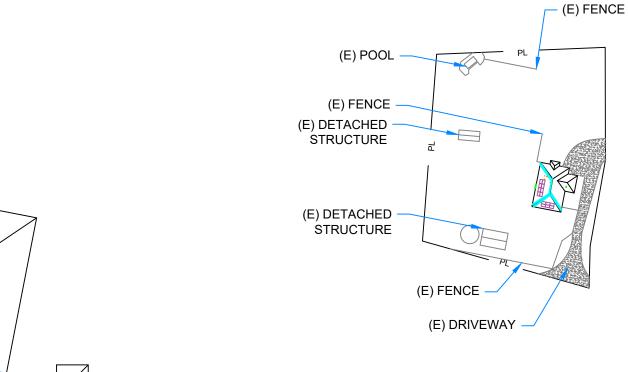
TABLE OF CONTENTS SCOPE OF WORK GENERAL NOTES LEGEND AND ABBREVIATIONS PAGE# **DESCRIPTION** • SYSTEM SIZE: 4410W DC, 3360W AC ALL WORK SHALL COMPLY WITH 2019 CRC/CBC/CEBC, MUNICIPAL CODE, AND **SOLAR MODULES** PV-1.0 COVER SHEET SERVICE ENTRANCE SE` • MODULES: (14) LONGI GREEN ENERGY TECHNOLOGY CO ALL MANUFACTURERS' LISTINGS AND INSTALLATION INSTRUCTIONS. PV-2.0 SITE PLAN LTD: LR6-60HPH-315M • PHOTOVOLTAIC SYSTEM WILL COMPLY WITH 2019 CEC. I(MP) • INVERTERS: (14) ENPHASE ENERGY: IQ7-60-2-US MAIN PANEL **EQUIPMENT** • RACKING: SNAPNRACK RLU; RL UNIVERSAL, SPEEDSEAL • ELECTRICAL SYSTEM GROUNDING WILL COMPLY WITH 2019 CEC. PV-2.1 **ELEVATION VIEW** TRACK ON COMP, SEE DETAIL SNR-DC-00436 $\langle SP \rangle$ SUB-PANEL PV-3.0 LAYOUT • ENERGY STORAGE SYSTEM: (1) TESLA: POWERWALL, 13.5 PHOTOVOLTAIC SYSTEM IS FUNCTIONALLY GROUNDED. NO CONDUCTORS ARE **SNR MOUNT** KWh. 5KW INVERTER OUTPUT, LITHIUM-ION BATTERY SOLIDLY GROUNDED IN THE INVERTER. SYSTEM COMPLIES WITH 690.41. **SNR MOUNT & SKIRT** PV-3.1 MOUNTING DETAIL PV LOAD CENTER (WEIGHT: 251.3LB EACH). • MAIN BREAKER DERATE: REPLACE EXISTING 200 AMP MAIN MODULES CONFORM TO AND ARE LISTED UNDER UL 1703. PV-4.0 **ELECTRICAL** CHIMNEY BREAKER WITH NEW 175 AMP 22K AIC RATED MAIN (sm̀ SUNRUN METER PV-5.0 **SIGNAGE** BREAKER. INVERTER CONFORMS TO AND IS LISTED UNDER UL 1741. BACKUP GATEWAY: (1) 200A TESLA POWERWALL CONTROL ATTIC VENT DEDICATED PV METER (PM • RACKING CONFORMS TO AND IS LISTED UNDER UL 2703. **PANEL** FLUSH ATTIC VENT INV INVERTER(S) SNAPNRACK RACKING SYSTEMS, IN COMBINATION WITH TYPE I, OR TYPE II PVC PIPE VENT MODULES, ARE CLASS A FIRE RATED. AC DISCONNECT(S) METAL PIPE VENT • RAPID SHUTDOWN REQUIREMENTS MET WHEN INVERTERS AND ALL DC \boxtimes T-VENT CONDUCTORS ARE WITHIN ARRAY BOUNDARIES PER 690.12(B). DC DISCONNECT(S) SATELLITE DISH • CONSTRUCTION FOREMAN TO PLACE CONDUIT RUN PER 690.31(G). IQ COMBINER BOX FIRE SETBACKS • ARRAY DC CONDUCTORS ARE SIZED FOR DERATED CURRENT. **POWERWALL ENERGY** STORAGE SYSTEM (ESS) **HARDSCAPE** • 9.94 AMPS MODULE SHORT CIRCUIT CURRENT. $\langle \mathsf{BG} \rangle$ **BACKUP GATEWAY** • 15.53 AMPS DERATED SHORT CIRCUIT CURRENT [690.8 (a) & 690.8 (b)]. PROPERTY LINE • ENERGY STORAGE SYSTEM CONFORMS TO AND IS LISTED UNDER UL 9540. GP **GENERATION PANEL** INTERIOR EQUIPMENT ENERGY STORAGE SYSTEM LIVE PARTS ARE NOT ACCESSIBLE DURING SHOWN AS DASHED ROUTINE MAINTENANCE. SYSTEM VOLTAGE IN ACCORDANCE WITH NEC 706.30 AND EXCEPTION 1 NEC 706.30 (A). COMMUNICATION WIRES ADDITIONAL DISCONNECTING MEANS SHALL BE INSTALLED WHERE ENERGY SCALE: NTS STORAGE DEVICE INPUT AND OUTPUT TERMINALS ARE MORE THAN 5 FT FROM SUNTUN CONNECTED EQUIPMENT, OR WHERE THE CIRCUITS FROM THESE TERMINALS Α AMPERE PASS THROUGH A WALL OR PARTITION PER 706.7(E). AC ALTERNATING CURRENT AFCI ARC FAULT CIRCUIT INTERRUPTER LISTED. COMBINATION TYPE AFCI SHALL BE INSTALLED WHERE BACKED UP CIRCUIT WIRING IS EXTENDED MORE THAN 6FT AND DOES NOT INCLUDE ANY AZIM **AZIMUTH** GILBERT CORREIA, C10, C46 **VICINITY MAP** COMP COMPOSITION ADDITIONAL OUTLETS OR DEVICES PER NEC 210.12(D). CA CL #750184 DC DIRECT CURRENT • THE CAPACITY OF THE STANDALONE SYSTEM SUPPLY SHALL BE EQUAL TO OR GREATER THAN THE LOAD POSED BY THE SINGLE LARGEST UTILIZATION (E) **EXISTING** 275 BEL MARIN KEYS BLVD., STE. D, NOVATO, CA 94949 PHONE 408.746.3062 FAX 408.894.9294 ESS **ENERGY STORAGE SYSTEM** EQUIPMENT CONNECTED TO THE SYSTEM PER NEC ARTICLE 710.15(A) EXT **EXTERIOR** • ALL PASS-THROUGH CONDUCTORS MUST COMPLY WITH NEC 312.8 **CUSTOMER RESIDENCE:** INT INTERIOR MAG **MAGNETIC** LEONID MITNIK MAIN SERVICE PANEL MSP 5011 LAVENDER LN, SANTA (N) NEW ROSA, CA, 95404 NTS NOT TO SCALE OC ON CENTER TEL. (650) 302-1771 PRE-FAB PRE-FABRICATED APN #: 067-160-021-000 PSF POUNDS PER SQUARE FOOT PROJECT NUMBER: 5011 Lavender Lane PV **PHOTOVOLTAIC** 107R-011MITN **RSD** RAPID SHUTDOWN DEVICE TL **TRANSFORMERLESS** (415) 580-6920 ex3 DESIGNER: TYP **TYPICAL GABRIEL RODRIGUEZ VOLTS** W WATTS SHEET **COVER SHEET** REV NAME DATE COMMENTS В **B.SCHULZE** 3/3/2021 **CONDUIT SCHEDULE** REV: B 3/3/2021 UPDATE PAGE **PV-1.0** Will Dd

SITE PLAN - SCALE = 3/32" = 1'-0"



SITE	ΡΙ ΔΝ	DETAIL	- SCALE =	= 1/128" =	: 1'-0'
3116	LWIA	DEIAIL	- JUALE -	- 1/120 -	· ı -v

	ARRAY PITCH		MAG AZIM	PV AREA (SQFT)
AR-01	18°	191°	178°	108.3
AR-02	18°	281°	268°	144.3



NOTES:

RESIDENCE DOES NOT CONTAIN ACTIVE FIRE SPRINKLERS.

ARRAY DETAILS:

- TOTAL ROOF SURFACE AREA: 2750 SQFT.
- TOTAL PV ARRAY AREA: 252.6 SQ FT.
- PERCENTAGE PV COVERAGE: (TOTAL PV ARRAY AREA/TOTAL ROOF SURFACE AREA) * 100 = 9.2%



275 BEL MARIN KEYS BLVD., STE. D, NOVATO, CA 94949 PHONE 408.746.3062 FAX 408.894.9294

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TEL. (650) 302-1771 APN #: 067-160-021-000

PROJECT NUMBER: 107R-011MITN

DESIGNER: (415) 580-6920 ex3

GABRIEL RODRIGUEZ

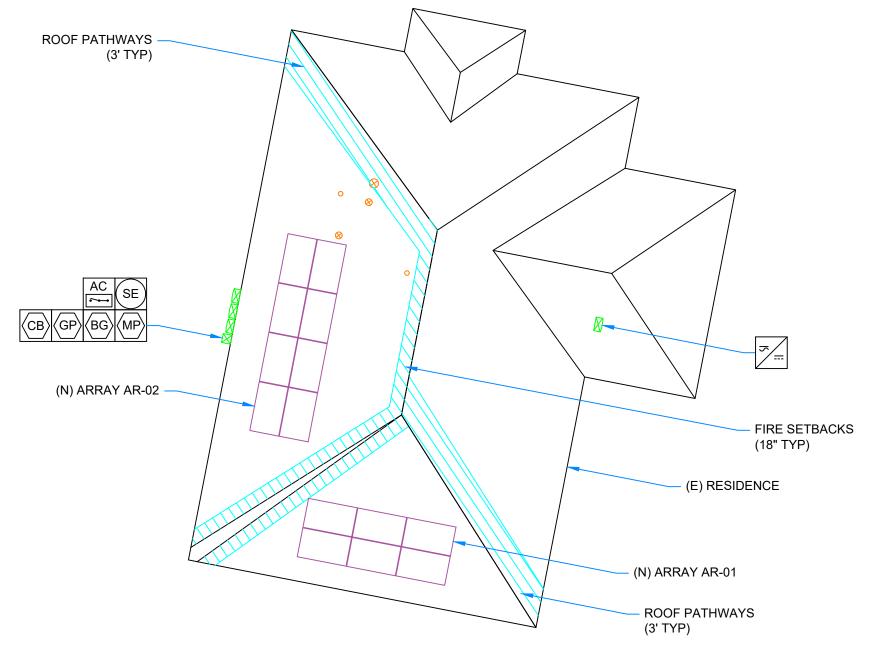
SHEET

SITE PLAN

REV: B 3/3/2021

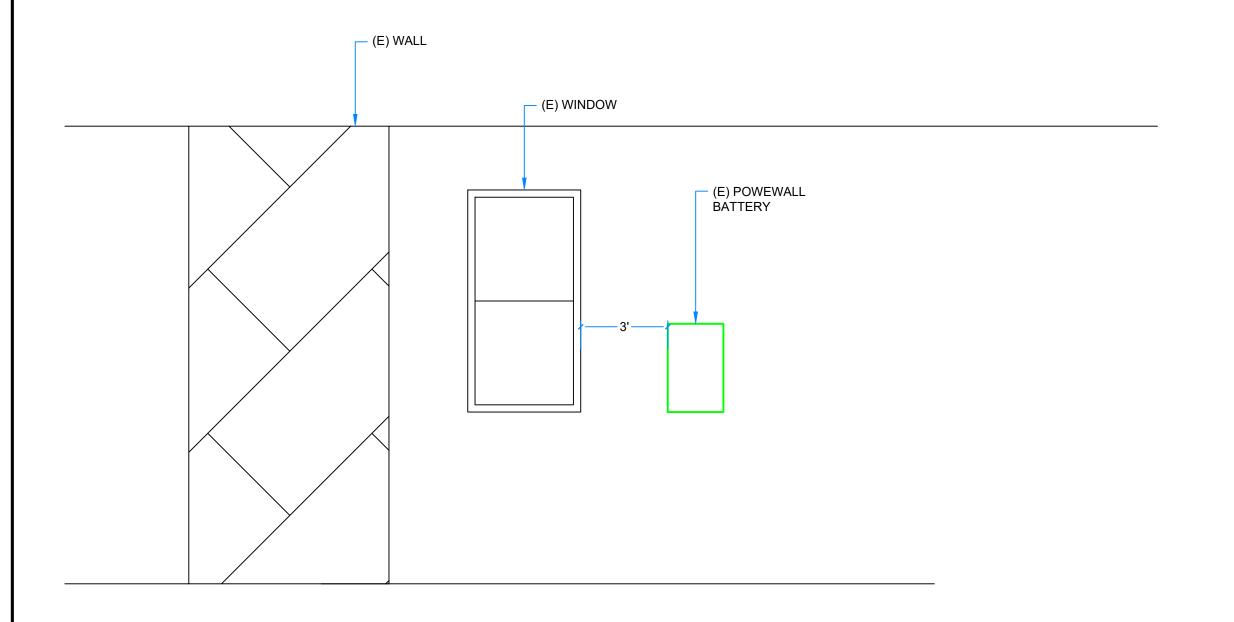
PAGE P\/-

PV-2.0



SITE PLAN - SCALE = 0.025197







CA CL #750184

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SHEET EQUIPMENT **ELEVATION VIEW**

REV: B

3/3/2021

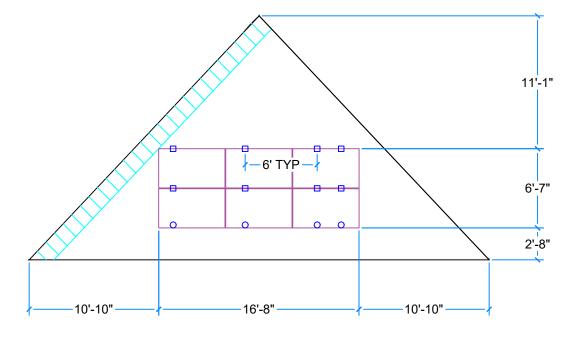
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PV-2.1

ROOF INFO		FRAMING INFO			ATTACHMENT INFORMATION							
Name	Туре	Height	Туре	Max Span	OC Spacing	Detail	Max Landscape OC Spacing		Max Portrait OC Spacing	Max Portrait Overhang	Configuration	MA SNO
AR-01	COMP SHINGLE - RLU	1-Story	2X4 PRE-FABRICATED TRUSSES	4' - 2"	24"	RL UNIVERSAL, SPEEDSEAL TRACK ON COMP, SEE DETAIL SNR-DC-00436	6' - 0"	1' - 6"	4' - 0"	1' - 0"	STACKED	92 N S.S.
AR-02	COMP SHINGLE - RLU	1-Story	2X4 PRE-FABRICATED TRUSSES	6' - 2"	24"	RL UNIVERSAL, SPEEDSEAL TRACK ON COMP, SEE DETAIL SNR-DC-00436	6' - 0"	1' - 6"	4' - 0"	1' - 0"	STACKED	5/16 STR

D1 - AR-01 - SCALE: 1/8" = 1'-0"

PITCH: 18° **AZIM:** 191°



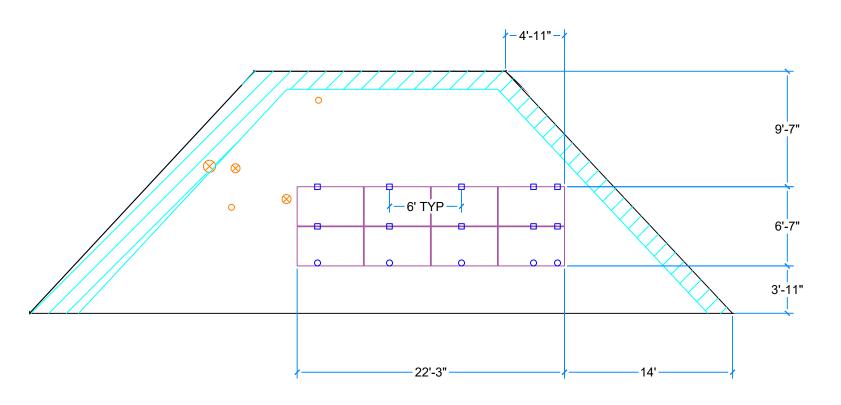
IAX DISTRIBUTED LOAD: 3 PSF
NOW LOAD: 0 PSF
//IND SPEED:
2 MPH 3-SEC GUST.
.S. LAG SCREWS:
/16":x 4.5"; 2.5" MIN EMBEDMENT
TRUCTURAL NOTES:
INSTALLERS TO VERIFY

DESIGN CRITERIA

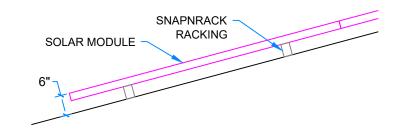
- INSTALLERS TO VERIFY
 RAFTER SIZE, SPACING AND
 SLOPED SPANS, AND NOTIFY
 E.O.R. OF ANY
 DISCREPANCIES BEFORE
 PROCEEDING.
- IF ARRAY (EXCLUDING SKIRT) IS WITHIN 12" BOUNDARY REGION OF ANY ROOF PLANE EDGES (EXCEPT VALLEYS), THEN ATTACHMENTS NEED TO BE ADDED AND OVERHANG REDUCED WITHIN THE 12" BOUNDARY REGION ONLY AS FOLLOWS:
- •• ALLOWABLE ATTACHMENT SPACING INDICATED ON PLANS TO BE REDUCED BY 50%
- •• ALLOWABLE OVERHANG INDICATED ON PLANS TO BE 1/5TH OF ALLOWABLE ATTACHMENT SPACING INDICATED ON PLANS

D2 - AR-02 - SCALE: 1/8" = 1'-0"

PITCH: 18° **AZIM:** 281°



MODULE ELEVATION DETAIL - SCALE: NTS



SUNTUN

GILBERT CORREIA, C10, C46

CA CL #750184

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TEL. (650) 302-1771 APN #: 067-160-021-000

PROJECT NUMBER: 107R-011MITN

DESIGNER:

(415) 580-6920 ex3

GABRIEL RODRIGUEZ

SHEET

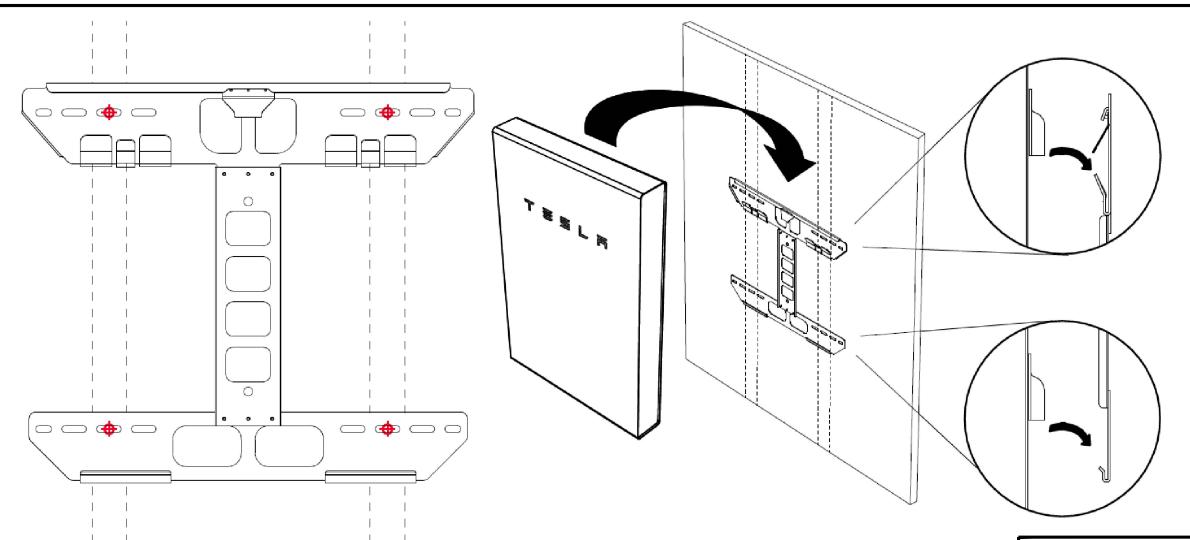
LAYOUT

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PV-3.0



INSTALL WALL MOUNT:

- 1. MARK THE LOCATION ON THE WALL FOR THE HOLES.
- 2. DRILL HOLES FOR FASTENERS IN THE WALL.
- 3. DRIVE THE FASTENERS THROUGH THE MOUNTING BRACKET INTO THE HOLES.
 - MINIMUM FASTENER COUNT : 4
 - MINIMUM FASTENER DEPTH : AT LEAST 2.5" EMBEDMENT.

INSTALL BATTERY PACK:

- 4. MOVE THE LIFT EQUIPMENT CLOSE TO THE WALL AND REMOVE THE TIE-DOWN STRAP SECURING THE POWERWALL TO THE LIFT EQUIPMENT.
- 5. ADJUST THE HEIGHT OF THE POWERWALL SO THAT ITS MOUNTING CLEATS ARE JUST ABOVE THE FLANGES ON THE BRACKET.
- 6. BEGIN TO LOWER THE POWERWALL SO THAT THE TOP CLEAT ENGAGES THE TOP FLANGE ON THE BRACKET. ENSURE THAT THE BOTTOM CLEAT ALIGNS WITH THE BOTTOM FLANGE OF THE BRACKET.
- 7. WITH BOTH CLEATS ENGAGED, LOWER THE POWERWALL ONTO THE BRACKET. WHEN THE CLEATS ARE SEATED IN THE BRACKET, THE LOCKING MECHANISM AT THE CENTER OF THE TOP FLANGE SHOULD CLICK INTO PLACE.

NOTE: IF MOUNTING IN GARAGE, BATTERY MUST BE MOUNTED AT A LEVEL ABOVE CAR BUMPER TO AVOID ANY POTENTIAL DAMAGE.



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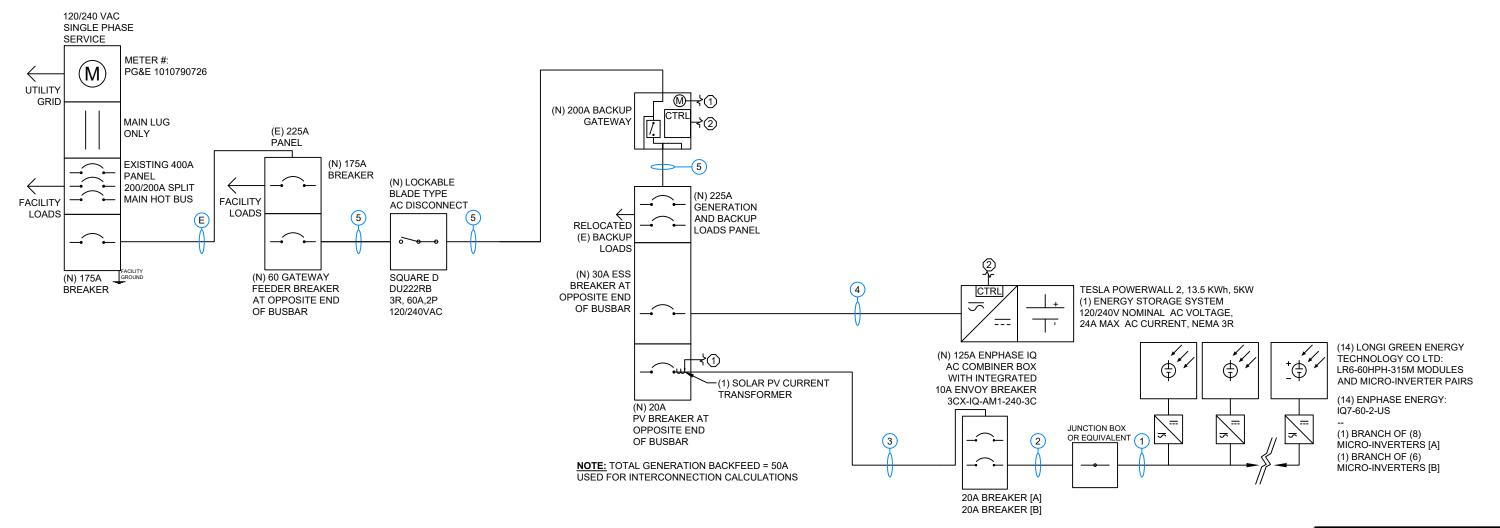
SHEET MOUNTING DETAIL

REV: B

3/3/2021

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PV-3.1



GENERAL NOTES:

ALL WIRES ARE CU

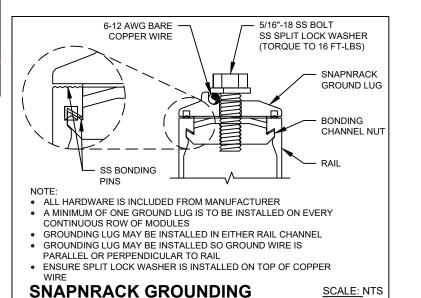
CONDUIT SCHEDULE									
#	CONDUIT	CONDUCTOR	NEUTRAL	GROUND					
1	NONE	(2) 12 AWG PER ENPHASE Q CABLE BRANCH	NONE	(1) 10 AWG BARE COPPER					
2	3/4" EMT OR EQUIV.	(4) 10 AWG THHN/THWN-2	NONE	(1) 8 AWG THHN/THWN-2					
3	3/4" EMT OR EQUIV.	(2) 10 AWG THHN/THWN-2	(1) 10 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2					
4	3/4" EMT OR EQUIV.	(2) 10 AWG THHN/THWN-2	(1) 10 AWG THHN/THWN 2	(1) & AWG THHN/THWN-2					
5	2" EMT OR EQUIV.	(2) 6 AWG THHN/THWN-2	(1) 6 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2					
E	EXISTING								



MODULE CHARACTERISTICS

LONGI GREEN ENERGY TECHNOLOGY CO LTD:

LR6-60HPH-315M: 315 W
OPEN CIRCUIT VOLTAGE: 40.6 V
MAX POWER VOLTAGE: 33.7 V
SHORT CIRCUIT CURRENT: 9.94 A





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GABRIEL RODRIGUEZ

SHEET

ELECTRICAL

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ELECTRICAL SHOCK HAZARD

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

LABEL LOCATION:

INVERTER(S), AC DISCONNECT(S), AC COMBINER PANEL (IF APPLICABLE). PER CODE(S): NEC 2020: 690.13(B), NEC 2017: 690.13(B), NEC 2014: 690.17(E), NEC 2011: 690.17(4)



PHOTOVOLTAIC SYSTEM **COMBINER PANEL**

DO NOT ADD LOADS

LABEL LOCATION:

PHOTOVOLTAIC AC COMBINER (IF APPLICABLE). PER CODE(S): CEC 2019: 705.12(B)(2)(3)(c), NEC 2017: 705.12(B)(2)(3)(c), NEC 2014: 705.12(D)(2)(3)(c), NEC 2011: 705.12(D)(4)

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL LOCATION:

UTILITY SERVICE ENTRANCE/METER. INVERTER/DC DISCONNECT IF REQUIRED BY LOCAL AHJ. OR OTHER LOCATIONS AS REQUIRED BY LOCAL AHJ. PER CODE(S): CEC 2019: 690.56(C)(3), NEC 2017: 690.56(C)(3), NEC 2014: 690.12, NEC 690.56, IFC 2012: 605.11.1, IFC 2018: 1204.5.3, CFC 2019: 1204.5.3

WARNING

POWER SOURCE OUTPUT CONNECTION

DO NOT RELOCATE THIS **OVERCURRENT DEVICE**

LABEL LOCATION:

ADJACENT TO PV BREAKER AND ESS OCPD (IF APPLICABLE).

PER CODE(S): NEC 2020: 705.12(B)(3)(2), CEC 2019: 705.12(B)(2)(3)(b), NEC 2017: 705.12(B)(2)(3)(b), CEC 2019: 705.12(B)(3), NEC 2017: 705.12(B)(3), NEC 2014: 705.12(B)(3), NEC 2011: 705.12(D)(7)

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), NEC 2014: 690.31(G)(3), 690.31(G)(4), NEC 2011: 690.31(E)(3), 690.31(E)(4), IFC 2012: 605.11.1.4

PHOTOVOLTAIC AC DISCONNECT

MAXIMUM AC OPERATING CURRENT: 14.00 AMPS NOMINAL OPERATING AC VOLTAGE: 240 VAC

LABEL LOCATION:

AC DISCONNECT(S), PHOTOVOLTAIC SYSTEM POINT OF INTERCONNECTION.

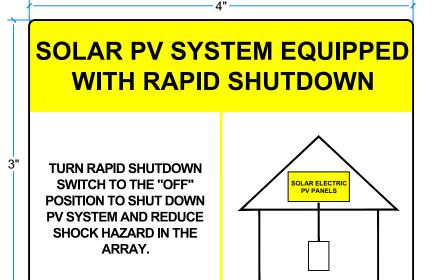
PER CODE(S): CEC 2019: 690.54, NEC 2017: 690.54, NEC 2014: 690.54, NEC 2011: 690.54

MAIN BREAKER DE-RATED FOR SOLAR BACKFEED MAX 175A MAIN BREAKER ALLOWED

LABEL LOCATION:

MAIN SERVICE PANEL ADJACENT TO MAIN SERVICE BREAKER.

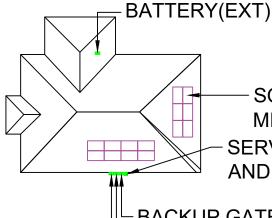
PER CODE(S): PER CODE(S): NEC 2020: 705.12(B)(3)(2), NEC 2017: 705.12(B)(2)(3)(b), NEC 2014: 705.12(D)(2)(3)(c), NEC 2011: 705.12(D)(4), CEC 2019: 705.12(B)(2)(3)(b)



LABEL LOCATION: ON OR NO MORE THAT 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)

CAUTION:

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



SOLAR PANELS AND MICROINVERTERS ON ROOF SERVICE ENTRANCE AND MAIN PANEL

NOTES AND SPECIFICATIONS:

IF REQUESTED BY THE LOCAL AHJ.

METHOD AND SHALL NOT BE HAND WRITTEN.

SIGNS AND LABELS. UNLESS OTHERWISE SPECIFIED.

• DO NOT COVER EXISTING MANUFACTURER LABELS.

WORDS, COLORS AND SYMBOLS.

• SIGNS AND LABELS SHALL MEET THE REQUIREMENTS OF THE 2019 CEC ARTICLE 110.21(B), UNLESS SPECIFIC INSTRUCTIONS ARE REQUIRED BY SECTION 690, OR

• SIGNS AND LABELS SHALL ADEQUATELY WARN OF HAZARDS USING EFFECTIVE

• LABEL SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT

• SIGNS AND LABELS SHALL COMPLY WITH ANSI Z535.4-2011, PRODUCT SAFETY

• LABELS SHALL BE PERMANENTLY AFFIXED TO THE EQUIPMENT OR WIRING

BACKUP GATEWAY GENERATION PANEL AND PV BREAKER DISCONNECT └ ENPHASE COMBINER BOX

5011 LAVENDER LN. SANTA ROSA, CA. 95404



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PROJECT NUMBER: 107R-011MITN

DESIGNER:

(415) 580-6920 ex3 **GABRIEL RODRIGUEZ**

SHEET

SIGNAGE

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PV-5.0