

SHEET INDEX

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ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
AFC	ARC FAULT CIRCUIT INTERUPTER
AZIM	AZIMUTH
COMP	COMPOSITION
DC	DIRECT CURRENT
(E)	EXISTING
ESS	ENERGY STORAGE SYSTEM
EXT	EXTERIOR
INT	INTERIOR
MSP	MAIN SERVICE PANEL
(N)	NEW
NTS	NOT TO SCALE
OC	ON CENTER
PRE-FAB	PRE-FABRICATED
PSF	POUNDS PER SQUARE FOOT
PV	PHOTOVOLTAIC
RSD	RAPID SHUTDOWN DEVICE
TL	TRANSFORMERLESS
TYP	TYPICAL
V	VOLTS
W	WATTS
LAN	LANDSCAPE
POR	PORTRAIT

SE

SERVICE ENTRANCE

MP

MAIN PANEL

SP

SUB-PANEL

LC

PV LOAD CENTER

SM

SUNRUN METER

PM

DEDICATED PV METER

INV

INVERTER(S)

AC

AC DISCONNECT(S)

DC

DC DISCONNECT(S)

CB

IQ COMBINER BOX

INTERIOR EQUIPMENT SHOWN AS DASHED

CHIMNEY

ATTIC VENT

FLUSH ATTIC VENT

PVC PIPE VENT

METAL PIPE VENT

T-VENT

SATELLITE DISH

FIRE SETBACKS

HARDSCAPE

— PL —

PROPERTY LINE

SOLAR MODULES

SCALE: NTS

SNR MOUNT

SNR MOUNT & SKIRT

VICINITY MAP

• SYSTEM SIZE: 9125W DC, 7600W AC

• MODULES: (25) LONGI GREEN ENERGY TECHNOLOGY CO LTD: LR4-60HPH-365M

• INVERTERS: (1) SOLAREEDGE TECHNOLOGIES: SE7600H-USSN

• RACKING: RL UNIVERSAL, SPEEDSEAL TRACK ON COMP, SEE DETAIL SNR-DC-00436

• ALL WORK SHALL COMPLY WITH 2020 NEW YORK STATE RESIDENTIAL CODE WITH 2018 IRC/IBC/IEBC, MUNICIPAL CODE, AND ALL MANUFACTURERS' LISTINGS AND INSTALLATION INSTRUCTIONS.

• PHOTOVOLTAIC SYSTEM WILL COMPLY WITH NEC 2017.

• ELECTRICAL SYSTEM GROUNDING WILL COMPLY WITH NEC 2017.

• PHOTOVOLTAIC SYSTEM IS UNGROUNDED. NO CONDUCTORS ARE SOLIDLY GROUNDED IN THE INVERTER. SYSTEM COMPLIES WITH 690.35.

• MODULES CONFORM TO AND ARE LISTED UNDER UL 1703.

• INVERTER CONFORMS TO AND IS LISTED UNDER UL 1741.

• RACKING CONFORMS TO AND IS LISTED UNDER UL 2703.

• SNAPNRACK RACKING SYSTEMS, IN COMBINATION WITH TYPE I, OR TYPE II MODULES, ARE CLASS A FIRE RATED.

• RAPID SHUTDOWN REQUIREMENTS MET WHEN INVERTERS AND ALL CONDUCTORS ARE WITHIN ARRAY BOUNDARIES PER NEC 690.12(1).

• CONSTRUCTION FOREMAN TO PLACE CONDUIT RUN PER 690.31(G).

• ARRAY DC CONDUCTORS ARE SIZED FOR DERATED CURRENT.

• 11.43 AMPS MODULE SHORT CIRCUIT CURRENT.

• 17.85 AMPS DERATED SHORT CIRCUIT CURRENT [690.8 (A) & 690.8 (B)].

STATE OF NEW YORK

MANOUCHEHR HAKHAMANESHI

LICENSED PROFESSIONAL ENGINEER

103982

Digitally signed by MANOUCHEHR HAKHAMANESHI

Date: 2022.11.20 08:56:07 -05'00'

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APN:
4803-154-000-00026-001-0040-0000000

PROJECT NUMBER:
212R-741ROBE

DESIGNER: (415) 580-6920 ex3
DAVID CLARK

SHEET
COVER SHEET

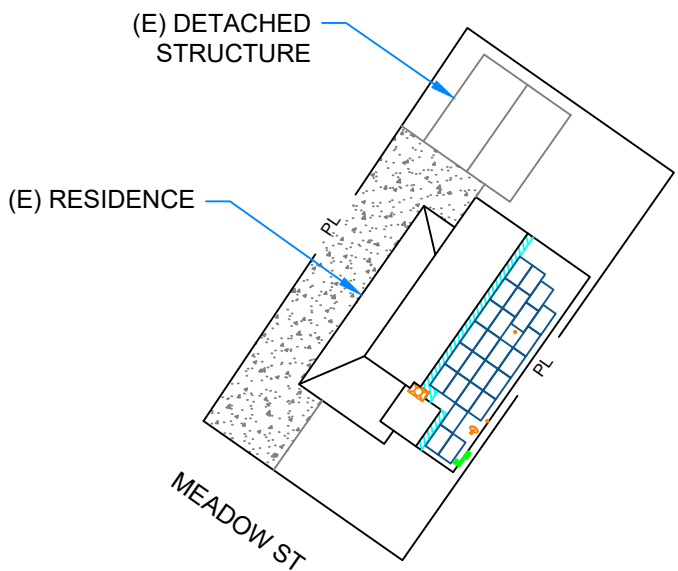
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PV-1.0

SITE PLAN DETAIL - SCALE = 1/8" = 1'-0"



SITE PLAN - SCALE = 3/128" = 1'-0"



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SITE PLAN

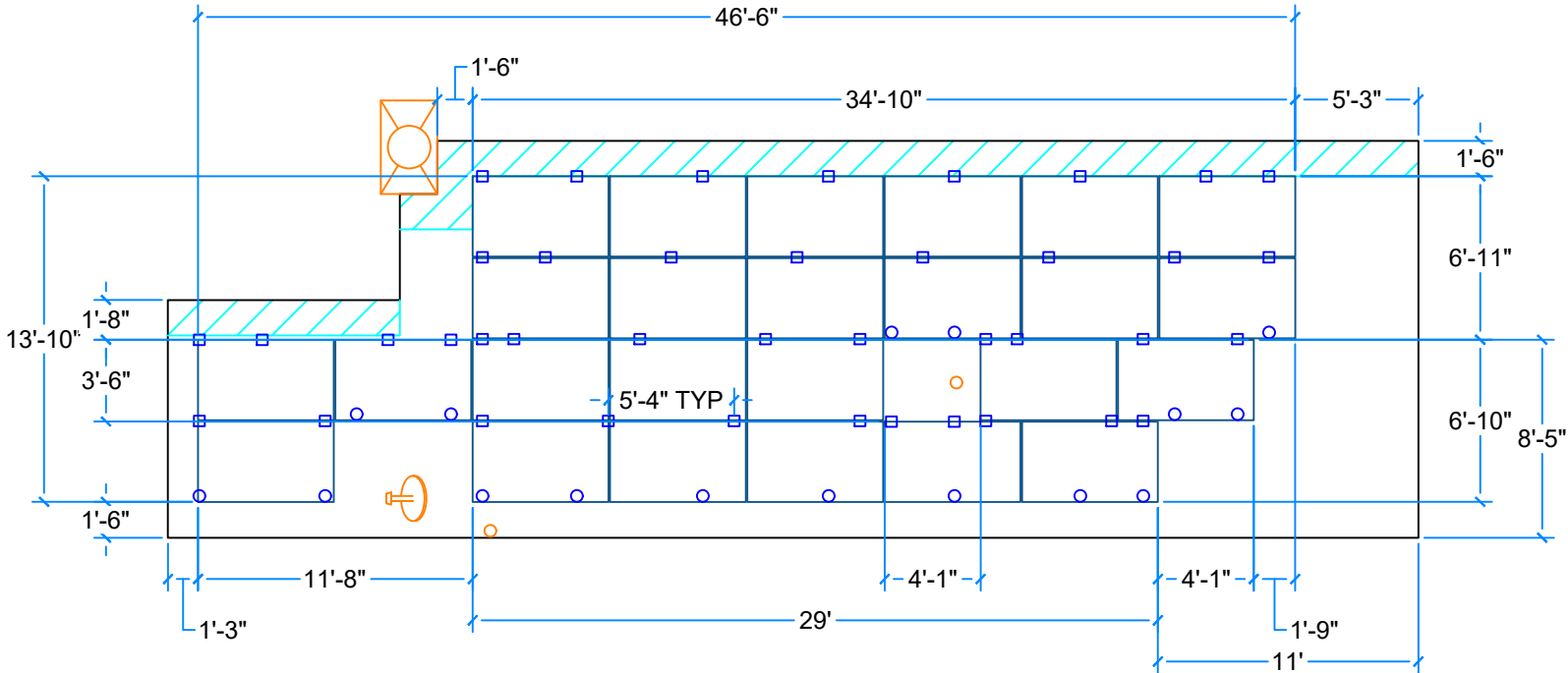
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PV-2.0

	ARRAY PITCH	TRUE AZIM	MAG AZIM	PV AREA (SQFT)
AR-01	38°	125°	137°	490.2

ROOF INFO			FRAMING INFO			ATTACHMENT INFORMATION					
Name	Type	Height	Type	Max Span	OC Spacing	Detail	Max Landscape OC Spacing	Max Landscape Overhang	Max Portrait OC Spacing	Max Portrait Overhang	Configuration
AR-01	COMP SHINGLE - RLU	2-Story	2X8 RAFTERS	11' - 0"	16"	RL UNIVERSAL, SPEEDSEAL TRACK ON COMP, SEE DETAIL SNR-DC-00436	5' - 4"	2' - 1"	4' - 0"	2' - 0"	STAGGERED

D1 - AR-01 - SCALE: 1/8" = 1'-0"
AZIM:125°
PITCH: 38°



SEE SITE PLAN FOR NORTH ARROW

DESIGN CRITERIA

MAX DISTRIBUTED LOAD: 3 PSF

SNOW LOAD: 30 PSF

WIND SPEED: 116 MPH 3-SEC GUST.

S.S. LAG SCREW

5/16"x1/4" MIN. EMBEDMENT

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SHEET

LAYOUT

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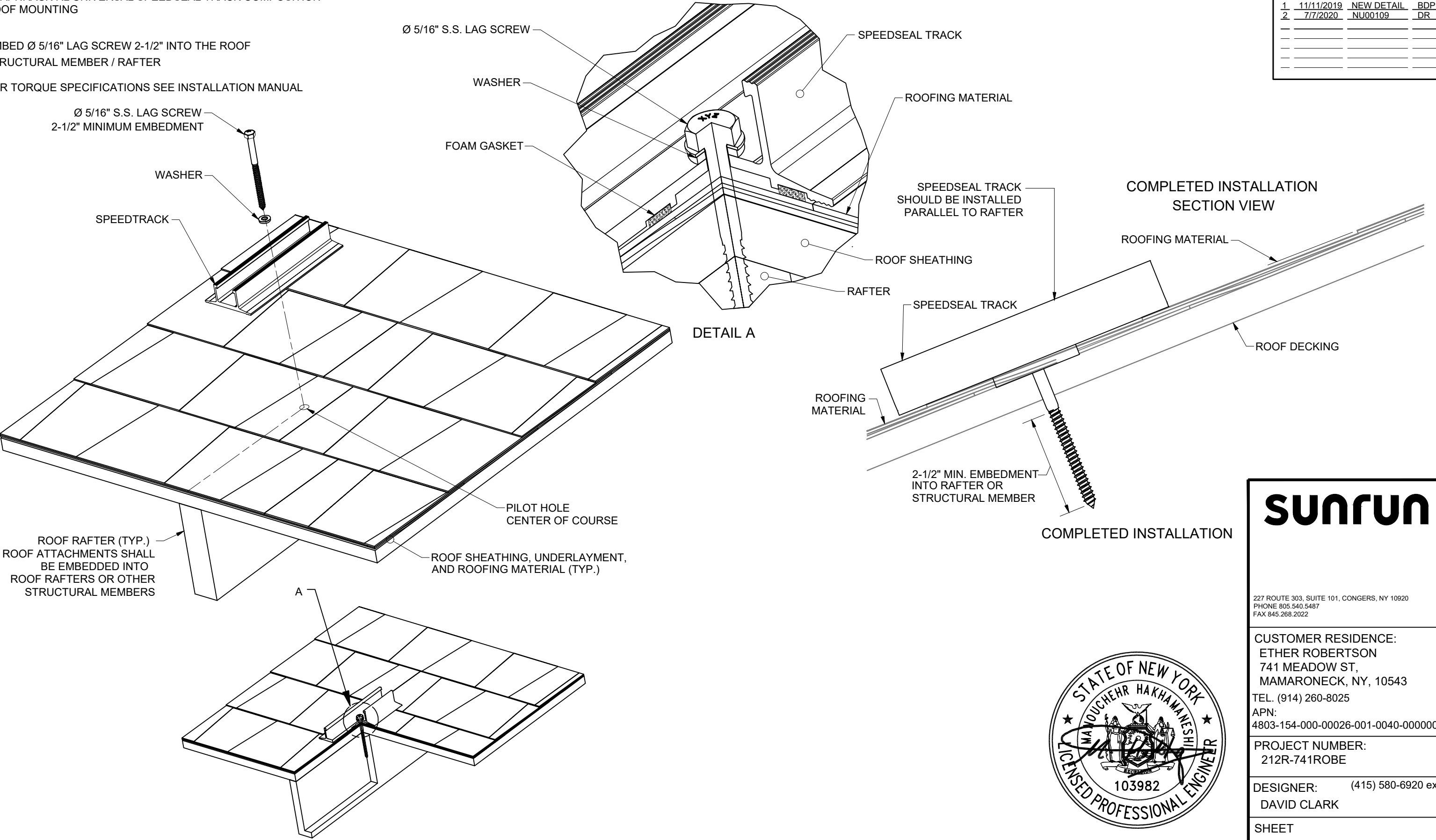
PV-3.0

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SNAPNRACK RL UNIVERSAL SPEEDSEAL TRACK COMPOSITION
ROOF MOUNTING

EMBED Ø 5/16" LAG SCREW 2-1/2" INTO THE ROOF
STRUCTURAL MEMBER / RAFTER

FOR TORQUE SPECIFICATIONS SEE INSTALLATION MANUAL



REVISION:			
1	11/11/2019	NEW DETAIL	BDP
2	7/7/2020	NU00109	DR

Sunrun

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MOUNTING DETAIL

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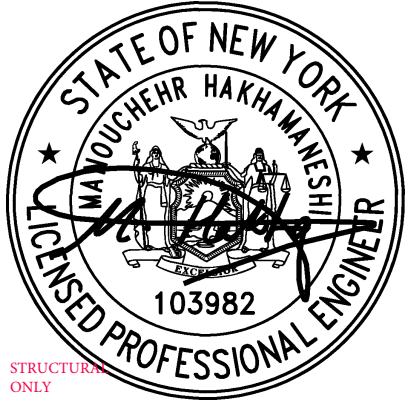
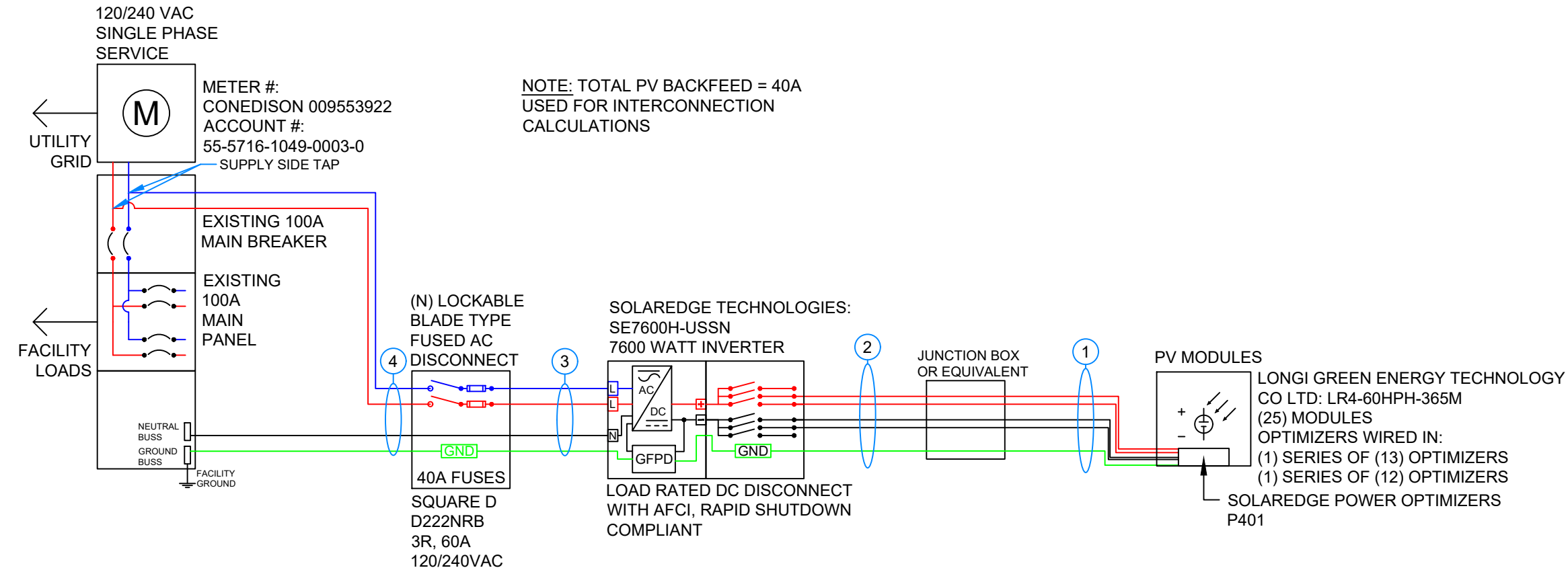
SnapNrack™
Solar Mounting Solutions

Sunrun South LLC
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DESIGNER: D.RYAN
DRAFTER: B.PETERSON
APPROVED BY: W.ARBUCKLE

SCALE: NTS
DATE: 7/7/2020

PART NUMBER:
SNR-DC-00436



CONDUIT SCHEDULE				
#	CONDUIT	CONDUCTOR	NEUTRAL	GROUND
1	NONE	(4) 10 AWG PV WIRE	NONE	(1) 6 AWG BARE COPPER
2	3/4" EMT OR EQUIV.	(4) 10 AWG THHN/THWN-2	NONE	(1) 10 AWG THHN/THWN-2
3	3/4" EMT OR EQUIV.	(2) 8 AWG THHN/THWN-2	(1) 10 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2
4	3/4" EMT OR EQUIV.	(2) 6 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2

MODULE CHARACTERISTICS

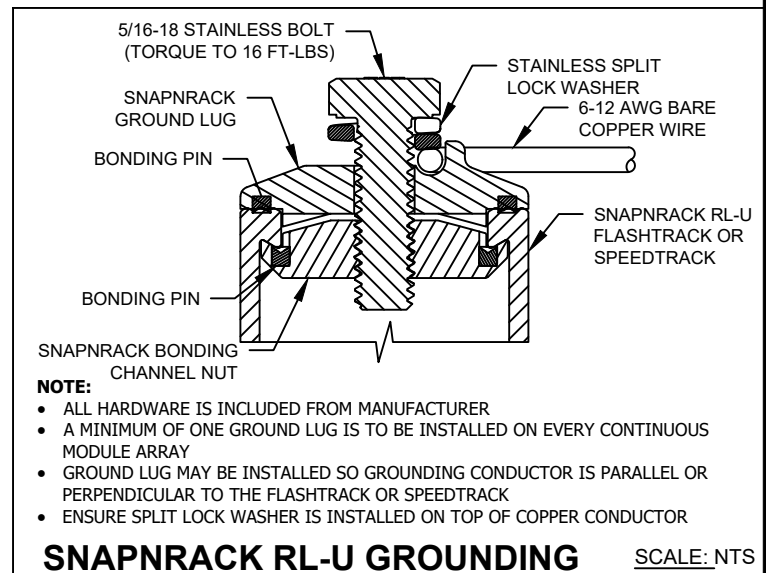
LONGI GREEN ENERGY
TECHNOLOGY CO LTD:
LR4-60HPH-365M: 365 W
OPEN CIRCUIT VOLTAGE: 40.7 V
MAX POWER VOLTAGE: 34.2 V
SHORT CIRCUIT CURRENT: 11.43 A

SYSTEM CHARACTERISTICS - INVERTER 1

SYSTEM SIZE: 9125 W
SYSTEM OPEN CIRCUIT VOLTAGE: 13 V
SYSTEM OPERATING VOLTAGE: 400 V
MAX ALLOWABLE DC VOLTAGE: 480 V
SYSTEM OPERATING CURRENT: 22.81 A
SYSTEM SHORT CIRCUIT CURRENT: 30 A

P401 OPTIMIZER CHARACTERISTICS:

MIN INPUT VOLTAGE: 8 VDC
MAX INPUT VOLTAGE: 60 VDC
MAX INPUT ISC: 11.75 ADC
MAX OUTPUT CURRENT: 15 ADC



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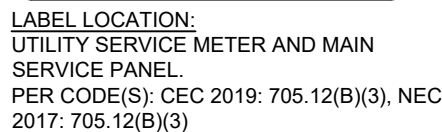
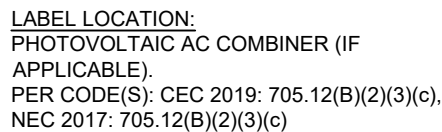
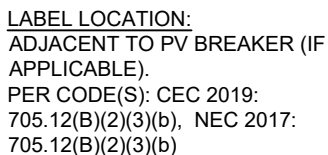
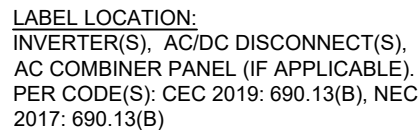
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SHEET
ELECTRICAL

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PHOTOVOLTAIC DC DISCONNECT

MAXIMUM SYSTEM VOLTAGE:	480	VDC
MAXIMUM CIRCUIT CURRENT:	30	ADC
MAX RATED OUTPUT CURRENT OF THE CHARGE CONTROLLER OR DC-TO-DC CONVERTER (IF INSTALLED):	15	ADC

LABEL LOCATION:
INVERTER(S), DC DISCONNECT(S).
PER CODE(S): CEC 2019: 690.53, NEC 2017: 690.53

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL LOCATION:
INSTALLED WITHIN 3' OF RAPID SHUT DOWN
SWITCH PER CODE(S): CEC 2019: 690.56(C)(3), NEC
2017: 690.56(C)(3), IFC 2012: 605.11.1, IFC 2018:
1204.5.3. CFC 2019: 1204.5.3

**WARNING: PHOTOVOLTAIC
POWER SOURCE**

LABEL LOCATION:
**INTERIOR AND EXTERIOR DC CONDUIT EVERY 10 FT,
 AT EACH TURN, ABOVE AND BELOW PENETRATIONS,
 ON EVERY JB/PULL BOX CONTAINING DC CIRCUITS.
 PER CODE(S): CEC 2019: 690.31(G)(3), 690.31(G)(4),
 NEC 2017: 690.31(G)(3), 690.31(G)(4) IFC 2012:
 605.11.1.4**

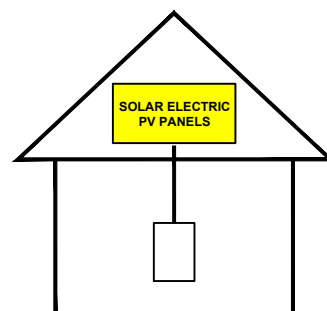
PHOTOVOLTAIC AC DISCONNECT

MAXIMUM AC OPERATING CURRENT: 32 AMPS
NOMINAL OPERATING AC VOLTAGE: 240 VAC

LABEL LOCATION:
AC DISCONNECT(S), PHOTOVOLTAIC SYSTEM POINT OF
INTERCONNECTION.
PER CODE(S): CEC 2019: 690.54, NEC 2017: 690.54

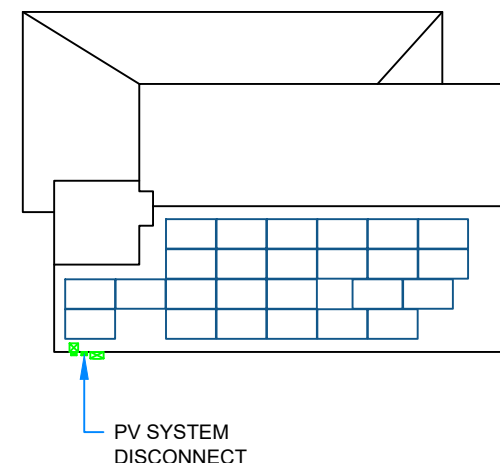
SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

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



LABEL LOCATION:
ON OR NO MORE THAN 1 M (3 FT) FROM THE SERVICE
DISCONNECTING MEANS TO WHICH THE PV SYSTEMS
ARE CONNECTED.
PER CODE(S): CEC 2019: 690.56(C)(1)(a), NEC 2017:
690.56(C)(1)(a)

BUILDING SUPPLIED BY UTILITY GRID AND PHOTOVOLTAIC SYSTEM



LABEL LOCATION:
POINT OF INTERCONNECTION
(PER CODE: NEC690.56(B), NEC705.10, 225.37, 230.2(E))

NOTES AND SPECIFICATIONS:

- SIGNS AND LABELS SHALL MEET THE REQUIREMENTS OF THE NEC 2017 ARTICLE 110.21(B), UNLESS SPECIFIC INSTRUCTIONS ARE REQUIRED BY SECTION 690, OR IF REQUESTED BY THE LOCAL AHJ.
- SIGNS AND LABELS SHALL ADEQUATELY WARN OF HAZARDS USING EFFECTIVE WORDS, COLORS AND SYMBOLS.
- LABELS SHALL BE PERMANENTLY AFFIXED TO THE EQUIPMENT OR WIRING METHOD AND SHALL NOT BE HAND WRITTEN.
- LABEL SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.
- SIGNS AND LABELS SHALL COMPLY WITH ANSI Z535.4-2011, PRODUCT SAFETY SIGNS AND LABELS, UNLESS OTHERWISE SPECIFIED.
- DO NOT COVER EXISTING MANUFACTURER LABELS.

STRUCTURE
ONLY

SUNFUN

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SHEET SIGNAGE

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