documentation from the Easement Holder supporting this application.

Are other Planning and/or Hearing Examiner Approvals /Reviews Required as part of this Application? (Conditional Use, Variance, Record Plat, etc.?) If YES, include information on these reviews as supplemental information.

Building Number: Street:

Town/City: Nearest Cross Street:

Lot: Block: Subdivision: Parcel:

TYPE OF WORK PROPOSED: See the checklist on Page 4 to verify that all supporting items for proposed work are submitted with this application. Incomplete Applications will not be accepted for review. Check all that apply:

- New Construction, Addition, Demolition, Grading/Excavation, Deck/Porch, Fence, Hardscape/Landscape, Roof, Shed/Garage/Accessory Structure, Solar, Tree removal/planting, Window/Door, Other:

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

Tina Crouse

Signature of owner or authorized agent

Date

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

<b>Owner's mailing address</b>	<b>Owner's Agent's mailing address</b>
<b>Adjacent and confronting Property Owners mailing addresses</b>	

Description of Property: Please describe the building and surrounding environment. Include information on significant structures, landscape features, or other significant features of the property:

Description of Work Proposed: Please give an overview of the work to be undertaken:

**REVIEWED**

By Laura DiPasquale, M-NCPPC at 12:09 pm, Nov 15, 2024

APPROVED

Montgomery County

Historic Preservation Commission



Robert H. Patton



Front of Structure

**REVIEWED**  
By Laura DiPasquale, M-NCPPC at 12:09 pm, Nov 15, 2024

APPROVED  
Montgomery County  
Historic Preservation Commission  
*Robert H. [Signature]*



Right Side of Structure

**REVIEWED**  
By Laura DiPasquale, M-NCPPC at 12:09 pm, Nov 15, 2024

APPROVED  
Montgomery County  
Historic Preservation Commission  




Underground conduit to run from detached  
Structure to Utility Meter.

**REVIEWED**

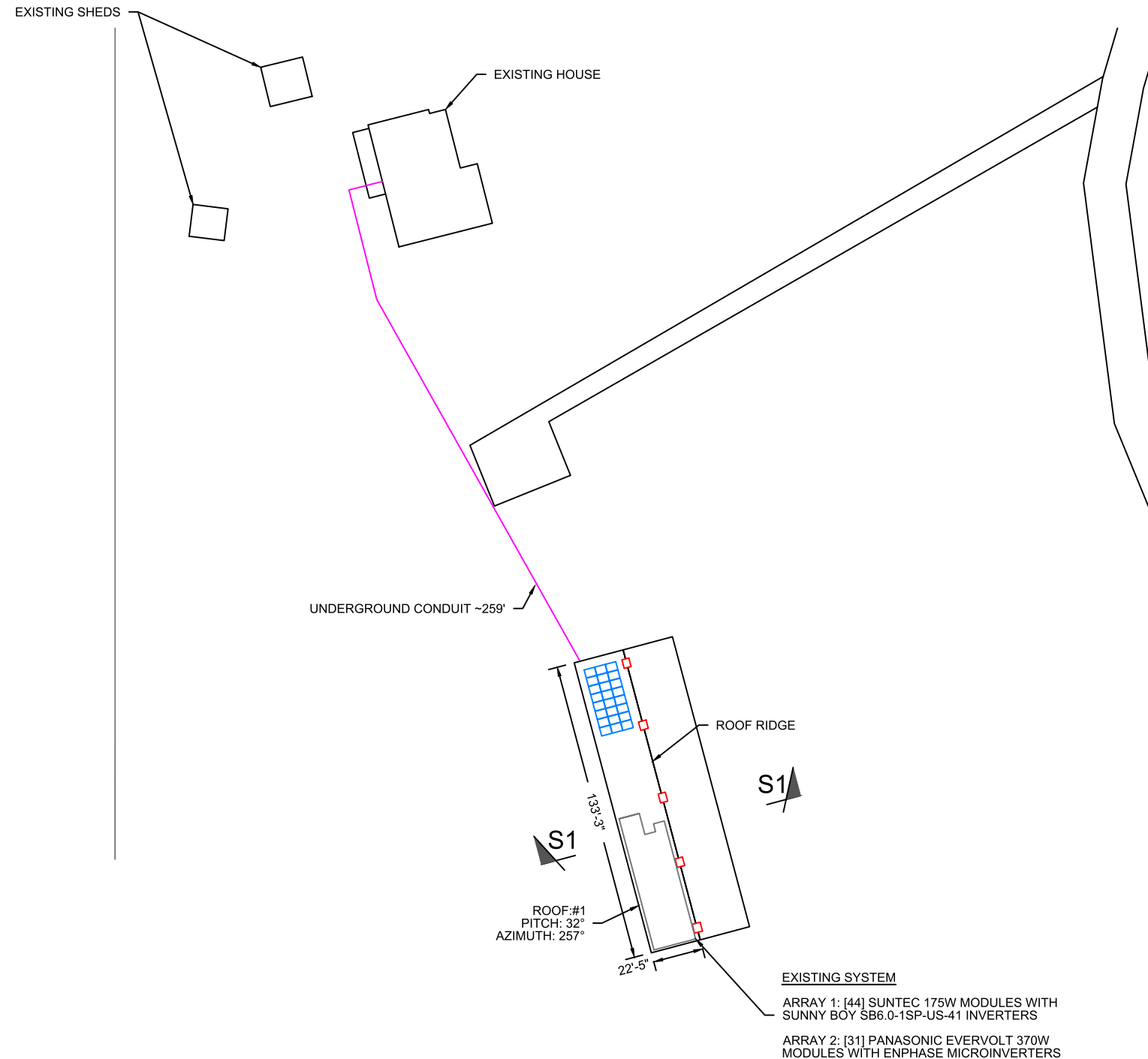
*By Laura DiPasquale, M-NCPPC at 12:10 pm, Nov 15, 2024*

APPROVED  
Montgomery County  
Historic Preservation Commission



Standing Seam Metal Roof  
 Existing Snowbirds on Roof  
 Add on System

David C. Hernande  
 Digitally signed by David C. Hernande  
 Date: 2024.11.04 11:39:12 -05:00



**REVIEWED**

By Laura DiPasquale, M-NCPPC at 12:10 pm, Nov 15, 2024

APPROVED  
 Montgomery County  
 Historic Preservation Commission



PLAN VIEW TOTAL ROOF AREA: 7052 SQFT  
 SOLAR ARRAY AREA: 504.48 SQFT  
 THE SOLAR ARRAY IS 7.2% OF THE PLAN VIEW TOTAL ROOF AREA

**NOTES:**

1. THE SYSTEM SHALL INCLUDE (24) LONGI LR5-54HABB-400M.
2. EXISTING SYSTEM INCLUDE [44] SUNTEC 175W MODULES WITH SUNNY BOY SB6.0-1SP-US-41 INVERTERS AND [31] PANASONIC EVERVOLT 370W MODULES WITH ENPHASE MICROINVERTERS
3. SNAPRACK SOLAR RAIL WILL BE INSTALLED IN ACCORDANCE WITH SNAPRACK INSTALLATION MANUAL.
4. REFER TO STRUCTURAL DRAWING FOR SECTIONS MARKED AND ADDITIONAL NOTES.

**SOLAR PANEL LAYOUT**

Scale: 1/64" = 1'-0"



 <b>Solar Energy World</b> Because Tomorrow Matters Solar Energy World LLC. 14880 Sweitzer Lane Laurel, MD 20707 (888) 497-3233		
<p><b>Disclaimer:</b>          This drawing is the property of Solar Energy World Inc. The information herein contained shall be used for the sole benefit of Solar Energy World. It shall not be disclosed to others outside the recipient's organization, in whole or in part, without the written permission of Solar Energy World, except in connection with the sale and use of the respective Solar Energy equipment.</p>		
<p>Building Code          International Residential Code (IRC) 2018</p>		
<p>Electrical Code          National Electrical Code (NEC) 2017</p>		
Wind Speed 115 MPH	Snow Load 30 PSF	
<p>Modules          (24) LONGi LR5-54HABB-400M</p>		
<p>Inverter(s)          (24) IQ8+-72-M-US</p>		
DC System Size 9.600 kW	AC System Size 6.960 kW	
<p>Customer Information          Charles Bergman          920 Old Bucklodge Ln          Boyds, MD, 20841</p>		
<p>Payment/Lender          None</p>		
City Montgomery	Utility Potomac Edison	
<p>Sheet Name          Solar Panel Layout</p>		
Drawn By AT	Date November 1, 2024	
Scale AS NOTED	Job Number MD21692	Sheet A-1

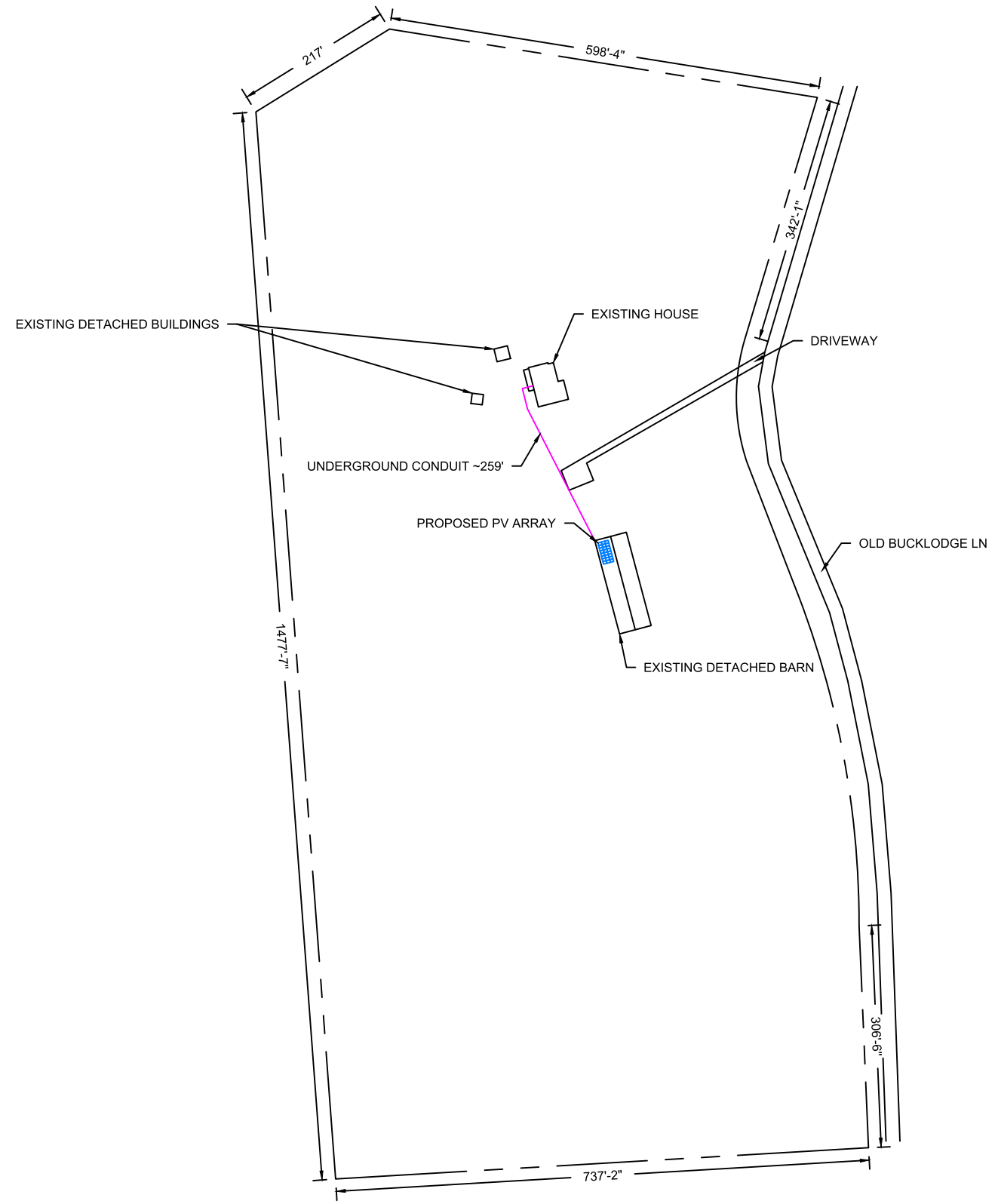
David C. Hernande  
 Digitally signed by David C. Hernande  
 Date: 2024.11.04 11:39:12 -05:00



**REVIEWED**


By Laura DiPasquale, M-NCPPC at 12:10 pm, Nov 15, 2024

APPROVED  
 Montgomery County  
 Historic Preservation Commission

**SITE PLAN**  
 Scale: 1" = 200'-0"





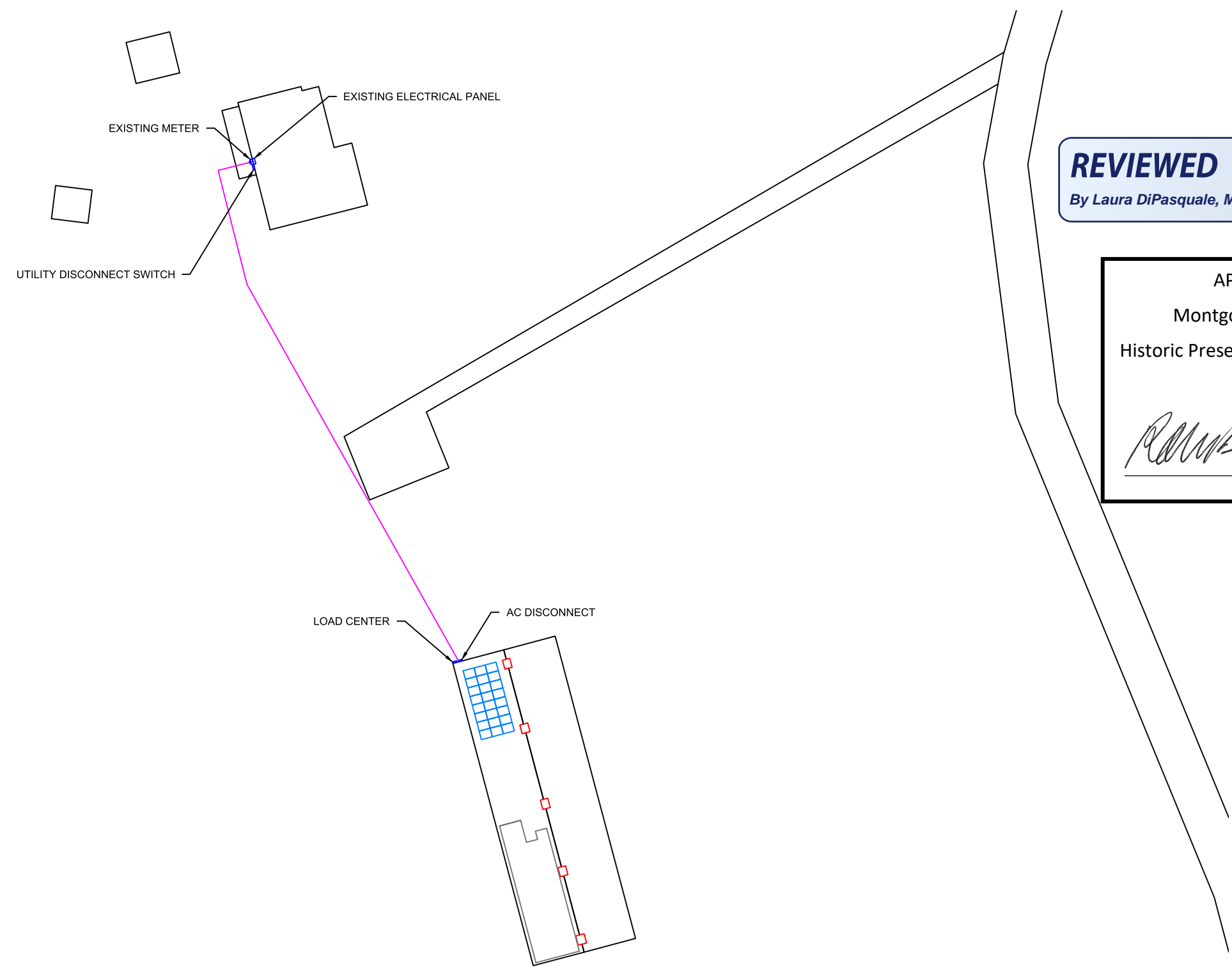
**Solar Energy World**  
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Solar Energy World LLC.  
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 Laurel, MD 20707  
 (888) 497-3233

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Building Code		
International Residential Code (IRC) 2018		
Electrical Code		
National Electrical Code (NEC) 2017		
Wind Speed	Snow Load	
115 MPH	30 PSF	
Modules		
(24) LONGi LR5-54HABB-400M		
Inverter(s)		
(24) IQ8+-72-M-US		
DC System Size	AC System Size	
9.600 kW	6.960 kW	
Customer Information		
Charles Bergman 920 Old Bucklodge Ln Boyds, MD, 20841		
Payment/Lender		
None		
AHJ	Utility	
Montgomery	Potomac Edison	
Sheet Name		
Site Plan		
Drawn By	Date	
AT	November 1, 2024	
Scale	Job Number	Sheet
AS NOTED	MD21692	A-2

David C. Hernandez  
 Digitally signed by David C. Hernandez  
 Date: 2024.11.04 11:39:12 -05:00



**REVIEWED**

By Laura DiPasquale, M-NCPPC at 12:10 pm, Nov 15, 2024

APPROVED  
 Montgomery County  
 Historic Preservation Commission

*Ronald A. Adams*



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Building Code  
 International Residential Code (IRC) 2018

Electrical Code  
 National Electrical Code (NEC) 2017

Wind Speed 115 MPH	Snow Load 30 PSF
-----------------------	---------------------

Modules  
 (24) LONGi LR5-54HABB-400M

Inverter(s)  
 (24) IQ8+-72-M-US

DC System Size 9.600 kW	AC System Size 6.960 kW
----------------------------	----------------------------

Customer Information  
 Charles Bergman  
 920 Old Bucklodge Ln  
 Boyds, MD, 20841

Payment/Lender  
 None

City Montgomery	Utility Potomac Edison
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Sheet Name  
 Equipment Location Plan

Drawn By AT	Date November 1, 2024
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Scale AS NOTED	Job Number MD21692	Sheet E-1
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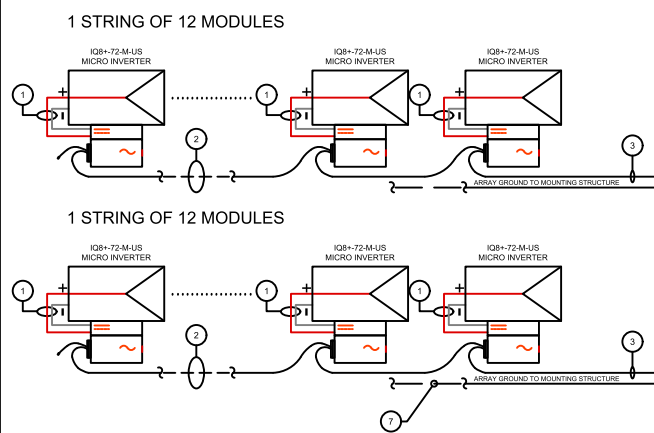
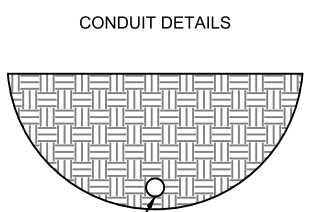
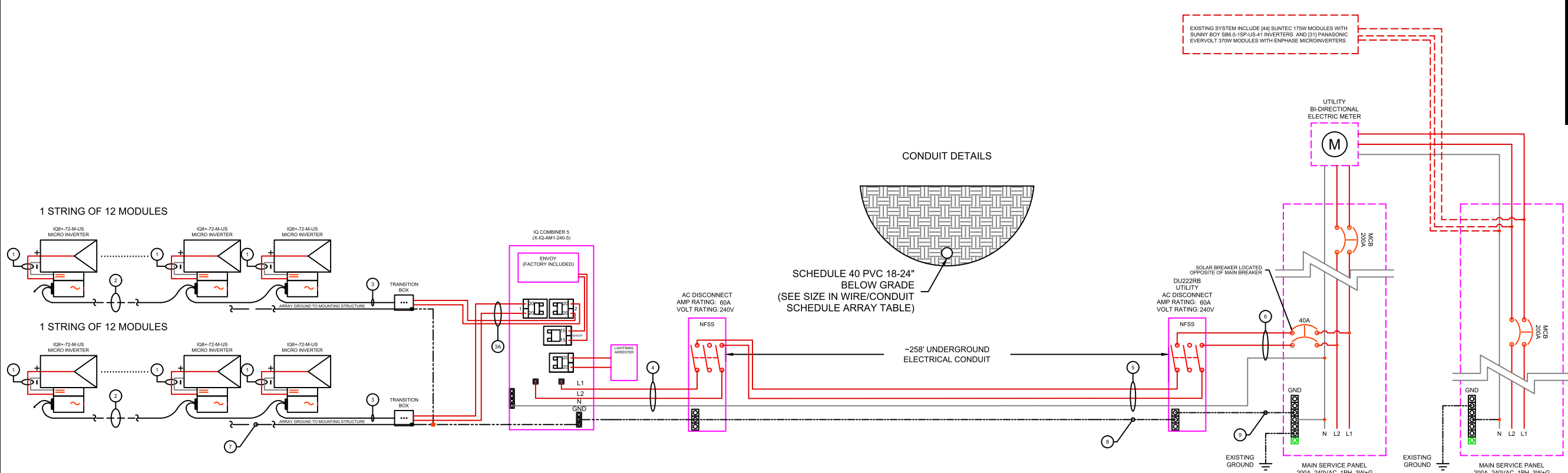
**EQUIPMENT LOCATION PLAN**  
 Scale: NTS

**NOTE:**  
 EQUIPMENT LOCATION PLAN IS APPROXIMATE, EXACT LOCATION TO BE VERIFIED WITH INSTALLATION CREW AND HOME OWNER AT THE TIME OF INSTALLATION.

**REVIEWED**

By Laura DiPasquale, M-NCPPC at 12:10 pm, No

APPROVED  
Montgomery County  
Historic Preservation Commission

MODULE SPECIFICATIONS	
MODEL NUMBER	LR5-54HABB-400M
PEAK POWER	400 W
RATED VOLTAGE (V <sub>mpp</sub> )	30.94 V
RATED CURRENT (I <sub>mp</sub> )	12.93 A
OPEN CIRCUIT VOLTAGE (V <sub>oc</sub> )	37.05 V
SHORT CIRCUIT CURRENT (I <sub>sc</sub> )	13.72 A
MAXIMUM SYSTEM VOLTAGE	1000VDC

INVERTER SPECIFICATIONS	
MODEL NUMBER	IQ8PLUS-72-M-US
MAXIMUM DC VOLTAGE	60 V
MAXIMUM POWER OUTPUT	290 W
NOMINAL AC VOLTAGE	240 VAC
MAXIMUM AC CURRENT	1.21 A
CEC EFFICIENCY	97.0%


ARRAY DETAILS		
NO. OF MODULES PER STRING	12	12
NO. OF STRINGS	1	1
ARRAY WATTS AT STC	4800	4800

**3-LINE DIAGRAM**

WIRE/CONDUIT SCHEDULE ARRAY			
TAG	DESCRIPTION	WIRE SIZE/TYPE	NOTES
1	Panel to Micro Inverter	PV Wire (Factory Made)	INTEGRATED
2	Micro Inverter to Micro Inverter	Pre-Manufactured Cable	
3	Micro Inverter to Transition Box	Pre-Manufactured Cable	
3A	Transition Box to Load Center	#10 THHN/THWN-2	
4	Load Center to AC Disconnect	#8 Cu THHN/THWN-2	
5	AC Disconnect to AC Disconnect	#6 Cu THHN/THWN-2 SCH 40 PVC 1.25	VDROP = 2.76%
6	AC Disconnect to Interconnection Point	#8 Cu THHN/THWN-2	
7	Equipment Grounding Conductor	#8 Cu Bare Copper Wire	
8	Equipment Grounding Conductor	#6 Cu THHN/THWN-2 SCH 40 PVC 1.25	
9	Grounding Electrode Conductor	#6 Cu	

**GENERAL ELECTRIC NOTES: NEC2017**

- 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.
  - COPPER CONDUCTORS SHALL BE USED AND SHALL HAVE AN INSULATION RATING OF 600V, 90°C, UNLESS OTHERWISE NOTED.
  - CONDUCTORS SHALL BE SIZED IN ACCORDANCE TO THE NEC. CONDUCTORS AMPACITY SHALL BE DE-RATED FOR TEMPERATURE INCREASE, CONDUIT FILL AND VOLTAGE DROP.
  - ALL CONDUCTORS, EXCEPT PV WIRE 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.
  - LINE SIDE INTER-CONNECTION SHALL COMPLY WITH NEC.
  - SMS MONITORING SYSTEM AND IT'S CONNECTION SHOWN IS OPTIONAL. IF USED, REFER TO SMS INSTALLATION MANUAL FOR WIRING METHODS AND OPERATION PROCEDURE.
  - ASHRAE FUNDAMENTAL 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
    - 10AWG CONDUCTOR ARE GENERALLY ACCEPTABLE FOR MODULES WITH AN I<sub>sc</sub> OF 9.6 AMPS WITH A 15 AMP FUSE.
- WIRE SIZING FOR OCCP  
EX (I<sub>sc</sub> \* (1.25)(1.25))/# OF STRINGS IN PARALLEL) = WIRE AMPACITY OR USING NEC TABLE 690.8

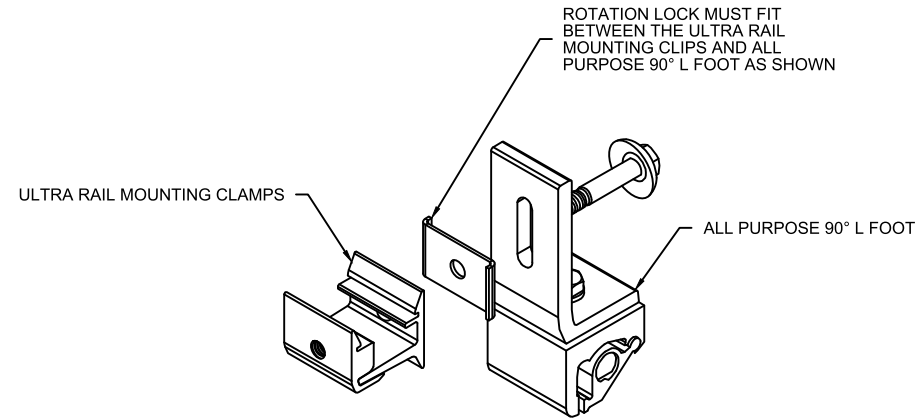


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Because Tomorrow Matters

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(888) 497-3233

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Building Code International Residential Code (IRC) 2018	
Electrical Code National Electrical Code (NEC) 2017	
Wind Speed 115 MPH	Snow Load 30 PSF
Modules (24) LONGi LR5-54HABB-400M	
Inverter(s) (24) IQ8+-72-M-US	
DC System Size 9.600 kW	AC System Size 6.960 kW
Customer Information Charles Bergman 920 Old Bucklodge Ln Boysds, MD, 20841	
Permit/Lender None	
City Montgomery	Utility Potomac Edison
Sheet Name Electrical 3-Line Diagram	
Drawn By AT	Date November 1, 2024
Scale AS NOTED	Job Number MD21692
Sheet E-2	



**REVIEWED**

By Laura DiPasquale, M-NCPPC at 12:10 pm, Nov 15, 2024

APPROVED  
 Montgomery County  
 Historic Preservation Commission



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Snow Load  
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Inverter(s)  
 (24) IQ8+-72-M-US

DC System Size  
 9.600 kW

AC System Size  
 6.960 kW

Customer Information  
 Charles Bergman  
 920 Old Bucklodge Ln  
 Boyds, MD, 20841

Permit/Lender  
 None

City  
 Montgomery

Utility  
 Potomac Edison

Sheet Name  
 Structural Attachment Details

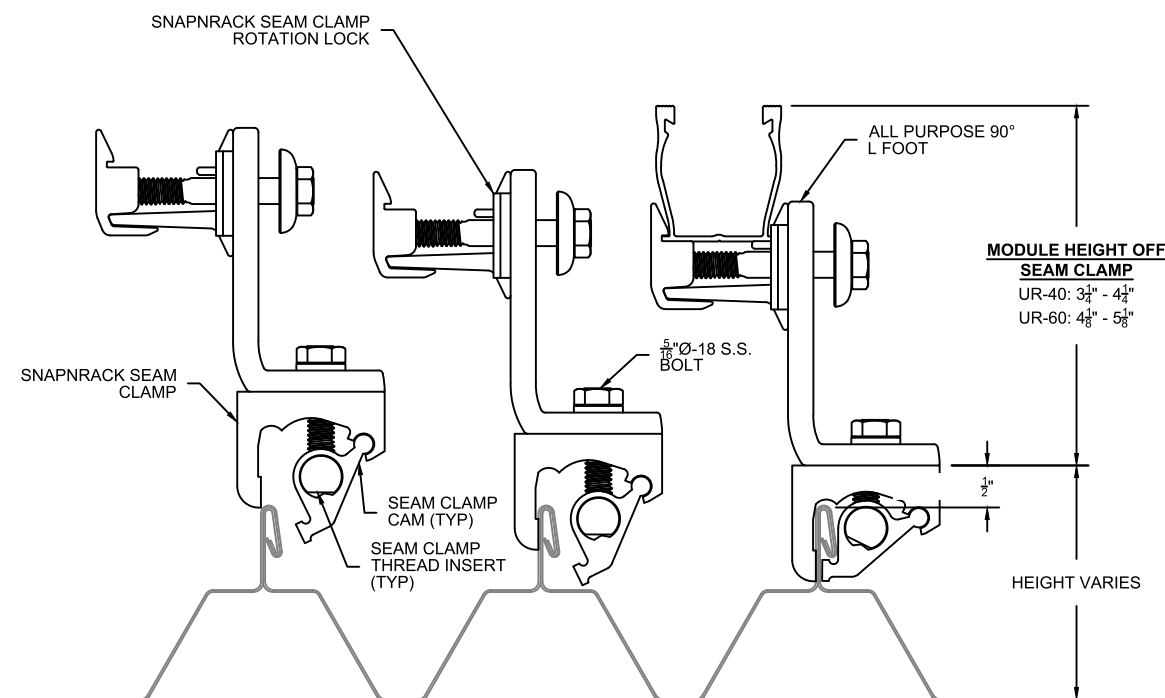
Drawn By  
 AT

Date  
 November 1, 2024

Scale  
 AS NOTED

Job Number  
 MD21692

Sheet  
 S-1



1. BEGIN INSTALLATION WITH THE BOLT LOOSE AND THE CLAMP IN THE OPEN POSITION.
2. PLACE OPEN CLAMP ONTO SEAM
3. TORQUE BOLT TO SECURE CLAMP AND L-FOOT ONTO SEAM

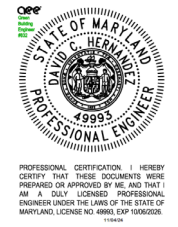
**STRUCTURAL ATTACHMENT DETAIL**

**Structural Details**

S1	Rafter	2x4 O.C. 24"
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**NOTES:**

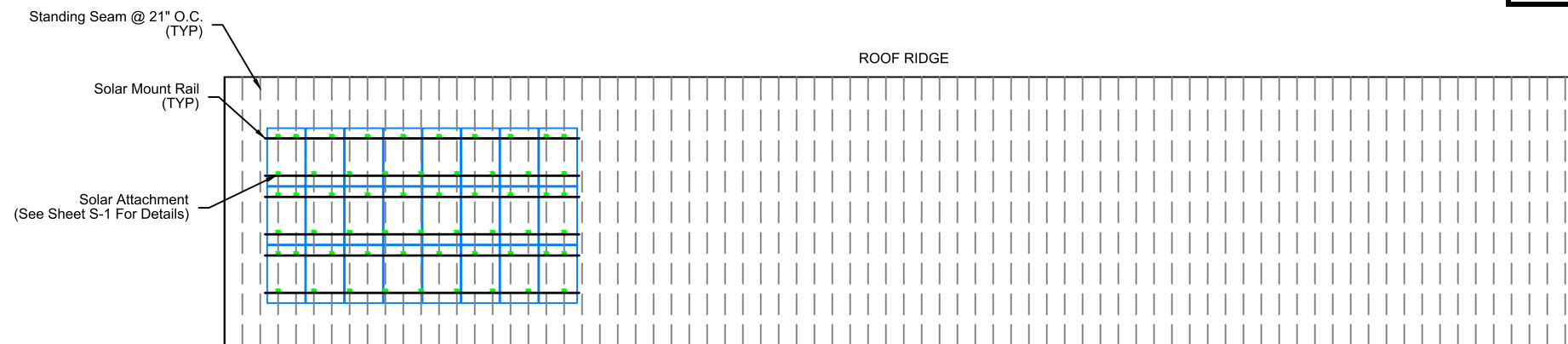
1. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF INTERNATIONAL RESIDENTIAL CODE (IRC 2018), LOADING CODE (ASCE 7-16), WOOD DESIGN CODE (NDS 2015), AND LOCAL REQUIREMENTS.
2. LOAD CRITERIA PER :
  - EXPOSURE CATEGORY "B"
  - GROUND SNOW LOAD, P<sub>g</sub> = 30 PSF
  - LATERAL LOAD RISK CATEGORY "II"
  - ULTIMATE DESIGN WIND SPEED = 115 MPH
3. SOLAR PANELS AND RACKING SYSTEMS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATION.
4. FOLLOW ALL LOCAL AND FEDERAL SAFETY REQUIREMENTS.



**REVIEWED**

By Laura DiPasquale, M-NCPPC at 12:10 pm, Nov 15, 2024

APPROVED  
 Montgomery County  
 Historic Preservation Commission

**SOLAR PANEL FOOTING PLAN R1**

Scale: 1/16" = 1'-0"

**NOTES:**

1. SNAPRACK SOLAR MOUNT RAIL SHALL BE INSTALLED IN ACCORDANCE WITH SNAPRACK INSTALLATION MANUAL.
2. "L" FEET SHALL BE SPACED AT A MAXIMUM OF 4' O/C.
3. AN "L" FOOT SHALL BE PLACED WITHIN 25% OF MAXIMUM "L" FOOT SPACING (16" MAX.) AT THE CANTILEVERED END OF EACH SECTION OF RAIL.
4. MAX OVERHANG (CANTILEVER) OF MODULES SHALL NOT EXCEED 12".



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 (888) 497-3233

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Wind Speed 115 MPH	Snow Load 30 PSF
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Modules  
 (24) LONGi LR5-54HABB-400M

Inverter(s)  
 (24) IQ8+-72-M-US

DC System Size 9.600 kW	AC System Size 6.960 kW
----------------------------	----------------------------

Customer Information  
 Charles Bergman  
 920 Old Bucklodge Ln  
 Boyds, MD, 20841

Payment/Lender  
 None

City Montgomery	Utility Potomac Edison
--------------------	---------------------------

Sheet Name  
 Solar Panel Footing Plan

Drawn By AT	Date November 1, 2024
----------------	--------------------------

Scale AS NOTED	Job Number MD21692	Sheet S-2
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# SnapNrack™

## Solar Mounting Solutions

### Ultra Rail

Residential Roof Mount System  
Installation Manual

**REVIEWED**

By Laura DiPasquale, M-NCPPC at 12:10 pm, Nov 15, 2024

APPROVED

Montgomery County


Historic Preservation Commission



[snapnrack.com](http://snapnrack.com)



# DAVID C. HERNANDEZ, PE

513-418-8812 

4912 Prospect Ave., Blue Ash OH 45242 

davehernandezpe@gmail.com 

DATE: November 04, 2024

RE: 920 Old Bucklodge Ln, Boyds, MD 20841

To Whom It May Concern,

As per your request, Exactus Energy has conducted a site assessment of the building at the above address.

PV solar panels are proposed to be installed on roof areas as shown in the submitted plans. The panels are clamped to rails which are attached to the roof with a flushed/drilled mounting system. The PV system (PV modules, racking, mounting hardware, etc.) shall be installed according to the manufacturer's approved installation specifications. The Engineer of Record and Exactus Energy claim no responsibility for misuse or improper installation.

It was found that the roof systems satisfactorily meet the applicable code standards included in the IBC 2018, IRC 2018 and ASCE 7-16 as well as the design criteria shown below:

Design Criteria:

Risk Category	= II
Exposure Category	= B
Wind speed	= 115 mph
Ground snow load	= 30 psf
Roof dead load	= 9 psf
Solar system dead load	= 3 psf

Overall, the roof systems integrity is adequate to support the PV alteration with no modifications or reinforcements as required per 2018 IEBC Sections 502.4 and 502.5.

This letter was completed in accordance to recognized design standards, professional engineering experience, and judgement. Prior to installation, the on-site contractor must notify Exactus Energy if there are any discrepancies, or damages to the members, that was not addressed in the plan set.

If you have any further questions, please do not hesitate to contact me.

Acknowledged by:

David C. Hernandez, PE Digitally sign  
Date: 2024.11.04



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 49993, EXP. 10/06/2026. 11/04/24




**REVIEWED**  
By Laura DiPasquale, M-NCPPC at 12:10 pm, Nov 15, 2024





# DAVID C. HERNANDEZ, PE

513-418-8812 

4912 Prospect Ave., Blue Ash OH 45242 

davehernandezpe@gmail.com 

## ASCE 7-16

IEBC IMPACT CHECK		
Inputs	Roof 1	Unit
Existing Gravity Loads		
Roof Dead Load (DL <sub>r</sub> )	9	psf
Roof Live Load (LL <sub>r</sub> )	20	psf
Roof Snow Load (SL <sub>r</sub> )	14.78	psf
(DL <sub>r</sub> +LL <sub>r</sub> )/Cd =	23.2	psf
(DL <sub>r</sub> +SL <sub>r</sub> )/Cd=	20.68	psf
Max. Existing Gravity Load	<b>23.2</b>	psf
Proposed Gravity Loads		
Roof Dead Load with PV Panel Load (DL)	12	psf
Roof Live Load (LL)	0	psf
Roof Snow Load (SL)	14.78	psf
(DL+LL)/Cd =	13.33	psf
(DL+SL)/Cd=	23.29	psf
Max. Proposed Gravity Load	<b>23.29</b>	psf
% Change =	<b>0.39</b>	%

*The change in gravity loads for Roof 1 after the proposed solar installation is less than 5%, therefore passes the Impact Check.*


APPROVED  
Montgomery County  
Historic Preservation Commission

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## SEISMIC CHECK

Breakdown of Loads		
Metal Roof:	4	psf
Insulation:	1.5	psf
Plywood Sheathing:	1.5	psf
Rafters:	1	psf
Misc:	1	psf
Live load:	20	psf

Existing Roof Seismic Weight			
Element	Unit Weight (psf)	Area (Sq.ft)	Weight (lbs)
Roof DL	9	7052.00	63468
Exterior Walls	7	10356.12	72492.84
Interior Walls	6	10356.12	62136.72
Existing Seismic Weight @Roof Level, We =			198097.56

New PV System Seismic Weight			
Element	Unit Weight (psf)	Area (Sq.ft)	Weight (lbs)
Pv System	3	504.48	1513.44
Seismic Weight of New PV System, Wpv =			1513.44

% Increase in Lateral (Seismic) Weight @Roof Level Due to PV System Addition, %-increase = $W_{pv} / W_e$	0.76%	< 10% - Pass
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Solar Energy World  
Because Tomorrow Matters

Project Property Owner Charles Bergman

Address 920 Old Bucklodge Ln, Boyds, MD 20841

I reviewed the design of the photovoltaic (PV) system, as designed by the manufacturer, and the design criteria utilized for the mounting equipment and panel mounting assembly (rack system) for the installation of (24) panels supported by the rack system, as shown on the drawings prepared for the above referenced address. I certify that the configurations and design criteria meet the standards and requirements of the International Residential Code (IRC) and International Existing Building Code (IEBC) adopted by Montgomery County in COMCOR08.00.02.

The attachment of the rack system to the building at the above address, including the location, number, and type of attachment points; the number of fasteners per attachment point; and the specific type of fasteners (size, diameter, length, minimum embedment into structural framing, etc.) meets the standards and requirements of the IRC and IEBC adopted by Montgomery County in COMCOR 08.00.02.

I evaluated the existing roof structure of the building at the above address and analyzed its capacity to support the additional loads imposed by the PV system. I certify that no structural modifications of the existing roof structure are required. The existing roof structure meets the standards and requirements of the IRC and IEBC, adopted by Montgomery County in COMCOR 08.00.02, necessary to support the PV system.

I evaluated the existing roof structure of the building at the above address and analyzed its capacity to support the additional loads imposed by the PV system. Structural modifications of the existing roof structure are required. I certify that the roof structure, as modified on the drawings for this project, will support the additional loads imposed by the PV system. I further certify that design of the modified roof structure meets the standards and requirements of the IRC and IEBC, adopted by Montgomery County in COMCOR 08.00.02.

I prepared or approved the construction documents for the mounting equipment, rack system, roof structure for this project.

49993  
Maryland PE License Number

Date 11/04/2024

Signature David C. Hernandez, PE  
Digitally signed by David C. Hernandez,  
Date: 2024.11.04 11:39:12 -05:00

Seal



PROFESSIONAL CERTIFICATION. 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. 49993, EXP. 10/06/2026.  
11/04/24

**Must be submitted with plans**





Property Owners Name: Charles Bergman

Property Owners Address: 920 Old Bucklodge Lane, Boyds, MD 20841

Address of installation if different than owner's address:

I certify that:

- I prepared or approved the electrical drawings and related documents for the photovoltaic {PV} system at the above location.
- The design of the PV system, and all electrical Installations and equipment, meets the standards and requirements of the National Electrical Code as adopted by Montgomery County *in* COMCOR 17.02.01.
- I reviewed and completed the Worksheet for PV System, which was attached to the permit application for the PV system at the **above** location.

15732

State Master Electrician License Number

Date: 11/05/2024

Signature: *Matt Huser*

**REVIEWED**  
By Laura DiPasquale, M-NCPPC at 12:11 pm, Nov 15, 2024

APPROVED  
Montgomery County  
Historic Preservation Commission

*[Signature]*



DEPARTMENT OF PERMITTING SERVICES

Marc Elrich  
*County Executive*

Rabbiah Sabbakhan  
*Director*

# HISTORIC AREA WORK PERMIT APPLICATION

Application Date: 11/5/2024

Application No: 1092457  
AP Type: HISTORIC  
Customer No: 1408761

## Affidavit Acknowledgement

The Contractor is the Primary applicant authorized by the property owner  
This application does not violate any covenants and deed restrictions

## Primary Applicant Information

Address 920 OLD BUCKLODGE LN  
BOYDS, MD 20841

Othercontact Solar Energy World (Primary)

## Historic Area Work Permit Details

Work Type ALTER

Scope of Work Install (24) roof mounted solar panels, 9.60 kW