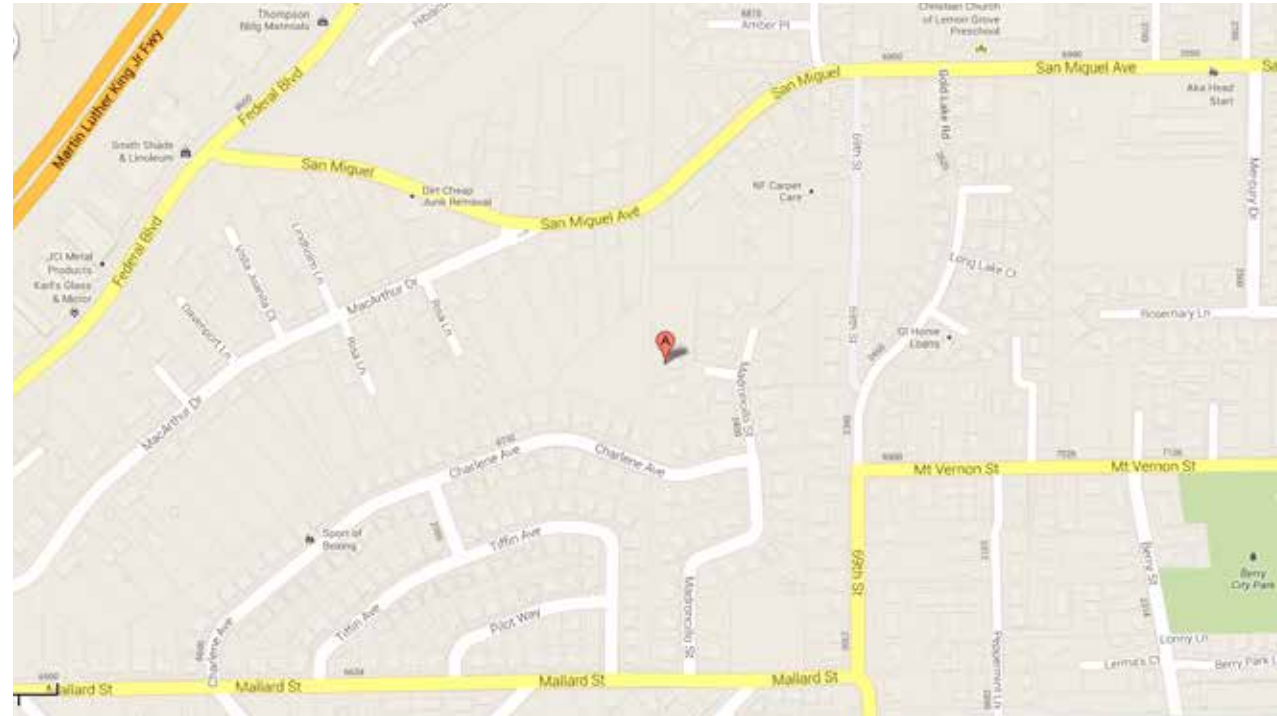


Doe Residence - 5.64 kW DC Photovoltaic System

Consisting of (24) REC 235W Solar Modules and (1) Power-One 5.0kW Inverter

<u>Sheet No.</u>	<u>Description</u>
T-01	Title Page
PV-01	Site Plan
PV-02	Electrical One Line
PV-03	Structural Tie-In Diagram



Vicinity Map



Single Family Residence

Customer:

John Doe
1000 Sample St
Sample City, CA 99999

Contractor:

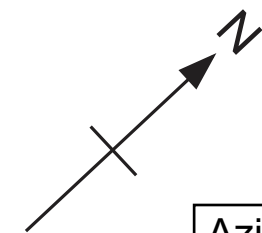
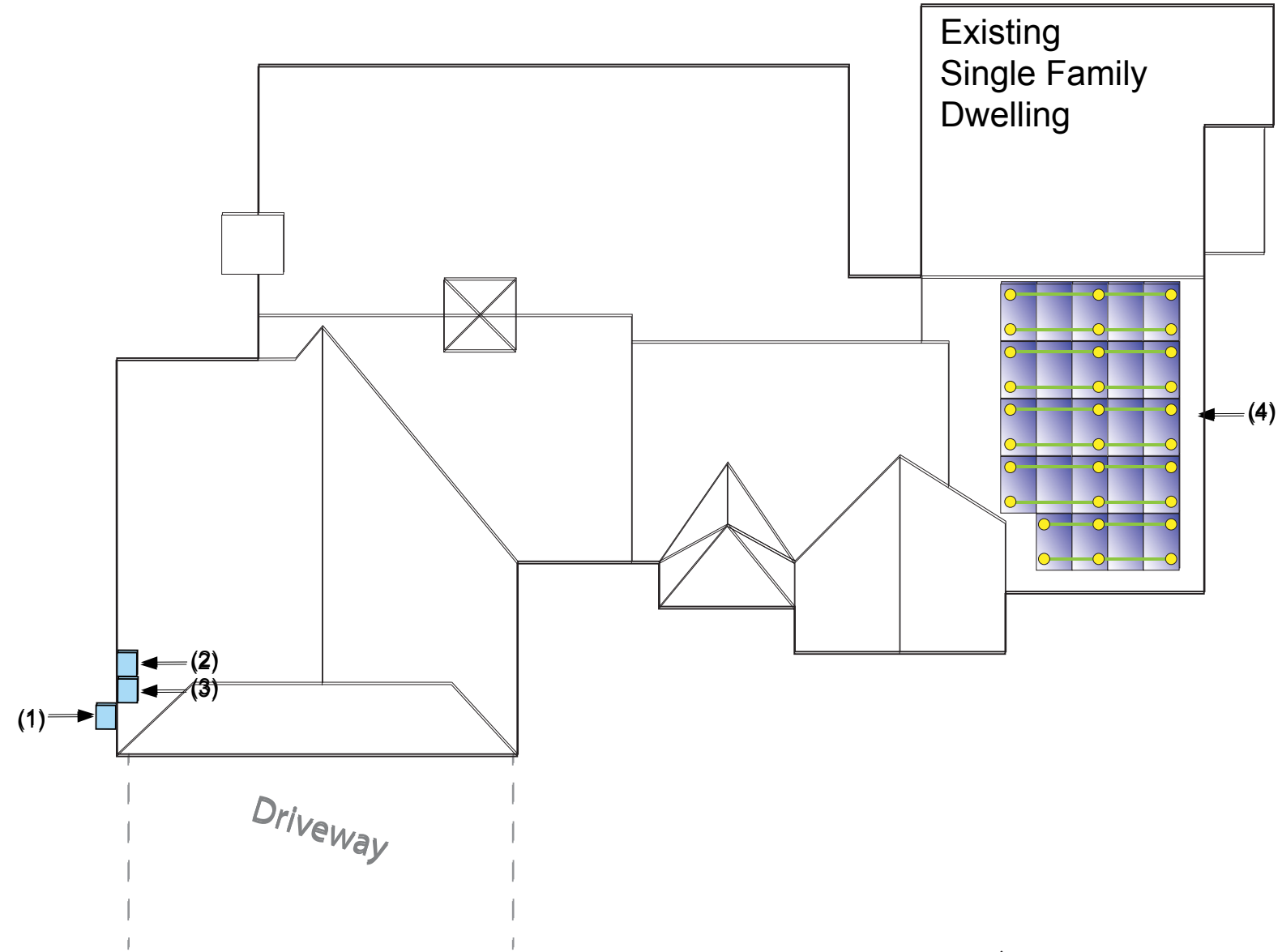
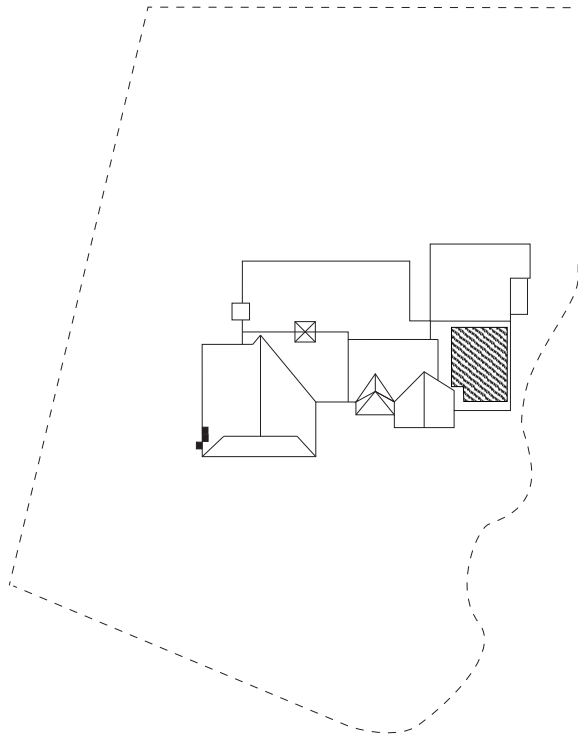
Contractor
1000 Sample St
Sample City, CA 99999
(999) 999-9999

Contractor Lic. #99999999

Installer	Contractor 1000 Sample St Sample City, CA 99999 (999) 999-9999 Contractor Lic. #999999 C-10 Electrical
Plans Prepared By	_____ Electrician
Owner	John Doe 1000 Sample St Sample City, CA 99999 Existing Single Family Residence
Drawn By	Peter Ruttkay
Sheet No.	T-01

- (1) Existing 125A Main Service Panel
- (2) Power-One Aurora PVI-5000-OUTD-US Inverter
- (3) AC Disconnect
- (4) Location of 24 REC235PE BLK Solar Modules

**Solar Modules Cover
Less than %50 of
Total Roof Area**



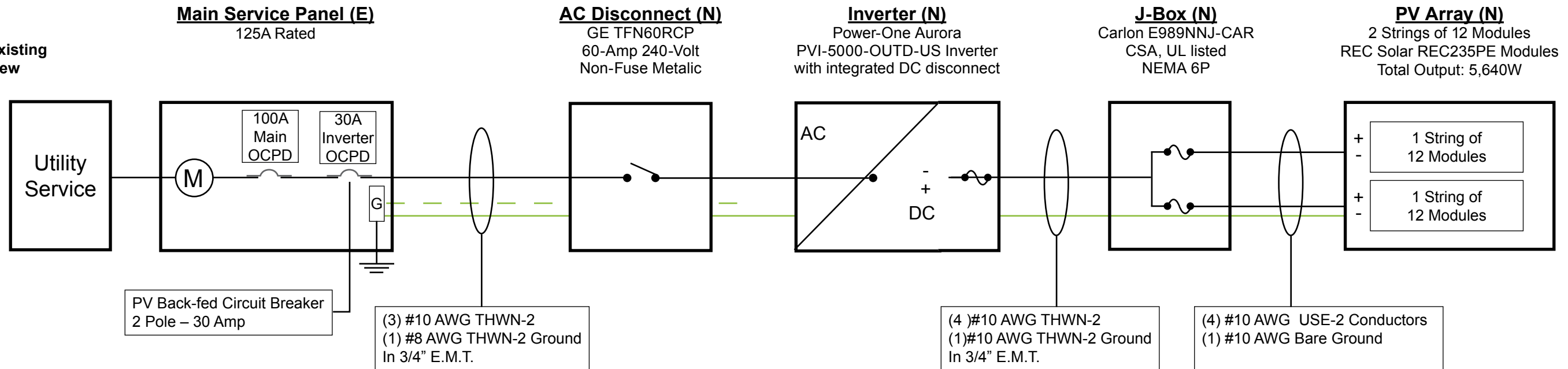
**Azimuth: 135°
Tilt: 26°**

Compliance Notes

- 1. The Solar Installation shall not obstruct any plumbing or mechanical vents
- 2. A ladder will be in place for inspections in compliance with CAL OSHA regulations
- 3. Each module will be grounded at a manufacturers identified connection point in compliance with manufacturers instructions
- 4. Designs comply with the latest edition of the California electrical code, NEC, the San Diego Electrical News Letters, and all local ordinances and policies
- 5. If the existing main service panel does not have a verifiable grounding electrode, a grounding electrode rod shall be installed

<p>Installer Contractor 1000 Sample St Sample City, CA 99999 (999) 999-9999 Contractor Lic. #99999 C-10 Electrical</p>
<p>Plans Prepared By _____ Electrician</p>
<p>Owner John Doe 1000 Sample St Sample City, CA 99999 Existing Single Family Residence</p>
<p>Drawn By Peter Ruttkay</p>
<p>PV-01</p>

(E) - Existing
(N) - New



1. Key Manufacturers

- Inverter
Power-One
740 Calle Plano
Camarillo, CA, 93012
- Solar Modules
REC Solar US LLC
835 Aerovista Place, Suite 230
San Luis Obispo, CA 93401
- Racking
SnapNrack PV Mounting
775 Fiero Lane Suite 200,
San Luis Obispo CA 93401

2. All Components are UL Listed and CEC Certified, where warranted.

Inverter Ratings:
Power-One Aurora
PVI-5000-OUTD-US Inverter
Input: 36A DC
Output: 240 VAC
I_{max} = 23A
I_{rec} = 28.75A (@ 125%)
Outdoor NEMA 4X Enclosure
UL1741/IEEE 1547

REC235PE BLK
235W Solar Module
Specs

P_{max} -	235W
V_{mp} -	29.5V
I_{mp} -	8.06A
V_{oc} -	36.6V
I_{sc} -	8.66A

PV SYSTEM DC DISCONNECT

OPERATING CURRENT :	16.12A
OPERATING VOLTAGE:	354.0V
MAXIMUM SYSTEM VOLTAGE:	439.2V
SHORT CIRCUIT CURRENT:	17.32A

Sticker Located On
DC Disconnect

WARNING

ELECTRICAL SHOCK HAZARD
IF A GROUND FAULT IS INDICATED,
NORMALLY GROUNDED CONDUCTORS
MAY BE UNGROUNDED AND ENERGIZED

Sticker Located on
DC Disconnect

CAUTION

SOLAR ELECTRIC SYSTEM
CONNECTED WITH SOURCES AND
DISCONNECTS AS SHOWN
(MAP)

Map Place Card Located
On Main Service Panel

**SOLAR PV
BREAKER**

BREAKER IS
BACKFED
DO NOT RELOCATE

Sticker on OCPD
Inside Main Service Panel

WARNING

ELECTRICAL SHOCK HAZARD
THE DC CONDUCTORS OF THIS
PHOTOVOLTAIC SYSTEM ARE
UNGROUND AND MAYBE ENERGIZED.

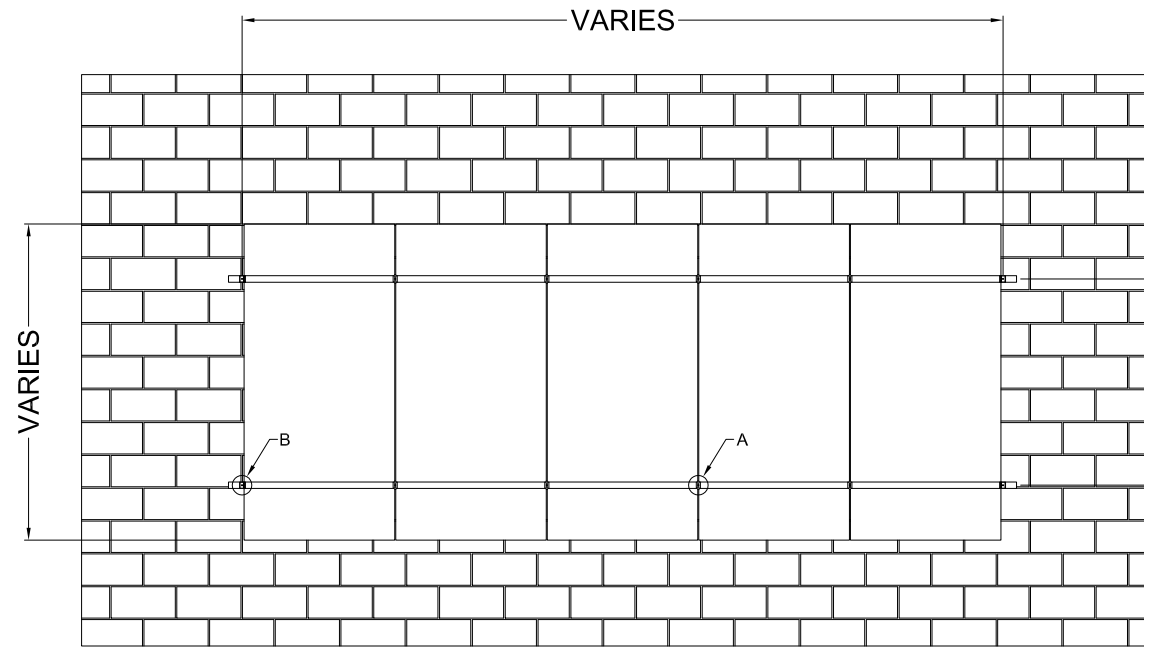
Sticker Located on
AC Disconnect

Notes

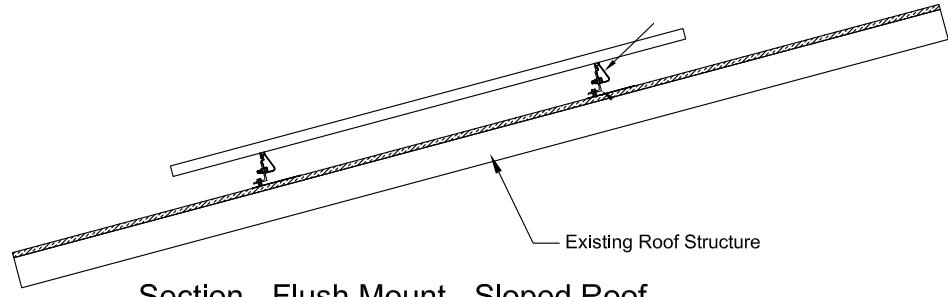
1. Compliance with the 2013 California electrical code, 2013 California Electrical Code, 2013 California Building Code, 2013 California Residential Code, County of San Diego Consolidated Fire Code
2. Photovoltaic DC conductors entering the building shall be installed in a metallic raceway and shall be identified every 10 feet -- and within 1 foot of turns or bends and within 1 foot above and below penetrations of roof/ceiling assemblies, walls, or barriers -- with minimum 3/8-inch-high white lettering on red background reading: 'WARNING: PHOTOVOLTAIC POWER SOURCE'.
3. Module Mounting structure will be tied directly into structural elements of single family dwelling Roof Trusses or beams according to mounting structure directions.
4. Marking will be provided in accordance with Cal-Fire Solar Photovoltaic Installation Guideline
5. Utility will be notified prior to use and activation of any solar installation. System will be Commissioned by owner per utility interconnection Agreement.
6. Placards consist of white lettering on red background with text written in capitol lettering a minimum of 3/8" in height on plastic Engraved placards

Contractor	1000 Sample St Sample City, CA 99999 (999) 999-9999 Contractor Lic. #999999
Installer	C-10 Electrical
Plans Prepared By	Electrician
Owner	John Doe 1000 Sample St Sample City, CA 99999 Existing Single Family Residence
Drawn By	Peter Ruttkay
PV-02	

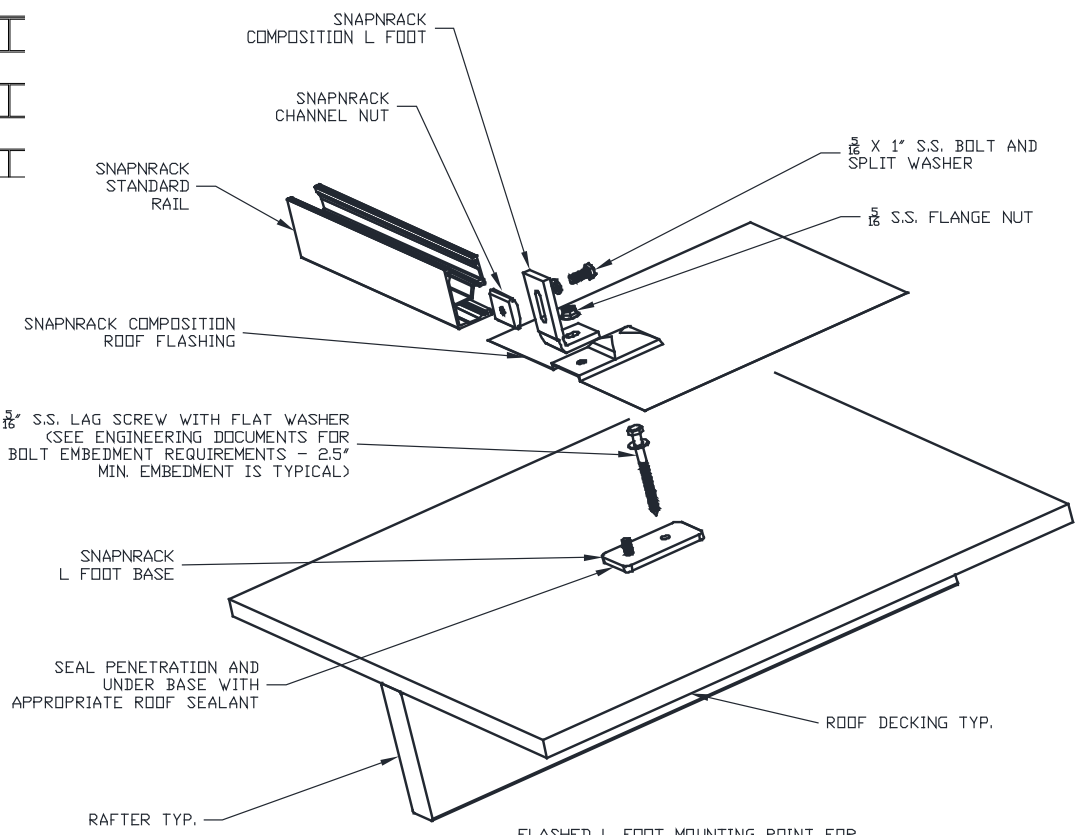
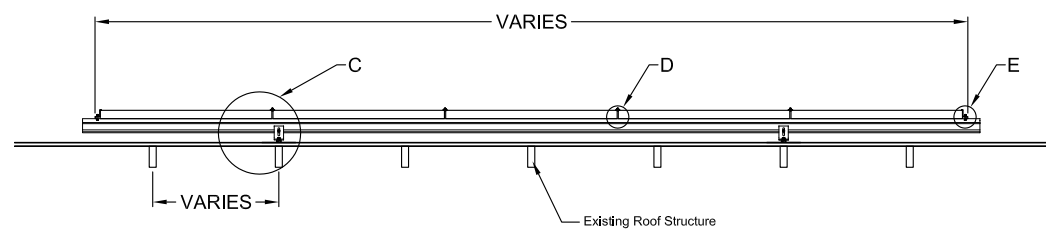
Structural Detail



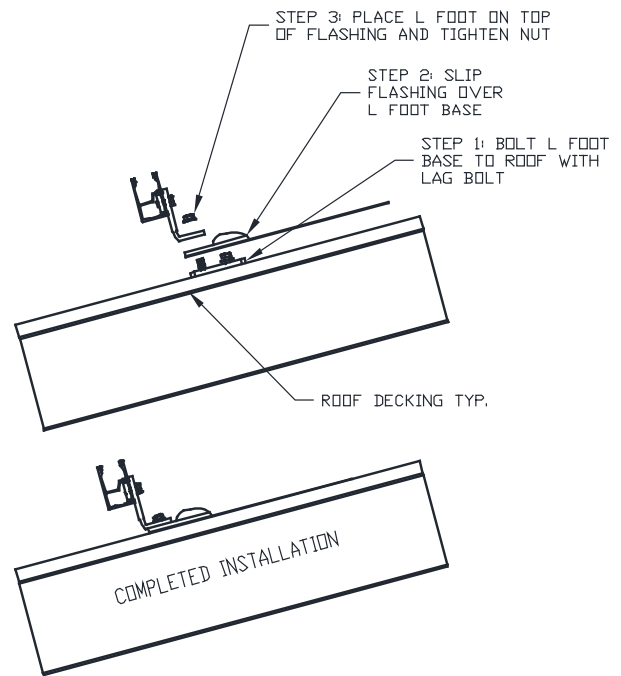
Typical Flush Mount Array - Plan View
1/2" = 1' -0"



Section - Flush Mount - Sloped Roof
3/4" = 1' -0"



- NOTES:
- LAG BOLTS MUST EMBED IN ROOF STRUCTURAL MEMBERS/RAFTERS
 - TORQUE ALL 5/16" HARDWARE TO THE FOLLOWING:
 - SILVER S.S. 10-16 FT-LBS
 - BLACK S.S. 7-9 FT-LBS
 - RAILS CAN MOUNT TO EITHER SIDE OF L FOOT (UPSLOPE VS DOWNSLOPE)



FLASHED L FOOT MOUNTING POINT FOR USE ON COMPOSITION ROOF SURFACES WITH LOW TO MODERATE TILT

RAILS CAN BE LEVELLED UP TO 3" USING UP TO TWO LEVELING SPACERS AS SHOWN IN 'SERIES 100 RAIL LEVELING'

1. SnapNRack Series 100 Racking System
2. Sized for 85 mph wind loads.
3. Racking loading calculations were performed for ASCE 7-05 wind speeds @ 85 mph for B and C exposure categories and ASCE 7-05 Seismic Design Category E.
4. Roof attachment hardware to be mounted to existing rafters; 8' rail spans or less.
5. Lag bolts are 5/16" X 4" stainless steel with 2.5" minimum penetration into the rafters.
6. Roof sheathed with 1/2" plywood and upper surface is faced with felt paper. Finished roof surface is composition shingle.
7. L-foot base is sealed with Tremco Vulkem 116 Polyurethane Sealant or equivalent.

<p>Contractor 1000 Sample St Sample City, CA 99999 (999) 999-9999 Contractor Lic. #99999 C-10 Electrical</p>
<p>Installer</p>
<p>Plans Prepared By _____ Electrician</p>
<p>Owner John Doe 1000 Sample St Sample City, CA 99999 Existing Single Family Residence</p>
<p>Drawn By Peter Ruttkay</p> <p>PV-03</p>