

# APPLICATION FOR BUILDING PERMIT

The Village of Irvington | 85 Main St | Irvington NY 10533

Application Number:	437	Date:	02/06/2023
Job Location:	2 HERITAGE HILL RD	Parcel ID:	2.111-59-49
Property Owner:	Charlotte Binns	Property Class:	1 FAMILY RES
Occupancy:	One/ Two Family	Zoning:	
Common Name:	4 HERITAGE HILL RD		

Applicant	Contractor
Janet E. Glover	Janet E. Glover
Green Hybrid Energy Solutions Inc.	Green Hybrid Energy Solutions Inc.
156 Woodbrook Road White Plains NY 10605	11 Washington Place East White Plains NY 10603
914-299-9552	9142999552

## Description of Work

Type of Work:	Solar Panels	Applicant is:	Agent
Work Requested by:	The Owner	In association with:	
Cost of Work (Est.):	45650.00	Property Class:	1 FAMILY RES

## Description of Work

**Installation of a 22,08KW DC ( 17.6KW AC) solar photovoltaic system on the roof. The system will consist of 46 Hanwha 485w panels, and 2 SolarEdge inverters. 1 10KW (SE10000H-US) and one 7.6KW (SE7600H-US) on a racking system.**

**Please Note:** Completing the application does not constitute a permit to commence construction. To obtain your permit follow the instructions on the instruction page provided on page 3.

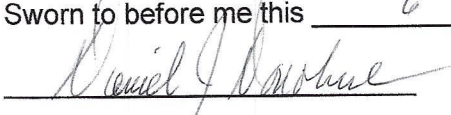
**AFFIDAVIT OF APPLICANT**

I Janet E. Glover being duly sworn, depose and says: That s/he does business as: **Green Hybrid Energy Solutions Inc.** with offices at: **156 Woodbrook Road White Plains NY 10605** and that s/he is:

- ☐ The owner of the property described herein.  
☐ The \_\_\_\_\_ of the New York Corporation \_\_\_\_\_ with offices at: \_\_\_\_\_ duly authorized by resolution of the Board of Directors, and that said corporation is duly authorized by the owner to make this application.  
☐ A general partner of \_\_\_\_\_ with offices \_\_\_\_\_ and that said Partnership is duly authorized by the Owner to make this application.  
☐ The Lessee of the premises, duly authorized by the owner to make this application.  
☐ The Architect of Engineer duly authorized by the owner to make this application.  
☒ The contractor authorized by the owner to make this application.

That the information contained in this application and on the accompanying drawings is true to the best of his knowledge and belief. The undersigned hereby agrees to comply with all the requirements of the New York State Uniform Fire Prevention and Building Code, the Village of Irvington Building Code, Zoning Ordinance and all other laws pertaining to same, in the construction applied for, whether or not shown on plans or specify in this application.

Sworn to before me this 6 day of February of 2023

  
Notary Public / Commission of Deeds

DANIEL J. DONOHUE  
NOTARY PUBLIC, State of New York  
No. 01DO4731804  
Qualified in Westchester County  
Commission Expires Feb. 28, 2027

  
Applicant's Signature

**OWNER'S AUTHORIZATION**

I **Charlotte Binns** as the owner of the subject premises and have authorized the contractor named above to perform the work under the subject application.

Owner phone number \_\_\_\_\_ Owner email address \_\_\_\_\_

- ☐ I hereby acknowledge that it is my responsibility as the **property owner** to ensure that if the permit (if issued) receives a Final Certificate of Approval from the Building Department and further that if a Final Certificate of Approval is not obtained upon completion of the construction, a property violation may be placed on the property for which this permit is being requested.

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ of \_\_\_\_\_

\_\_\_\_\_  
Notary Public / Commission of Deeds

\_\_\_\_\_  
Applicant's Signature

DANIEL J. DONOHUE  
NOTARY PUBLIC, State of New York  
No. 01DO4731804  
Qualified in Westchester County  
Commission Expires Feb. 28, 2027



**VILLAGE OF IRVINGTON**  
**BUILDING DEPARTMENT**  
85 MAIN STREET  
IRVINGTON, NEW YORK 10533  
TEL: (914) 591-8335 • FAX: (914) 591-5870  
WWW.IRVINGTONNY.GOV



## Proxy Statement

Charlotte Binns is the owner of the property  
located at 2 Heritage Hill Road, Irvington, NY 10533 and has authorized  
Green Hybrid Energy Solutions, Inc. - Janet E. Glover to make the attached building permit  
application for Solar photovoltaic system installation.

Signature of Owner

### NOTARY:

Sworn to before me

this 22 day of November, 2022

Notary Public:

Arlene Burgos  
Notary Public, State of New York  
No. 02BU6385280  
Qualified in Westchester County  
Certificate Filed in New York County  
My Commission Expires December 31, 22

# INSTRUCTIONS

## REQUIREMENTS FOR OBTAINING A PERMIT:

The following items must be submitted in order to obtain a Building Permit:

1. One (1) Building Permit application signed by the owner or a notarized Agent Letter.
2. One (1) property survey (signed and sealed), reflecting existing conditions.
3. Two (2) sets of construction drawings and specifications, including existing and proposed conditions, state design criteria, structural and architectural details, plans, and cross sections, mechanical, electrical, and plumbing drawings (signed and sealed by a licensed professional).
4. One USB with all plans (with Licensed Professionals certification/stamp) and specifications in PDF (file size must be less than 25MB).
5. Copy of approved site plan from the Irvington Planning Board when applicable (required on all increases of FAR, footprint, coverage, driveways and increases of cubic content under a roof).
6. Approval by the Architectural Review Board (ARB) when applicable. An additional five (5) sets of construction drawings and specifications (please see ARB requirements (available on the village web site [www.irvingtonny.gov](http://www.irvingtonny.gov)) prior to submission).
7. Visit the Village of Irvington website [www.irvingtonny.gov](http://www.irvingtonny.gov) for additional check list for solar panels, generators, underground propane tanks, signs and awnings(found in forms and documents in the Building & Planning General Information folder).
8. Village Zoning Code is available on the Village website: [www.irvingtonny.gov](http://www.irvingtonny.gov).
9. Provide evidence that the application meets the NYS Energy code as described by [www.dos.state.ny.us/code/energycode/overview.htm](http://www.dos.state.ny.us/code/energycode/overview.htm)

Contractor Requirements in order to obtain a Building Permit:

10. Contractor's Certificate of Liability listing the Village of Irvington as the Certificate Holder with no disclaimer in the description other than certificate holder is named additional insured (any additional comments will not be accepted).
11. Contractor's Workers Compensation C-105 form (or equivalent) listing the Village of Irvington as Certificate Holder.
12. Copy of Contractor's Westchester County Home Improvement License.
13. All information above uploaded into permit application with the contractor's contact information, including mailing address, phone number, and email address.
14. Contractor's signature on Affidavit of Contractor (required prior to issuance of the permit).

Please Note:

-State Law requires that the contractor submits a copy of Workman's Compensation as required by the New York State Disability Insurance naming the Department of Buildings, Village of Irvington as certificate holder and showing coverage for general contracting and the locations covered by such insurance. If structure is to be demolished a copy of Liability Insurance must also be submitted.

- Please be advised under State and Municipal Laws, the Workman's Compensation and Disability benefits insurance must be submitted on separate state approved forms. The "Acord Form" is no longer acceptable as proof of Workman's Compensation coverage. Further information or questions may be answered by calling the NYS Bureau of Compliance at (518) 486-6307 or by visiting their website or by contacting your insurance provider.

**FEES ASSOCIATED WITH BUILDING PERMIT APPLICATION (All fees must be paid at time of application):**

Fee schedule

Building Permit (Non-Refundable)

\* Application fee \$85

\* Permit fee \$17 per thousand dollars (\$1000) of estimated cost of construction, or fraction thereof

85

**• Inspection Fees (as applicable)**

- |  |  |
|--|--|
| • Insulation: \$50                               | • Footing: \$50  |
| • Solid Fuel: \$50                               | • Preparation for concrete slabs and walls: \$50             |
| • Foundation and footing drain: \$50             | • Framing: \$50  |
| • Energy Code Compliance: \$50                   | • Building systems, including underground and rough-in: \$50 |
| • Sediment and erosion control: \$50             | • Fire resistant construction and penetrations: \$50         |
| • Footing: \$50                                  | • Final Inspection for C.O.: \$50                            |
| • Preparation for concrete slabs and walls: \$50 | • State and local laws (per re-inspection): \$50             |

**Total Inspections** \_\_\_\_\_

\* Certificate of Occupancy Fees: One dollar (\$1.00) per thousand dollars of estimated cost. Minimum Fee \$25.00

\* Permit Revisions or Amendment: \$50.00 (plus \$17 per thousand (\$1000), of the estimated cost of construction and any additional inspections fees).

\* Re-inspection fee for work not ready at time of inspection or not in compliance: \$50

\* Applications for Undocumented Work/ Legalizing: Applications to legalize work done prior to applying for and receiving a building permit shall pay double all applicable fees and inspections, including the cost of construction based on the cost of all proposed work being legalized at the time of application. Minimum fee \$500.00.

(To be collected at time of submission of application) **Total** \_\_\_\_\_

(Note: pursuant to 224-54A all permits are valid for one (1) year from date on permit  
Any permit that expires will be subject to additional fees.)



# VILLAGE OF IRVINGTON

## BUILDING DEPARTMENT

85 MAIN STREET

IRVINGTON, NEW YORK 10533

TEL: (914) 591-8335 • FAX: (914) 591-5870



## PHOTOVOLTAIC (PV SOLAR) RESIDENTIAL SYSTEMS

### PERMIT APPLICATION CHECK LIST

Revised June 7, 2017

It is suggested that all applicants applying for a permit read and understand the manufacture installation instructions prior to applying for a building permit and attached ARB guide lines and Village code for Solar Energy Equipment.

#### REQUIREMENTS TO APPLY FOR A PHOTOVOLTAIC (PV SOLAR) SYSTEM PERMIT

- ☒ 1) Apply on line at [www.irvingtonny.gov](http://www.irvingtonny.gov) for a mechanical permit, under building permits and along with your application, submit to the building department the following;
- ☒ 2) Owners phone number and email address entered in the online permit application
- ☒ 3) Evidence of Workers Compensation Insurance (on a C-105 or equivalent)
- ☒ 4) Evidence of Liability Insurance naming the Village of Irvington additional insured
- ☒ 5) A copy of the contractors Westchester County Department of Consumer Protection License
- ☒ 6) Pursuant to 9-12-A. provide evidence of notice to adjacent properties owners not less than 10 days prior to the meeting (see attached code section for more details)
- ☒ 7) Submit permit fee: **(all fees must be paid at time of submission)**
  - ☐ \$85 application fee
  - ☐ \$200 for systems up to 5 kilowatts
  - ☐ \$450 for systems above 5 kilowatts and less than 10 kilowatts
  - ☐ \$700 for systems above 10 kilowatts and less than 20 kilowatts
  - ☐ \$700 plus \$250 per additional 10 kilowatts above 20 for systems above 20 kilowatts
  - ☐ \$75 Certificate of Completion inspection and fee
- ☒ 8) An affidavit from a NYS licensed professional detailing and certifying that the existing structure meets or exceeds the minimum load requirement's as per TABLE R301.2(1) for wind and load before and after installation of the proposed equipment or the proposed upgrades to the existing structure to accomplish the aforesaid.
- ☒ 9) Drawings (signed and sealed by a NYS licensed professional) of the roof plan showing the following criteria;
  - a. ☒ Showing all proposed PV panels on all proposed roof surfaces.
  - b. ☒ Showing all equipment on all elevations including
  - c. ☒ Show / list all roof connectors and flashing details
  - d. ☒ Show compliance with section R902.4 (fire classification in accordance with UL1703 and 3' from any lot line)
  - e. ☒ Show compliance with sections R324.3.1 through R324.7.2.5 and NFPA 70 (installation)
  - f. ☒ Show compliance with section R324.7 (access and pathways) (see attachment)
  - g. ☒ Show compliance with section R324.7.2.1-6. (roof access points) (see attachment)
  - h. ☒ Show compliance with section R324.7.3 (ground access areas) (see attachment)
  - i. ☒ Show compliance with section R324.7.4 (single ridge roofs *when applicable*) (see attachment)
  - j. ☒ Show compliance with section R324.7.5 (hip roofs *when applicable*) (see attachment)
  - k. ☒ Show compliance with section R324.7.6 (roof with valleys *when applicable*) (see attachment)
  - l. ☒ Show compliance with section R324.7.7 (allowance for smoke ventilation operations) (see attachment)
  - m. ☒ Show a Fire Department AC disconnect, located outside by the Utility meter on all systems.
- ☒ 10) Provide a drawing or manufactures cut sheets of array mounting hardware and interconnection diagram and specifications.
- ☒ 11) Provide a drawing or manufactures cut sheets of the unit mount and roof penetration's flashing system.
- ☒ 12) 3 wire diagram showing all proposed equipment as governed by the National Electrical Code (NEC)
- ☒ 13) Provide a diagram showing all proposed labels and labeling locations including; Solar AC Disconnect, Inverter Output, Connection Warning, Dual Power Source Warning, Solar AC Combiner Panel, Solar PV Circuits Only, Solar Production meter. (see attachment)
- ☒ 14) Provide snow guards on panels were snow has the potential of sliding of the panel into a neighbor's property
- ☒ 15) Pictures of dwelling showing photo shopped arrays on the structure.
- ☒ 16) Provide a drawing or photo shop picture of all proposed equipment on all effected elevations (including FD emergency disconnect switch)
- ☒ 17) A Fire Department AC disconnect, located outside by the Utility meter on all systems.



## CERTIFICATE OF INSURANCE COVERAGE

### NYS DISABILITY AND PAID FAMILY LEAVE BENEFITS LAW

#### PART 1. To be completed by NYS disability and Paid Family Leave benefits carrier or licensed insurance agent of that carrier

<b>1a. Legal Name &amp; Address of Insured (use street address only)</b> <b>GREEN HYBRID ENERGY SOLUTIONS INC</b>  <b>11 WASHINGTON PLACE-EAST</b> <b>WHITE PLAINS, NY 10603</b>  <small>Work Location of Insured (Only required if coverage is specifically limited to certain locations in New York State, i.e., Wrap-Up Policy)</small>	<b>1b. Business Telephone Number of Insured</b> <b>914-299-9552</b>  <b>1c. Federal Employer Identification Number of Insured or Social Security Number</b> <b>272994933</b>
<b>2. Name and Address of Entity Requesting Proof of Coverage (Entity Being Listed as the Certificate Holder)</b> <b>Village of Irvington</b> <b>Building Department</b> <b>85 Main Street</b> <b>Irvington, NY 10533</b>	<b>3a. Name of Insurance Carrier</b> <b>ShelterPoint Life Insurance Company</b>  <b>3b. Policy Number of Entity Listed in Box "1a"</b> <b>DBL355470</b>  <b>3c. Policy effective period</b> <b>03/15/2022</b> to <b>03/14/2024</b>

**4. Policy provides the following benefits:**

- ☒ A. Both disability and paid family leave benefits.  
☐ B. Disability benefits only.  
☐ C. Paid family leave benefits only.

**5. Policy covers:**

- ☒ A. All of the employer's employees eligible under the NYS Disability and Paid Family Leave Benefits Law.  
☐ B. Only the following class or classes of employer's employees:

Under penalty of perjury, I certify that I am an authorized representative or licensed agent of the insurance carrier referenced above and that the named insured has NYS Disability and/or Paid Family Leave Benefits insurance coverage as described above.

Date Signed 12/16/2022 By   
(Signature of insurance carrier's authorized representative or NYS Licensed Insurance Agent of that insurance carrier)

Telephone Number 516-829-8100 Name and Title Richard White, Chief Executive Officer

**IMPORTANT:** If Boxes 4A and 5A are checked, and this form is signed by the insurance carrier's authorized representative or NYS Licensed Insurance Agent of that carrier, this certificate is **COMPLETE**. Mail it directly to the certificate holder.

If Box 4B, 4C or 5B is checked, this certificate is **NOT COMPLETE** for purposes of Section 220, Subd. 8 of the NYS Disability and Paid Family Leave Benefits Law. It must be emailed to PAU@wcb.ny.gov or it can be mailed for completion to the Workers' Compensation Board, Plans Acceptance Unit, PO Box 5200, Binghamton, NY 13902-5200.

#### PART 2. To be completed by the NYS Workers' Compensation Board (Only if Box 4B, 4C or 5B have been checked)

### State of New York Workers' Compensation Board

According to information maintained by the NYS Workers' Compensation Board, the above-named employer has complied with the NYS Disability and Paid Family Leave Benefits Law (Article 9 of the Workers' Compensation Law) with respect to all of their employees.

Date Signed \_\_\_\_\_ By \_\_\_\_\_  
(Signature of Authorized NYS Workers' Compensation Board Employee)

Telephone Number \_\_\_\_\_ Name and Title \_\_\_\_\_

**Please Note:** Only insurance carriers licensed to write NYS disability and paid family leave benefits insurance policies and NYS licensed insurance agents of those insurance carriers are authorized to issue Form DB-120.1. **Insurance brokers are NOT authorized to issue this form.**







# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

12/16/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> BNC Insurance Agency 90 S Ridge St Ste UL-2  Rye Brook NY 10573-2836	<b>CONTACT NAME:</b> John Andros <b>PHONE (A/C, No, Ext):</b> (914) 937-1230 <b>E-MAIL ADDRESS:</b> jandros@bncagency.com <b>FAX (A/C, No):</b> (914) 937-1124
<b>INSURED</b> Green Hybrid Energy Solutions Inc. 11 Washington Place East  White Plains NY 10603	<b>INSURER(S) AFFORDING COVERAGE</b> <b>INSURER A:</b> Southwest Marine & General Ins Company <b>INSURER B:</b> <b>INSURER C:</b> <b>INSURER D:</b> <b>INSURER E:</b> <b>INSURER F:</b>
	<b>NAIC #</b> 12294

**COVERAGES****CERTIFICATE NUMBER:** CL2221704846**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liability GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	Y		PK202100020645	02/22/2022	02/22/2023	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 Errors & Comissions \$ 1,000,000
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
A	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			EX202100001784	02/22/2022	02/22/2023	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below Y / N <input type="checkbox"/> N / A		N / A				PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	Installation Floater Coverage/ Rented or Leased Equipment			PK202100020645	02/22/2022	02/22/2023	Limit \$200,000/200,000 Deductible \$2,500

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES** (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Village of Irvington Building Department is included as an additional insured when required under written Contract or Agreement.

**CERTIFICATE HOLDER****CANCELLATION**Village of Irvington  
Building Department  
85 Main Street  
Irvington

NY 10533

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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**Workers'  
Compensation  
Board**

## CERTIFICATE OF NYS WORKERS' COMPENSATION INSURANCE COVERAGE

<p><b>1a. Legal Name &amp; Address of Insured (use street address only)</b></p> <p>Green Hybrid Energy Solutions Inc.</p> <p>11 Washington Place E White Plains, NY 10603</p> <p><i>Work Location of Insured (Only required if coverage is specifically limited to certain locations in New York State, i.e., a Wrap-Up Policy)</i></p>	<p><b>1b. Business Telephone Number of Insured</b> (914)949-4900</p> <p><b>1c. NYS Unemployment Insurance Employer Registration Number of Insured</b></p> <p><b>1d. Federal Employer Identification Number of Insured or Social Security Number</b> 27-2994933</p>
<p><b>2. Name and Address of Entity Requesting Proof of Coverage (Entity Being Listed as the Certificate Holder)</b></p> <div style="border: 1px solid black; padding: 10px; min-height: 150px;"> <p>Village of Irvington Building Department</p> <p>85 Main Street</p> <p>Irvington, NY 10533</p> </div>	<p><b>3a. Name of Insurance Carrier</b> New Jersey Manufacturers Insurance Company</p> <p><b>3b. Policy Number of Entity Listed in Box "1a"</b> W43404-3-22</p> <p><b>3c. Policy effective period</b>  <div style="display: inline-block; border: 1px solid black; padding: 2px 10px;">7/31/2022</div> to <div style="display: inline-block; border: 1px solid black; padding: 2px 10px;">7/31/2023</div> </p> <p><b>3d. The Proprietor, Partners or Executive Officers are</b>  <input checked="" type="checkbox"/> included. (Only check box if all partners/officers included)  <input type="checkbox"/> all excluded or certain partners/officers excluded.         </p>

This certifies that the insurance carrier indicated above in box "3" insures the business referenced above in box "1a" for workers' compensation under the New York State Workers' Compensation Law. **(To use this form, New York (NY) must be listed under Item 3A on the INFORMATION PAGE of the workers' compensation insurance policy).** The Insurance Carrier or its licensed agent will send this Certificate of Insurance to the entity listed above as the certificate holder in box "2".

The insurance carrier must notify the above certificate holder and the Workers' Compensation Board within 10 days IF a policy is canceled due to nonpayment of premiums or within 30 days IF there are reasons other than nonpayment of premiums that cancel the policy or eliminate the insured from the coverage indicated on this Certificate. (These notices may be sent by regular mail.) **Otherwise, this Certificate is valid for one year after this form is approved by the insurance carrier or its licensed agent, or until the policy expiration date listed in box "3c", whichever is earlier.**

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policy listed, nor does it confer any rights or responsibilities beyond those contained in the referenced policy.

This certificate may be used as evidence of a Workers' Compensation contract of insurance only while the underlying policy is in effect.

**Please Note: Upon cancellation of the workers' compensation policy indicated on this form, if the business continues to be named on a permit, license or contract issued by a certificate holder, the business must provide that certificate holder with a new Certificate of Workers' Compensation Coverage or other authorized proof that the business is complying with the mandatory coverage requirements of the New York State Workers' Compensation Law.**

**Under penalty of perjury, I certify that I am an authorized representative or licensed agent of the insurance carrier referenced above and that the named insured has the coverage as depicted on this form.**

Approved by: Raveena Malhotra  
(Print name of authorized representative or licensed agent of insurance carrier)

Approved by: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

Title: Insurance Broker

Telephone Number of authorized representative or licensed agent of insurance carrier: 856-552-3013

**Please Note: Only insurance carriers and their licensed agents are authorized to issue Form C-105.2. Insurance brokers are NOT authorized to issue it.**



George Latimer  
Westchester County Executive

Westchester  
gov.com

James Maisano  
Director, Consumer Protection

## Department of Consumer Protection Home Improvement License

GREEN HYBRID ENERGY SOLUTIONS, INC.

11 WASHINGTON PLACE EAST

WHITE PLAINS, NY-10603

This license is issued in accordance with Article XVI of the Westchester County Consumer Protection Code and is valid only upon presence of the official department seal. Proof of citizenship or immigration status is not required for issuance of this license.

NOT FOR FEDERAL PURPOSES

License Number

WC-24683-H11



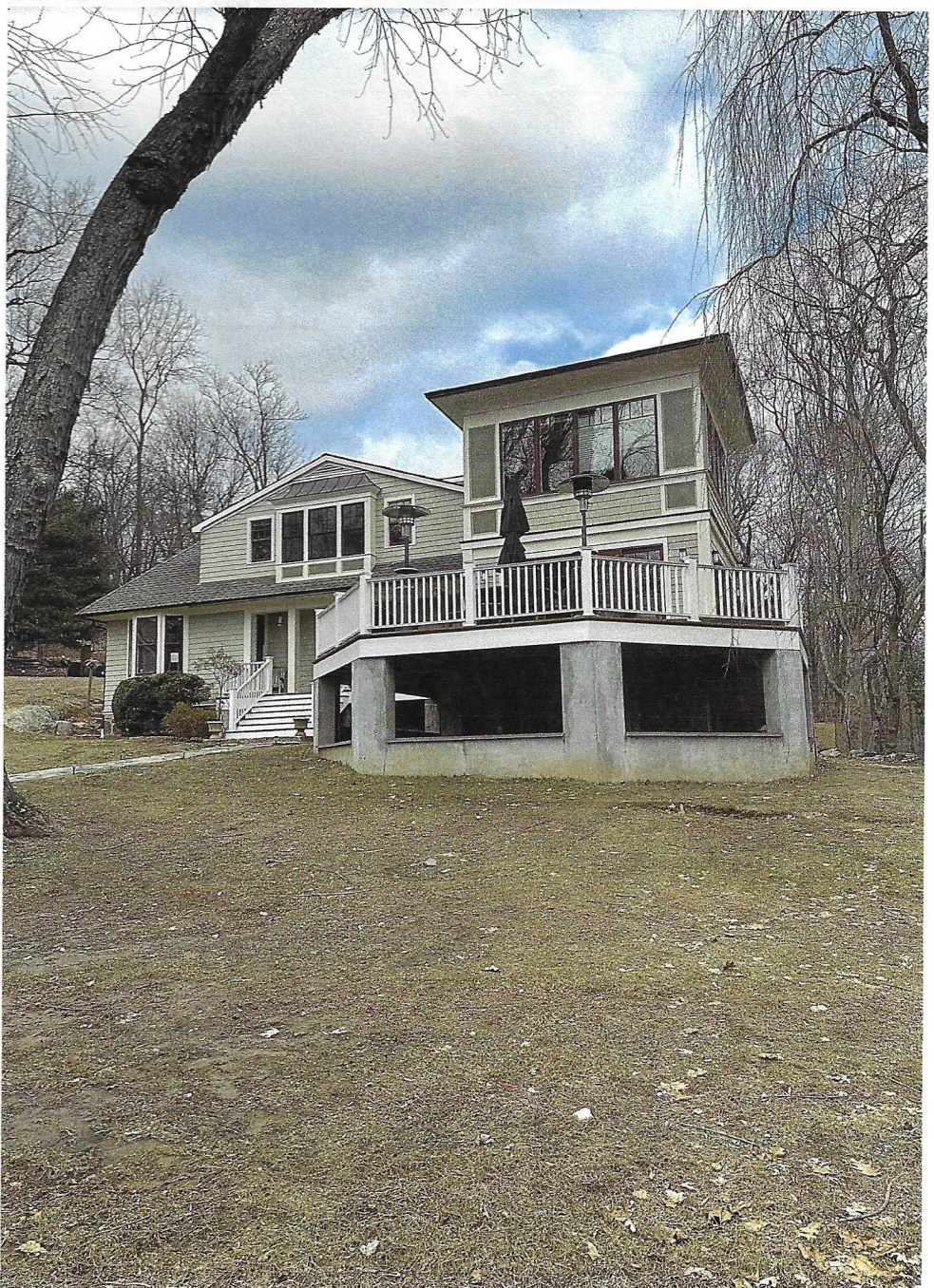
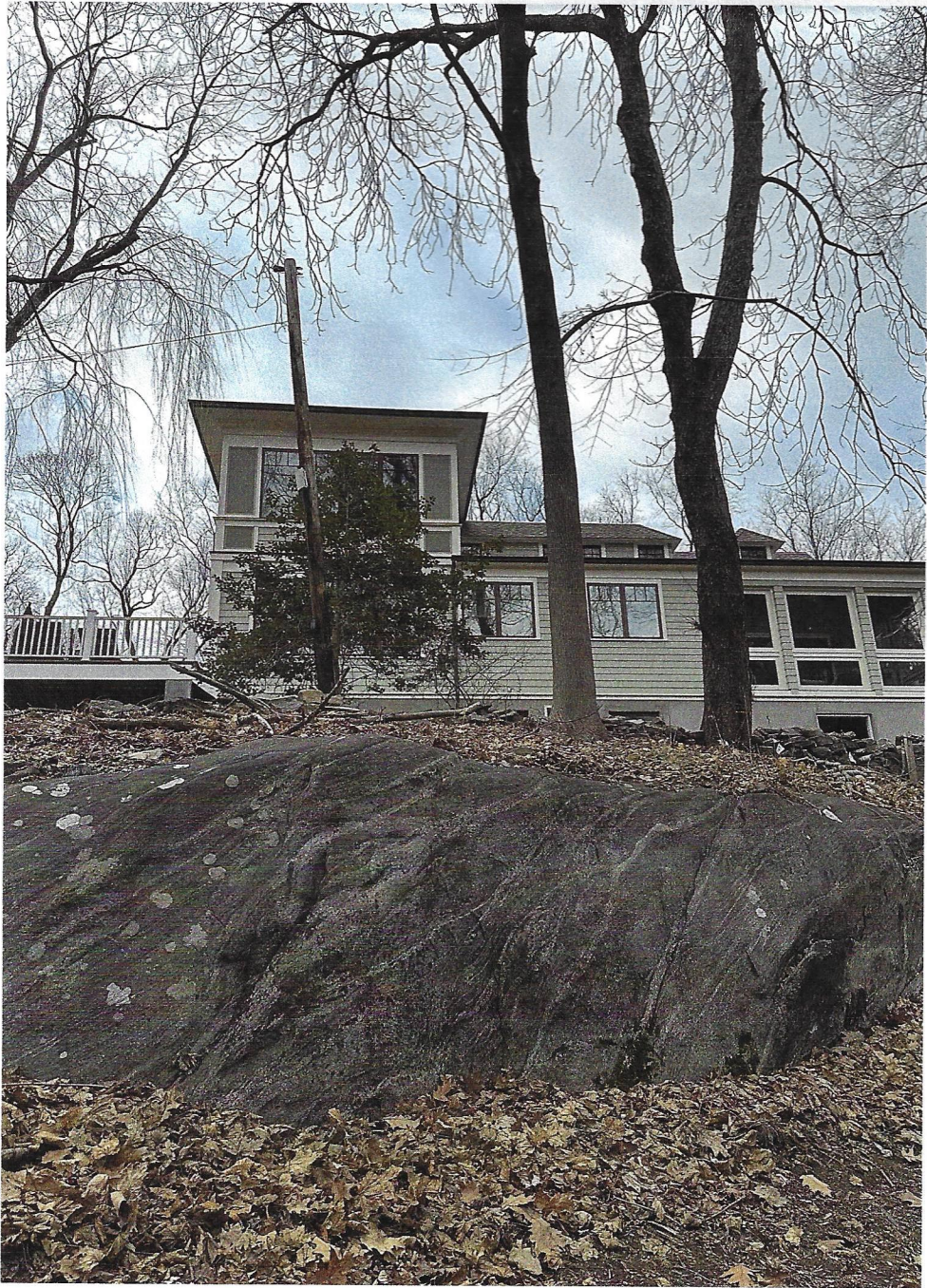
Date of Expiration

12/19/2023























# NOTICE OF APPLICATION AND HEARING

Board of Architectural Review

Clerk's Office

Village of Irvington

Westchester County, New York

CERTIFIED MAIL

Date of Mailing **January 24, 2023**

## NOTICE:

Pursuant to 9-12 of the code of the Village of Irvington notice to adjacent neighbors (as defined below) is required 10 days prior a meeting where an application for Solar Panels to the Village of Irvington Architectural Board is asking to be heard.

Date of Meeting: **February 27, 2023**

Time of Meeting: Meeting starts at 8pm

Location of Meeting: Trustees Meeting Room  
85 Main St. Irvington, NY 10533

Applicant Name	Janet E. Glover
Applicant Mailing Address	11 Washington Place E. White Plains, NY 10603
Applicant Phone Number	(914) 299-9552
Applicant Email Address	eglover@ghessolar.com

Owners Name	Charlotte & David Binns
Owner Mailing Address	2 Heritage Hill Road Irvington, NY 10533
Owners Phone Number	(917) 402-8447
Owners Email Address	charlottebinns@gmail.com

## Address of Proposed Solar Panels:

Street Address **2 Heritage Hill Road**  
**Irvington, NY 10533**

To Adjacent Neighbors of: **Daniel Antonelli**  
**27 Dearman, Irvington, NY 10533**

Please take notice that the applicant named above is requesting the Board of Architectural Review of the Village of Irvington to grant a permit for the installation of **Solar Energy Equipment** to the address listed above.

Plans of the proposed work are available in the office of the Irvington Building Department for public inspection during regular business hours 5 days prior to the scheduled meeting.

## 9-12. SolarEnergyEquipment.

*For any application for a building permit for solar energy equipment, written notice of the application and the date, time and place of the meeting at which it will be considered must be given to all adjacent property\* owners not less than 10 days prior to the meeting date. Notice shall be by a method of mail or a delivery service company providing proof of mailing or delivery or by personal service of such notice on the property owners, evidenced by their signature as acknowledgment of receipt of such notice on a form supplied or similar to one supplied by the Village Clerk. Proof of service of the notice shall be filed prior to or at the meeting at which the application is considered.*

*("Adjacent property" refers to any neighbor that shares a property line with the subject property as well as neighbors across any street from the subject property.)*



## SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Village of Irvington  
Riverview Road  
Irvington, NY 10533



9590 9402 6163 0220 4338 77

Article Number (Transfer from service label)

2250 0001 1192 6091

PS Form 3811, July 2020 PSN 7530-02-000-9053

## COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

257

☐ Agent☐ Addressee

B. Received by (Printed Name)

257

C. Date of Delivery

1/27/23

D. Is delivery address different from item 1?  
If YES, enter delivery address below:☐ Yes☐ No

3. Service Type

☐ Adult Signature☐ Adult Signature Restricted Delivery☐ Certified Mail®☐ Certified Mail Restricted Delivery☐ Collect on Delivery☐ Collect on Delivery Restricted Delivery☐ Insured Mail☐ Insured Mail Restricted Delivery (over \$500)☐ Priority Mail Express®☐ Registered Mail™☐ Registered Mail Restricted Delivery☐ Signature Confirmation™☐ Signature Confirmation Restricted Delivery

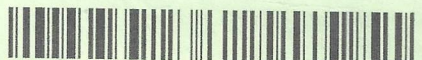
Domestic Return Receipt

## SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Joseph A. Ciccio, Jr  
301 Riverview Road  
Irvington, NY 10533



9590 9402 6163 0220 4338 91

2. Article Number (Transfer from service label)

2250 0001 1192 5926

PS Form 3811, July 2020 PSN 7530-02-000-9053

## COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

JAN 30 2023

☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1?  
If YES, enter delivery address below:☐ Yes☐ No

3. Service Type

☐ Adult Signature☐ Adult Signature Restricted Delivery☐ Certified Mail®☐ Certified Mail Restricted Delivery☐ Collect on Delivery☐ Collect on Delivery Restricted Delivery☐ Insured Mail☐ Insured Mail Restricted Delivery (over \$500)☐ Priority Mail Express®☐ Registered Mail™☐ Registered Mail Restricted Delivery☐ Signature Confirmation™☐ Signature Confirmation Restricted Delivery

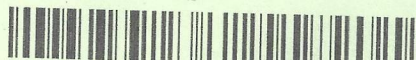
Domestic Return Receipt

## SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

David + Charlotte Binns  
2 Heritage Hill Road  
Irvington, NY 10533



9590 9402 6163 0220 4339 45

2. Article Number (Transfer from service label)

PS Form 3811, July 2020 PSN 7530-02-000-9053

## COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

1/27

☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1?  
If YES, enter delivery address below:☐ Yes☐ No

3. Service Type

☐ Adult Signature☐ Adult Signature Restricted Delivery☐ Certified Mail®☐ Certified Mail Restricted Delivery☐ Collect on Delivery☐ Collect on Delivery Restricted Delivery☐ Insured Mail☐ Insured Mail Restricted Delivery (over \$500)☐ Priority Mail Express®☐ Registered Mail™☐ Registered Mail Restricted Delivery☐ Signature Confirmation™☐ Signature Confirmation Restricted Delivery

Domestic Return Receipt

## COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

1/27

☐ Agent☐ Addressee

C. Date of Delivery

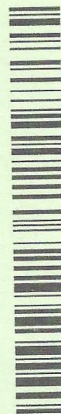
☐ Yes☐ NoD. Is delivery address different from item 1?  
If YES, enter delivery address below:

## SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Daniel Antonelli  
27 Dearman  
Irvington, NY 10533



9590 9402 6163 0220 4339 38



**U.S. Postal Service™**  
**CERTIFIED MAIL™ RECEIPT**  
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

Irvington, NY 10533

Postage	\$4.15	\$3.35
Certified Fee		\$0.00
Return Receipt Fee (Endorsement Required)		\$0.00
Restricted Delivery Fee (Endorsement Required)		\$0.00
Total Postage & Fees	\$0.87	\$
	\$8.37	



Sent To  
 Joseph A Ciccio, Jr  
 Street, Apt. No. or PO Box No. 301 Riverview Road  
 City, State, ZIP+4 Irvington, NY 10533  
 PS Form 3800, August 2006 See Reverse for Instructions

**U.S. Postal Service™**  
**CERTIFIED MAIL™ RECEIPT**  
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

Irvington, NY 10533

Postage	\$4.15	\$3.35
Certified Fee		\$0.00
Return Receipt Fee (Endorsement Required)		\$0.00
Restricted Delivery Fee (Endorsement Required)		\$0.00
Total Postage & Fees	\$0.53	\$
	\$8.13	



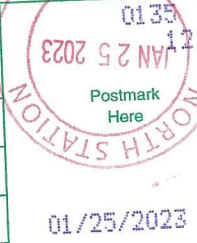
Sent To  
 Village of Irvington  
 Street, Apt. No. or PO Box No. Riverview Road  
 City, State, ZIP+4 Irvington, NY 10533  
 PS Form 3800, August 2006 See Reverse for Instructions

**U.S. Postal Service™**  
**CERTIFIED MAIL™ RECEIPT**  
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

Irvington, NY 10533

Postage	\$4.15	\$3.35
Certified Fee		\$0.00
Return Receipt Fee (Endorsement Required)		\$0.00
Restricted Delivery Fee (Endorsement Required)		\$0.00
Total Postage & Fees	\$0.87	\$
	\$8.37	



Sent To  
 Laura A Bird  
 Street, Apt. No. or PO Box No. 202 Riverview Rd  
 City, State, ZIP+4 Irvington, NY 10533  
 PS Form 3800, August 2006 See Reverse for Instructions

**U.S. Postal Service™**  
**CERTIFIED MAIL™ RECEIPT**  
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

Irvington, NY 10533

Postage	\$4.15	\$3.35
Certified Fee		\$0.00
Return Receipt Fee (Endorsement Required)		\$0.00
Restricted Delivery Fee (Endorsement Required)		\$0.00
Total Postage & Fees	\$0.63	\$
	\$8.13	



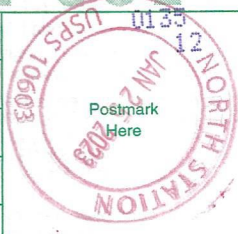
Sent To  
 David + Charlotte Binns  
 Street, Apt. No. or PO Box No. 9 Heritage Hill Road  
 City, State, ZIP+4 Irvington, NY 10533  
 PS Form 3800, August 2006 See Reverse for Instructions

**U.S. Postal Service™**  
**CERTIFIED MAIL™ RECEIPT**  
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

Irvington, NY 10533

Postage	\$4.15	\$3.35
Certified Fee		\$0.00
Return Receipt Fee (Endorsement Required)		\$0.00
Restricted Delivery Fee (Endorsement Required)		\$0.00
Total Postage & Fees	\$	



Sent To  
 Daniel Antonelli  
 Street, Apt. No. or PO Box No. 27 Dearman  
 City, State, ZIP+4 Irvington, NY 10533  
 PS Form 3800, August 2006 See Reverse for Instructions



Enthink Engineering LLC

1266 Rahway Avenue, Westfield, NJ 07090

enthinkllc@gmail.com (646) 632-7738

December 19, 2022

Village of Irvington  
Building Department  
85 Main Street  
Irvington, NY 10533

Re:2 Heritage Hill Road  
Irvington, NY 10533

To Whom it May Concern,

The existing roof structure of the above captioned property which is constructed of 2"X 10" wood rafters 16" oc with 2" x 10" collar ties every rafter with 3/4" plywood decking and asphalt shingles will support the additional load of the solar panels of 2.49PSF under the required loads of 114 MPH wind speed, and 30PSF ground snow load without additional structural supports.

I have determined that the installation will meet the requirements of the 2020 NYS Energy Conservation Construction Code, 2020 NYS Residential Code, 2020 NYS Fire Code, NYS Existing Building Code, 2017 NEC and The Village of Irvington building codes, when installed in accordance with the manufacturer's instructions.

If you have any further questions or require addition information, feel free to contact me.

Very truly yours,





# PHOTOVOLTAIC ROOF MOUNT SYSTEM

46 MODULES - SYSTEM SIZE STC (22.31 kW DC ,17.6 KW AC)

2 HERITAGE HILL RD, IRVINGTON, NY 10533, USA (41.04117°, -73.85315°)

## SYSTEM SUMMARY STC (22.31 kW DC / 17.6 kW AC)

- STC DC: (46) 465 = 22.31 kW
- STC AC: (1) 10000 + (1) 7600 = 17.6 kW
- (46) HANWHA Q CELL Q.PEAK DUO XL-G10.d BFG/465 MODULES
- (46) SOLAREEDGE S500 OPTIMIZERS
- (1) SOLAREEDGE SE10000H-US ENERGY HUB (240) INVERTERS
- (1) STOREDGE SE7600H-US ENERGY HUB INVERTERS
- 2x STRINGS OF 10 CONNECTED IN SERIES
- 2x STRINGS OF 13 CONNECTED IN SERIES

## GOVERNING CODES:

- ALL WORK SHALL CONFORM TO THE FOLLOWING CODES
- 2020 RESIDENTIAL CODE OF NEW YORK STATE
  - 2020 BUILDING CODE OF NEW YORK STATE
  - 2020 ENERGY CONSERVATION CONSTRUCTION CODE
  - 2020 FIRE CODE OF NEW YORK STATE
  - 2017 NATIONAL ELECTRICAL CODE
  - 2020 FUEL CODE OF NEW YORK STATE

## GENERAL NOTES

- ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE WITH UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN.
- THIS SYSTEM WILL NOT BE INTERCONNECTED UNTIL APPROVAL FROM THE LOCAL JURISDICTION AND UTILITY IS OBTAINED.
- ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT SHALL BE WEATHERPROOF AND SHALL BE LISTED BY 'UL' FOR THE TYPE OF APPLICATION AND 'UL' LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
- WIRING METHOD SHALL BE EMT ABOVE GROUND MOUNTED IN CONCEALED SPACES (UNLESS APPROVED OTHERWISE) AND SCHEDULE-40 PVC FOR BELOW GROUND INSTALLATIONS UNLESS NOTED OTHERWISE.
- AN OSHA APPROVED LADDER PROVIDING ACCESS TO ALL PORTIONS OF THE ARRAY SHALL BE SECURED IN PRIOR TO REQUESTING INSPECTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE CONDUCTOR IF NECESSARY.

## ROOF ACCESS POINT

- SHALL BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION IN LOCATIONS WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREE LIMBS, WIRES OR SIGNS.

## SAFETY PLAN NOTES

- INSTALLERS SHALL DRAW IN DESIGNATED SAFETY AREA AROUND HOME.
- INSTALLERS SHALL UPDATE NAME, ADDRESS AND PHONE NUMBER OF NEAREST URGENT CARE FACILITY RELATIVE TO THE SITE BEFORE STARTING WORK.

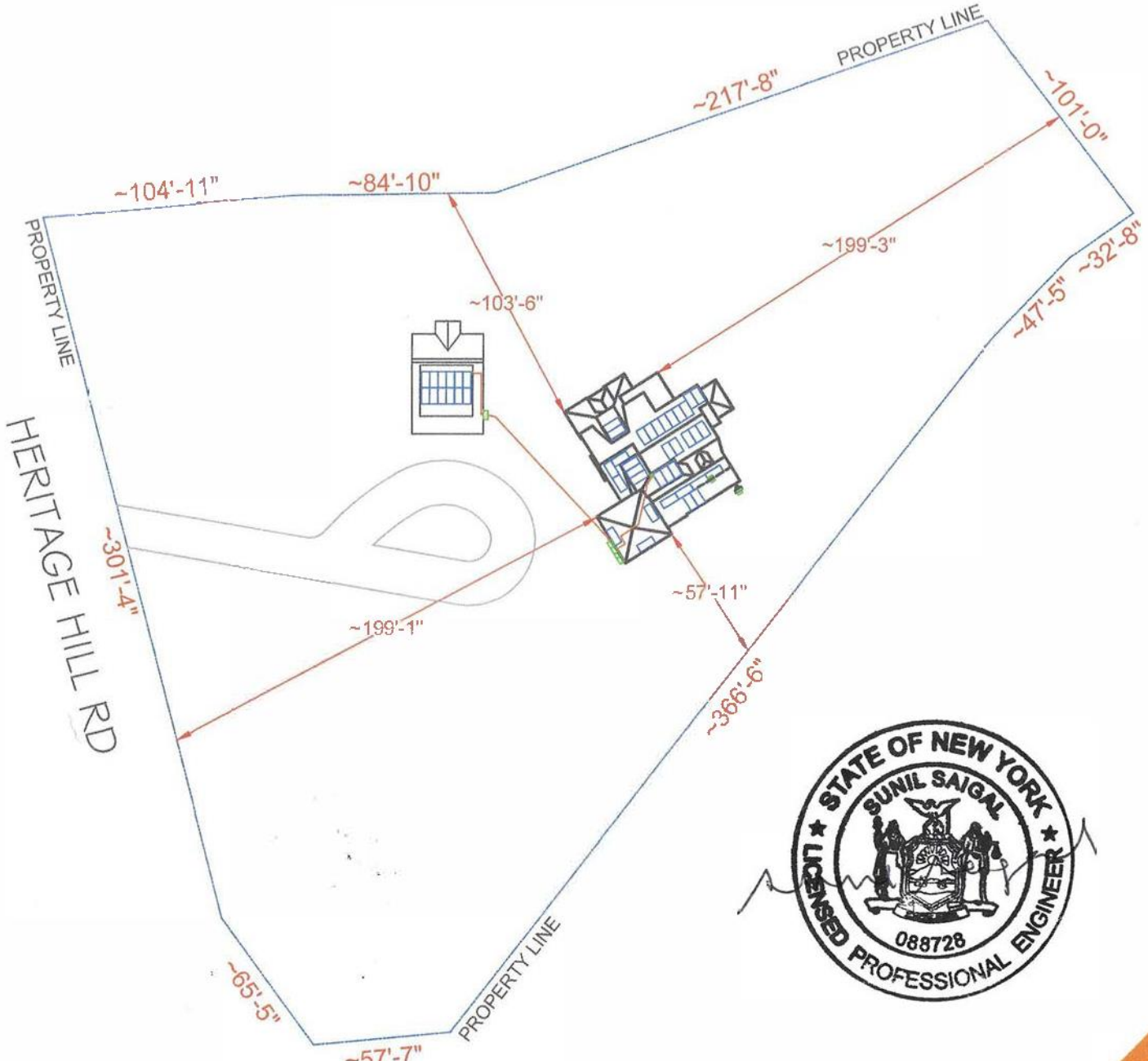
## LOCATION OF NEAREST URGENT CARE FACILITY

- (FOR INSTALLER USE ONLY)
- NAME:
  - ADDRESS:
  - PHONE NUMBER:

UTILITY: CONSOLIDATED EDISON CO-NY INC.  
ACCOUNT NUMBER: #51-1702-5430-0002-3  
METER NUMBER: #005060366



<b>MSP</b> MAIN SERVICE PANEL (EXISTING, 200A)	<b>ACD</b> AC DISCONNECT UNFUSED (NEW)
<b>UM</b> UTILITY METER (EXISTING)	<b>ACF</b> AC DISCONNECT FUSED (NEW)
<b>PM</b> PRODUCTION METER (N/A)	<b>JB</b> JUNCTION BOX (NEW)
<b>BAT</b> BATTERY (N/A)	<b>AT</b> AUTO TRANSFORMER (N/A)
<b>INV</b> (2) INVERTER (NEW)	<b>SUB</b> SUBPANEL (N/A)
<b>CB</b> COMBINER BOX (NEW)	<b>DCD</b> DC DISCONNECT (N/A)
<b>SM</b> SOLAREEDGE METER (N/A)	<b>DCC</b> DC COMBINER (NEW)
<b>BLP</b> BACKUP LOAD PANEL (N/A)	<b>EE</b> EXISTING EQUIPMENT



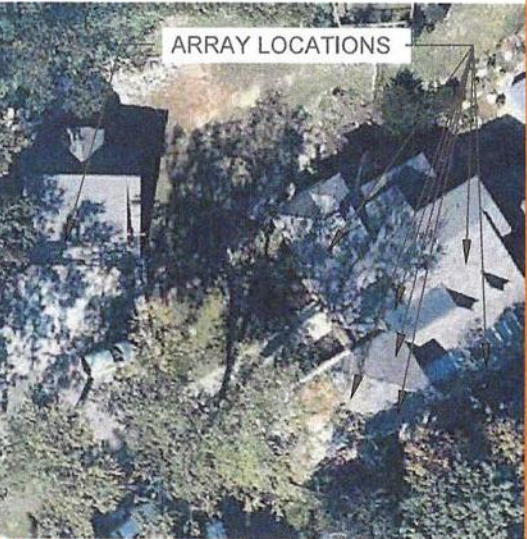
**SITE PLAN & SAFETY PLAN**  
SCALE: 1/64" = 1'-0"



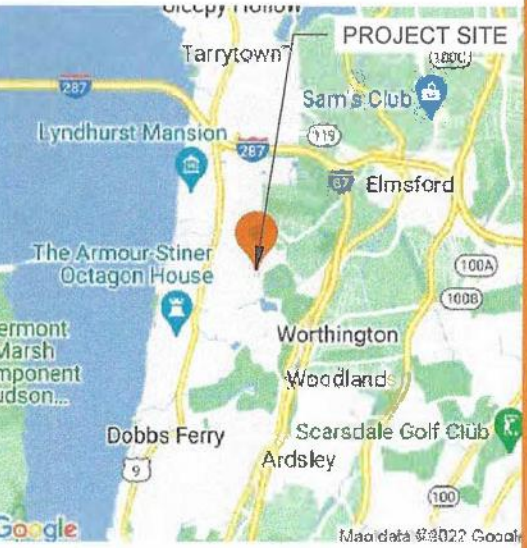
## SHEET INDEX

PV-1	COVER PAGE
PV-2	ROOF PLAN WITH MODULES
PV-3	ATTACHMENT DETAIL
PV-4	SINGLE LINE DIAGRAM
PV-5	WIRING CALCULATION
PV-6	PLACARDS
PV-7+	EQUIPMENT SPECIFICATION

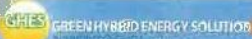
AHJ: VILLAGE OF IRVINGTON  
UTILITY: CONSOLIDATED EDISON  
CO-NY INC.



**HOUSE PHOTO**  
SCALE: NTS



**VICINITY MAP**  
SCALE: NTS



**CONTRACTOR**  
NAME: GREEN HYBRID ENERGY SOLUTIONS, INC.  
ADDRESS: 11 WASHINGTON PLE, WHITE PLAINS, NY 10603, USA  
PHONE: 9143467588  
CONTRACTOR LICENSE #: WC-24683-JH1  
ELECTRICAL LICENSE #: 1163  
EMAIL: awglover@ghehsolar.com

REVISIONS		
DESCRIPTION	DATE	REV

## SIGNATURE & SEAL

## HOMEOWNER INFO

**CHARLOTTE BINNS**  
2 HERITAGE HILL RD,  
IRVINGTON, NY 10533, USA

APN: 55260021119949  
EMAIL: -  
PHONE: -

**SHEET NAME**  
COVER PAGE

**SHEET SIZE**  
ANSI B  
11" X 17"

**SHEET NUMBER**  
PV-1



MODULE AREA & WEIGHT CALCULATIONS

PANEL TYPES (COUNT, AREA, WEIGHT):  
• (46x) HANWHA Q CELL Q.PEAK DUO XL-G10.d BFG485 (86.92' x 40.82', 68.4 LBS)  
OPTIMIZER TYPES (COUNT, WEIGHT):  
• (46x) SOLAREGE S500 (1.5 LBS)  
ATTACHMENT COUNT: 154  
MOUNTING SYSTEM WEIGHT/MODULE: 1.5 LBS  
TOTAL ROOF AREA: 3413 SF  
TOTAL ARRAY AREA: (46) 86.9' x 40.8' = 1133.41 SF  
TOTAL ARRAY WEIGHT: (46) 68.4 + (46) 1.5 + (46) 1.5 = 2824 LBS  
WEIGHT AT EACH CONNECTION: 2824 LBS / 154 = 18.33 LBS  
DISTRIBUTED LOAD: 2824 LBS / 1133.41 SF = 2.49 PSF  
ROOF AREA COVERED BY ARRAY: 1133 SF / 3413 SF = 33.0%

DESIGN CRITERIA

EXPOSURE CATEGORY = B  
WIND SPEED = 114 MPH  
SNOW LOAD = 30 PSF

UTILITY: CONSOLIDATED EDISON CO-NY INC.  
ACCOUNT NUMBER: #51-1702-5430-0002-3  
METER NUMBER: #005060366



**CONTRACTOR**  
NAME: GREEN HYBRID ENERGY SOLUTIONS, INC.  
ADDRESS: 11 WASHINGTON PL E WHITE PLAINS, NY 10603, USA  
PHONE: 914-4675588  
CONTRACTOR LICENSE #: WC-24693-H11  
ELECTRICAL LICENSE #: 1163  
EMAIL: ewgk@ghesolar.com

REVISIONS

DESCRIPTION	DATE	REV

SIGNATURE & SEAL

HOMEOWNER INFO

CHARLOTTE BINNS  
2 HERITAGE HILL RD,  
IRVINGTON, NY 10533, USA

APN: 56250021115949  
EMAIL: -  
PHONE: -

SHEET NAME

ROOF PLAN WITH MODULES

SHEET SIZE

ANSI B  
11" X 17"

SHEET NUMBER

PV-2

BILL OF MATERIALS		
SOLAR PV MODULES	46	HANWHA Q CELL Q.PEAK DUO XL-G10.d BFG485
OPTIMIZERS	46	SOLAREGE S500
INVERTERS	01	SOLAREGE SE7600H-US ENERGY HUB (240)
INVERTERS	01	SOLAREGE SE10000H-US ENERGY HUB (240)
JUNCTION BOX	01	600V, NEMA 3R RATED JBOX
LOAD CENTER	01	AC COMBINER PANEL (MIN RATING 80A)
LOAD CENTER	01	DC COMBINER PANEL
AC DISCONNECT	01	PV VISIBLE LOCKABLE LABELED DISCONNECT (100A UNFUSED 1PH 240VAC)
AC DISCONNECT	01	PV VISIBLE LOCKABLE LABELED DISCONNECT (100A FUSED, 100A FUSES 1PH 240VAC)
ATTACHMENTS	96	ROOF TECH - RT MIN
ATTACHMENTS	21	IRONRIDGE TILT LEG FOR NORTH TILT LEG
ATTACHMENTS	38	IRON RIDGE TILT LEG
RAIL	30	IRONRIDGE RESOURCES - XR100
RAIL SPLICES	10	RAIL SPLICES
MID CLAMPS	52	MID CLAMP
END CLAMPS	80	END CLAMP
GROUNDING LUG	20	GROUNDING LUG

ROOF DESCRIPTION TABLE						
ROOF PLANE	RAFTER SIZE	RAFTER SPACING	ATTACHMENT SPACING	MODULE COUNT	ARRAY TILT	AZIMUTH
#1	2" x 10"	16" O.C.	48" O.C.	12	23°	180°
#2	2" x 10"	16" O.C.	48" O.C.	02	0°	148°
#3	2" x 10"	16" O.C.	48" O.C.	09	5°	148°
#4	2" x 10"	16" O.C.	48" O.C.	05	23°	148°
#5	2" x 10"	16" O.C.	48" O.C.	03	0°	148°
#6	2" x 10"	16" O.C.	48" O.C.	06	20°	148°
#7	2" x 10"	16" O.C.	48" O.C.	01	27°	148°
#8	2" x 10"	16" O.C.	48" O.C.	01	27°	238°
#9	2" x 10"	16" O.C.	48" O.C.	01	27°	58°
#10	2" x 10"	16" O.C.	48" O.C.	03	23°	148°
#11	2" x 10"	16" O.C.	48" O.C.	03	0°	148°

ROOF ACCESS POINT

• SHALL BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION IN LOCATIONS WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREE LIMBS, WIRES OR SIGNS.

**LEGEND**

PV MODULE

OPTIMIZER

ROOF ATTACHMENT

RAFTER

DIMENSIONS

PROPERTY LINE

FENCE

GATE

MSP

MAIN SERVICE PANEL (EXISTING, 200A)

UM

UTILITY METER (EXISTING)

PM

PRODUCTION METER (N/A)

BAT

BATTERY (N/A)

INV

(2) INVERTER (NEW)

LC

LOAD CENTER (COMBINER PANEL) (NEW)

SM

SOLAREGE METER (N/A)

BLP

BACKUP LOAD PANEL (N/A)

ACD

AC DISCONNECT UNFUSED (NEW)

ACF

AC DISCONNECT FUSED (NEW)

JB

JUNCTION BOX (NEW)

AT

AUTO TRANSFORMER (N/A)

SUB

SUBPANEL (N/A)

DCD

DC DISCONNECT (N/A)

DCC

DC COMBINER (NEW)

EE

EXISTING EQUIPMENT

ROOF #1  
PITCH 23°  
AZIMUTH 180°

LADDER LANDING AREA

UNDERGROUND CONDUIT RUN TO THE MAIN HOUSE

(E) BACK YARD

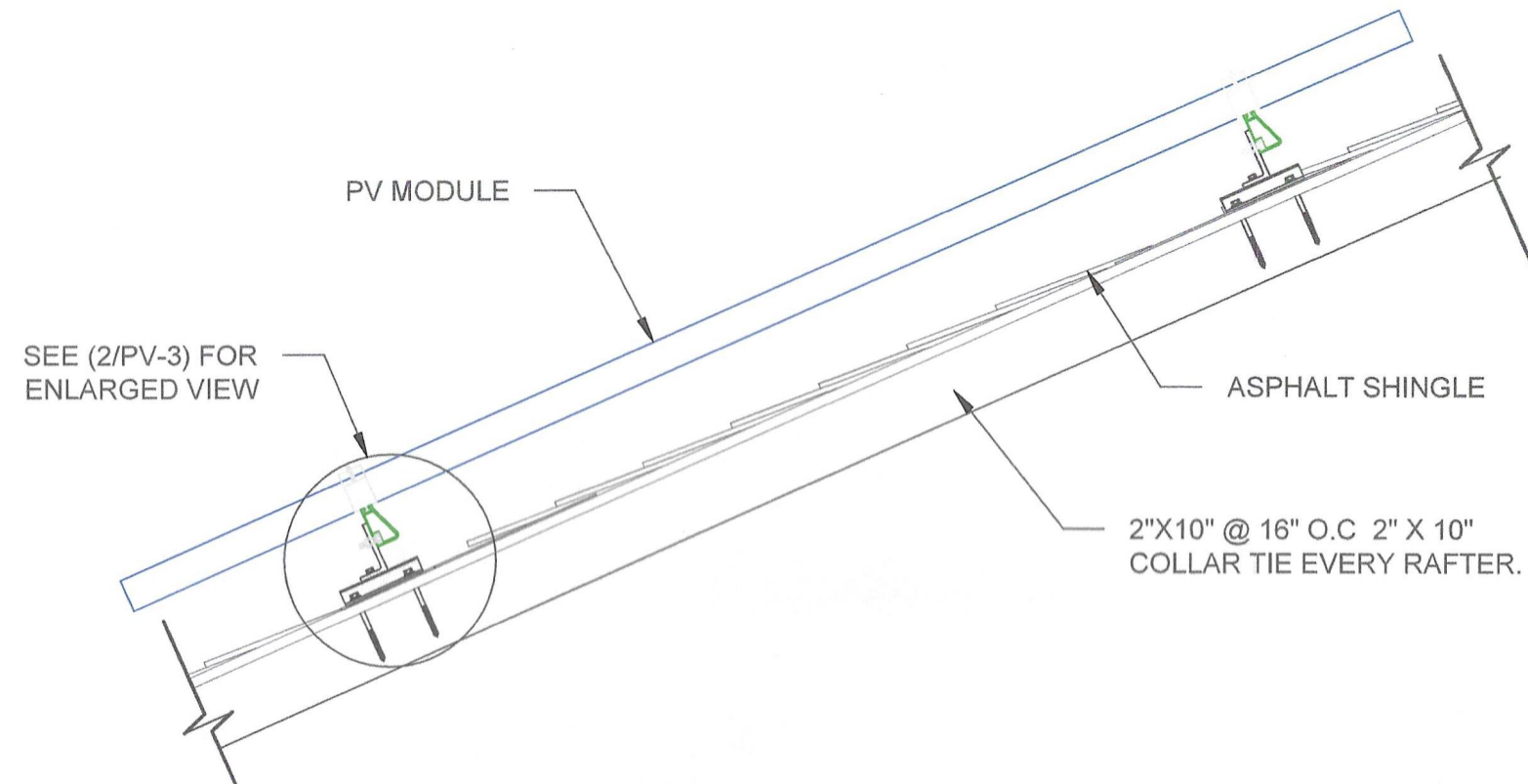
HERITAGE HILL RD  
(E) FRONT YARD

ROOF PLAN WITH MODULES

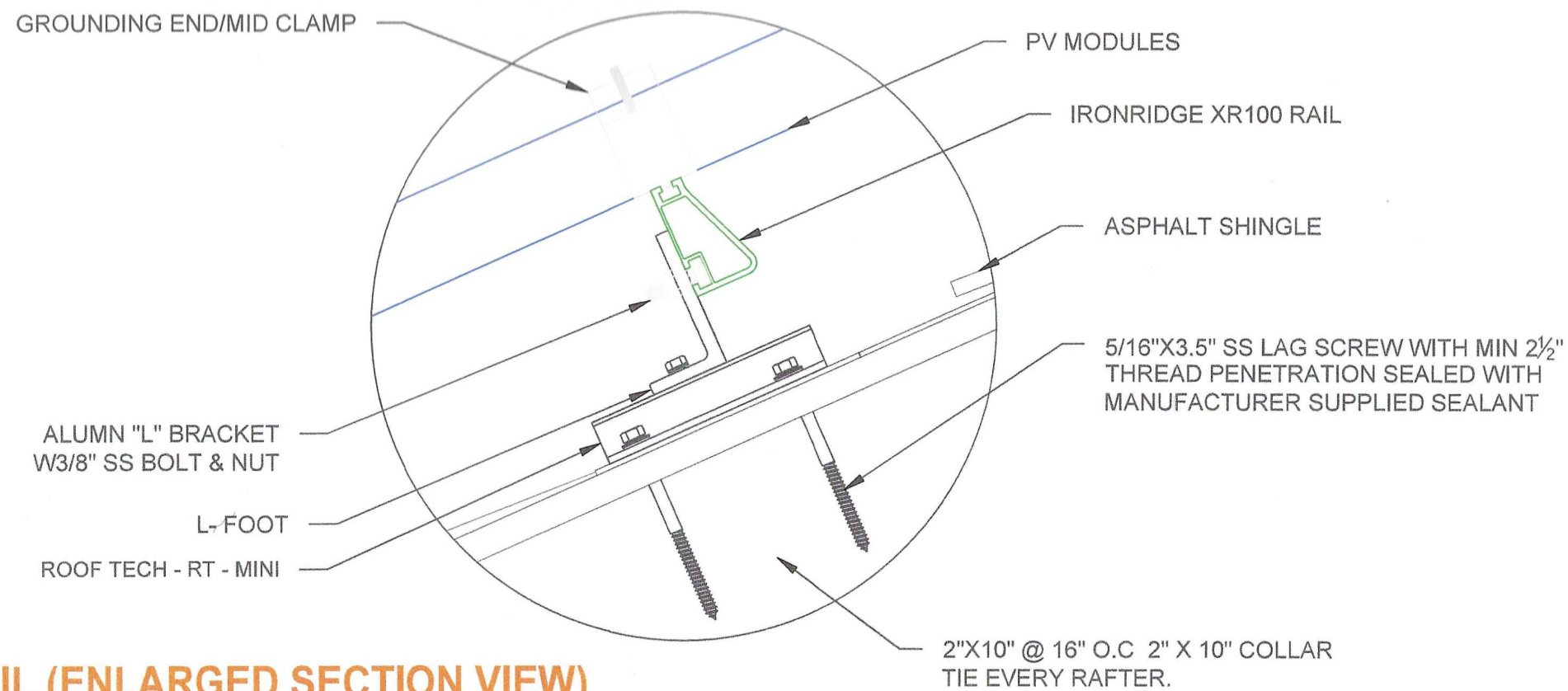
SCALE: 1/16" = 1'

Page 20





**ATTACHMENT DETAIL**  
SCALE: NTS



**ATTACHMENT DETAIL (ENLARGED SECTION VIEW)**  
SCALE: NTS



**CONTRACTOR**  
NAME: GREEN HYBRID ENERGY SOLUTIONS, INC.  
ADDRESS: 11 WASHINGTON PL E, WHITE PLAINS, NY 10603, USA  
PHONE: 9143467588  
CONTRACTOR LICENSE #: WC-24683-H11  
ELECTRICAL LICENSE #: 1163  
EMAIL: avglover@ghesolar.com

REVISIONS		
DESCRIPTION	DATE	REV

SIGNATURE & SEAL

HOMEOWNER INFO

**CHARLOTTE BINNS**  
2 HERITAGE HILL RD,  
IRVINGTON, NY 10533, USA

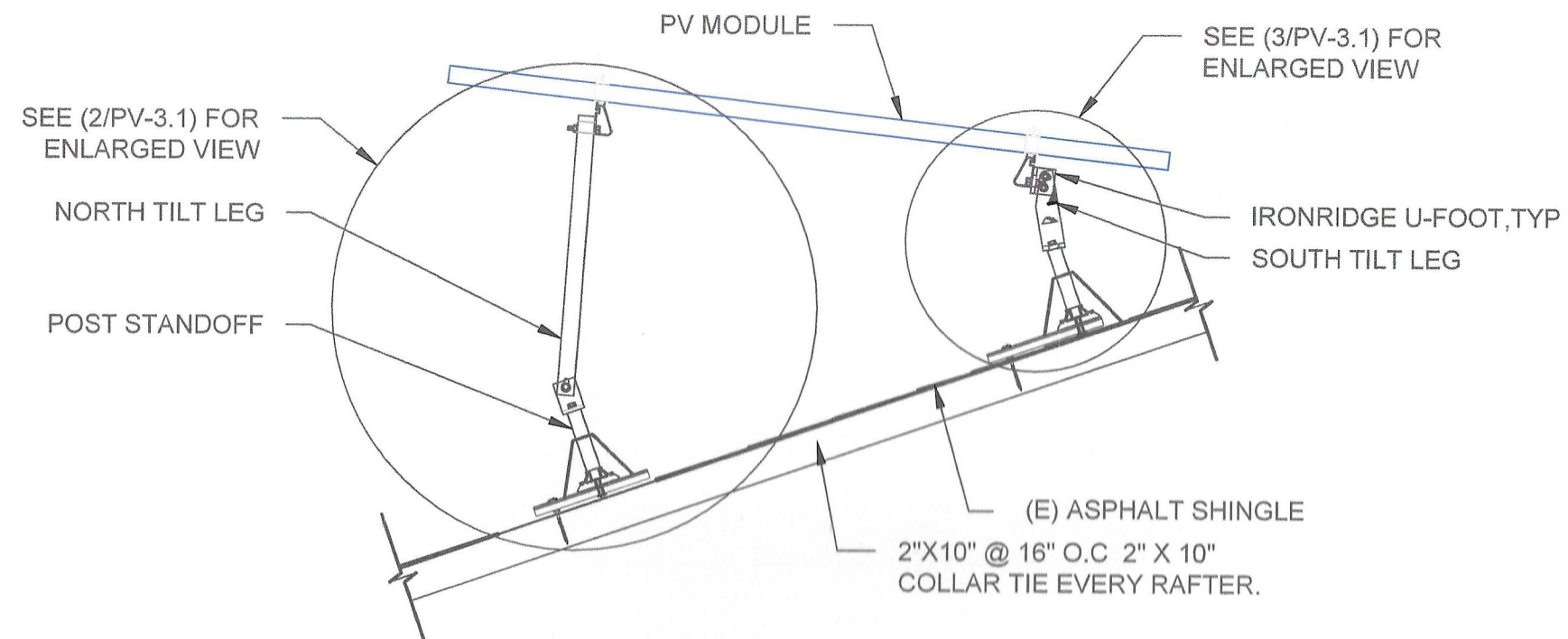
APN: 55260021115949  
EMAIL: -  
PHONE: -

SHEET NAME  
**ATTACHMENT DETAIL**

SHEET SIZE  
**ANSI B  
11" X 17"**

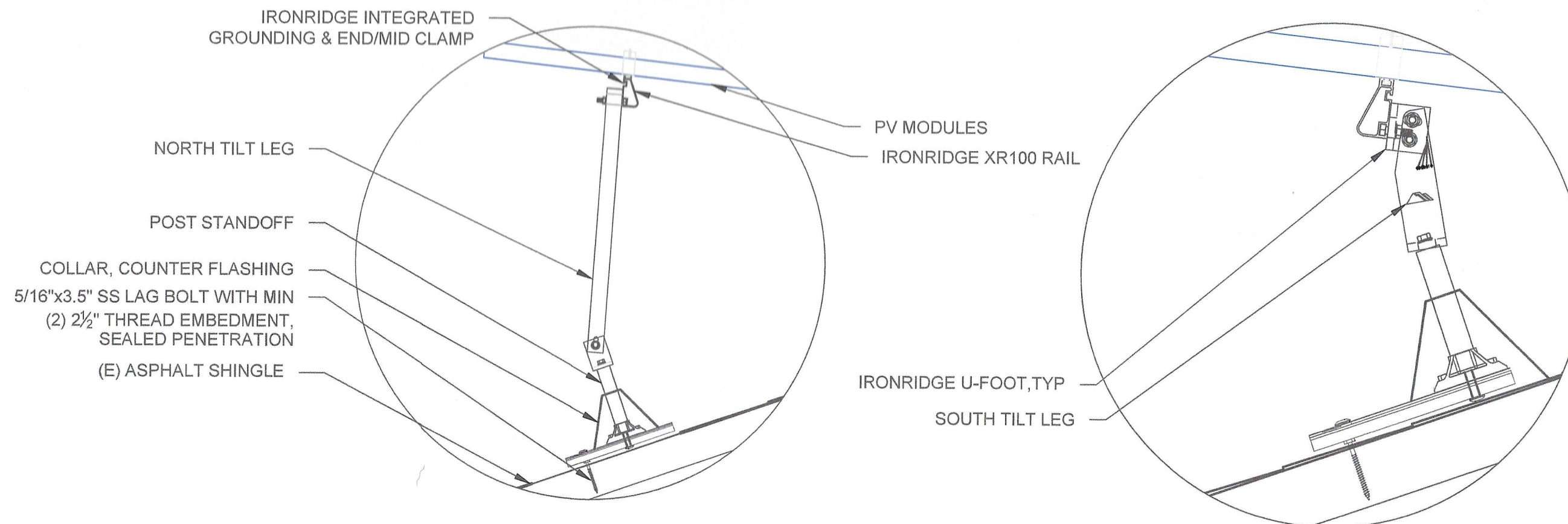
SHEET NUMBER  
**PV-3**





## ATTACHMENT DETAIL

SCALE: NTS



## ATTACHMENT DETAIL (ENLARGED SECTION VIEW)

SCALE: NTS



**CONTRACTOR**  
 NAME: GREEN HYBRID ENERGY SOLUTIONS, INC.  
 ADDRESS: 11 WASHINGTON PL E, WHITE PLAINS, NY 10603, USA  
 PHONE: 9143467588  
 CONTRACTOR LICENSE #: WC-24683-H11  
 ELECTRICAL LICENSE #: 1163  
 EMAIL: avglover@ghesolar.com

### REVISIONS

DESCRIPTION	DATE	REV

### SIGNATURE & SEAL

### HOMEOWNER INFO

**CHARLOTTE BINNS**  
 2 HERITAGE HILL RD,  
 IRVINGTON, NY 10533, USA

APN: 65260021115949  
 EMAIL: -  
 PHONE: -

### SHEET NAME

ATTACHMENT  
 DETAIL

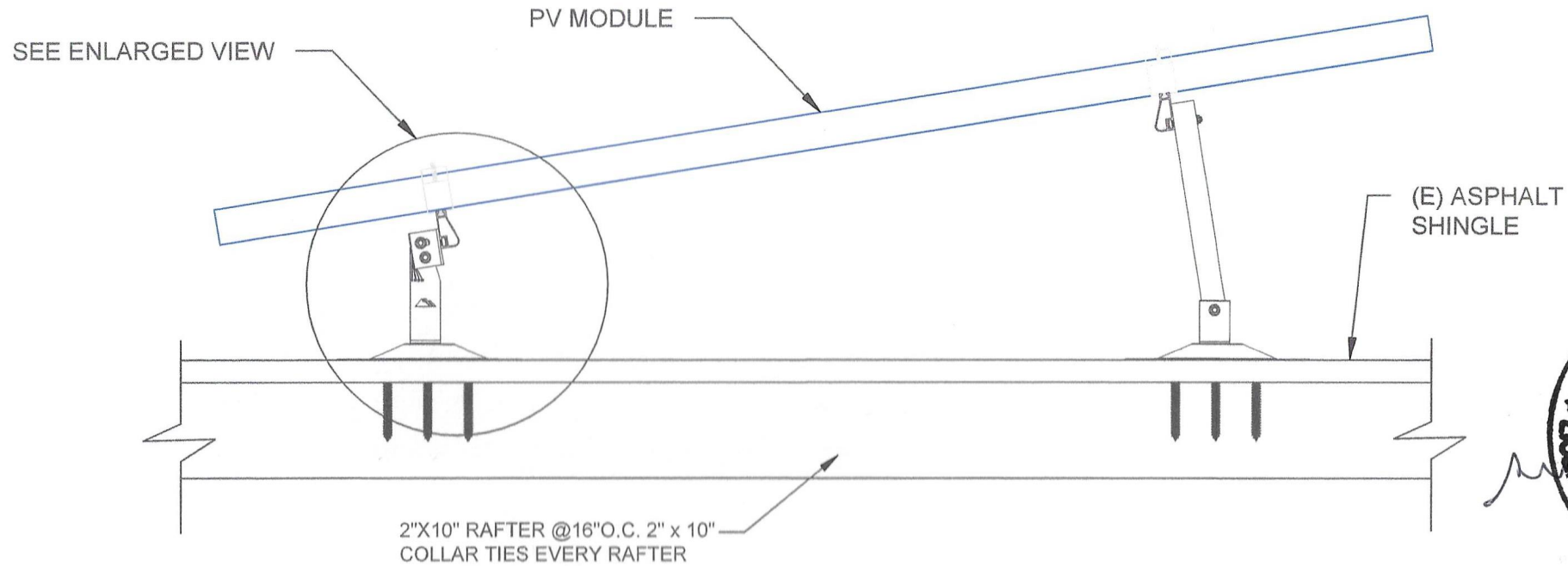
### SHEET SIZE

ANSI B  
 11" X 17"

### SHEET NUMBER

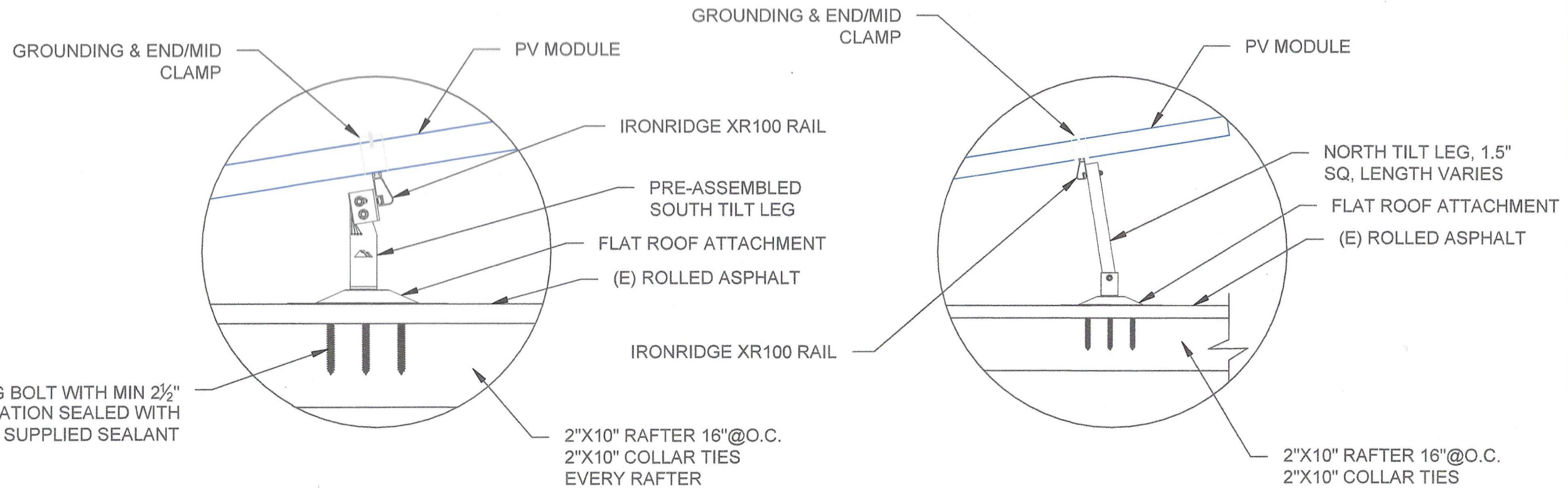
PV-3.1





## ATTACHMENT DETAIL

SCALE: NTS



## ATTACHMENT DETAIL (ENLARGED SECTION VIEW)

SCALE: NTS



**CONTRACTOR**  
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 PHONE: 9143467588  
 CONTRACTOR LICENSE # WC-24683-H11  
 ELECTRICAL LICENSE # 1163  
 EMAIL: avglover@ghesolar.com

REVISIONS		
DESCRIPTION	DATE	REV

SIGNATURE & SEAL

HOMEOWNER INFO

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 2 HERITAGE HILL RD,  
 IRVINGTON, NY 10533, USA

APN: 55260021115949  
 EMAIL: -  
 PHONE: -

SHEET NAME

ATTACHMENT  
 DETAIL

SHEET SIZE

ANSI B  
 11" X 17"

SHEET NUMBER

PV-3.2



**! WARNING !**  
ELECTRICAL SHOCK HAZARD  
DO NOT TOUCH TERMINALS.  
TERMINALS ON BOTH SIDES  
MAY BE ENERGIZED IN THE  
OPEN POSITION. DUAL  
POWER SOURCE: UTILITY  
AND SOLAR PV POWER MAY  
BE PRESENT

LABEL LOCATION:  
INSTALL ON EACH PV AC DEVICE,  
PRODUCTION METER, UTILITY METER  
PER CODE: NEC 2017 690.17(E), 705.12(B)(3)

**! WARNING !**  
ELECTRICAL SHOCK HAZARD  
THE DC CONDUCTORS OF THIS  
PHOTOVOLTAIC SYSTEM ARE  
UNGROUND AND MAY BE  
ENERGIZED

LABEL LOCATION:  
INSTALL ON EACH INVERTER.  
PER CODE: 2017 NEC 690.35(F)

**! WARNING !**  
INVERTER OUTPUT CONNECTION  
DO NOT RELOCATE THIS  
OVERCURRENT DEVICE

LABEL LOCATION:  
ADJACENT TO PV BREAKER (IF  
APPLICABLE).

**! WARNING !**  
DUAL POWER SUPPLY  
SOURCES: UTILITY GRID  
AND PV SOLAR ELECTRIC  
SYSTEM

LABEL LOCATION:  
INSTAL ON EACH PV AC DEVICE  
PER CODE: NEC 2017 690.56(B)

**PHOTOVOLTAIC AC  
DISCONNECT SWITCH**

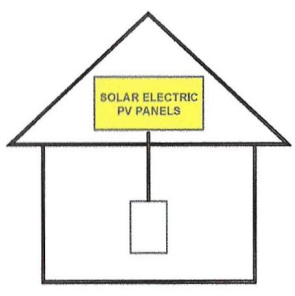
LABEL LOCATION:  
INSTALL ON PV SYSTEM  
DISCONNECTING MEANS  
PER CODE: NEC 2017 690.13 (B)

**RAPID SHUTDOWN SWITCH  
FOR SOLAR PV SYSTEM**

NEC 690.56(C)(3)  
SIGNAGE LOCATIONS:  
MAIN SERVICE PANEL

**SOLAR PV SYSTEM EQUIPPED  
WITH RAPID SHUTDOWN**

TURN RAPID SHUTDOWN  
SWITCH TO THE "OFF"  
POSITION TO SHUT DOWN  
PV SYSTEM AND REDUCE  
SHOCK HAZARD IN THE  
ARRAY.



690.56(C)(1)(a)  
SIGNAGE LOCATIONS:  
MAIN SERVICE PANEL

## SIGNAGE NOTES

- 1.MATERIAL USED FOR THE SIGNAGE SHALL BE REFLECTIVE,WEATHER RESISTANT AND SUITABLE FOR THE ENVIRONMENT.
- 2.ALL SIGNAGE SHALL HAVE ALL CAPITAL LETTERS WITH MINIMUM 3/8" LETTER HEIGHT,WHITE ON RED BACKGROUND.
- 3.MAIN SERVICE DISCONNECT MARKING SHALL BE PLACED ADJACENT TO MAIN SERVICE DISCONNECT IN A LOCATION CLEARLY VISIBLE FROM THE LOCATION WHERE THE LEVER IS OPERATED.
- 4.MARKING IS REQUIRED ON ALL INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS,ENCLOSURES,CABLE ASSEMBLIES,AND JUNCTION BOXES TO ALERT THE FIRE SERVICE TO AVOID CUTTING THEM.MARKING SHALL BE PLACED EVERY 10',AT TURNS AND ABOVE AND/OR BELOW PENETRATIONS, AND AT ALL DC COMBINER AND JUNCTION BOXES.
- 5.DO NOT US SCREWS FOR SIGNAGE ATTACHMENT. USE ONLY APPROVED ADHESIVE.

**! WARNING !**  
SOLAR ELECTRIC CIRCUIT  
BREAKER IS BACKFED

LABEL LOCATION:  
INSTALL AT PV CIRCUIT BREAKER  
WHEN BACKFEEDING  
PER CODE(S): NEC 2017 690.64,  
705.12(D)(2)(3)(B)

**WARNING: PHOTOVOLTAIC  
POWER SOURCE**

LABEL LOCATION:  
INTERIOR AND EXTERIOR DC CONDUIT EVERY 10 FT, AT  
EACH TURN, ABOVE AND BELOW PENETRATIONS, ON  
EVERY JB/PULL BOX CONTAINING DC CIRCUITS.  
PER CODE: NEC 2017: 690.31(G)(3)

**PHOTOVOLTAIC DC DISCONNECT**

MAXIMUM SYSTEM VOLTAGE: 480.0 VDC  
MAXIMUM CIRCUIT CURRENT: 15.00 ADC  
MAX RATED OUTPUT CURRENT OF THE CHARGE  
CONTROLLER OR DC-TO-DC CONVERTER (IF INSTALLED): 30 ADC

LABEL LOCATION: DC DISCONNECTS, INVERTERS  
REF: NEC 2017 - 690.53

**! WARNING !**  
SOALAR PV INVERTER OUTPUT  
CONNECTION  
BACK-FED BREAKERS DO  
NOT ADD LOADS

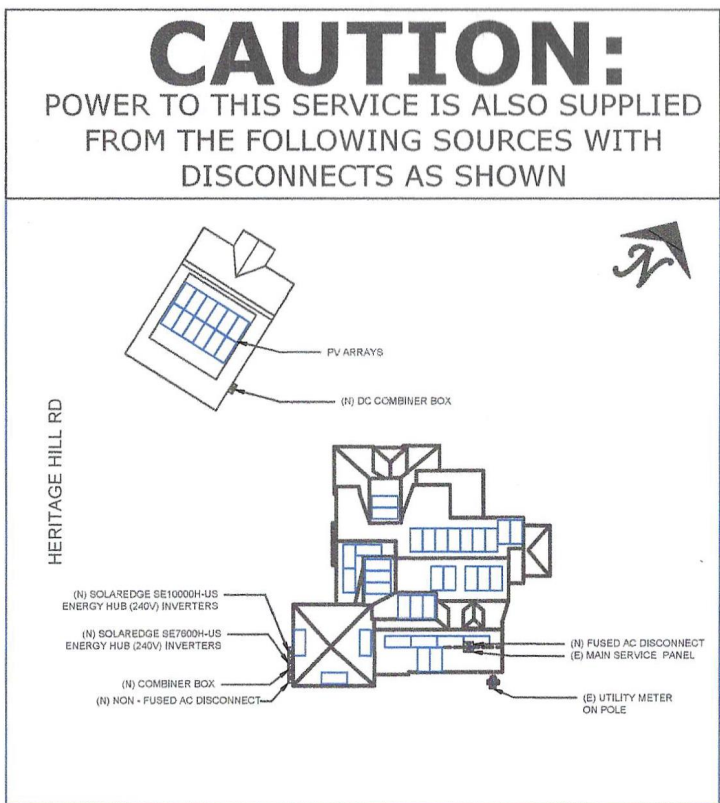
LABEL LOCATION:  
INSTALL ON AC COMBINER  
PER CODE: NEC 2017 690.64,  
705.12(D)(2)(3)(C)

**PHOTOVOLTAIC DC DISCONNECT**

MAXIMUM SYSTEM VOLTAGE: 480.0 VDC  
MAXIMUM CIRCUIT CURRENT: 15 ADC  
MAX RATED OUTPUT CURRENT OF THE CHARGE  
CONTROLLER OR DC-TO-DC CONVERTER (IF INSTALLED): 30 ADC

LABEL LOCATION: DC DISCONNECTS, INVERTERS  
CODE REF: NEC 2017 - 690.53

15



LABEL LOCATION: MSP  
CODE REF: NEC 2017 - 705.10



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APN: 55260021115949  
EMAIL: -  
PHONE: -

**SHEET NAME**

PLACARDS

**SHEET SIZE**

ANSI B  
11" X 17"

**SHEET NUMBER**

PV-6





## Q.PEAK DUO XL-G10.3 / BFG 475-490

BIFACIAL DOUBLE GLASS MODULE  
WITH EXCELLENT RELIABILITY  
AND ADDITIONAL YIELD



Quality  
Controlled PV  
www.tuv.com  
ID 1111232615



### BIFACIAL ENERGY YIELD GAIN OF UP TO 20%

Bifacial Q.ANTUM solar cells with zero gap cell layout make efficient use of light shining on the module rear-side for radically improved LCOE.



### LOW ELECTRICITY GENERATION COSTS

Q.ANTUM DUO Z combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology for higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 21.4%.



### INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behavior.



### ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID and Anti PID Technology<sup>1</sup>, Hot-Spot Protect and Traceable Quality Tra.Q™.



### FRAME FOR VERSATILE MOUNTING OPTIONS

High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400Pa) and wind loads (2400Pa).



### A RELIABLE INVESTMENT

Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty<sup>2</sup>.

<sup>1</sup> APT test conditions according to IEC / TS 62804-1:2015 method B (~1500V, 168h) including post treatment according to IEC 61215-1-1 Ed. 2.0 (CD)

<sup>2</sup> See data sheet on rear for further information.

### THE IDEAL SOLUTION FOR:

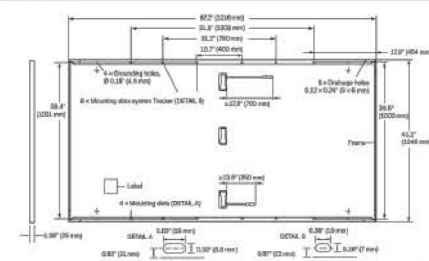


Engineered in Germany

**Q CELLS**

### MECHANICAL SPECIFICATION

Format	67.2 in x 41.1 in x 1.38 in (including frame) (2216 mm x 1045 mm x 35 mm)
Weight	64.2 lbs (29.1 kg)
Front Cover	0.08 in (2.0 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	0.08 in (2.0 mm) semi-tempered glass
Frame	Anodized aluminum
Cell	6 x 26 monocrystalline Q.ANTUM solar half cells
Junction Box	2.09-3.98 in x 1.26-2.36 in x 0.59-0.71 in (53-101 mm x 32-60 mm x 15-18 mm), IP67, with bypass diodes
Cable	4 mm <sup>2</sup> Solar cable; (+) ≥ 27.6 in (700 mm), (-) ≥ 13.8 in (350 mm)
Connector	Stäubli MC4, Stäubli MC4-Evo2, Hanwha Q CELLS HGC4, IP68



Drawing not to scale

### ELECTRICAL CHARACTERISTICS

POWER CLASS		475		480		485		490		
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC <sup>1</sup> AND BSTC <sup>2</sup> (POWER TOLERANCE +5 W / -0 W)										
		BSTC*		BSTC*		BSTC*		BSTC*		
Minimum	Power at MPP <sup>1</sup>	P <sub>MPP</sub> [W]	475	519.6	480	526.0	485	530.5	490	536.0
	Short Circuit Current <sup>1</sup>	I <sub>SC</sub> [A]	11.08	12.12	11.12	12.17	11.16	12.21	11.20	12.26
	Open Circuit Voltage <sup>1</sup>	V <sub>OC</sub> [V]	53.15	53.34	53.39	53.58	53.63	53.82	53.86	54.06
	Current at MPP	I <sub>MPP</sub> [A]	10.55	11.54	10.59	11.58	10.63	11.63	10.67	11.67
	Voltage at MPP	V <sub>MPP</sub> [V]	45.03	45.02	45.33	45.32	45.63	45.62	45.93	45.92
	Efficiency <sup>1</sup>	η [%]	≥20.5	≥22.4	≥20.7	≥22.7	≥20.9	≥22.9	≥21.2	≥23.1

Bifaciality of P<sub>MPP</sub> and I<sub>SC</sub>: 70% ± 5% • Bifaciality given for rear side irradiation on top of STC (front side) • According to IEC 60904-1-2

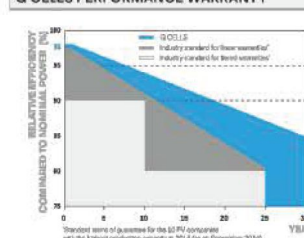
<sup>1</sup> Measurement tolerances P<sub>MPP</sub> ± 3%; I<sub>SC</sub>, V<sub>OC</sub> ± 5% at STC: 1000 W/m<sup>2</sup>; \* at BSTC: 1000 W/m<sup>2</sup> + ϕ × 135 W/m<sup>2</sup>, ϕ = 70% ± 5%, 25 ± 2°C, AM 1.5 according to IEC 60904-3

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT<sup>3</sup>

		357.6	361.4	365.1	368.9
Power at MPP	P <sub>MPP</sub> [W]				
Short Circuit Current	I <sub>SC</sub> [A]	8.92	8.96	8.99	9.02
Open Circuit Voltage	V <sub>OC</sub> [V]	50.27	50.49	50.72	50.95
Current at MPP	I <sub>MPP</sub> [A]	8.30	8.34	8.37	8.40
Voltage at MPP	V <sub>MPP</sub> [V]	43.06	43.35	43.63	43.92

<sup>3</sup> 800 W/m<sup>2</sup>, NMOT, spectrum AM 1.5

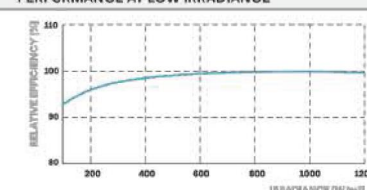
### Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.45% degradation per year. At least 93.95% of nominal power up to 10 years. At least 84.95% of nominal power up to 30 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organization of your respective country.

### PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25°C, 1000 W/m<sup>2</sup>)

### TEMPERATURE COEFFICIENTS

Temperature Coefficient of I <sub>SC</sub>	α [%/K]	+0.04	Temperature Coefficient of V <sub>OC</sub>	β [%/K]	-0.27
Temperature Coefficient of P <sub>MPP</sub>	γ [%/K]	-0.34	Nominal Module Operating Temperature	NMOT [°F]	108 ± 5.4 (42 ± 3°C)

### PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V <sub>sys</sub> [V]	1500	PV module classification	Class II
Maximum Series Fuse Rating [A DC]	20	Fire Rating based on ANSI / UL 61730	TYPE 29 <sup>4</sup>
Max. Design Load, Push / Pull <sup>5</sup> [lbs/ft <sup>2</sup> ]	75 (3600 Pa) / 33 (1600 Pa)	Permitted Module Temperature on Continuous Duty	-40°F up to +185°F (-40°C up to +85°C)
Max. Test Load, Push / Pull <sup>6</sup> [lbs/ft <sup>2</sup> ]	113 (5400 Pa) / 50 (2400 Pa)		

<sup>4</sup> See Installation Manual

<sup>5</sup> New Type is similar to Type 3 but with metallic frame

### QUALIFICATIONS AND CERTIFICATES

Quality Controlled PV -  
TÜV Rheinland;  
UL 6170, CE-compliant,  
IEC 61215:2016,  
IEC 61730:2016,  
U.S. Patent No. 9,893,215  
(solar cells)



### PACKAGING INFORMATION

Horizontal packaging	89.4 in 2270 mm	43.1 in 1095 mm	47.6 in 1210 mm	1975 lbs 896 kg	20 pallets	20 pallets	29 modules
Vertical packaging	90.8 in 2306 mm	45.3 in 1150 mm	47.4 in 1205 mm	2013 lbs 913 kg	20 pallets	20 pallets	30 modules

**Note:** Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Hanwha Q CELLS America Inc.

400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL Inquiry@us.q-cells.com | WEB www.q-cells.us



### CONTRACTOR

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CONTRACTOR LICENSE #: WC-24683-H11  
ELECTRICAL LICENSE #: 1163  
EMAIL: awglover@ghessolar.com

### REVISIONS

DESCRIPTION	DATE	REV



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IRVINGTON, NY 10533, USA

APN: 55280021115949

EMAIL: -

PHONE: -

### SHEET NAME

EQUIPMENT  
SPECIFICATION

### SHEET SIZE

ANSI B  
11" X 17"

### SHEET NUMBER

PV-7

Specifications subject to technical changes © Q CELLS Q.PEAK DUO XL-G10.3 / BFG 475-490, 2021-12, Rev 04, NA



# Single Phase Energy Hub Inverter with Prism Technology

For North America

SE3000H-US / SE3800H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US<sup>(1)</sup>



HOME BACKUP

## Optimized battery storage with HD-Wave technology

- Record-breaking 99% weighted efficiency with 200% DC oversizing
- Multi-inverter, scalable storage solution
- Small, lightweight, and easy to install
- With enhanced battery power up to 10kW
- Modular design, future ready with optional upgrades to:
  - DC-coupled storage for full or partial home backup
  - Integrated arc fault protection and rapid shutdown for NEC 2014, NEC 2017 and NEC 2020, per article 690.11 and 690.12
  - Built-in consumption monitoring
  - Embedded revenue grade production data, ANSI C12.20 Class 0.5
  - Direct connection to the SolarEdge smart EV charger

solaredge.com

**solar**edge

## Single Phase Energy Hub Inverter with Prism Technology For North America

SE3000H-US / SE3800H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US<sup>(1)</sup>

	SE3000H-US	SE3800H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	UNITS
OUTPUT - AC ON GRID							
Rated AC Power	3000	3800 @ 240V 3300 @ 208V	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	W
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	W
AC Frequency Range (min - nom - max)	59.3 - 60 - 60.5 <sup>(2)</sup>						Hz
Maximum Continuous Output Current @ 240V	12.5	16	25	32	42	47.5	A
Maximum Continuous Output Current @ 208V	-	16	24	-	-	48.5	A
GFDI Threshold	1						A
Total Harmonic Distortion (THD)	<3						%
Power Factor	1, adjustable -0.85 to 0.85						
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes						
Charge Battery from AC (if allowed)	Yes						
Typical Nighttime Power Consumption	<2.5						W
OUTPUT - AC BACKUP <sup>(3)</sup>							
Rated AC Power in Backup Operation <sup>(4)</sup>	3000	3800 7600*	6000	7600 10300*	10000	10300	W
AC L-L Output Voltage Range in Backup	211 - 264						Vac
AC L-N Output Voltage Range in Backup	105 - 132						Vac
AC Frequency Range in Backup (min - nom - max)	55 - 60 - 65						Hz
Maximum Continuous Output Current in Backup Operation	12.5	16 32*	25	32 43*	42	43	A
GFDI	1						A
THD	<5						%
OUTPUT - SMART EV CHARGER AC							
Rated AC Power	9600						W
AC Output Voltage Range	211 - 264						Vac
On-Grid AC Frequency Range (min - nom - max)	59.3 - 60 - 60.5						Hz
Maximum Continuous Output Current @240V (grid, PV and battery)	40						Aac
INPUT - DC (PV AND BATTERY)							
Transformer-less, Ungrounded	Yes						
Max Input Voltage	480						Vdc
Nom DC Input Voltage	380						Vdc
Reverse-Polarity Protection	Yes						
Ground-Fault Isolation Detection	600kΩ Sensitivity						
INPUT - DC (PV)							
Maximum DC Power @ 240V	6000	7600 15200*	12000	15200 22800*	22000	22800	W
Maximum DC Power @ 208V	-	6600	10000	-	-	20000	W
Maximum Input Current <sup>(5)</sup> @ 240V	8.5	10.5 20*	16.5	20 31*	27	31	Adc
Maximum Input Current <sup>(5)</sup> @ 208V	-	9	13.5	-	-	27	Adc
Max. Input Short Circuit Current	45						Adc
Maximum Inverter Efficiency	99	99.2					%
CEC Weighted Efficiency	99					99 @ 240V 98.5 @ 208V	%
2-pole Disconnection	Yes						

\* Supported with PN SExxxxH-USMMxxxxxx or SExxxxH-USMNxxxxxx

(1) These specifications apply to inverters with part numbers SExxxxH-USMMxxxxxx or SExxxxH-USMNxxxxxx and connection unit model number DCD-1PH-US-PxH-F-x

(2) For other regional settings please contact SolarEdge support

(3) Not designed for standalone applications and requires AC for commissioning. Backup functionality is only supported for 240V grid

(4) Rated AC power in Backup Operation are valid for installations with multiple inverters. For a single backup inverter operation, rated AC power in Backup is 90% of the value stated

(5) A higher current source may be used; the inverter will limit its input current to the values stated

GHES GREEN HYBRID ENERGY SOLUTIONS

### CONTRACTOR

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### REVISIONS

DESCRIPTION	DATE	REV



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PHONE: -

### SHEET NAME

EQUIPMENT  
SPECIFICATION

### SHEET SIZE

ANSI B  
11" X 17"

### SHEET NUMBER

PV-8



Single Phase Energy Hub Inverter  
with Prism Technology  
For North America

SE3000H-US / SE3800H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US<sup>(1)</sup>

	SE3000H-US	SE3800H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	UNITS
INPUT - DC (BATTERY)							
Supported Battery Types	SolarEdge Energy Bank, LG RESU Prime <sup>(6)</sup>						
Number of Batteries per Inverter	Up to 3 SolarEdge Energy Bank, up to 2 LG RESU Prime						
Continuous Power <sup>(7)</sup>	6000	7600	10000			W	
Peak Power <sup>(7)</sup>	6000	7600	10000			W	
Max Input Current	16	20	26.5			Adc	
2-pole Disconnection	Yes						
SMART ENERGY CAPABILITIES							
Consumption Metering	Built - in <sup>(8)</sup>						
Backup & Battery Storage	With Backup Interface (purchased separately) for service up to 200A; Up to 3 inverters						
EV Charging	Direct connection to Smart EV charger						
ADDITIONAL FEATURES							
Supported Communication Interfaces	RS485, Ethernet, Cellular <sup>(9)</sup> , Wi-Fi (optional),SolarEdge Energy Net (optional)						
Revenue Grade Metering, ANSI C12.20	Built - in <sup>(8)</sup>						
Integrated AC, DC and Communication Connection Unit	Yes						
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi Access Point for local connection						
DC Voltage Rapid Shutdown (PV and Battery)	Yes, according to NEC 2014, NEC 2017 and NEC 2020 690.12						
STANDARD COMPLIANCE							
Safety	UL1741, UL1741 SA, UL1741 PCS, UL1699B, UL1998, UL9540, CSA 22.2						
Grid Connection Standards	IEEE1547, Rule 21, Rule 14H						
Emissions	FCC part 15 class B						
INSTALLATION SPECIFICATIONS							
AC Output and EV AC Output Conduit Size / AWG Range	1" maximum / 14-4 AWG						
DC Input (PV and Battery) Conduit Size / AWG Range	1" maximum / 14-6 AWG						
Dimensions with Connection Unit (H x W x D)	17.7 x 14.6 x 6.8 / 450 x 370 x 174		17.7 x 14.6 x 6.8 / 450 x 370 x 174 17.7 x 14.6 x 6.8 / 450 x 370 x 174*		17.7 x 14.6 x 6.8 / 450 x 370 x 174		in / mm
Weight with Connection Unit	26 / 11.8		26 / 11.8 30.2 / 13.7*		30.2 / 13.7		lb / kg
Noise	< 25	< 25 < 50*	< 25	< 50			dBA
Cooling	Natural Convection						
Operating Temperature Range	-40 to +140 / -40 to +60 <sup>(10)</sup>						°F / °C
Protection Rating	NEMA 4						

(6) The part numbers SExxxxH-USxMxxxx only support the SolarEdge Energy Bank. The part numbers SExxxxH-USxNxxxx support both SolarEdge Energy Bank and LG RESU Prime batteries  
Requires supporting inverter firmware  
(7) Discharge power is limited up to the inverter rated AC power for on-grid and backup applications  
(8) For consumption metering current transformers should be ordered separately: SECT-SPL-225A-T-20 or SEACT0750-400NA-20 units per box. Revenue grade metering is only for production metering  
(9) Information concerning the Data Plan's terms & conditions is available in the following link:  
<https://www.solaredge.com/sites/default/files/se-communication-plan-terms-and-conditions-eng.pdf>  
(10) Full power up to at least 50°C / 122°F; for power de-rating information refer to: <https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf>



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EMAIL: [avglover@ghessolar.com](mailto:avglover@ghessolar.com)

REVISIONS		
DESCRIPTION	DATE	REV

**SIGNATURE & SEAL**

**HOMEOWNER INFO**  
  
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2 HERITAGE HILL RD,  
IRVINGTON, NY 10533, USA

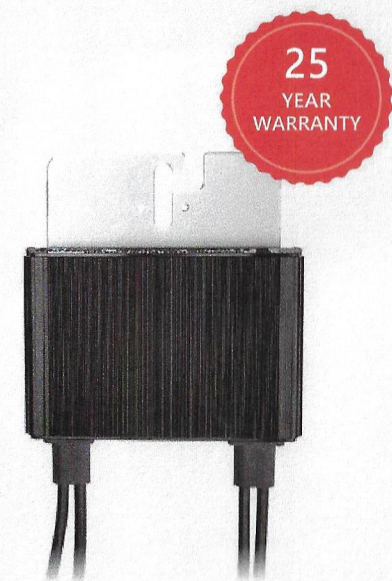
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PHONE: -

<b>SHEET NAME</b> EQUIPMENT SPECIFICATION
<b>SHEET SIZE</b> ANSI B 11" X 17"
<b>SHEET NUMBER</b> PV-8.1



# Power Optimizer For Residential Installations

S440, S500



POWER OPTIMIZER

## Enabling PV power optimization at the module level

- Specifically designed to work with SolarEdge residential inverters
- Mitigates all types of module mismatch loss, from manufacturing tolerance to partial shading
- Detects abnormal PV connector behavior, preventing potential safety issues\*
- Faster installations with simplified cable management and easy assembly using a single bolt
- Module-level voltage shutdown for installer and firefighter safety
- Flexible system design for maximum space utilization
- Superior efficiency (99.5%)
- Compatible with bifacial PV modules

\* Functionality subject to inverter model and firmware version

[solaredge.com](https://www.solaredge.com)

**solaredge**

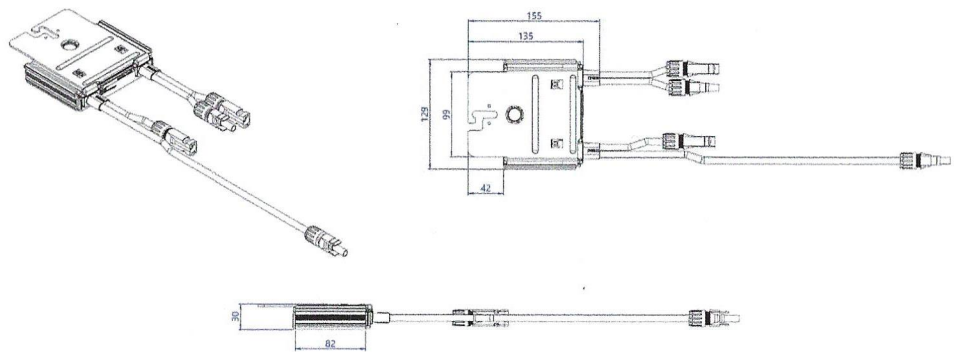
## Power Optimizer For Residential Installations S440, S500

	S440	S500	UNIT
Rated Input DC Power <sup>(1)</sup>	440	500	W
Absolute Maximum Input Voltage (Voc)		60	Vdc
MPPT Operating Range		8 - 60	Vdc
Maximum Short Circuit Current (Isc) of Connected PV Module	14.5	15	Adc
Maximum Efficiency		99.5	%
Weighted Efficiency		98.6	%
Overvoltage Category		II	
OUTPUT DURING OPERATION			
Maximum Output Current		15	Adc
Maximum Output Voltage		60	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)			
Safety Output Voltage per Power Optimizer		1	Vdc
STANDARD COMPLIANCE			
EMC	FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3, CISPR11, EN-55011		
Safety	IEC62109-1 (class II safety), UL1741		
Material	UL94 V-0, UV Resistant		
RoHS	Yes		
Fire Safety	VDE-AR-E 2100-712:2013-05		
INSTALLATION SPECIFICATIONS			
Maximum Allowed System Voltage		1000	Vdc
Dimensions (W x L x H)		129 x 155 x 30	mm
Weight (including cables)		655 / 1.5	gr / lb
Input Connector		MC4 <sup>(2)</sup>	
Input Wire Length		0.1	m
Output Connector		MC4	
Output Wire Length		(+) 2.3, (-) 0.10	m
Operating Temperature Range <sup>(3)</sup>		-40 to +85	°C
Protection Rating		IP68 / NEMA6P	
Relative Humidity		0 - 100	%

(1) Rated power of the module at STC will not exceed the Power Optimizer Rated Input DC Power. Modules with up to +5% power tolerance are allowed  
(2) For other connector types please contact SolarEdge  
(3) For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details

PV System Design Using a SolarEdge Inverter		Single Phase HD-Wave	Three Phase	Three Phase for 277/480V Grid	
Minimum String Length (Power Optimizers)	S440, S500	8	16	18	
Maximum String Length (Power Optimizers)		25	50		
Maximum Nominal Power per String <sup>(4)</sup>		5700	11250 <sup>(5)</sup>	12750 <sup>(6)</sup>	W
Parallel Strings of Different Lengths or Orientations			Yes		

(4) If the inverters rated AC power < maximum nominal power per string, then the maximum power per string will be able to reach up to the inverters maximum input DC power. Refer to: <https://www.solaredge.com/sites/default/files/se-power-optimizer-single-string-design-application-note.pdf>  
(5) For the 230/400V grid: it is allowed to install up to 13,500W per string when the maximum power difference between each string is 2,000W  
(6) For the 277/480V grid: it is allowed to install up to 15,000W per string when the maximum power difference between each string is 2,000W  
(7) It is not allowed to mix S-series and P-series Power Optimizers in new installations



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CE RoHS



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PHONE: 9143467588  
CONTRACTOR LICENSE # WC-24683-H11  
ELECTRICAL LICENSE # 1163  
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REVISIONS		
DESCRIPTION	DATE	REV

SIGNATURE & SEAL



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**SHEET NAME**  
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SPECIFICATION

**SHEET SIZE**  
ANSI B  
11" X 17"

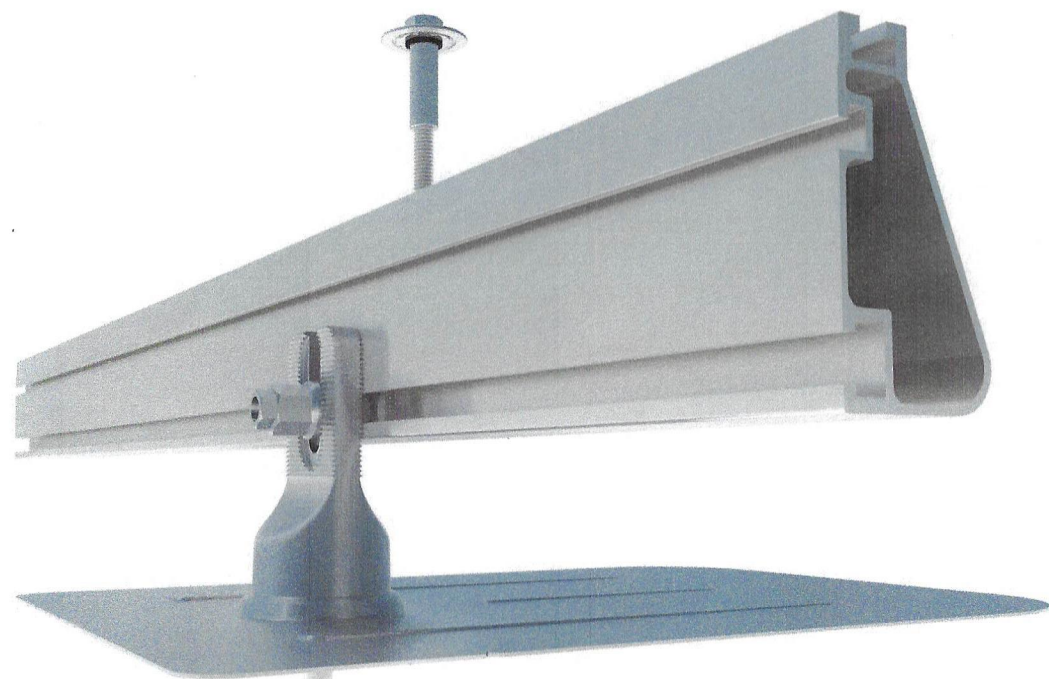
**SHEET NUMBER**  
PV-9





## Flush Mount System

Datasheet



### Built for solar's toughest roofs.

IronRidge builds the strongest mounting system for pitched roofs in solar. Every component has been tested to the limit and proven in extreme environments.

Our rigorous approach has led to unique structural features, such as curved rails and reinforced flashings, and is also why our products are fully certified, code compliant and backed by a 20-year warranty.



#### Strength Tested

All components evaluated for superior structural performance.



#### Class A Fire Rating

Certified to maintain the fire resistance rating of the existing roof.



#### UL 2703 Listed System

Entire system and components meet newest effective UL 2703 standard.



#### PE Certified

Pre-stamped engineering letters available in most states.



#### Design Assistant

Online software makes it simple to create, share, and price projects.

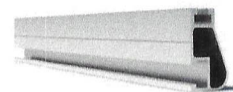


#### 20-Year Warranty

Twice the protection offered by competitors.

### XR Rails ☺

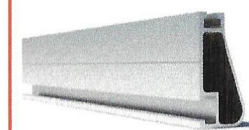
#### XR10 Rail



A low-profile mounting rail for regions with light snow.

- 6' spanning capability
- Moderate load capability
- Clear and black finish

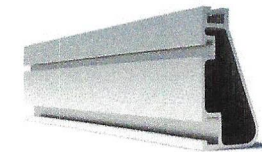
#### XR100 Rail



The ultimate residential solar mounting rail.

- 8' spanning capability
- Heavy load capability
- Clear and black finish

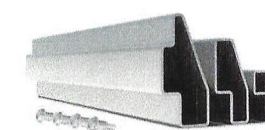
#### XR1000 Rail



A heavyweight mounting rail for commercial projects.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish

#### Bonded Splices

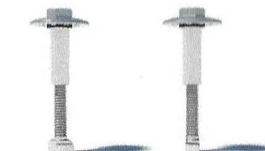


All rails use internal splices for seamless connections.

- Self-drilling screws
- Varying versions for rails
- Forms secure bonding

### Clamps & Grounding ☺

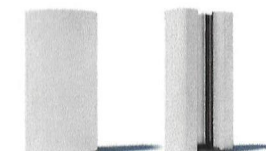
#### UFOs



Universal Fastening Objects bond modules to rails.

- Fully assembled & lubed
- Single, universal size
- Clear and black finish

#### Stopper Sleeves



Snap onto the UFO to turn into a bonded end clamp.

- Bonds modules to rails
- Sized to match modules
- Clear and black finish

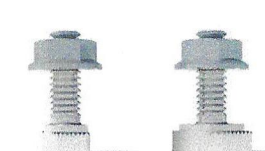
#### Grounding Lugs



Connect arrays to equipment ground.

- Low profile
- Single tool installation
- Mounts in any direction

#### Microinverter Kits



Mount MIs or POs to XR Rails.

- Bonds devices to rails
- Kit comes assembled
- Listed to UL 2703

### Attachments ☺

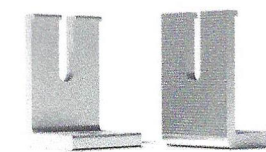
#### FlashFoot2



Flash and mount XR Rails with superior waterproofing.

- Twist-on Cap eases install
- Wind-driven rain tested
- Mill and black finish

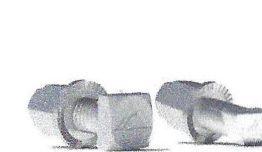
#### Slotted L-Feet



Drop-in design for rapid rail attachment.

- Secure rail connections
- Slot for vertical adjusting
- Clear and black finish

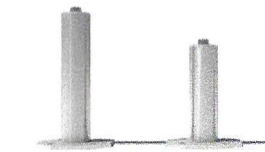
#### Bonding Hardware



Bond and attach XR Rails to roof attachments.

- T & Square Bolt options
- Nut uses 7/16" socket
- Assembled and lubricated

#### Flush Standoffs



Raise Flush Mount System to various heights.

- Works with vent flashing
- 4" and 7" lengths
- Ships assembled

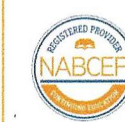
### Resources



#### Design Assistant

Go from rough layout to fully engineered system. For free.

Go to [IronRidge.com/design](http://IronRidge.com/design)



#### NABCEP Certified Training

Earn free continuing education credits, while learning more about our systems.

Go to [IronRidge.com/training](http://IronRidge.com/training)

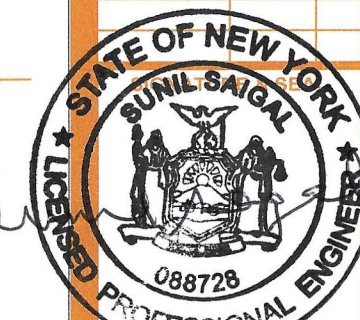


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#### REVISIONS

DESCRIPTION	DATE	REV



#### HOMEOWNER INFO

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PHONE: -

#### SHEET NAME

EQUIPMENT  
SPECIFICATION

#### SHEET SIZE

ANSI B  
11" X 17"

#### SHEET NUMBER

PV-10



# RT-MINI

Self-flashing base for asphalt & metal roof-top PV mounting systems

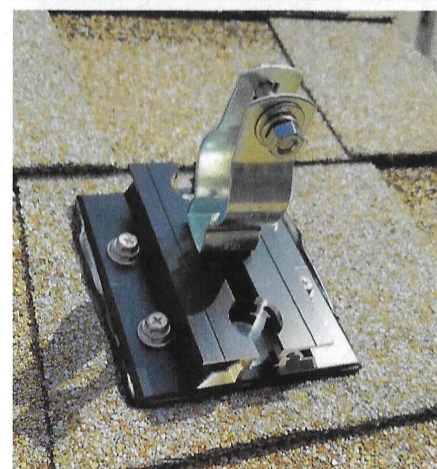
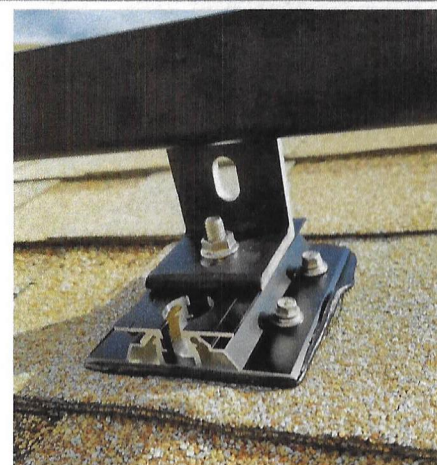
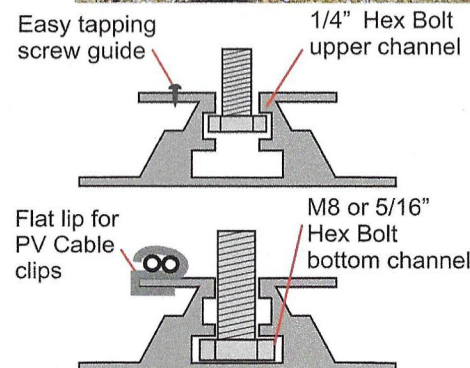
RT-MINI is suitable for mounting any rail system with a conventional L-Foot.



Dual bolt design: M8 or 5/16" for L-Foot & 1/4" for EMC



Installation Manual



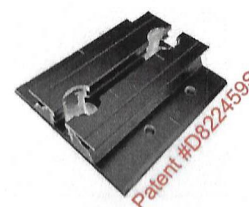
# RT-MINI

Flexible Flashing certified by the International Code Council (ICC)

Engineered to ASTM D 1761 (Standard Test Methods for Mechanical Fasteners in Wood)

## Components

RT2-00-MINIBK



Patent #D822459S



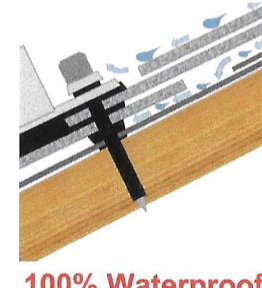
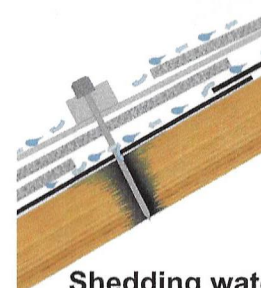
MINI base : 20 ea.  
Screw : 40 ea.  
Extra RT-Butyl : 10 ea.

## Optional item

5 x 60mm Mounting screw (RT2-04-SD5-60) : 100 ea./Bag  
5/16" Hex bolt, washer & nut set (RT-04-BN30SL-US) : 100 ea./Bag  
RT-Butyl (RT2-04-BUTYLT) : 10 ea./Box

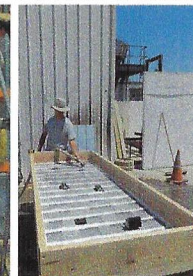
RT-Butyl is Roof Tech's flexible flashing used in one million residential PV systems for the last 26 years. It is the first PV mounting system with Flexible Flashing certified by the ICC. Engineered to withstand wind speeds up to 180 mph and ground snow up to 90 psf.

## Metal Flashing Retrofit Flexible Flashing

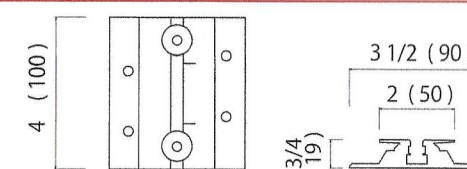


Shedding water? **100% Waterproof**

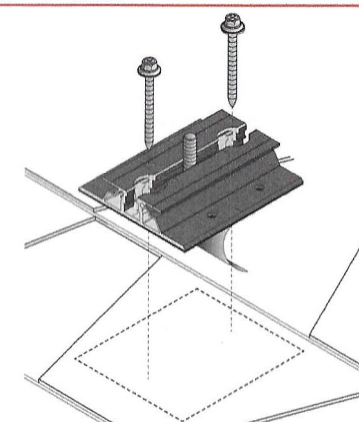
ICC ESR-3575 ASTM2140 testing UV testing (7500 hrs.)



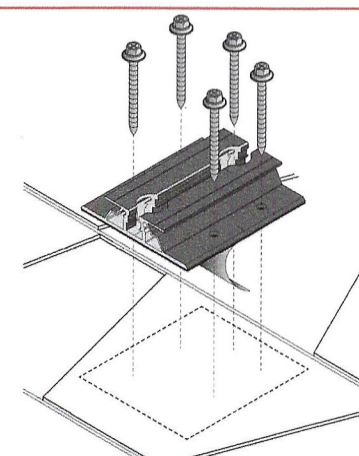
## Dimensions in (mm)



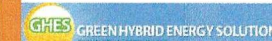
## Rafter installation



## Deck installation



P.E. Stamped Letters available at [www.roof-tech.us/support](http://www.roof-tech.us/support)  
TAS 100 A on metal and asphalt roof.



## CONTRACTOR

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## REVISIONS

DESCRIPTION	DATE	REV



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IRVINGTON, NY 10533, USA

APN: 55260021115949  
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PHONE: -

## SHEET NAME

EQUIPMENT  
SPECIFICATION

## SHEET SIZE

ANSI B  
11" X 17"

## SHEET NUMBER

PV-11

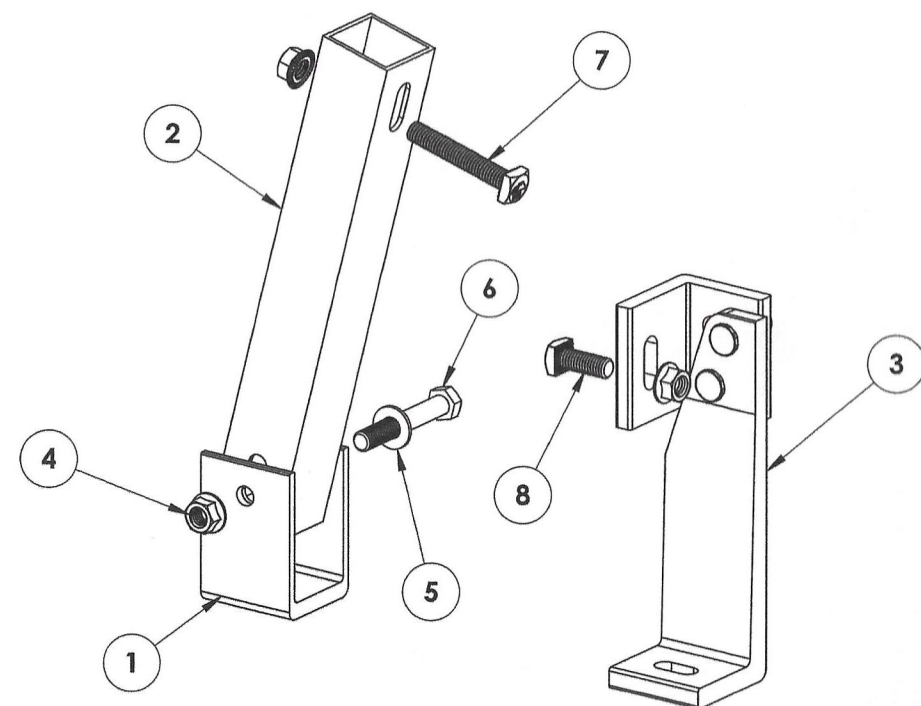
**Roof Tech**  
The Standard for Waterproof Flexible Flashing Since 1994  
[www.roof-tech.us](http://www.roof-tech.us) [info@roof-tech.us](mailto:info@roof-tech.us)

Roof Tech Inc.  
[www.roof-tech.us](http://www.roof-tech.us) [info@roof-tech.us](mailto:info@roof-tech.us)  
10620 Treena Street, Suite 230, San Diego, CA 92131  
858.935.6064

March 2020



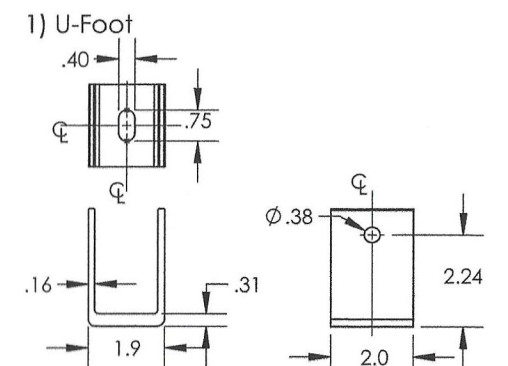
# Tilt Leg



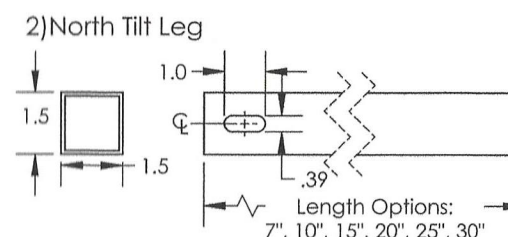
ITEM NO.	DESCRIPTION	QTY.
1	U-FOOT	1
2	NORTH TILT LEG, 1.5" SQ, LENGTH VARIES	1
3	PRE-ASSEMBLED SOUTH TILT LEG	1
4	NUT, FLANGE HEX 3/8-16 SS	3
5	WASHER, FLAT 3/8 SS	1
6	BOLT, 3/8-16 X 2.5" CS SST	1
7	BOLT, BONDING 3/8-16 SQ HEAD, 2.25"	1
8	BOLT, BONDING 3/8-16 SQ HEAD, 1.0"	1

Part Number	Description	North Tilt Leg Length
TM-FTL-007	Kit, Fixed Tilt Leg, 7", Mill	7"
TM-FTL-010	Kit, Fixed Tilt Leg, 10", Mill	10"
TM-FTL-015	Kit, Fixed Tilt Leg, 15", Mill	15"
TM-FTL-020	Kit, Fixed Tilt Leg, 20", Mill	20"
TM-FTL-025	Kit, Fixed Tilt Leg, 25", Mill	25"
TM-FTL-030	Kit, Fixed Tilt Leg, 30", Mill	30"

v1.0

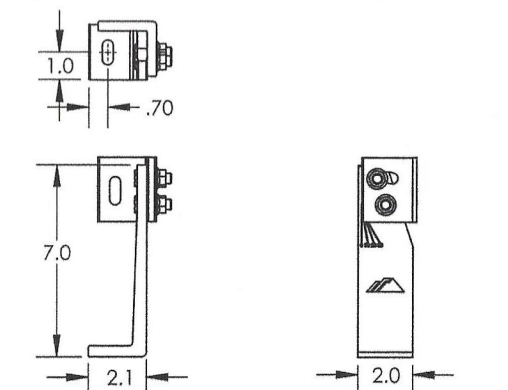


Property	Value
Material	Aluminum
Finish	Mill



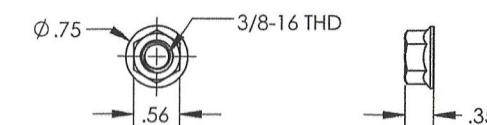
Property	Value
Material	Aluminum
Finish	Mill

## 3) Pre-assembled South Tilt Leg



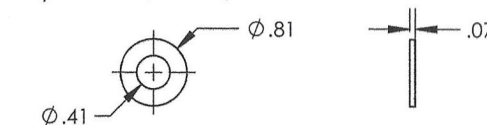
Property	Value
Material	Aluminum
Finish	Mill

## 4) Nut, Flange Hex 3/8-16 SS



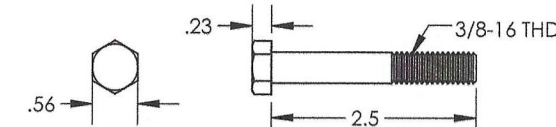
Property	Value
Material	Stainless Steel
Finish	Clear

## 5) Washer, Flat 3/8 SS



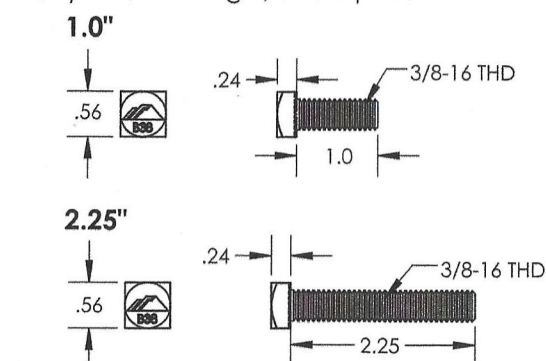
Property	Value
Material	Stainless Steel
Finish	Clear

## 6) Bolt, 3/8-16 X 2.5" CS SS



Property	Value
Material	Stainless Steel
Finish	Clear

## 7, 8) Bolt, Bonding 3/8-16 Sq Head



Property	Value
Material	Stainless Steel
Finish	Clear

v1.0

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PV-12