

APPLICATION FOR BUILDING PERMIT

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

Application Number:	484	Date:	02/23/2023
Job Location:	84 FARGO LN	Parcel ID:	2.20-3-2
Property Owner:	Heather Morris	Property Class:	1 FAMILY RES
Occupancy:	One/ Two Family	Zoning:	
Common Name:			

Applicant	Contractor
Eric Eyges	Eric Eyges
Rivertown Solar LLC	Rivertown Solar LLC
64 Main St.Irvington NY 10533	
914-325-2167	914 231 6866

Description of Work

Type of Work:	Solar Panels	Applicant is:	Agent
Work Requested by:	The Owner	In association with:	
Cost of Work (Est.):	20400.00	Property Class:	1 FAMILY RES

Description of Work

Installation of solar panels on rear roof plane.

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.

Job Location: 84 FARGO LN

Parcel Id: 2.20-3-2

AFFIDAVIT OF APPLICANT

I **Eric Eyges** being duly sworn, depose and says: That s/he does business as: **Rivertown Solar LLC** with offices at: **64 Main St. Irvington NY 10533** 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 _____ day of _____ of _____

Notary Public / Commission of Deeds

Applicant's Signature

OWNER'S AUTHORIZATION

I **Heather Morris** 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 _____

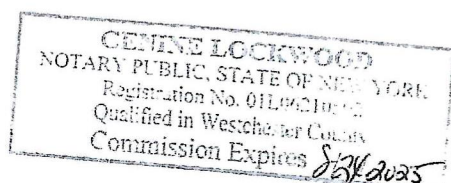
- ☐ Heather Morris I hereby acknowledge that it is my responsibility as the **property owner** to ensure that if the permit (if issued) receives a Final Certificate of Approval from the Building Department and further that if a Final Certificate of Approval is not obtained upon completion of the construction,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

Sworn to before me this 2 day of March of 2023

Celine Lockwood
Notary Public / Commission of Deeds

DocuSigned by:
Heather Morris
2A24754F265048F...

Applicant's Signature



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 likened 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) prior to submission).
7. Visit the Village of Irvington website 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.
9. Provide evidence that the application meets the NYS Energy code as described by 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.)

George Latimer
Westchester County Executive

Westchester
gov.com

James Maisano
Director, Consumer Protection

Department of Consumer Protection Home Improvement License

RIVERTOWN SOLAR LLC

64 MAIN STREET

IRVINGTON, NY-10533

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-34809-H22



Date of Expiration

01/10/2024



RIVER-3

OP ID: CB

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

02/06/2023

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).

PRODUCER Feehan Insurance Agency P.O. Box 870 Carmel, NY 10512 Terence Feehan	845-278-7070	CONTACT NAME: Terence Feehan PHONE (A/C, No, Ext): 845-278-7070 E-MAIL ADDRESS: carolb@feehaninsurance.com	FAX (A/C, No): 845-278-6496
		INSURER(S) AFFORDING COVERAGE	
		INSURER A: Evanston Insurance Co.	
		INSURER B:	
		INSURER C:	
		INSURER D:	
		INSURER E:	
		INSURER F:	

COVERAGES

CERTIFICATE NUMBER:

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	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PRO-JECT ☐ LOC OTHER:			3FH1049	12/15/2022	12/15/2023	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000
	AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	UMBRELLA LIAB EXCESS LIAB DED ☐ RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) ☐ If yes, describe under DESCRIPTION OF OPERATIONS below		N/A				PER STATUTE ☐ OTH-ER ☐ E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Job Site: 84 Fargo Lane, Irvington, NY 10533

CERTIFICATE HOLDER

CANCELLATION

IRVINGT

VILLAGE OF IRVINGTON
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

Matthew Feehan



**Workers'
Compensation
Board**

**Certificate of Attestation of Exemption
from New York State Workers' Compensation and/or
Disability and Paid Family Leave Benefits Insurance Coverage**

****This form cannot be used to waive the workers' compensation rights or obligations of any party.****

The applicant may use this Certificate of Attestation of Exemption **ONLY** to show a government entity that New York State specific workers' compensation and/or disability and paid family leave benefits insurance is not required. The applicant may **NOT** use this form to show another business or that business's insurance carrier that such insurance is not required. Please provide this form to the government entity from which you are requesting a permit, license or contract. This Certificate will not be accepted by government officials one year after the date printed on the form.

In the Application of (Legal Entity Name and Address): Rivertown Solar LLC 64 Main St Irvington, NY 10533 PHONE: 914-325-2167 FEIN: XXXXX7611	Business Applying For: Building Permit From: Village of Irvington The location of where work will be performed is 84 Fargo Ln, Irvington, NY 10533. Estimated dates necessary to complete work associated with the building permit are from February 6, 2023 to June 30, 2023. The estimated dollar amount of project is \$10,001 - \$25,000
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Workers' Compensation Exemption Statement:

The above named business is certifying that it is **NOT REQUIRED TO OBTAIN NEW YORK STATE SPECIFIC WORKERS' COMPENSATION INSURANCE COVERAGE** for the following reason:
The business is a LLC, LLP, PLLP or a RLLP; OR is a partnership under the laws of New York State and is not a corporation. Other than the partners or members, there are no employees, day labor, leased employees, borrowed employees, part-time employees, unpaid volunteers (including family members) or subcontractors.

Partners / Members: Brandon Hall, Eric Eyges

Disability and Paid Family Leave Benefits Exemption Statement:

The above named business is certifying that it is **NOT REQUIRED TO OBTAIN NEW YORK STATE STATUTORY DISABILITY AND PAID FAMILY LEAVE BENEFITS INSURANCE COVERAGE** for the following reason:
The business MUST be either: 1) owned by one individual; OR 2) is a partnership (including LLC, LLP, PLLP, RLLP, or LP) under the laws of New York State and is not a corporation; OR 3) is a one or two person owned corporation, with those individuals owning all of the stock and holding all offices of the corporation (in a two person owned corporation each individual must be an officer and own at least one share of stock); OR 4) is a business with no NYS location. In addition, the business does not require disability and paid family leave benefits coverage at this time since it has not employed one or more individuals on at least 30 days in any calendar year in New York State. (Independent contractors are not considered to be employees under the Disability and Paid Family Leave Benefits Law.)

I, Eric Eyges, am the Member with the above-named legal entity. I affirm that due to my position with the above-named business I have the knowledge, information and authority to make this Certificate of Attestation of Exemption. I hereby affirm that the statements made herein are true, that I have not made any materially false statements and I make this Certificate of Attestation of Exemption under the penalties of perjury. I further affirm that I understand that any false statement, representation or concealment will subject me to felony criminal prosecution, including jail and civil liability in accordance with the Workers' Compensation Law and all other New York State laws. By submitting this Certificate of Attestation of Exemption to the government entity listed above I also hereby affirm that if circumstances change so that workers' compensation insurance and/or disability and paid family leave benefits coverage is required, the above-named legal entity will immediately acquire appropriate New York State specific workers' compensation insurance and/or disability and paid family leave benefits coverage and also immediately furnish proof of that coverage on forms approved by the Chair of the Workers' Compensation Board to the government entity listed above.

SIGN HERE	Signature: <i>Eric Eyges</i>	Date: 3/2/2023
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**Exemption Certificate Number
2023-007636**

**Received
February 6, 2023
NYS Workers' Compensation Board**

BARUN CORP

February 8, 2023

RE:

CERTIFICATION LETTER

Project Address:

MORRIS RESIDENCE
84 FARGO LN
IRVINGTON, NY 10533

Design Criteria:

- Applicable Codes = 2020 NYSEBC/NYSBC, 2020 NYSRC, ASCE 7-16 and 2018 NDS
- Risk Category = II
- Wind Speed = 115 mph, Exposure Category B, Partially/Fully Enclosed Method
- Ground Snow Load = 30 psf
- Roof 1: 2 x 8 @ 16" OC, Roof DL = 8 psf, Roof LL/SL = 23 psf (Non-PV), Roof LL/SL = 17.3 psf (PV)

To Whom It May Concern,

A structural evaluation of loading was conducted for the above address based on the design criteria listed above.

Existing roof structural framing has been reviewed for additional loading due to installation of Solar PV System on the roof. The structural review applies to the sections of roof that is directly supporting the Solar PV System.

Based on this evaluation, I certify that the alteration to the existing structure by installation of the Solar PV System meets the prescriptive compliance requirements of the applicable existing building and/or new building provisions adopted/referenced above.

Additionally, the Solar PV System assembly (including attachment hardware) has been reviewed to be in accordance with the manufacturer's specifications and to meet and/or exceed the requirements set forth by the referenced codes.

Sincerely,

Xiaojian
Xie

Digitally signed by Xiaojian Xie
Date: 2023.02.09 14:18:21
+05'00'



MOUNTING PLANE STRUCTURAL EVALUATION			
MOUNTING PLANE	ROOF PITCH	RESULT	GOVERNING ANALYSIS
Roof 1	25°	OK	NYSEBC IMPACT CHECK

Limits of Scope of Work and Liability:

The existing structure has been reviewed based on the assumption that it has been originally designed and constructed per appropriate codes. The structural analysis of the subject property is based on the provided site survey data. The calculations produced for this structure's assessment are only for the roof framing supporting the proposed PV installation referenced in the stamped planset and were made according to generally recognized structural analysis standards and procedures. All PV modules, racking and attachment components shall be designed and installed per manufacturer's approved guidelines and specifications. These plans are not stamped for water leakage or existing damage to the structural component that was not accessed during the site survey. Prior to commencement of work, the PV system installer should verify that the existing roof and connections are in suitable condition and inspect framing noted on the certification letter and inform the Engineer of Record of any discrepancies prior to installation. The installer should also check for any damages such as water damage, cracked framing, etc. and inform the Engineer of Record of existing deficiencies which are unknown and/or were not observable during the time of survey and have not been included in this scope of work. Any change in the scope of the work shall not be accepted unless such change, addition, or deletion is approved in advance and in writing by the Engineer of Record.

BARUN CORP**LOAD CALCULATION****Roof 1**

MORRIS RESIDENCE, 84 FARGO LN, IRVINGTON, NY 10533

PV PANELS DEAD LOAD (PV-DL)

PV Panels Weight	= 2.50 psf
Hardware Assembly Weight	= 0.50 psf
Total PV Panels Weight	PV-DL = 3.00 psf

ROOF DEAD LOAD (R-DL)

Existing Roofing Material Weight	Composite Shingle Roof	1 Layer(s)	= 2.50 psf
Underlayment Weight			= 0.50 psf
Plywood/OSB Sheathing Weight			= 1.50 psf
Framing Weight	2 x 8 @ 16 in. O.C.		= 2.27 psf
No Vaulted Ceiling			= 0.00 psf
Miscellaneous			= 1.50 psf
Total Roof Dead Load			R-DL = 8.30 psf

REDUCED ROOF LIVE LOAD (Lr)

Roof Live Load	Lo = 20.00 psf
Member Tributary Area	At < 200 ft ²
Roof 1 Pitch	25° or 6/12
Tributary Area Reduction Factor	R1 = 1.00
Roof Slope Reduction Factor	R2 = 0.93
Reduced Roof Live Load, Lr = Lo (R1) (R2)	Lr = 18.50 psf

SNOW LOAD

Ground Snow Load	pg = 30.00 psf
Effective Roof Slope	25°
Snow Importance Factor	Is = 1.00
Snow Exposure Factor	Ce = 1.00
Snow Thermal Factor	Ct = 1.10
Minimum Flat Roof Snow Load	pf-min = 0.00 psf
Flat Roof Snow Load	pf = 23.10 psf

SLOPED ROOF SNOW LOAD ON ROOF (Non-Slippery Surfaces)

Roof Slope Factor	Cs-roof = 1.00
Sloped Roof Snow Load on Roof	ps-roof = 23.10 psf

SLOPED ROOF SNOW LOAD ON PV PANELS (Unobstructed Slippery Surfaces)

Roof Slope Factor	Cs-PV = 0.75
Sloped Roof Snow Load on PV Panels	ps-PV = 17.30 psf

BARUN CORP	NYSEBC IMPACT CHECK	
	Roof 1	
MORRIS RESIDENCE, 84 FARGO LN, IRVINGTON, NY 10533		

	EXISTING	WITH PV PANELS	
Roof Dead Load (DL) =	8.30	11.30	psf
Roof Live Load (Lr) =	18.50	0.00	psf
Roof Snow Load (SL) =	23.10	17.30	psf

	EXISTING	WITH PV PANELS	
(DL + Lr)/Cd =	21.44	12.56	psf
(DL + SL)/Cd =	27.30	24.87	psf
Maximum Gravity Load =	27.30	24.87	psf

Load Increase (%) =	-8.92%	OK
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The requirements of section 806.2 of 2020 NYSEBC are met and the structure is permitted to remain unaltered.

NOTICE OF APPLICATION AND HEARING

Board of Architectural Review

Clerk's Office

Village of Irvington

Westchester County, New York

CERTIFIED MAIL

Date of Mailing 03/03/2023

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: March 27, 2023
Time of Meeting: Meeting starts at 8pm
Location of Meeting: Trustees Meeting Room
85 Main St. Irvington, NY 10533

Applicant Name	Brandon Hall	Owners Name	Heather Morris
Applicant Mailing Address	64 Main St. Irvington, NY 10533	Owner Mailing Address	84 Fargo Lane IRVINGTON NY 10533
Applicant Phone Number	914-591-0100	Owners Phone Number	914-907-6299
Applicant Email Address	info@conhudelectric.com	Owners Email Address	heathermorris4381@gmail.com

Address of Proposed Solar Panels:

Street Address 84 Fargo Lane
Irvington, NY 10533

To Adjacent Neighbors of: Eli Ben Anson Halliwell
94 Fargo Lane

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. Solar Energy Equipment.

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.)

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Applicant Email Address	info@conhudelectric.com	Owners Email Address	heathermorris4381@gmail.com

Address of Proposed Solar Panels:

Street Address 84 Fargo Lane
Irvington, NY 10533

To Adjacent Neighbors of: Jason Franks
41 Fargo Lane

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.

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Applicant Phone Number	914-591-0100	Owners Phone Number	914-907-6299
Applicant Email Address	info@conhudelectric.com	Owners Email Address	heathermorris4381@gmail.com

Address of Proposed Solar Panels:

Street Address 84 Fargo Lane
Irvington, NY 10533

To Adjacent Neighbors of: Robert Leonard
39 Fargo Lane

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. Solar Energy Equipment.

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.)

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Address of Proposed Solar Panels:

Street Address 84 Fargo Lane
Irvington, NY 10533

To Adjacent Neighbors of: Eta Fargo LLC
90 Fargo Lane

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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. Solar Energy Equipment.

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.)

NOTICE OF APPLICATION AND HEARING

Board of Architectural Review

Clerk's Office

Village of Irvington

Westchester County, New York

CERTIFIED MAIL

Date of Mailing 03/03/2023

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: March 27, 2023
Time of Meeting: Meeting starts at 8pm
Location of Meeting: Trustees Meeting Room
85 Main St. Irvington, NY 10533

Applicant Name Brandon Hall
Applicant Mailing Address 64 Main St.
Irvington, NY 10533
Applicant Phone Number 914-591-0100
Applicant Email Address info@conhudelectric.com

Owners Name Heather Morris
Owner Mailing Address 84 Fargo Lane
IRVINGTON NY 10533
Owners Phone Number 914-907-6299
Owners Email Address heathermorris4381@gmail.com

Address of Proposed Solar Panels:

Street Address 84 Fargo Lane
Irvington, NY 10533

To Adjacent Neighbors of: Barbara Deroos
88 Fargo Lane

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.

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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.)

NOTICE OF APPLICATION AND HEARING

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Clerk's Office

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Date of Meeting: March 27, 2023
Time of Meeting: Meeting starts at 8pm
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85 Main St. Irvington, NY 10533

Applicant Name	Brandon Hall	Owners Name	Heather Morris
Applicant Mailing Address	64 Main St. Irvington, NY 10533	Owner Mailing Address	84 Fargo Lane IRVINGTON NY 10533
Applicant Phone Number	914-591-0100	Owners Phone Number	914-907-6299
Applicant Email Address	info@conhudelectric.com	Owners Email Address	heathermorris4381@gmail.com

Address of Proposed Solar Panels:

Street Address 84 Fargo Lane
Irvington, NY 10533

To Adjacent Neighbors of: Lillian Romano
86 Fargo Lane

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. Solar Energy Equipment.

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("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.)

7021 2720 0001 8228 9173

**U.S. Postal Service™
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For delivery information, visit our website at www.usps.com®.

Irvington NY 10533
OFFICIAL USE

Certified Mail Fee	\$4.15
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.63
Total Postage and Fees	\$4.78



Sent To Barbar DeRoos
 Street and Apt. No., or PO Box No. 88 Fargo Lane
 City, State, ZIP+4® Irvington NY 10533

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

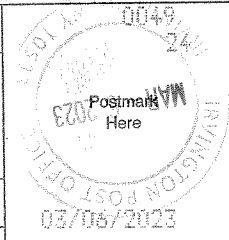
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Irvington NY 10533
OFFICIAL USE

Certified Mail Fee	\$4.15
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.63
Total Postage and Fees	\$4.78



Sent To Robert Leonard
 Street and Apt. No., or PO Box No. 34 Fargo Lane
 City, State, ZIP+4® Irvington NY 10533

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

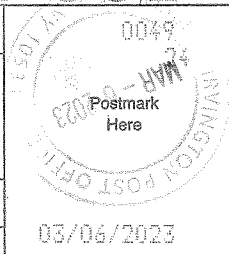
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Irvington NY 10533
OFFICIAL USE

Certified Mail Fee	\$4.15
Extra Services & Fees (check box, add fee as appropriate)	
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☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.63
Total Postage and Fees	\$4.78



Sent To El Ben Anson Halliwell
 Street and Apt. No., or PO Box No. 84 Fargo Lane
 City, State, ZIP+4® Irvington NY 10533

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

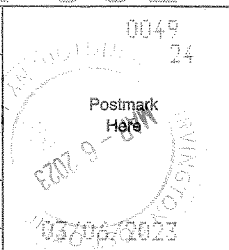
7021 2720 0001 8228 9166

**U.S. Postal Service™
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Irvington NY 10533
OFFICIAL USE

Certified Mail Fee	\$4.15
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.63
Total Postage and Fees	\$4.78



Sent To Lillian Romano
 Street and Apt. No., or PO Box No. 84 Fargo Lane
 City, State, ZIP+4® Irvington NY 10533

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7021 2720 0001 8228 9180

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Irvington NY 10533
OFFICIAL USE

Certified Mail Fee	\$4.15
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.63
Total Postage and Fees	\$4.78



Sent To Jason Franks
 Street and Apt. No., or PO Box No. 41 Fargo Lane
 City, State, ZIP+4® Irvington NY 10533

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

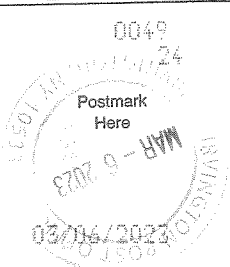
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Irvington NY 10533
OFFICIAL USE

Certified Mail Fee	\$4.15
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.63
Total Postage and Fees	\$4.78



Sent To Eta Fargo LLC
 Street and Apt. No., or PO Box No. 84 Fargo Lane
 City, State, ZIP+4® Irvington NY 10533

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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 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.

VILLAGE OF IRVINGTON

BUILDING DEPARTMENT

85 MAIN STREET

IRVINGTON, NEW YORK 10533

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



- ✓ 18) Separate Electrical Permit application by a Westchester County Department of Licensing, licensed Electrician with required insurances and the appropriate fee (must be filed by the licensed contractor, see village application for further details).
- ✓ 19) Submit signed check list with submission and appropriate building permit fee.
- 20) Applicant has provided seven copies of the entire submittal for Architectural Review Board approval.

Applicant Affidavit:

Applicants Name: _____

Applicants Address: _____

Applicants Phone # _____

Applicants Email _____

Applicant Name: _____ Signature: _____ Date: _____ By signing this affidavit I attest to have read the attached Solar Energy Equipment Code and the Solar Equipment Guidelines manufactures installation instructions and that all information asked for above has been submitted and that the submitted information is correct.

General Contractor Affidavit:

Contractors Name: _____

Contractors Address: _____

Contractors Phone # _____

Contractors Email _____

General Contractor Name: _____ Signature: _____ Date: _____ By signing this affidavit I attest to being the general contractor of record for this application and will be responsible for oversight and direct supervision of same, and will maintain a valid Westchester County Department of Consumer Protection License, a valid for Workers Compensation Policy and a General Liability Policy listing the Village of Irvington as Certificate Holder and additional insured with no conditions until such time I apply for and receive a Certificate of Completion.

Electrical Contractor Affidavit:

Electrical Contractors Name: _____

Electrical Contractors Address: _____

Electrical Contractors Phone # _____

Electrical Contractors Email _____

Electrical Contractor Name: _____ Signature: _____ Date: _____ By signing this affidavit I attest to being the electrical contractor of record for this application and will be responsible for oversight and direct supervision of same, and will maintain a valid Westchester County Electrical License, a valid for Workers Compensation Policy and a General Liability Policy listing the Village of Irvington as Certificate Holder and additional insured with no conditions until such time I apply for and receive a Certificate of Completion.

Note: Applications for all exterior elevation changes including photovoltaic solar systems are required to apply for, make a presentation in front of, and receive approval from the Village of Irvington Architectural Review Board (ARB) prior to issuance of a building permit. The ARB meetings are the second and fourth Mondays of the month, with a deadline for submissions one week prior to the meetings (see village web site for confirmation of meetings). Seven sets of copies of the entire application are required to be submitted at the deadline with appropriate fee at the time of submission.

Note: The following list above is given to assist in the application process. It is not intended to be a replacement for the Building or Zoning Code, County or State Regulations, or Consolidate Edison Requirements. Unique and Special projects may require additional information.

****Hours of Construction: Monday-Friday 7AM-7PM; Saturday 9AM-5PM; Sunday and holiday's construction is prohibited***
****Only completed applications will be accepted with attached insurance certificates and County license***

VILLAGE OF IRVINGTON

BUILDING DEPARTMENT

85 MAIN STREET

IRVINGTON, NEW YORK 10533

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



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- ____ 20) Applicant has provided seven copies of the entire submittal for Architectural Review Board approval.

Applicant Affidavit:

Applicants Name: Brandon Hall

Applicants Address: 64 Main St.

Irvington, NY 10533

Applicants Phone # 914-591-0100

Applicants Email info@conhudelectric.com

Applicant Name: Brandon Hall Signature: [Signature] Date: 03/02/2023 By signing this affidavit I attest to have read the attached Solar Energy Equipment Code and the Solar Equipment Guidelines manufactures installation instructions and that all information asked for above has been submitted and that the submitted information is correct.

General Contractor Affidavit:

Contractors Name: Rivertown Solar LLC

Contractors Address: 64 MAIN ST

Irvington, NY 10533

Contractors Phone # 914-231-6866

Contractors Email info@conhudelectric.com

General Contractor Name: Brandon Hall Signature: [Signature] Date: 03/02/2023 By signing this affidavit I attest to being the general contractor of record for this application and will be responsible for oversight and direct supervision of same, and will maintain a valid Westchester County Department of Consumer Protection License, a valid for Workers Compensation Policy and a General Liability Policy listing the Village of Irvington as Certificate Holder and additional insured with no conditions until such time I apply for and receive a Certificate of Completion.

Electrical Contractor Affidavit:

Electrical Contractors Name: Brandon Hall

Electrical Contractors Address: 64 MAIN ST

Irvington, NY 10533

Electrical Contractors Phone # 914-591-0100

Electrical Contractors Email info@conhudelectric.com

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***Hours of Construction: Monday-Friday 7AM-7PM; Saturday 9AM-5PM; Sunday and holiday's construction is prohibited**
***Only completed applications will be accepted with attached insurance certificates and County license**

GENERAL NOTES

- 1.1.1

PROJECT NOTES:
- 1.1.2

THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC) ARTICLE 690, ALL MANUFACTURERS'S LISTING AND INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION'S (AHJ) APPLICABLE CODES.
- 1.1.3

THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION
- 1.1.4

GROUND FAULT DETECTION AND INTERRUPTION (GFDI) DEVICE IS INTEGRATED WITH THE MICROINVERTER IN ACCORDANCE WITH NEC 690.41 (B)
- 1.1.5

ALL PV SYSTEM COMPONENTS; MODULES, UTILITY-INTERACTIVE INVERTERS, AND SOURCE CIRCUIT COMBINER BOXES ARE IDENTIFIED AND LISTED FOR USE IN PHOTOVOLTAIC SYSTEMS AS REQUIRED BY NEC 690.4:
PV MODULES: UL1703, IEC61730, AND IEC61215, AND NFPA 70 CLASS C FIRE INVERTERS: UL 1741 CERTIFIED, IEEE 1547, 929, 519
COMBINER BOX(ES): UL 1703 OR UL 1741 ACCESSORY
- 1.1.6

MAX DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC. IF UNAVAILABLE, MAX DC VOLTAGE CALCULATED ACCORDING TO NEC 690.7.
- 1.1.7

ALL INVERTERS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AND SOURCE CIRCUIT COMBINERS INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER 690.4 (D). SHALL BE INSTALLED ACCORDING TO ANY INSTRUCTIONS FROM LISTING OR LABELING [NEC 110.3]
- 1.1.8

ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE. IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANT. ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS REQUIRED BY THE NEC AND AHJ.
- 1.2.1

SCOPE OF WORK:
- 1.2.2

PRIME CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SPECIFICATIONS OF THE GRID-TIED PHOTOVOLTAIC SYSTEM RETROFIT. PRIME CONTRACTOR WILL BE RESPONSIBLE FOR COLLECTING EXISTING ONSITE REQUIREMENTS TO DESIGN, SPECIFY, AND INSTALL THE EXTERIOR ROOF-MOUNTED PORTION OF THE PHOTOVOLTAIC SYSTEMS DETAILED IN THIS DOCUMENT.
- 1.3.1

WORK INCLUDES:
- 1.3.2

PV ROOF ATTACHMENTS - ROOF TECH RT-MINI II
- 1.3.3

PV RACKING SYSTEM INSTALLATION - IRONRIDGE XR-100
- 1.3.4

PV MODULE AND INVERTER INSTALLATION - HANWHA Q-CELLS Q.PEAK DUO BLK ML-G10+400/ ENPHASE IQ8PLUS-72-2-US
- 1.3.5

PV EQUIPMENT GROUNDING
- 1.3.6

PV SYSTEM WIRING TO A ROOF-MOUNTED JUNCTION BOX
- 1.3.7

PV LOAD CENTERS (IF INCLUDED)
- 1.3.8

PV METERING/MONITORING (IF INCLUDED)
- 1.3.9

PV DISCONNECTS
- 1.3.10

PV GROUNDING ELECTRODE & BONDING TO (E) GEC
- 1.3.11

PV FINAL COMMISSIONING
- 1.3.12

(E) ELECTRICAL EQUIPMENT RETROFIT FOR PV
- 1.3.13

SIGNAGE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE

SCOPE OF WORK

SYSTEM SIZE: STC: 15 x 400W = 6.000kW
PTC: 15 x 371.5W = 5.573kW
(15) HANWHA Q-CELLS Q.PEAK DUO BLK ML-G10+400
(15) ENPHASE IQ8PLUS-72-2-US

ATTACHMENT TYPE: ROOF TECH RT-MINI II

MSP UPGRADE: NO

NEW PV SYSTEM: 6.000 kWp
MORRIS RESIDENCE

84 FARGO LN
IRVINGTON, NY 10533

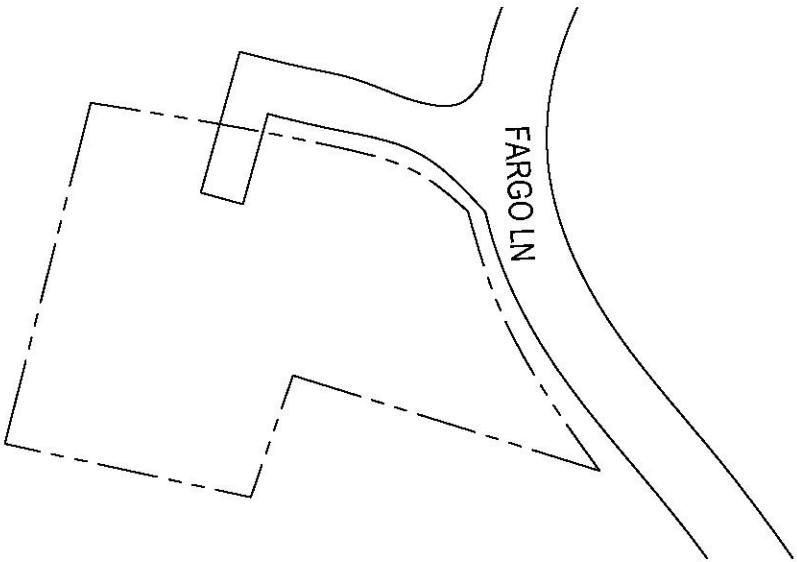
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01

AERIAL PHOTO

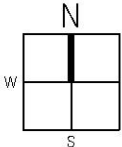
NOT TO SCALE



02

PLAT MAP

NOT TO SCALE



SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
T-001	COVER PAGE
G-001	NOTES
A-101	SITE PLAN
A-102	ELECTRICAL PLAN
A-103	SOLAR ATTACHMENT PLAN
E-601	LINE DIAGRAM
E-602	DESIGN TABLES
E-603	PLACARDS
S-501	ASSEMBLY DETAILS
R-001	RESOURCE DOCUMENT
R-002	RESOURCE DOCUMENT
R-003	RESOURCE DOCUMENT
R-004	RESOURCE DOCUMENT
R-005	RESOURCE DOCUMENT

PROJECT INFORMATION

OWNER

NAME: HEATHER MORRIS

PROJECT MANAGER

NAME: ERIC EYGES

PHONE: 941-325-2167

CONTRACTOR

NAME: RIVERTOWN SOLAR, LLC

PHONE: 914-231-6866

AUTHORITIES HAVING JURISDICTION

BUILDING: IRVINGTON, NY

ZONING: IRVINGTON, NY

UTILITY:

DESIGN SPECIFICATIONS

OCCUPANCY: II

CONSTRUCTION: SINGLE-FAMILY

ZONING: RESIDENTIAL

GROUND SNOW LOAD: 30 PSF

WIND EXPOSURE: B

WIND SPEED: 115 MPH

APPLICABLE CODES & STANDARDS

BUILDING: NYSBC 2020, NYSRC 2020

ELECTRICAL: NEC2017

FIRE: NYSFC 2020

CONTRACTOR

RIVERTOWN SOLAR, LLC

PHONE: (914) 231-6866

ADDRESS: RIVERTOWN SOLAR LLC
IRVINGTON, NY 10533

LIC. NO.: 52649

HIC. NO.:

ELE. NO.:

UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 6.000 kWp

MORRIS
RESIDENCE

84 FARGO LN
IRVINGTON, NY 10533
APN: 55260022032

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

COVER PAGE

DATE: 01.21.2023

DESIGN BY: M.T.

CHECKED BY: M.M.

REVISIONS

T-001.00

(SHEET 1)

	A	B	C	D	E	F	G	H
1	2.1.1	SITE NOTES:		2.5.6	EACH MODULE WILL BE GROUNDED USING WEEB GROUNDING CLIPS AS SHOWN IN MANUFACTURER DOCUMENTATION AND APPROVED BY THE AHJ. IF WEEBS ARE NOT USED, MODULE GROUNDING LUGS MUST BE INSTALLED AT THE SPECIFIED GROUNDING LUG HOLES PER THE MANUFACTURERS' INSTALLATION REQUIREMENTS.			
	2.1.2	A LADDER WILL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.			THE GROUNDING CONNECTION TO A MODULE SHALL BE ARRANGED SUCH THAT THE REMOVAL OF A MODULE DOES NOT INTERRUPT A GROUNDING CONDUCTOR TO ANOTHER MODULE.			
	2.1.3	THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE AND THIS SYSTEM IS A UTILITY INTERACTIVE SYSTEM WITH STORAGE BATTERIES.			GROUNDING AND BONDING CONDUCTORS, IF INSULATED, SHALL BE COLORED GREEN OR MARKED GREEN IF #4 AWG OR LARGER [NEC 250.119]			
	2.1.4	THE SOLAR PV INSTALLATION WILL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.		2.5.7	THE GROUNDING ELECTRODE SYSTEM COMPLIES WITH NEC 690.47 AND NEC 250.50 THROUGH 250.106. IF EXISTING SYSTEM IS INACCESSIBLE, OR INADEQUATE, A GROUNDING ELECTRODE SYSTEM PROVIDED ACCORDING TO NEC 250, NEC 690.47 AND AHJ.			
	2.1.5	PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED AS PER SECTION NEC 110.26.		2.5.8	GROUND-FAULT DETECTION SHALL COMPLY WITH NEC 690.41(B)(1) AND (2) TO REDUCE FIRE HAZARDS			
	2.1.6	ROOF COVERINGS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THIS CODE AND THE APPROVED MANUFACTURER'S INSTRUCTIONS SUCH THAT THE ROOF COVERING SERVES TO PROTECT THE BUILDING OR STRUCTURE.		2.5.9				
				2.5.10				
2	2.2.1	EQUIPMENT LOCATIONS:			DISCONNECTION AND OVER-CURRENT PROTECTION NOTES:			
	2.2.2	ALL EQUIPMENT SHALL MEET MINIMUM SETBACKS AS REQUIRED BY NEC 110.26.			DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING ENERGIZED ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS).			
	2.2.3	WIRING SYSTEMS INSTALLED IN DIRECT SUNLIGHT MUST BE RATED FOR EXPECTED OPERATING TEMPERATURE AS SPECIFIED BY NEC 690.31 (A),(C) AND NEC TABLE 310.15 (B)(2)(A).		2.6.1	DISCONNECTS TO BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH			
	2.2.4	JUNCTION AND PULL BOXES PERMITTED INSTALLED UNDER PV MODULES ACCORDING TO NEC 690.34.		2.6.2	PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH 690.12(A) THROUGH (D).			
	2.2.5	ADDITIONAL AC DISCONNECT(S) SHALL BE PROVIDED WHERE THE INVERTER IS NOT WITHIN SIGHT OF THE AC SERVICING DISCONNECT.		2.6.3	ALL OCPD RATINGS AND TYPES SPECIFIED ACCORDING TO NEC 690.8, 690.9, AND 240.			
	2.2.6	ALL EQUIPMENT SHALL BE INSTALLED ACCESSIBLE TO QUALIFIED PERSONNEL ACCORDING TO NEC APPLICABLE CODES.		2.6.4	MICROINVERTER BRANCHES CONNECTED TO A SINGLE BREAKER OR GROUPED FUSES IN ACCORDANCE WITH NEC 110.3(B).			
	2.2.7	ALL COMPONENTS ARE LISTED FOR THEIR PURPOSE AND RATED FOR OUTDOOR USAGE WHEN APPROPRIATE.		2.6.5	IF REQUIRED BY AHJ, SYSTEM WILL INCLUDE ARC-FAULT CIRCUIT PROTECTION ACCORDING TO NEC 690.11 AND UL1699B.			
				2.6.6	INTERCONNECTION NOTES:			
3	2.3.1	STRUCTURAL NOTES:			LOAD-SIDE INTERCONNECTION SHALL BE IN ACCORDANCE WITH [NEC 705.12 (B)]			
	2.3.2	RACKING SYSTEM & PV ARRAY WILL BE INSTALLED ACCORDING TO CODE-COMPLIANT INSTALLATION MANUAL. TOP CLAMPS REQUIRE A DESIGNATED SPACE BETWEEN MODULES, AND RAILS MUST ALSO EXTEND A MINIMUM DISTANCE BEYOND EITHER EDGE OF THE ARRAY/SUBARRAY, ACCORDING TO RAIL MANUFACTURER'S INSTRUCTIONS.		2.6.7	THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR SHALL NOT EXCEED 120 PERCENT OF THE AMPACITY OF THE BUSBAR, PV DEDICATED BACKFEED BREAKERS MUST BE LOCATED OPPOSITE END OF THE BUS FROM THE UTILITY SOURCE OCPD [NEC 705.12(B)(2)(3)].			
	2.3.3	JUNCTION BOX WILL BE INSTALLED PER MANUFACTURERS' SPECIFICATIONS. IF ROOF-PENETRATING TYPE, IT SHALL BE FLASHED & SEALED PER LOCAL REQUIREMENTS.		2.7.1	AT MULTIPLE ELECTRIC POWER SOURCES OUTPUT COMBINER PANEL, TOTAL RATING OF ALL OVERCURRENT DEVICES SHALL NOT EXCEED AMPACITY OF BUSBAR. HOWEVER, THE COMBINED OVERCURRENT DEVICE MAY BE EXCLUDED ACCORDING TO NEC 705.12 (B)(2)(3)(C).			
	2.3.4	ROOFTOP PENETRATIONS FOR PV RACEWAY WILL BE COMPLETED AND SEALED W/ APPROVED CHEMICAL SEALANT PER CODE BY A LICENSED CONTRACTOR.		2.7.2	FEEDER TAP INTERCONNECTION (LOAD SIDE) ACCORDING TO NEC 705.12 (B)(2)(1)			
	2.3.5	ALL PV RELATED ROOF ATTACHMENTS TO BE SPACED NO GREATER THAN THE SPAN DISTANCE SPECIFIED BY THE RACKING MANUFACTURER.		2.7.3	SUPPLY SIDE TAP INTERCONNECTION ACCORDING TO NEC 705.12 (A) WITH SERVICE ENTRANCE CONDUCTORS IN ACCORDANCE WITH NEC 230.42			
	2.3.6	WHEN POSSIBLE, ALL PV RELATED RACKING ATTACHMENTS WILL BE STAGGERED AMONGST THE ROOF FRAMING MEMBERS.		2.7.4	BACKFEEDING BREAKER FOR ELECTRIC POWER SOURCES OUTPUT IS EXEMPT FROM ADDITIONAL FASTENING [NEC 705.12 (B)(5)].			
				2.7.5				
4	2.4.1	WIRING & CONDUIT NOTES:		2.7.6				
	2.4.2	ALL CONDUIT AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING.		2.7.7				
	2.4.3	CONDUCTORS SIZED ACCORDING TO NEC 690.8, NEC 690.7.						
	2.4.4	VOLTAGE DROP LIMITED TO 1.5%						
	2.4.5	DC WIRING LIMITED TO MODULE FOOTPRINT. MICROINVERTER WIRING SYSTEMS SHALL BE LOCATED AND SECURED UNDER THE ARRAY W/ SUITABLE WIRING CLIPS.						
	2.4.6	AC CONDUCTORS COLORED OR MARKED AS FOLLOWS:						
		PHASE A OR L1- BLACK						
		PHASE B OR L2- RED, OR OTHER CONVENTION IF THREE PHASE						
		PHASE C OR L3- BLUE, YELLOW, ORANGE**, OR OTHER CONVENTION						
		NEUTRAL- WHITE OR GRAY						
		IN 4-WIRE DELTA CONNECTED SYSTEMS THE PHASE WITH HIGHER VOLTAGE TO BE MARKED ORANGE [NEC 110.15].						
	2.5.1	GROUNDING NOTES:						
	2.5.2	GROUNDING SYSTEM COMPONENTS SHALL BE LISTED FOR THEIR PURPOSE, AND GROUNDING DEVICES EXPOSED TO THE ELEMENTS SHALL BE RATED FOR SUCH USE.						
	2.5.3	PV EQUIPMENT SHALL BE GROUNDED ACCORDING TO NEC 690.43 AND MINIMUM NEC TABLE 250.122.						
6	2.5.4	METAL PARTS OF MODULE FRAMES, MODULE RACKING, AND ENCLOSURES CONSIDERED GROUNDED IN ACCORD WITH 250.134 AND 250.136(A).						
	2.5.5	EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED ACCORDING TO NEC 690.45 AND MICROINVERTER MANUFACTURERS' INSTRUCTIONS.						

CONTRACTOR

RIVERTOWN SOLAR, LLC

PHONE: (914) 231-6866

ADDRESS: RIVERTOWN SOLAR LLC
IRVINGTON, NY 10533

LIC. NO.: 52649

HIC. NO.:

ELE. NO.:

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AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 6.000 kWp

MORRIS
RESIDENCE

84 FARGO LN
IRVINGTON, NY 10533
APN: 55260022032

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

NOTES

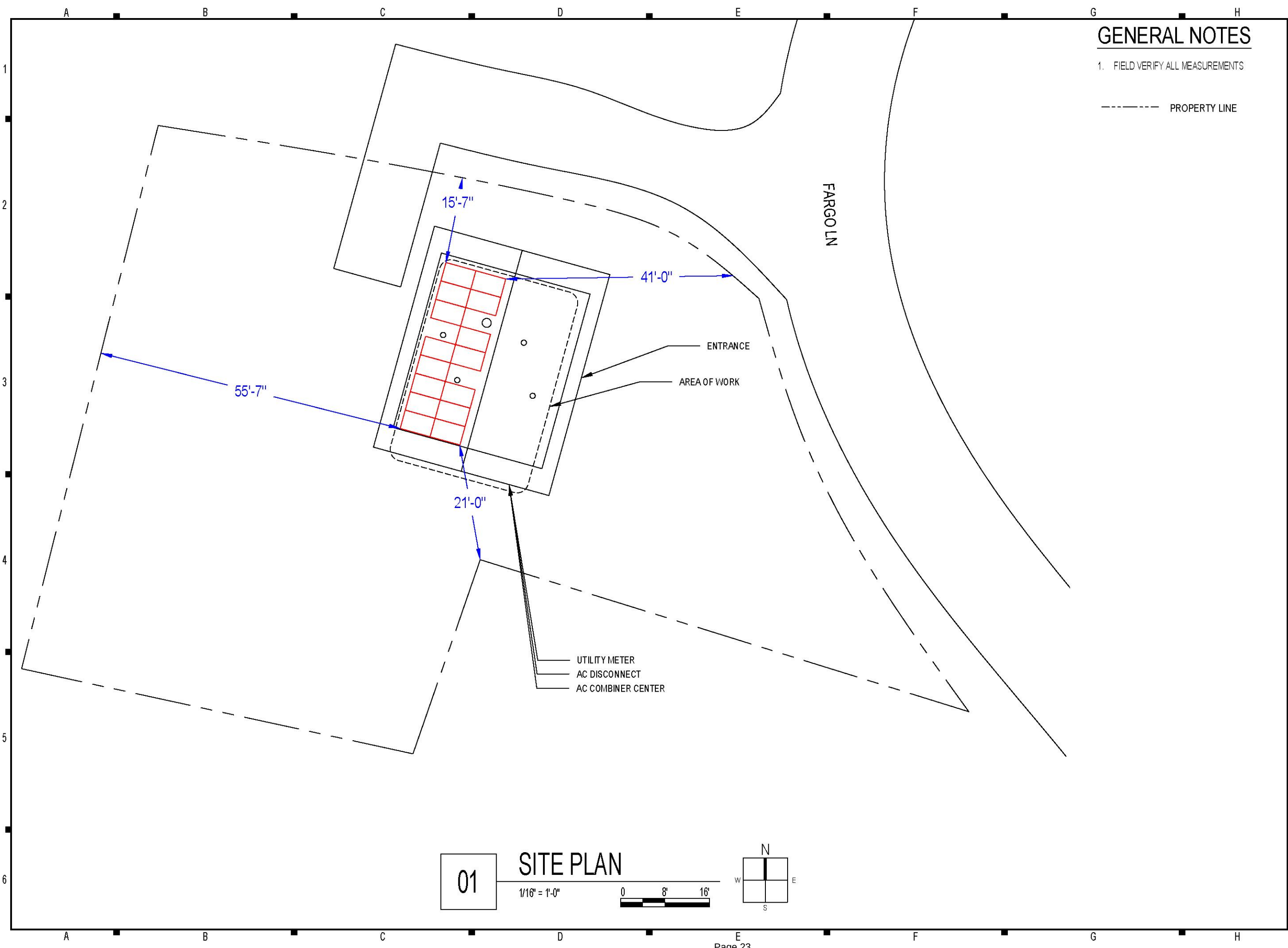
DATE: 01.21.2023

DESIGN BY: M.T.

CHECKED BY: M.M.

REVISIONS

G-001.00
(SHEET 2)



GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS

----- PROPERTY LINE

CONTRACTOR

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ENGINEER OF RECORD

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SITE PLAN

DATE: 01.21.2023

DESIGN BY: M.T.

CHECKED BY: M.M.

REVISIONS

A-101.00

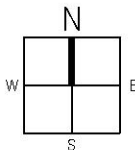
(SHEET 3)

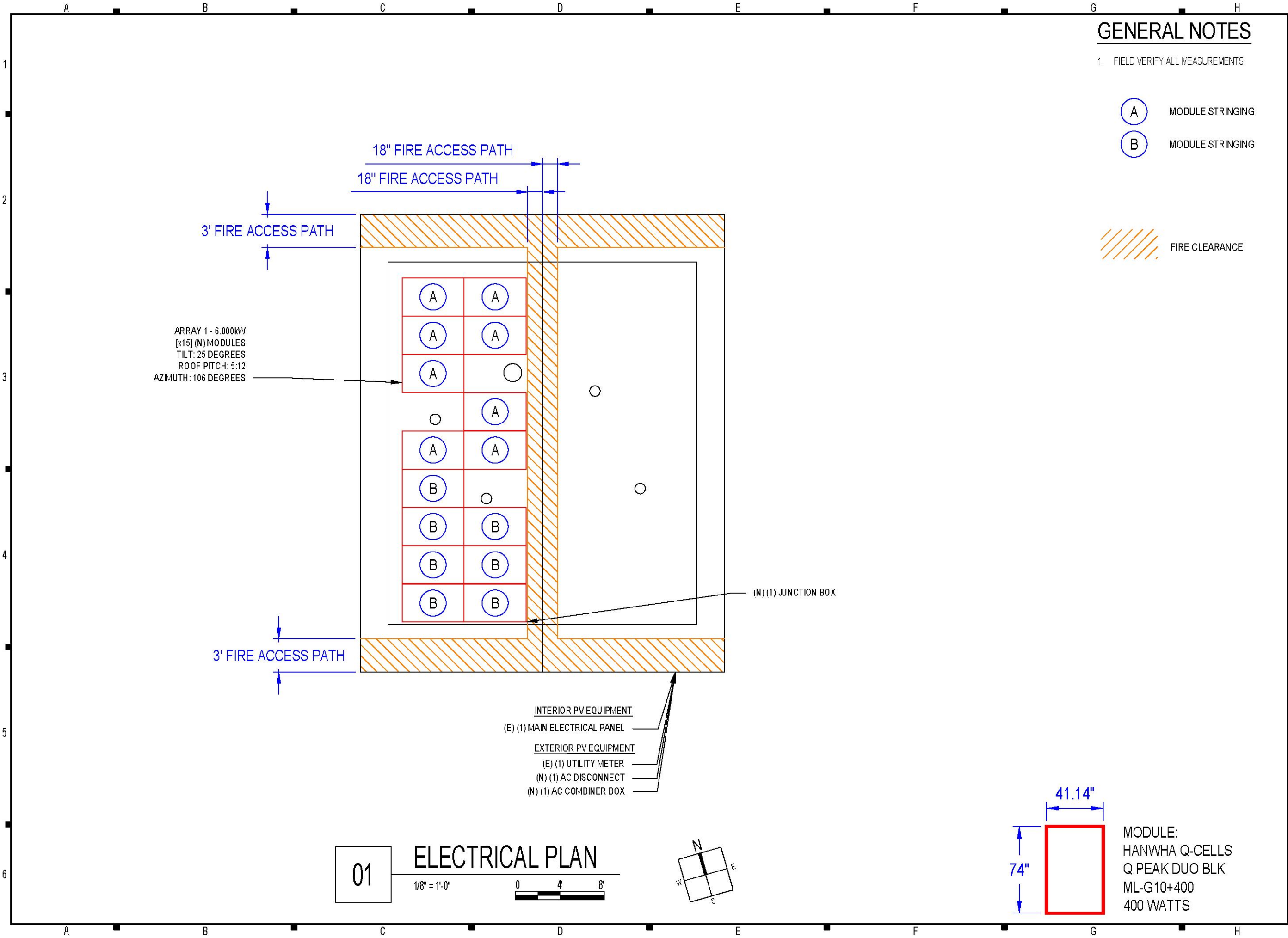
01

SITE PLAN

1/16" = 1'-0"

0 8' 16'





GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS

- A MODULE STRINGING
- B MODULE STRINGING

FIRE CLEARANCE

CONTRACTOR

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NEW PV SYSTEM: 6.000 kWp

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RESIDENCE

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IRVINGTON, NY 10533
APN: 55260022032

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

ELECTRICAL PLAN

DATE: 01.21.2023

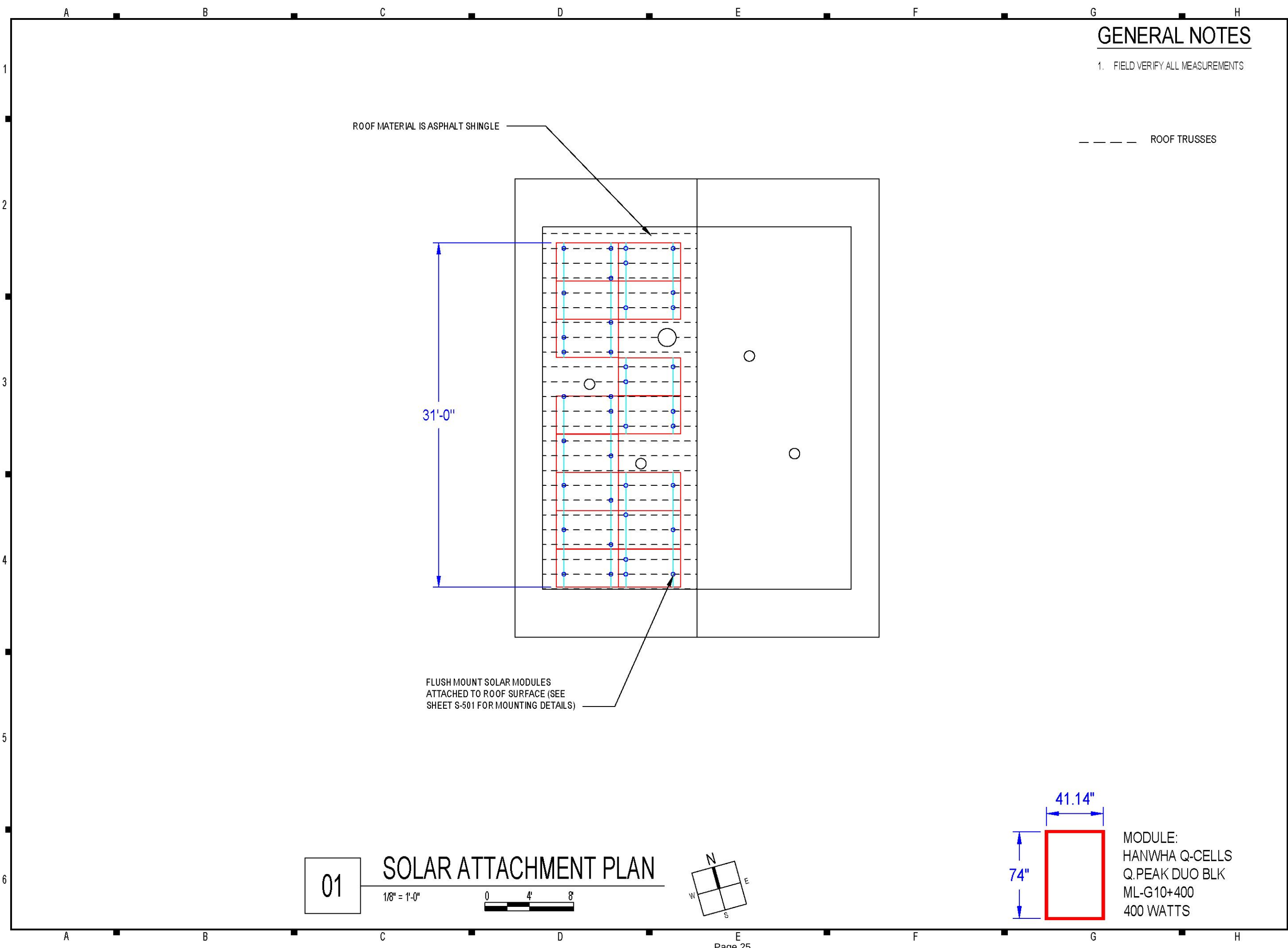
DESIGN BY: M.T.

CHECKED BY: M.M.

REVISIONS

A-102.00

(SHEET 4)



GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS

CONTRACTOR

RIVERTOWN SOLAR, LLC

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NEW PV SYSTEM: 6.000 kWp

MORRIS
RESIDENCE

84 FARGO LN
IRVINGTON, NY 10533
APN: 55260022032

ENGINEER OF RECORD



PAPER SIZE: 11" x 17" (ANSI B)

SOLAR ATTACHMENT PLAN

DATE: 01.21.2023

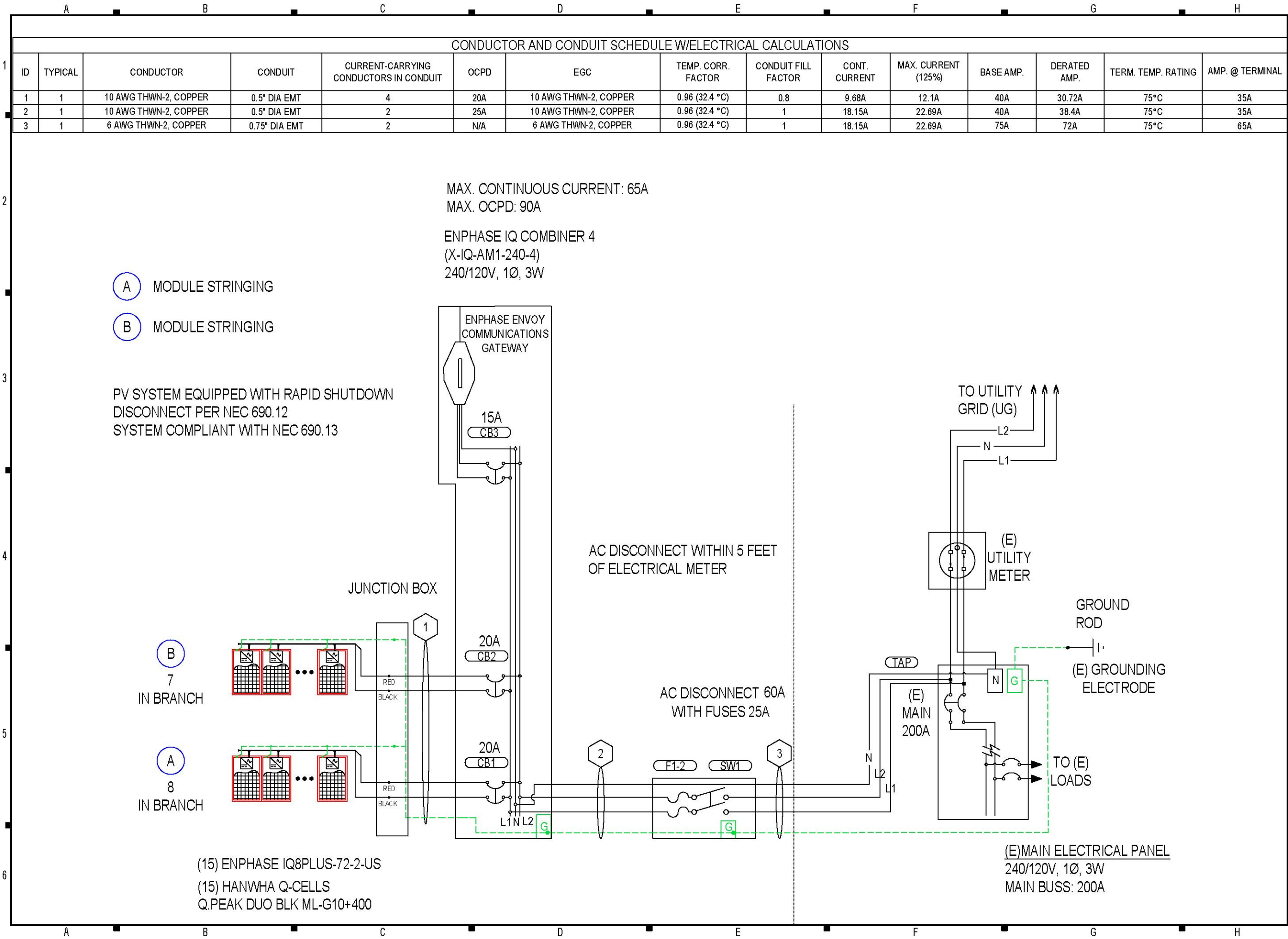
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(SHEET 5)



CONTRACTOR

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NEW PV SYSTEM: 6.000 kWp

MORRIS RESIDENCE

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IRVINGTON, NY 10533
APN: 55260022032

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

LINE DIAGRAM

DATE: 01.21.2023

DESIGN BY: M.T.

CHECKED BY: M.M.

REVISIONS

E-601.00

(SHEET 6)

1	SYSTEM SUMMARY		
	BRANCH #1	BRANCH #2	
	INVERTERS PER BRANCH	8	7
	MAX AC CURRENT	9.68A	8.47A
	MAX AC OUTPUT POWER	2,400W	2,100W
	ARRAY STC POWER	6,000W	
	ARRAY PTC POWER	5,573W	
	MAX AC CURRENT	18.150000A	
	MAX AC POWER	4,500W	
	DERATED (CEC) AC POWER	4,500W	

MODULES										
REF.	QTY.	MAKE AND MODEL	P _{MAX}	P _{TC}	I _{SC}	I _{MP}	V _{OC}	V _{MP}	TEMP. COEFF. OF V _{OC}	FUSE RATING
PM1-15	15	HANHWA Q.PEAK DUO BLK ML-G10+ 400	400W	371.5W	11.14A	10.77A	45.3V	37.13V	-0.122V/°C (-0.27%/°C)	20A

INVERTERS										
REF.	QTY.	MAKE AND MODEL	AC VOLTAGE	GROUND	OCPD RATING	RATED POWER	MAX OUTPUT CURRENT	MAX INPUT CURRENT	MAX INPUT VOLTAGE	CEC WEIGHTED EFFICIENCY
I1-15	15	ENPHASE IQ8PLUS-72-2-US	240V	FLOATING	20A	290W	1.21A	15A	60V	97.0%

DISCONNECTS				
REF.	QTY.	MAKE AND MODEL	RATED CURRENT	MAX RATED VOLTAGE
SW1	1	SQUARE D D222NRB OR EQUIV.	60A	240VAC

ASHRAE EXTREME LOW	-19.7°C (-3.5°F), SOURCE: WESTCHESTER CO (41.07°; -73.71°)
ASHRAE 2% HIGH	32.4°C (90.3°F), SOURCE: WESTCHESTER CO (41.07°; -73.71°)

OCPDS			
REF.	QTY.	RATED CURRENT	MAX VOLTAGE
CB1-2	2	20A	240VAC
CB3	1	15A	240VAC
F1-2	2	25A	240VAC

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APN: 55260022032

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

DESIGN TABLES

DATE: 01.21.2023

DESIGN BY: M.T.

CHECKED BY: M.M.

REVISIONS

E-602.00
(SHEET 7)

LABELING NOTES

1.1 LABELING REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRICAL CODE, INTERNATIONAL FIRE CODE 605.11, OSHA STANDARD 1910.145, ANSI Z535

1.2 MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

1.3 LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.

1.4 LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8" AND PERMANENTLY AFFIXED.

1.5 ALERTING WORDS TO BE COLOR CODED. "DANGER" WILL HAVE RED BACKGROUND; "WARNING" WILL HAVE ORANGE BACKGROUND; "CAUTION" WILL HAVE YELLOW BACKGROUND. [ANSI Z535]

WARNING

ELECTRICAL SHOCK HAZARD

TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL 1

AT EACH DISCONNECTING MEANS FOR PHOTOVOLTAIC EQUIPMENT (2" X 4"). [NEC 690.13].

WARNING

POWER SOURCE

OUTPUT CONNECTION

DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL 2

AT POINT OF INTERCONNECTION OVERCURRENT DEVICE (2" X 4"). [NEC 705.12(B)(2)(3)(B)].

PHOTOVOLTAIC SYSTEM AC DISCONNECT

RATED AC OUTPUT CURRENT 18.15 A

NOMINAL OPERATING AC VOLTAGE 240 V

LABEL 3

AT POINT OF INTERCONNECTION, MARKED AT DISCONNECTING MEANS (4" X 2"). [NEC 690.54]

PHOTOVOLTAIC SOLAR AC DISCONNECT

LABEL 4

AT EACH AC DISCONNECTING MEANS (4" X 1"). [NEC 690.13(B)].

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL 5

AT RAPID SHUTDOWN DISCONNECT SWITCH (5 1/4" X 2"). [NEC 690.56(C)(3)].

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 ARRAY

LABEL 6

AT RAPID SHUTDOWN SYSTEM (3 3/4" X 5 1/4"). [NEC 690.56(C)(1)(A)].

WARNING

DUAL POWER SUPPLY

SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

LABEL 7

AT POINT OF INTERCONNECTION (2 3/4" X 1 5/8"). [NEC 705.12(B)(3)].

WARNING

SOLAR ELECTRIC CIRCUIT BREAKER IS BACKFED

LABEL 8

AT POINT OF INTERCONNECTION (2" X 1"). [NEC 705.12(B)(3)].

INTERACTIVE PHOTOVOLTAIC SYSTEM CONNECTED PHOTOVOLTAIC SYSTEM DISCONNECT LOCATED SOUTH SIDE OF THE HOUSE

DIRECTORY

PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS IF NOT IN THE SAME LOCATION (5 3/4" X 1 1/8"). [NEC 690.56(B)]

WHERE THE PV SYSTEMS ARE REMOTELY LOCATED FROM EACH OTHER, A DIRECTORY IN ACCORDANCE WITH 705.10 SHALL BE PROVIDED AT EACH PV SYSTEM DISCONNECTING MEANS.

PV SYSTEM EQUIPMENT AND DISCONNECTING MEANS SHALL NOT BE INSTALLED IN BATHROOMS [NEC 690.4(D), (E)]

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL 9

AT EXPOSED RACEWAYS, CABLE TRAYS, AND OTHER WIRING METHODS; SPACED AT MAXIMUM 10 FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS (5 3/4" X 1 1/8"). [NEC 690.31(G)]

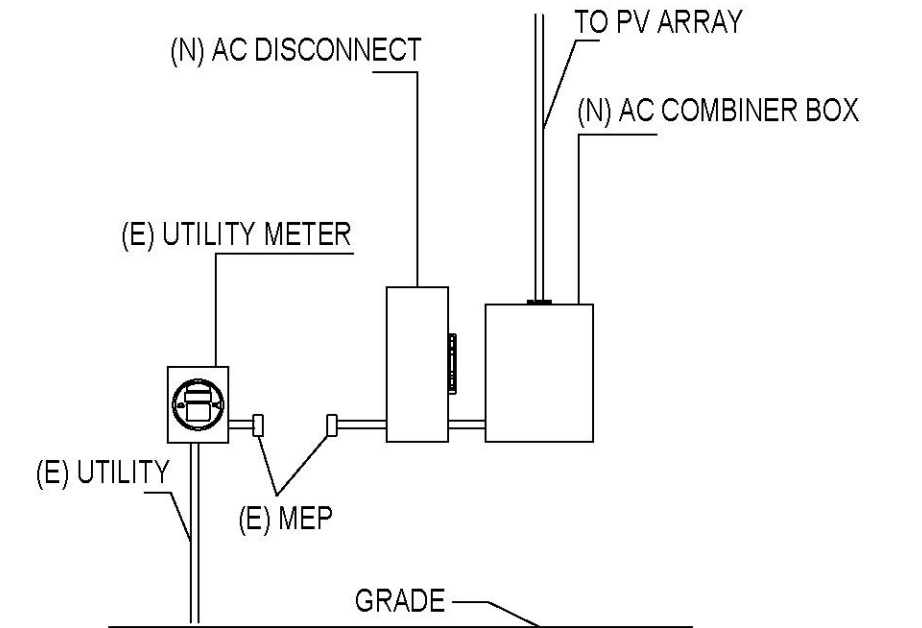
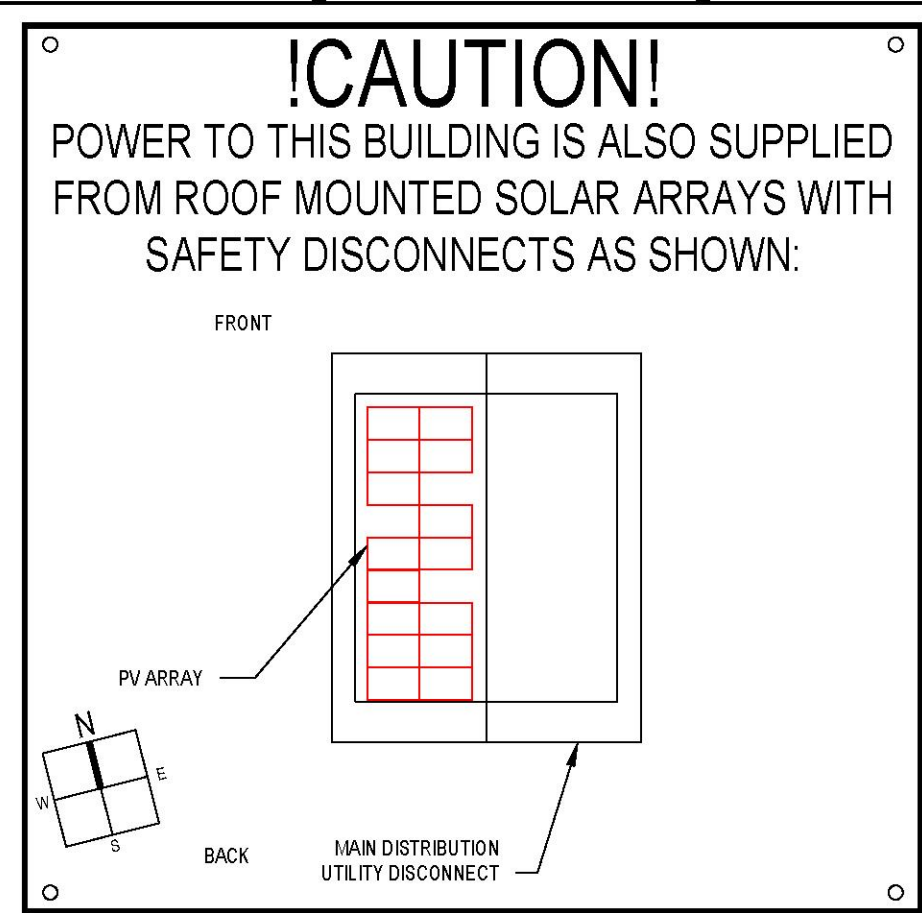
LETTERS AT LEAST 3/8 INCH; WHITE ON RED BACKGROUND; REFLECTIVE [IFC 605.11.1.1]

CAUTION

SOLAR ELECTRIC SYSTEM CONNECTED

LABEL 10

AT UTILITY METER (5 3/4" X 1 1/8") [NEC 690.56(B)]



01

EQUIPMENT ELEVATION

NOT TO SCALE

CONTRACTOR

RIVERTOWN SOLAR, LLC

PHONE: (914) 231-6866

ADDRESS: RIVERTOWN SOLAR LLC
IRVINGTON, NY 10533

LIC. NO.: 52649

HIC. NO.:

ELE. NO.:

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NEW PV SYSTEM: 6.000 kWp

MORRIS RESIDENCE

84 FARGO LN
IRVINGTON, NY 10533
APN: 55260022032

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

PLACARDS

DATE: 01.21.2023

DESIGN BY: M.T.

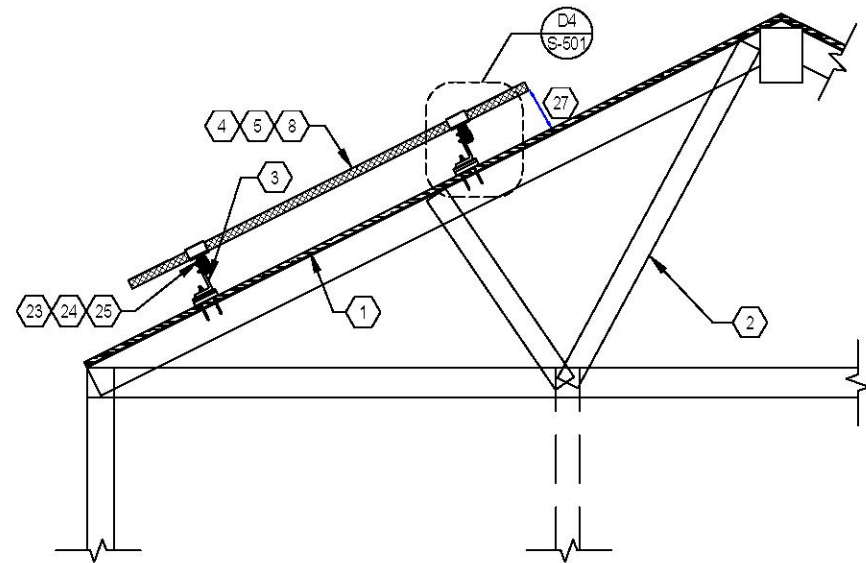
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REVISIONS

E-603.00
(SHEET 8)

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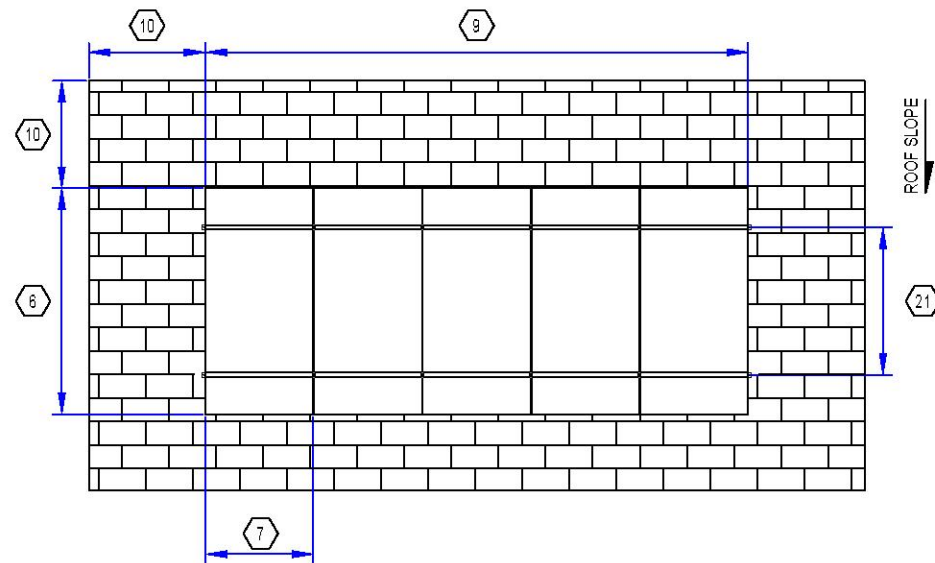
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D1

RACKING DETAIL (TRANSVERSE)

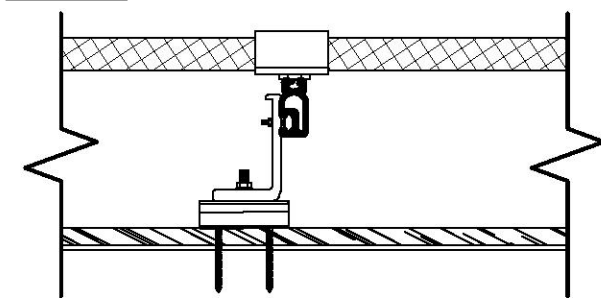
NOT TO SCALE



D3

RACKING DETAIL (TOP)

NOT TO SCALE



D4

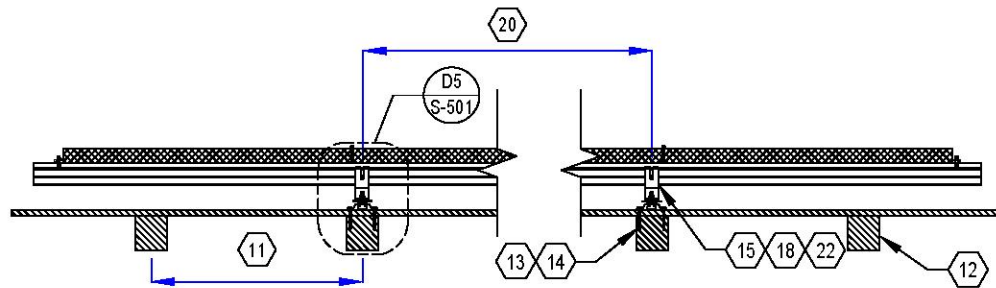
DETAIL (TRANSVERSE)

NOT TO SCALE

D5

DETAIL (LONGITUDINAL)

NOT TO SCALE



D2

RACKING DETAIL (LONGITUDINAL)

NOT TO SCALE

GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS

SHEET KEYNOTES

1. ROOF MATERIAL: ASPHALT SHINGLE
2. ROOF STRUCTURE: TRUSS
3. ATTACHMENT TYPE: ROOF TECH RT-MINI II
4. MODULE MANUFACTURER: HANWHA Q.CELLS
5. MODULE MODEL: Q.PEAK DUO BLK ML-G10+400
6. MODULE LENGTH: 74"
7. MODULE WIDTH: 41.14"
8. MODULE WEIGHT: 48.5 LBS.
9. SEE SHEET A-103 FOR DIMENSION(S)
10. MIN. FIRE OFFSET: 18" FROM RIDGE, 36" FROM EDGE
11. TRUSS SPACING: 16 IN. O.C.
12. TRUSS SIZE: 2X8 IN. NOMINAL
13. LAG BOLT MANUFACTURER: 5/32"
14. LAG BOLT EMBEDMENT: 3-1/2"
15. TOTAL # OF ATTACHMENTS: 38
16. TOTAL AREA: 317.12 LBS
17. TOTAL WEIGHT: 833.14 LBS.
18. WEIGHT PER ATTACHMENT: 21.92 LBS.
19. DISTRIBUTED LOAD: 2.63 PSF
20. MAX. HORIZONTAL STANDOFF: 48 IN.
21. MAX. VERTICAL STANDOFF: IN ACCORDANCE WITH MODULE MANUFACTURER'S INSTRUCTIONS.
22. STANDOFF STAGGERING: YES
23. RAIL MANUFACTURER (OR EQUIV.): IRONRIDGE
24. RAIL MODEL (OR EQUIVALENT): XR-100
25. RAIL WEIGHT: 0.68 PLF.
26. MAX. TRUSS SPAN: N/A.
27. MODULE CLEARANCE: 3 IN. MIN., 6 IN. MAX.

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ENGINEER OF RECORD



PAPER SIZE: 11" x 17" (ANSI B)

ASSEMBLY DETAILS

DATE: 01.21.2023

DESIGN BY: M.T.

CHECKED BY: M.M.

REVISIONS

S-501.00

(SHEET 9)

powered by
Q.ANTUM DUO Z

Q.PEAK DUO BLK ML-G10+ 385-410

ENDURING HIGH
PERFORMANCE



BREAKING THE 20% EFFICIENCY BARRIER

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 21.1%.



THE MOST THOROUGH TESTING PROGRAMME IN THE INDUSTRY

Q CELLS is the first solar module manufacturer to pass the most comprehensive quality programme in the industry: The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.



INNOVATIVE ALL-WEATHER TECHNOLOGY

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



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Hot-Spot Protect and Traceable Quality Tra.Q™.



EXTREME WEATHER RATING

High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



A RELIABLE INVESTMENT

Inclusive 25-year product warranty and 25-year linear performance warranty¹.

¹ See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:



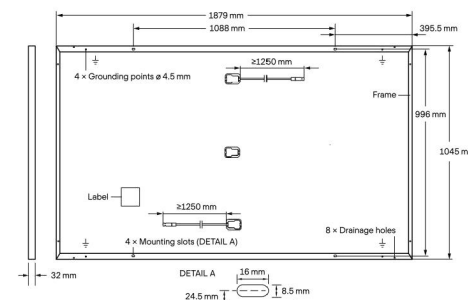
Rooftop arrays on
residential buildings

Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	1879 mm × 1045 mm × 32 mm (including frame)
Weight	22.0 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction box	53-101 mm × 32-60 mm × 15-18 mm Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 1250 mm, (-) ≥ 1250 mm
Connector	Stäubli MC4; IP68



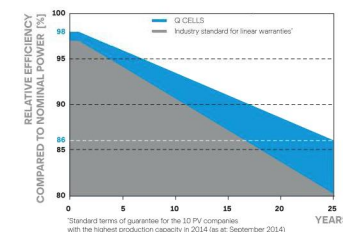
ELECTRICAL CHARACTERISTICS

POWER CLASS	385	390	395	400	405	410
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W / -0 W)						
Power at MPP ¹	P _{MPP} [W]	385	390	395	400	405
Short Circuit Current ¹	I _{SC} [A]	11.04	11.07	11.10	11.14	11.17
Open Circuit Voltage ¹	V _{OC} [V]	45.19	45.23	45.27	45.30	45.34
Current at MPP	I _{MPP} [A]	10.59	10.65	10.71	10.77	10.83
Voltage at MPP	V _{MPP} [V]	36.36	36.62	36.88	37.13	37.39
Efficiency ¹	η [%]	≥ 19.6	≥ 19.9	≥ 20.1	≥ 20.4	≥ 20.6
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²						
Power at MPP	P _{MPP} [W]	288.8	292.6	296.3	300.1	303.8
Short Circuit Current	I _{SC} [A]	8.90	8.92	8.95	8.97	9.00
Open Circuit Voltage	V _{OC} [V]	42.62	42.65	42.69	42.72	42.79
Current at MPP	I _{MPP} [A]	8.35	8.41	8.46	8.51	8.57
Voltage at MPP	V _{MPP} [V]	34.59	34.81	35.03	35.25	35.46

¹ Measurement tolerances P_{MPP} ± 3%; I_{SC}; V_{OC} ± 5% at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • ² 800 W/m², NMOT, spectrum AM 1.5

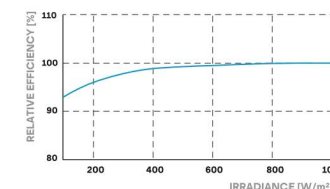
Q CELLS PERFORMANCE WARRANTY

PERFORMANCE AT LOW IRRADIANCE



At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

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



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I _{SC}	α	[%/K]	+0.04	Temperature Coefficient of V _{OC}	β	[%/K]	-0.27
Temperature Coefficient of P _{MPP}	γ	[%/K]	-0.34	Nominal Module Operating Temperature	NMOT	[°C]	43 ± 3

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	V _{sys} [V]	1000	PV module classification	Class II
Maximum Reverse Current	I _R [A]	20	Fire Rating based on ANSI / UL 61730	C / TYPE 2
Max. Design Load, Push / Pull	[Pa]	3600 / 2660	Permitted Module Temperature on Continuous Duty	-40 °C - +85 °C
Max. Test Load, Push / Pull	[Pa]	5400 / 4000		

QUALIFICATIONS AND CERTIFICATES

Quality Controlled PV - TÜV Rheinland;
IEC 61215:2016; IEC 61730:2016.
This data sheet complies
with DIN EN 50380.
QCPV Certification ongoing.
Certification holder:
Hanwha Q CELLS GmbH



Horizontal
packaging



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.

Made in Korea

Hanwha Q CELLS Australia Pty Ltd

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Engineered in Germany

Q CELLS

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NEW PV SYSTEM: 6.000 kWp

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APN: 55260022032

ENGINEER OF RECORD

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RESOURCE DOCUMENT

DATE: 01.21.2023

DESIGN BY: M.T.

CHECKED BY: M.M.

REVISIONS

R-001.00

(SHEET 10)



DATA SHEET



IQ8 Series Microinverters

Our newest IQ8 Microinverters are the industry's first microgrid-forming, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (ASIC) which enables the microinverter to operate in grid-tied or off-grid modes. This chip is built in advanced 55nm technology with high speed digital logic and has super-fast response times to changing loads and grid events, alleviating constraints on battery sizing for home energy systems.



Part of the Enphase Energy System, IQ8 Series Microinverters integrate with the Enphase IQ Battery, Enphase IQ Gateway, and the Enphase App monitoring and analysis software.



Connect PV modules quickly and easily to IQ8 Series Microinverters using the included Q-DCC-2 adapter cable with plug-n-play MC4 connectors.



IQ8 Series Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industry-leading limited warranty of up to 25 years.



IQ8 Series Microinverters are UL Listed as PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

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IQ8SE-DS-0001-01-EN-US-2021-10-19

Easy to install

- Lightweight and compact with plug-n-play connectors
- Power Line Communication (PLC) between components
- Faster installation with simple two-wire cabling

High productivity and reliability

- Produce power even when the grid is down
- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

Microgrid-forming

- Complies with the latest advanced grid support
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) requirements

IQ8 Series Microinverters

INPUT DATA (DC)		IQ8-60-2-US	IQ8PLUS-72-2-US	IQ8M-72-2-US	IQ8A-72-2-US	IQ8H-240-72-2-US	IQ8H-208-72-2-US¹
Commonly used module pairings²	W	235 – 350	235 – 440	260 – 460	295 – 500	320 – 540+	295 – 500+
Module compatibility		60-cell/120 half-cell		60-cell/120 half-cell and 72-cell/144 half-cell			
MPPT voltage range	V	27 – 37	29 – 45	33 – 45	36 – 45	38 – 45	38 – 45
Operating range	V	25 – 48			25 – 58		
Min/max start voltage	V	30 / 48			30 / 58		
Max input DC voltage	V	50			60		
Max DC current³ [module Isc]	A			15			
Overvoltage class DC port				II			
DC port backfeed current	mA			0			
PV array configuration		1x1 Ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit					
OUTPUT DATA (AC)		IQ8-60-2-US	IQ8PLUS-72-2-US	IQ8M-72-2-US	IQ8A-72-2-US	IQ8H-240-72-2-US	IQ8H-208-72-2-US
Peak output power	VA	245	300	330	366	384	366
Max continuous output power	VA	240	290	325	349	380	360
Nominal (L-L) voltage/range⁴	V			240 / 211 – 264			208 / 183 – 250
Max continuous output current	A	1.0	1.21	1.35	1.45	1.58	1.73
Nominal frequency	Hz			60			
Extended frequency range	Hz			50 – 68			
Max units per 20 A (L-L) branch circuit⁵		16	13	11	11	10	9
Total harmonic distortion				<5%			
Overvoltage class AC port				III			
AC port backfeed current	mA			30			
Power factor setting				1.0			
Grid-tied power factor (adjustable)				0.85 leading – 0.85 lagging			
Peak efficiency	%	97.5	97.6	97.6	97.6	97.6	97.4
CEC weighted efficiency	%	97	97	97	97.5	97	97
Night-time power consumption	mW			60			
MECHANICAL DATA							
Ambient temperature range		-40°C to +60°C (-40°F to +140°F)					
Relative humidity range		4% to 100% (condensing)					
DC Connector type		MC4					
Dimensions (HxWxD)		212 mm (8.3") x 175 mm (6.9") x 30.2 mm (1.2")					
Weight		1.08 kg (2.38 lbs)					
Cooling		Natural convection – no fans					
Approved for wet locations		Yes					
Acoustic noise at 1 m		<60 dBA					
Pollution degree		PD3					
Enclosure		Class II double-insulated, corrosion resistant polymeric enclosure					
Environ. category / UV exposure rating		NEMA Type 6 / outdoor					
COMPLIANCE							
Certifications		CA Rule 21 (UL 1741-SA), UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01 This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 690.12 and C22.1-2018 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to manufacturer's instructions.					

(1) The IQ8H-208 variant will be operating in grid-tied mode only at 208V AC. (2) No enforced DC/AC ratio. See the compatibility calculator at <https://link.enphase.com/module-compatibility> (3) Maximum continuous input DC current is 10.6A (4) Nominal voltage range can be extended beyond nominal if required by the utility. (5) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

IQ8SE-DS-0001-01-EN-US-2021-10-19

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REVISIONS

R-002.00

(SHEET 11)

Enphase IQ Combiner 4/4C

X-IQ-AM1-240-4
X-IQ-AM1-240-4C



X-IQ-AM1-240-4C

X-IQ-AM1-240-4



To learn more about Enphase offerings, visit enphase.com

The **Enphase IQ Combiner 4/4C** with Enphase IQ Gateway and integrated LTE-M1 cell modem (included only with IQ Combiner 4C) consolidates interconnection equipment into a single enclosure and streamlines IQ microinverters and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and Eaton BR series busbar assembly.

Smart

- Includes IQ Gateway for communication and control
- Includes Enphase Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05), included only with IQ Combiner 4C
- Includes solar shield to match Enphase IQ Battery aesthetics and deflect heat
- Flexible networking supports Wi-Fi, Ethernet, or cellular
- Optional AC receptacle available for PLC bridge
- Provides production metering and consumption monitoring

Simple

- Centered mounting brackets support single stud mounting
- Supports bottom, back and side conduit entry
- Up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- 80A total PV or storage branch circuits

Reliable

- Durable NRTL-certified NEMA type 3R enclosure
- Five-year limited warranty
- Two years labor reimbursement program coverage included for both the IQ Combiner SKU's
- UL listed



Enphase IQ Combiner 4/4C

MODEL NUMBER	
IQ Combiner 4 (X-IQ-AM1-240-4)	IQ Combiner 4 with Enphase IQ Gateway printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes a silver solar shield to match the IQ Battery system and IQ System Controller 2 and to deflect heat.
IQ Combiner 4C (X-IQ-AM1-240-4C)	IQ Combiner 4C with Enphase IQ Gateway printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes Enphase Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05), a plug-and-play industrial-grade cell modem for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area.) Includes a silver solar shield to match the IQ Battery and IQ System Controller and to deflect heat.
ACCESSORIES AND REPLACEMENT PARTS	
Ensemble Communications Kit COMMS-CELLMODEM-M1-06 CELLMODEM-M1-06-SP-05 CELLMODEM-M1-06-AT-05	- Includes COMMS-KIT-01 and CELLMODEM-M1-06-SP-05 with 5-year Sprint data plan for Ensemble sites - 4G based LTE-M1 cellular modem with 5-year Sprint data plan - 4G based LTE-M1 cellular modem with 5-year AT&T data plan
Circuit Breakers BRK-10A-2-240V BRK-15A-2-240V BRK-20A-2P-240V BRK-15A-2P-240V-B BRK-20A-2P-240V-B	Supports Eaton BR210, BR215, BR220, BR230, BR240, BR250, and BR260 circuit breakers. Circuit breaker, 2 pole, 10A, Eaton BR210 Circuit breaker, 2 pole, 15A, Eaton BR215 Circuit breaker, 2 pole, 20A, Eaton BR220 Circuit breaker, 2 pole, 15A, Eaton BR215B with hold down kit support Circuit breaker, 2 pole, 20A, Eaton BR220B with hold down kit support
EPLC-01	Power line carrier (communication bridge pair), quantity - one pair
XA-SOLARSHIELD-ES	Replacement solar shield for IQ Combiner 4/4C
XA-PLUG-120-3	Accessory receptacle for Power Line Carrier in IQ Combiner 4/4C (required for EPLC-01)
XA-ENV-PCBA-3	Replacement IQ Gateway printed circuit board (PCB) for Combiner 4/4C
X-IQ-NA-HD-125A	Hold down kit for Eaton circuit breaker with screws.
ELECTRICAL SPECIFICATIONS	
Rating	Continuous duty
System voltage	120/240 VAC, 60 Hz
Eaton BR series busbar rating	125 A
Max. continuous current rating	65 A
Max. continuous current rating (input from PV/storage)	64 A
Max. fuse/circuit rating (output)	90 A
Branch circuits (solar and/or storage)	Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included)
Max. total branch circuit breaker rating (input)	80A of distributed generation / 95A with IQ Gateway breaker included
Production metering CT	200 A solid core pre-installed and wired to IQ Gateway
Consumption monitoring CT (CT-200-SPLIT)	A pair of 200 A split core current transformers
MECHANICAL DATA	
Dimensions (WxHxD)	37.5 x 49.5 x 16.8 cm (14.75" x 19.5" x 6.63"). Height is 21.06" (53.5 cm) with mounting brackets.
Weight	7.5 kg (16.5 lbs)
Ambient temperature range	-40° C to +46° C (-40° to 115° F)
Cooling	Natural convection, plus heat shield
Enclosure environmental rating	Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction
Wire sizes	• 20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors • 60 A breaker branch input: 4 to 1/0 AWG copper conductors • Main lug combined output: 10 to 2/0 AWG copper conductors • Neutral and ground: 14 to 1/0 copper conductors Always follow local code requirements for conductor sizing.
Altitude	To 2000 meters (6,560 feet)
INTERNET CONNECTION OPTIONS	
Integrated Wi-Fi	802.11b/g/n
Cellular	CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G based LTE-M1 cellular modem). Note that an Enphase Mobile Connect cellular modem is required for all Ensemble installations.
Ethernet	Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included)
COMPLIANCE	
Compliance, IQ Combiner	UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5
Compliance, IQ Gateway	UL 60601-1/CANCSA 22.2 No. 61010-1

To learn more about Enphase offerings, visit enphase.com

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(SHEET 12)

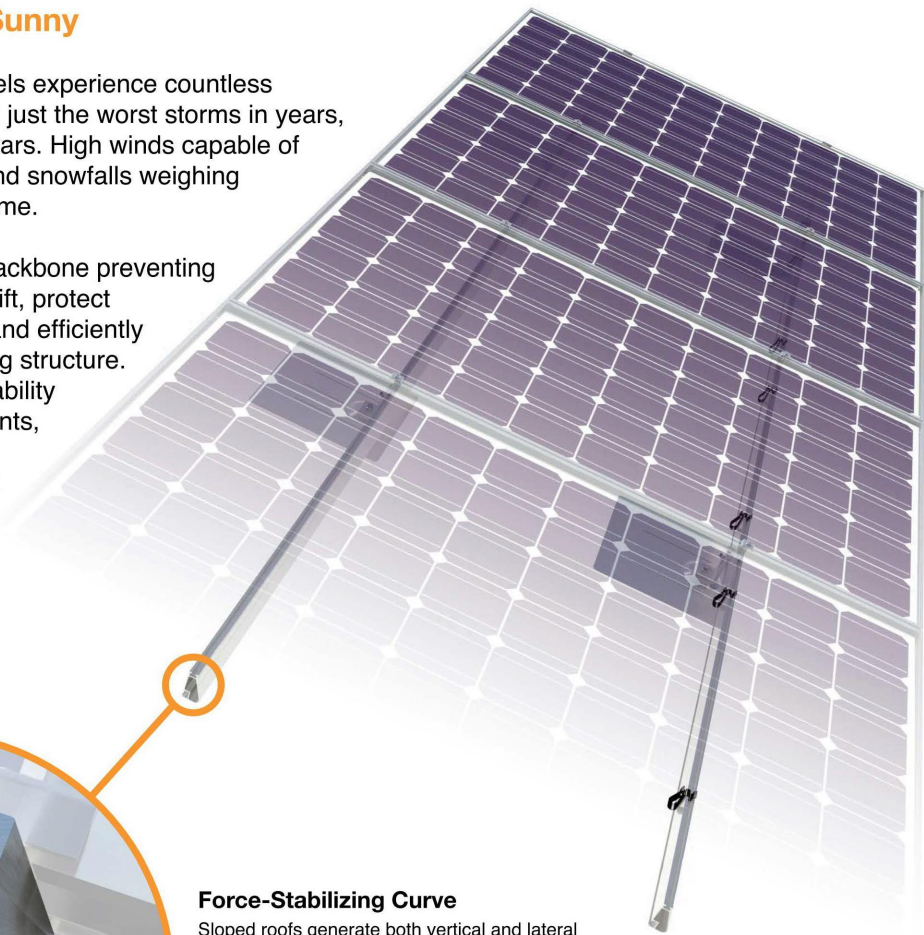


XR Rail Family

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs



XR Rails are compatible with FlashFoot and other pitched roof attachments.



IronRidge offers a range of tilt leg options for flat roof mounting applications.

Corrosion-Resistant Materials

All XR Rails are made of marine-grade aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.



XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.



XR10

XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves 6 foot spans, while remaining light and economical.

- 6' spanning capability
- Moderate load capability
- Clear anodized finish
- Internal splices available



XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 8 feet.

- 8' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans 12 feet or more for commercial applications.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

The following table was prepared in compliance with applicable engineering codes and standards. Values are based on the following criteria: ASCE 7-10, Roof Zone 1, Exposure B, Roof Slope of 7 to 27 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed span tables and certifications.

Load		Rail Span					
Snow (PSF)	Wind (MPH)	4'	5' 4"	6'	8'	10'	12'
None	100	XR10		XR100		XR1000	
	120						
	140						
	160						
10-20	100						
	120						
	140						
	160						
30	100						
	160						
40	100						
	160						
50-70	160						
80-90	160						

Tech Brief

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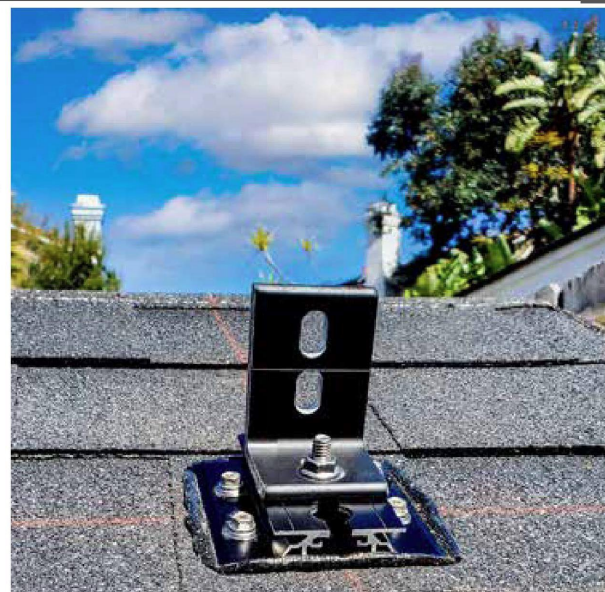
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(SHEET 13)

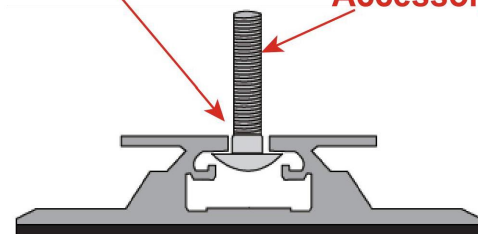
RT-MINI II

A Self-flashing PV Mount Featuring Roof Tech's AlphaSeal™ Technology

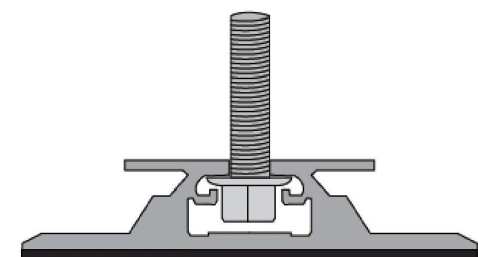


RT-MINI II is suitable for all systems with a conventional L-Foot.

1/4" x 1" Carriage Bolt EMT Accessory



RT Serrated Hex Flange Bolt/Nut: 5/16-18 x 1"



- ✓ Less Aluminum
- ✓ More Efficient Design
- ✓ Additional Mounting Options
- ✓ Metal, EPDM, TPO, & Asphalt Roofs



Installation Manual



ICC ESR 3575

Roof Tech
The Standard for Waterproof Flexible Flashing Since 1994
www.roof-tech.us info@roof-tech.us

RT-MINI II

Flexible Flashing Certified by the International Code Council (ICC)

Components

RT2-00-MINIBK2

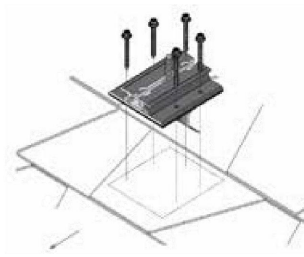


MINI II base : 20 ea.
Screw : 40 ea.
Extra RT-Butyl : 5 ea.

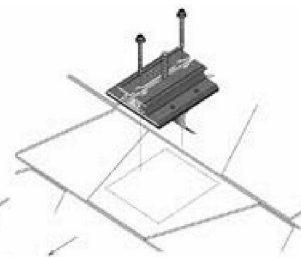
Optional Items:

5 x 60mm Mounting Screw (RT2-04-SD5-60) : 100 ea./Bag
5/16 X 25MM Flange Bolt & Nut (RT2-04-FBN25) : 100 ea./Bag
RT-Butyl (RT2-04-MNBUTYL) : 10 ea./Box

Deck Installation



Rafter Installation



RT-Butyl is Roof Tech's flexible flashing used in one million residential PV systems for the last 27 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.

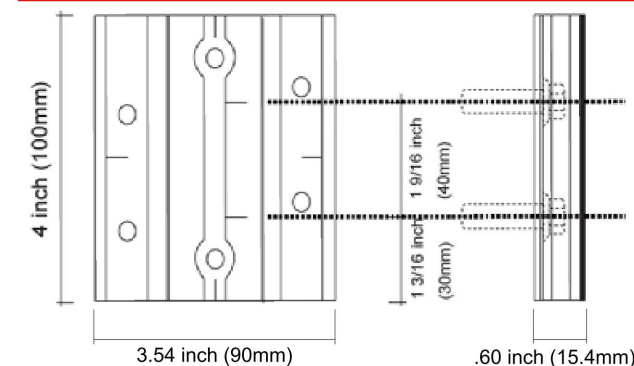
Engineered to ASTM D 1761
(Standard Test Methods for Mechanical Fasteners in Wood)

ICC ESR-3575 ASTM2140 Testing

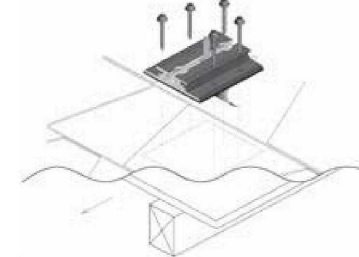


TAS 100 A on metal and asphalt roof.
P.E. Stamped Letters available at www.roof-tech.us/support

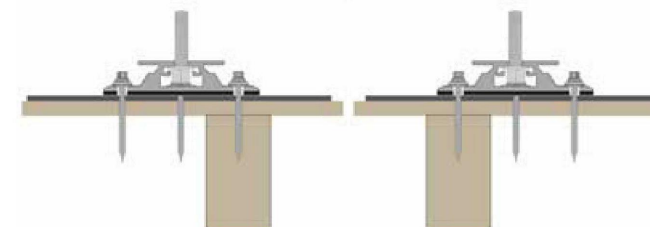
Dimensions in (mm)



Offset Rafter Installation



Offset Rafter Attachment Options



Metal Flashing Retrofit



Shedding Water?

Flexible Flashing



100% Waterproof

CONTRACTOR

RIVERTOWN SOLAR, LLC

PHONE: (914) 231-6866

ADDRESS: RIVERTOWN SOLAR LLC
IRVINGTON, NY 10533

LIC. NO.: 52649

HIC. NO.:

ELE. NO.:

UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 6.000 kWp

MORRIS RESIDENCE

84 FARGO LN
IRVINGTON, NY 10533
APN: 55260022032

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 01.21.2023

DESIGN BY: M.T.

CHECKED BY: M.M.

REVISIONS

R-005.00

(SHEET 14)