

Williams Installation

BAKER ELECTRIC HOME ENERGY

BakerHomeEnergy.com
877.578.8080



You've got Baker.™

Baker Electric Home Energy - San Diego County
2120 Harmony Grove Road
Escondido, CA 92029

Baker Electric Home Energy - Riverside County
40165 Murrieta Hot Springs Road
Murrieta, CA 92563



Dear Williams Family,

Your confidence in Baker Electric Home Energy means a great deal to us. Our goal is to ensure your experience with our Baker staff and your new solar system exceeds your expectations now and into the future.

Baker Electric Home Energy is a member of the Baker family of businesses and is built on the success of our electrical contracting company which has met the needs of homeowners and businesses in Southern California since 1938. We are dedicated to an everyday commitment to deliver exceptional customer service. Should you have any questions or comments regarding your installation or system performance, please don't hesitate to contact us at 877.578-8080.

In closing, our best advocates are customers, just like you. By referring friends and family to Baker Electric Home Energy, you can earn a \$250 Visa gift card once their installation is complete. You also have the option to donate that money to one of our four partner charities. For more information on the Baker Way Bonus Program, go to www.BakerHomeEnergy.com/referrals

Thank you for your business. You're in good hands!

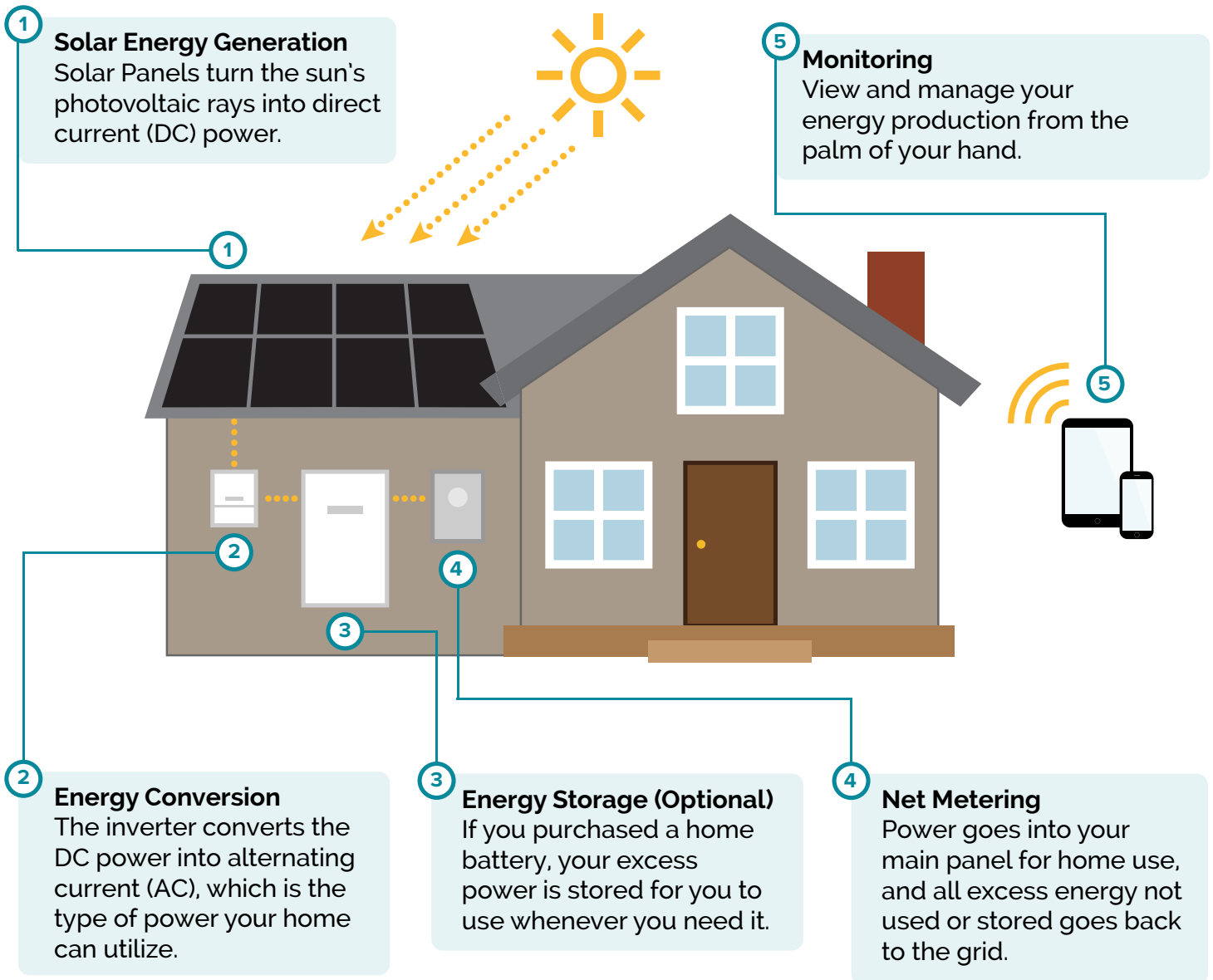
Sincerely,

A handwritten signature in blue ink, appearing to read "Ted Baker".

Ted Baker
CEO
Baker
Electric, Inc.

How Solar Works

Your Baker Electric Home Energy solar system is engineered for optimal energy production. Simple and reliable, our installation comes with a 10 year warranty on the entire system and up to 25 years on the panels.



DID YOU KNOW?

Both state and federal tax incentives can substantially reduce the cost of your solar system. Ask about the Investment Tax Credit (ITC) and the Self-Generation Incentive Program (SGIP).



Smart METER

How to read your smart electric meter for net metering customers

Reading your new smart electric meter is easy. The meter scrolls through several different displays that will show your kilowatt-hour (kWh) usage, date, time, and other system and diagnostic information. Since you have a photovoltaic (PV) system, your level (amount) of energy consumption is shown on your meter by bars or a 'pulse' running along the bottom of the display, right below the digital readout.

Scrolling Displays

Look at the top left-hand corner. Most of the scrolling digital displays are identified by a number in this corner. This number represents what type of data is being shown:



01 03.04.10

- "01" = Date. Shown as month/date/year. For example, March 4, 2010 would display as 03.04.10.

02 19:17:17

- "02" = Time. Shown in "military" or 24-hour time and includes seconds. For example, if it's 7:17 pm and 17 seconds, the display will be 19:17:17.

10 001406

- "10" = Current meter read. Net = Delivered - Received.

del 002005

- "del" = Energy delivered from the SDG&E grid to the customer.

rec 000599

- "rec" = Energy received from the customer to the SDG&E grid.

There is other information that scrolls through the display sequence providing valuable system information to SDG&E®.

Smart METER

Reading Your Energy Usage

Using our sample display, the initial NET meter read is 001406. To find out how much energy you use in a given time, subtract this first reading from a second reading taken at a later date. For instance, if you go back to your meter later and it reads 001940, then you have used 534 kWh for that time period ($001940 - 001406 = 534$).

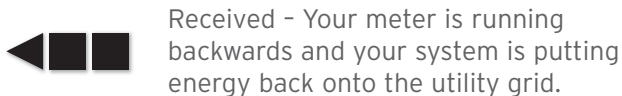
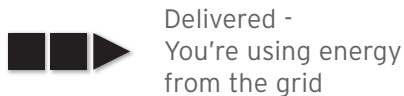
Your meter will not show the total amount of energy being produced by your PV system, but will show how much energy has flowed back onto the grid. You can determine this by reading the data on the "rec" display as given in the example.

Visit sdge.com/nem for more information about our solar PV system requirements.

Detail of kWh Display

A kilowatt-hour (kWh) is 1,000 watts of power used for one hour. For example, when you use a 1000 watt (one-kilowatt) appliance for one hour, you've used one kWh and your meter read display will show an increase in consumption of one. If your generation system is providing power to the grid, the net values will be decreased by 1 kWh for every 1,000 watts of received power.

The "rotating disk" has been replaced with a series of symbols that will show the direction of energy flow.



For more information about how to read your electric smart meter, visit sdge.com/smartmeter.



Here for you, every day.™

Field Verification Certification Form

Please complete checkboxes and Contractor's signature box:

1. Installation equipment is consistent with the submitted EPBB Printout (Certificate of Compliance)
2. Shading analysis has been performed, attached and accurately reported in the EPBB Printout (Certificate of Compliance)
3. Field verification & diagnostic testing protocol has been performed:
 - ☐ Modules and all other systems components are bolted securely and all wiring connections have been made properly according to the system schematic, manufacturer's instructions and applicable electrical code requirements

Primary Method (Single or Multiple String Arrays)

OR

Secondary Method (Multiple String Arrays only)

☐ Irradiance (W/m²)

☐ Temp (F)

☐ Inv Output (W)

☐ Verify Inverter output against Field

Verification Table (Shown Below)

- ☐ Polarity of all source circuits is correct
- ☐ Open circuit voltages of source circuits have been tested and measured to be within 2% of each other (if multiple strings)
- ☐ Operating current of each source circuit has been tested and measured to be within 5% of each other (if multiple strings)

CONTRACTOR SIGNATURE

PRINT NAME

DATE

FIELD VERIFICATION TABLE

I _t (W/m ²)	T=15	T=25	T=35	T=45	T=55	T=65	T=75	T=85	T=95	T=105	T=115
300	26%	26%	25%	24%	24%	23%	22%	22%	21%	20%	20%
325	28%	28%	27%	26%	26%	25%	24%	24%	23%	22%	22%
350	31%	30%	29%	28%	28%	27%	26%	25%	25%	24%	23%
375	33%	32%	31%	31%	30%	29%	28%	27%	27%	26%	25%
400	35%	34%	33%	33%	32%	31%	30%	29%	28%	27%	27%
425	37%	36%	36%	35%	34%	33%	32%	31%	30%	29%	28%
450	40%	39%	38%	37%	36%	35%	34%	33%	32%	31%	30%
475	42%	41%	40%	39%	38%	37%	36%	35%	34%	33%	32%
500	44%	43%	42%	41%	40%	39%	38%	37%	36%	34%	33%
525	46%	45%	44%	43%	42%	41%	40%	38%	37%	36%	35%
550	48%	47%	46%	45%	44%	43%	41%	40%	39%	38%	37%
575	51%	49%	48%	47%	46%	45%	43%	42%	41%	40%	38%
600	53%	51%	50%	49%	48%	46%	45%	44%	43%	41%	40%
625	57%	54%	52%	51%	50%	48%	47%	46%	44%	43%	42%
650	59%	58%	54%	53%	52%	50%	49%	47%	46%	45%	43%
675	61%	58%	56%	55%	54%	52%	51%	49%	48%	46%	45%
700	63%	60%	58%	57%	55%	54%	52%	51%	49%	48%	46%
725	65%	62%	60%	59%	57%	56%	54%	53%	51%	50%	48%
750	67%	64%	62%	61%	59%	58%	55%	54%	53%	51%	49%
775	69%	66%	64%	63%	61%	59%	58%	56%	54%	53%	51%
800	71%	68%	66%	65%	63%	61%	59%	58%	56%	54%	53%
825	73%	70%	68%	66%	65%	63%	61%	59%	58%	56%	54%
850	75%	72%	70%	68%	66%	65%	63%	61%	59%	57%	55%
875	77%	74%	72%	70%	68%	66%	65%	63%	61%	59%	57%
900	79%	76%	74%	72%	70%	68%	66%	64%	62%	60%	58%
925	81%	78%	76%	74%	72%	70%	68%	66%	64%	62%	60%
950	83%	79%	77%	75%	73%	71%	69%	67%	65%	63%	61%
975	85%	81%	79%	77%	75%	73%	71%	69%	67%	65%	63%
1000	90%	83%	81%	79%	77%	75%	73%	70%	68%	66%	64%
1025	90%	85%	83%	81%	78%	76%	74%	72%	70%	67%	65%
1050	90%	90%	84%	82%	80%	78%	76%	73%	71%	69%	66%
1075	90%	90%	86%	84%	82%	79%	77%	75%	72%	70%	68%
1100	90%	90%	90%	86%	83%	81%	79%	76%	74%	71%	69%
1125	90%	90%	90%	90%	85%	82%	80%	78%	75%	73%	70%
1150	90%	90%	90%	90%	86%	84%	81%	79%	76%	74%	71%
1175	90%	90%	90%	90%	90%	85%	83%	80%	79%	75%	73%
1200	90%	90%	90%	90%	90%	90%	84%	82%	79%	77%	74%

For systems that have only one string connected to a single inverter for or for systems using micro-inverters, the following applies:

1. Record Temperature and Irradiance as discussed in CSI Handbook [note: to be added in accordance with "Guidelines"]
2. Examine Field Verification Output (FVO) table for the percentage shown given the measured temperature and irradiance.
Always round temperature up to the next block. So, 47 degrees rounds up to 55 degrees on the chart.
3. Multiply the CEC-AC (from EPBB printout) times the FVO percentage to get estimated system output.
4. Compare estimated system output with actual output. If actual system output is higher, the system is operating within expectations.
If estimated output is higher, perform additional diagnostics and correct any issues as the system may not be performing properly.

CALIFORNIA SOLAR CONSUMER PROTECTION GUIDE

Published January 2021



What's Inside

Watch out for false claims	2
Know your rights.....	3
Ask solar providers these initial questions	4
Step 1: Ask is solar a good fit for me?	5
Step 2: Understand roles and the solar process	7
Step 3: Find a qualified solar provider	9
Step 4: Compare your financing options	12
Step 5: Learn about electricity bill savings.....	16
Step 6: Carefully read all paperwork.....	20
Step 7: Review additional resources.....	21
Step 8: "Before you sign" checklist	22
Step 9: Sign this guide	23

This guide provides important information to homeowners thinking of going solar.



PUTTING SOLAR ON YOUR HOME IS AN
IMPORTANT FINANCIAL DECISION.

**DON'T SIGN A CONTRACT UNTIL YOU
READ THIS DOCUMENT!**



This guide is from the California Public Utilities Commission (CPUC), a government agency that regulates privately-owned utilities like Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E).

PG&E, SCE, and SDG&E customers must initial and sign this guide to connect a residential solar system to the electric grid. The CPUC requires these companies to collect your signed copy of this guide to ensure that you know your rights and have enough information to make a decision. *(This requirement does not apply to solar thermal systems or solar systems in new home construction or multi-family buildings.)*

Guide Accessibility

- Audio recording available at 855-955-1535.
- Español, 中文, 한국어, Tiếng Việt, and Tagalog versions available at 866-849-8390.



**You should understand and initial the first 4 pages
and sign at the end of this guide before you sign
a contract for a residential solar system.**

Initial here if you understand this page  (1/4)

Watch Out for False Claims

Most solar providers are honest and fair. However, there are still some false claims you need to watch out for. Do not do business with a salesperson who makes one of these false claims.

 False Claim	 The Truth
You can get free solar energy at no cost to you.	Solar energy is rarely free. An honest company will be upfront about all the costs you will pay over time. There is one exception: a few government-funded solar programs offer free or low-cost solar to low-income households. Go directly to page 6 to see what government-approved organizations run these programs.
You will never pay an electricity bill ever again after a solar system is installed.	After going solar, you will typically pay a small electricity bill every month and a larger electricity bill at the end of the 12-month cycle. See page 18 for an example. Customers who take out a solar loan or sign a lease or power purchase agreement will also receive a monthly bill from a loan company or solar provider. If you use Property Assessed Clean Energy (PACE) financing, you will also make a payment once or twice a year with your property taxes or monthly with your mortgage payment.
Time is running out and you must quickly sign an electronic tablet to get solar.	An honest salesperson would never rush you to sign anything without giving you time to review what you are signing. California law requires that a salesperson show you the contract terms before you sign.



If you think you have been a victim of solar fraud, you may file a complaint against a contractor or home improvement salesperson to the Contractors State License Board (CSLB) at 800-321-CSLB (2752) or www.cslb.ca.gov/consumers. To file a complaint against a financing company, visit www.dbo.ca.gov/file-a-complaint.

Initial here if you understand this page 



Know Your Rights

You have the right...

to read this entire 24-page guide before signing a contract.

The CPUC recommends that solar providers give out this guide during their first contact with potential customers. Do not feel pressured to read this guide while the salesperson waits. Ask them to come back at a later date to allow you time to read it.

If you are a PG&E, SCE, or SDG&E customer, a solar provider must give you time to read this guide before you sign a contract for solar. If they do not allow you to read this guide, they cannot connect your solar system to the electric grid, and you should report them to the Contractors State License Board (CSLB) at 800-321-CSLB (2751) or www.cslb.ca.gov/consumers.

to a copy of a solar contract and financing agreement in the language in which the salesperson spoke to you.

If a solar provider or salesperson comes to sell you solar panels and speaks to you in a language other than English, they must give you a copy of the contract in that language. Also, if you prefer to read this guide in Spanish, Chinese, Korean, Vietnamese, or Tagalog, the solar provider or salesperson must give you this guide in that language.

to a Solar Disclosure Document from your solar provider.

By law, a solar provider must provide you with a completed Solar Energy System Disclosure Document created by the Contractors State License Board (CSLB). This one-page document shows you the total costs for the solar energy system. A blank version of this document is available at www.cslb.ca.gov/consumers/solar_smart.

to a 3-day cancellation period after signing a contract.

You have at least three business days to cancel your contract for any reason. You may cancel the contract by emailing, mailing, faxing, or delivering a notice to your solar provider by midnight of the third business day after you received a signed, dated copy of the contract. Note that different rules may apply for contracts negotiated at a company's place of business.

If your solar provider refuses to cancel the contract, report them to the CSLB at 800-321-CSLB (2751) or www.cslb.ca.gov/consumers.

Initial here if you understand this page



Ask Solar Providers These Initial Questions Before You Sign A Contract

What is your Contractors State License Board (CSLB) license or registration number?

Ask for the solar provider's CSLB license number. If you were contacted by a telephone or door-to-door salesperson, ask for their individual home improvement salesperson (HIS) registration number, too. Then check the license and, if applicable, HIS registration numbers to make sure they are valid and associated with the solar provider by going to www.cslb.ca.gov/consumers or calling 800-321-CSLB (2752).

- CSLB License Number is: 858088
- (If applicable) HIS Registration Number is: 99273 SP

The CSLB license must be active and in classification C-46 (Solar Contractor), C-10 (Electrical Contractor), or B (General Building Contractor) in order to be valid. If your solar provider does not have a valid contractor license, do not sign a contract with them and report them to the CSLB.

What is the total cost of the solar energy system?

If you are considering a solar loan, lease, or power purchase agreement, also ask:

- Is there a down payment?
- How much will I pay per month? When will these payments increase and by how much?

If you are considering PACE financing, also ask:

- How much will I pay once or twice a year with my property taxes or monthly with my mortgage?
- How many years will I pay this amount?

If I sell my home, what are my options and what do I need to do?

Ask your solar provider, lender, or PACE program administrator to show you where in the contract it describes what happens when you sell your home.

Make sure to **get bids from at least 3** different solar providers. See page 9 for more details.

OK, I read these 4 pages. Now what?

- For other important questions to ask a solar provider *before* you sign a contract, go to page 10 of this guide.
- If you already understand the information listed in the table of contents and are getting ready to sign a contract, you can skip to the "Before You Sign" checklist, on page 22 of this guide.
- For a step-by-step guide for how to go solar, proceed to the next page. This is recommended, even if you've already started the solar process!

Customer Initial Here CLW (4/4) 



STEP 9: Sign This Guide

January 2021

Have you read at least the first 4 pages of this guide?

The first 4 pages of the California Solar Consumer Protection Guide contain important information on false claims to watch out for and your rights.

The CPUC recommends that solar providers* give out this guide during their first contact with potential customers, so customers may fully understand what a solar purchase involves. If a solar provider gave you this guide along with your contract, the CPUC recommends that you take at least 48 hours to read and understand this entire guide before you sign below.



Do not feel pressured to read the complete document while the salesperson waits.

Ask them to come back at a later date to allow you time to read it.

Customer

- ☐ I have not yet entered into a contract for solar with the solar provider signing on page 24.
- ☐ The solar provider provided me with a complete copy of the Solar Consumer Protection Guide before they collected my initials and signature below.
- ☐ The solar provider gave me the opportunity to read this guide in Español, 中文, 한국어, Tiếng Việt, or Tagalog if they spoke to me in one of those languages.
- ☐ I read and initialed the first 4 pages of California's Solar Consumer Protection Guide. The solar provider gave me the time to read the entire 24-page guide.
- ☐ I was provided an option to sign the Solar Consumer Protection Guide electronically or in handwriting.
- ☐ If I was solicited as part of a door-to-door sale, the solar provider offered me the option to sign the Solar Consumer Protection Guide with a handwritten signature by default. I was also given the option to sign with an electronic signature.
- ☐ If I was solicited as part of a door-to-door sale and did not expressly request an electronic format, a complete copy of the Solar Consumer Protection Guide was provided in paper format.
- ☐ If I choose to sign the Solar Consumer Protection Guide electronically, I am using an email address that was created and is controlled by me prior to the sale, lease, or power purchase agreement.

Carson Williams

2/28/2022

Customer Printed Name

Date

 Carson Williams

Customer Signature

continued on page 24

STEP 9: Sign This Guide *continued from page 23*

Solar Provider*

☐ The customer initialed the first 4 pages of the guide.

☐ The customer signed above before entering into a contract for the purchase, lease, power purchase agreement, or PACE financing of a solar system or solar energy with the company named below.

☐ The sales presentation to this customer was principally conducted in this language: English

Donald Inman	2/28/2022
Company Representative Name/Title	Date
	877.578.8080
Company Representative Signature	Company Phone
Baker Electric Home Energy	info@bakerhomeenergy.com
Company Name	Company Email
858088	C-10/C-46/C-39/C-20
Company CSLB License Number	Company CSLB License Classification

*A solar provider is defined in California Public Utilities Commissioner Decision (D.) 18-09-044 as a vendor, contractor, installer, or financing entity that enters into a contract for a power purchase agreement, lease, or purchased solar system. Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) require solar providers to upload a signed copy of this page with a signature to their interconnection portals before interconnecting residential customers in single-family homes to the electric grid. This requirement does not apply to new home construction, multifamily buildings, or solar thermal systems.

SOLAR SYSTEM AGREEMENT

Customer Information:

Carson Williams
5617 Adobe Falls Road Unit D
San Diego, CA 92120
United States

System Size: 6.4 kW

(16) Hanwha Q Cells Q.PEAK DUO-BLK-ML-G10+400 Solar Modules, (16) Enphase IQ 7A Inverter(s),
Enphase Envoy/Enlighten Wireless Monitoring

Agreement valid fifteen (15) days after February 28, 2022

Sales Person Name: Donald Inman

Sales Person CSLB HIS License #: 99273 SP

Sales Person Company Cell: (760) 484-6489

Sales Person Company Email: dinman@bakerhomeenergy.com





SOLAR ENERGY SYSTEM DISCLOSURE DOCUMENT

Pursuant to Business and Professions Code section 7169 - This cover page was developed through coordination of the California Contractors State License Board and the California Public Utilities Commission - and needs to be displayed on the front page or cover page of every home energy contract.

The TOTAL COST for the solar energy system (including financing and energy / power cost if applicable) is: \$29,602.00.

To make a complaint against a contractor who installs this system and/or the home improvement salesperson who sold this system, contact the Contractors State License Board (CSLB) through their website at www.cslb.ca.gov (search: "complaint form"), by telephone at 800-321-CSLB (2752), or by writing to P.O. Box 26000, Sacramento, CA 95826.

If the attached contract was not negotiated at the contractor's place of business, you have a Three-Day Right to Cancel the contract, pursuant to Business and Professions Code (BPC) section 7159, as noted below. For further details on canceling the contract, see the Notice of Cancellation, which must be included in your contract.

Three-Day Right to Cancel

You, the buyer, have the right to cancel this contract within three business days. You may cancel by e-mailing, mailing, faxing, or delivering a written notice to the contractor at the contractor's place of business by midnight of the third business day after you received a signed and dated copy of the contract that includes this notice. Include your name, your address, and the date you received the signed copy of the contract and this notice.

13L-6 (05/2018)



HOME IMPROVEMENT AGREEMENT – FINANCED RESIDENTIAL SOLAR SUPPLY AND INSTALL

Customer Information:	Installation Location:	Utility Information:	Salesperson Information:
Carson Williams 7605873331 carsonclaywilliams@gmail.com	5617 Adobe Falls Road Unit D San Diego, CA 92120 United States	SDG&E	Donald Inman
Estimated Year 1 Production:	Utility Account No.:	Utility Meter No.:	Salesperson CSLB No.:
7,301 kWh			99273 SP

This Home Improvement Agreement (“**Agreement**”) is entered into on **2/28/2022** (“**Agreement Date**”) by NB Baker Electric, Inc. dba Baker Electric Home Energy (“**Baker**” or “**Contractor**”) and the customer(s) listed above (“**Customer**” or “**You**”) for the sale and installation of the photovoltaic solar with optional incorporated energy storage described below (“**Project**” or “**System**”) at the location listed above (“**Property**”) upon the following terms and conditions, including all Exhibits.

1. NOTICES

You may send notices, including Notices of Cancellation, to Baker at 2120 Harmony Grove Road, Escondido, CA 92029.

2. DESCRIPTION OF PROJECT, MATERIALS, AND EQUIPMENT

2.1 Design, installation, construction, and roofing to the extent performed on Your Project, including the following parts and materials (“**Work**”):

(16) Hanwha Q Cells Q.Peak DUO-BLK-ML-G10+400 Solar Modules, (16)EnphaseIQ 7A Inverter(s),
Enphase Envoy/Enlighten Wireless Monitoring

2.2 Additional materials and extra work (“**Extra Work**”):

SDGE RMA

3. PRICE

3.1 The price for the Project is **\$ 29,602.00** (“**Contract Price**”).

- i. The amount of Contract Price to be paid to Baker by Dividend Solar is **\$29,602.00**.
- ii. The amount of the Initial Down Payment to be paid to Baker by the customer at the time of contract signing is **\$0.00**.
- iii. The amount of Contract Price to be paid to Baker by Customer Upon delivery of materials is **\$0.00**.

3.2 The Contract Price is subject to any changes in the Work that You and Baker agree to in writing (“**Change Orders**”). The pricing is valid for fifteen (15) days from the Agreement Date.

3.3 See the following page for information on the down payment and progress payments.

4. TIMELINE

4.1 Baker will schedule the installation of Your System at a mutually convenient date and time.

4.2 Approximate Start Date: 30 days from **2/28/2022**

The start date is the date on which Baker completes the engineering site audit (Confirming Site Survey).

4.3 Approximate Completion Date: 30 to 180 days from **2/28/2022**

The completion date is the date on which the system has passed AHJ inspection.

4.4 The above installation timeline is an estimate and may be adjusted for delays due to reasons including, but not limited to, force majeure events, late payments, unforeseen conditions, scope changes, panel upgrades, new construction timelines, and delays caused by others, such as utilities, HOAs, and other contractors.

5. PAYMENTS

5.1 THE DOWN PAYMENT MAY NOT EXCEED ONE THOUSAND DOLLARS (\$1,000) OR TEN PERCENT (10%) OF THE CONTRACT PRICE, WHICHEVER IS LESS. The schedule of progress payments must specifically describe each phase of work, including the type and amount of work or services scheduled to be supplied in each phase, along with the amount of each proposed progress payment. IT IS AGAINST THE LAW FOR A CONTRACTOR TO COLLECT PAYMENT FOR WORK NOT YET COMPLETED, OR FOR MATERIALS NOT YET DELIVERED. HOWEVER, A CONTRACTOR MAY REQUIRE A DOWN PAYMENT.

5.2 Payment schedule:

PAYMENT	TIMING	AMOUNT
Down Payment	Due at signing of Agreement. Baker may not commence the Work until it receives the Down Payment.	From Customer: <u>\$0.00</u>
Progress Payment 1	Due (10) ten days prior to the scheduled start of installation. <i>Construction and installation may not begin until BAKER receives Payment 1</i>	From Financier: <u>\$5,920.40</u> From Customer: <u>\$0.00</u>
Progress Payment 2	Due at completion of installation Work. Baker has completed installation Work when it has installed all System equipment and additional materials, completed Extra Work, and performed a successful System test. Baker may not schedule an inspection by City/County/Other Authority Having Jurisdiction until it receives Payment 2	From Financier: <u>\$23,681.60</u>
TOTAL		\$29,602.00

The payment schedule can be adjusted to account for Change Orders.

5.3 BAKER DOES NOT ACCEPT CREDIT CARD PAYMENTS FOR PROGRESS PAYMENTS OR ADDITIONAL WORK. BAKER MAY, AT ITS SOLE OPTION, ACCEPT CREDIT CARD PAYMENTS FOR THE DOWN PAYMENT AND/OR FINAL PAYMENT.

6. ARBITRATION

6.1 ANY CLAIM OR DISPUTE BETWEEN THE PARTIES RELATING TO THIS AGREEMENT AND/OR PROJECT ("DISPUTE") MUST BE RESOLVED EXCLUSIVELY BY BINDING ARBITRATION IN SAN DIEGO COUNTY, CALIFORNIA. HOWEVER, AT BAKER'S SOLE OPTION, CLAIMS BAKER VALUES AT \$5,000 AND UNDER MAY BE LITIGATED IN SMALL CLAIMS COURT IN SAN DIEGO COUNTY, CALIFORNIA. THE ARBITRATION, INCLUDING SELECTION OF THE ARBITRATOR, WILL BE ADMINISTERED BY JAMS (JUDICIAL ARBITRATION AND MEDIATION SERVICES, INC.) UNDER ITS STREAMLINED ARBITRATION RULES AND PROCEDURES ("RULES") AND DECIDED BY A

SINGLE NEUTRAL ARBITRATOR AGREED ON BY THE PARTIES WITHIN THIRTY (30) DAYS OF THE COMMENCEMENT OF THE ARBITRATION. EITHER PARTY MAY INITIATE THE ARBITRATION PROCESS BY FILING THE NECESSARY FORMS WITH JAMS. TO LEARN MORE ABOUT ARBITRATION, YOU CAN CALL ANY JAMS OFFICE OR REVIEW THE MATERIALS AT WWW.JAMSADR.COM.

6.2 If You initiate the arbitration, You will be required to pay \$250 towards the filing fee. If Baker initiates the arbitration, Baker will pay the filing fee. The Parties will split the arbitration fees and costs. Your arbitration fees and costs, exclusive of arbitrator fees, will be waived if You are indigent. Each party will be responsible for its own attorneys' fees and costs.

6.3 Arbitration must be on an individual (not class or representative) basis, and the arbitrator may not award relief for or against anyone who is not a party. This means that neither You nor Baker may (a) join or consolidate claims in arbitration by or against any other parties, or (b) litigate in court or arbitrate any Dispute as a representative, member of a class, or in a private attorney general capacity. The arbitrator will have the authority to award any legal or equitable remedy or relief that a court could order or grant under this Agreement. However, the arbitrator may not change or alter the terms of this Agreement or make any award that would extend to any transaction other than Yours. All statutes of limitations that are applicable to any Dispute will apply with respect to any arbitration between the parties. The arbitrator will issue a decision or award in writing, briefly stating the essential findings of fact and conclusions of law.

6.4 BY INITIALING IN THE SPACE BELOW, YOU AGREE TO HAVE ANY DISPUTE ARISING OUT OF THE MATTERS INCLUDED IN THIS PROVISION DECIDED BY NEUTRAL ARBITRATION AS PROVIDED BY CALIFORNIA LAW, AND YOU GIVE UP ANY RIGHTS YOU MIGHT HAVE TO PARTICIPATE IN A COURT TRIAL, JURY TRIAL, CLASS ACTION OR SIMILAR PROCEEDING, DISCOVERY, AND APPEAL, UNLESS THOSE RIGHTS ARE SPECIFICALLY INCLUDED IN THIS PROVISION. IF YOU REFUSE TO SUBMIT TO ARBITRATION AFTER AGREEING TO THIS PROVISION, YOU MAY BE COMPELLED TO ARBITRATE UNDER APPLICABLE LAW. YOU ACKNOWLEDGE THAT YOUR AGREEMENT TO ARBITRATION IS VOLUNTARY, AND YOU HAVE READ AND UNDERSTAND THE FOREGOING.

Customer Initials:



Baker Initial: _____

7 LIST OF DOCUMENTS TO BE INCORPORATED INTO THE AGREEMENT

- Exhibit 1 – General Terms and Conditions
- Exhibit 2 – Limited Warranty and Production Guarantee
- Exhibit 3 – Notice of Cancellation forms, 2 copies (required by law)
- Exhibit 4 – Notice about Contractors' State License Board (required by law)
- Exhibit 5 – Mechanics Lien Warning (required by law)
- Exhibit 6 – Association Acknowledgement
- Exhibit 7 – Form of Change Order (required by law)

8 THREE- AND FIVE-DAY RIGHT TO CANCEL UNDER CALIFORNIA BUS & PROF CODE § 7159(e)(6)(B)

8.1 If you, the buyer, are under sixty-five (65) years of age, you, the buyer, have the right to cancel this contract within three business days. You may cancel by e-mailing, mailing, faxing, or delivering a written notice to the contractor at the contractor's place of business by midnight of the third business day after you received a signed and dated copy of the contract that includes this notice. Include your name, your address, and the date you received the signed copy of the contract and this notice.

8.2 If you, the buyer, are sixty-five (65) years old or older, you, the buyer, have the

right to cancel this contract within five business days. You may cancel by e-mailing, mailing, faxing, or delivering a written notice to the contractor at the contractor's place of business by midnight of the fifth business day after you received a signed and dated copy of the contract that includes this notice. Include your name, your address, and the date you received the signed copy of the contract and this notice.

8.3 If you cancel, the contractor must return to you anything you paid within ten (10) days of receiving the notice of cancellation. For your part, you must make available to the contractor at your residence, in substantially as good condition as you received them, any goods delivered to you under this contract or sale. Or, you may, if you wish, comply with the contractor's instructions on how to return the goods at the contractor's expense and risk. If you do make the goods available to the contractor and the contractor does not pick them up within twenty (20) days of the date of your notice of cancellation, you may keep them without any further obligation. If you fail to make the goods available to the contractor, or if you agree to return the goods to the contractor and fail to do so, then you remain liable for performance of all obligations under the contract.

9 BONDS

You have the right to require Baker to have a performance and payment bond. You must request any such bonds prior to commencement of any Work under this Agreement, and You will be solely responsible for the extra costs of obtaining such bonds.

10 FOREIGN LANGUAGE TRANSACTION ACKNOWLEDGEMENT

Homeowner hereby verifies that Homeowner is capable of reading and understanding the English language, that Homeowner received and reviewed all documents in English, and that the transaction was conducted in English.

This transaction was conducted solely in the English language.

Esta transacción se realizó únicamente en inglés.

此交易仅以英语进行

Ang transaksyong ito ay isinasagawa lamang sa wikang Ingles.

Giao dịch này chỉ được thực hiện bằng tiếng Anh.

이 거래는 영어로만 진행되었습니다.

Customer Initials:



11 SIGNATURES

You certify that all information provided in this Agreement is correct, that Baker may conclusively rely upon such information, that You have taken the actions needed to authorize, execute, deliver, and perform Your obligations under this Agreement, and that you have the legal right to take such actions.

CUSTOMER:

Signature:



Name:

Carson Williams

CONTRACTOR:

NB Baker Electric Inc. dba Baker Electric Home Energy,
a California corporation

Signature: _____

Name: _____

Dated: 2/28/2022

Trust
Name:

Title:

Dated:

*(If home is owned by a Trust enter in
name of trust, if NOT enter "N/A")*

Signature:

Name:

Dated:

Best Point
of Contact:

Carson Williams

Best Phone
Number:

7605873331

Best Email:

carsonclaywilliams@gmail.com

You are entitled to a completely filled-in copy of this agreement, signed by both You and the Contractor, before any work may be started.

EXHIBIT 1**GENERAL TERMS AND CONDITIONS****1. Utility Bill Savings**

Any utility bill savings will vary based on factors including, but not limited to, system size, government rebates, post-solar kWh consumption and the time of the consumption, local utility rates, utility tariff structures, system production, and programming and discharge of optional incorporated energy storage equipment ("Batteries"). BAKER DOES NOT GUARANTEE ANY SAVINGS ON YOUR ELECTRICITY COSTS OR UTILITY BILLS. ANY SAVINGS WILL BE DEPENDENT ON YOUR ENERGY CONSUMPTION.

Customer Initials:**2. Tax Credits and Rebates**

Baker will provide reasonable support and documents in connection with obtaining the Federal Investment Tax Credit and California Public Utility Commission's Self-Generation Incentive Program Rebate, or any other available credit or rebate. However, BAKER DOES NOT GUARANTEE THAT YOU WILL QUALIFY FOR CREDITS OR REBATES, is not responsible for changes in the law on credits or rebates, and urges you to consult Your accountant and legal counsel.

Customer Initials:**3. Pricing and Termination**

3.1 If You are financing Your System, Baker's obligation to install the System is conditioned on confirmation that You have obtained such financing. Regardless of financing, You are responsible for all payments due under this Agreement.

3.2 If Baker determines that it misestimated the System's size, total cost, or annual production, either Party can terminate this Agreement at no cost. This termination right will expire at the earlier of the time when Baker submits Your permit application, or one (1) week after Baker informs You in writing of the revised size, cost, or production estimate.

3.3 If Baker does not complete the installation within six (6) months for any reason, and the cost of equipment or materials increases due to circumstances beyond Baker's control, Baker can give You a Change Order for the new price. If You do not accept the Change Order within seven (7) days, Baker can issue a refund to You and terminate this Agreement.

4. Transfer

If you transfer the Property before making final payment, You remain liable for meeting all payment obligations.

5. Property Conditions

You are responsible for the structural integrity of the location for the System, including structural and electrical modifications. You agree that Baker is not responsible for known or unknown Property conditions, including, but not limited to:



- (a) Existing permitting issues at the Property,
- (b) Buried objects,
- (c) Existing electrical systems,
- (d) The condition of the roof, other than the portion where Baker will install the System, and
- (e) The condition of the gutters.

6. Roof Conditions

If Baker must modify the roofing materials and/or reinforce the structural supports, Baker will be entitled to a Change Order to increase the Contract Price and extend the completion date. If Baker discovers roof leaks or compromised /deteriorated decking/materials during installation, Baker will notify You to address the issue.

For the safety of our installers, Baker is required by law to protect them from falls at elevations of six (6) feet or greater. Baker will install all needed fall protection anchor points throughout the Project, which is likely to require the use of roof penetration(s). Baker will remove and seal anchor points at the completion of the installation, and the standard Limited Workmanship and Installation Warranty will apply.

7. Electrical Conditions

You will provide 110-volt electrical power from the existing distribution system on the Property for hand-held portable power tools at no cost to Baker. Baker is not responsible for the malfunctioning of existing electrical equipment, including, but not limited to, the electrical service panel, major electrical devices, fuses, or similar devices.

8. Cost or Delay Due to Unforeseen Conditions

Baker is not responsible for failures, delays, or expenses related to unanticipated, unusual, or unforeseen conditions at the Property arising out of conditions beyond Baker's reasonable control, including acts of God such as Covid-19 impacts not known at the time of signing of this Agreement (all of which shall be considered "Force Majeure Events"). Performance times under this Agreement will be considered extended for a period of time equivalent to the time lost due to such Force Majeure Events. If Baker discovers unforeseen conditions requiring additional cost, then Baker will present such costs to You and get Your written approval before beginning or continuing performance. Failure to provide such approval in writing may result in Baker exercising its termination rights pursuant to this Agreement.

9. Change Orders

9.1 A Change Order is a document that describes the change to the scope of Work, the cost to be added or subtracted, and the effect on the schedule of payments. Change orders become part of the Agreement once both Parties sign.

9.2 Only an authorized representative of Baker may execute a change to this Agreement.

9.3 You may not require Baker to do Extra Work or change the scope of Work without a signed Change Order. In the absence of a signed Change Order, Baker may seek compensation for unjust enrichment.

10. Permits

The cost of permitting Your Project is included in Your Contract Price. You will be able to review and approve the working plans for the Project. If you do not request any changes to the working plans in writing within three (3) business days of receipt, Baker will use such plans to obtain all permits. Baker is not responsible for delays due to permitting and regulatory agencies or their employees.

11. Access to Property

11.1 You hereby grant to Baker and its employees, agents, and contractors the right to reasonably access all of the Property between 7:00 a.m. and 6:00 p.m., Monday through Saturday, as reasonably necessary for purposes of installing, constructing, and performing related services on the System and its interconnections.

11.2 Baker may erect temporary facilities, including, but not limited to, storage sheds and portable toilets, on the Property. Such temporary buildings will remain the property of Baker and will be removed after the completion of the Project at no cost to You.

11.3 If You authorize Baker to access to the Property through adjacent properties, You are responsible for obtaining written permission from the owner(s) of such properties, and You agree to indemnify, defend, and hold Baker harmless from all liability that may arise from such access, including, but not limited to, property, easements, or other rights of any third parties.

12. Access to Information

To improve our systems and services to You and facilitate the service of Your system, Baker may collect certain data regarding the performance, usage of electricity, and operation and condition of Your system. Baker may also receive information about You from other sources, such as equipment manufacturers and utility companies. You hereby authorize Baker to access information about You and Your System. Any data collected by Baker will not be shared to third parties.

13. Termination and Default.

Upon seven (7) days' written notice, Baker may terminate this Agreement due to Your:

- (a) Material or non-material breach,
- (b) Failure to agree to an appropriate Change Order,
- (c) Failure to pay Baker any amount due,
- (d) Bankruptcy or financial distress, and
- (e) Hindrance in the performance process.

14. Remedies Upon Customer's Breach.

Without limiting any of Baker's other rights and remedies, upon Your material or non-material breach, including Your failure to pay Baker any amount due, Baker will have the right, to the fullest extent of the law, to:

- (a) Stop Work at the Property,
- (b) Stop any Work at the Property until You cure the breach and post a bond for any amounts payable under this Agreement,
- (c) Recover all amounts due under this Agreement for services provided through the date of termination, including interest (prime + 2% or such amount as allowed by law),
- (d) Require You to return the System at Your expense and/or make the Property available to Baker to remove any Project materials or equipment,
- (e) Disconnect, turn off, or take back the System by legal process or self-help (if legally available), provided Baker does not disturb the peace or violate the law (You agree that Baker will have access to Your Property and permission to enter Your Property in order to disable and/or remove the System until such time as Baker is paid in full and title to the System passes to You)
- (f) Report the non-operational status of the System to Your utility, informing them that You are no longer net metering,
- (g) Charge You a reasonable reconnection fee for reconnecting the System to Your utility or turning your

System back on after it is disconnected or turned off due to your default, and
 (h) Any other legal remedies, including, without limitation, mechanic's liens or similar remedies.

15. Lien Releases.

If a lien is placed on Your Property, upon Your satisfactory payment for any portion of the Work performed, Baker will, prior to You making any further payments, provide You with a full and unconditional release from any potential lien claimant, claim, or mechanic's lien authorized pursuant to Civil Code sections 8400 and 8404 for the portion of the Work for which You made payment.

16. Title and Risk of Loss.

16.1 All materials delivered to the Property, regardless of whether they are incorporated into the Project, are the property of Baker until the time when You pay Baker in full for such materials. Title to the System will transfer to You after Baker completes the installation of the System and You make final payment. Notwithstanding the foregoing, after delivery of the System equipment and materials to Your Property, other than damage directly resulting from Baker's negligent actions or omissions or willful misconduct, You bear the risk of loss to the System for all causes of loss not covered by the Limited Warranty (as set forth in Exhibit 2).

16.2 Baker retains all Baker-owned intellectual property rights in the equipment installed in Your System, including, but not limited to, patents, copyrights, trademarks, and data generated by Baker's accessing of the System.

17. Insurance.

17.1 Commercial General Liability Insurance (CGL): Baker carries commercial general liability insurance written by Alliant Insurance Services.

17.2 Workers' Compensation Insurance: Baker carries workers' compensation insurance for all employees.

18. Indemnification.

Each party will indemnify, defend, and hold harmless the other party and its employees, officers, directors, agents, and assigns from all third-party claims, actions, costs, expenses (including reasonable attorneys' fees), damages, liabilities, penalties, losses, obligations, demands, and liens of any kind arising out of or relating to its failure to perform under this Agreement. Neither party will be required to indemnify the other party for such other party's own negligence, willful misconduct, or fraud.

19. Exercise of Reasonable Care.

Baker will exercise reasonable care not to damage Your Property during installation of the System. Upon completion of the Work, Baker will perform a visual inspection of the Work Area (Work Area defined as the area where Baker has performed the Work to install the System,) and at Baker's expense make reasonable efforts to repair visible damage which we caused in our Work Area.

Homeowner acknowledges and agrees that, even with the exercise of reasonable care, there is a risk of damage occurring (both visible and hidden) on the Property during the Work performed under this contract, including but not limited to areas used to access the Work Area like a driveway, lawn, adjacent roof areas or other exterior property and You assume these risks as long as Baker exercises reasonable care.

Customer Initials:



20. Limitation of Liability.

20.1 EACH PARTY'S LIABILITY TO THE OTHER WILL BE LIMITED TO DIRECT, ACTUAL DAMAGES. NEITHER PARTY WILL BE LIABLE TO THE OTHER FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES, INCLUDING, BUT NOT LIMITED TO, (a) PHYSICAL OR MENTAL PAIN AND SUFFERING, MENTAL ANGUISH, OR EMOTIONAL DISTRESS DAMAGES; (b) COSTS OF TEMPORARY SHELTER, TRANSPORTATION, FOOD, MOVING, STORAGE, OR SIMILAR INCIDENTAL DAMAGES; (c) LOSS OF WAGES, USE, OPPORTUNITY, FAIR MARKET VALUE, RENTAL VALUE, FINANCING, OR SIMILAR LOSS OF ECONOMIC OPPORTUNITY; OR (d) LOSS OF PROFITS, BUSINESS OPPORTUNITY, OR REPUTATION.

20.2 Neither party's liability will exceed the Contract Price. This includes, but is not limited to, liability for damage to Your Property. You agree that by making final payment, You waive all claims that may have arisen from this Agreement and/or the Project unless You previously gave Baker written notice of such claims.

21. Limitation of Use

21.1 WITHOUT THE ADDITION OF AN INCORPORATED BATTERY, YOUR SYSTEM IS NOT INTENDED FOR USE DURING A UTILITY GRID OUTAGE AND WILL SHUT DOWN UNDER THIS CIRCUMSTANCE.

21.2 YOUR SYSTEM, WITH OR WITHOUT THE ADDITION OF AN INCORPORATED ENERGY STORAGE EQUIPMENT ("BATTERY") OR BATTERIES, IS NOT INTENDED FOR USE AS A PRIMARY OR BACK-UP POWER SOURCE FOR LIFE SUPPORT OR OTHER MEDICAL EQUIPMENT OR FOR ANY OTHER USE THAT COULD LEAD TO INJURY TO PERSONS, LOSS OF LIFE, OR CATASTROPHIC DAMAGE.

BAKER DISCLAIMS ALL LIABILITY ARISING OUT OF SUCH USE OR BAKER'S SERVICE OR REFUSAL TO SERVICE YOUR SYSTEM IN SUCH CIRCUMSTANCES.

22. General Provisions

22.1 Governing Law: The laws of the State of California will govern this Agreement without giving effect to conflict of laws principles.

22.2 Time of the Essence: Subject to the Force Majeure clause and other relevant sections, the parties agree that time is of the essence in this Agreement.

22.3 If any portion of this Agreement is found unenforceable or invalid, the remaining provisions will be enforced in accordance with their terms or interpreted or rewritten to make them enforceable.

22.4 Waiver: No delay or failure of a party to enforce the provisions of this Agreement (including, but not limited to, requiring performance or pursuing remedies) will waive its right to enforce that provision or affect the validity of this Agreement.

22.5: Survival: Provisions that should reasonably be considered to survive the termination of this Agreement will survive.

22.6: Subcontracting: Baker may assign or subcontract any of its rights or obligations under this Agreement to any successor, partner, or purchaser.

22.7: Counterparts: This Agreement may be signed by the parties in multiple counterparts, all of which will be taken together as a single document.

23. Final Agreement.

BY SIGNING THIS DOCUMENT, EACH PARTY AGREES THAT: (A) THIS DOCUMENT REPRESENTS THE FINAL AGREEMENT BETWEEN PARTIES WITH RESPECT TO THE SUBJECT MATTER HEREOF, (B) THIS DOCUMENT SUPERSEDES ANY PROPOSALS, ESTIMATES, OR OTHER WRITTEN OUTLINE OF TERMS AND CONDITIONS RELATING TO THE SUBJECT MATTER HEREOF, (C) THERE ARE NO UNWRITTEN ORAL AGREEMENTS BETWEEN THE PARTIES, AND (D) THIS DOCUMENT MAY NOT BE CONTRADICTED BY EVIDENCE OF ANY PRIOR, CONTEMPORANEOUS, OR SUBSEQUENT ORAL AGREEMENTS, WRITINGS, PROPOSALS OR UNDERSTANDINGS.

Exhibit 1 GENERAL TERMS AND CONDITIONS ACKNOWLEDGE

Customer Signature:



EXHIBIT 2**LIMITED WARRANTY AND PRODUCTION GUARANTEE**

THE FOLLOWING DESCRIBES THE TERMS AND CONDITIONS OF THE LIMITED WARRANTY AND PRODUCTION GUARANTEE (COLLECTIVELY, THE “**WARRANTY**”) COVERING THE PHOTOVOLTAIC SOLAR WITH OPTIONAL INCORPORATED ENERGY STORAGE SYSTEM (“**SYSTEM**”) INSTALLED AT YOUR PROPERTY PURSUANT TO THE HOME IMPROVEMENT AGREEMENT (“**AGREEMENT**”) ENTERED INTO BY AND BETWEEN YOU AND NB BAKER ELECTRIC, INC. DBA BAKER ELECTRIC HOME ENERGY (“**BAKER**”). EXCEPT AS EXPRESSLY SET FORTH HEREIN, BAKER DISCLAIMS, AND YOU WAIVE, ALL OTHER WARRANTIES OR GUARANTEES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, AS TO THE MERCHANTABILITY, FITNESS FOR ANY PURPOSE, CONDITION, DESIGN, CAPACITY, SUITABILITY, OR PERFORMANCE OF THE SYSTEM AND/OR THE SYSTEM INSTALLATION. All capitalized terms used but not defined in this Warranty will have the meanings set forth in the Agreement. This Warranty is an exhibit to the Agreement and is subject to all of the terms and conditions of the Agreement. In the event of any conflict between this Warranty and the terms of the Agreement, the terms of this Warranty will control.

1. Limited Workmanship and Installation Warranty.

For ten (10) years from the date when Baker completes the installation of the System, Baker warrants that it will repair or replace any Work (as defined below) on the System that it does not perform in a good workmanlike manner according to the standards of care and diligence generally practiced by solar engineering, construction, installation, and roofing companies when installing residential photovoltaic solar power with optional incorporated energy storage systems of a similar size and type as the System in the geographic region where Your Property is located, and pursuant to (i) good engineering design practices, (ii) manufacturer’s instructions, (iii) applicable law (including local codes and standards), (iv) required governmental approvals and permits, and (v) applicable requirements of the local utility. Work includes design, installation, construction, and roofing to the extent performed on Your project, but does not include materials. Baker may use new or reconditioned parts to make repairs and may substitute materials or types of equipment if necessary.

2. Limited Labor Warranty.

For two (2) years from the date when Baker completes the installation of the System, Baker warrants that it will provide no-cost labor in support of the manufacturer’s warranties on the System Products (“**System Product Warranties**,” discussed below).

If, during this period You request a site visit or any service, and the issue is not covered by a manufacturer’s warranty, including, but not limited to, loss of Internet connection, cleaning of panels, shutoff of breakers, etc. Baker will charge a \$99 trip fee and provide You with a price quote for the remaining services. You then elect whether to have Baker provide the services at that price.

3. Limited Product Warranty.

If the manufacturers warrant the System Products, then upon receipt of Your final payment, Baker will provide You with these warranties, assign these warranties to You as permitted, and reasonably assist You with obtaining warranty assistance from the manufacturers to the extent that any System Products are defective or damaged.

After the expiration of the 2 Year Limited Labor Warranty, if the warranties cover some or all of Baker’s labor for replacing the defective System Products, Baker will offset the amount it receives under the warranties against the amounts that You owe Baker for its labor, and You will only be responsible for the difference.

BAKER DOES NOT WARRANT THE SYSTEM PRODUCTS AND ASSUMES NO LIABILITY UNDER SYSTEM PRODUCTS WARRANTIES. You should check with the manufacturers of the System Products to determine whether the System Products are covered by manufacturer’s warranties.

4. Production Guarantee.

Baker guarantees that two (2) years from the date that the utility grants permission to operate Your System, the System will have produced the following: [13096kWh]. **Having an incorporated Battery as part of your System does not affect the Production Guarantee.**

The Production Guarantee applies provided that all of the following conditions are met:

- (a) Any shade-causing circumstances or conditions identified in the Agreement with respect to Your Property prior to installation of the System that You agreed to eliminate have been eliminated;
- (b) There is no damage, malfunction, or degradation of electrical output caused by Your failure to properly operate or maintain the System (including ensuring that shading on the system does not exceed the levels confirmed at the confirming site survey);
- (c) There are no failures of Internet connectivity or accessing equipment/components lasting for more than thirty (30) days;
- (d) There are no failures of electrical service lasting for more than three (3) days;
- (e) Any production deficiencies are due to a failure of Baker's design, engineering, or installation of the System, **and not due to** defective System Products.

You agree to allow Baker and its authorized representatives to access Your Property to inspect and service the System physically or remotely in connection with the Production Guarantee. **This is a right, but not an obligation. It is up to you to make sure the System is performing and notify Baker in a timely manner of any issues. Baker has no duty to monitor the System.**

If Baker is unable to access the System, if the System is shut down, or if the System produces less power for any reason other than the fault of Baker (including a transmission grid failure, a System Product failure, at Your request, or due to Your failure to perform any of Your obligations under the Agreement and/or this Warranty) for any period, then Baker will estimate the production for such period.

If the System does not meet the Production Guarantee of [13096kWh], then Baker will have the option, at Baker's sole election, to either:

- (a) Repair, upgrade, or add to the System (or any part thereof) to ensure that the System performs according to the Production Guarantee; or
- (b) Pay You an amount ("**Production Credit**") equal to the difference in kWh between the guaranteed production and the actual production, multiplied by \$0.15.

Baker may use new or reconditioned parts to make repairs and may substitute materials or types of equipment if necessary.

Customer Initials:



5. Limited Battery Assistance.

For a period of ten (10) years from the date of installation of a System containing an incorporated Battery, Baker will:

- (a) Provide You with remote preventative maintenance services and telephone technical system support at no additional cost, during our normal business hours;
- (b) Modify the behavior of the Battery to the extent possible. Behavior of the Battery is defined as remotely programmable features, such as depth and timing of discharge; and
- (c) Provide You with on-site Battery repair and preventive maintenance services at Baker's then-current rates

following the expiration of the 2-Year Limited Labor Warranty.

Please note that the Battery may not be discharged to the grid and may not power Your entire Property. The Battery is designed to draw its charge from the solar array, simply storing the energy produced by the solar array for discharge according to its programming, whether self-consumption or automatic backup power to a selected set of essential circuits. Loads powered by the Battery, and the length of time the loads can be powered, are dependent on the charge of the Battery at the time of a grid outage, the maximum discharge rate of the inverter, and the Battery discharge programmed settings.

You will need to self-manage Your consumption patterns and load for both self-consumption and backup applications. You are responsible for changes to battery behavior which You programmed or have the ability to program yourself.

Customer Initials:



6. Exclusions from Warranty.

Without limiting other potential exclusions, the following items are expressly excluded from warranty coverage:

- (a) Damage, malfunction, or degradation of the System or its electrical output caused by:
 - (i) Your failure to properly operate or maintain the System (including ensuring that shading on the system does not exceed the levels confirmed at the confirming site survey);
 - (ii) Any repair, replacement, removal, or reinstallation using a part or service or performed by personnel not authorized by Baker in writing;
 - (iii) Your or third party abuse, accident (e.g., damage by a golf ball), alteration, improper use, negligence, or vandalism, or from earthquake, erosion, corrosion, fire, flood, earth or ground fill movement, or other acts of God;
 - (iv) Your failure to take appropriate action to minimize any damage as soon as reasonably practicable. For example, for a roof leak, time is of the essence, and You must act immediately to prevent major damage;
 - (v) Failure of the structural integrity of the support system for the System;
 - (vi) Your programming of the Battery;
 - (vii) Your draining of the Battery.
- (b) Cosmetic defects stemming from normal wear and tear of the System, including without limitation, modules, inverters, disconnects, and conduit;
- (c) Loss of System accessing capability due to an interruption in internet connectivity at the Property or failure of accessing equipment and related components. Baker has the right, but not the obligation, to access the System;
- (d) Defective or damaged System Products, whether or not covered by System Product Warranties;
- (e) Normal wear and tear of the System (such as fuse replacement);
- (f) Personal or bodily injury of any kind (including physical or mental pain and suffering or emotional distress), medical, hospital, rehabilitation, or other incidental expenses;
- (g) Cost of shelter, transportation, food, moving, storage, or any other incidental or consequential damages or expenses related to any defect or repair or replacement of any defects under the Limited Warranty;
- (h) Loss of use, loss of opportunity, loss of fair market value, loss of rental value, or any other consequential damages or losses; and
- (i) Hidden damage, including, but not limited to, damage to weather protection, during the installation of the System notwithstanding the exercise of reasonable care.

7. Circumstances that Void the Warranty.

The following items will void Warranty coverage:

- (a) Gross negligence or intentional damage to the System;
- (b) Breach of or failure to perform Your obligations under the Agreement and/or this Warranty;
- (c) Actual or attempted installation, repair, alteration, replacement, movement, change, or modification to the System made by anyone other than Baker or without Baker's prior written consent;
- (d) Shading due to foliage or other obstacles that shade the System in an amount greater than the System's location was shaded on the Initial Production Date;
- (e) Violation of a Manufacturer's Warranty;
- (f) Energizing Your System without the utility's prior written consent to operate and Baker's expressed consent.

8. Extensions of Time to Perform Under the Warranty.

Baker will not be in breach of this Warranty because of its failure or delay in complying with its obligations as a result of Force Majeure Events (otherwise known as acts of God) or their effects. The periods allowed for Baker's performance will be extended for so long as the Force Majeure Events or their effects continue. Force Majeure Events include, but are not limited to, Covid-19 impacts, such as government restrictions and material shortages, not known at the time of signing of this Agreement.

9. Questions and Claims.

To ask a question regarding this Warranty, You may call Baker at (760) 546-6000 during normal business hours. To submit a claim or provide a notice under this Warranty, You must send us the request in writing by email, certified or registered first-class mail (post prepaid with a return receipt requested), or a reputable courier service requiring signature for receipt at the following address:

Baker Electric Home Energy
 Attn: Warranty Claims
 2120 Harmony Grove Road
 Escondido, California 92029
 service@bakerelectricsolar.com

To notify You under this Warranty, Baker may send You a notice in writing in the manner described above to the email or mailing address provided in the Agreement or any subsequent contact information that You provide under the Agreement or this Warranty. The parties agree that any emailed document will be deemed an original document.

If Baker receives a claim under this Warranty from You, Baker will review Your claim and notify You within thirty (30) business days of receipt whether Your claim is covered. If Baker cannot make this determination without inspecting the System, Baker will send an employee, contractor, or agent to Your Property within thirty (30) business days of receipt or as soon as commercially practicable thereafter. Baker will then notify You within ten (10) business days of the visit as to whether Your claim is covered.

10. Selling Your Property.

This Warranty only protects the person who owns the Property that contains the System. YOU MAY NOT OTHERWISE TRANSFER YOUR RIGHTS OR OBLIGATIONS UNDER THIS WARRANTY, AND ANY TRANSFEREE OF THE SYSTEM WILL BE BOUND BY ALL REMAINING OBLIGATIONS AND DUTIES OF THE CUSTOMER UNDER THE AGREEMENT AND THIS WARRANTY. **You must notify Baker of the sale of your Property within thirty (30) days. Failure to notify Baker constitutes a material breach of this Agreement and will mean that the warranty will not transfer to the new owner.**

Customer Initials:



LIMITED WARRANTY AND PRODUCTION GUARANTEE ACKNOWLEDGED

Customer Signature:

A yellow rectangular box containing a red circle with a white 'C' and the signature 'Carson Williams' in black cursive script.

EXHIBIT 3

NOTICE OF CANCELLATION FORMS – CUSTOMERS UNDER 65 YEARS OF AGE

NOTICE OF CANCELLATION (Customer Copy)

2/28/2022

Agreement Date

You may cancel this transaction, without any penalty or obligation, within three (3) business days from the above date.

If you cancel, any property traded in, any payments made by you under the contract or sale, and any negotiable instrument executed by you will be returned within ten (10) days following receipt by the seller of your cancellation notice, and any security interest arising out of the transaction will be canceled.

If you cancel, you must make available to the seller at your residence, in substantially as good condition as when received, any goods delivered to you under this contract or sale, or you may, if you wish, comply with the instructions of the seller regarding the return shipment of the goods at the seller's expense and risk.

If you do make the goods available to the seller and the seller does not pick them up within twenty (20) days of the date of your notice of cancellation, you may retain or dispose of the goods without any further obligation. If you fail to make the goods available to the seller, or if you agree to return the goods to the seller and fail to do so, then you remain liable for performance of all obligations under the contract.

To cancel this transaction, mail or deliver a signed and dated copy of this cancellation notice, or any other written notice, or send a telegram to

NB Baker Electric, Inc. dba Baker Electric Home Energy,

at 2120 Harmony Grove Road, Escondido, CA 92029,

no later than midnight of the third day following the Agreement Date: **2/28/2022**
[Agreement Date]

I hereby cancel this transaction.

(Date)

(Customer's signature) **(SIGN HERE ONLY IF CANCELLING)**

NOTICE OF CANCELLATION (Contractor Copy)**2/28/2022**

Agreement Date

You may cancel this transaction, without any penalty or obligation, within three (3) business days from the above date.

If you cancel, any property traded in, any payments made by you under the contract or sale, and any negotiable instrument executed by you will be returned within ten (10) days following receipt by the seller of your cancellation notice, and any security interest arising out of the transaction will be canceled.

If you cancel, you must make available to the seller at your residence, in substantially as good condition as when received, any goods delivered to you under this contract or sale, or you may, if you wish, comply with the instructions of the seller regarding the return shipment of the goods at the seller's expense and risk.

If you do make the goods available to the seller and the seller does not pick them up within twenty (20) days of the date of your notice of cancellation, you may retain or dispose of the goods without any further obligation. If you fail to make the goods available to the seller, or if you agree to return the goods to the seller and fail to do so, then you remain liable for performance of all obligations under the contract.

To cancel this transaction, mail or deliver a signed and dated copy of this cancellation notice, or any other written notice, or send a telegram to

NB Baker Electric, Inc. dba Baker Electric Home Energy,

at 2120 Harmony Grove Road, Escondido, CA 92029,

no later than midnight of the third day following the Agreement Date: **2/28/2022**
[Agreement Date]

I hereby cancel this transaction.

(Date)

(Customer's signature) **(SIGN HERE ONLY IF CANCELLING)**

NOTICE OF CANCELLATION FORMS – CUSTOMERS 65 YEARS OF AGE OR OLDER

NOTICE OF CANCELLATION (Customer Copy)

2/28/2022

Agreement Date

You may cancel this transaction, without any penalty or obligation, within five (5) business days from the above date.

If you cancel, any property traded in, any payments made by you under the contract or sale, and any negotiable instrument executed by you will be returned within ten (10) days following receipt by the seller of your cancellation notice, and any security interest arising out of the transaction will be canceled.

If you cancel, you must make available to the seller at your residence, in substantially as good condition as when received, any goods delivered to you under this contract or sale, or you may, if you wish, comply with the instructions of the seller regarding the return shipment of the goods at the seller's expense and risk.

If you do make the goods available to the seller and the seller does not pick them up within twenty (20) days of the date of your notice of cancellation, you may retain or dispose of the goods without any further obligation. If you fail to make the goods available to the seller, or if you agree to return the goods to the seller and fail to do so, then you remain liable for performance of all obligations under the contract.

To cancel this transaction, mail or deliver a signed and dated copy of this cancellation notice, or any other written notice, or send a telegram to

NB Baker Electric, Inc. dba Baker Electric Home Energy,

at 2120 Harmony Grove Road, Escondido, CA 92029,

no later than midnight of the fifth day following the Agreement Date: **2/28/2022**
[Agreement Date]

I hereby cancel this transaction.

(Date)

(Customer's signature) **(SIGN HERE ONLY IF CANCELLING)**

NOTICE OF CANCELLATION (Contractor Copy)

2/28/2022

Agreement Date

You may cancel this transaction, without any penalty or obligation, within five (5) business days from the above date.

If you cancel, any property traded in, any payments made by you under the contract or sale, and any negotiable instrument executed by you will be returned within ten (10) days following receipt by the seller of your cancellation notice, and any security interest arising out of the transaction will be canceled.

If you cancel, you must make available to the seller at your residence, in substantially as good condition as when received, any goods delivered to you under this contract or sale, or you may, if you wish, comply with the instructions of the seller regarding the return shipment of the goods at the seller's expense and risk.

If you do make the goods available to the seller and the seller does not pick them up within twenty (20) days of the date of your notice of cancellation, you may retain or dispose of the goods without any further obligation. If you fail to make the goods available to the seller, or if you agree to return the goods to the seller and fail to do so, then you remain liable for performance of all obligations under the contract.

To cancel this transaction, mail or deliver a signed and dated copy of this cancellation notice, or any other written notice, or send a telegram to

NB Baker Electric, Inc. dba Baker Electric Home Energy,

at 2120 Harmony Grove Road, Escondido, CA 92029,

no later than midnight of the fifth day following the Agreement Date: **2/28/2022**

[Agreement Date]

I hereby cancel this transaction.

(Date)

(Customer's signature) **(SIGN HERE ONLY IF CANCELLING)**

EXHIBIT 4

NOTICE ABOUT CONTRACTORS' STATE LICENSE BOARD

California Business & Professions Code § 7159(e)(5):

INFORMATION ABOUT THE CONTRACTORS' STATE LICENSE BOARD (CSLB):

CSLB IS THE STATE CONSUMER PROTECTION AGENCY THAT LICENSES AND REGULATES CONSTRUCTION CONTRACTORS.

CONTACT CSLB FOR INFORMATION ABOUT THE LICENSED CONTRACTOR YOU ARE CONSIDERING, INCLUDING INFORMATION ABOUT DISCLOSABLE COMPLAINTS, DISCIPLINARY ACTIONS AND CIVIL JUDGMENTS THAT ARE REPORTED TO CSLB.

USE ONLY LICENSED CONTRACTORS. IF YOU FILE A COMPLAINT AGAINST A LICENSED CONTRACTOR WITHIN THE LEGAL DEADLINE (USUALLY FOUR YEARS), CSLB HAS AUTHORITY TO INVESTIGATE THE COMPLAINT. IF YOU USE AN UNLICENSED CONTRACTOR, CSLB MAY NOT BE ABLE TO HELP YOU RESOLVE YOUR COMPLAINT. YOUR ONLY REMEDY MAY BE IN CIVIL COURT, AND YOU MAY BE LIABLE FOR DAMAGES ARISING OUT OF ANY INJURIES TO THE UNLICENSED CONTRACTOR OR THE UNLICENSED CONTRACTOR'S EMPLOYEES.

FOR MORE INFORMATION:

VISIT CSLB'S WEBSITE AT WWW.CSLB.CA.GOV

CALL CSLB AT 800-321-CSLB (2752)

WRITE CSLB AT P.O. BOX 26000, SACRAMENTO, CA 95826

EXHIBIT 5**MECHANICS LIEN WARNING**

NOTICE TO PROPERTY OWNER: If bills are not paid in full for the labor, services, equipment, or materials furnished or to be furnished, a mechanics lien leading to the loss, through court foreclosure proceedings, of all or part of your property being so improved may be placed against the property even though you have paid your contractor in full. You may wish to protect yourself against this consequence by (1) requiring your contractor to furnish a signed release by the person or firm giving you this notice before making payment to your contractor, or (2) any other method or device that is appropriate under the circumstances.

California Business & Professions Code § 7159(e)(4):

Anyone who helps improve your property, but who is not paid, may record what is called a mechanics lien on your property. A mechanics lien is a claim, like a mortgage or home equity loan, made against your property and recorded with the county recorder.

Even if you pay your contractor in full, unpaid subcontractors, suppliers, and laborers who helped to improve your property may record mechanics liens and sue you in court to foreclose the lien. If a court finds the lien is valid, you could be forced to pay twice or have a court officer sell your home to pay the lien. Liens can also affect your credit.

To preserve their right to record a lien, each subcontractor and material supplier must provide you with a document called a "Preliminary Notice." This notice is not a lien. The purpose of the notice is to let you know that the person who sends you the notice has the right to record a lien on your property if he or she is not paid.

BE CAREFUL. The Preliminary Notice can be sent up to twenty (20) days after the subcontractor starts work or the supplier provides material. This can be a big problem if you pay your contractor before you received the Preliminary Notices.

You will get the Preliminary Notices from your prime contractor or from laborers who work on your project. The law assumes that you already know they are improving your property.

PROTECT YOURSELF FROM LIENS. You can protect yourself from liens by getting a list from your contractor of all the subcontractors and material suppliers that work on your project. Find out from your contractor when these subcontractors started work and when these suppliers delivered goods or materials. Then wait twenty (20)20 days, paying attention to the Preliminary Notices you receive.

PAY WITH JOINT CHECKS. One way to protect yourself is to pay with a joint check. When your contractor tells you it is time to pay for the work of a subcontractor or supplier who has provided you with a Preliminary Notice, write a joint check payable to both the contractor and the subcontractor or material supplier.

For other ways to prevent liens, visit CSLB's website at www.cslb.cs.gov or call CSLB at 800-321-CSLB (2752).

REMEMBER, IF YOU DO NOTHING, YOU RISK HAVING A LIEN PLACED ON YOUR HOME. This can mean that you may have to pay twice, or face the forced sale of your home to pay what you owe.

EXHIBIT 6**ASSOCIATION APPROVAL ACKNOWLEDGEMENT****NOTICE REGARDING REQUIREMENT OF ASSOCIATION APPROVAL:**

You are solely responsible for any and all costs and expenses of any nature associated with obtaining any approvals required from any Homeowners Association or any other association or organization (each an “**Association**”) with any rights or claims over or with respect to the Property in connection with the installation of Your System under this Agreement. Baker agrees to provide You with reasonable support and documentation required by any Association in connection with You obtaining any required Association approval.

Association Exists? (Check box to indicate “Yes”) ☒

Customer Signature:  Carson Williams

Association Name and Contact Information (type HOA name and phone number in the fields below. If HOA does not exist, please type in N/A):

HOA Name: **Smoke Tree Adobe Falls Owners Association**

HOA Phone (number with area code only): **N/A**

[OR]

ALTERNATIVE WAIVER OF ASSOCIATION APPROVAL REQUIREMENT AND INDEMNITY:

You may, at your own discretion and at Your sole risk, authorize Baker to proceed with installation of Your System without advance written approval from any applicable Association.

By signing below, You hereby direct Baker to proceed with installation of the Your System even though You have not received advance written approval from all applicable Associations.

You agree that You will be solely responsible for, and will immediately reimburse, defend, and indemnify Baker for all costs and expenses incurred directly and indirectly by Baker in connection with or arising out of Your election to waive and not obtain advance written Association approval for the installation of Your System. Such costs may include, without limitation, the cost of removing and replacing some or all of the installed System and/or the cost to revise the design, and a reasonable mark-up for overhead and profit in connection with any such work.

CUSTOMER:

Signature: _____

Dated: _____

Signature: _____

Dated: _____

EXHIBIT 7

FORM OF CHANGE ORDER

To: _____ Job Number: _____
From: _____ Job Name: _____
Change Order Number: _____
Date: _____

Description: _____

Qualifications: _____

Exclusions: _____

Original contract / prior amount to this revision

Add for this revision

New Total Contract value

Payment for this change order is due upon completion of change order work. If this change order is amending your lease/loan, you will be required to sign a new loan/lease document.

If this change order meets your approval, please sign where noted below and return a copy to our office to serve as authorization of the above.

Both parties agree that this change order amends the previously signed contract between homeowner and Baker Electric Home Energy.

No other terms or conditions of the Agreement will be negated or changed as a result of this Change Order.

CUSTOMER:	CONTRACTOR:
Signature: _____	NB Baker Electric Inc. dba Baker Electric Home Energy,
Name: _____	a California corporation
Dated: _____	Signature: _____
	Name: _____
	Title: _____
	Dated: _____
Signature: _____	
Name: _____	
Dated: _____	

ADDENDUM TO HOME IMPROVEMENT CONTRACT PHOTOVOLTAICS – NEM 3.0

This addendum is in reference to the Home Improvement Contract Photovoltaics – Supply & Install (“Contract”) dated **2/28/2022** by and between NB Baker Electric, Inc., dba Baker Electric Home Energy (“Baker”) and Carson Williams (“Homeowner”). Homeowner and BAKER may each individually be referred to as “Party” and both collectively referred to as “Parties”.

May it be known that the Parties, for good consideration contained in the Contract, do hereby agree to make the following changes and/or additions that are outlined below. These additions shall be made valid as if they are included in the original Contract.

Stated Contract for:

Homeowner acknowledges that Baker has not implied, agreed or guaranteed to have the system interconnected under Net Metering 2.0 (NEM 2.0). However, up until the scheduling of the installation, should it become evident that the project is at risk of not being interconnected under NEM 2.0 the Homeowner has the right to Cancel this contract under the conditions below:

If the Homeowner cancels under this scenario before Baker submits for permit, they will receive a full refund of any deposits and not be charged for costs incurred.

If the Homeowner cancels a contract under this scenario after Baker submits for permit, they will receive a refund of any deposits, less any costs incurred after and including permit submission.

No other terms or conditions of the Contract shall be negated or changed as a result of this here stated addendum.

HOMEOWNER:

A handwritten signature in black ink that reads "Carson Williams". The signature is written over a yellow rectangular background.

Signature of Homeowner

BAKER:

Signature of Baker

Signed Date: **2/28/2022**

Carson Williams

Print Name of Homeowner

Print Name of Baker



Terms and Conditions Agreement for Net Energy Metering Solar or Wind Electricity Generating Facilities

APPLICATION ID NUMBER: _____

I, THE CUSTOMER, UNDERSTAND AND AGREE TO THE FOLLOWING TERMS AND CONDITIONS:

Customer is electing to interconnect and operate its solar and/or wind electricity generating facility in parallel with SDG&E's Distribution System, primarily to offset part or all of the Customer's own electrical requirements. Customer shall comply at all times with the Agreement as well as with all applicable laws, tariffs, and requirements of the California Public Utilities Commission ("CPUC").

Permission to Interconnect

Customers must not operate their Generating Facility in parallel with SDG&E's Distribution System until they receive written authorization for Parallel Operation from SDG&E.

Unauthorized Parallel Operation could result in injury to persons and/or damage to equipment and/or property for which the Customer may be liable.

Safe Operation of your Generating Facility

Notwithstanding any other provision of this Agreement, if at any time SDG&E determines that either (a) the Customer's Facility, or its operation, may endanger SDG&E personnel, or (b) the continued operation of the Customer's Facility may endanger the safe and reliable operation of SDG&E's electrical system, SDG&E shall have the right to disconnect the Facility from SDG&E's system. Customer's Facility shall remain disconnected until such time as SDG&E is satisfied that the unsafe condition(s) have been corrected.

Customers interconnecting inverter-based Generating Facilities are required to comply with the requirements of Section Hh. of SDG&E's Electric Rule 21, including configuration of protective settings in accordance with the specifications therein. Verification of compliance with such requirements shall be provided by the Customer upon request by SDG&E in accordance with SDG&E's Electric Rule 21.

Smart Inverters

Inverter-based Generating Facilities are required to compliant with the requirements of Section Hh. of SDG&E's Electric Rule 21, including configuration of protective settings in accordance with the specifications therein. Verification of compliance with such requirements shall be provided by the Customer upon request by SDG&E in accordance with SDG&E's Electric Rule 21.



Terms and Conditions Agreement for Net Energy Metering Solar or Wind Electricity Generating Facilities

Meter Access

Your meter must be installed in a safe SDG&E-accessible location and remain unobstructed. SDG&E's ability to access the meter must be maintained at all times for purposes, including, but not limited to, meter reading system maintenance, and system emergencies. Any animals owned by the customer, including pet dogs, should not have access to these areas to avoid hindering SDG&E service personnel from completing their work. If a self-contained meter is being utilized in lieu of an AC disconnect switch, the meter cannot be located within a residence or garage.

Document and Fee Requirements

Other Documents and/or Fees *may* be required and there may be requirements for interconnection in addition to the below list, depending on the specifics of the planned Generating Facility. Other approvals and/or other agreements may be needed for special SDG&E programs or regulatory agency requirements.

Stale Agreements

If this agreement is still pending **two years from its date of submittal** and customer has not met all of the requirements, SDG&E will close this application and Customer will be required to submit a new application. should Customer wish to take service on Schedule NEM-ST.

Interconnection Agreement Package

The following documents are needed to ensure safe and reliable operation of SDG&E's Distribution System and to confirm that Customer's interconnection has been performed in accordance with SDG&E's tariffs. **To insure prompt attention and authorization of your project and to avoid any delays, we would like to be in receipt of your completed package at least two (2) weeks prior to the date that SDG&E receives the city or county electrical inspection release.**

Required Documents for New Applicants:

1. A completed copy of this **Agreement**. **Please note:** the Customer name must be the same name as on the SDG&E bill. In this Agreement, Customer will confirm their otherwise-applicable rate schedule (OAS), establishing how Customer's monthly usage or net generation will be charged/credited. Customer-initiated rate changes are governed in accordance with SDG&E's Electric Rule 12.
2. A **single-line diagram** showing Customer's actual installation of his/her Generating Facility. The diagram must include the electrical rating and operating voltages of the significant electrical components such as the service panel, the disconnect switch (if required), inverters, all wind and/or photovoltaic generators, circuit breakers and other protective devices of the Generating Facility, the general location of the Customer's loads relative to the Generating Facility, and the interconnection with SDG&E's Distribution System. The diagram must include the following information:



Terms and Conditions Agreement for Net Energy Metering Solar or Wind Electricity Generating Facilities

- a. A description and location of the visible, lockable **AC disconnect switch**, if present.

Effective January 01, 2010, customers installing inverter-based systems will no longer be required to include an AC disconnect switch when the facility has a self-contained electric revenue meter (i.e., 0-320-amp socket-based meters or 400-amp K-based meters). This type of meter is used by the vast majority of all SDG&E customers.

To accommodate this change while maintaining utility operating safety needs, the revenue meter, when appropriate, may be temporarily removed by SDG&E to isolate the customer's inverter from the electric distribution system. Removal of the revenue meter (due to an emergency or maintenance on SDG&E's system) will result in loss of electrical service to the customer's facility or residence for the duration of time that work is actively in progress.

SDG&E *recommends* that customers installing an inverter-based generator consider also installing an AC disconnect switch to facilitate maintenance of the customer's equipment (i.e. inverter, PV arrays, etc.) without the need for interrupting service to the customer. The AC disconnect switch provides the additional benefit of allowing SDG&E to isolate the customer's generator from the utility's Distribution System without having to interrupt service to the customer's facility or residence but for customers with 30 kW or smaller NEM generating facilities, the switch is optional.

SDG&E's AC disconnect requirement for Distributed Energy Resources (Distributed Generation) will continue to apply to:

- Inverter-based interconnections having a transformer-rated meter (i.e., all meter panels or switchboards employing the use of potential and current transformers).
 - Non-inverter based generators, including rotating or machine-based generators – regardless if the service meter configuration is transformer-rated or self-contained.
- b. A description of the specific **inverter(s)** used to control the interconnection between SDG&E and the Generating Facility, including rating, brand name, and model number. CEC-certified inverters will pass the requirements for Simplified Interconnection per SDG&E's Electric Rule 21. Non-certified units will require further study and may involve additional costs.
- c. A complete description of the **generating equipment that the Customer plans to install**. If the Generating Facility includes photovoltaic panels, the description must include the manufacturer name, model number, number of panels, and the nameplate rating. If the Generating Facility includes a wind turbine, the description must include the manufacturer name, model number,



Terms and Conditions Agreement for Net Energy Metering Solar or Wind Electricity Generating Facilities

number of turbines, and the nameplate rating. Only CEC-certified inverters and certified wind-turbine generators without separate inverters will pass the requirements for Simplified Interconnection. (The CEC's list of inverters is available: www.gosolarcalifornia.org/equipment)

- d. A description of how the power output from the inverter is connected to the **main service panel via a branch breaker**. The ampere rating of this branch breaker and the main service panel breaker must be compatible with the output rating of the Generating Facility. The output rating is computed based on the total nameplate rating of the inverter.

If applicable, a complete description of energy storage devices, including, but not limited to, the battery manufacturer, battery model number, the inverter model number, nameplate rating in kilowatts, CEC-AC rating, quantity, output voltage and phase. **Indemnity and Liability**

Each party as indemnitor shall defend, hold harmless, and indemnify the other party and the directors, officers, employees, and agents of the other party against and from any and all loss, liability, damages, claim, cost, charge, demand, or expense (including any direct, indirect or consequential loss, liability, damages, claim, cost charge, demand, or expense, including retained or in-house attorneys' fees) for injury or death to persons, including employees of either party, and damage to property, including property of either party, arising out of or in connection with (a) the engineering, design, construction, maintenance, repair, operation, supervision, inspection, testing, protection or ownership of the indemnitor's facility, or (b) the making of replacements, additions betterments to or reconstruction of the indemnitor's facilities. This indemnity shall apply notwithstanding the active or passive negligence of the indemnitee. However, neither party shall be indemnified hereunder for its loss, liability, damage, claim, cost, charge, damage, or expense resulting from its sole negligence or willful misconduct. The indemnitor shall, on the other party's request, defend any suit asserting a claim covered by this indemnity and shall pay for all costs, including reasonable attorney fees, which may be incurred by the other party in enforcing this indemnity.

Term of Agreement

This Agreement shall become effective as of the date of SDG&E's issuance of the Permission to Operate Letter after receipt of all applicable fees, required documents, and this completed Agreement. This Agreement shall continue in full force and effect until terminated by either Party providing 30-days prior written notice to the other Party, or when a new Customer takes service with SDG&E operating this approved generating facility. This new Customer will be interconnected subject to the terms and conditions as set forth in Schedule NEM-ST.

Governing Law

This Agreement shall be interpreted, governed, and construed under the laws of the State of California as if executed and to be performed wholly within the State of California.



Terms and Conditions Agreement for Net Energy Metering Solar or Wind Electricity Generating Facilities

Rates

Customer understands that SDG&E's rates and rate design are subject to change from time to time.

Customer understands and agrees that it must not operate its Generating Facility in parallel with SDG&E's Distribution System until Customer receives written authorization for Parallel Operation from SDG&E.

Pursuant to California Public Utilities Commission Decision 14-11-001, SDG&E is required to provide certain data to the CPUC or its contractors regarding NEM Customers, including but not limited to customer identification information, contractor identification information, system ownership status, cost, etc. By filling out and executing this Application, you authorize SDG&E to release any and all information contained herein to the CPUC and/or its contractor without further notification or consent.

Customer Name (Please Print): Carson Williams

Customer Name (Signature):  Carson Williams Date: 2/28/2022

A copy of this signed Agreement should be retained with the "Permission to Operate" letter to confirm Interconnection approval

FORM OF CHANGE ORDER

To:	<u>Carson Williams</u> 5617 Adobe Falls Road Unit D, San Diego, CA 92120	Job Number:	<u>S33889</u>
		Job Name:	<u>S33889 5617 Adobe Falls Road Unit D San Diego Williams</u>
From:	Paul Castanon	Change Order Number:	<u>S33889 - CO - 1</u>
		Date:	<u>April 5, 2022</u>

Type:

Loan - Included in Loan Amount

Description:

Project scope change:

**Removing RMA from scope of work.
Not able to install RMA on multi-meter bank.
Upgrading existing subpanel in closet to 200A
Also includes drywall repair.**

**Switching the finance from Dividend 25yr 1.99% to Dividend 20yr 5.99%
New loan amount is \$23,550**

Qualifications:

Exclusions:

Original contract/prior amount to this revision. . . .	\$29,602.00
Add to this revision.	(\$6,052.00)
New total contract value.	\$23,550.00

Payment for this change order is due upon completion of change order work. If this change order is amending your lease/loan, you will be required to sign a new loan/lease document.

If this change order meets your approval, please sign where noted below and return a copy to our office to serve as authorization of the above.

Both parties agree that this change order amends the previously signed contract between homeowner and Baker Electric Home Energy.

No other terms or conditions of the Agreement shall be negated or changed as a result of this Change Order.

CUSTOMER:

 *Carson Williams*
Signature: _____
Name: **Carson Williams**
Dated: **4/5/2022**

Signature: _____
Name: _____
Dated: _____

CONTRACTOR:

NB Baker Electric Inc. dba Baker Electric Home Energy,
a California corporation
 *Paul Castanon*
Signature: _____
Name: **Paul Castanon**
Title: _____
Dated: **4/5/2022**

FORM OF CHANGE ORDER

To:	<u>Carson Williams</u> 5617 Adobe Falls Road Unit D, San Diego, CA 92120	Job Number:	<u>S33889</u>
		Job Name:	<u>S33889 5617 Adobe Falls Road Unit D San Diego Williams</u>
From:	Ivette Monroy	Change Order Number:	<u>S33889 - CO - 2</u>
		Date:	<u>April 14, 2022</u>

Type:

Loan - Included in Loan Amount

Description:

From: (16) Hanwha Q Cells Q. Peak DUO-BLK-ML-G10+400 Solar Modules, (16) Enphase IQ7A

To: (15) Hanwha Q Cells Q. Peak DUO-BLK-ML-G10+400 Solar Modules, (15) Enphase IQ7A

Qualifications:

Exclusions:

Original contract/prior amount to this revision. . . .	\$23,550.00
Add to this revision.	(\$1,190.71)
New total contract value.	\$22,359.29

Payment for this change order is due upon completion of change order work. If this change order is amending your lease/loan, you will be required to sign a new loan/lease document.

If this change order meets your approval, please sign where noted below and return a copy to our office to serve as authorization of the above.

Both parties agree that this change order amends the previously signed contract between homeowner and Baker Electric Home Energy.

No other terms or conditions of the Agreement shall be negated or changed as a result of this Change Order.

CUSTOMER:  Carson Williams
Signature: _____
Name: Carson Williams
Dated: 4/14/2022

Signature: _____
Name: _____
Dated: _____

CONTRACTOR:
NB Baker Electric Inc. dba Baker Electric Home Energy,
a California corporation
 Ivette Monroy
Signature: _____
Name: Ivette Monroy
Title: _____
Dated: 4/14/2022

Modules	Inverter
824522073808400056	202208170212
824022073808400048	202208170298
824022073808400051	202208170997
824222073808400044	202208168210
824422072808403570	202208156581
824122073808400038	202208154023
824922073808400029	202208164227
824622073808400033	202208165760
824822073808400039	202208170957
201621493550203111	202208152033
201021493550203113	202208165891
201021493550203027	202208170602
201721493550203127	202208151538
201921493550203110	202208151254
201421493550203131	202208171346
Comm. Kit	Battery
202221086518	



Enphase Energy, Inc. Limited Warranty – United States, United States Territories, and Canada

1. **Limited Warranty.** This Limited Warranty is effective for Covered Products (defined below) that are activated on or after November 19, 2021, *unless* a newer limited warranty has been posted which applies to your Covered Product's date of activation. Always check <https://enphase.com/en-us/warranty> for the correct limited warranty governing your Covered Product. Subject to the terms of this Limited Warranty, Enphase Energy, Inc. ("**Enphase**") warrants to the Covered Owner (defined below) that the product(s) covered by this Limited Warranty listed below and installed for use at the original end user location (the "**Original Location**") (each a "**Covered Product**") will be free from defects in workmanship and materials for the applicable product warranty period set forth below (each, a "Warranty Period"), provided that the Original Location is located within the following territories: United States, United States territories (including Puerto Rico, Northern Mariana Islands, U.S. Virgin Islands, American Samoa, and Guam), and Canada. This Limited Warranty is valid only (a) when the Covered Products are sold to the Covered Owner by Enphase itself or by an Enphase authorized reseller and (b) to the extent permitted by the applicable laws of the territories mentioned above.

<u>Covered Product(s)</u>	<u>Limited Warranty Period(s)</u>
IQ microinverters	25 years commencing on the earlier of (i) the date the Covered Product is registered with Enphase, or (ii) the date the Covered Product is activated* at the Original Location via the Enphase's Installer Portal (such applicable date is referred to as the " Warranty Activation Date ").
IQ Gateway Products: IQ8D Envoy, IQ Commercial Envoy, Envoy-S Standard, Envoy-S Metered IQ Combiner Products: IQ Combiner +, IQ Combiner 3, IQ Combiner 3- ES, IQ Combiner 3-ES2, IQ Combiner 4, , or AC Combiner Box	5 years from the Warranty Activation Date.
IQ Aggregator, IQ Commercial Aggregator, Mobile Connect or Consumption CT	5 years from the Warranty Activation Date.

*A Covered Product is considered "activated" when the solar system has received "permission to operate" by authorities having jurisdiction.

2. Subject to Section 3, this Limited Warranty is also conditioned on the Covered Owner registering the Covered Product within forty-five (45) days from the date of first installation (the "**Registration**") by either (a) completing and returning the registration card (found at the end of this Limited Warranty) to the address set forth in this Section 2; (b) registering on-line at www.enphase.com/register-my-product; or (c) registering through the Enphase Installer Platform or the Enphase® application when an IQ Gateway product is purchased and installed as part of the PV solar system.

Return Registration Card to:

Enphase Energy, Inc.
Attn: Product Registration NA Customer Service
1819 S. Cobalt Point Way
Meridian, ID 83642 United States of America

3. IF THE COVERED OWNER IS A RESIDENT OF CALIFORNIA, CONNECTICUT, OR ANY OTHER STATE OR PROVINCE THAT FORBIDS THE RETURN OF A REGISTRATION CARD AS A CONDITION PRECEDENT TO ANY WARRANTY COVERAGE OFFERED UNDER THIS LIMITED WARRANTY, THEN THE REGISTRATION REQUIREMENTS DESCRIBED IN SECTION 2 ABOVE SHALL NOT APPLY.
4. For the purposes of this Limited Warranty, the “**Covered Owner**” shall mean the person or entity that purchases a Covered Product from Enphase or an Enphase-authorized reseller and installs (or has installed) such Covered Product at the Original Location. In addition, Covered Owner shall include subsequent transferees (each, a “**Transferee**”) as long as (a) the Covered Product remains at the Original Location, (b) the Transferee submits to Enphase a completed “Change of Ownership Form,” which Enphase may modify from time to time in its sole discretion (c) the Transferee pays the applicable transfer fee (“**Transfer Fee**”) set forth in the Change of Ownership Form within 30 days from the date of transfer from the Covered Owner to the Transferee, and (d) subject to Section 3, the Transferee complies with the Registration requirement in Section 2. The submission of a Change of Ownership Form is required in order for the Transferee to receive continued Limited Warranty coverage on the transferred Covered Product. The Transfer Fee is subject to reasonable adjustment from time to time (as determined at Enphase’s discretion). The Change of Ownership Form and payment instructions for the Transfer Fee are available at <https://enphase.com/en-us/support/how-to-transfer-ownership>.
5. The Covered Products should be continuously connected to the internet during the warranty period, except where interrupted by causes outside of the Covered Owner’s reasonable control. This will help ensure that potential defects in the Product can be diagnosed remotely and that the Product can receive over-the-air firmware updates.
6. **How to Obtain Warranty Service.**
 - a. To obtain warranty service for a Covered Product, the Covered Owner must comply with the Return Merchandise Authorization (RMA) Procedure available at <https://enphase.com/en-us/support/return-merchandise-authorization-procedure>. Unless Enphase specifically instructs the Covered Owner otherwise, the Covered Owner must return the allegedly defective Covered Product to Enphase in the original packaging or equivalent. If the allegedly defective Covered Product is not received by Enphase within 60 days of Enphase providing an RMA number to Covered Owner, pursuant to the RMA Procedure, Enphase will invoice the Covered Owner, and the Covered Owner will pay, the then-current list price for such new product or product part. We recommend that Covered Owners use a tracking service for their protection. The RMA Procedure allows Covered Owners to generate a prepaid mailing label for the return.
 - b. If a Covered Owner returns a Covered Product to Enphase (i) without an RMA from Enphase or (ii) without all parts included in the original package, Enphase retains the right to either (1) refuse delivery of such return; or (2) charge a restocking fee equal to the higher of fifteen (15) per cent of the original Covered Owner’s purchase price of the Covered

Product or the retail value of the missing parts.

- c. By returning a Covered Product, Covered Owner hereby acknowledges that ownership of the Covered Product is transferred to Enphase upon Enphase's receipt of the Covered Product. If the claim is justified based on this Limited Warranty, Enphase will bear the cost of shipping the repaired or replacement Covered Product to Covered Owner (or to the installer authorized by Covered Owner to replace the Covered Product) at the Original Location. Any Covered Product returned to Enphase that Enphase determines is not covered under this Limited Warranty, or that is returned to Enphase without a valid RMA, may be rejected, and returned at the Covered Owner's cost (subject to prepayment), or kept for 30 days for pick-up by the Covered Owner, and then disposed of in Enphase's sole discretion without further liability or obligation to Covered Owner.
- d. Once a returned Covered Product is received and inspected, Enphase will notify Covered Owner (or the installer authorized by Covered Owner to replace the Covered Product) that Enphase has received the returned Covered Product.

7. Remedies.

- a. During the applicable Warranty Period, if Enphase confirms the existence of a defect that is covered by the Limited Warranty, Enphase will, at Enphase's option, either (i) repair or replace the Covered Product free of charge, or (ii) refund the Covered Owner the actual purchase price for the Covered Product less reasonable depreciation based on use at the time the Covered Owner notifies Enphase of the defect. Enphase will not elect to issue a refund unless (1) Enphase is unable to provide a replacement and repair is not commercially practicable or cannot be timely made, or (2) Covered Owner is willing to accept such a refund. In the event of a defect, to the extent permitted by law, these are the Covered Owner's sole and exclusive remedies.
- b. If Enphase repairs or replaces the Covered Product pursuant to this Limited Warranty, (i) Enphase will, at its option, use new and/or reconditioned parts or products of the Covered Product's original or improved design, and (ii) the Limited Warranty will continue to apply to the repaired or replacement product for the remainder of the original Limited Warranty Period or ninety (90) days from the date Covered Owner receives the repaired or replacement product, whichever is later.
- c. If Enphase issues a refund (rather providing a repaired or replacement Covered Product), such refund will be processed and paid within 2 weeks of Enphase's receipt of the Covered Product.

8. Limited Warranty Limitations and Exclusions.

- a. This Limited Warranty does not include any cost of labor related to (i) un-installing Covered Product; (ii) re-installing a repaired or replacement product, or (iii) the removal, installation or troubleshooting of the Covered Owner's electrical systems.
- b. The Limited Warranty does not cover, and Enphase will not be responsible for any delays, lost or damage or any other damage to any Covered Product caused by a freight carrier.
- c. This Limited Warranty does not apply to, and Enphase will not be responsible for, any defect in or damage to any Covered Products: (i) that have been misused, neglected, tampered with, altered, or otherwise damaged, either internally or externally; (ii) that have been improperly installed, operated, handled or used, including use under conditions for which the product was not designed, use in an unsuitable environment, or use in a manner contrary to the Enphase User Manual or applicable laws or regulations; (iii) that have been subjected to fire, water, generalized corrosion, biological infestations, acts of nature, or input voltage that creates operating conditions beyond the applicable maximum or minimum limits listed in the applicable Covered Product Data Sheet (as published online at www.enphase.com), including high input voltage from generators or lightning

strikes; (iv) that have been subjected to damage caused by third party components not provided by Enphase and used with the Covered Products or any damage to the Covered Products caused by service performed by anyone who is not a representative of Enphase; (v) if the original identification markings (including trademark or serial number) of such products have been defaced, altered, or removed (other than by fading through regular wear and tear); or (vi) if the Grid Profile (utility approved operating parameters) of the Covered Product has been altered, and such alteration causes the product to malfunction, fail, or fail to optimally perform.

- d. The Limited Warranty does not cover cosmetic, technical or design defects, or shortcomings which do not materially influence or affect energy production or degrade form, fit, or function of the Covered Products, or any defects or parts requiring replacement due to ordinary wear and tear, corrosion, rust or stains, scratches, dents on the casing or paintwork of the Covered Product. The Limited Warranty does not cover costs related to the removal, installation or troubleshooting of the Covered Owner's electrical systems.
 - e. The Limited Warranty does not apply to, and the term "Covered Product" shall not include, any third-party products that may be installed with the Covered Products at the Original Location.
 - f. For the avoidance of doubt, software programs installed in the Covered Products and the recovery and reinstallation of such software programs and data are not covered under this Limited Warranty. Enphase does not warrant that the operations of the Covered Product will be uninterrupted or error-free. No Enphase employee or authorized reseller is authorized to make any modification, extension, or addition to this Limited Warranty. If any term of this Limited Warranty is held to be illegal or unenforceable, the legality or enforceability of the remaining terms shall not be affected or impaired.
9. **Assignment.** Enphase expressly reserves the right to novate or assign its rights and obligations under this Limited Warranty to a third party with the demonstrated expertise and requisite resources needed to effectively discharge the obligations hereunder.

10. **Disclaimer of Warranties.**

THIS LIMITED WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY ENPHASE AND, EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ALL OTHER WARRANTIES AND CONDITIONS, WHETHER EXPRESS OR IMPLIED, STATUTORY, OR OTHERWISE, ARISING BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE USAGE OF TRADE, OR OTHERWISE (INCLUDING WARRANTIES AND CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, OR WARRANTIES AS TO THE ACCURACY, SUFFICIENCY OR SUITABILITY OF ANY TECHNICAL OR OTHER INFORMATION PROVIDED IN MANUALS OR OTHER DOCUMENTATION) SHALL BE LIMITED IN DURATION TO THE DURATION OF THIS LIMITED WARRANTY.

THE GRANT OF THIS LIMITED WARRANTY BY ENPHASE IS CONDITIONED UPON AGREEMENT BY THE COVERED OWNER TO THE TERMS, CONDITIONS AND REQUIREMENTS HEREIN. THE LAWS OF CERTAIN JURISDICTIONS DO NOT ALLOW FOR THE EXCLUSIONS ON THE DURATION OF AN IMPLIED WARRANTY OR FOR EXCLUSIONS OR LIMITATIONS ON LEGAL WARRANTIES. WHERE SUCH LAWS APPLY TO THE COVERED OWNER, SOME OR ALL OF THE EXCLUSIONS OR LIMITATION MAY NOT APPLY TO COVERED OWNER, AND SUCH COVERED OWNER MAY HAVE ADDITIONAL RIGHTS. THIS LIMITED WARRANTY GIVES COVERED OWNER SPECIFIC LEGAL RIGHTS, AND COVERED OWNER MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION.

11. **Limitation of Liability.**

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, IN NO EVENT WILL ENPHASE BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES,

LOSSES, COSTS OR EXPENSES HOWEVER ARISING, WHETHER IN CONTRACT OR TORT, INCLUDING WITHOUT LIMITATION ANY ECONOMIC LOSSES OF ANY KIND, ANY LOSS OR DAMAGE TO PROPERTY, OR ANY PERSONAL INJURY.

SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO COVERED OWNER AND COVERED OWNER MAY HAVE ADDITIONAL RIGHTS.

12. **Governing law.** This Limited Warranty shall be governed by the laws of the State of California, USA, without giving effect to any conflict of laws principles that may require the application of the law of another jurisdiction, except in cases where, and to the extent required, the laws of a particular Canadian jurisdiction in which the Covered Owner resides require that the laws of such jurisdiction apply, in which case the laws of such jurisdiction will apply.

13. **Arbitration.**

- a. ***Please read the following arbitration agreement in this Section ("Arbitration Agreement") carefully. It requires Covered Owner ("you") to arbitrate disputes with ENPHASE and limits the manner in which you can seek relief from Enphase ("us"). THE LAWS OF CERTAIN JURISDICTIONS DO NOT PERMIT THE USE OF MANDATORY ARBITRATION CLAUSES. WHERE SUCH LAWS APPLY TO THE COVERED OWNER, THIS ARBITRATION CLAUSE MAY NOT APPLY.***
- b. **Applicability of Arbitration Agreement.** You agree that any dispute or claim relating in any way to your access or use of the Covered Products, or to any aspect of your relationship with Enphase, will be resolved by binding arbitration, rather than in court, except that (i) you may assert claims in small claims court if your claims qualify; and (ii) you or Enphase may seek equitable relief in court for infringement or other misuse of intellectual property rights (such as trademarks, trade dress, domain names, trade secrets, copyrights, and patents).
- c. **Arbitration Rules and Forum.** For any dispute with Enphase in connection with this Limited Warranty, Covered Owner agrees to first contact Enphase at the email address identified below and attempt to resolve the dispute with us informally. If the dispute has not been resolved after 60 days, both parties agree to resolve such dispute through binding arbitration under the Optional Expedited Arbitration Procedures then in effect for the Judicial Arbitration and Mediation Services ("JAMS"). JAMS may be contacted at www.jamsadr.com. The existence, content and result of the arbitration shall be held in confidence by all participants. The arbitration will be conducted by a single arbitrator selected by agreement of the parties or, failing such agreement, appointed in accordance with the JAMS rules. The arbitration shall be conducted in English and in Santa Clara County, California. If JAMS is not available to arbitrate, the parties will select an alternative arbitral forum. If the arbitrator finds that Covered Owner cannot afford to pay JAMS's filing, administrative, hearing and/or other fees and cannot obtain a waiver from JAMS, Enphase will pay them for Covered Owner. In addition, Enphase will reimburse all such JAMS's filing, administrative, hearing and/or other fees for claims totaling less than \$10,000 unless the arbitrator determines the claims are frivolous. Any judgment on the award rendered by the arbitrator may be entered in any court of competent jurisdiction. The arbitrator shall have exclusive authority to determine the scope and enforceability of this Arbitration Agreement, and (b) resolve any dispute related to the interpretation, applicability, enforceability or formation of this Arbitration Agreement including, but not limited to any claim that all or any part of this Arbitration Agreement is void or voidable. The arbitration will decide the rights and liabilities, if any, of the parties. The arbitration proceeding will not be consolidated with any other matters or joined with any other cases or parties. The arbitrator shall have the authority to grant motions dispositive of all or part of any claim. The arbitrator shall have the authority to award monetary damages and to grant any non-monetary remedy or relief available to an individual under applicable law, the arbitral forum's rules, and the Limited Warranty. The arbitrator shall issue a written award and statement of decision describing the essential findings and conclusions on which the award is based, including the calculation of any damages awarded. The arbitrator has the same authority to award relief on an individual basis that a judge in a court of law would have. The award of the

arbitrator is final and binding upon the parties.

- d. **Waiver of Jury Trial.** YOU AND ENPHASE HEREBY WAIVE ANY CONSTITUTIONAL AND STATUTORY RIGHTS TO SUE IN COURT AND HAVE A TRIAL IN FRONT OF A JUDGE OR A JURY. You and ENPHASE are instead electing that all claims and disputes shall be resolved by arbitration under this Arbitration Agreement, except as specified in sections above. An arbitrator can award on an individual basis the same damages and relief as a court and must follow this Agreement as a court would. However, there is no judge or jury in arbitration, and court review of an arbitration award is subject to very limited review.
- e. **Waiver of Class or Other Non-Individualized Relief.** ALL CLAIMS AND DISPUTES WITHIN THE SCOPE OF THIS ARBITRATION AGREEMENT MUST BE ARBITRATED ON AN INDIVIDUAL BASIS AND NOT ON A CLASS OR COLLECTIVE BASIS, ONLY INDIVIDUAL RELIEF IS AVAILABLE, AND CLAIMS OF MORE THAN ONE COVERED OWNER CANNOT BE ARBITRATED OR CONSOLIDATED WITH THOSE OF ANY OTHER COVERED OWNER. If a decision is issued stating that applicable law precludes enforcement of any of this subsection's limitations as to a given claim for relief, then such claim must be severed from the arbitration and brought into the State or Federal Courts located in San Francisco, California. All other claims shall be arbitrated.
- f. **30-Day Right to Opt Out.** You have the right to opt out of the provisions of this Arbitration Agreement by sending written notice of your decision to opt out to Enphase Energy, Inc., 47281 Bayside Parkway, Fremont, California, 94538, attention: General Counsel, within 30 days after first becoming subject to this Arbitration Agreement. You may also opt-out of the provisions of this Arbitration Agreement by sending written notice of your decision to the following email address: legal@enphaseenergy.com. Your notice must include your name and address, and an unequivocal statement that you want to opt out of this Arbitration Agreement. If you opt out of this Arbitration Agreement, all other parts of this Agreement will continue to apply to you. Opting out of this Arbitration Agreement has no effect on any other arbitration agreements that you may currently have, or may enter in the future, with us.
- g. **Severability.** Except as provided above, if any part or parts of this Arbitration Agreement are found under the law to be invalid or unenforceable, then such specific part or parts shall be of no force and effect and shall be severed and the remainder of the Arbitration Agreement shall continue in full force and effect.
- h. **Survival of Agreement.** This Arbitration Agreement will survive the termination of your relationship with Enphase.



Homeowner Warranty Certificate

Solar only

Certificate of Limited Warranty



This document certifies that the following Qcells Photovoltaic Modules are covered by a 25-year warranty against Product and Performance Defects pursuant to the applicable limited warranty document accessible at <https://qcells.com/us/get-support/support>.

Homeowner Name: **Carson Williams**

Homeowner Address: **5617 Adobe Falls Rd Unit D**

City: **San Diego**

State: **California**

Zip Code: **92120**

Installer Name: **Baker Electric Home Energy**

City: **Escondido**

State: **California**

Solar Panel Model: **Q.PEAK DUO BLK G10+**

Number of Panels:

Date of Installation: **07/14/2022**

LIMITED WARRANTY FOR CRYSTALLINE PHOTOVOLTAIC MODULES FROM Q CELLS

Valid from January 1st, 2020

This limited warranty ("Limited Warranty") is issued by Hanwha Q CELLS USA Inc., 300 Nexus Drive, Dalton GA 30721, USA, or its successors or assigns ("HQC"), and applies exclusively to Q CELLS Modules (as defined in Section 1.a.).

1. SCOPE

a. Products

Q CELLS Modules are defined in this Limited Warranty as Q CELLS branded photovoltaic modules manufactured by HQC or its authorized manufacturers that are sold and installed within the United States, Canada, Mexico, Panama and Costa Rica and are of the following product type:

- Q.PEAK DUO-G6+, Q.PEAK DUO BLK-G6+

b. Beneficiary

The sole and exclusive beneficiary of this Limited Warranty is an end customer who purchases Q CELLS Modules from HQC or from any one of its authorized distributors ("Distributor") and is the initial installer of such modules into a specific photovoltaic (PV) solar energy project ("Project"), and any of the end customer's permitted successors or assigns ("Customer").

c. Validity

This Limited Warranty takes effect on January 1st, 2020 and shall remain valid until a new version of warranty applying to Q CELLS Modules is released by HQC.

d. Term

The term of this Limited Warranty ("Term") for the Customer begins on the date of initial delivery to the Customer ("Warranty Start Date") and ends at the end of the warranty periods set forth in Section 2. The performance of warranty services under this Limited Warranty does not extend the Term. HQC's obligations under this Limited Warranty are conditioned upon the Customer's compliance with its payment obligations for purchase of the applicable Q CELLS Module.

2. WARRANTY

a. Product Warranty

Subject to the terms and conditions in this Limited Warranty, HQC warrants to the Customer for a period of twenty-five (25) years following the Warranty Start Date that the Q CELLS Modules, when

installed, used, and serviced under normal operating conditions and in accordance with Q CELLS Module Installation Manual provided by HQC or Distributor will be free from any defects in materials and workmanship that have a significantly negative effect on the power output of the Q CELLS Modules (collectively, "Product Defect"). The Product Warranty does not warrant a specific power output of the Q CELLS Modules, which shall be exclusively covered under the Performance Warranty in Section 2.b.. Product Defect does not include any cosmetic changes or other changes in the Q CELLS Modules' appearance, including but not limited to, any color changes, mold and normal wear and tear.

b. Performance Warranty

Subject to the terms and conditions of this Limited Warranty, HQC warrants to the Customer that the Q CELLS Modules are manufactured to (i) produce a power output of at least ninety-eight percent (98 %) of the minimum power output specified in the applicable module data sheet during the first twelve (12) months following the Warranty Start Date, and (ii) have a yearly maximum decrease (or degradation) of power of not more than fifty four hundredths of one percent (0.54 %) from start of the second (2nd) twelve (12)-month period following the Warranty Start Date until the end of such twelve (12)-month period, and repeated for each successive twelve (12)-month period until the twenty-fifth (25th) anniversary of the Warranty Start Date, (collectively, "Performance Warranty"). As an example, the Q CELLS Module will be manufactured to have a minimum power output of eighty-five percent (85 %) of the minimum power output specified in the applicable module data sheet at the end of the term of this Limited Warranty. Failure to meet the Performance Warranty is defined herein as a "Performance Defect." In the event of a Performance Defect claim, the power output of any Q CELLS Modules described in this Section 2.b. shall be measured by HQC under the Standard Test Conditions ("STCs") defined in the IEC standards EN 61215 and 60904-3 in effect as of the Warranty Start Date.

3. EXCLUSIONS

The Limited Warranty shall not apply to any Q CELLS Modules affected by the following events or conditions:

1. usage, transport, storage, installation and/or handling in any manner that fails to strictly comply with the Installation Manual and the Packaging and Transportation Information sheet applicable to the Q CELLS Modules;
2. system or components of such system that are of a design, configuration or installation that does not meet the standards typically used by experienced professionals in the industry;
3. incorrect, improper or inadequate service, operation or maintenance of the Q CELLS Modules or of the Project, or any normal wear and tear of the Q CELLS Modules;
4. damage caused by extreme environmental sources of impact, including, but not limited to (i) acid rain or snow, (ii) blowing sand, (iii) saline air, (iv) pollution of any kind in the air, soil or groundwater, (v) unusual oxidation levels, (vi) mold, or (vii) any nearby fire, explosion, smoke or charring;
5. damage caused by acts of nature or acts of God, including, but not limited to, lightning, hail, frost, snow, storms, tidal waves, floods, extreme temperatures, earthquakes, typhoons, tornadoes, volcanic eruptions, meteorites, ground motions, earth fissures or landslides;
6. damage caused directly or indirectly by acts of violence or intervention by third parties or external forces, including but not limited to, misadventure, riots, war, insurrection, communal violence, unintentional damage by third parties, vandalism, damage caused by animals, and/or acts or omissions by third parties beyond the reasonable control of HQC;
7. damage to the Project in which the Q CELLS Modules are installed caused by external factors, including, but not limited to, voltage fluctuations, power peaks, excess current, power failure, poor electrical or mechanical engineering work, or other faults occurring in a power supply system with or without mains connection, whether or not such faults in the power supply system was contributed to by any act or omission of the Customer;
8. Q CELLS Modules are modified or used in processes involving other products, without obtaining the prior written consent of HQC;

9. the serial number or product label has been removed, changed, deleted or made unrecognizable;
10. the Q CELLS Modules are used on any mobile carriers (such as motor vehicles or ships)
11. the conditions of use at the Project, at any time, exceed the specifications set out in the applicable module data sheet; and/or
12. the Customer fails to notify the Distributor or HQC of a Product Defect or Performance Defect within 30 days of the initial discovery or prior to the end of the applicable warranty period set forth in Section 2..

4. WARRANTY CLAIMS

a. Customer Inspection

The Customer must inspect the Q CELLS Modules for visible defects when delivered. The Customer must notify HQC of any defects immediately, but in no event later than thirty (30) days any such defects were discovered during such visible defect inspection process.

b. Warranty Claims

The Customer will be entitled to make claims under this Limited Warranty ("Warranty Claims") only if the Customer has provided documented evidence sufficient to prove that the malfunctioning or non-conformity of the Q CELLS Modules resulted exclusively from a Product Defect or Performance Defect covered by this Limited Warranty. If the Warranty Claim is based on glass breakage, then the Customer shall conduct a static load calculation on the substructure.

c. Warranty Claim Compliance

The Customer must comply with the HQC's then-current Return Merchandise Authorization ("RMA") process to make any Warranty Claim. HQC will not accept any Warranty Claims not in compliance with the RMA or Warranty Claims that use the delivery of any unauthorized return shipments of Q CELLS Modules.

d. Warranty Claim Procedure

The Customer is responsible for shipping the Q CELLS Modules to HQC for evaluation at the Customer's expense. HQC shall pay the costs of a technical inspection and, in the event that the warranty claim is confirmed by such inspection, transportation. Otherwise, the Customer shall be charged with these costs. To make a Warranty Claim, the Customer must submit the original receipt or invoice, which bears the date of the purchase and of the delivery, the serial numbers of the relevant Q CELLS Modules and the name of the authorized distributor or seller.

e. Ownership Interest

The Q CELLS Modules sent to HQC in the course of the RMA process shall remain the property of the Customer until any inspection has been completed and HQC provides a replacement or refund. At the time any refund or delivery of a replacement Q CELLS Module to the Customer takes place under this Limited Warranty, the ownership interest of the defective module passes to HQC. Any repaired, replaced or additionally supplied modules will be warranted only for the remainder of the original warranty period applicable to the original Q CELLS Modules.

5. REMEDIES

a. Product Defect Remedy

If HQC determines, following a Warranty Claim, that a Q CELLS Module has a Product Defect, then HQC shall, at its discretion, within a reasonable time: (i) remedy or repair the Product Defect; (ii) provide a replacement module in place of the Q CELLS Module with the Product Defect; or (iii) provide the Customer monetary compensation equal to the purchase price of the Q CELLS Module subject to an annual four percent (4%) depreciation rate on the original purchase price as evidenced by the invoice produced by the Customer; provided, however, if the Customer fails to produce an original invoice, then the price shall be based upon the then-current per watt market price of a comparable PV module in a similar market and the date shall be based upon the date of manufacture according to the HQC records.

b. Performance Warranty Remedy

If HQC determines following a Warranty Claim that a Q CELLS Module has a Performance Defect, then HQC shall, at its discretion, within a reasonable time: (i) remedy or repair the Performance Defect; (ii) provide a replacement module in place of the Q CELLS Module that has the Performance Defect; (iii) make up the difference to the guaranteed power output by providing additional modules; or (iv) provide to the Customer monetary compensation equal to the portion of the purchase price of the Q CELLS Module that is in the same proportion to the purchase price as the actual measured power is to the guaranteed power subject to an annual four percent (4%) depreciation rate on the original purchase price as evidenced by the invoice produced by the Customer; provided, however, if the Customer fails to produce an original invoice, then the price shall be based upon the then current per watt market price of a comparable PV module in a similar market and the date shall be based upon the date of manufacture according to the HQC records.

c. Sole and Exclusive Remedy and Obligation

THE REMEDIES SET FORTH IN THIS SECTION 5. ARE HQC'S SOLE AND EXCLUSIVE LIABILITY AND OBLIGATION, AND THE CUSTOMER'S SOLE AND EXCLUSIVE REMEDIES, FOR ANY PRODUCT DEFECT OR PERFORMANCE DEFECT IN ANY

Q CELLS MODULE. THE REMEDY EXTENDED TO THE CUSTOMER SPECIFICALLY EXCLUDES ANY REIMBURSEMENT FOR THE COSTS OR EXPENSES INCURRED IN THE DISMANTLING OR INSTALLATION OF THE Q CELLS MODULES, REPLACEMENT MODULES OR PARTS, OR LOSS OF POWER.

6. WARRANTY LIMITATIONS

THE WARRANTIES SET FORTH IN THIS LIMITED WARRANTY ARE IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, REGARDING ANY Q CELLS MODULES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

HOWEVER, IF A Q CELLS MODULE IS SOLD AS A CONSUMER PRODUCT, TO THE EXTENT REQUIRED BY APPLICABLE LAW, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT ARE LIMITED TO THE PERIODS OF THE LIMITED PRODUCT AND LIMITED PERFORMANCE WARRANTIES SET FORTH ABOVE, OR SUCH SHORTER PERIOD AS REQUIRED BY APPLICABLE LAW. THIS LIMITED WARRANTY GIVES THE CUSTOMER SPECIFIC LEGAL RIGHTS, AND THE CUSTOMER MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. HQC IS NOT RESPONSIBLE OR LIABLE IN ANY WAY FOR DAMAGE OR INJURY TO PERSONS OR PROPERTY, OR FOR OTHER LOSS OR INJURY RESULTING FROM ANY CAUSE WHATSOEVER, ARISING OUT OF OR RELATED TO ANY Q CELLS MODULES UNLESS OTHERWISE STIPULATED BY MANDATORY STATUTORY LAW. IN PARTICULAR, HQC'S LIABILITY FOR FRAUDULENT OR WILLFUL INTENT, GROSS NEGLIGENCE OR PERSONAL INJURY, IN EACH CASE, UNDER APPLICABLE MANDATORY LIABILITY LAW SHALL REMAIN UNAFFECTED.

EXCEPT AS PROVIDED IN THIS SECTION 6., THE Q CELLS MODULES, THE PRODUCT DOCUMENTATION AND ALL INFORMATION ARE PROVIDED ON AN "AS IS" BASIS.

THE CUSTOMER ACKNOWLEDGES THAT THE FOREGOING LIMITATIONS ON LIABILITY ARE AN ESSENTIAL ELEMENT OF THE RELEVANT SALES AGREEMENT BETWEEN THE PARTIES AND THAT IN THE ABSENCE OF SUCH LIMITATIONS THE PURCHASE PRICE OF THE Q CELLS MODULES WOULD BE SUBSTANTIALLY HIGHER.

SOME JURISDICTIONS LIMIT OR DO NOT PERMIT DISCLAIMERS OF LIABILITY, SO THIS PROVISION MAY NOT APPLY TO THE CUSTOMER IN SAID JURISDICTION. SOME JURISDICTIONS DO NOT ALLOW LIMITATIONS OR THE EXCLUSION OF DAMAGES SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO THE CUSTOMER IN SAID JURISDICTION. THE CUSTOMER MAY HAVE SPECIFIC LEGAL RIGHTS OUTSIDE THIS LIMITED

WARRANTY FOR Q CELLS MODULES, AND MAY ALSO HAVE OTHER MANDATORY RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION, WHICH SHALL REMAIN UNAFFECTED.

IN NO EVENT WILL HQC BE LIABLE FOR ANY CONSEQUENTIAL, INDIRECT, EXEMPLARY, SPECIAL OR INCIDENTAL DAMAGES, INCLUDING LOSS OF USE, LOST REVENUE AND/OR LOST POWER, ARISING FROM OR RELATING TO THIS WARRANTY OR ANY Q CELLS MODULE OR ANY REPLACEMENT OR ADDITIONAL MODULE SUPPLIED BY HQC HEREUNDER, EVEN IF HQC IS AWARE OF THE POSSIBILITY OF SUCH DAMAGES.

THE TOTAL LIABILITY OF HQC, ANY DISTRIBUTOR, AND/OR THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES AND AGENTS ARISING FROM OR RELATING TO THIS LIMITED WARRANTY, WHETHER IN CONTRACT, TORT OR OTHERWISE, WILL NOT EXCEED THE AMOUNT RECEIVED BY HQC FOR THE Q CELLS MODULE THAT IS THE SUBJECT OF THE CLAIM OR DISPUTE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO THE CUSTOMER IN SAID JURISDICTION.

7. ASSIGNMENT

Customer Assignment

Customer Assignment. Customer may assign this Limited Warranty for any Q CELLS Module to a new owner of the entire photovoltaic system in which such module is originally installed, provided that such system remains intact in its original place of installation. This Limited Warranty may not otherwise be assigned or transferred, and any attempt to assign or transfer in violation of this Section 7. shall be null and void.

8. MISCELLANEOUS

a. Survival

If any provision of this Limited Warranty terms and conditions is held to be invalid, illegal or unenforceable in any respect, such provision will be changed and interpreted to accomplish the objectives of such provision to the greatest extent possible under applicable law and the remaining provisions will continue in full force and effect.

b. Governing Law

All matters arising from or relating to this Limited Warranty shall be governed by the laws of the State of California, without regard to its choice of law rules. The UN Convention on the International Sale of Goods shall not apply.

c. Waiver of Jury Trial; Jurisdiction

Any dispute, controversy or claim arising out of or relating to this Limited Warranty or any of its provisions, or the breach, termination, interpretation, enforcement or validity thereof, including any dispute hereby is waived to the fullest extent permitted by applicable Law any right it may have to a trial by jury with respect to any litigation directly or indirectly arising out of, under or in connection with this Limited Warranty. Any dispute, controversy or claim arising out of or relating to this Limited Warranty or any of its provisions, or the breach, termination, interpretation, enforcement or validity thereof, including any dispute irrevocably is submitted to the jurisdiction of the courts of the State of California and the federal courts of the United States of America located in the State of California solely in respect of the interpretation and enforcement of the provisions of this Limited Warranty.

Approval

Page 1 of 1

Project Information

Project Nbr: PRJ-1058066

Title: Express- Mechanical/Electrical/Plumbing
Standalone:5617/ADOBE FALLS



Project Mgr:

Approval Information

Approval Nbr: PMT-3155414

Type: Electrical Pmt

Status: Issued

Issued: 06/30/2022

Issued By: Accela,
Administrator

Issued To: Baker Electric Home Energy

Completed:

Completed By:

Expiration Date: 12/27/2022

Owner Occupied:☐

Extension Qty: 0

Extended By:

Cancel Reason:

Overridden:☐

Precancel Status:

Scope: For installation of a roof mounted solar photovoltaic system on existing multi family residence.

Land Doc Type:

Recorded Map No:

Recorded Date:

Job Location

Address

Description

Assessor Parcel

Electrical Pmt:null/null

Fee

Commercial School Charge:

School Charge:

Residential School Charge:

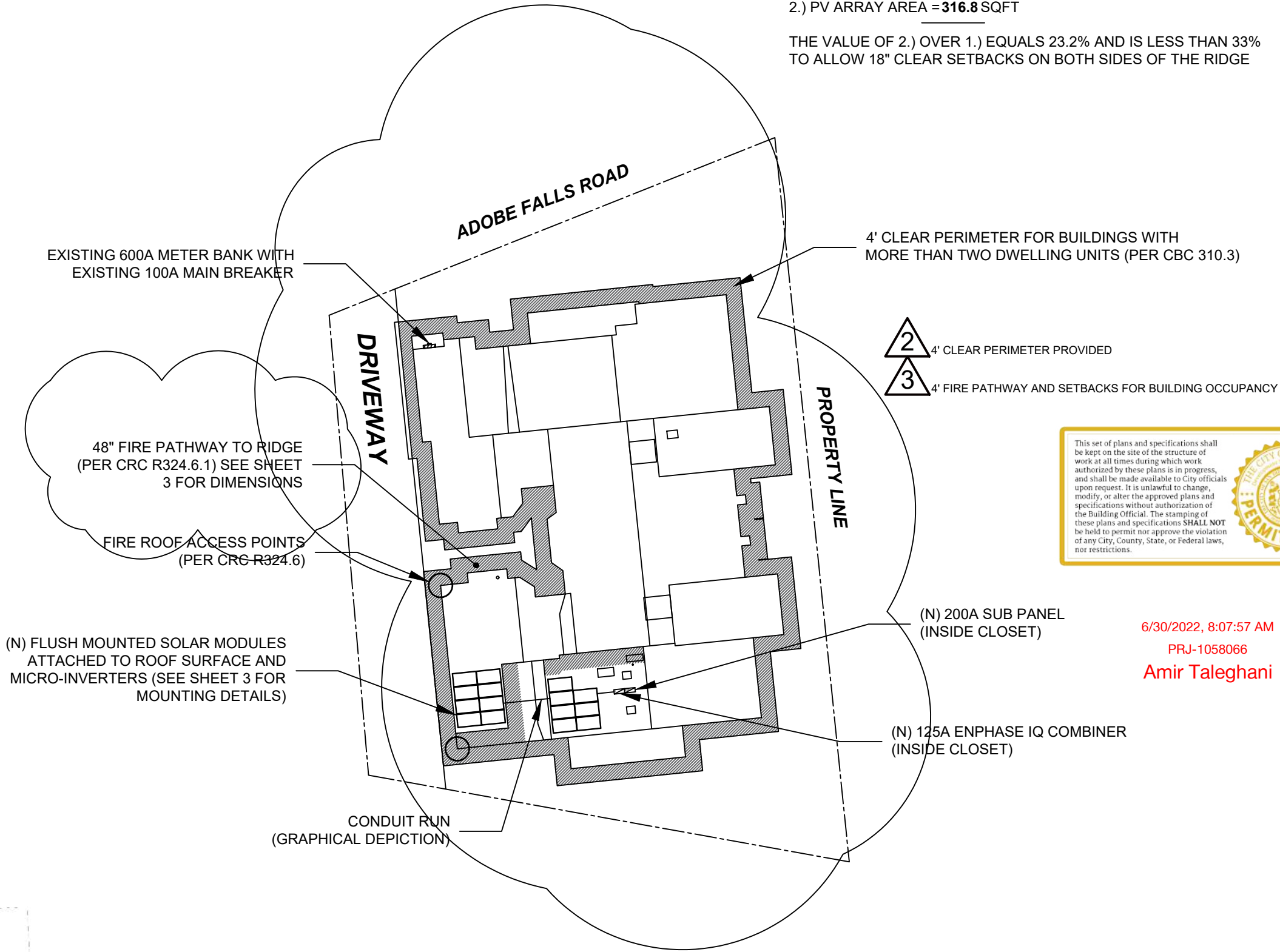
Fee Worksheet

<u>Fee</u>	<u>Quantity</u>	<u>Unit</u>	<u>Category</u>
PVS-Non Res/MDU (I)	6.00	KLW	ISSUANCE FEES
Records-Com/MDU(No Calcs &Std)	1.00	EA	ISSUANCE FEES

PV 00



SITE PLAN
SCALE: 1" = 30'-0"



- 1.) PLAN VIEW TOTAL ROOF AREA = 1,368 SQFT.
2.) PV ARRAY AREA = **316.8** SQFT

THE VALUE OF 2.) OVER 1.) EQUALS 23.2% AND IS LESS THAN 33%
TO ALLOW 18" CLEAR SETBACKS ON BOTH SIDES OF THE RIDGE

4' CLEAR PERIMETER FOR BUILDINGS WITH
MORE THAN TWO DWELLING UNITS (PER CBC 310.3)



4' CLEAR PERIMETER PROVIDED

4' FIRE PATHWAY AND SETBACKS FOR BUILDING OCCUPANCY



6/30/2022, 8:07:57 AM

PRJ-1058066

Amir Taleghani

(N) 200A SUB PANEL
(INSIDE CLOSET)

(N) 125A ENPHASE IQ COMBINER
(INSIDE CLOSET)

CONSTRUCTION NOTES:

1. THIS PROJECT HAS BEEN DESIGNED IN COMPLIANCE WITH THE CBC SECTION 1609 TO WITHSTAND A BASIC WIND SPEED OF 110 MPH (3 SECOND GUST), WIND EXPOSURE B.
2. THE HOUSE IS A ONE STORY STRUCTURE.
3. THE ROOF MEMBERS ARE 2X6 TRUSS @ 24" O.C.. CONNECTION TO STRUCTURE SHALL NOT BE WITHIN 6" OF NAILING PLATES.
4. THE SOLAR PHOTOVOLTAIC INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING, MECHANICAL OR BUILDING ROOF VENTS.
5. ALL CONDUCTORS AND CONDUITS MOUNTED ON ROOF SHALL BE MINIMUM 3 3/4" ABOVE ROOF SURFACE (INCLUDING CABLES UNDERNEATH MODULES AND RACKING). UTILIZING CADDY PYRAMID ST FIXED STRUT SUPPORTS (WHERE APPLICABLE).
6. ROOF ACCESS POINTS SHALL BE PROVIDED PER THE FOLLOWING (CRC R324.6, CBC 3111.3.4):

- LOCATED IN AREAS NOT REQUIRING PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS DOORS OR WINDOWS.

- LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION IN LOCATIONS WHERE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS: TREE LIMBS, WIRES, OR SIGNS.

BAKER ELECTRIC
HOME ENERGY
2120 HARMONY GROVE RD
ESCONDIDO, CA 92029
PHONE (760) 546-6000

LICENSED PROFESSIONAL

TED BAKER
C10 & C46
LIC# 858088
EXP. 4/30/2023

PHOTOVOLTAIC SYSTEM SIZE:
6.0 kW DC

Williams Residence
5617 ADOBE FALLS ROAD UNIT D, SAN
DIEGO, CA 92120
APN: 462 210 31 07

REVISIONS:
MA 05/12/2022
MA 06/14/2022

DRAWN BY: MA
JOB NO: S33889
DATE: 03/23/2022

SITE PLAN

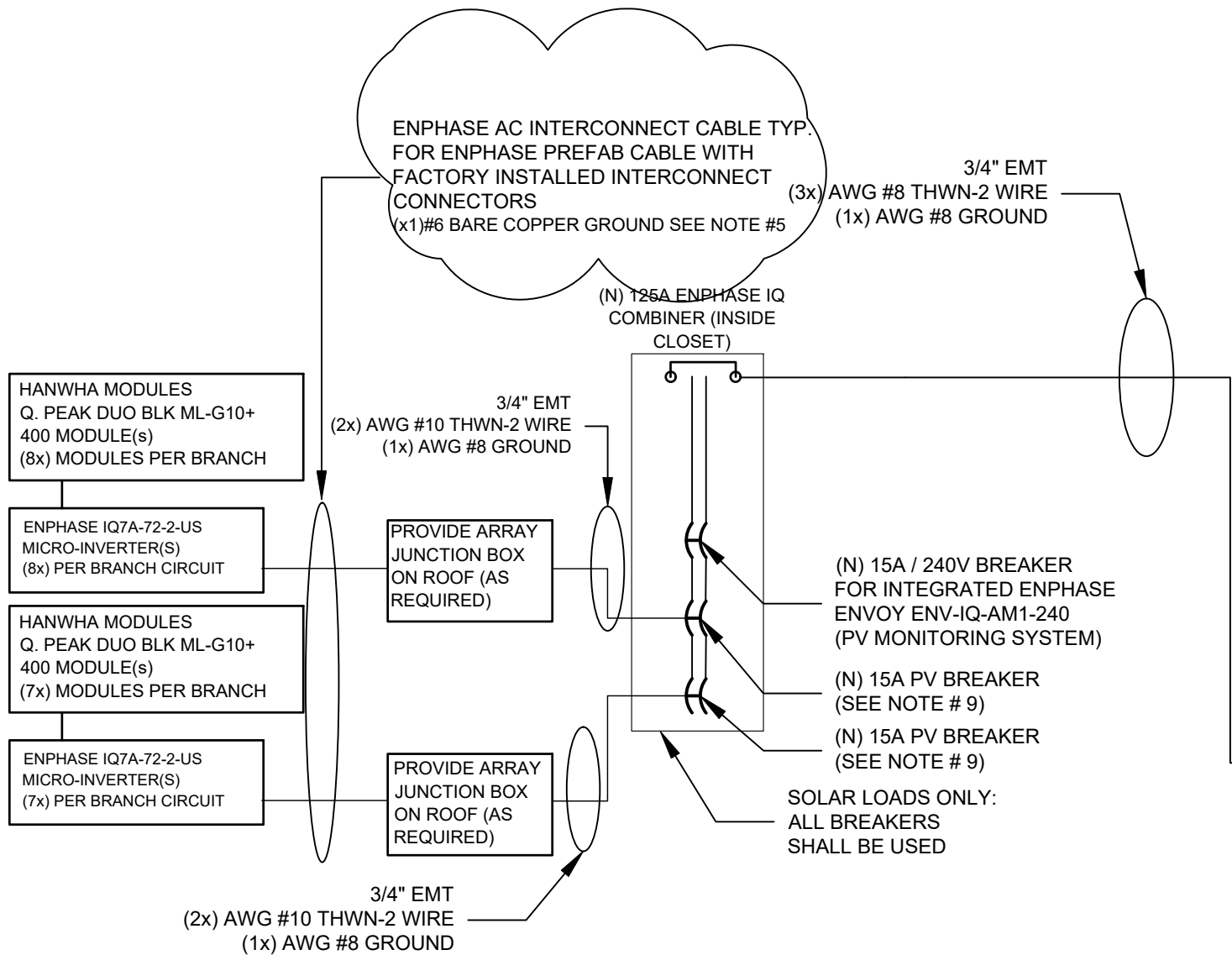
PV 1

AS THE HOMEOWNER OF THE SUBJECT PROJECT, I CERTIFY THAT I AM REQUESTING TO INSTALL THE SOLAR PHOTOVOLTAIC SHOWN ON THESE PLANS.

HOME OWNER SIGNATURE HOME OWNER'S NAME (PRINTED)

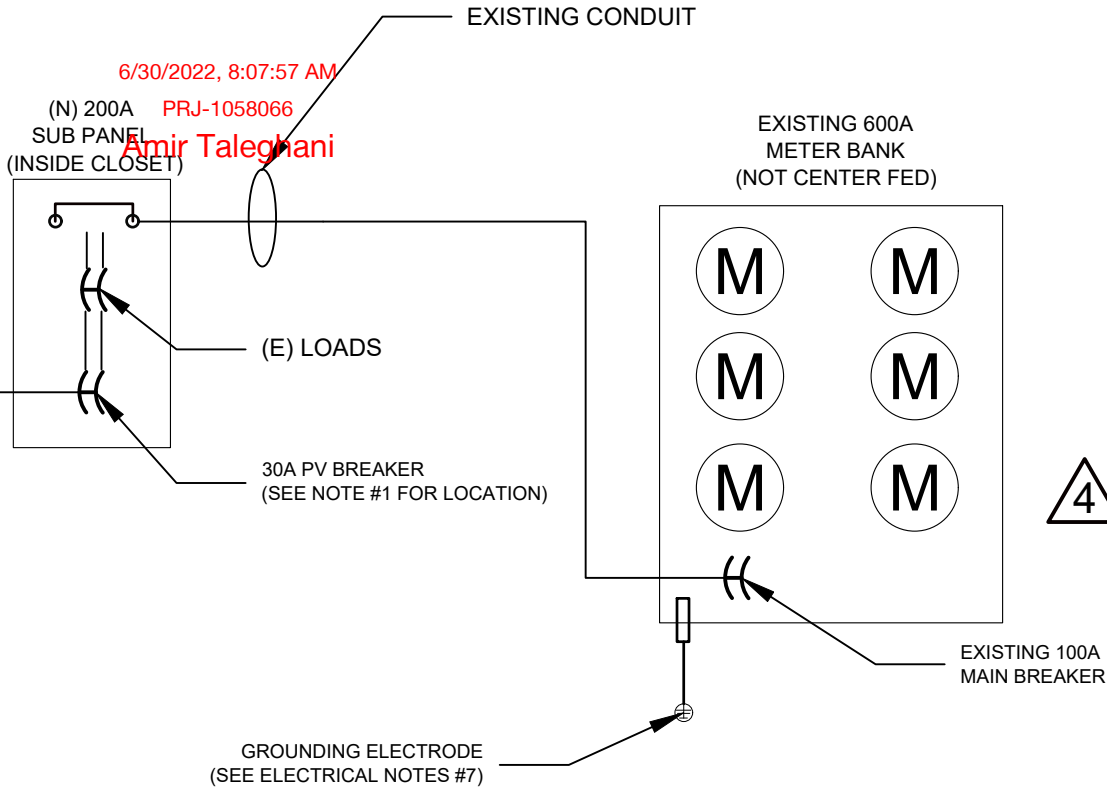
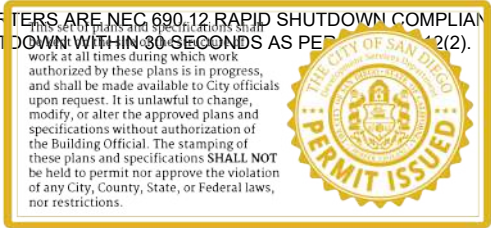


SINGLE LINE DIAGRAM STATES #6 BARE COPPER GROUNDING FOR THE RAILS AND MODULES



ELECTRICAL NOTES:

1. THE PHOTOVOLTAIC CONNECTION IN THE PANEL BOARD SHALL BE POSITIONED AT THE OPPOSITE (LOAD) END FROM THE INPUT FEEDER LOCATION OR MAIN CIRCUIT LOCATION PER CEC ART. 690.64 WHEN USING THE 120% OF RATING ALLOWANCE FOR DETERMINING THE TOTAL RATING OF OVER CURRENT DEVICE AS PER 705.12(B)(2)(3)(b). A CONNECTION AT EITHER END, BUT NOT BOTH ENDS, OF A CENTER-FED PANEL BOARD IN DWELLINGS SHALL BE PERMITTED WHERE THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR DOES NOT EXCEED 120 PERCENT OF THE CURRENT RATING OF THE BUSBAR AS PER 705.12(B)(2)(3)(d).
2. SOLAR CIRCUIT BREAKERS SHALL BE SUITABLE FOR BACKFEED. (CIRCUIT BREAKERS THAT ARE MARKED "LINE" AND "LOAD" ARE NOT SUITABLE FOR BACKFEED.)
3. LABELS ARE REQUIRED ON ALL INTERIOR AND EXTERIOR PHOTOVOLTAIC DC CONDUIT, RACEWAYS, ENCLOSURES AND CABLE ASSEMBLIES. LABEL SHALL READ "WARNING: PHOTOVOLTAIC POWER SOURCE" WITH A RED BACKGROUND, WHITE LETTERING, MINIMUM 3/8" LETTER HEIGHT, ALL CAPITAL LETTERS, ARIAL OR SIMILAR FONT, NON-BOLD, AND ON A RED BACKGROUND. THE MATERIALS USED SHALL BE REFLECTIVE, WEATHER RESISTANT AND SUITABLE FOR THE ENVIRONMENT. LABEL SHALL BE LOCATED AT EVERY 10 FEET OF CONDUIT, WITHIN 1' OF TURNS OR BENDS, WITHIN 1' ABOVE AND BELOW PENETRATIONS OF ROOF/CEILING ASSEMBLIES, WALLS, OR BARRIERS AND AT ALL PV COMBINER AND JUNCTION BOXES.
4. IDENTIFICATION FOR UNGROUNDED CONDUCTORS OF BRANCH CIRCUITS SUPPLIED FROM DIRECT-CURRENT SYSTEMS SHALL COMPLY WITH 210.5(C)(2)(a) AND (b). IDENTIFICATION AND GROUPING OF PHOTOVOLTAIC DC CIRCUITS SHALL COMPLY WITH NEC 690.31(B) AND SHALL BE SEPARATED FROM OTHER NON PV SYSTEM CONDUCTORS. PHOTOVOLTAIC SYSTEM GROUNDING COMPLIES WITH 690.41 & 690.35.
5. AUXILIARY GROUNDING IS PROVIDED FOR THE MOUNTING RAILS AT EACH ROW UTILIZING THE BURNDY WEEB-LUG 8.0 (UL 2703) AS PER CEC 690.47(D). PHOTOVOLTAIC SYSTEM GROUNDING COMPLIES WITH 690.41 & 690.35. EXPOSED NON-CURRENT CARRYING METAL PARTS OF PHOTOVOLTAIC RACKING, EQUIPMENT, AND CONDUCTOR ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE TO NEC 690.47 (C)(3), 250.64(C), 250.66, & 250.134 OR 250.136(A), AND SIZED PER 250.166 REGARDLESS OF VOLTAGE. THE GEC / EGC SHALL BE CONTINUOUS, OR WHEN SPLICED, THE SPLICE SHALL BE MADE BY IRREVERSIBLE CRIMP PER NEC 250.64 (C)
6. EACH MODULE SHALL BE GROUNDED PER THE MANUFACTURER'S INSTRUCTIONS USING THE INTEGRATED BONDING MIDCLAMP / COMPONENTS (SEE SOLAR MOUNT SPEC SHEET), AND AT EACH ROW UTILIZING THE SUPPLIED GROUND LUG (UL 2703). SEE GROUNDING LUG SPEC SHEET.
7. IF THE EXISTING GROUNDING ELECTRODE SYSTEM CAN NOT BE VERIFIED, OR IS ONLY METALLIC WATER PIPING, OR IT HAS A RESISTANCE GREATER THAN 25 OHMS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE AT LEAST 6' FROM THE EXISTING GROUNDING ELECTRODE.
8. ELECTRICAL EQUIPMENT INSTALLED SHALL BE LISTED, LABELED, OR CERTIFIED FOR ITS USE BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL).
9. ENPHASE MICRO-INVERTERS ARE NEC 690.12 RAPID SHUTDOWN COMPLIANT; SEE SPECS. UPON TURNING OFF THE OCPD AT THE MSP THE PV CONDUCTORS SHUT DOWN WITHIN 30 SECONDS AS PER 690.12(2).



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LICENSED PROFESSIONAL
Ted Baker
TED BAKER
C10 & C46
LIC# 858088
EXP. 4/30/2023

PHOTOVOLTAIC SYSTEM SIZE:
6.0 kW DC

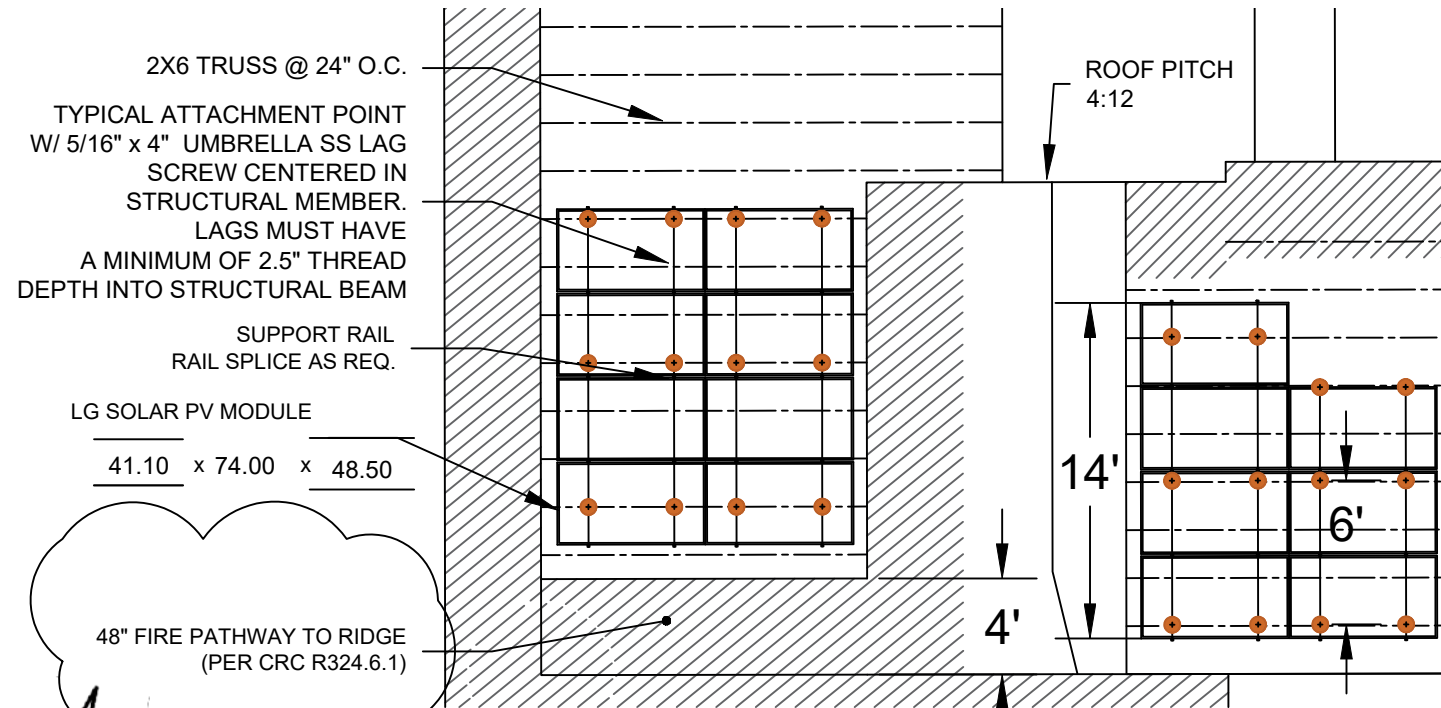
Williams Residence
5617 ADOBE FALLS ROAD UNIT D, SAN
DIEGO, CA 92120
APN: 462 210 31 07

REVISIONS:
MA 06/14/2022

DRAWN BY: MA
JOB NO: S33889
DATE: 03/23/2022

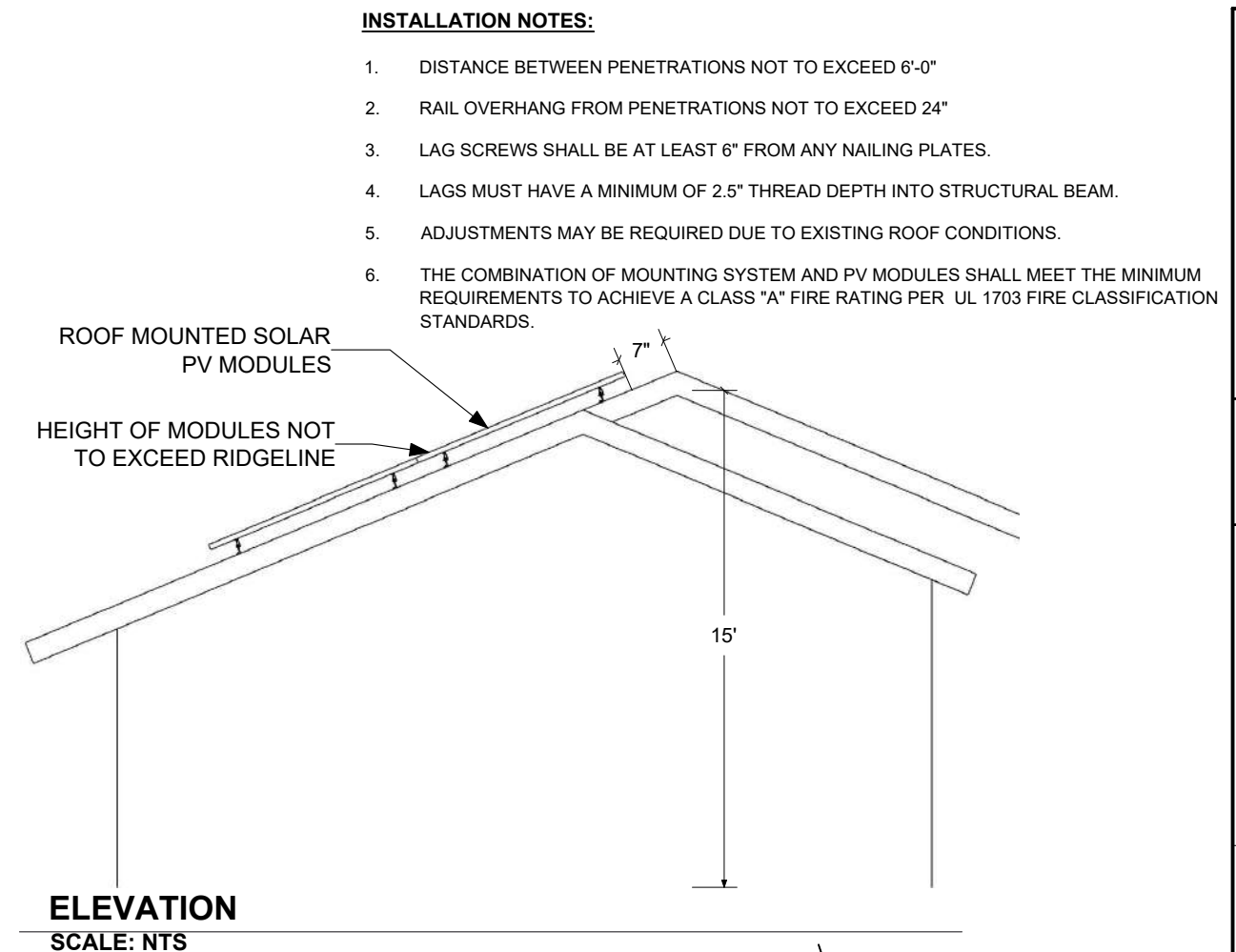
SINGLE LINE
DIAGRAM

PV 2

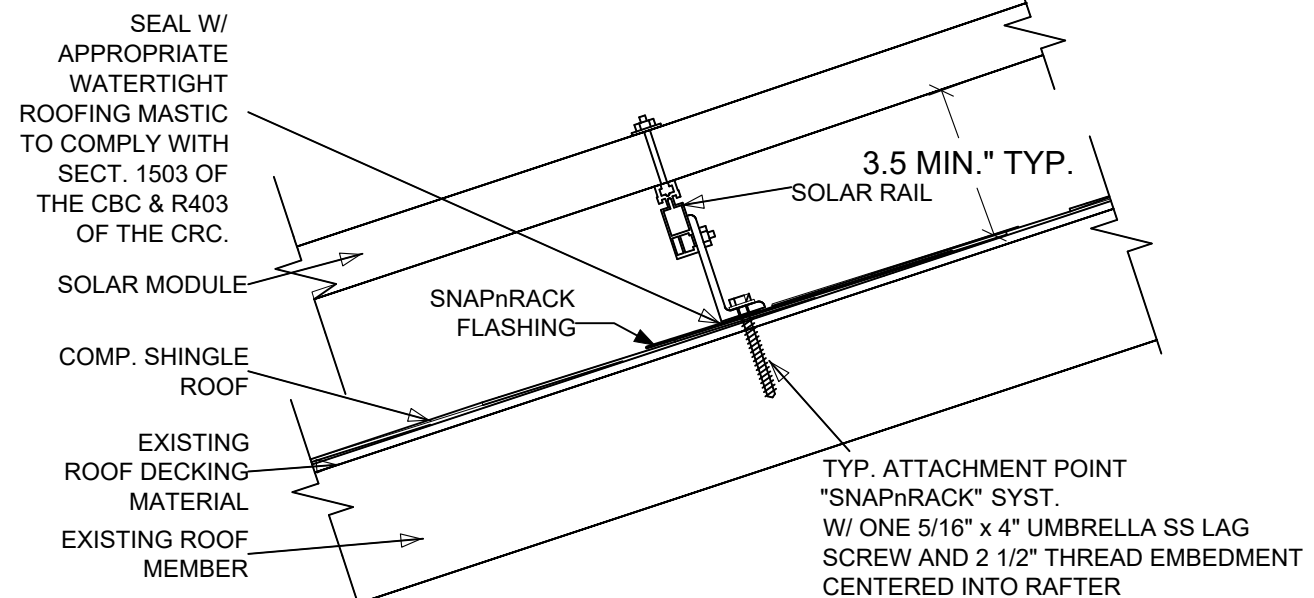


1 ENLARGED PARTIAL ROOF/RACKING PLAN
SCALE: 1/8" = 1'-0"

CLIENT - S33889	DEAD LOAD		
	Module	Q.PEAK DUO BLK-G10+ 400	
	Weight	48.50	lbs
	Area (Module)	21.12	sq. ft.
	Length	74.00	in
	Width	41.10	in
	Quantity	Lbs. / Unit	Lbs. / Qty.
Q.PEAK DUO BLK-G10+ 400	15	48.5	727.5
IQ7A-72-2-US	15	2.4	35.7
Midclamp	22	0.05	0.00
Endclamp	16	0.06	0.00
L-Foot	24	0.2	4.8
Rail	109.6	0.8	87.7
Tilt Leg	0	1.5	0.0
Splice bars	8	0.5	3.9
Footings	24	2.2	52.8
	Total Weight / Array	912.4	Lbs
	Total Area / Array	316.8	Sq.ft.
	Lbs. per SQFT	2.9	Lbs/sq.ft.
	Lbs. per Standoff	38.0	Lbs.



3 4' FIRE PATHWAY AND SETBACKS FOR BUILDING OCCUPANCY



2 SOLAR MODULE MOUNTING DETAIL
SCALE: NTS

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Ted Baker
TED BAKER
C10 & C46
LIC# 858088
EXP. 4/30/2023

PHOTOVOLTAIC SYSTEM SIZE:
6.0 kW DC

Williams Residence
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RACKING PLAN /
DETAILS

PV 3

DIRECTORY PLACARD (BELOW)



 **CAUTION:**
POWER TO THIS BUILDING IS ALSO
SUPPLIED FROM THE FOLLOWING
SOURCES WITH DISCONNECTS
LOCATED AS SHOWN.

 PV ARRAY W/ RAPID SHUTDOWN EQUIPPED

○ FIRE ROOF ACCESS
POINTS

ADOBE FALLS ROAD

SERVICE POINT UTILITY METERING

SOLAR DISTRIBUTION PANEL
WITH SOLAR PV BREAKERS
RAPID SHUTDOWN SWITCH

SUB PANEL WITH SOLAR
BREAKER INSIDE
RAPID SHUTDOWN SWITCH

WARNING: DUAL POWER SOURCES
SECOND SOURCE IS PHOTO-VOLTAIC SYSTEM
RATED AC OUTPUT CURRENT: 21.75 AMPS
NOMINAL OPERATING AC VOLTAGE: 240 VOLTS

BAKER ELECTRIC
HOME ENERGY

760-546-6099

LOCATED AT MSP AS PER 690.56(B), 690.54, 705.10, 705.12(D)(3)

WARNING:
POWER SOURCE OUTPUT CONNECTION-
DO NOT RELOCATE THIS
OVERCURRENT DEVICE

LOCATED ADJACENT TO BACK-FED
BREAKER AS PER 705.12(B)(2)(3)(b)

WARNING
ELECTRIC SHOCK HAZARD
TERMINALS ON THE LINE AND LOAD
SIDES MAY BE
ENERGIZED IN THE OPEN POSITION

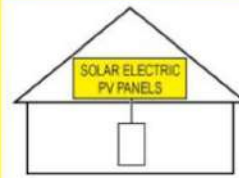
LOCATED AT DC DISCONNECTING
MEANS PER 690.13(B)

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LOCATED AT SWITCH AS PER 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 THE ARRAY



6" X 3 1/2"

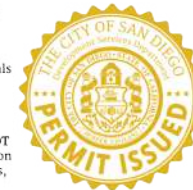
LOCATED AT MSP AS PER 690.56(C)(1)(a)

SOLAR DISTRIBUTION PANEL

This breaker panel is only for combining solar inverter outputs. Do NOT add any additional breakers or make any circuit connections.

LOCATED AT SOLAR LOAD CENTER

This set of plans and specifications shall be kept on the site of the structure of work at all times during which work authorized by these plans is in progress, and shall be made available to City officials upon request. It is unlawful to change, modify, or alter the approved plans and specifications without authorization of the Building Official. The stamping of these plans and specifications **SHALL NOT** be held to permit nor approve the violation of any City, County, State, or Federal laws, nor restrictions.



6/30/2022, 8:07:57 AM

PRJ-1058066

Amir Taleghani

PERMANENT SIGNAGE NOTES:

1. ALL PLAQUES AND SIGNAGE REQUIRED BY THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE AND THE SAN DIEGO COUNTY AREA ELECTRICAL NEWSLETTER WILL BE INSTALLED AS REQUIRED.
2. ALTERNATE POWER SOURCE PLACARD SHALL BE METALLIC OR PLASTIC, ENGRAVED OR MACHINE PRINTED LETTERS IN A CONTRASTING COLOR TO THE PLAQUE. THIS PLAQUE WILL BE ATTACHED BY POP RIVETS OR SCREWS OR OTHER APPROVED METHOD.
3. DIRECTORY PLACARD MARKING CONTENT AND FORMAT: RED BACKGROUND, WHITE LETTERING, MINIMUM 3/8" LETTER HEIGHT, ALL CAPITAL LETTERS, ARIAL OR SIMILAR FONT, NON BOLD, REFLECTIVE WEATHER RESISTANT MATERIAL SUITABLE FOR THE ENVIRONMENT.
4. THE FOLLOWING WIRING METHODS AND ENCLOSURES THAT CONTAIN PV SYSTEM DC CIRCUIT CONDUCTORS SHALL BE MARKED WITH THE WORDING "WARNING: PHOTOVOLTAIC POWER SOURCE" BY MEANS OF PERMANENTLY AFFIXED LABELS WITH SPACING BETWEEN LABELS NOT MORE THAN 10 FT. THE LABELS SHALL BE REFLECTIVE, AND ALL LETTERS SHALL BE CAPITALIZED AND SHALL BE A MINIMUM HEIGHT OF 3/8" IN WHITE ON A RED BACKGROUND. PV SYSTEM DC CIRCUIT LABELS SHALL APPEAR ON EVERY SECTION OF THE WIRING SYSTEM THAT IS SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS.

BAKER ELECTRIC
HOME ENERGY

CENSED PROFESSIONAL

TED BAKER
C10 & C46
LIC# 858088
EXP. 4/30/2023

6.0 kW DC

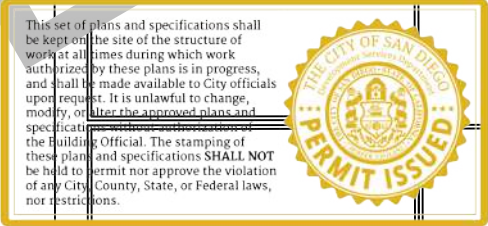
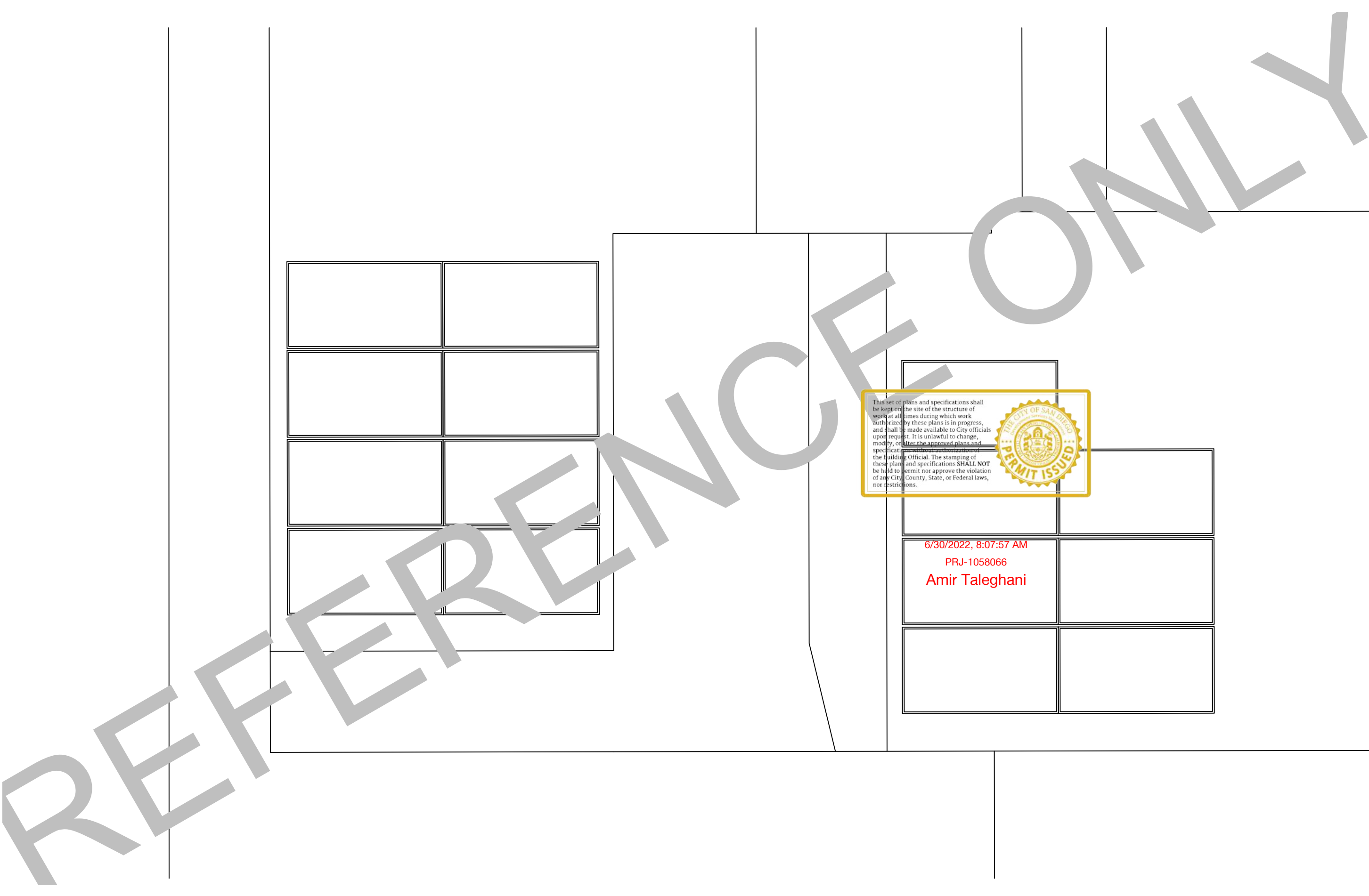
Williams Residence
5617 ADOBE FALLS ROAD UNIT D, SAN
DIEGO, CA 92120
APN: 462 210 31 07

REVISIONS:

RAWN BY:	MA
DB NO:	S33889
DATE:	03/23/2022

SYSTEM LABELS

PV 4



6/30/2022, 8:07:57 AM

PRJ-1058066

Amir Taleghani

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PHOTOVOLTAIC SYSTEM SIZE:
6.0 kW DC

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JOB NO:	S33889
DATE:	03/23/2022

AS BUILT
PV 5

Enphase IQ 7A Microinverter

The high-powered smart grid-ready **Enphase IQ 7A Micro™** dramatically simplifies the installation process while achieving the highest system efficiency for systems with 60-cell and 72-cell modules.

Part of the Enphase IQ System, the IQ 7A Micro integrates with the Enphase IQ Envoy™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analysis software.

The IQ Series Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.



High Power

- Peak output power 366 VA @ 240 VAC and 295 VA @ 208 VAC

Easy to Install

- Lightweight and simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014 & 2017)

Efficient and Reliable

- Optimized for high powered 60-cell and 72-cell modules
- Highest CEC efficiency of 97%
- More than a million hours of testing
- Class II double-insulated enclosure
- UL listed

Smart Grid Ready

- Complies with advanced grid support, voltage and frequency ride-through requirements
- Envoy and Internet connection required
- Configurable for varying grid profiles
- Meets CA Rule 21 (UL 1741-SA)

Enphase IQ 7A Microinverter

INPUT (DC)	IQ7A-72-2-US	
Commonly used module pairings ¹	295 W–460 W +	
Module compatibility	60-cell, 66-cell, and 72-cell PV modules	
Maximum input DC voltage	58 V	
Power point tracking voltage range ²	18 V–58 V	
Min/Max start voltage	30 V / 58 V	
Max DC short circuit current (module Isc) ³	15 A	
Overvoltage class DC port	II	
DC port backfeed current	0 A	
PV array configuration	1 x 1 ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit	
OUTPUT (AC)	@ 240 VAC	@ 208 VAC
Peak output power	366 VA	295 VA
Maximum continuous output power	349 VA	290 VA
Nominal (L-L) voltage/range ⁴	240 V / 211–264 V	208 V / 183–229 V
Maximum continuous output current	1.45 A (240 VAC)	1.39 A (208 VAC)
Nominal frequency	60 Hz	
Extended frequency range	47–68 Hz	
AC short circuit fault current over 3 cycles	5.8 Arms	
Maximum units per 20 A (L-L) branch circuit ⁵	11 (240 VAC)	11 (208 VAC)
Overvoltage class AC port	III	
AC port backfeed current	18 mA	
Power factor setting	1.0	
Power factor (adjustable)	0.85 leading ... 0.85 lagging	
EFFICIENCY	@240 VAC	@208 VAC
CEC weighted efficiency	97.0 %	96.5 %
MECHANICAL	This set of plans and specifications shall be kept on the site of the structure of which they are a part during which work is being done by these plans is in progress, and shall be made available to City officials upon request. It is unlawful to change, modify or alter the approved plans and specifications without the authorization of the Building Official. The stamping of these plans and specifications SHALL NOT be held to permit nor approve the violation of any City, County, State, or Federal laws, nor restrictions. 6/30/2022 8:07:57 AM PRJ-1058066 Amir Taleghani	
Ambient temperature	-40°C to +60°C	
Relative humidity	5% to 95% (non-condensing)	
Connector	MC4 compatible	
Dimensions (W x H x D)	175 mm x 30.2 mm (without bracket)	
Weight	0.238 lbs (108 g)	
Cooling	Natural convection – No fans	
Approved for wet locations	Yes	
Pollution degree	PD3	
Enclosure	Class II double-insulated, corrosion resistant polymeric enclosure	
Environmental category / UV exposure rating	NEMA Type 6 / outdoor	
FEATURES		
Communication	Power Line Communication (PLC)	
Monitoring	Enlighten Manager and MyEnlighten monitoring options Compatible with Enphase IQ Envoy	
Disconnecting means	The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690.	
Compliance	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 and NEC-2017 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according manufacturer's instructions.	

1. No enforced DC/AC ratio. See the compatibility calculator at <https://enphase.com/en-us/support/module-compatibility>.
2. CEC peak power tracking voltage range is 38 V to 43 V.
3. Maximum continuous input DC current is 10.2A.
4. 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.

To learn more about Enphase offerings, visit enphase.com

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2019-11-07



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CERTIFICATE OF COMPLIANCE

Certificate Number 20180626-E341165
Report Reference E341165-20171030
Issue Date 2018-June-26

Issued to: Enphase Energy Inc.
1420 N. McDowell Blvd. Petaluma, CA 94954-6515

This is to certify that representative samples of Photovoltaic Grid Support Utility Interactive Inverter with Rapid Shutdown Functionality
Models IQ7-60, IQ7PLUS-72, and IQ7X-96, followed by -2, -5, -B, or -ACM, followed by -US+. Models IQ7PD-72-2-US and IQ7PD-84-2-US.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 1741, Standard for Safety for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, UL 1741, Second Edition, dated January 28, 2010. Including the requirements in UL 1741 Supplement SA, sections as noted in the Technical considerations.
IEEE 1547, IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems.
IEEE 1547.1, IEEE Standard for Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems.
UL 62109-1, Safety of Converters for Use in Photovoltaic Power Systems - Part 1: General Requirements; IEC 62109-2, Safety of Power Converters for use in Photovoltaic Power Systems - Part 2: Particular Requirements for Inverters.
CSA C22.2 No. 107.1-01, General Use Power Supplies.

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

B. Mahlen

Bruce Mahlenholz, Director North American Certification Program
UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20180626-E341165
Report Reference E341165-20171030
Issue Date 2018-June-26

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Standards for Safety:

UL 1741, Standard for Safety for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, UL 1741, Second Edition, dated January 28, 2010. Including the requirements in UL 1741 Supplement SA, sections as noted in the Technical considerations.

IEEE 1547, IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems.
IEEE 1547.1, IEEE Standard for Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems.

UL 62109-1, Safety of Converters for Use in Photovoltaic Power Systems - Part 1: General Requirements; IEC 62109-2, Safety of Power Converters for use in Photovoltaic Power Systems - Part 2: Particular Requirements for Inverters.

CSA C22.2 No. 107.1-01, General Use Power Supplies.



6/30/2022, 8:07:57 AM

PRJ-1058066

Amir Taleghani

B. Mahlen

Bruce Mahlenholz, Director North American Certification Program
UL LLC

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Enphase IQ Combiner 3-ES/3C-ES

X-IQ-AM1-240-3-ES
X-IQ-AM1-240-3C-ES

The **Enphase IQ Combiner 3-ES/3C-ES™** with Enphase IQ Envoy™ and integrated LTE-M1 modem (included only with IQ Combiner 3C-ES) consolidates interconnection equipment into a single enclosure and streamlines PV 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.



X-IQ-AM1-240-3C-ES

X-IQ-AM1-240-3-ES

Smart

- Includes IQ Envoy for communication and control
- Includes LTE-M1 cell modem (included only with IQ Combiner 3C-ES)
- Includes solar shield to match Ensemble esthetics 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

- Reduced size from IQ Combiner+ (X-IQ-AM1-240-2)
- Centered mounting brackets support single stud mounting
- Supports back and side conduit entry
- Up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- 80 A 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
- UL listed

Enphase IQ Combiner 3-ES / 3C-ES

MODEL NUMBER	
IQ Combiner 3-ES (X-IQ-AM1-240-3-ES)	IQ Combiner 3-ES with Enphase IQ Envoy printed circuit board for integrated revenue grade production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes solar shield to match the Encharge storage system and Enpower smart switch and to deflect heat.
IQ Combiner 3C-ES (X-IQ-AM1-240-3C-ES)	IQ Combiner 3C-ES with Enphase IQ Envoy printed circuit board for integrated revenue grade production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes Enphase Mobile Connect LTE-M1 (CELLMODEM-M1), a plug-and-play industrial-grade cellular modem for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the Virgin Islands, where there is adequate cellular service in the installation area.) Includes solar shield to match the Encharge storage system and Enpower smart switch and to deflect heat.
ACCESSORIES and REPLACEMENT PARTS	
Ensemble Communications Kit (COMMS-CELLMODEM-M1)	Includes COMMS-KIT-01 and CELLMODEM-M1 with 5-year data plan for Ensemble.
Circuit Breakers BRK-10A-2-240 BRK-15A-2-240 BRK-20A-2P-240	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
EPLC-01	Power line carrier (communication bridge pair), quantity - one pair
XA-SOLARSHIELD-ES	Replacement solar shield for Combiner 3-ES / 3C-ES
XA-PLUG-120-3	Accessory receptacle for Power Line Carrier in IQ Combiner 3-ES / 3C-ES (required for 120VAC)
XA-ENV-PCBA-3	Replacement IQ Envoy printed circuit board (PCB) for Combiner 3-ES / 3C-ES
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 rating (output)	90 A
Max. fuse rating (input from PV/storage)	90 A
Branch circuits (voltage and/or amperage)	Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included)
Max. branch circuit breaker rating	80A of distributed generation / 90A with IQ Envoy breaker included
Production metering CT (CT-200)	200 A solid core pre-installed and wired to IQ Envoy
Consumption monitoring CT (CT-200)	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 4G based LTE-M1 cellular modem (included only with IQ Combiner 3C-ES). 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, 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 Envoy	UL 60601-1/CANCSA 22.2 No. 61010-1

To learn more about Enphase offerings, visit enphase.com

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To learn more about Enphase offerings, visit enphase.com



Enphase IQ Envoy

The **Enphase IQ Envoy™** communications gateway delivers solar production and energy consumption data to Enphase Enlighten™ monitoring and analysis software for comprehensive, remote maintenance and management of the Enphase IQ System.

With integrated revenue grade production metering and optional consumption monitoring, the Envoy IQ is the platform for total energy management and integrates with the Enphase IQ Battery™.



Smart

- Enables web-based monitoring and control
- Bidirectional communications for remote upgrades
- Supports power export limiting and zero-export applications

Simple

- Easy system configuration using Enphase Installer Toolkit™ mobile app
- Flexible networking with Wi-Fi, Ethernet, or cellular

Reliable

- Designed for installation indoors or outdoors
- Five-year warranty

Enphase IQ Envoy

MODEL NUMBERS		
Enphase IQ Envoy™ ENV-IQ-AM1-240	Enphase IQ Envoy communications gateway with integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and optional consumption monitoring (+/- 2.5%). Includes one 200A continuous rated production CT.	
ACCESSORIES (order separately)		
Enphase Mobile Connect™ CELLMODEM-03 (4G / 12-year data plan) CELLMODEM-01 (3G / 5-year data plan) CELLMODEM-M1 (4G based LTE-M / 5-year data plan)	Plug and play industrial grade cellular modem with data plan 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.)	
Consumption Monitoring CT CT-200-SPLIT	Split-core current transformers enable whole home metering.	
POWER REQUIREMENTS		
Power requirements	120/240 VAC split-phase. Max 20 A overcurrent protection required.	
CAPACITY		
Number of microinverters polled	Up to 600	
MECHANICAL DATA		
Dimensions (WxHxD)	21.3 x 12.6 x 4.5 cm (8.4" x 5" x 1.8")	
Weight	17.6 oz (498 g)	
Ambient temperature range	-40° to 65° C (-40° to 149° F) -40° to 46° C (-40° to 115° F) if installed in an enclosure	
Environmental rating	IP30. For installation indoors or in an NRTL-certified, NEMA type 3R enclosure.	
Altitude	To 2000 meters (6,560 feet)	
Production CT	- Is limited to 200A of continuous current / 250A OCPD – 72kW AC	
Consumption CT	- External aperture measures 19.36mm to support 250MCM THWN conductors (max) - Electrical services to 250A with parallel runs up to 500A - Internal aperture measures 0.84" x 0.96" (21.33mm x 24.38mm) to support 1/0 THWN conductor - Wire insulation rating of 600V	
INTERNET CONNECTION OPTIONS		
Integrated Wi-Fi	802.11b/g/n	
Ethernet	802.3, Cat5E (or Cat 6) UTP Ethernet cable, not included	
Mobile	Optional, CELLMODEM-01 (3G) or CELLMODEM-03 (4G), not included	
COMPLIANCE		
Compliance	6/30/2022, 8:07:57 AM PRJ-1058066 Amir Taleghani	UL 916 CAN/CSA C22.2 No. 61010-1 47 CFR, Part 15, Class B, ICES 003 IEC/EN 61010-1:2010, EN50065-1, EN61000-4-5, EN61000-6-1, EN61000-6-2 Metering: ANSI C12.20 accuracy class 0.5

CERTIFICATE OF COMPLIANCE

Certificate Number 20161102-E468459
Report Reference E468459-20150630
Issue Date 2016-NOVEMBER-02

Issued to: ENPHASE ENERGY INC
1420 N McDowell Blvd
Petaluma CA 94954-6515

This is to certify that representative samples of ENERGY USAGE MONITORING SYSTEMS
Models: ENV-S-AB-120-A or 830-00380, ENV-S-AM1-120 or 830-00377 or 830-00441, and 830-00500 or ENV-IQ-AM1-240.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 916, Energy Management Equipment.
CAN/CSA-C22.2 No. 1010.1, Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements.
CSA CAN3-C17, Alternating-Current Electricity Metering.

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

B. Mahlenz
Bruce Mahlenholz, Director North American Certification Program
UL LLC

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Type Examination Certification



Certificate Number	: C11517506_Rev1
Company Name and Location	: Enphase Energy, Inc. 1420 N McDowell Blvd Petaluma, CA 94954-6515
Product	: IQ Envoy Board: 800-005555-03; SK J: ENV-IQ-AM1-240
Product Serial Nos.	: Refer to UL Test Report
Date of Report	: March 13, 2017
Testing Location	: 12 Laboratory Drive, Rm. 27700



Test Specifications	: Enphase Test Plan Reference Standards: ANSI C12:20-2010, ANSI C12:1-2008
Test Results	: The above product was found to be compliant to ANSI C12:20-2010, Class 0.5

It is the responsibility of the company shown above that the products it produces are in compliance with the applicable requirements and identical to the sample(s) actually tested. Complete test results of the testing can be found in the report referenced above.

The name of UL LLC, any abbreviation thereof, or any symbol shall not be used on or in connection with the product unless and until specifically authorized by UL LLC.

Staff Engineer: *David Colon-Smith* Program Manager: *Scotty*
Date: 2017-03-13 Date: 2017-03-13



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powered by
Q.ANTUM DUO Z

Q.PEAK DUO BLK ML-G10+

385-405

ENDURING HIGH
PERFORMANCE



BREAKING THE 20% EFFICIENCY BARRIER
Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 20.9%.



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 behavior.



ENDURING HIGH PERFORMANCE
Long-term yield security with Anti LID Technology, Anti PID Technology¹, Hot-Spot Protect and Traceable Quality Tra.Q™.



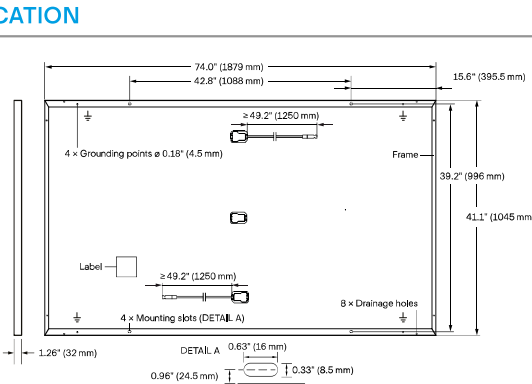
EXTREME WEATHER RATING
High-tech aluminum alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



A RELIABLE INVESTMENT
Inclusive 25-year product warranty and 25-year linear performance warranty².

¹ APT test conditions according to IEC / TS 62804-1:2015, method A (–1500 V, 96h)
² See data sheet on rear for further information.

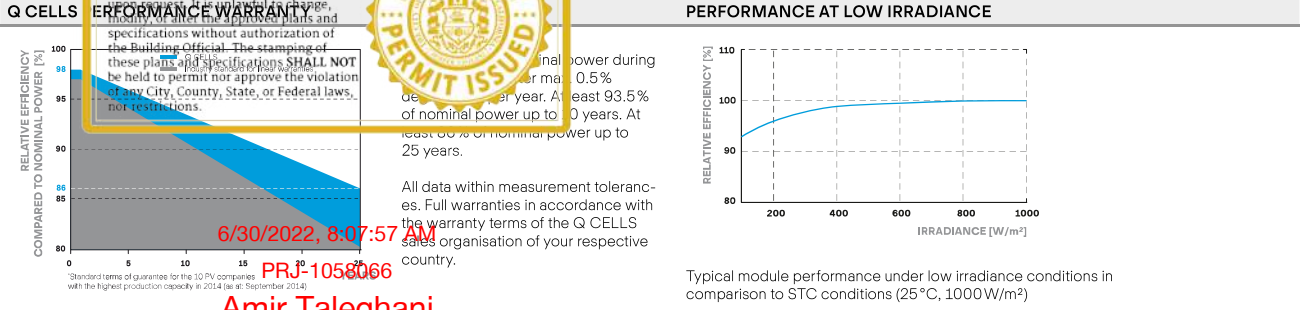
THE IDEAL SOLUTION FOR:
Rooftop arrays on residential buildings



ELECTRICAL CHARACTERISTICS

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

¹ Measurement tolerance: ±0.5% for P_{MPP}, ±0.5% for I_{SC}, ±0.5% for V_{OC}, ±0.5% for I_{MPP}, ±0.5% for V_{MPP}, ±0.5% for η. ² According to IEC 60904-3 • 2800 W/m², NMOT, spectrum AM 1.5



TEMPERATURE COEFFICIENTS					
Temperature Coefficient of I _{SC}	α	[%/K]	+0.04	Temperature Coefficient of V _{OC}	β
Temperature Coefficient of P _{MPP}	γ	[%/K]	–0.34	Nominal Module Operating Temperature	NMOT
					[°F]
					109 ± 5.4 (43 ± 3 °C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V _{sys}	[V]	1000 (IEC) / 1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating based on ANSI / UL 61730	TYPE 2
Max. Design Load, Push / Pull ³	[lbs/ft²]	75 (3600 Pa) / 55 (2660 Pa)	Permitted Module Temperature on Continuous Duty	–40 °F up to +185 °F (–40 °C up to +85 °C)
Max. Test Load, Push / Pull ³	[lbs/ft²]	113 (5400 Pa) / 84 (4000 Pa)		

³ See Installation Manual

QUALIFICATIONS AND CERTIFICATES

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



Horizontal packaging	76.4 in 1940 mm	43.3 in 1100 mm	48.0 in 1220 mm	1656 lbs 751 kg	24 pallets	24 pallets	32 modules
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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.

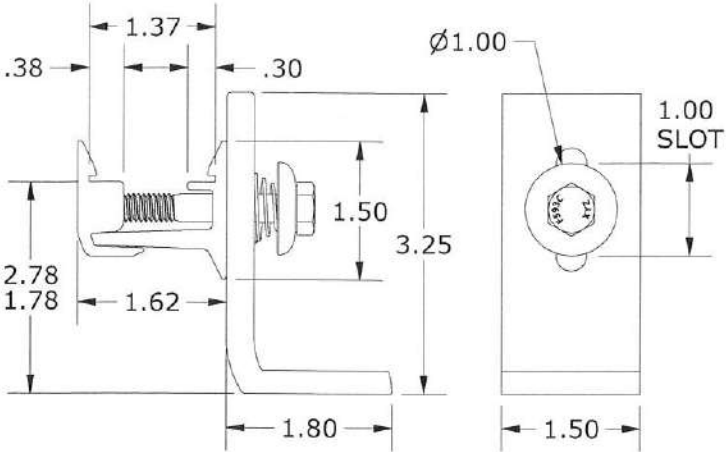
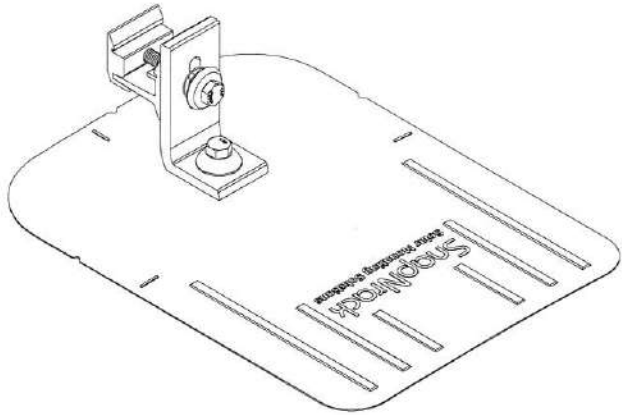
Hanwha Q CELLS America Inc.
400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | **TEL** +1 949 748 59 96 | **EMAIL** inquiry@us.q-cells.com | **WEB** www.q-cells.us

Engineered in Germany

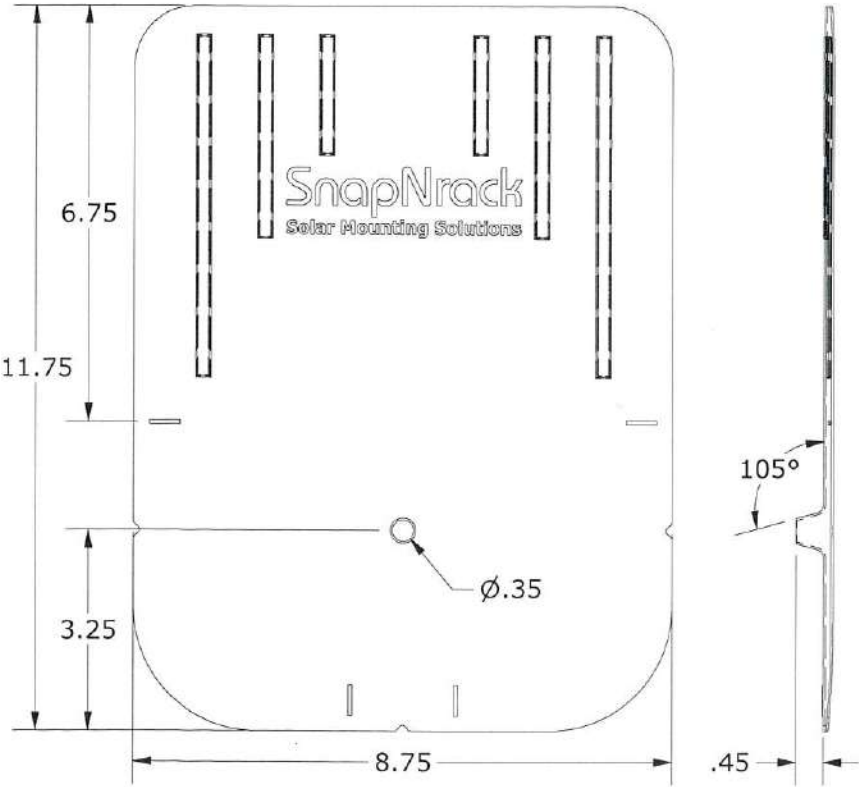


DESCRIPTION:	DRAWN BY:	
SNAPNRACK, ULTRA RAIL COMP KIT	mwatkins	
PART NUMBER(S):	REVISION:	
SEE BELOW	B	595 MARKET STREET, 29TH FLOOR • SAN FRANCISCO, CA 94105 USA PHONE (415) 580-6900 • FAX (415) 580-6902 THE INFORMATION IN THIS DRAWING IS CONFIDENTIAL AND PROPRIETARY. ANY REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF SUNRUN SOUTH LLC.

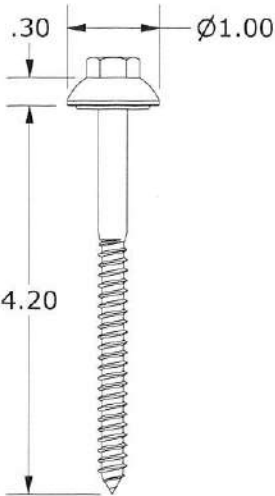
UMBRELLA L FOOT PROPERTIES	
SKU	DESCRIPTION
242-01219	ULTRA RAIL UMBRELLA L FOOT, SILVER
242-01220	ULTRA RAIL UMBRELLA L FOOT, BLACK



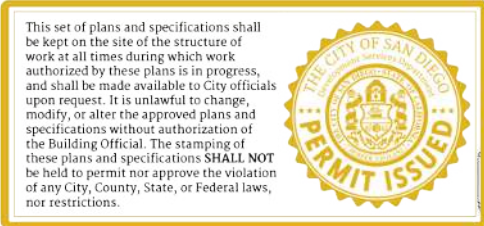
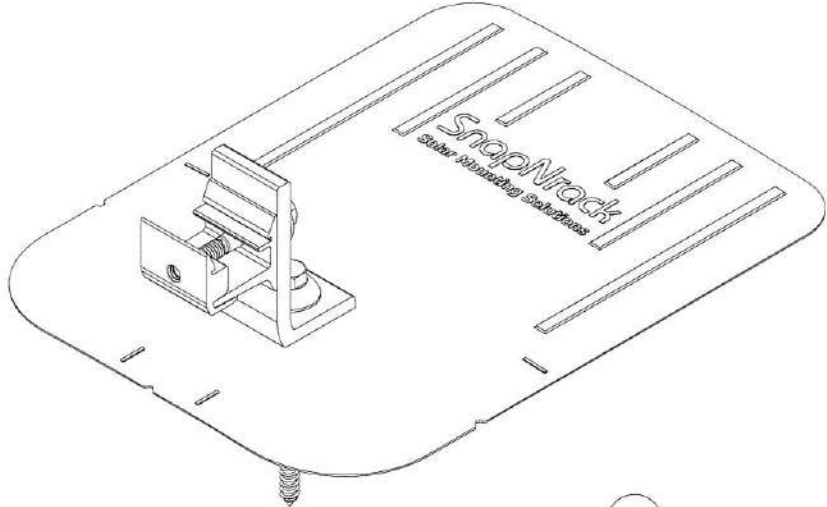
COMP FLASHING PROPERTIES	
SKU	DESCRIPTION
232-01375	COMP FLASHING, 9" X 12", BLACK ALUM
232-01376	COMP FLASHING, 9" X 12", SILVER ALUM



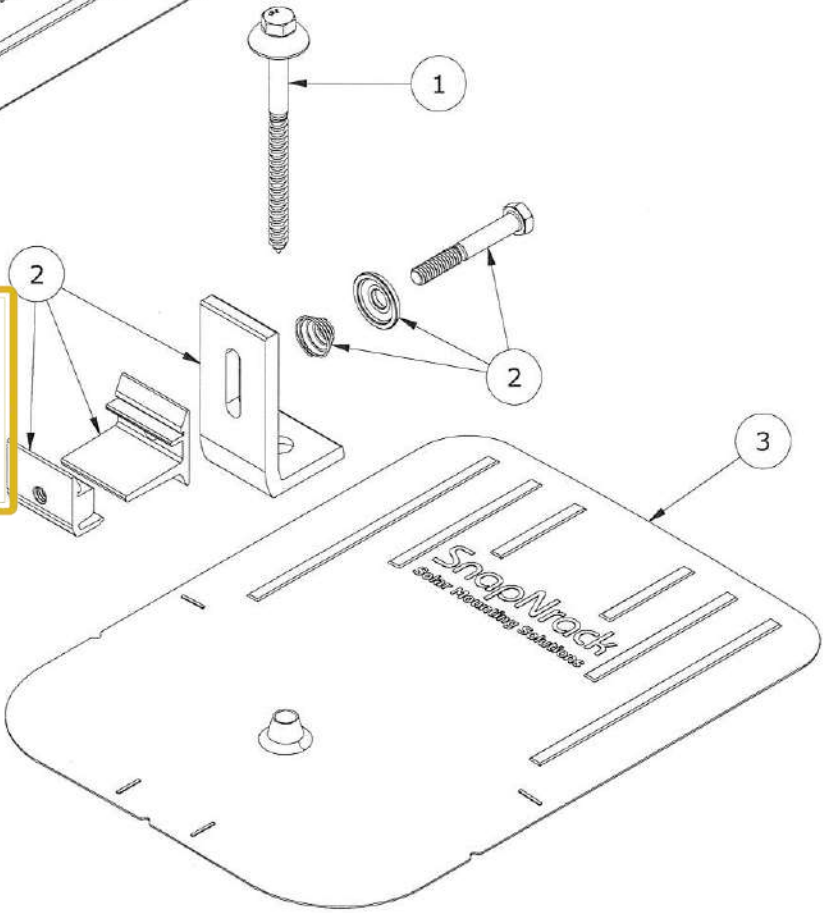
ALL DIMENSIONS IN INCHES



DESCRIPTION:	DRAWN BY:	
SNAPNRACK, ULTRA RAIL COMP KIT	mwatkins	
PART NUMBER(S):	REVISION:	
SEE BELOW	B	595 MARKET STREET, 29TH FLOOR • SAN FRANCISCO, CA 94105 USA PHONE (415) 580-6900 • FAX (415) 580-6902 THE INFORMATION IN THIS DRAWING IS CONFIDENTIAL AND PROPRIETARY. ANY REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF SUNRUN SOUTH LLC.



6/30/2022, 8:07:57 AM
PRJ-1058066
Amir Taleghani



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	242-92266	SNAPNRACK, UMBRELLA LAG, TYPE 3, 4IN, SS
2	1	242-01219, 242-01220	SNAPNRACK, ULTRA FOOT FOR U FLASHING, SILVER / BLACK
3	1	232-01375, 232-01376	SNAPNRACK, COMP FLASHING, 9IN X 12IN, SILVER / BLACK ALUM

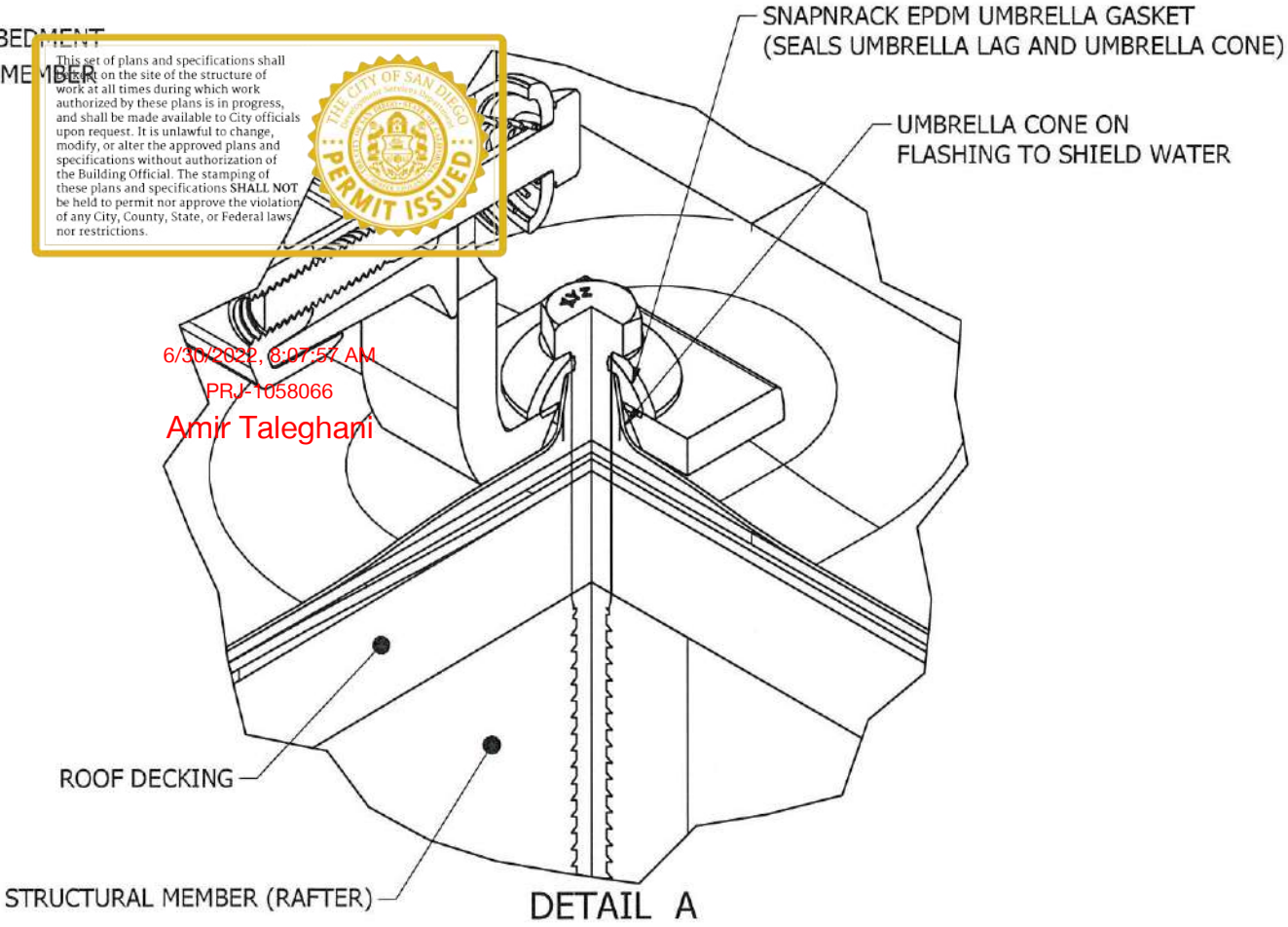
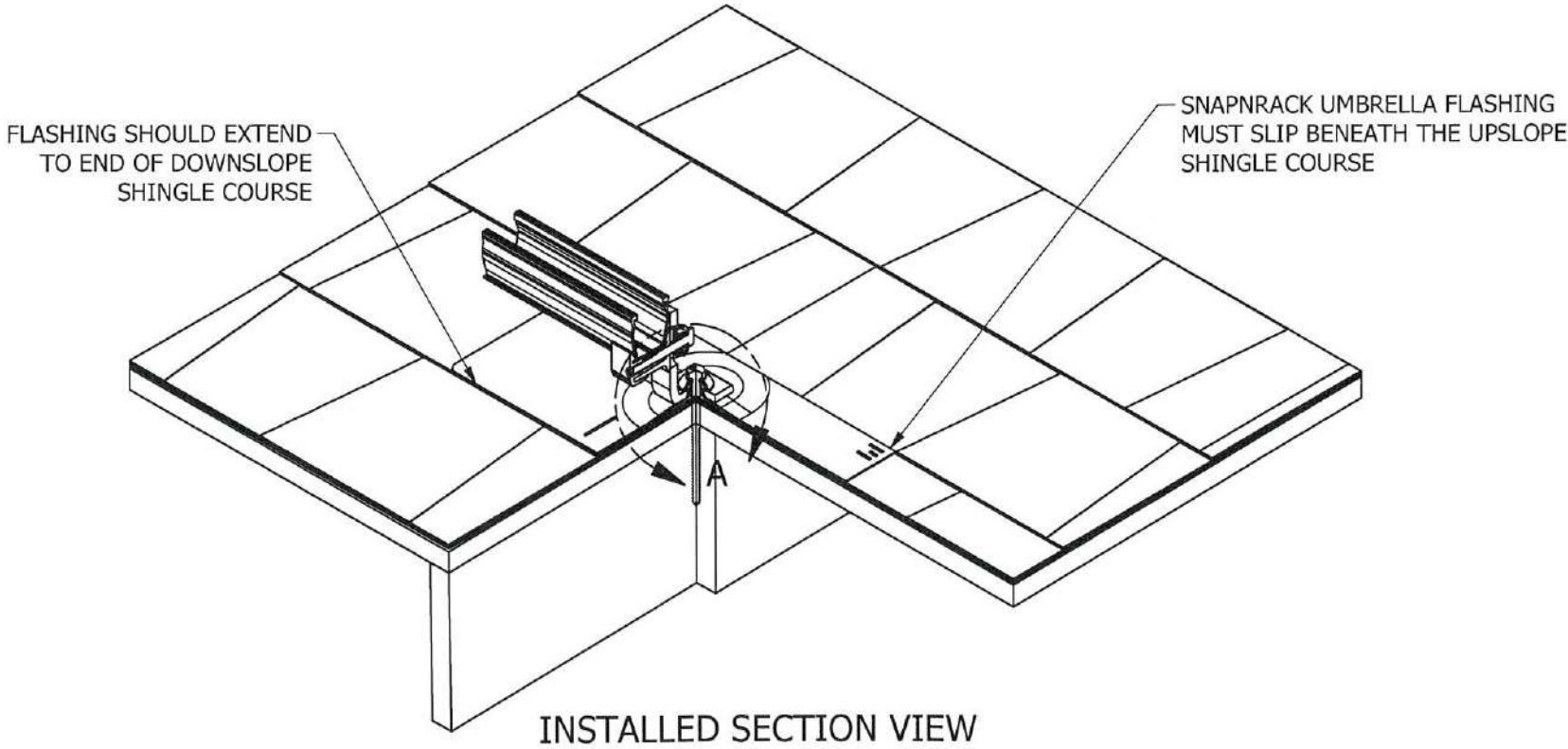
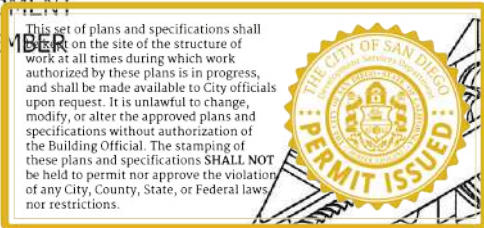
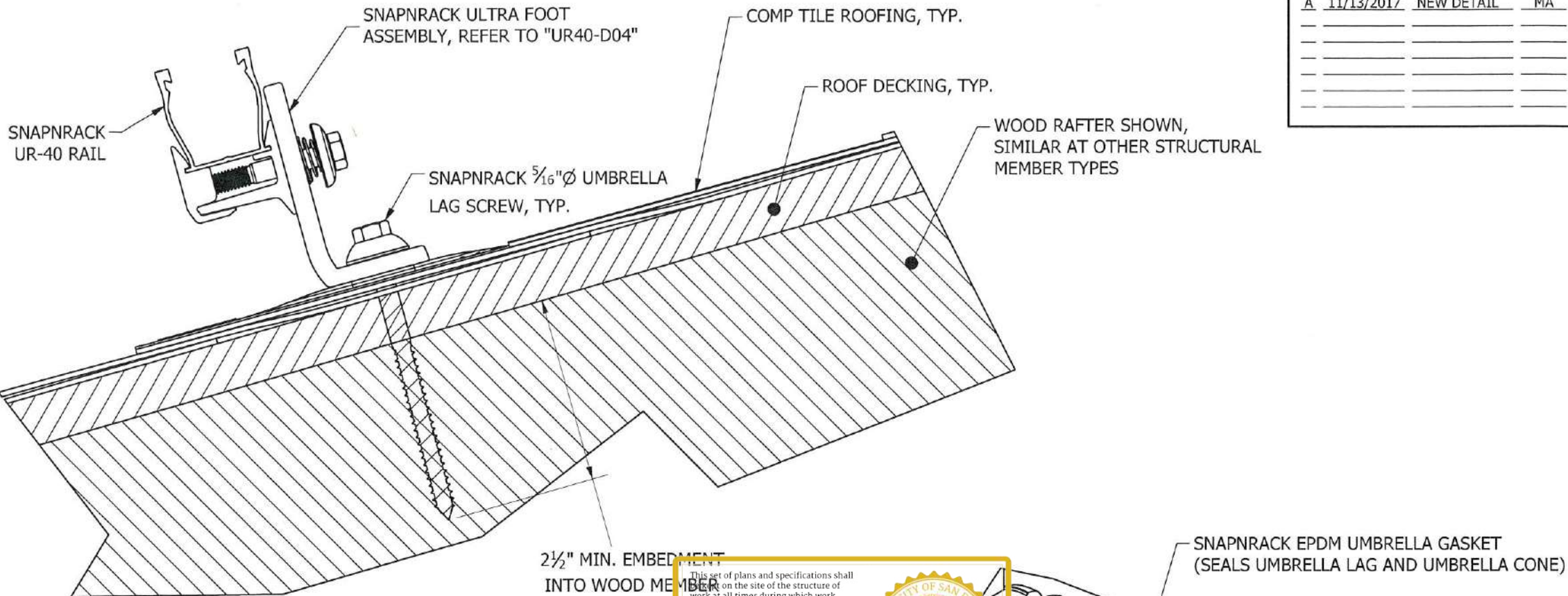
MATERIALS:	6000 SERIES ALUMINUM, STAINLESS STEEL, RUBBER
DESIGN LOAD (LBS):	405 UP, 788 DOWN, 236 SIDE
ULTIMATE LOAD (LBS):	2006 UP, 4000 DOWN, 1070 SIDE
TORQUE SPECIFICATION:	12 LB-FT
CERTIFICATION:	UL 2703, FILE E359313
WEIGHT (LBS):	0.80

SNAPNRACK UR-40 ULTRA FOOT FOR UMBRELLA
FLASHING COMP MOUNTING

$\frac{5}{16}$ " $\varnothing$ UMBRELLA LAG SCREW MUST EMBED A MIN.
OF 2 $\frac{1}{2}$ " INTO THE ROOF STRUCTURAL MEMBER.

FOR LEVELING DETAILS, PLEASE SEE SNAPNRACK
DETAIL DRAWING "UR40-D01, L FOOT LEVELING"

REVISION:		
A	11/13/2017	NEW DETAIL MA



6/30/2022, 8:07:57 AM
PRJ-1058066
Amir Taleghani



Sunrun South LLC
595 MARKET STREET, 29TH FLOOR • SAN FRANCISCO, CA 94105 USA
PHONE (415) 580-8900 • FAX (415) 580-8902
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DESIGNER: M.Affentranger
DRAFTER: M.Affentranger
APPROVED BY: G.McPheeters

SCALE: DNS
DATE: 11/13/2017

PART NUMBER:
UR40-PEN-D01

DESCRIPTION:
UR-40 PENETRATION DETAIL, ULTRA FOOT FOR UMBRELLA FLASHING

REV
A

OVERVIEW OF THE SNAPNRACK ULTRA RAIL SYSTEM INSTALLED ON A TYPICAL ROOF

REFER TO SPECIFIC "ATTACHMENT DETAIL" FOR DETAILS ON ATTACHING AND WATERPROOFING THE VARIOUS SNAPNRACK ROOF ATTACHMENT PRODUCTS

REFER TO SPECIFIC "COMPONENT DETAIL" FOR DETAILS ON VARIOUS SNAPNRACK ACCESSORY AND COMPONENT PRODUCTS

BOTH THE SNAPNRACK, UNIVERSAL END CLAMP AND SNAPNRACK, ADJUSTABLE END CLAMP CAN BE USED ON END MODULES

MODULES MAY BE CLAMPED ON SHORT OR LONG SIDE PER MODULE MANUFACTURER REQUIREMENTS

RAILS MAY BE MOUNTED UP/DOWN OR ACROSS THE SLOPE OF THE ROOF

REFER TO SNAPNRACK INSTALLATION MANUAL FOR $\frac{5}{16}$ "Ø HARDWARE TORQUE SPECIFICATIONS

SnapNrack, Adjustable End Clamp. Select to match module height

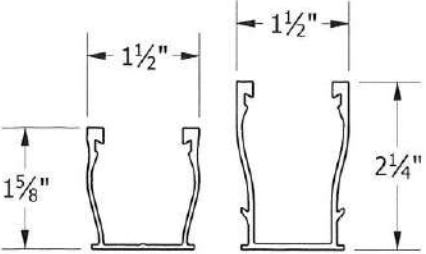
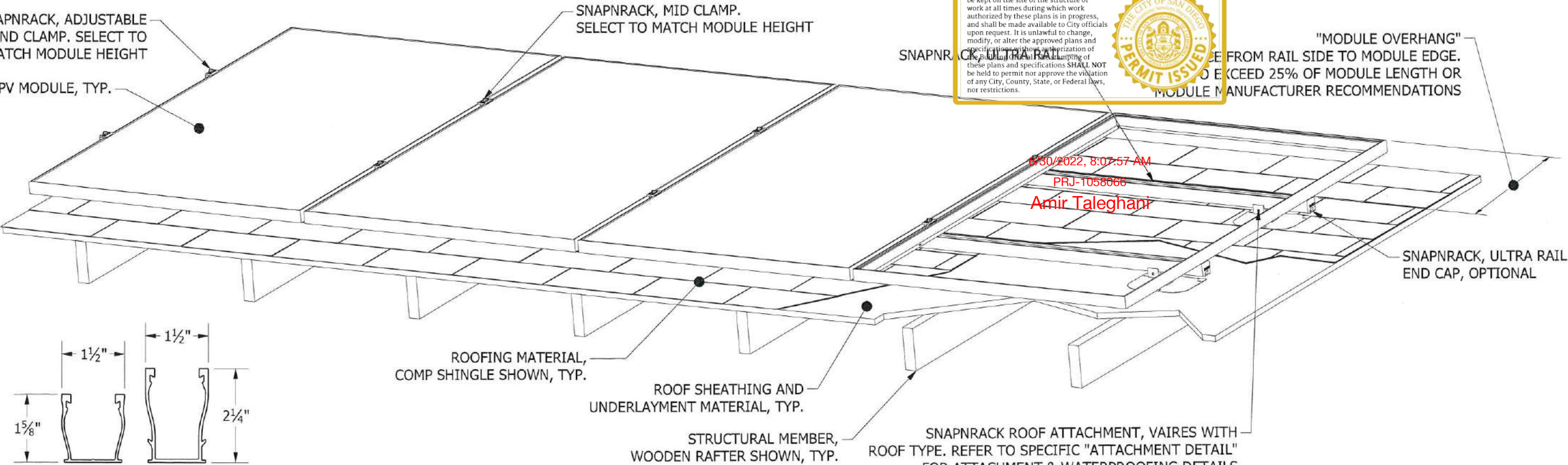
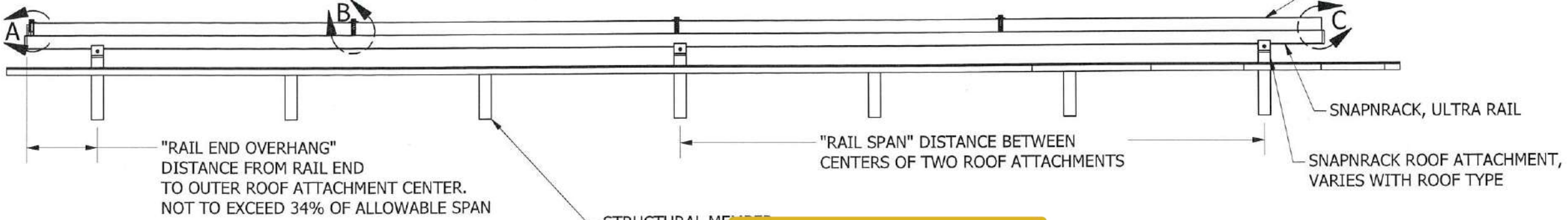
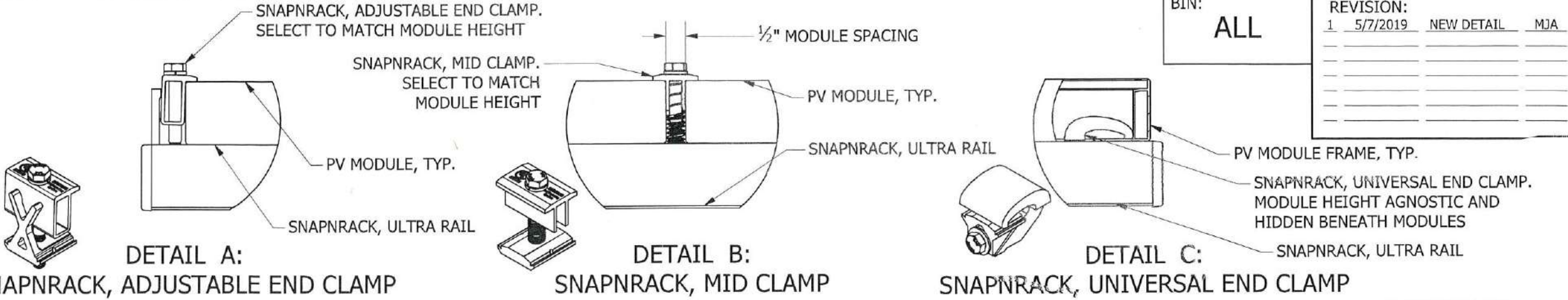
PV Module, TYP.

SnapNrack, Mid Clamp. Select to match module height

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6/30/2022, 8:07:57 AM
PRJ-1058666
Amir Taleghani

BIN:	ALL		
	REVISION:	1	5/7/2019
		NEW DETAIL	MJA



UR-40 RAIL | UR-60 RAIL
FOR USE WITH SNAPNRACK ULTRA SERIES RAILS



Sunrun South LLC
595 MARKET STREET, 29TH FLOOR • SAN FRANCISCO, CA 94105 USA
PHONE (415) 580-6900 • FAX (415) 580-5902
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DESIGNER: M.AFFENTRANGER
DRAFTER: M.AFFENTRANGER
APPROVED BY: B.PETERSON

SCALE: DNS
DATE: 5/7/2019

DRAWING NUMBER:
SNR-DC-00329

DESCRIPTION:
ULTRA RAIL, SYSTEM OVERVIEW, TYPICAL

REV
1

SNAPNRACK UR-40 RAIL AND SPLICE DETAILS

REFER TO SNAPNRACK INSTALLATION MANUAL FOR
 $\frac{5}{16}$ "Ø HARDWARE TORQUE SPECIFICATIONS

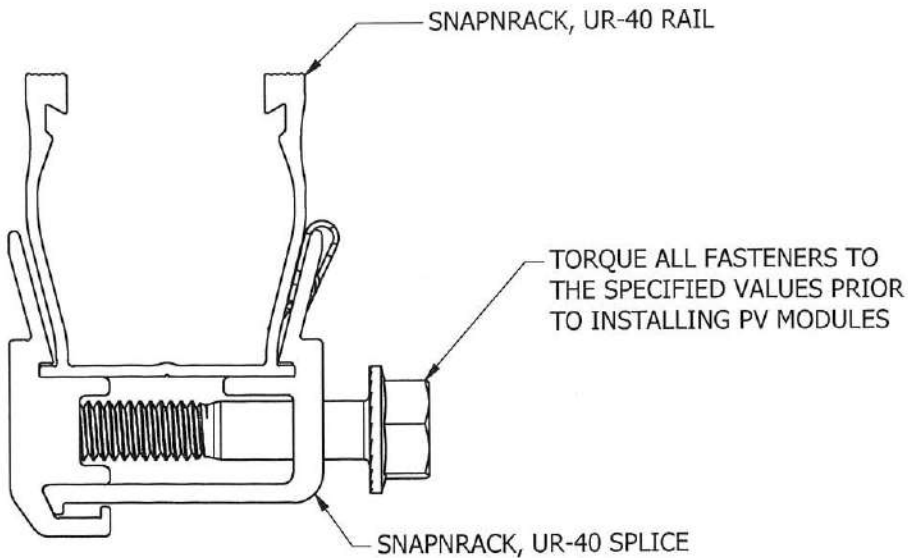
SPLICE POSITIONING:

- APPROVED - ANYWHERE ALONG RAIL SPAN
BETWEEN **TWO** ROOF ATTACHMENTS
- NOT APPROVED - RAIL OVERHANGS /
CANTILEVERS

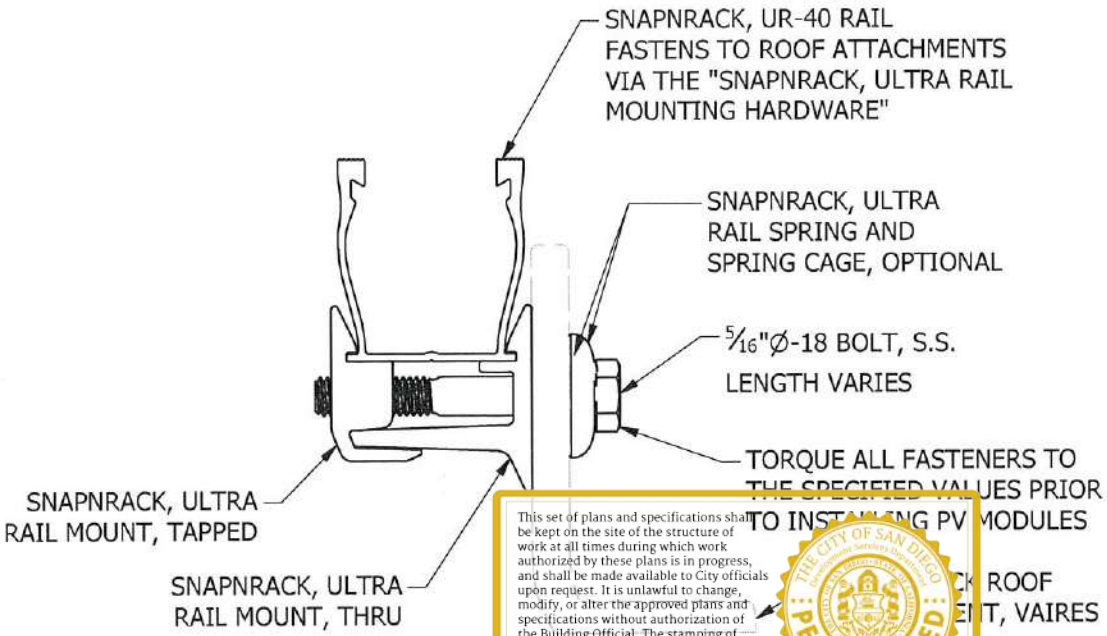
USE OF THE UR-40 SPLICE WITH THE UR-60 RAIL IS
PROHIBITED

BIN:
N/A

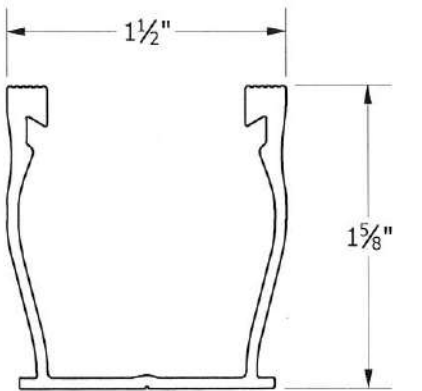
REVISION:			
1	5/7/2019	NEW DETAIL	MJA



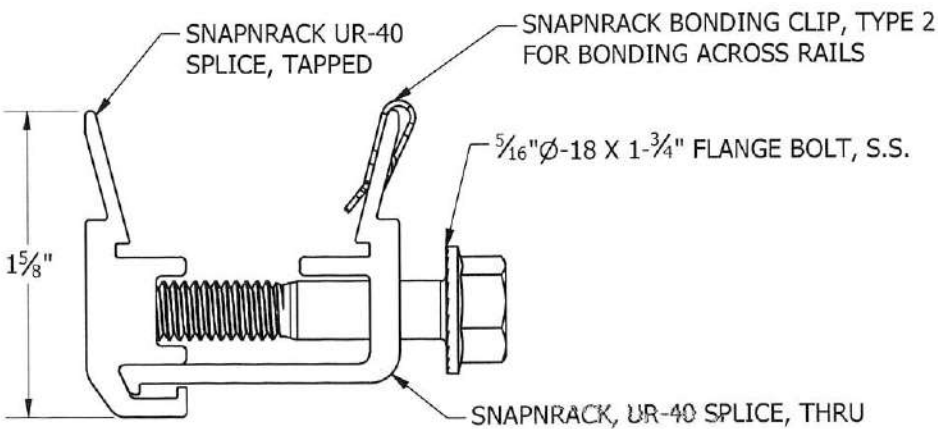
SNAPNRACK, UR-40 SPLICE INSTALLED



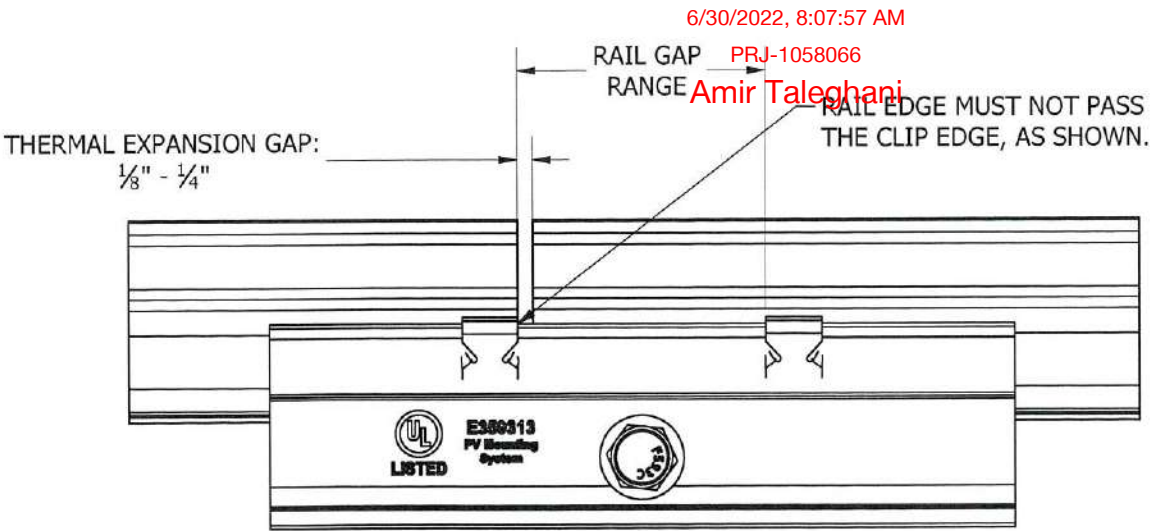
SNAPNRACK, ULTRA RAIL MOUNTING HARDWARE



SNAPNRACK, UR-40 RAIL



SNAPNRACK, UR-40 SPLICE



SPLICE ALIGNMENT LIMITS

Certification Details

SnapNrack Ultra Rail system has been evaluated by Underwriters Laboratories (UL) and Listed to UL/ANSI Standard 2703 for Grounding/Bonding, Mechanical Loading, and Fire Classification.

Grounding/Bonding

The Ultra Rail system has been designed in compliance with UL Standard 2703 Section 9.1 Exception, which permits accessible components that **are not part** of the fault current ground path to **not be electrically bonded** to the mounting system (e.g. roof attachments, array skirt, etc.). For more details on the integrated grounding functionality see the [Grounding Specifications](#) section.

This racking system may be used to ground and/or mount a PV module complying with UL 1703 only when the specific module has been evaluated for grounding and/or mounting in compliance with the included instructions. See the [Grounding Specifications](#) for the list of modules tested with the Ultra Rail system for integrated grounding.

Ground Lugs have been evaluated to both UL 467 and UL 2703 Listing requirements.

Ultra Rail has been listed with the following Enphase microinverter models for grounding/bonding: M215, M250, and C250. The Enphase microinverters are certified to be mounted to SnapNrack rail with the MLPE Attachment or to the module frame with the Enphase Frame Mount. When installing the Enphase microinverters per the specifications in the MLPE Installation section of this manual, the total roof-mounted PV system is bonded (modules, racking and microinverters) and grounded through the Enphase ground circuit when the Enphase units are properly grounded through to the service entrance. Therefore, no ground lugs or equipment grounding conductor (EGC) are required on the SnapNrack systems.

Ultra Rail has been Listed with the following SolarEdge optimizer models for grounding/bonding: P300-5NC4ARS, P320-5NC4ARS, P370-5NC4AFS, and P400-5NC4AFS. The SolarEdge optimizers are certified to be mounted to SnapNrack rail with the MLPE Attachment or to the module frame with the SolarEdge Power Optimizer Frame-Mounted Module Add-On. When installing the SolarEdge optimizers per the specifications in the MLPE Installation section of this manual, the total roof-mounted PV system is bonded to the optimizer backing plate (modules, racking and optimizers) and grounded through the ground lugs installed on the SnapNrack rail. Therefore, it is not necessary to run an EGC to each SolarEdge optimizer.

Note: Frame-Mounted Module Add-On has been evaluated for all modules except Suniva modules.

Ultra Rail has been Listed with the following Ginlong Rapid Shutdown Units for grounding/bonding: Solis-RSD-1G 1:1 and Solis-RSD-1G 2:2. The Ginlong Rapid Shutdown Units are certified to be mounted to SnapNrack rail with the MLPE Attachment.

The mounting system Bonding Listing is only valid when installed with a Non-Separately Derived PV system. The PV system is required to have a direct electrical connection to another source, such as connecting to the grid via a grid interactive inverter.

SnapNrack recommends that bare copper never come into contact with aluminum.

Mechanical Loading

The Ultra Rail system is Listed for mechanical loading for different load ratings depending on the mounting configuration and PV module installed. For more details on the mechanical loading details see the [Mechanical Loading Specifications](#) section.

SnapNrack engineered systems should only be used with SnapNrack components and hardware. Any application outside of those specified in this Installation Manual and the Structural Engineering Report may void the warranty and structural certification could become invalid.

If the module clamps have been engaged and need to be loosened and reengaged, SnapNrack recommends moving the module frame 3mm to engage the bonding pin in a new location *if required by the AHJ*.

The UL Listing covers mechanical load ratings for the various span lengths, module orientations and positive, negative, and side load ratings. These values can be found in the [Mechanical Loading Specifications](#) section.

SnapNrack recommends a periodic re-inspection of the completed installation for loose components, loose fasteners, and any corrosion, such that if found, the affected components are to be immediately replaced.

SnapNrack UL 2703 Fire Classification

March 2019

As of January 1st, 2015 many jurisdictions are now enforcing codes based upon updates to the International Building Code (IBC) and UL Standards 1703 (modules) and 2703 (mounting systems). The language included in the 2012 IBC requires that the combination of roof mounted solar modules and racking components is to be considered a system (IBC Section 1509.7.2). Additionally, it requires that this system shall meet or exceed the fire classification of the roof assembly.

The objective is to ensure that the PV system does not adversely affect the fire rating of the roof. Roof surface fire ratings are classified either A, B, or C; Class A being the most resistant to the spread of flame.

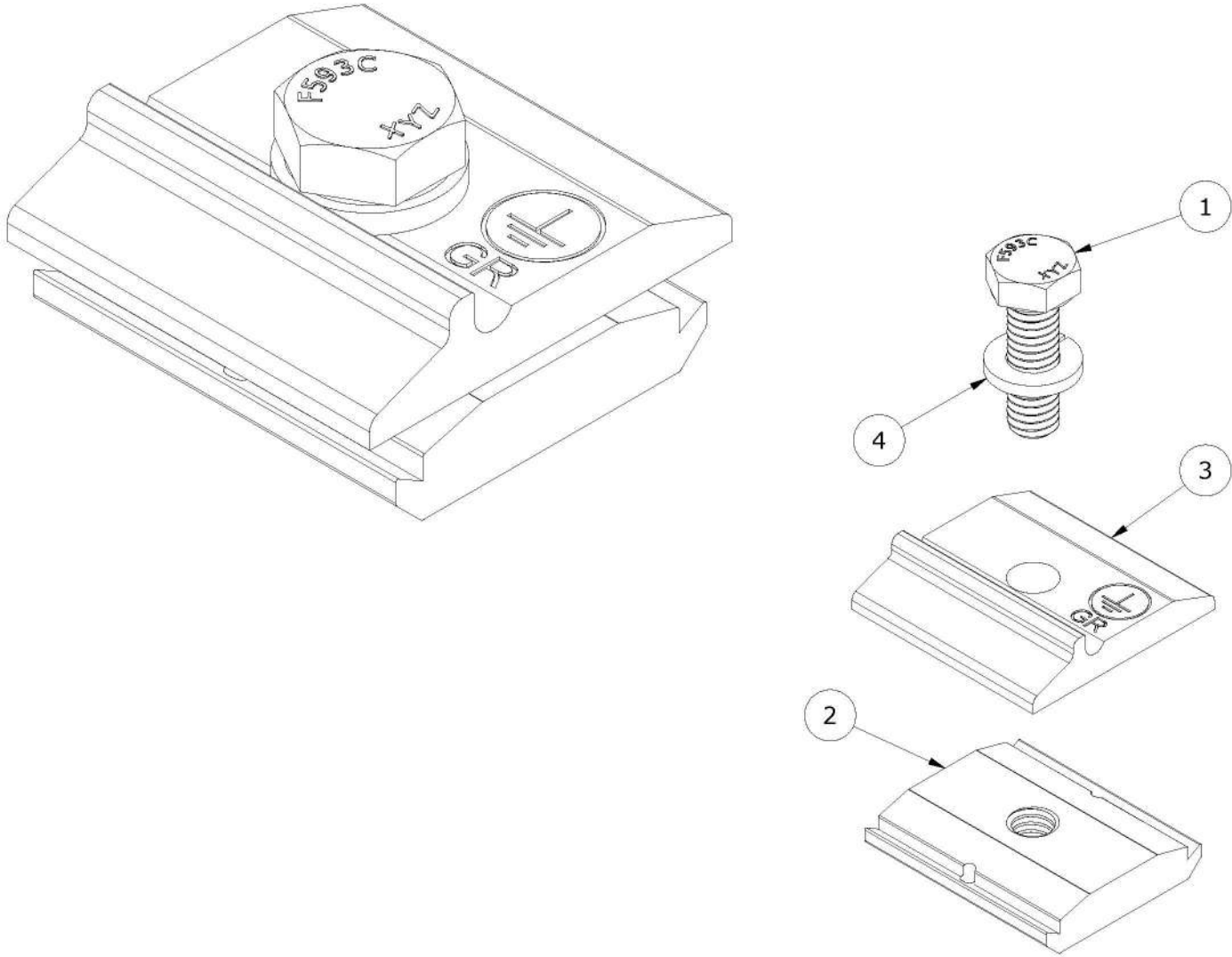
Since the PV system is tested and characterized based upon these characteristics and spread of flame test results. There are 15 total module types, Types 1, 2 and 3 represent differences in the module composition and Types 4 – 15 are the same module compositions as Types 1 – 3 with differing fire test performance.

SnapNrack Series 100, Ultra Rail and RL systems have been Certified for a Class A fire rating with Type 1 and Type 2 modules, in accordance with the standards set forth in UL1703/2703 and IBC 2012. In order to maintain this classification, the SnapNrack mounting systems must be installed per the UL-approved [Installation Manuals](#). Because the test was conducted with the modules at 5 inches from the roof surface (worst case scenario), there is no restriction to the standoff height.

Attachment 1 is the SnapNrack QIMS File which is accessed through the UL Online Certification Directory, or available here: [SnapNrack QIMS File](#).



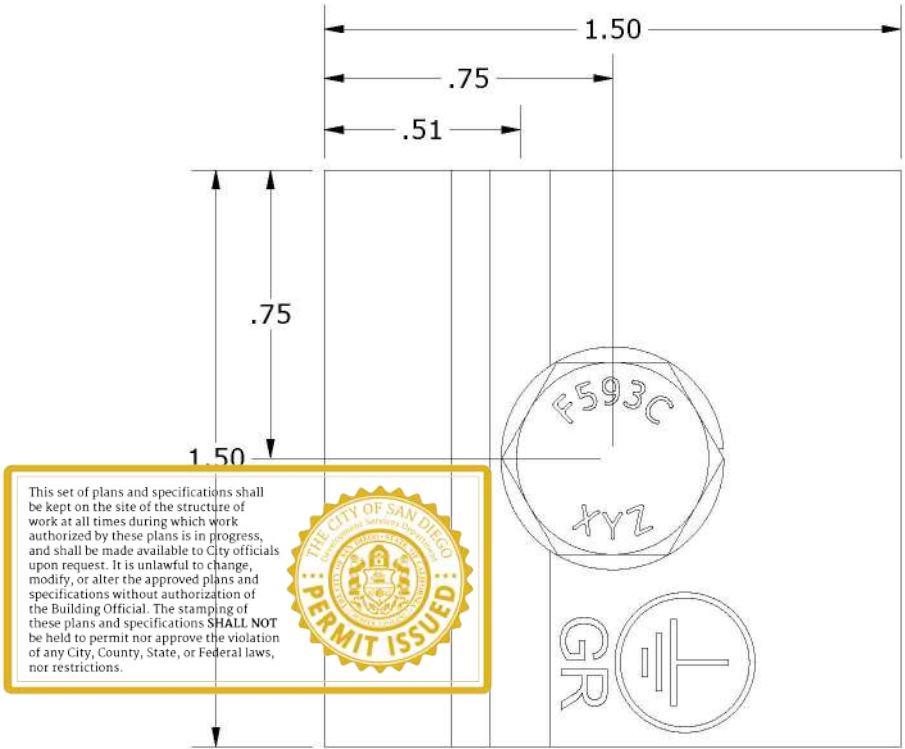
DESCRIPTION:	DRAWN BY:	SnapNrack™ Solar Mounting Solutions 595 MARKET STREET, 29TH FLOOR • SAN FRANCISCO, CA 94105 USA PHONE (415) 580-6900 • FAX (415) 580-6902 THE INFORMATION IN THIS DRAWING IS CONFIDENTIAL AND PROPRIETARY. ANY REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF SUNRUN SOUTH LLC.
SNAPNRACK, GROUND LUG	D.Ryan	
PART NUMBER(S):	REVISION:	
242-02101	A	



PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	BOLT, HEX CAP, 5/16IN-18 X 1IN, SS
2	1	SNAPNRACK, BONDING CHANNEL NUT
3	1	SNAPNRACK, GROUND LUG R PRC
4	1	5/16IN SS SPLIT LOCK WASHER

MATERIALS:	TIN-PLATED ALUMINUM, STAINLESS STEEL	OPTIONS:
DESIGN LOAD (LBS):	N/A	
ULTIMATE LOAD (LBS):	N/A	
TORQUE SPECIFICATION:	16 LB-FT	
CERTIFICATION:	UL 467 & UL 2703, FILE E359313	
WEIGHT (LBS):	0.13	

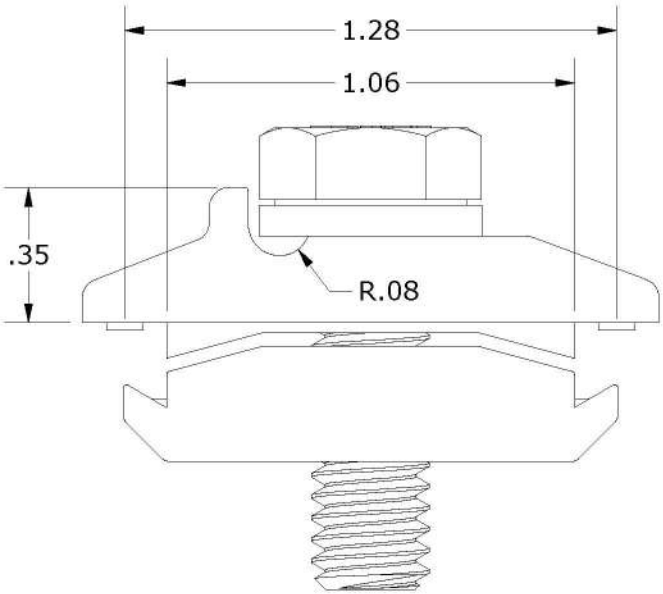
DESCRIPTION:	DRAWN BY:	SnapNrack™ Solar Mounting Solutions 595 MARKET STREET, 29TH FLOOR • SAN FRANCISCO, CA 94105 USA PHONE (415) 580-6900 • FAX (415) 580-6902 THE INFORMATION IN THIS DRAWING IS CONFIDENTIAL AND PROPRIETARY. ANY REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF SUNRUN SOUTH LLC.
SNAPNRACK, GROUND LUG	D.Ryan	
PART NUMBER(S):	REVISION:	
242-02101	A	



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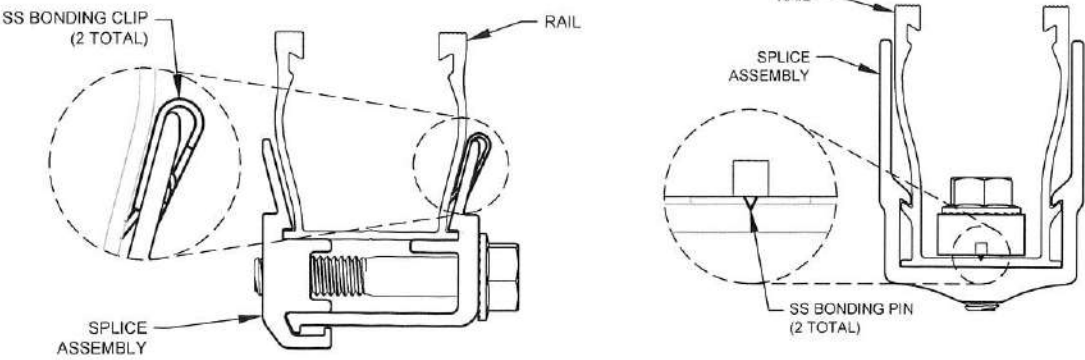
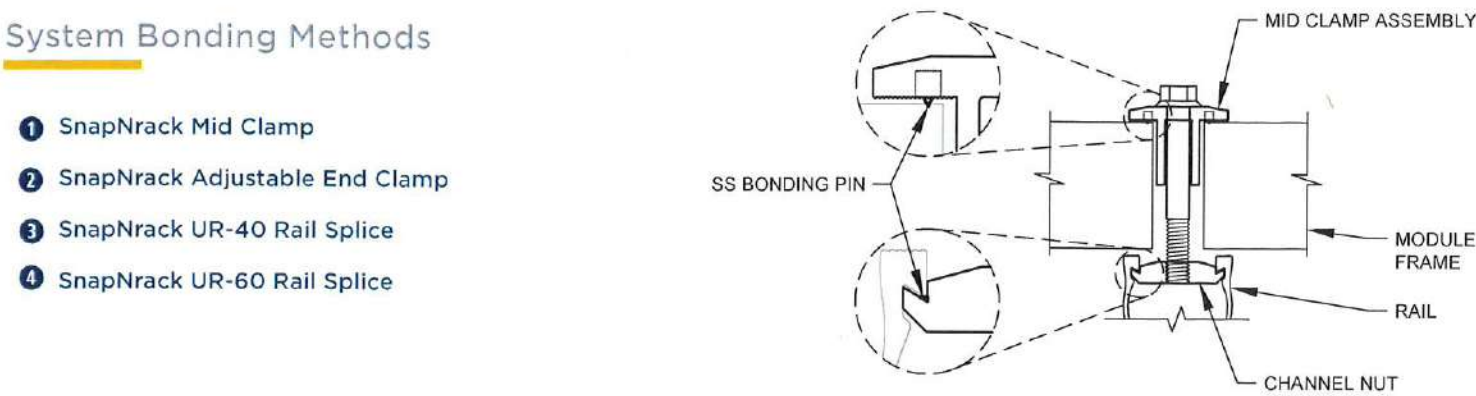
Amir Taleghani



ALL DIMENSIONS IN INCHES

System Bonding Methods

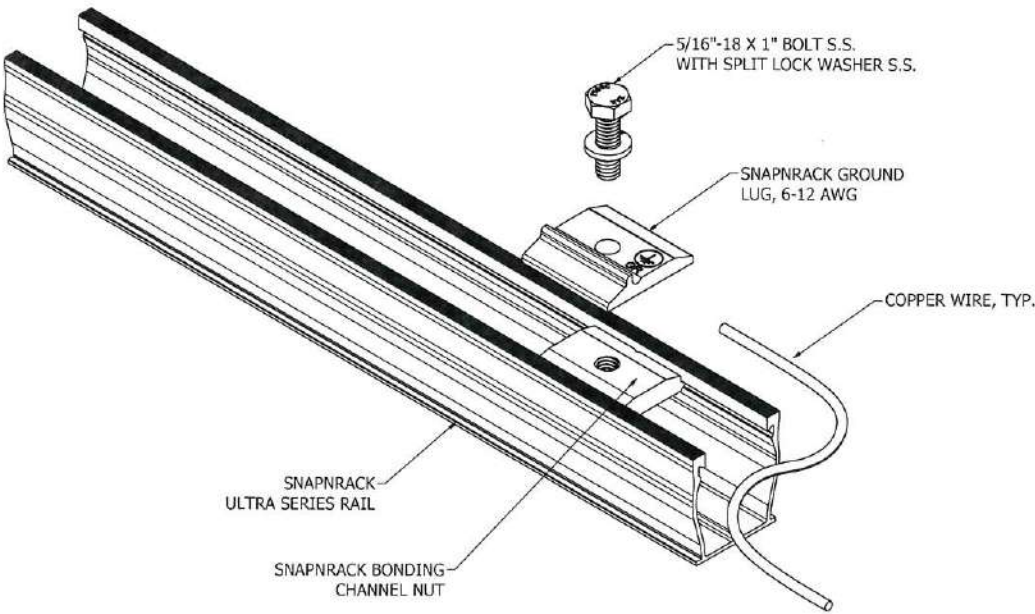
- 1 SnapNrack Mid Clamp
- 2 SnapNrack Adjustable End Clamp
- 3 SnapNrack UR-40 Rail Splice
- 4 SnapNrack UR-60 Rail Splice



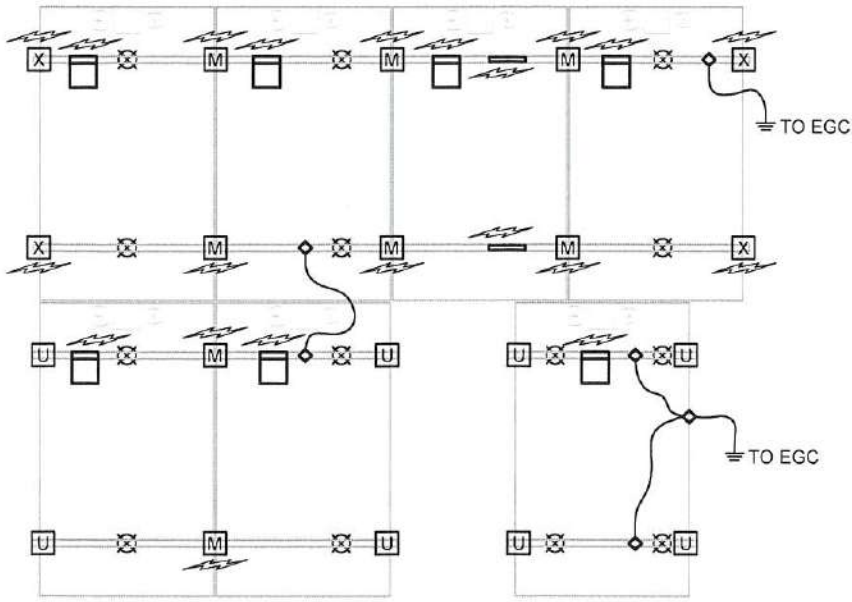
Note:
SnapNrack module clamps contain a SnapNrack Channel Nut with integral bonding clips or pins in assembly to properly bond the system (except Universal End Clamps).

Note:
SnapNrack Ultra Rail Splices contain integral bonding clips in assembly to properly bond the system.

SnapNrack Ground Lug Assembly



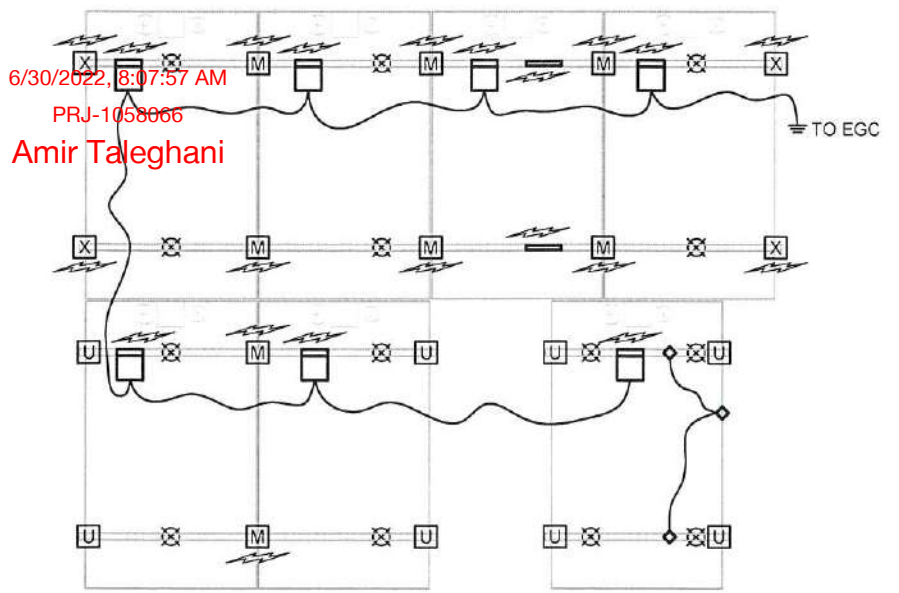
Ground Path Details - SolarEdge



This set of plans and specifications shall be kept on the site of the structure of work at all times during which work authorized by these plans and specifications shall be made available to City officials upon request. It is unlawful to change, modify, or alter the approved plans and specifications without authorization of the Building Official. The stamping of these plans and specifications SHALL NOT be held to permit nor approve the violation of any City, County, State, or Federal laws, codes, or restrictions.



Ground Path Details - Enphase



RAIL RAIL SPICE MOUNT GROUND LUG
GROUND PATH EQUIPMENT GROUNDING CONDUCTOR ENPHASE MICRO-INVERTER
MODULE CLAMP
M = MIDCLAMP
X = X-END CLAMP
U = UNIVERSAL END CLAMP

DESCRIPTION:

SNAPNRACK, BONDING MID CLAMP

DRAWN BY:

D.Ryan

REVISION:

A

PART NUMBER(S):

242-02050, 242-02051, 242-02052, 242-02053, 242-02054, 242-02055, 242-02056, 242-02057

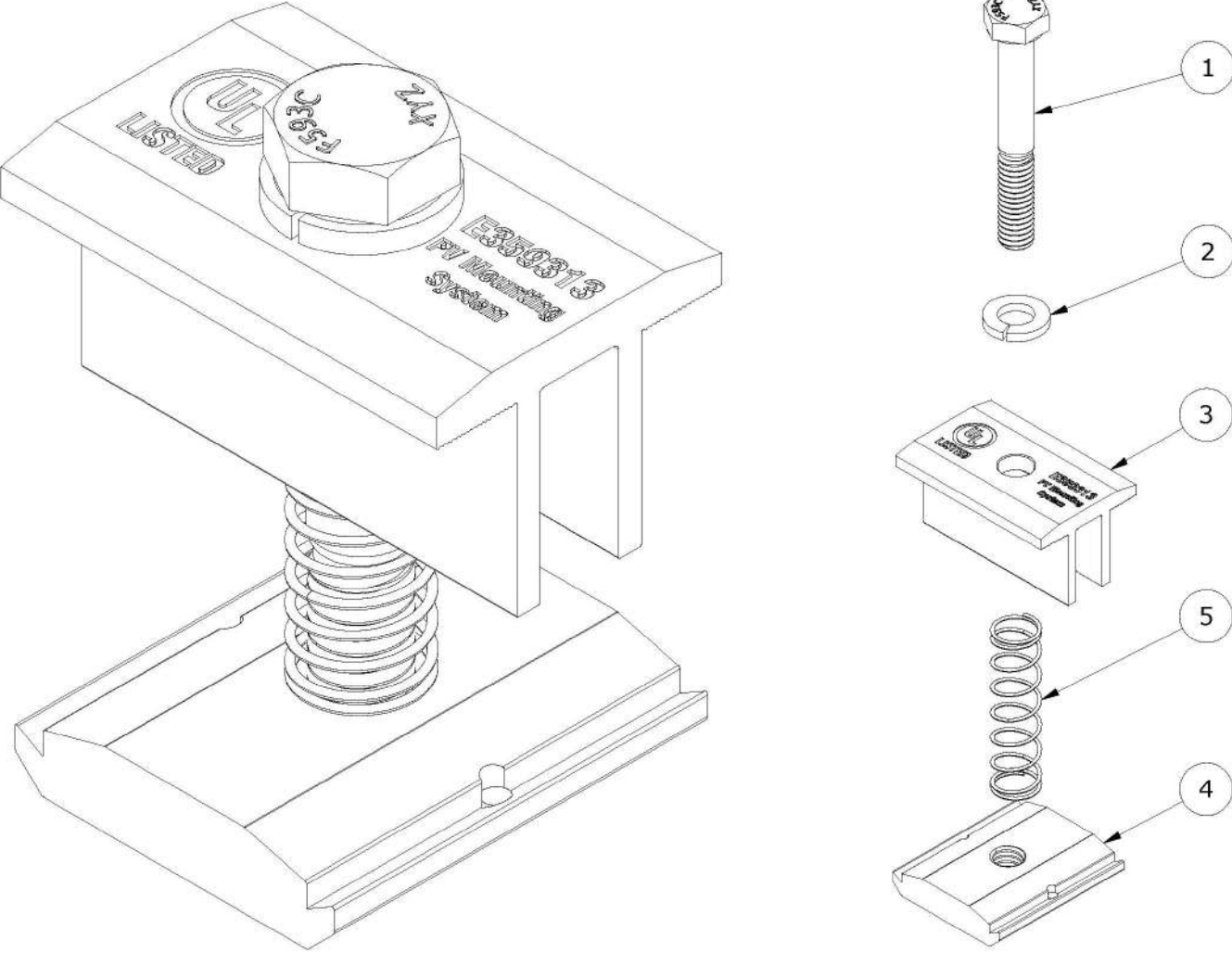
SnapNrack™

Solar Mounting Solutions

595 MARKET STREET, 28TH FLOOR • SAN FRANCISCO, CA 94105 USA

PHONE (415) 580-6900 • FAX (415) 580-6902

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PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	5/16IN-18 SS HCS BOLT, LENGTH VARIES, CLEAR / BLACK
2	1	5/16IN SS SPLIT LOCK WASHER, CLEAR / BLACK
3	1	SNAPNRACK, BONDING MID CLAMP, CLEAR / BLACK
4	1	SNAPNRACK, BONDING CHANNEL NUT
5	1	SNAPNRACK, MID CLAMP SPRING, SS

MATERIALS:	6000 SERIES ALUMINUM, STAINLESS STEEL	OPTIONS:
DESIGN LOAD (LBS):	800	CLEAR / BLACK ANODIZED
ULTIMATE LOAD (LBS):	2400	
TORQUE SPECIFICATION:	10+ LB-FT	
CERTIFICATION:	UL 2703, FILE E359313	
WEIGHT (LBS):	0.16 - 0.18	

DESCRIPTION:

SNAPNRACK, BONDING MID CLAMP

DRAWN BY:

D.Ryan

REVISION:

A

PART NUMBER(S):

242-02050, 242-02051, 242-02052, 242-02053, 242-02054, 242-02055, 242-02056, 242-02057

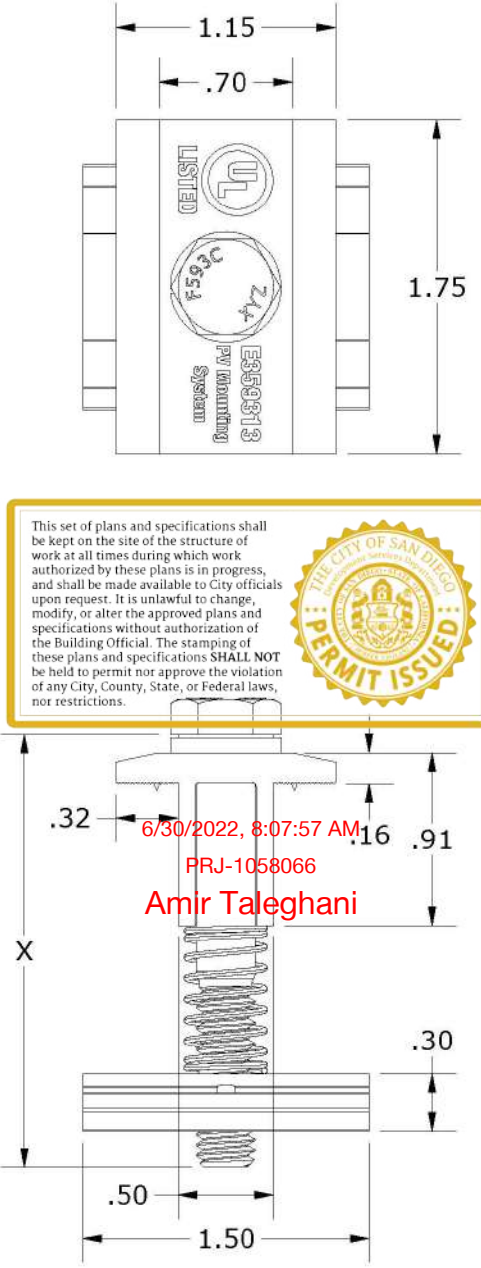
SnapNrack™

Solar Mounting Solutions

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MID CLAMP PROPERTIES		
SKU	BOLT LENGTH (X)	FINISH
242-02050	2.25"	CLEAR
242-02051	2.50"	CLEAR
242-02052	2.75"	CLEAR
242-02053	2.25"	BLACK
242-02054	2.50"	BLACK
242-02055	2.75"	BLACK
242-02056	3.00"	CLEAR
242-02057	3.00"	BLACK

ALL DIMENSIONS IN INCHES

QIMS.E359313 - Mounting Systems, Mounting Devices, Clamping Devices and Ground Lugs for Use with Photovoltaic Modules and Panels

Mounting Systems, Mounting Devices, Clamping Devices and Ground Lugs for Use with Photovoltaic Modules and Panels

See General Information for Mounting Systems, Mounting Devices, Clamping Devices and Ground Lugs for Use with Photovoltaic Modules and Panels

SUNRUN SOUTH LLC, DBA SNAPNRACK

775 Fiero Ln
Suite 200
San Luis Obispo, CA 93401 USA

E359313

Cat. No.	Investigated for Bonding	Investigated for Mechanical Loading	System Fire Classification (A, B or C)	Tested in Combination With
Photovoltaic mounting system				
Series 100 -- Consisting of the Following Components: Flashed L-Foot, Standard Standoff, Four Hole Standoff, Heavy Duty Standoff, Hanger Bolt Clamp, Corrugated Block, 10°-45° Tilt Mount, Dimensioned Seam Clamp, Dimensioned Wide Seam Clamp, Rail Splice, S Tile Roof Hook, Flat Tile Roof Hook, Metal Roof Base Standoff, Standard Rail, Mid Clamp, X End Clamp, Universal End Clamp, Ultra Rail Mid Clamp, Ultra Rail End Clamp, Flat Tile Replacement Kit, S Tile Replacement Kit, W Tile Replacement Kit.	Y*	See Below	See Below	UL Listed PV Modules: Aptos Solar DNA-120-MF23-XXX where XXX is 320-340; DNA-120-BF23-XXX where XXX is 320-345 DNA-144-MF23-XXX where XXX is 390-410; DNA-144-BF23-XXX where XXX is 390-415 Hyundai Heavy Industries Co Ltd (E325005) - HiS-MXXXRG where XXX is 235 to 275; HiS-SXXXRG where XXX is 245 to 295; HiS-SXXXRW where XXX is 250 to 265; HiS-MXXXMG where XXX is 210 to 270; HiS-SXXXMG where XXX is 220 to 275. All may be followed by the suffix BK or blank. HiD-SXXXRG(BK) where XXX is 290-320. Jinko Solar (E362479) - JKMXXXP-60, JKMXXXPP-60, JKMXXXP-60-V, JKMXXXP-60-J4, JKMXXXP-60B-J4 where XXX is 200 to 290; JKMXXXP-72, JKMXXXPP-72, JKMXXXP-72-V where XXX is 250 to 360; JKMXXXM-60 where XXX is 200 to 305; JKMXXXM-72 where XXX is 250 to 365; JKMXXXPP-60-V
Series 200 - Consisting of the Following Components: Kee Klamp Tee, Speed Rail Tee, Speed Rail Single Swivel, Threaded Pipe Coupler, Pipe Clamp Assembly, Ground Rail, Mid Clamp, X End Clamp, Universal End Clamp				

UR-40 Mounting and Bonding Systems for use with Photovoltaic Modules, consisting of the following components: UR-40 Rail, Mid Clamp, X End Clamp, Universal End Clamp, UR-40 Splice, UR-40 Composition Mount Kits, SpeedSeal Foot Mount Kit, SpeedSeal Deckfoot Mount Kit for UR-40, Standard Standoff for UR-40, Four Hole Standoff for UR-40, Heavy Duty Standoff for UR-40, Metal Roof Base Standoff for UR-40, UR-40 Corrugated Block, Standard Base Seam Clamp for UR-40, Wide Base Seam Clamp for UR-40, UR-40 Universal Tile Hook, UR-40 Flat Tile Hook, UR-40 Tile Hook F, UR-40 Tile Hook WS, Flat Tile Replacement Kit for UR-40, S Tile Replacement Kit for UR-40, W Tile Replacement Kit for UR-40, UR-40 Hanger Bolt Clamp, UR-40 Tilt Kits, SnapNrack Ground Lug Models 242-02101 or 242-92202, IlSCO Ground Lug Models GBL-4DBT or SGB-4, UR-40 Skirt Assembly, Frame Attachment Kit, Metal Rail Attachment Kit, Smart Clamps Kits, Seam Clamp Simple Tilt Kits, Adjustable Tile Hook

UR-60 Mounting and Bonding Systems for use with Photovoltaic Modules, consisting of the following components: UR-60 Rail, Mid Clamp, X End Clamp, Universal End Clamp, UR-60 Splice, UR-60 Composition Mount Kits, SpeedSeal Foot Mount Kit, Standard Standoff for UR-60, Four Hole Standoff for UR-60, Heavy Duty Standoff for UR-60, Metal Roof Base Standoff for UR-60, UR-60 Corrugated Block, Standard Base Seam Clamp for UR-60, Wide Base Seam Clamp for UR-60, UR-60 Universal Tile Hook, UR-60 Flat Tile Hook, UR-60 Tile Hook F, UR-60 Tile Hook WS, Flat Tile Replacement Kit for UR-60, S Tile Replacement Kit for UR-60, W Tile Replacement Kit for UR-60, UR-60 Hanger Bolt Clamp, UR-60 Tilt Kits, SnapNrack Ground Lug Models 242-02101 or 242-92202, IlSCO Ground Lug Models GBL-4DBT or

This plan and specifications shall be the responsibility of the engineer of record and shall be made available to City officials at all times during which work is in progress. It is unlawful to change, modify, or alter the approved plans and specifications without authorization of the Building Official. The stamping of these plans and specifications SHALL NOT be held to permit the City, State, or Federal to approve the violation of any restrictions.

THE CITY OF SAN DIEGO
BUILDING DEPARTMENT
PERMIT ISSUED

6/30/2022, 8:07:57 AM
PRJ-1058066
Amir Taleghani

where XXX is 200 to 300; JKMSXXXP-72 where XXX is 250 to 330; JKMXXXM-60L where XXX is 305-325; JKMXXXM-60HBL (310-330); JKMXXXM-72L-V (370-390); JKMXXXM-72HL-V (370-420). JKMXXXM-60HBL where XXX is 310-330; JKMXXXM-60HL where XXX is 315-335, JKMXXXM-72HL-V where XXX is 390-415; JKMXXXM-72HL-TV where XXX is 380-410, JKMXXXM-72HBL where XXX is 370-420.

Kyocera (E467150) - KU-60 1000 V Series - KUXXX, where XXX is 250 to 275, followed -6BCA, -6BFA, -6BPA, -6DCA, -6DFA, -6DPA, -6MCA, -6MPA, -6XCA, -6XPA, -6ZCA, -6ZPA, -6ZPB, -6ZCB, -6ZPC, -6ZCC, -6ZPD, -6ZCD, -6ZPE, 6ZCE, -6MPC, -6MCC, -6MPB or -6MCB; KU-80 1000 V Series - KUXXX, where XXX is 315 to 335, followed by -8BCA, -8BFA or -8BPA. LG (E329725) - LGXXXQ1C-A5 where XXX is 340 to 385; LGXXXQ1K-A5 where XXX is 315 to 375. LGXXXN1C-V5 where XXX is 320 to 350; LGXXXN1K-V5 where XXX is 320 to 340; LGXXXQ1C-V5 where XXX is 340 to 375; LGXXXQ1K where XXX is 350 to 365, LGXXXA1C-V5 where XXX is 360-380. LGXXXM1C-L5 where XXX is 355-370; LGXXXM1K-L5 where XXX is 340-350; LGXXXn1C-N5 where XXX is 330-360; LGXXXN1K-L5 where XXX is 310-355

Panasonic (E181540) - VBHNXXXSA16 where XXX is 320 to 335; VBHNXXXKA01 and VBHNXXXKA02 where XXX is 310 to 325, VBHNXXXKA03 and VBHNXXXKA04 where XXX is 310 to 325; VBHNXXXSA17 and VBHNXXXSA18 where XXX is 325 to 335. VBHNXXXSA17E where XXX is 325 to 330, VBHNXXXRA18N where XXX is 325 to 340; VBHXXXRA03K where XXX is 320 to 335.

REC Solar AS (E308147) - RECXXX, where XXX is 214 to 270, all may be followed by PE, PE(BLK), PE-US, PE-US(BLK), PEQ2 or PEQ3.

where XXX is 270 to 330;
BVM6612M-XXX where XXX is 280 to 340.
Canadian Solar - CS6P-XXX-P, CS6P-XXX-M where XXX is 200 to 300; CS6P-XXX-P-SD, CS6K-XXX-P-SD where XXX is 240 to 300; CS6K-XXX-M, CS6K-XXX-MS where XXX is 240 to 335, CS6K-XXX-M-SD where XXX is 240 to 305; CS6K-XXX-P where XXX is 220 to 300; CS6X-XXX-P where XXX is 250 to 360; CS6V-XXX-M where XXX is 215 to 225; CS6V-XXX-P where XXX is 250 to 255; CS3K-XXX-P where XXX is 250 to 350; CS3K-XXX-MS where XXX is 280 to 345; CS1K-XXX-MS where XXX is 285 to 345; CS1H-XXX-MS, CS1H-XXX-MS-AB where XXX is 310 to 350, CS3U-XXX-MS where XXX is 350 to 420; CS3U-XXX-P where XXX is 295 to 420. CS3W-XXX-P where XXX is 380-445.
ET Solar - ET-P660XXXBB where XXX is 200 to 265; ET-P660XXXWB where XXX is 200 to 265; ET-P660XXXWW where XXX is 200 to 265; ET-P660XXXWWG where XXX is 235 to 265; P660XXXWB/WW where XXX is 200 to 265 and may be followed by WB or WW; P660XXXWWG where XXX is 240 to 250; M660XXXBB where XXX is 250 to 265; M660XXXWW where XXX is 200 to 270.
Hanwha Q Cells - B.LINE PLUS BFR-G4.1-XXX, B.LINE PRO BFR-G4.1-XXX, Q.BASE GY-XXX, Q.PEAK G4-XXX, Q.PLUS BFR-G3.1-XXX, Q.PLUS BFR-G4-XXX, Q.PLUS BFR-G4.1-XXX, Q.PLUS BFR-G4.1/TAA-XXX, Q.PLUS BFR-GY-XXX, Q.PLUS GY-XXX, Q.PLUS G4-XXX, Q.PRO BFR-G4-XXX, Q.PRO BFR-G4.1-XXX, Q.PRO BFR-G4.3-XXX, Q.PRO BFR-GY-XXX, Q.PRO BLK-GY-XX, Q.PRO G4-XXX, Q.PRO GY-XXX, Q.PRO GY/SC-XXX, where XXX is 245 to 295; Q.PEAK BLK-G3.1-XXX, Q.PEAK BLK-G4.1-XXX, Q.PEAK BLK-G4.1/TAA-XXX, Q.PEAK G3.1-XXX, Q.PEAK G4.1-XXX, Q.PEAK G4.1/MAX-XXX, Q.PEAK G4.1/TAA-XXX where XXX is 270 to 325; Q.PEAK DUO BLK-G5-XXX, Q.PEAK DUO G5-XXX and Q.PLUS DUO-G5-

This set of plans and specifications shall be kept on the site of the structure of work at all times during which work authorized by these plans is in progress and shall be made available to City officials upon request. It is unlawful to change, modify, or alter the approved plans and specifications without authorization of the Building Official. The stamping of these plans and specifications SHALL NOT be held to permit nor approve the violation of any City, County, State, or Federal laws, nor restrictions.



6/30/2022, 8:07:57 AM
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Amir Taleghani

XXX where XXX is 290 to 360, Q.PEAK L-G4.2 where XXX is 330 to 390; Q.PEAK L-G5.2, Q.PEAK L-G5.3 where XXX is 360 to 390; Q.PEAK DUO-G7-XXX, Q.PEAK DUO-G7.2-XXX where XXX is 310 to 350; Q.PEAK DUO-BLK-G7-XXX where XXX is 290 to 350; Q.PEAK DUO-G6-XXX, Q.PEAK DUO-G6+-XXX where XXX is 320 to 360; Q.PEAK DUO-BLK-G6-XXX, Q.PEAK DUO-BLK-G6+-XXX where XXX is 310 to 350; Q.PEAK DUO-G8-XXX, Q.PEAK DUO-BLK-G8-XXX, Q.PEAK DUO-G8+-XXX, Q.PEAK DUO-BLK-G8+-XXX where XXX is 290 to 360; Q.PLUS L-G4-XXX, Q.PLUS L-G4.1-XXX, Q.PLUS L-G4.2-XXX where XXX is 280 to 355; Q.PEAK L-G4.1-XXX, Q.PEAK L-G4.2-XXX where XXX is 330-390; Q.PLUS DUO-L-G5-XXX, Q.PLUS DUO-L-G5.1-XXX, Q.PLUS DUO-L-G5.2-XXX, Q.PLUS DUO-L-G5.3-XXX where XXX is 340 to 425; Q.PEAK DUO-L-G5.2-XXX, Q.PEAK DUO-L-G5.3-XXX where XXX is 360 to 425; Q.PEAK DUO-L-G5.3-XXX, Q.PEAK DUO-L-G7.1-XXX, Q.PEAK DUO-L-G7.2-XXX, Q.PEAK DUO-L-G7.3-XXX where XXX is 360 to 415; Q.PEAK DUO-L-G6-XXX, Q.PEAK DUO-L-G6.2-XXX, Q.PEAK DUO-L-G6.3-XXX, Q.PEAK DUO-L-G8-XXX, Q.PEAK DUO-L-G8.1-XXX, Q.PEAK DUO-L-G8.2-XXX, Q.PEAK DUO-L-G8.3-XXX where XXX is 360 to 430, Q.PEAK DUO-G5/SC-XXX, Q.PEAK DUO-BLK-G5/SC-XXX where XXX is 290 to 360; Q.PEAK DUO-G6+/SC-XXX where XXX is 320 to 360; Q.PEAK DUO-BLK-G6+/SC-XXX where XXX is 310 to 350.
Q.PEAK DUO-G5/TS-XXX where XXX is 290-360; Q.PEAK DUO BLK-G5/TS-XXX where XXX is 290-360; Q.PEAK DUO-G6/TS-XXX where XXX is 320-360; Q.PEAK DUO G6+/TS-XXX where XXX is 320-360; Q.PEAK DUO BLK-G6/TS-XXX where XXX is 310-350; Q.PEAK DUO BLK-G6+/TS-XXX where XXX is 310-350
Hanwha SolarOne - HSL60P6-PB-X-YYYQ where X is 2 or 4, and YYY is 230 to 270, may be followed by additional suffixes.

Helione - 60M-XXX where XXX is 225 to 325; 60P-XXX where XXX is 200 to 270; 72M-XXX where XXX is 275 to 390; 72P-XXX where XXX is 250 to 350.
JA Solar - JAP6-60-XXX/3BB where XXX is 235 to 265; JAM6-60-XXX/SI where XXX is 250 to 270;
JAP72S01-XXX/SC where XXX is 315 to 335; JAP6(k)-72-XXX/4BB where XXX is 305 to 325,
JAM60S09-XXX/PR where XXX is 310 to 325, JAM60S10-XXX/MR where XXX is 330 to 345,
JAM60S10-XXX/PR where XXX is 320 to 335, JAM60S12-XXX/PR where XXX is 305 to 320,
JAM72S09-XXX/PR where XXX is 370 to 395, JAM72S10-XXX/MR where XXX is 395 to 415,
JAM72S10-XXX/PR where XXX is 380 to 405, JAM72S12-XXX/PR where XXX is 365 to 385,
JAM60S17-XXX/MR where XXX is 320-330
LG Electronics Inc. - LGXXXS1C-G4 where XXX is 250 to 300;
LGXXXN1K-G4 where XXX is 280 to 300; LGXXXN1C-G4 where XXX is 280 to 340; LGXXXN2C-G4,
LGXXXN2W-G4, where XXX is 360 to 395; LGXXXN2K-G4, where XXX is 360 to 385; LGXXXS2C-G4,
LGXXXS2W-G4, where XXX is 300 to 360; LGXXXN2C-B3, LGXXXN2W-B3, where XXX is 330 to 400;
LGXXXS1C-A5 where XXX is 280 to 320; LGXXXN1C-A5 where XXX is 320 to 345; LGXXXN1K-A5 where XXX is 310 to 335, LGXXXN1T-V5 where XXX is 310 to 340;
LGXXXN2T-J5 where XXX is 385 to 405; LGXXXN2T-V5 where XXX is 385 to 430.
Longi Green Energy Technology Co., Ltd.: LR6-60-XXXM, LR6-60BK-XXXM, LR60-HV-XXXM, where XXX is 270 to 300; LR6-60PB-XXXM, LR6-60PE-XXXM, LR6-60PH-XXXM, where XXX is 280 to 320; LR6-60HPB-XXXM where XXX is 295 to 320; LR6-60HPH-XXXM where XXX is 300 to 320;
LR4-60HPB-XXXM where XXX is 335-365,
LR4-60HIB-XXXM where XXX is 335 to 365;

This set of plans and specifications shall be kept on the site of the structure of work at all times during which work authorized by these plans is in progress, and shall be made available to City officials upon request. It is unlawful to change, modify, or alter the approved plans and specifications without authorization of the Building Official. The stamping of these plans and specifications SHALL NOT be held to permit nor approve the violation of any City, County, State, or Federal laws, nor restrictions.



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Amir Taleghani

LR4-60HPH-XXXM where XXX is 350-380, LR4-60HIH-XXXM where XXX is 350 to 380;
LR6-60HIH-XXXM where XXX is 300 to 330; LR6-60HIB-XXXM where XXX is 295-320, LR4-72HPH-XXXM where XXX is 420 to 455.
Mission Solar - Models
MSEXXXSO5T where XXX is 260 to 290; MSEXXXSO5K where XXX is 270 to 290; MSEXXXSQ5T where XXX is 280 to 300; MSEXXXSQ5K where XXX is 285 to 305;
MSEXXXMM4J and MSEXXXMM6J where XXX is 320 to 330;
MSEXXXSO6W where XXX is 320 to 340; MSEXXXSO4J and MSEXXXSO6J where XXX is 320 to 350; MSEXXXSQ4S and MSEXXXSQ6S where XXX is 345 to 365; MSEXXXSQ8K where XXX is 290 to 315; MSEXXXSQ8T where XXX is 285 to 310, - MSEXXXSR8K where XXX is 315 to 335;
MSEXXXSR8T where XXX is 310 to 340; MSEXXXSR9S where XXX is 340; MSE60AXXX where XXX is 315; MSEXXXTS60 where XXX is 300-310.
Solar PTE. LTD. - RECXXXPE where the XXX is 214 to 280;
RECXXXTP where XXX is 260 to 300; RECXXXTP2 where XXX is 260 to 300; RECXXXTP IQ where XXX is 260 to 300; All may be followed by BLK; RECXXXTP72 where XXX is 330 to 345; RECXXX where XXX is 285 to 325, followed by PE72, PE72BLK, PE72 Q2 or PE72 Q3;
RECXXXPE72XV where XXX is 295 to 325, followed by PE72 XV, PE72 XV Q2 or PE72 XV Q3;
RECXXXNP, where XXX is 310-330; RECXXXTP2M, where XXX is 300-315, RECXXXAA where XXX is 340 to 380, RECXXXTP2M 72 or RECXXXTP2SM72 where XXX is 350-400. May be followed by BLK or BLK2, RECXXXTP3 where XXX is 295-340.
Silfab - SLAXXX-M, where XXX is 225 to 320; SLGXXX-M, where XXX is 265 to 380; SLAXXX-P, where XXX is 225 to 275; SLGXXX-P, where XXX is 265 to 320; SSAXXX-M,

5/12/2021	QIMS.E359313 - Mounting Systems, Mounting Devices, Clamping Devices and Ground Lugs for Use with Photovoltaic Modules and Pan.					5/12/2021	QIMS.E359313 - Mounting Systems, Mounting Devices, Clamping Devices and Ground Lugs for Use with Photovoltaic Modules and F				
				NRTL Listed PV Modules: Canadian Solar - CS6K-XXX-M, CS6K-MS, CS6K-M-SD where XXX is 240 to 305; CS6K-XXX-P where XXX is 220 to 320; CS6K-XXX-P-SD where 240 to 300; CS3K-XXX-P where XXX is 250 to 350; CS3K-XXX-MS where XXX is 280 to 345; CS1K-XXX-MS where XXX is 285 to 345. CS1H-XXX-MS, CS1H-XXX-MS-AB where XXX is 310 to 350, CS3W-XXX-P where XXX is 380-445. Hanwha - B.LINE PLUS BFR-G4.1-XXX, B.LINE PRO BFR-G4.1-XXX, Q.BASE GY-XXX, Q.PEAK G4-XXX, Q.PLUS BFR-G4-XXX, Q.PLUS BFR-G4.1-XXX, Q.PLUS BFR-G4.1/TAA-XXX, Q.PLUS BFR-GY-XXX, Q.PLUS GY-XXX, Q.PLUS G4-XXX, Q.PRO BFR-G4-XXX, Q.PRO BFR-G4.1-XXX, Q.PRO BFR-G4.3-XXX, Q.PRO BFR-GY-XXX, Q.PRO BLK-GY-XX, Q.PRO G4-XXX, Q.PRO GY-XXX, Q.PRO GY/SC-XXX, where XXX is 245 to 295; Q.PEAK BLK-G3.1-XXX, Q.PEAK BLK-G4.1-XXX, Q.PEAK BLK-G4.1/TAA-XXX, Q.PEAK G4.1-XXX, Q.PEAK G4.1/MAX-XXX, Q.PEAK G4.1/TAA-XXX where XXX is 270 to 325; Q.PEAK DUO BLK-G5-XXX, Q.PEAK DUO G5-XXX, and Q.PLUS DUO-G5-XXX where XXX is 290 to 360; Q.PEAK DUO-G7-XXX, Q.PEAK DUO-G7.2-XXX where XXX is 310 to 350; Q.PEAK DUO-BLK-G7-XXX where XXX is 290 to 350; Q.PEAK DUO-G6-XXX, Q.PEAK DUO-G6+-XXX where XXX is 320 to 360; Q.PEAK DUO-BLK-G6-XXX, Q.PEAK DUO-BLK-G6+-XXX where XXX is 310 to 350; Q.PEAK DUO-G8-XXX, Q.PEAK DUO-BLK-G8-XXX, Q.PEAK DUO-G8+-XXX, Q.PEAK DUO-BLK-G8+-XXX where XXX is 290 to 360, Q.PEAK DUO BLK-G6+/AC-XXX where XXX is 340-345, Q.PEAK DUO BLK ML-G9-XXX where XXX is 365-385; Q.PEAK DUO ML-G9-XXX where XXX is 370-390; Q.PEAK DUO XL-G9.2-XXX where XXX is 440-460; Q.PEAK DUO XL-G9.3-XXX where XXX is 440-460. Q.PEAK DUO-G5/TS-XXX where						XXX is 290-360; Q.PEAK DUO BLK-G5/TS-XXX where XXX is 290-360; Q.PEAK DUO-G6/TS-XXX where XXX is 320-360; Q.PEAK DUO G6+/TS-XXX where XXX is 320-360; Q.PEAK DUO BLK-G6/TS-XXX where XXX is 310-350; Q.PEAK DUO BLK-G6+/TS-XXX where XXX is 310-350. Heliene - 60M-XXX where XXX is 225-325; 60P-XXX where XXX is 200-270; 72M-XXX where XXX is 275-390; 72P-XXX where XXX is 250-350 LG - Models LGXXXS1C-G4 where XXX is 250 to 300; LGXXXN1K-G4 where XXX is 280 to 300; LGXXXN1C-G4 where XXX is 280 to 340; LGXXXN2C-G4, LGXXXN2W-G4, where XXX is 360 to 395; LGXXXN2K-G4, where XXX is 360 to 385; LGXXXS2C-G4, LGXXXS2W-G4, where XXX is 300 to 360; LGXXXS1C-A5 where XXX is 280 to 320; LGXXXN1C-A5 where XXX is 320 to 345; LGXXXN1K-A5 where XXX is 310 to 335, LGXXXA1C-V5 where XXX is 360-380. Longi Green Energy Technology Co., Ltd. - LR6-60-XXXM, LR6-60BK-XXXM, LR60-HV-XXXM, where XXX is 270 to 300; LR6-60PB-XXXM, LR6-60PE-XXXM, LR6-60PH-XXXM, where XXX is 280 to 320, LR6-60HPB-XXXM where XXX is 295 to 320; LR6-60HPH-XXXM where XXX is 300 to 320. Mission Solar - Models Models MSEXXXSO5T where XXX is 260 to 290; MSEXXXSO5K where XXX is 270 to 290; MSEXXXSQ5T where XXX is 280 to 300; MSEXXXSQ5K where XXX is 285 to 305; MSEXXXSQ8K where XXX is 290 to 315; MSEXXXSQ8T where XXX is 285 to 310, MSE60AXXX where XXX is 290-315, MSEXXXTS60 where XXX is 300-310. REC Group - RECXXXPE or RECXXXPE-BLK Series where XXX is 214 to 280; RECXXXTP RECXXXTP-BLK Series, where the XXX is 260 to	



6/30/2022, 8:07:57 AM
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NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE UL MARK



2020-09-30

Jim Snyder
SUNRUN SOUTH LLC, DBA SNAPNRACK
775 Fiero Ln
Suite 200
San Luis Obispo, CA, 93401, US

Our Reference: File E359313, Vol 1 Order: 13467822
Project: 4789594857

Your Reference: Jim Snyder 08/11/2020
Project Scope: 4789594857: Module additions to File E359313, V1, S2, 3, 7, 8, 9 For Bonding,
mechanical load and Fire. The following modules were added:

Trina Solar – TSM-XXXDD06M.05(II) where XXX is 315-350; TSM-XXXDE15H(II)
where XXX is 380-420; TSM-XXXDE15M(II) where XXX is 335-420, TSM-
XXXDD05H.05(II) where XXX is 275-340

Znshine – ZXM6-60-XXX/M where XXX is 295-330

LG – LGXXM1C-L5 where XXX is 355-370; LGXXM1K-L5 where XXX is 340-
350; LGXXN1C-N5 where XXX is 330-360; LGXXN1K-L5 where XXX is 310-
355

Dear Jim Snyder:

Congratulations! UL's investigation of your product(s) has been completed under the above Reference Number and the product was determined to comply with the applicable requirements. This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Mark at authorized factories under UL's Follow-Up Service Program. To provide your manufacturer(s) with the intended authorization to use the UL Mark, you must send a copy of this notice to each manufacturing location currently authorized under File E359313, Vol 1.

Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent in the near future. Until then, this letter authorizes application of the UL Mark for 90 days from the date indicated above.

Additional requirements related to your responsibilities as the Applicant can be found in the document "Applicant responsibilities related to Early Authorizations" that can be found at the following web-site:
<http://www.ul.com/EAResponsibilities>

Any information and documentation provided to you involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

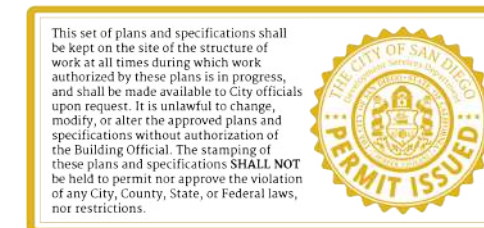
We are excited you are now able to apply the UL Mark to your products and appreciate your business. Feel free to contact me or any of our Customer Service representatives if you have any questions.

Very truly yours,

Gerrell Washington
Engineering Project Handler
Gerrell.Washington@ul.com

Reviewed by:

Bruce A. Mahrenholz
CPO Director
Bruce.A.Mahrenholz@ul.com



6/30/2022, 8:07:57 AM

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Amir Taleghani

NOTICE OF COMPLETION
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2021-4-30

Jim Snyder
SUNRUN SOUTH LLC, DBA SNAPNRACK
775 Fiero Ln
Suite 200
San Luis Obispo, CA, 93401, US

Your Reference: 4789828386
Our Reference: File E359313, Volume 1 Order: 1101985228
Project: 4789828386

Project Scope: Module addition to Vol 1 Sec 3,7,8, and 9 for bonding, mechanical load and fire +
file update
Adding the following modules:

- Canadian Solar – CS1Y-XXXMS where XXX is 380-415, CS3N-XXXMS where XXX is 385-425.
- Hyundai – HiA-SXXXXHI where XXX is 355-385, HiS-SXXXXY where XXX is 350-375, HiS-SXXXXYI where XXX is 420-450.
- Jinko Solar – JKMXXXM-6TL3-B where XXX is 330-365, JKMXXXM-6RL3-B where XXX is 365-400.
- LG – LGXXXN1K-A6 where XXX is 345-370, LGXXXN1C-A6 where XXX is 355-385, LGXXXN1W-A6 where XXX is 355-385, LGXXXQ1C-A6 where XXX is 390-405, LGXXXQ1K-A6 where XXX is 375-390, LGXXXM1K-A6 where XXX is 355-370, LGXXXM1C-A6 where XXX is 375-385, LGXXXA1C-A6 where XXX is 390-405.
- Next Energy Alliance – USNEA-XXXM3-60 and USNEA-XXXM3B-60 where XXX is 310-335, USNEA-XXXM3-72 where XXX is 375-400, USNEA-XXXM3B-72 where XXX is 375.
- Panasonic – EVPVXXX where XXX is 350-380, may be followed by K.

Dear Jim Snyder:

UL has completed the investigation under the above project and confirmed compliance of your product(s) with UL requirements. We appreciate that you have a choice of certification providers and thank you for choosing UL.

This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Mark at the factory location(s) identified on the Authorization Page of UL File E359313, Volume 1. You are required to send a copy of this letter to all manufacturing locations authorized under UL File E359313, Volume 1.

The Follow-Up Services Procedure covering your product(s) will typically be provided by UL within 10 business days. Any information and documentation provided to you involving the UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Products that bear the UL Mark must be identical to those submitted to UL for evaluation and certification and must comply with the Follow-Up Services Procedure covering your product(s). Additional requirements related to the responsibilities of the Applicant and Manufacturer can be found under **Additional Resources** at <https://www.ul.com/fus>.

NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE UL MARK



A UL certification is a valuable marketing tool meaning your product or company has successfully met stringent requirements. We encourage you to use your UL Mark and certification in your marketing activities. You can find information on how to accurately promote your UL certification at <https://www.ul.com/marketing>.

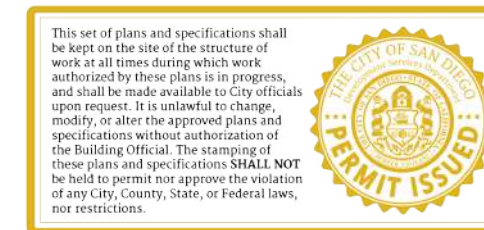
If you have any questions, please contact me or any of our customer service representatives. And, congratulations again on your achievement!

Sincerely,

Gerrell Washington
Engineering Project Handler
UL LLC
Gerrell.Washington@ul.com

Bruce A. Mahrenholz
Director, Conformity Assessment Programs (CPO)
UL LLC
Bruce.A.Mahrenholz@ul.com

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6/30/2022, 8:07:57 AM

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Amir Taleghani

NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE MARK



2021-09-15

Jim Snyder
SUNRUN SOUTH LLC, DBA SNAPNRACK
775 Fiero Ln
Suite 200
San Luis Obispo, CA, 93401, US

Your Reference:

Our Reference: File E395313 , Volume 1 Order: 13894780
Project: 4790002260

Project Scope: 4790002260-CA-SUNRUN SOUTH LLC, DBA SNAPNRACK-1102056846-E395313
QIMS - June 2021 Module Additions: UL2703 Listing for Bonding, Fire and
Mechanical Loading

The following modules have been added:

Aptos Solar
DNA-120-BF26-XXXW
DNA-144-BF26-XXXW

Chint Solar:
CHSM6612M-XXX
CHSM6612M/HV-XXX
CHSM6612M(BL)-XXX
CHSM72M-HC-XXX (Astro 4)
CHSM72M-HC-XXX (Astro 5)

Dehui Solar:
DH-M760B-XXXW
DH-M760W-XXXW
DH-M772W-XXXW
DH-M760F-XXXW
DH-M772F-XXXW

LG:
LGXXXQAK-A6
LGXXXN2W-E6
LGXXXN1K-E6
LGXXXQAC-A6
LGXXXN1K-B6
LGXXXN2T-E6
LGXXXN3K-V6

REC:
RECXXTP4
RECXXXAA Pure

Silfab:
SILXXBKB

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AND
AUTHORIZATION TO APPLY THE MARK



SILXXXNX
SILXXXNU
SILXXXHC

Trina Solar:
TSM-XXXDE06X.05(II)

Dear Jim Snyder:

UL has completed the investigation under the above project and confirmed compliance of your product(s) with UL requirements. We appreciate that you have a choice of certification providers and thank you for choosing UL.

This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the Mark at the factory location(s) identified on the Authorization Page of UL File E395313 , Volume 1. You are required to send a copy of this letter to all manufacturing locations authorized under UL File E395313 , Volume 1.

The Follow-Up Services Procedure covering your product(s) will typically be provided by UL within 10 business days. Any information and documentation provided to you involving the Mark services are provided on behalf of or any authorized licensee of.

Products that bear the Mark must be identical to those authorized by these plans in progress, and shall be made available to City officials for evaluation and certification and must comply with the Follow-Up Services Procedure covering your product(s). Additional requirements related to the responsibilities of the Applicant and Manufacturer must be found under Additional Resources at <https://www.ul.com/dfs>.

A UL certification is a valuable marketing tool meaning your product or company has successfully met stringent requirements. We encourage you to use your Mark and certification in your marketing activities. You can find information on how to accurately promote your UL certification at <https://www.ul.com/marketing>.

If you have any questions, please contact Amir Taleghani, our customer service representatives. And, congratulations again on your achievement!

Sincerely,

Gerrell Washington
Engineering Project Handler
UL LLC
Gerrell.Washington@ul.com

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Company: SUNRUN SOUTH LLC, DBA SNAPNRAC

Type of Equipment: PV Module Mounting Systems (QIMS)

Model Designation: Ultra Rail Mounting Systems (UR-40 and UR-60)

UL File Number: E359313

To whom it may concern:

This letter is confirmation that the Ultra Rail mounting systems were investigated in accordance with the Standard for Rack Mounting Systems, Mounting Devices, Clamping/Retention Devices and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels, UL/ANSI 2703, 1st Edition, dated January 28, 2015.

These systems have been evaluated for bonding, mechanical loading and fire per the requirements of UL 2703.

The systems have been evaluated for the creation of an equipotential bond for the interconnected photovoltaic module frames, which can then be grounded in accordance to the U.S. National Electrical Code (U.S. NEC).

The systems employs top-down clamps which have been evaluated for frame-to-system bonding, at a mounting torque and with specific modules defined by SnapNrack. The systems have been assessed to a maximum Over-Current Device (OCD) Protection level of 20 Amps.

These systems have also been evaluated for a Class A System Fire Classification for Low-Sloped and Steep-Sloped Roofs with Type 1 and Type 2 modules. System fire rating was established both with and without the Skirt Assembly, making the skirt optional to maintain system fire ratings. Modules were tested at a height of 5 inches off the test deck which is considered a worst case condition according to UL 2703.

Certain components have also been evaluated for Wind-Driven Rain, per the requirements of UL Subject 2582.

For additional details about Ultra Rail systems UL Listing and to review a list of modules for which the systems have been tested, please see the following: <https://iq.ulprospector.com/en/profile?e=122609>

Gerrell Washington

Engineering Project Handler



January 7, 2020

SnapNrack
775 Fiero Lane, Ste. 200
San Luis Obispo, CA 93401
TEL: (877) 732-2860

Attn.: SnapNrack - Engineering Department

Re: SnapNrack pre-engineered PV racking systems:

- RL Universal System (Report # 2019-02916A.01 and B.01)
- S200 Ground Mount System (Report # 2017-00240-D.02)
- UR40 Railed System (Report # 2017-03227.11)
- UR60 Railed System (Report # 2018-11940.03)

Subject: Engineering certification for the State of California.

PZSE, Inc. - Structural Engineers has provided engineering and span tables as presented in the above referenced reports. All information and analysis therein are based on, and comply with, the following building codes and specifications:

 This set of plans and specifications shall be held to permit the construction of any City, County, State or Federal law, or restrictions.

1. ASCE/SEI 10 & Aluminum Design Loads for Buildings and Other Structures, by American Society of Civil Engineers

2. 2016 & 2019 California Building Code, by California Building Standards Commission

3. 2016 & 2019 California Residential Code, by California Building Standards Commission

4. AC428 Acceptance Criteria for Modular Framing Systems Used to Support Photovoltaic (PV) Panels, November 1, 2012, by ICC-ES

5. Aluminum Design manual 2015, by The Aluminum Association, Inc.

6. ANSI AWC NDS-2018, National Design Specification for Wood Construction, by the American Wood Council

6/30/2022, 8:07:57 AM
PRJ-1058066
Amir Taleghani

This letter certifies that the design criteria and design methodology for the SnapNrack product span tables are in compliance with the above codes. Please refer to the system specific Engineering Certification Reports (listed above) for system specific design criteria and limitations.

If you have any questions on the above, do not hesitate to call.

Prepared by:
PZSE, Inc. – Structural Engineers
Roseville, CA



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August 6, 2019

SnapNrack
775 Fiero Lane, Ste. 200
San Luis Obispo, CA 93401
TEL: (877) 732-2860

Attn.: SnapNrack - Engineering Department

Subject: Report # 2017-03227.11 – Engineering Certification and Span Tables for the SnapNrack Ultra Rail Solar Photovoltaic Racking System

PZSE, Inc. – Structural Engineers has reviewed and analyzed the SnapNrack Ultra Rail Racking System, a proprietary mounting system constructed from modular parts, which is intended for rooftop installation of solar photovoltaic (PV) panels; and has provided the attached span tables. This review included the complete system including the “UR-40” aluminum rail (6005-T56 alloy), attachment devices, splice elements, and PV Panels. All information, data, and analysis contained within are based on, and comply with, the following building codes and typical specifications:

- Building Codes:**
1. ASCE/SEI 7-16, Minimum Design Loads for Buildings and Other Structures, by American Society of Civil Engineers
 2. 2018 International Building Code, by International Code Council, Inc.
 3. 2018 International Residential Code, by International Code Council, Inc.
 4. AC428, Acceptance Criteria for Modular Framing Systems Used to Support Photovoltaic (PV) Panels, November 1, 2012 by ICC-ES
 5. Aluminum Design Manual 2015, by The Aluminum Association, Inc.
 6. ANSI/AWC NDS-2015, National Design Specification for Wood Construction, by the American Wood Council

Design Criteria: Risk Category II; Seismic Design Category = A - E

Wind Loads: Basic Wind Speed (ultimate) per ASCE 7-16 = 95 mph to 190 mph. Includes roof pitches from 0° to 90°, up to 60 feet mean roof height, and exposure categories B, C, & D. Parapets, roof overhangs, and topographic wind speed adjustment have not been considered.

Snow Loads: Ground Snow Load = 0 to 120 (psf). Spans are based on the sloped roof snow load (Ps) corresponding to each ground snow load. See Appendix A to adjust span tables for non-reducible snow loads.

PV Modules: All solar PV modules with metal frames. “60-Cell” tables are applicable for modules up to 5’-6” (66”) long; “72-Cell” tables are applicable for modules up to 6’-6” (78”) long; and “Landscape” tables are applicable for modules up to 3’ 4-1/2” (40-1/2”) long in the narrow direction. Module length is defined to be perpendicular to the rail, regardless of panel orientation.

If you have any questions, do not hesitate to call.

Prepared by:
PZSE, Inc. – Structural Engineers
Roseville, CA

Ultra Rail Racking System with UR-40 Rail:

The SnapNrack Ultra Rail Racking System is intended for the rooftop installation of solar photovoltaic modules and is constructed from an assortment of modular parts as described in this report and shown in the attached details.

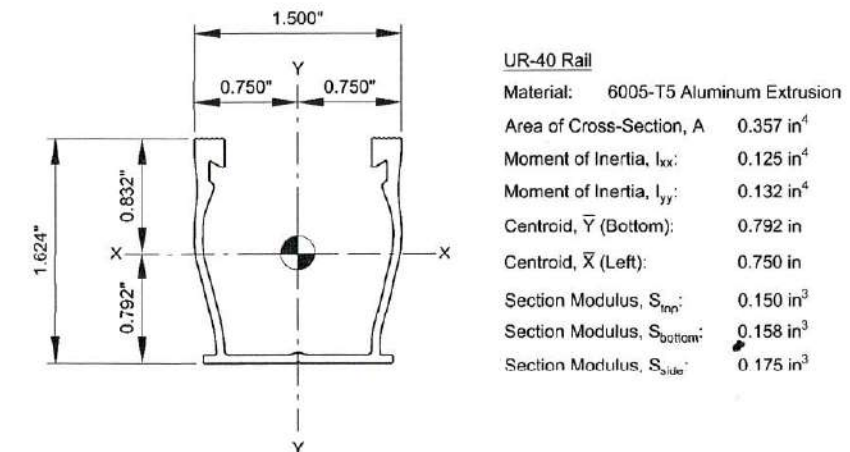


Figure 1: Diagram of UR-40 Rail Profile Covered by This Report (with Section Properties)

Flush-Mount System Geometry Limitations:

This set of plans and specifications shall be the basis for all work. No change shall be made without the written approval of the engineer. It is unlawful to change these plans and specifications without the written approval of the engineer. The City of San Diego Seal of Office is visible in the background.

Flush-Mounted PV modules are designed to be installed on the roof surface, and shall be located between 2" to 10" clear from the edge of the roof. The maximum cantilever length of the rail is L/3, where "L" is the maximum rail span after adjustments provided to the span tables. The modules shall be centered between the rails with a maximum of industry standard tolerance. The 1/2" gap between each PV module has been considered in the span charts and shall not be obstructed. Installations utilizing the Tile Replacement or Tile Hook attachment devices are permitted to have panels offset from the centerline of the rails.

Attachment to Roof:

The attached span tables include consideration of the attachment device capacity, based on UL 2703 load testing performed by SnapNrack. Tested load values are developed with 5/16" Ø lag screws with an effective embedment of 2-1/2" into a Douglas Fir substrate, with a reference withdrawal (uplift or pullout) load capacity of 532 lb, and a reference shear (side or lateral) load capacity of 270 lb for resisting short-term wind or seismic loads. Reference values are the base values, before any adjustment is made per the NDS. Installations into alternate substrates or which use alternate fasteners shall be permitted; provided that the fastener has tested or code-derived allowable load capacities, and meets one of the following two criteria: A) The allowable load values for the alternate fastener shall meet or exceed the allowable values noted above for the 5/16" Ø lag screws in Douglas Fir; or B) the span length identified in the "span tables" shall be reduced according to the more restrictive of the following two formulas:

$$\text{Rail Span} = \text{Table Span} * \frac{\text{Alternate Reference Withdrawal Capacity}}{532 \text{ lb}}$$

Or

$$\text{Rail Span} = \text{Table Span} * \frac{\text{Alternate Reference Shear Capacity}}{270 \text{ lb}}$$

These formulas shall not be used to increase the allowable span beyond the spans listed in the span tables.

Attachment Devices:

The Flush-mount span tables have been grouped into sets of attachment devices called "Bins", which are presented in the table below. To use this table, find the attachment device to be used in the list below, then read across to determine which bin the attachment is in. The spans may then be determined from the table with the corresponding Bin number. Structural details for the system and attachments may be found in Appendix D. Note: Side load direction is parallel to rafter.

Attachment Device Name	Detail Reference	Bin No.	Maximum Design Load			
			Uplift	Down	Side	Lateral
Ultra Rail Flush-Mount, Standard Base Seam Clamp with L-Foot †	SNR-DC-00342	1	598.4	461.8	275.7	275.7
Ultra Rail Flush-Mount, Wide Base Seam Clamp with L-Foot †	SNR-DC-00342					
Ultra Rail Flush-Mount, Flat Tile Hook	SNR-DC-00346	2	318.3	394	500	500
Ultra Rail Flush-Mount, Universal Tile Hook	SNR-DC-00347		344	423.1	416.7	416.7
Ultra Rail Flush-Mount, Hanger Bolt Clamp	SNR-DC-00354		397.3	460.9	500	500
Ultra Rail Flush-Mount, Flashed L-Foot (92 Deg)	SNR-DC-00340	3	309.4	1468.7	251.4	251.4
Ultra Rail Flush-Mount, Tile Replacement	SNR-DC-00341	4	444.7	1333.3	119.4	119.4
Ultra Rail Flush-Mount, All Purpose L-Foot (90 Deg)	SNR-DC-00340	5	444.7	1468.7	259.3	259.3
Ultra Rail Flush-Mount, Corrugated Straddle Block with L-Foot	SNR-DC-00343		444.7	1468.7	323.6	323.6
Ultra Rail Flush-Mount, Metal Roof Base with L-Foot	SNR-DC-00344 SNR-DC-00345		444.7	1468.7	446.6	446.6
Ultra Rail Flush-Mount, Metal Roof Base with 7 in Standoff	SNR-DC-00352 SNR-DC-00353		416.1	788.2	285.9	285.9
Ultra Rail Flush-Mount, 1-Hole Base with 5-1/2 in, 7 in, or 8-1/2 in Standoff	SNR-DC-00348 SNR-DC-00349		444.7	788.2	264.8	264.8
Ultra Rail Flush-Mount, 4-Hole Base with 5-1/2 in Standoff	SNR-DC-00350 SNR-DC-00357 SNR-DC-00358 SNR-DC-00359		444.7	788.2	222.3	222.3
Ultra Rail Flush-Mount, 6-Hole Base with 7 in HD Standoff	SNR-DC-00351		405.2	788.2	213	213
Ultra Rail Flush-Mount, 4-Hole Base with 8-1/2 in Standoff	SNR-DC-00350	6	444.7	788.2	136.3	136.3
Ultra Rail Flush-Mount, Tile Roof Hook F	SNR-DC-00356	7	848.7	500 *	554.1	554.1
Ultra Rail Flush-Mount, Tile Roof Hook WS	SNR-DC-00355		820.3	500 *	429.9	429.9
Ultra Rail Flush-Mount, Umbrella L-Foot	SNR-DC-00339	8	802.2	1333.3	356.7	356.7

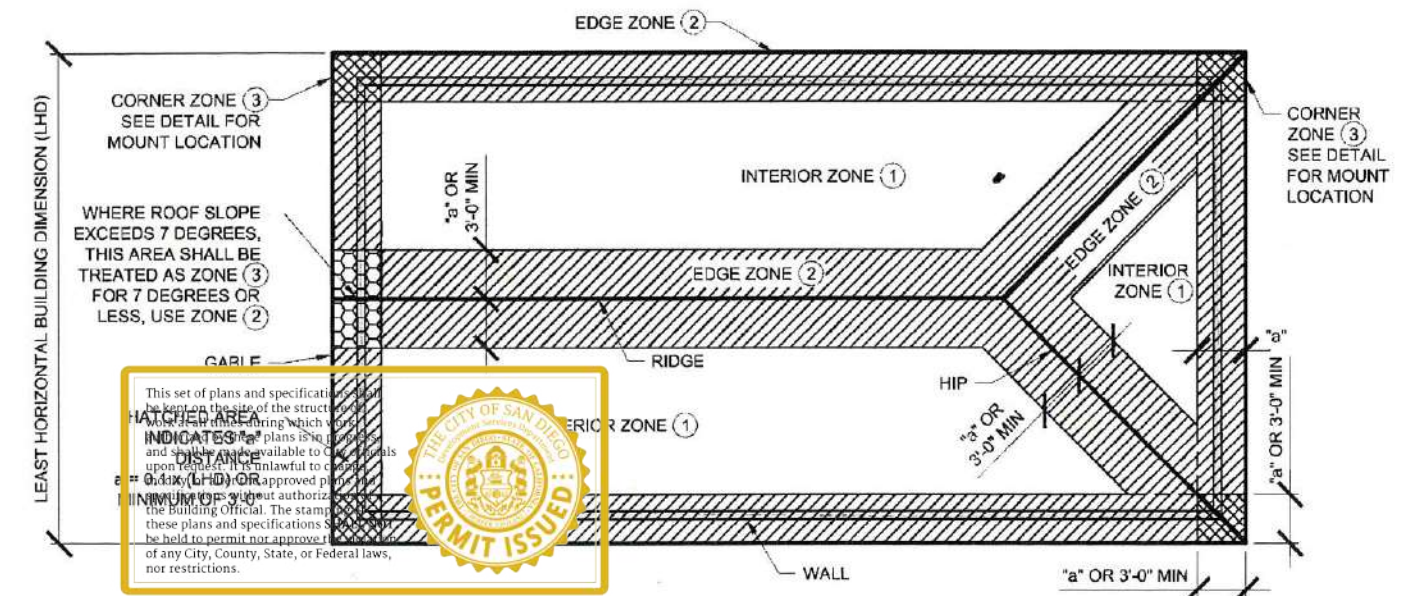
Table 1: Allowable load capacities of SnapNrack Flush-Mount attachment devices when used with the UR-60 rail. The lowest load value in each Bin (bold value) is used for calculation of the corresponding span table.

† Seam clamp load values are the lower of the racking system capacity, clamp slip strength, and seam rupture; based on testing performed with the clamp installed on representative panels of both 24ga steel and .032" (20ga) aluminum. Installation on thicker/stronger panels is permitted. Fastening or attachment of standing seam roof panels to the roof structure has not been evaluated.

* In order to reduce the chance for breaking roof tiles, SnapNrack recommends limiting downforce reaction load of the tile hook devices in Bin 7 to a maximum of 333 lb.

Components and Cladding Roof Zones:

The Edge Zones of the roof shall be determined based on the building's dimensions using Figure 2 below. The Edge Zone, "a", is the smaller of 10% of the least horizontal dimension, or 40% of the building height, and "a" shall not be taken as less than 3 feet (ASCE 7-16 figures 30.3-1 & 30.3-2). For buildings exceeding a least horizontal dimension of 60 feet, further analysis may be required to determine proper Edge Zones. Edge and Corner Zone spacings (Zone 2 & 3, respectively) apply only to mounts located in those Zones, not to all the mounts supporting the module. For the 45-90 degree roof pitch range, mount spacings shall be determined utilizing roof zones 1, 2, & 3.



Design Responsibility:

These tables are intended to be used under the responsible charge of a registered design professional where required by the authority having jurisdiction. In all other cases, these tables should be used under the direction of a design professional with sufficient structural engineering knowledge and experience to be able to:

- Evaluate whether these tables are applicable to the project, and
- Understand and determine the appropriate values for all input parameters of these tables.

This letter certifies that the SnapNrack Ultra Rail Flush-Mount Racking System, when installed according to the limitations of this letter and the attached span tables, is in compliance with the above codes and loading criteria. This certification excludes 1) evaluation of the building structure to support the loads imposed on the building by the array; including, but not limited to: strength and deflection of structural framing members, fastening and/or strength of roofing materials, and/or the effects of snow accumulation on the roof; and 2) excludes effects on building structural and architectural components. This requires additional knowledge of the building and is outside the scope of the certification of this racking system.

Appendix A: Snow Load Conversion

This appendix is applicable for Authorities Having Jurisdiction (AHJ's) with non-reducible snow loads for roof pitches under 45 degrees and roof pitches between 45 and 90 degrees.

Span tables were compiled utilizing ground snow load, which is reduced to flat roof snow for pitches under 45 degrees, and to sloped roof snow for roof pitches between 45 and 90 degrees. For AHJ's specifying minimum roof snow loads or non-reducible ground snow loads, the user shall convert the specified snow load to the equivalent ground snow load in the Snow Load Conversion Table below to utilize the SnapNrack Ultra Rail Flush-Mount Span Table(s).

Snow Load Conversion Table		
Specified Minimum Roof Snow Load (psf)	Equivalent Ground Snow Load (psf) for use in Span Table(s)	
	Roof Pitch: $0^\circ \leq \theta < 45^\circ$	Roof Pitch: $45^\circ \leq \theta \leq 90^\circ$
10	20	20
20	25	40
25	35	60
30	40	60
35	50	80
40	60	90
50	70	100
60	80	110
70	90	120
80	100	NA
90	120	NA
100	NA	NA
110	NA	NA
120	NA	NA

Table B: Conversion Table for Minimum Specified and/or Non-Reducible Snow Loads

Note: Calculated Snow Loads for roof-mounted solar photovoltaic installations assume Risk Category II.

Example Conversion

Given(s): AHJ requires minimum 30 psf roof snow load.
Existing roof pitch is 6 in 12 = 27°

- Step 1) Locate specified roof snow load in column 1 (30 psf).
Step 2) Determine which Roof Pitch column applies. Column 2 applies for the given condition.
Step 3) Select 40 psf from column 2 as the equivalent ground snow load for use in the Span Table(s).

Step 1			Step 2		
25	35	60	25	35	60
30	40	60	30	40	60
35	50	80	35	50	80
			Step 3		

Appendix B: Oversized Modules

Certain commercially available solar photovoltaic modules exceed the maximum length limitations given on page 1 of this report. These span tables are based on the assumption of a solid contiguous panel, without any gaps to allow the equalization of wind pressures above and below the panel. Approved oversized modules, which are listed in this appendix, are permitted to be designed using the span tables in the report, provided that the gaps between the panels remain unobstructed.

The following modules may be designed in portrait orientation using the span tables for "60-cell" panels, provided that the gaps between the individual modules remain unobstructed:

Manufacturer:	Model Number:
LG	LGxxxN1C-V5
LG	LGxxxN1K-V5
LG	LGxxxN1T-V5
LG	LGxxxQ1C-V5
LG	LGxxxQ1K-V5
LG	LGxxxN1K-A5
LG	LGxxxQ1K-A5
LG	LGxxxS1C-A5
LG	LGxxxN1C-A5
LG	LGxxxQ1C-A5
Hanwha	Q.PEAK DUO BLK-G5
Hanwha	Q.PEAK DUO-G5
Panasonic	VBHN330SA17
Panasonic	VBHN325SA17

6/30/2022, 8:07:57 AM
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Amir Taleghani

This set of plans and specifications shall be kept on the site of the structure of work at all times during which work authorized by these plans is in progress, and shall be made available to City officials upon request. It is unlawful to change, modify, or alter the approved plans and specifications without authorization of the Building Official. The stamping of these plans and specifications SHALL NOT be held to permit nor approve the violation of any City, County, State, or Federal laws, nor restrictions.

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Table C1: Approved 60-Cell modules

EATON 200A (DISTRIBUTION / COMBINER / SUB PANEL)

EATON 200 AMPS MAX. - SEE MAIN BREAKER RATING 200 AMPS MAX. BUS RATING 120/240 VAC/VCA 1PH-3W; 1 FASE - 3 HILOS, 208Y/120 VAC/VCA - 3W; 3 HILOS. SEE CASE SIDEWALL FOR FURTHER INFORMATION. PARA INFORMACION ADICIONAL VEA LA PARED LATERAL DEL GABINETE Y EL REVERSO DE LA CUBRIETO DE LOS INTERRUPTORES. THE PANEL RATING IS THAT OF THE MAIN BREAKER MAXIMUM SUM OF BREAKER RATINGS PER STAB: 200A BREAKER HANDLE IN MID-POSITION INDICATES BREAKER IS TRIPPED. TO RESTORE SERVICE, MOVE HANDLE TO EXTREME "OFF", THEN TO "ON". USE TYPE BD, BJ, BJH, BQ, BQC, BR, BRAF, BRD, BRH, BRO, BRSN, BRWH, GFCB, GFEP OR GFCBH CIRCUIT BREAKERS. FOR BACKFED MAIN BREAKER HOLD DOWN KIT USE CAT # BRHDK125 FOR FILLER PLATE TO CLOSE UNUSED COVER OPENINGS USE CAT # BRFP FOR MAIN LUG KIT FOR CONVERTIBLE PANELS USE CAT # BRS225 FOR MAIN BREAKER USE TYPE BW, BWH, CSR OR CSH FOR SUBFEED LUG KIT USE CAT # BRS225 FOR ADDITIONAL #6-2/0 NEUTRAL / GROUND LUGS USE CAT # NL20 FOR ADDITIONAL #6-300mm NEUTRAL / GROUND LUGS USE CAT # NL300 FOR MECHANICAL INTERLOCK KIT USE CAT # BRMIKCSR FOR GROUND BARS USE TYPE # GBK WHEN USED AS SERVICE EQUIPMENT, ANY UNUSED NEUTRAL HOLES MAY BE USED FOR EQUIPMENT GROUNDING. FOR EQUIPMENT GROUNDING, WIRE HOLES ARE SUITABLE FOR (1) #14-4 OR UP TO (3) #14-10 WIRES. MULTIPLE WIRES IN THE SAME HOLE MUST BE THE SAME SIZE AND MATERIAL. ADDITIONAL OR REPLACEMENT BREAKERS SHALL BE OF THE SAME MANUFACTURER AND TYPE AND SHALL HAVE AN INTERRUPTING RATING EQUAL TO OR GREATER THAN THE INTERRUPTING RATING OF ANY CIRCUIT BREAKER INSTALLED. LOS INTERRUPTORES ADICIONALES O DE REPUESTO DEBERAN SER DEL MISMO TIPO Y FABRICANTE Y DEVERAN TENER UNA CAPACIDAD INTERRUPTIVA EQUA A O MAYOR QUE LA CAPACIDAD INTERRUPTIVA DE CUALQUIER INTERRUPTOR DE CIRCUITO INSTALADO. PANELS WITH INSULATED NEUTRAL: SUITABLE FOR USE AS SERVICE EQUIPMENT WHEN NOT MORE THAN SIX MAIN DISCONNECTING MEANS ARE PROVIDED. PANELS WITH FACTORY BONDED NEUTRAL: SUITABLE ONLY FOR USE AS SERVICE EQUIPMENT. INSTALL NO MORE THAN SIX MAIN DISCONNECTING MEANS. PUB26542MADE IN USA ; HECHO EN EUAREV. 005	FOR RAINPROOF FITTINGS, (ON NEMA 3R DEVICES ONLY) REFER TO TABLE BELOW. PARA ACCESORIO A PRUEBA DE LLUVIA (SOLAMENTE EN APARATOS NEMA 3R) CONSULTE LA SIGUIENTE TABLA. HUB SIZE TAMANO DE CAMPANA CATALOG NUMBER 3/4" (19.05mm) 1" (25.40mm) 1-1/4" (31.75mm) 1-1/2" (38.10mm) 2" (50.80mm) 2" (50.80mm) 2-1/2" (63.50mm) 3" (76.20mm) DS075H1 DS100H1 DS125H1 DS150H1 DS200H1 DS200H2 DS250H2 DS300H2 TORQUE CIRCUIT BREAKER LUGS TO VALUES SPECIFIED ON CIRCUIT BREAKERS. APRIETE LAS TERMINALES DEL INTERRUPTOR A LOS VALORES DE TORQUE ESPECIFICADOS EN EL INTERRUPTOR. TERMINALS OTHER THAN BREAKER TERMINALS SUITABLE FOR 60/75°C AL-CU WIRE. BREAKER TERMINALS SUITABLE FOR AL-CU WIRE WHEN SO MARKED. REFER TO MARKINGS ON BREAKERS. WIRE SIZE CABLE/ CALIBRE NEUTRAL & GROUND BAR NEUTRO Y BARRRA DE CONEXION A TIERRA GROUND LUG (G1) & NEUTRAL LUG (N2) TERMINAL DE CONEXION A TIERRA (G1) Y NEUTRO (N2) LB-IN (N-M) PANEL LUGS (A & B) & MAIN NEUTRAL (N1) TERMINALES DEL PANEL (A&B) Y NEUTRO PRINCIPAL (N1) LB-IN (N-M) #14-10 #8 #6-4 #3-2/0 #6-300 20 (2.26) 25 (2.82) 35 (3.96) - - - - 45 (5.08) 50 (5.65) - - - - - 225 (25.42)	SERIES CONNECTED SHORT CIRCUIT RATING; CAPACIDAD DE CORTO CIRCUITO CONECTADO EN SERIE MAIN DISCONNECT EATON DESCONECTADOR PRINCIPAL FEEDER BREAKER / ALIMENTADOR DEL TABLERO DE DISTRIBUCION EATON BREAKER TYPES (INTEGRAL OR REMOTE) / INTERRUPTOR DE CIRCUITO (INTERGRAL O REMOTO) TYPE; TIPO NONE; NINGUNO LOADCENTER BRANCH BREAKER, EATON TYPE INTERRUPTOR DERIVADO DE CENTRO DE CARGA MAXIMUM SHORT CIRCUIT CURRENT RATING CAPACIDAD DE CORTO CIRCUITO MAXIMA 240 VAC/VCA MAX TORQUE WIRE PRESSURE SCREW(S) AS FOLLOWS APRIETE LOS TORNILLOS DE SUJECION DE CABLE A LOS VALORES DE TORQUE SIGUIENTES: TYPICAL WIRING DIAGRAM DIAGRAMA DE ALAMBRAO TIPICO MAIN LUG; TERMINAL PRINCIPAL MAIN BREAKER; INTERRUPTOR PRINCIPAL A B B A INSULATED OR BONDED NEUTRAL NEUTRO AISLADO O CONECTADO A TIERRA GROUND BAR (IF INSTALLED) BARRA DE CONEXION A TIERRA (DE SER INSTALADA) BOND WHEN REQUIRED CONECTE CUANDO SEA REQUERIDO SOLID STAB FOR ALL BRANCH BREAKERS EXCEPT TYPE BDR, BQ, BQC. CONECTOR SOLIDO PARA TODOS LOS INTERRUPTORES DERIVADOS EXCEPTO LOS TIPO BRD, BQ, BQC. NOTCHED STAB FOR ALL BRANCH BREAKERS. CONECTOR RANURADO PARA TODOS LOS INTERRUPTORES DERIVADOS.			
		SWITCH INTERRUPTOR CLASS T-FUSE 1200A MAX CLASS L-FUSE 1200-1600A MAX FUSIBLE CLASE T 1200A MAX FUSIBLE CLASE L 1200-1600A MAX CIRCUIT BREAKER INTERRUPTORES D CIRCUITO KD, HKD - 400 A MAX LD, HLD - 600 A MAX MD, HMD, MDL, HMDL - 800A MAX ND, NGS, HND, NGH - 1200 A MAX RD, RGH - 2000 A MAX BRH CHH-H2, BWH, CSR, CCVH CV, KD, HKD BRHH, CHH-H4, CWS CHH, CVH, KDC R, CC, BW, CCV (22K) (25K) (42K) (65K) (100K) (1) BD, BR, BRAF, BRD, BQ, BQC, GFCB. (2) 100,000 WITH CLASS T-FUSE, 600 AMP MAXIMUM. (3) 100,000 WITH CLASS T-FUSE, 1200 AMP MAXIMUM. (4) 100,000 WITH 100,000 AMP RATED MAIN SWITCH / INTERRUPTOR ONLY, OTHERWISE 65,000 AIC.			



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PER NEC TABLE 310.15(B)(16)

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