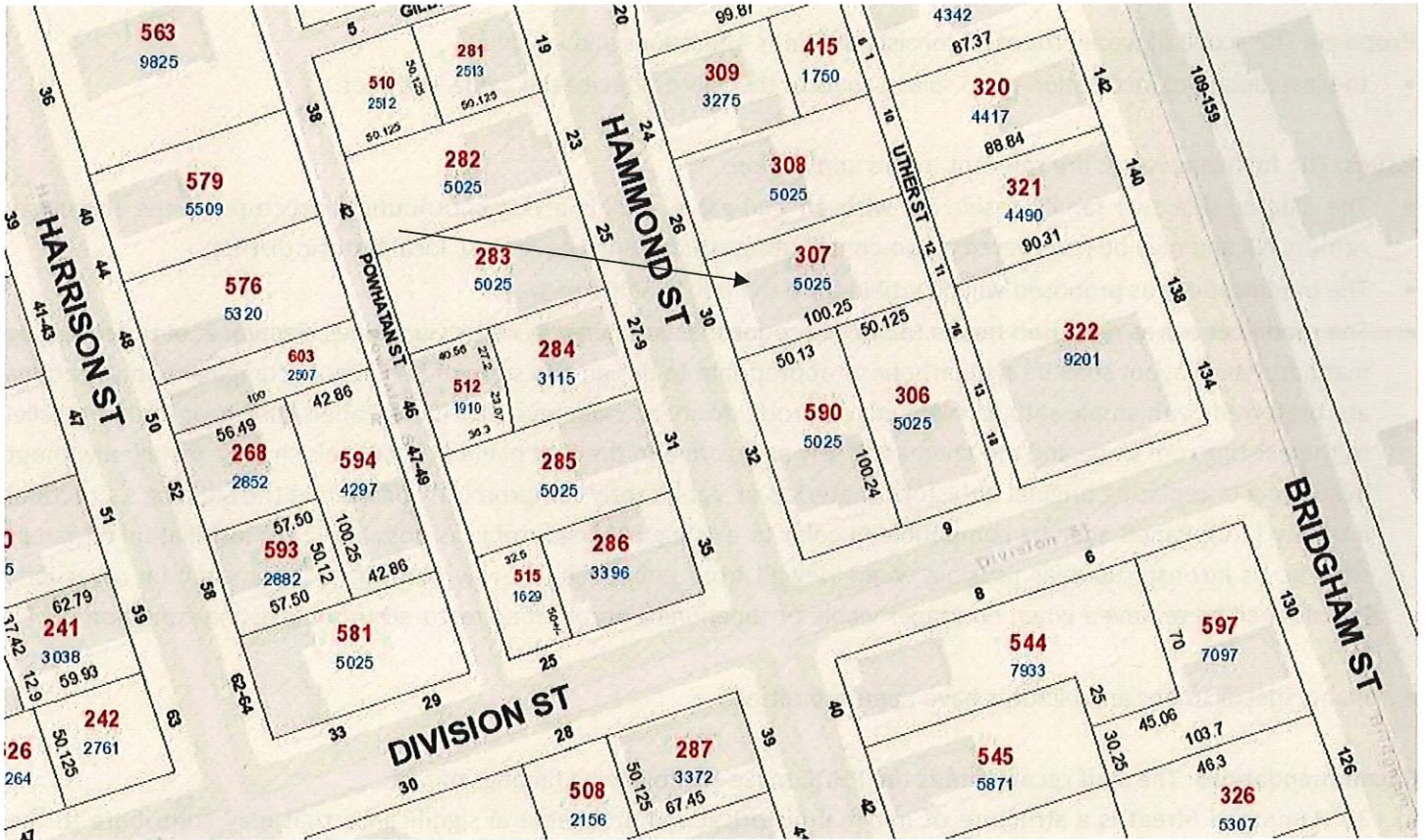
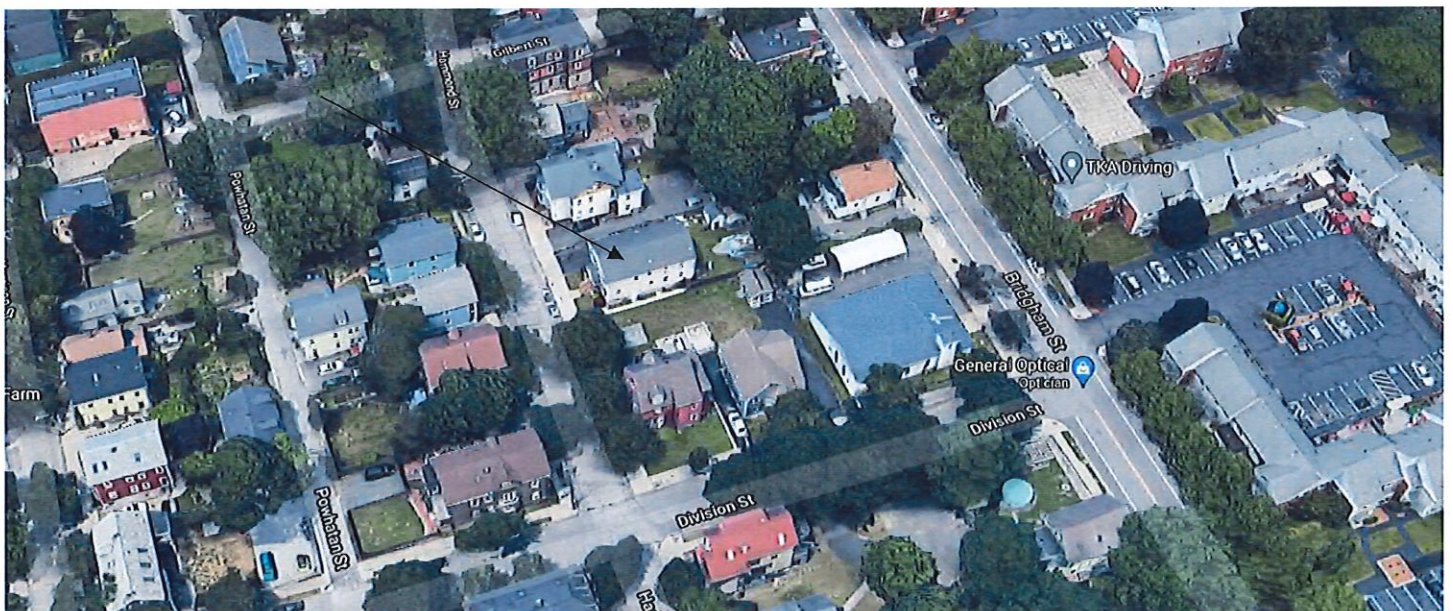


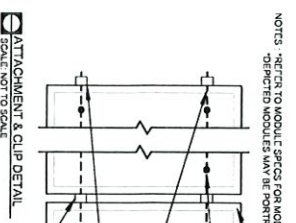
4. CASE 21.082, 30 HAMMOND STREET, House, 2004 (ARMORY)
NON-CONTRIBUTING to Broadway/Armory NR



Arrow indicates 30 Hammond Street



Arrow indicates project location, looking north.



NOTES - REFER TO MODULE SPECS FOR MODULE DIMENSIONS
- SPECIFIED MODULES MAY BE PARTIAL OR UNUSABLE

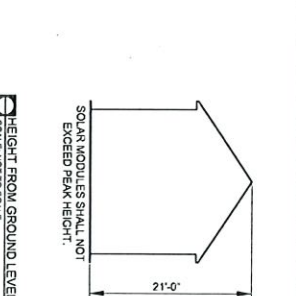
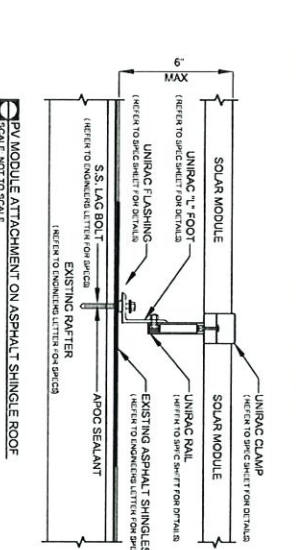
REFER TO EQUIPMENT SPECIFICATIONS FOR SPECS AND QUANTITIES

NEW MOUNTING FOOT ATTACHMENT POINTS TYPICAL (REFER TO SPECIFICATION DATA SHEET FOR DETAILS)

NEW UNIRAC RAIL TYPICAL (REFER TO UNIRAC SPECIFICATION/ DATA SHEET FOR DETAILS)

NEW END CLIP TYPICAL (REFER TO UNIRAC SPECIFICATION/ DATA SHEET FOR DETAILS)

NEW MID CLIP TYPICAL (REFER TO UNIRAC SPECIFICATION/ DATA SHEET FOR DETAILS)



HEIGHT FROM GROUND LEVEL TO PEAK OF ROOF
SCALE: NOT TO SCALE



Issued / Revisions

NO.	DESCRIPTION	DATE
01	ISSUED FOR PERMITS	04/20/2021
02	ISSUED FOR PERMITS	04/20/2021
03	ISSUED TO CONTRACTOR FOR REVIEW	04/20/2021

Project Title: BROWN, GREGORY- TRINITY ACT # : 2021-03-566671

Project Address: 30 HAMMOND STREET PROVIDENCE, RI 02909 41.8155237,-71.4284724

Drawing Title: PROPOSED PV SOLAR SYSTEM

Drawing Information: DRAWING DATE: 4/23/2021, DRAWN BY: KTD, REVISION BY: DMK

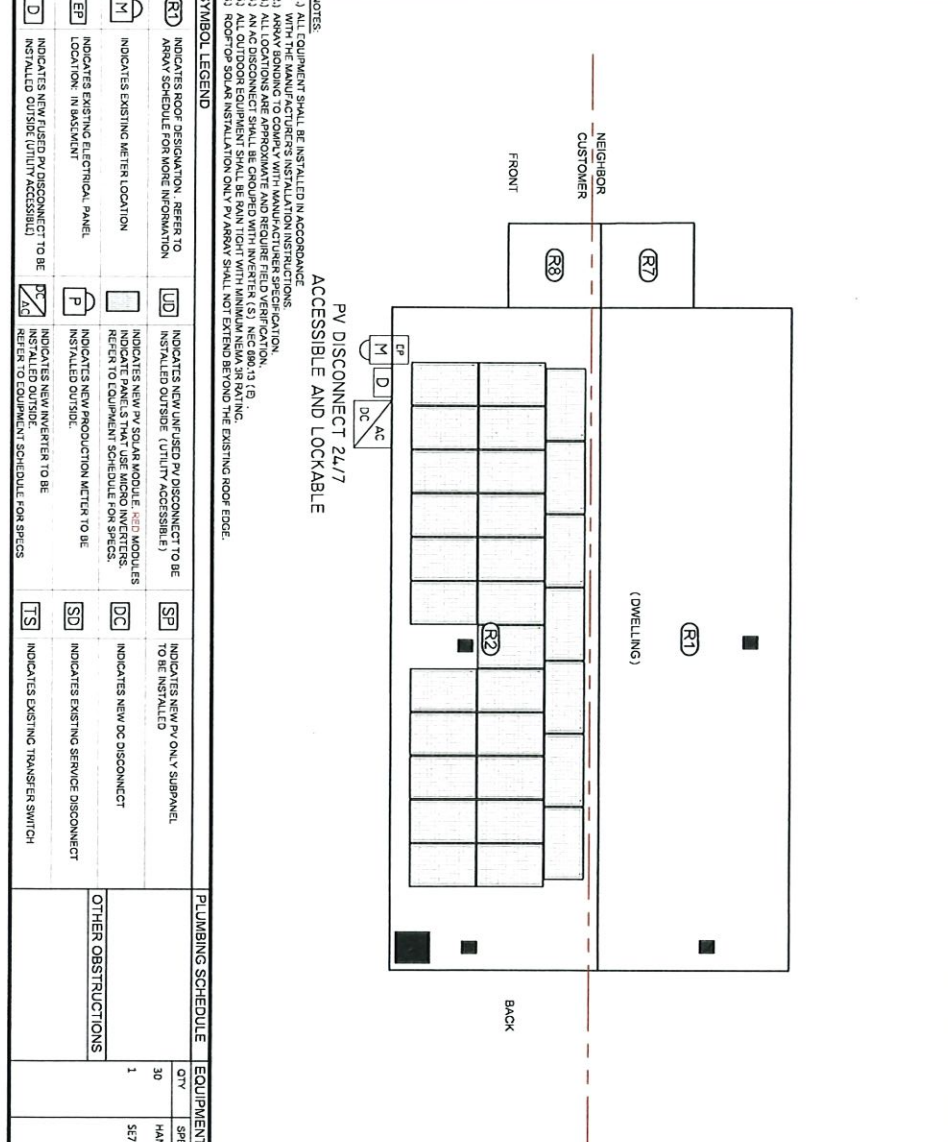
System Information: DC SYSTEM SIZE: 10.2kW, AC SYSTEM SIZE: 7.6kW, TOTAL MODULE COUNT: 30, MODULES USED: HANWHA 340, MODULE SPEC #: QPEAK QDIO BLK-C6+ 340, UTILITY COMPANY: NATL GRID, UTILITY ACT #: 893069000, UTILITY METER #: 98746252, DATA TYPE: SUNNOVA

Rev. No. R2 Sheet PV - 2

NICOLAS NITTI
REGISTERED PROFESSIONAL ENGINEER
6-15-2021
No. 11258

EXPIRES 06/30/2023

- ROOF 1: PITCH: 15.5°, ORIENTATION: 341°
- ROOF 2: PITCH: 15.5°, ORIENTATION: 341°
- ROOF 3: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 4: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 5: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 6: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 7: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 8: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 9: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 10: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 11: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 12: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 13: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 14: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 15: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 16: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 17: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 18: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 19: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 20: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 21: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 22: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 23: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 24: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 25: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 26: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 27: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 28: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 29: PITCH: 15.5°, ORIENTATION: 257°
- ROOF 30: PITCH: 15.5°, ORIENTATION: 257°



NOTES:

- EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION SPECIFICATIONS.
- ARRAY BONDING TO COMPLY WITH MANUFACTURER SPECIFICATION.
- ALL LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.
- ALL OCCUPANCIES SHALL BE CHECKED WITH INVENTOR (S) AND OWNER (S).
- ALL OUTSIDE WORK SHALL BE COMPLETED PRIOR TO PV ARRAY INSTALLATION.
- ROOF TOP SOLAR INSTALLATION ONLY PV ARRAY SHALL NOT EXTEND BEYOND THE EXISTING ROOF EDGE.

SYMBOL LEGEND

SYMBOL	DESCRIPTION
(R1)	INDICATES ROOF DESIGNATION. REFER TO ARRAY SCHEDULE FOR MORE INFORMATION
(M)	INDICATES EXISTING METER LOCATION
(EP)	INDICATES EXISTING ELECTRICAL PANEL LOCATION. IN BASINMENT
(D)	INDICATES NEW TIEDED PV DISCONNECT TO BE INSTALLED OUTSIDE (UTILITY ACCESSIBLE)
(P)	INDICATES NEW UNFINISHED PV DISCONNECT TO BE INSTALLED OUTSIDE (UTILITY ACCESSIBLE)
(SP)	INDICATES NEW PV ONLY SUBPANEL TO BE INSTALLED
(DC)	INDICATES NEW PV SOLAR MODULE. NEW MODULES INDICATE PANELS THAT USE MICRO INVERTERS. REFER TO EQUIPMENT SCHEDULE FOR SPECS.
(SD)	INDICATES NEW PRODUCTION METER TO BE INSTALLED OUTSIDE.
(TS)	INDICATES NEW INVERTER TO BE INSTALLED OUTSIDE (UTILITY ACCESSIBLE)
(TS)	INDICATES EXISTING TRANSFER SWITCH

PUMPING SCHEDULE

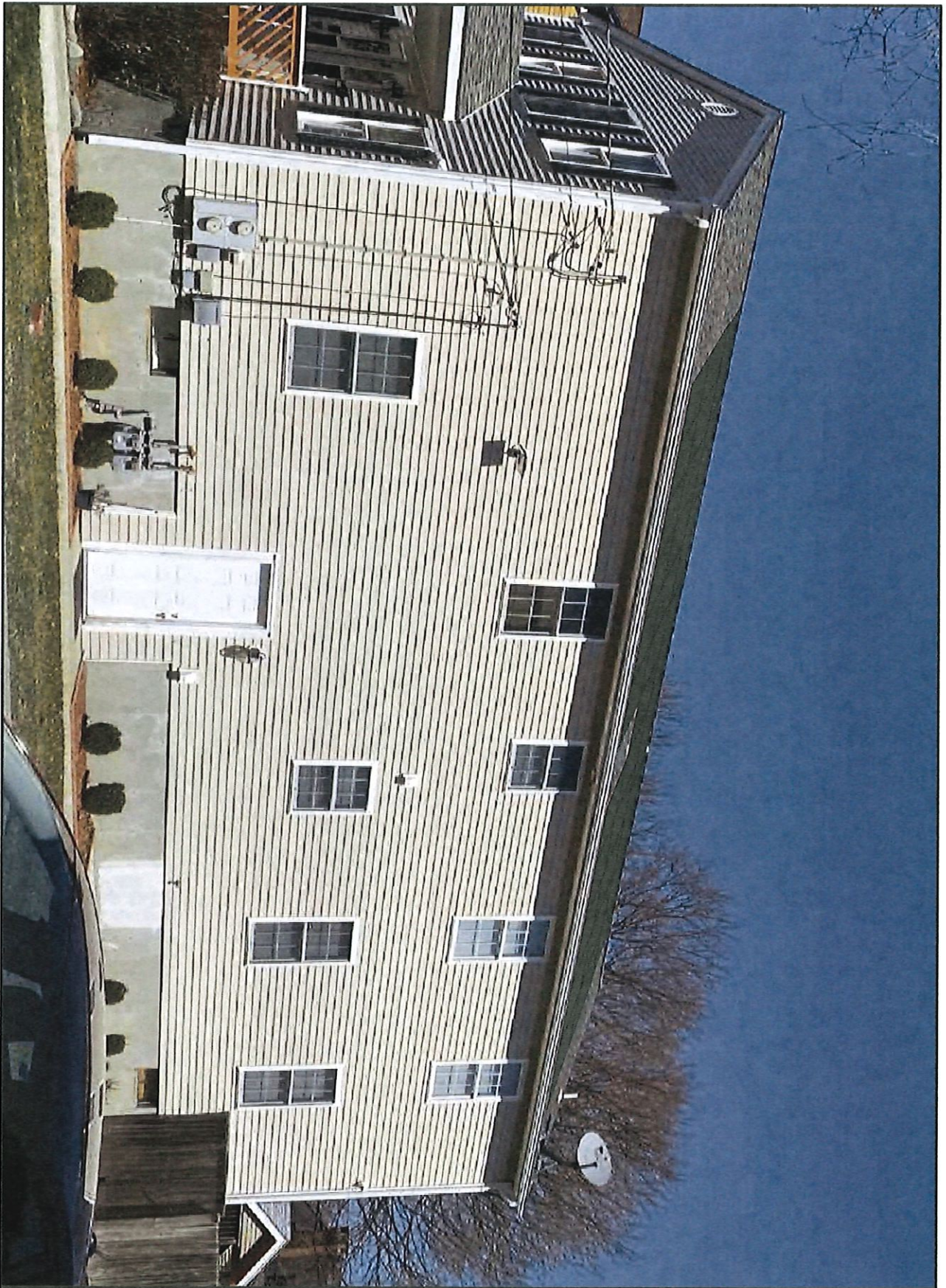
EQUIPMENT SCHEDULE	QTY	SPEC #
HANWHA 340 (QPEAK QDIO BLK-C6+ 340)	30	5E7800H-U5008ANC4

OTHER OBSTRUCTIONS

2211 Alfordwood Road
Wall, New Jersey 07719
www.TrinitySolar.com

877-786-2783

Trinity SOLAR



Engineer / License Holder:

NICOLAS NITTI

No. 11258



REGISTERED
PROFESSIONAL ENGINEER
6-15-2021

ECOA: 000000000

Issued / Revisions

NO.	DESCRIPTION	DATE
01	ISSUED FOR I.T.	4/29/21
02	ISSUED FOR I.T.	4/29/21
03	ISSUED FOR I.T.	4/29/21

Project Title:

BROWN, GREGORY-
TRINITY ACCT #: 2021-03-566671

Project Address:

30 HAMMOND STREET
PROVIDENCE, RI 02909
41.8353237, -71.4284714

Drawing Title:

PROPOSED PV SOLAR SYSTEM

Drawing Information

DRAWING DATE: 4/29/2021
DRAWN BY: KTD
REVISIONS: DMH

System Information:

DC SYSTEM SIZE: 10.2kW
AC SYSTEM SIZE: 7.6kW
TOTAL MODULE COUNT: 30
MODULES USED: HANWHA 340
MODULE SPEC #: QP1AN-D10 BK-66-340
UTILITY COMPANY: NANTUCKET
UTILITY ACCT #: 892082000
UTILITY METER #: 98766132
DEAL TYPE: SUNNIVA

Rev. No.

R2 PV - 3

Sheet



2311 Alford Road
Wail, New Jersey 07719
873-786-7383
www.TrinitySolar.com

ARRAY CIRCUIT WIRING NOTES
 1) ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH ALL RESPONSIBILITY FOR DETERMINING ON-SITE CONDITIONS AND EXECUTING INSTALLATION IN ACCORDANCE WITH **NEC 2017**

2) LOWEST EXPECTED AMBIENT TEMPERATURE BASED ON ASHRAE HIGHEST MONTH 2% DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION. LOWEST EXPECTED AMBIENT TEMP = 31°C

3) HIGHEST CONTINUOUS AMBIENT TEMPERATURE BASED ON ASHRAE HIGHEST MONTH 2% DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION. HIGHEST CONTINUOUS TEMP = 33°C

4) 2005 ASHRAE FUNDAMENTALS 2% DESIGN TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION. HIGHEST CONTINUOUS TEMP = 33°C

5) PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. CURRENT CARRYING CAPACITY SHALL BE DETERMINED IN ACCORDANCE WITH NEC 690.12(A) THROUGH (D)

6) PHOTOVOLTAIC POWER SYSTEMS SHALL BE PERMITTED TO BE INSTALLED IN UNFINISHED ATTIC SPACES PROVIDED THE SOURCE AND OUTPUT CIRCUITRY AS PER NEC 690.41 (A)(4) THROUGH (A)(6) IS PROTECTED FROM OUTLET FINISH. POSITIVE CONDUCTORS = RED NEGATIVE CONDUCTORS = BLACK

7) UNGROUNDING DC CIRCUIT CONDUCTORS SHALL BE PERMITTED TO BE INSTALLED IN UNFINISHED ATTIC SPACES PROVIDED THE SOURCE AND OUTPUT CIRCUITRY AS PER NEC 690.41 (A)(4) THROUGH (A)(6) IS PROTECTED FROM OUTLET FINISH. POSITIVE CONDUCTORS = RED NEGATIVE CONDUCTORS = BLACK

8) ARRAY AND SUB ARRAY CONDUCTORS SHALL BE #10 PV WIRE TYPE FHW-2 OR EQUIVALENT AND SHALL BE PROTECTED BY CONDUIT WHERE EXPOSED TO DIRECT SUNLIGHT. ALL CONDUCTORS SHALL BE INSTALLED IN UNFINISHED ATTIC SPACES WHERE EXPOSED TO DIRECT SUNLIGHT SHALL CONTAIN < 20 CURRENT CARRYING CONDUCTORS AND < 9 CURRENT CARRYING CONDUCTORS.

9) ALL WIRE LENGTHS SHALL BE LESS THAN 100' UNLESS OTHERWISE NOTED

10) RIGID CONDUIT SHALL NOT BE INSTALLED ON ROOFTOP AND SHALL BE LIMITED TO 12" IF USED OUTDOORS

11) OVERCURRENT PROTECTION FOR CONDUCTORS CONNECTED TO THE SUPPLY SIDE OF A SERVICE SHALL BE LOCATED WITHIN 10' OF THE POINT OF CONNECTION NEC 705.31

12) WHERE TWO SOURCES FEED A BUSBAR, ONE A UTILITY AND THE OTHER AN INVERTER, PV BACKFEED BREAKER(S) SHALL BE LOCATED OPPOSITE FROM UTILITY BREAKER(S) (NEC 705.12(B)(1)(b))

13) ALL SOLAR SYSTEM LOAD CENTERS TO CONTAIN ONE GENERATION CIRCUITS AND NO UNUSED POSITIONS OR LOADS

14) ALL EQUIPMENT INSTALLED OUTDOORS SHALL HAVE A NEMA 3R RATING

CALCULATION FOR CURRENT CARRYING CONDUCTORS REQUIRED CONDUCTOR CAPACITY
 [NEC 690.8(B)(1)]: $(5.00 \times 1.25) \times 18.75A$

AMC #10, SEATED AMPACITY
 AMBIENT TEMP: 33°C, TEMP DE-RATING: 1.0
 RATED CAPACITY: 18.75A
 DERATING FACTOR: 0.96
 (690.9(B) 80) = 30.77A

AMC #8, SEATED AMPACITY
 AMBIENT TEMP: 33°C, TEMP DE-RATING: 1.0
 RATED CAPACITY: 18.75A
 DERATING FACTOR: 0.96
 (690.9(B) 80) = 30.77A

CALCULATION FOR PV OVERCURRENT PROTECTION
 TOTAL INVERTER CURRENT: 32.00A
 32.00A $\times 1.25$ = 40.00A
 --> 40A OVERCURRENT PROTECTION IS VALID

PV MODULE SPECIFICATIONS

Model	HANWHA 340 (GPR)X DUO BLK(G)- 340
Vmp	10.2
Voc	33.94
Isc	40.66
Pmax	340
Impp	33.94

INVERTER #1 - SETPOINT: 480V/60HZ

DC	AC
Vmp	7600
Voc	13
Isc	40
Vnom	240



NOTE:
 INTERNAL REVENUE GRADE MONITORING CONTAINED WITHIN SOLAR EDGE INVERTER SOLAR EDGE PN: RNWD-30-240-WB

CONDUIT TYPE SHALL BE GIVEN BY THE INSTALLATION CONTRACTOR TO MEET OR EXCEED NEC AND LOCAL AND REQUIREMENTS.

A	#6 THWN-2 GFC TO EXISTING GROUND ROD
B	3/4" CONDUIT W/ 2-#8 THWN-2, 1-#10 THWN-2, 1-#10 THWN-2 GROUND
C	3/4" CONDUIT W/ 4-#10 THWN-2, 1-#10 THWN-2 GROUND
D	3/4" CONDUIT W/ 2-#8 THWN-2, 1-#10 THWN-2, 1-#10 THWN-2 GROUND
E	#10 PV WIRE (PANEL W/ #6 BARE COPPER BOND TO ARRAY)
F	3/4" CONDUIT W/ 2-#6 THWN-2, 1-#6 THWN-2, 1-#8 THWN-2 GROUND

PROPOSED PV SOLAR SYSTEM

Project Address:	30 HANAMOND STREET PROVIDENCE, RI 02909 41.8155237, -71.4284714
Project Title:	BROWN, GREGORY- TRINITY ACCT # 2021-03-566571
System Information:	DC SYSTEM SIZE: 10.2kW AC SYSTEM SIZE: 7.4kW TOTAL MODULE COUNT: 30 MODULES USED: HANWHA 340 MODULE SPEC #: GPRX DUO BLK(G)- 340 UTILITY ACT #: N.N.T. GRID UTILITY COMPANY: 8910029000 UTILITY METER #: 98766132 METER TYPE: SUNNIVA

Rev. No. R2 Sheet PV - 4

Trinity SOLAR

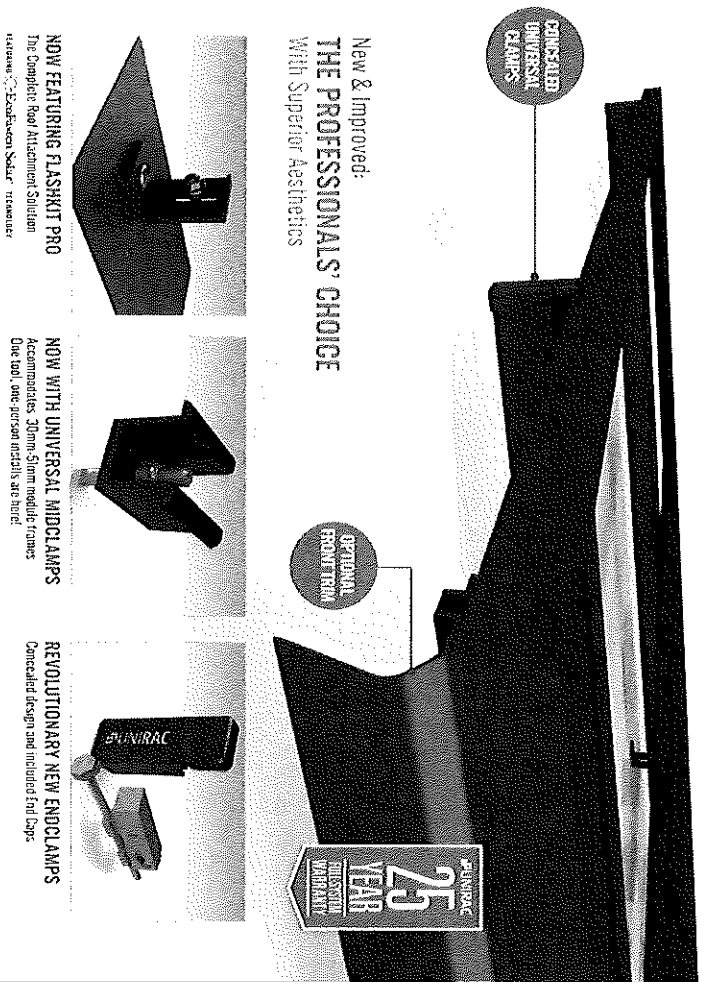
PROFESSIONAL ENGINEER
 6-15-2021
 11258
 NICHOLAS NITTI
 Engineer / License Holder

Issued / Revisions

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	6/15/2021

SOLARMOUNT

SOLARMOUNT is the professionals' choice for residential PV mounting applications. Every aspect of the system is designed for an easier, faster installation experience. SOLARMOUNT is a complete solution with revolutionary universal clamps. FLASHKIT PRO, full system UL 2703 certification and 25-year warranty. Not only is SOLARMOUNT easy to install, but best-in-class aesthetics make it the most attractive on any block!



THE PROFESSIONALS' CHOICE FOR RESIDENTIAL RACKING
BEST INSTALLATION EXPERIENCE • CURB APPEAL • COMPLETE SOLUTION • UNIRAC SUPPORT

SOLARMOUNT

BETTER DESIGNS

TRUST THE INDUSTRY'S BEST DESIGN TOOL

Start the design process for every project in our U-Builder online design tool. It's your way to save time and money.

BETTER SYSTEMS

ONE SYSTEM - MANY APPLICATIONS

Quickly self-install, flush to the roof or slope pitched, etc. Grant's a large variety of models to perfect fit landscape. Fit the system up an feet or ten, low roofs. Components available in metal, steel, and dark finishes to optimize your design, aesthetics and aesthetics.

BETTER RESULTS

MAXIMIZE PROFITABILITY ON EVERY JOB

Bring Unirac to help you optimize both system and labor costs from the time the job is quoted to the time your teams get off the roof. Senior installers, loss-prevent, More Profit.

BETTER SUPPORT

WORK WITH THE INDUSTRY'S MOST EXPERIENCED TEAM

Professional support for professional installers and designers. You have access to our technical support and training groups. Whatever your regional needs, we've got you covered. Visit Unirac.com/Support for more information.



UL2703

UL LISTED
 UL2703
 PHOTOVOLTAIC
 SYSTEMS CLASSIFICATION

UNIRAC CUSTOMER SERVICE MEANS THE HIGHEST LEVEL OF PRODUCT SUPPORT



TECHNICAL SUPPORT

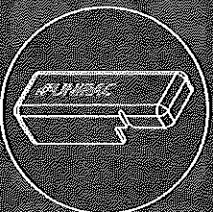
Unirac's technical support team is dedicated to answering questions & addressing issues in real time. An entire library of documents including engineering reports, standard letters and technical data sheets, general analytics, your portfolio and project planning process.

CERTIFIED QUALITY PROVIDER

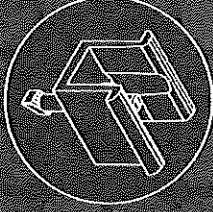
Unirac is the only PV mounting vendor with ISO certifications for 9007:2008, 14001:2014 and 61500:2001:2007 which means we deliver the highest standards for its turn-key and localized. These certifications demonstrate our confidence and commitment to the highest business practices.

BANKABLE WARRANTY

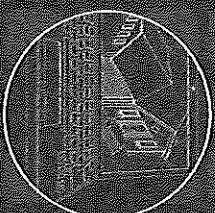
Don't leave your investment in doubt. Since the financial strength to back our products can reduce your risk, the peace of mind knowing you are providing projects of exceptional quality, SOLARMOUNT is covered by a 25-year limited product warranty and a 5-year limited third-party ENHANCED YOUR REPUTATION WITH QUALITY PROVEN SOLUTIONS BACKED BY ENGINEERING EXCELLENCE AND A SUPERIOR SUPPORT TEAM.



CONCEALED UNIVERSAL ENDCLAMPS



END CAPS INCLUDED WITH EVERY ENDCLAMP



UNIVERSAL SELF-STANDING MIDCLAMPS

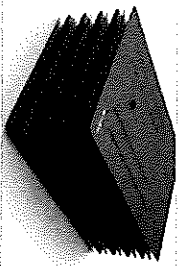
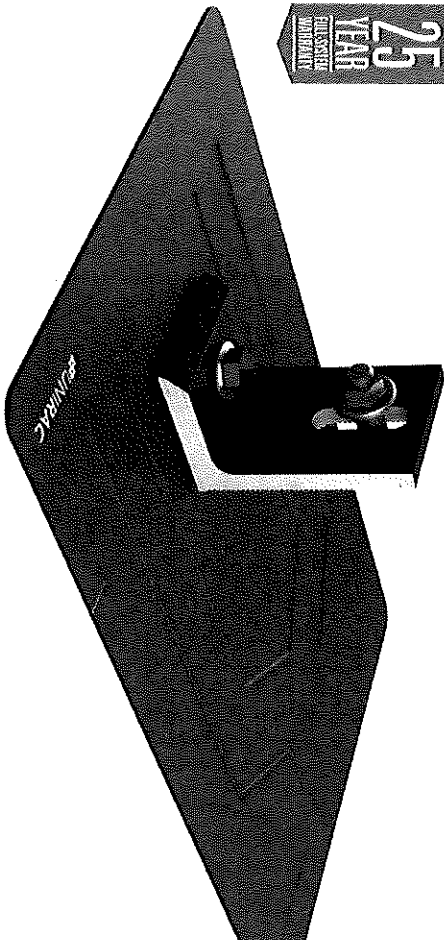
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FLASHKIT PRO

FEATURING SHED & SEAL TECHNOLOGY
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FLASHKIT PRO is the complete attachment solution for composition shingle roofs. Featuring Unirac's patented SHED & SEAL technology, a weather proof system which provides the ultimate protection against roof leaks. Kitted in 10 packs for maximum convenience, flashings and hardware are available in Mill or Dark finishes. With FLASHKIT pro, you have everything you need for a quick, professional installation.

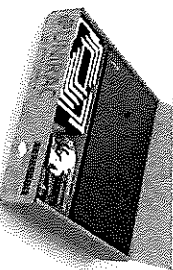
UNIRAC
25
YEAR
WARRANTY



TRUSTED WATER SEAL FLASHINGS
FEATURING SHED & SEAL TECHNOLOGY



YOUR COMPLETE SOLUTION
Flashings, legs, continuous slot L-Foot and hardware



CONVENIENT 10 PACKS
Packaged for speed and ease of handling

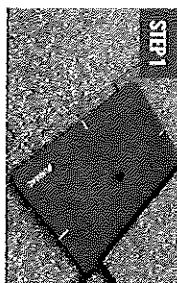
THE COMPLETE ROOF ATTACHMENT SOLUTION

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702

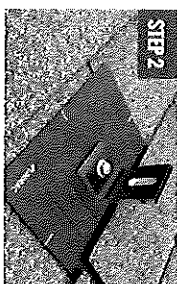
FLASHKIT PRO

FEATURING SHED & SEAL TECHNOLOGY
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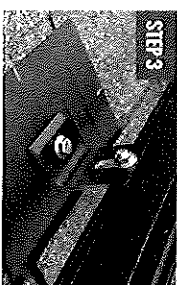
FLASHKIT PRO IS THE COMPLETE FLASHING AND ATTACHMENT SOLUTION FOR COMPOSITION ROOFS.



STEP 1
INSTALL FLASHKIT PRO FLASHINGS



STEP 2
INSTALL L-FOOT



STEP 3
ATTACH L-FOOT TO RAIL

PRE-INSTALL

- Locate roof rafters and snap chalk lines to mark the installation point for each roof attachment.
- Drill a 7/32" pilot hole at each roof attachment. Fill each pilot hole with sealant.

STEP 1 INSTALL FLASHKIT PRO FLASHING

- Add a U-shaped bead of roof sealant to the underside of the flashing with the open side of the U pointing down the roof slope. Slide the aluminum flashing underneath the row of shingles directly up slope from the pilot hole as shown. Align the indicator marks on the lower end of the flashing with the chalk lines on the roof to center the raised hole in the flashing over the pilot hole in the roof. When installed correctly, the flashing will extend under the two courses of shingles above the pilot hole.

STEP 2 INSTALL L-FOOT

- Fasten L-foot and flashing into place by passing the included lag bolt and pre-installed stainless steel-backed EPDM washer through the L-foot EPDM grommet, and the raised hole in the flashing, into the pilot hole in the roof rafter.

- Drive the lag bolt down until the L-foot is held firmly in place. It is normal for the EPDM on the underside of the stainless steel backed EPDM washer to compress and expand beyond the outside edge of the steel washer when the proper torque is applied.

TIP:

- Use caution to avoid over-tightening the lag bolt if using an impact driver.
- Repeat Steps 1 and 2 at each roof attachment point.

STEP 3 ATTACH L-FOOT TO RAIL

- Insert the included 3/8" 16 T-bolts into the lower slot on the Rail (sold separately), spacing the bolts to match the spacing between the roof attachments.
- Position the Rail against the L-foot and insert the threaded end of the T-bolt through the continuous slot in the L-foot. Apply anti-seize to both threads to prevent galling of the T-bolt and included 3/8" serrated flange nut. Place the 3/8" flange nut on the T-bolt and finger tighten. Repeat STEP 3 until all L-Feet are secured to the Rail with a T-bolt. Adjust the level and height of the Rail and torque each bolt to 30ft-lbs.

FASTER INSTALLATION. 25-YEAR WARRANTY.

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702