

PHOTOVOLTAIC ROOF MOUNT SYSTEM

CODE AND STANDARDS

THE INSTALLATION OF SOLAR ARRAYS AND PHOTOVOLTAIC POWER SYSTEMS SHALL COMPLY WITH THE FOLLOWING CODES:

- 2020 NATIONAL ELECTRICAL CODE
- 2018 NORTH CAROLINA RESIDENTIAL CODE
- 2018 NORTH CAROLINA BUILDING CODE
- ALL OTHER ORDINANCE ADOPTED BY THE LOCAL GOVERNING AGENCIES

SITE NOTES / OSHA REGULATION

1. A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.
2. THE SOLAR PV INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.
3. ROOFTOP MOUNTED PHOTOVOLTAIC PANELS AND MODULES SHALL BE TESTED, LISTED AND IDENTIFIED BY RECOGNIZED ELECTRICAL TESTING LABORATORY.
4. MODULES AND SUPPORT STRUCTURES SHALL BE GROUNDED
5. SOLAR INVERTER SHALL BE LISTED TO UL1741
6. ALL CONDUCTORS SHALL BE COPPER AND SHOULD BE 75 AND 90 DEG RATED
7. REMOVAL OF AN INTERACTIVE INVERTER OR OTHER EQUIPMENT SHALL NOT DISCONNECT THE BONDING CONNECTION BETWEEN THE GROUNDING ELECTRODE CONDUCTOR, THE PHOTOVOLTAIC SOURCE AND OUTPUT CIRCUIT GROUNDED CONDUCTORS.
8. LIVE PARTS OF PV SOURCE CIRCUITS AND PV OUTPUT CIRCUITS OVER 150V TO GROUND SHALL NOT BE ACCESSIBLE TO OTHER THAN QUALIFIED PERSONS WHILE ENERGIZED.
9. ALL PV MODULES AND ASSOCIATED EQUIPMENT AND WIRING SHALL BE PROTECTED FROM PHYSICAL DAMAGE.
10. NFPA 855 ONLY PERMITS RESIDENTIAL ESS TO BE INSTALLED IN THE FOLLOWING AREAS: ATTACHED GARAGES, DETACHED GARAGES, ON EXTERIOR WALLS AT LEAST 3 FT AWAY FROM DOORS OR WINDOWS, OUTDOORS AT LEAST 3 FT AWAY FROM DOORS OR WINDOWS, UTILITY CLOSETS, STORAGE OR UTILITY SPACES.

SOLAR CONTRACTOR

1. MODULE CERTIFICATIONS INCLUDE UL1703, IEC61646, IEC61370.
2. IF APPLICABLE, MODULE GROUNDING LUGS MUST BE INSTALLED AT THE MARKED GROUNDING LUG HOLES PER THE MANUFACTURERS INSTALLATION REQUIREMENTS.
3. AS INDICATED BY DESIGN, OTHER NRTL LISTED MODULE GROUNDING DEVICES MAY BE USED IN PLACE OF STANDARD GROUNDING LUGS AS SHOWN IN MANUFACTURER DOCUMENTATION AND APPROVED BY THE AHJ.
4. ALL MICROINVERTERS, PHOTOVOLTAIC MODULES, AC COMBINERS, DC-AC CONVERTERS AND SOURCE CIRCUIT COMBINERS INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER NEC690.4(B).
5. ALL SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH LOCAL BUILDING CODE.
6. TERMINALS AND LUGS WILL BE TIGHTENED TO MANUFACTURER TORQUE SPECIFICATIONS (WHEN PROVIDED) IN ACCORDANCE WITH NEC CODE 110.14(D) ON ALL ELECTRICAL CONNECTIONS.
7. MAX DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC UNLESS NOT AVAILABLE.

DESIGN CRITERIA
WIND SPEED: 110 MPH
GROUND SNOW LOAD: 20 PSF
WIND EXPOSURE FACTOR: B

UTILITY COMPANY:
DUKE ENERGY
PERMIT ISSUER (AHJ):
HARNETT COUNTY

SCOPE OF WORK
 INSTALLATION OF UTILITY INTERACTIVE PHOTOVOLTAIC SOLAR SYSTEM.

SR.#

PROJECT INFORMATION

1	PV MODULES	32 x Q.TRON BLK M-G2+ 425W
2	INVERTER	01 x Tesla Powerwall3 01 x Tesla Inverter 7.6 kW
3	ROOF TYPE	ASPHALT SHINGLES
4	RACKING	PSR-B84 RAILS (BLACK) IRONRIDGE
5	MOUNTING TYPE	COMP MOUNT FLASHING (BLACK) GROUND SCREW
6	DC SIZE	13.6 KW
7	AC SIZE	19.1 KVA

SR.#

PROJECT INFORMATION

1	PV1	DRAWING INDEX
2	PV2	SITE LAYOUT
3	PV3	STRING MAPPING
4	PV4	ELECTRICAL ONE LINE DIAGRAM
5	PV5	DETAILED ELECTRICAL WIRING SCHEMATIC
6	PV6	PV LABELS
7	PV7	BILL OF MATERIALS
8	PV8	ATTACHMENT DETAILS
9	PV9	PLOT PLAN



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 165 Buie Farm Ln
 Lillington NC 27546

Customer Signature:

Sheet Name:

Drawing Index

JOB NUMBER:

24-49-RP

Date:

03/13/2024

Revision:

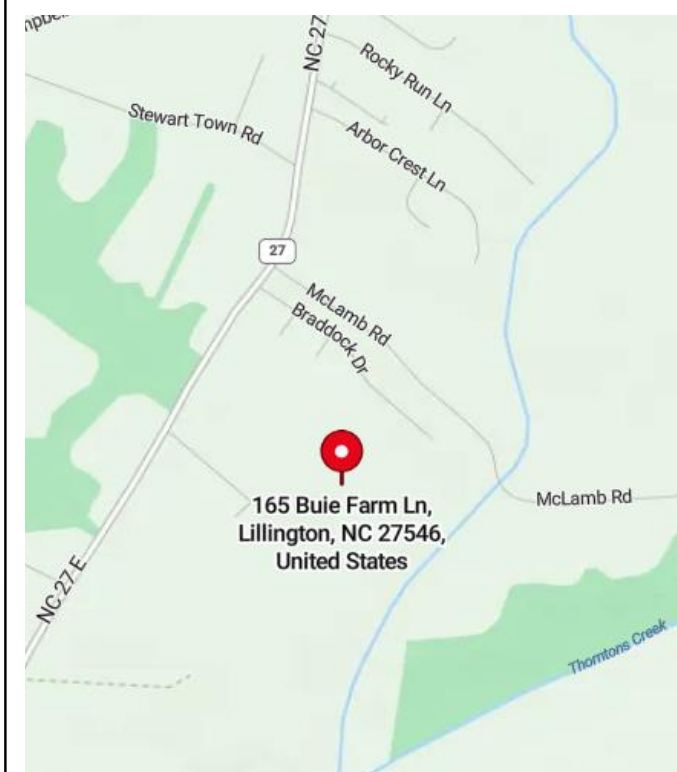
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Sheet Number:


PV1

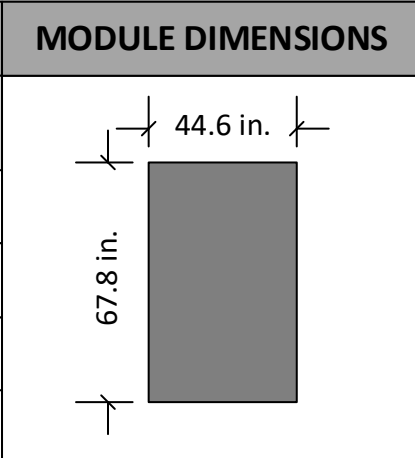


VICINITY MAP

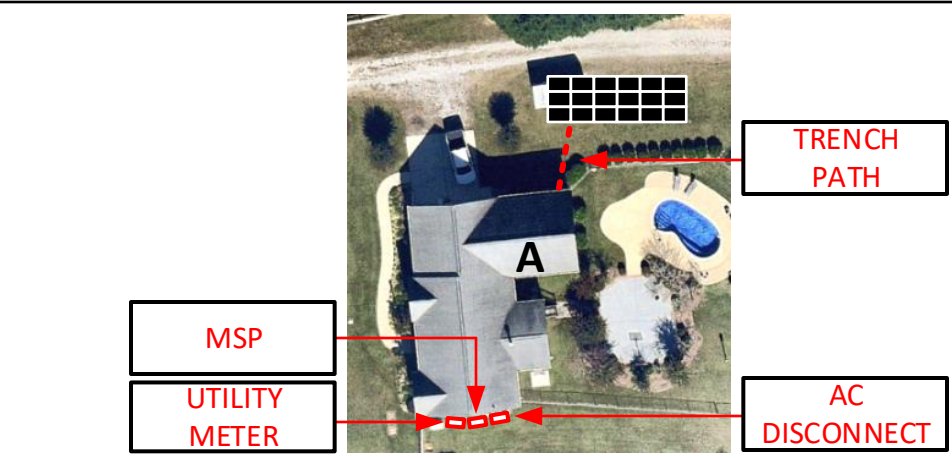
TOP VIEW OF THE BUILDING



ROOF DESCRIPTION			
	PITCH/TILT	AZIMUTH	NO. OF MODULES
Array A	30°	180°	18
Roof A	40°	174°	14
Vent		No vents will be covered by PV modules during the installation.	
Trench 40ft.			



PV System Dead Load (Panel + Racking weight) / PV System Area (No. of panels x Weight of panel(lbs.) + Length of racking(ft.) x 1.15 lb.ft) / (No. of panels x Height x Width) = Total psf			
ROOF	A		
DEAD LOAD (PSF)	2.66		



SYSTEM DETAILS

NUMBER OF PANELS : 32
 PANELS MODEL : Q.TRON BLK M-G2+ 425W
 DC SIZE : 13.6 KW
 AC SIZE : 19.1 KVA



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Sheet Name:

Site Layout

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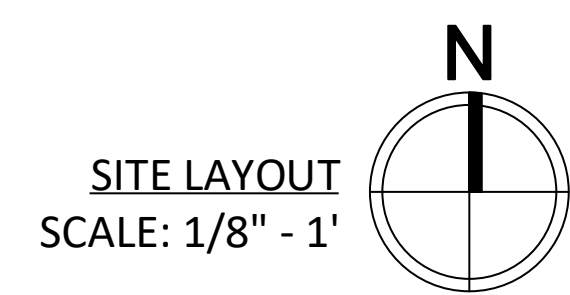
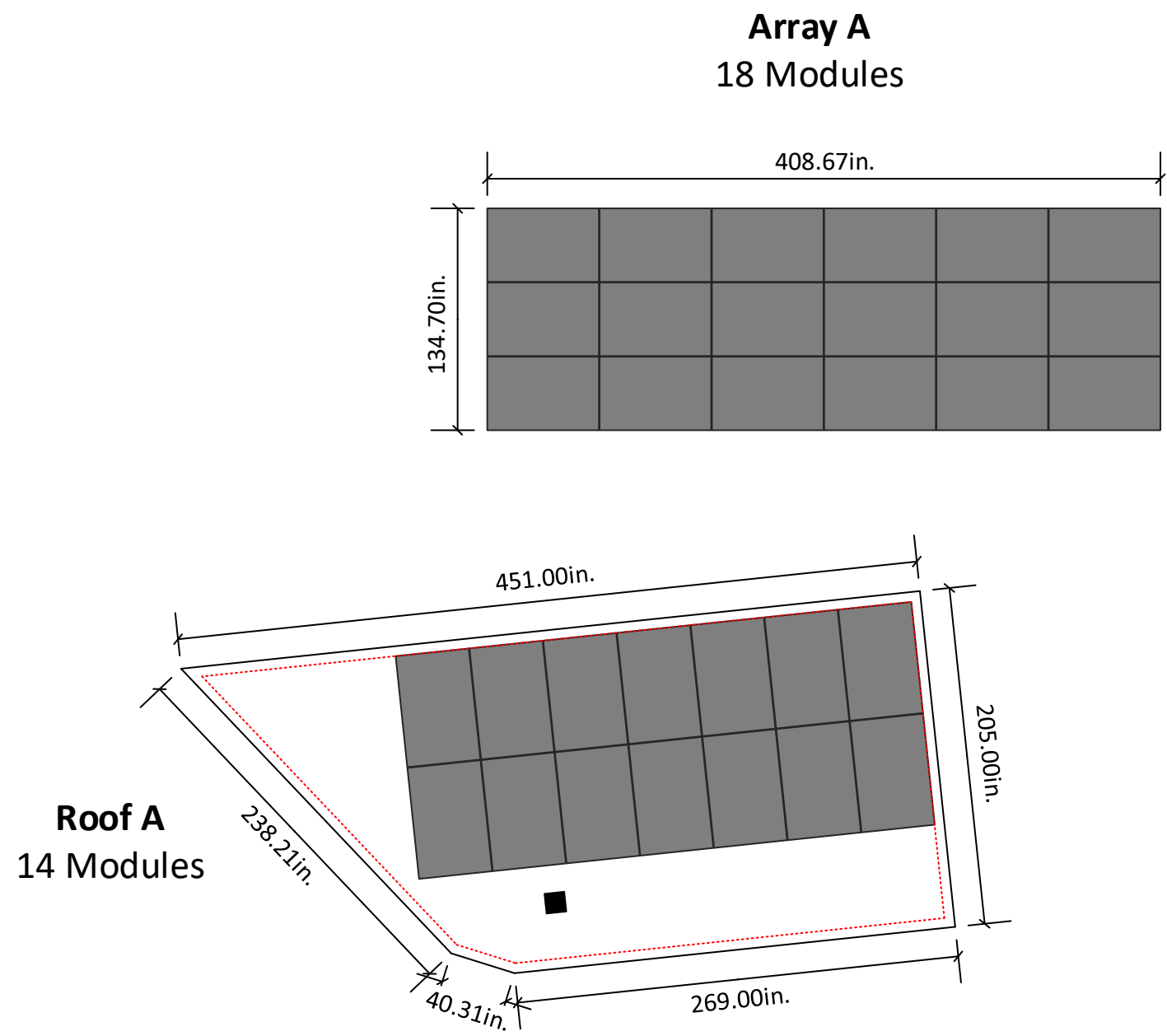
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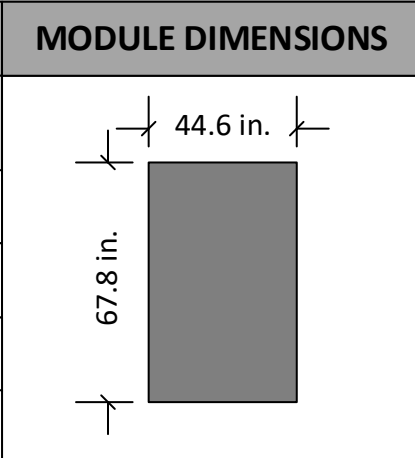
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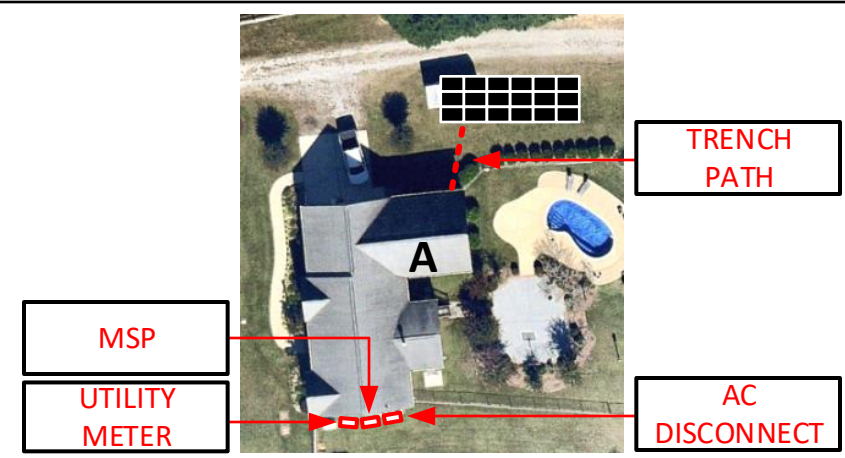
PV2



ROOF DESCRIPTION			
	PITCH/TILT	AZIMUTH	NO. OF MODULES
Array A	30°	180°	18
Roof A	40°	174°	14



STRING LAYOUT					
TESLA POWERWALL 3			TESLA 7.6KW		
Strings #	No. of Modules	Color	Strings #	No. of Modules	Color
String 1	09	Blue	String 3	07	Green
String 2	09	Orange	String 4	07	Purple
		Brown			Light Blue



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SYSTEM DETAILS
 NUMBER OF PANELS : 32
 PANELS MODEL : Q.TRON BLK M-G2+ 425W
 DC SIZE : 13.6 KW
 AC SIZE : 19.1 KVA

Tesla MCI (Mid Circuit Interrupter)

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 Lillington NC 27546

Customer Signature:

Sheet Name:

String Mapping

JOB NUMBER:

24-49-RP

Date:

03/13/2024

Revision:

A

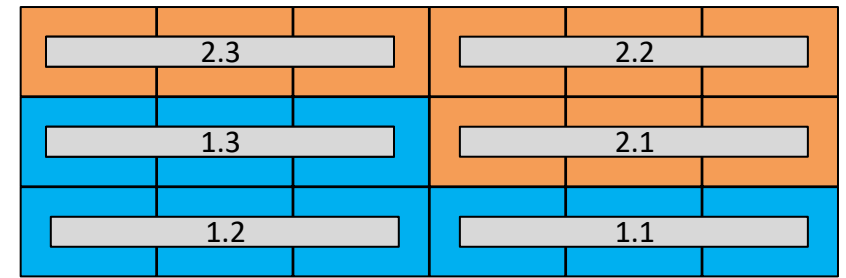
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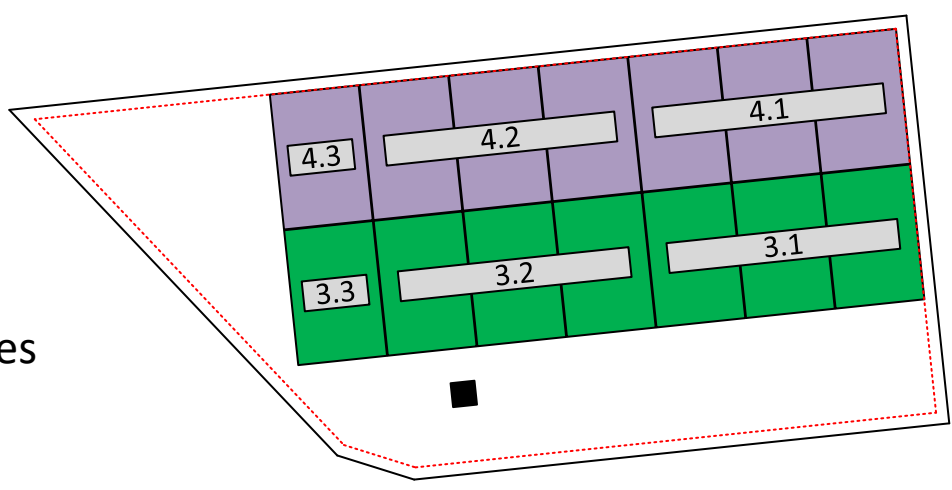
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PV3

Array A
18 Modules

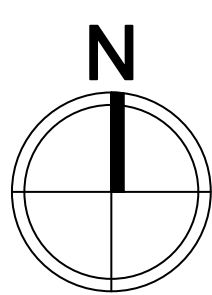


Roof A
14 Modules



6in setback from sides of the roof

STRING MAPPING
SCALE: 1/8" - 1'



STRING CALCULATION

String #	No of Modules	Estimated Power	I _{max}	I _{mpp}	V _{oc}	V _{mpp}
1,2	09	3,825 W	20.24 Adc	12.98 Adc	351.27Vdc	550 Vdc
3,4	07	2,975 W	20.24 Adc	12.98 Adc	273.21Vdc	550 Vdc

NEC Code (2020) and UL Standard References

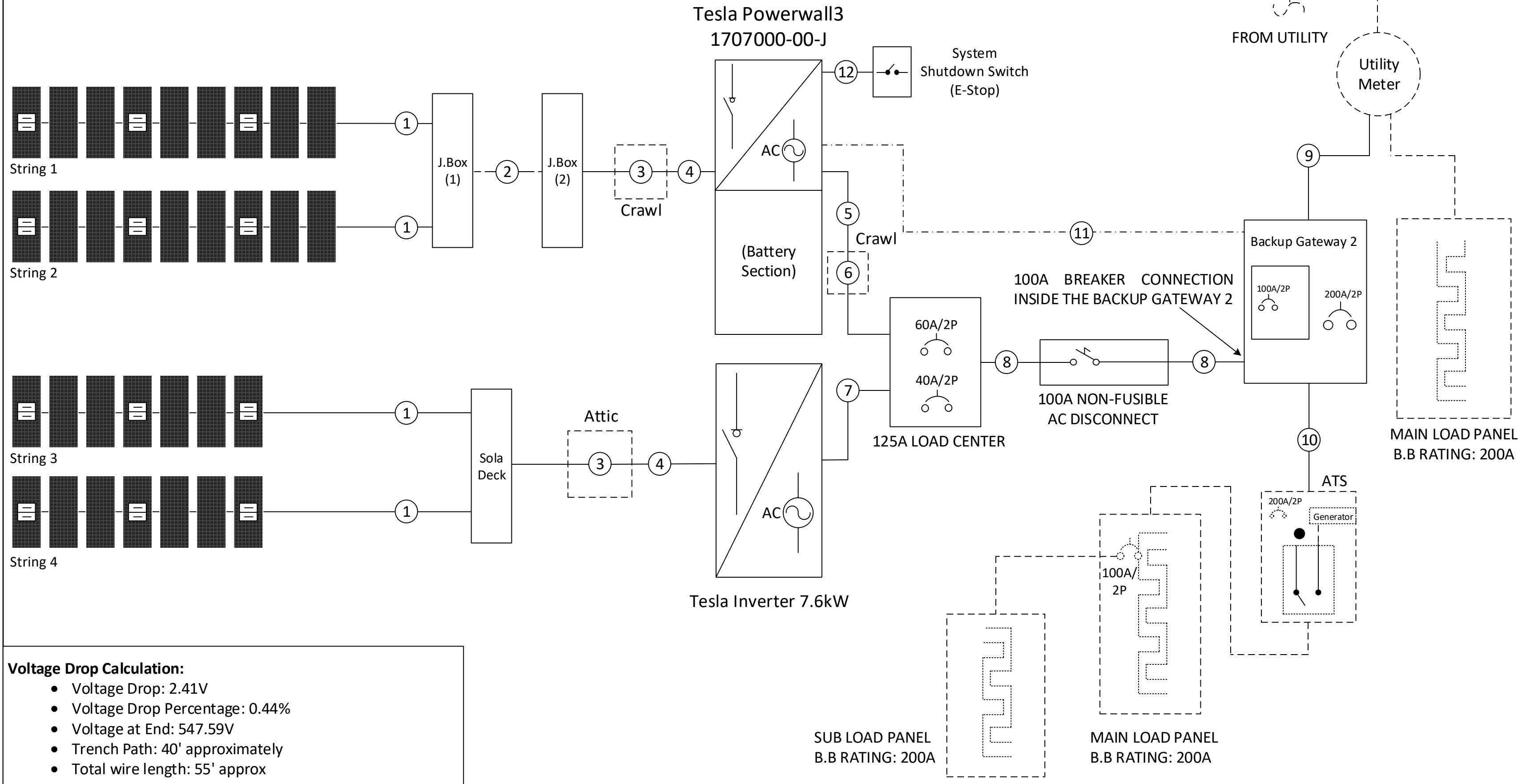
Rapid Shut Down	NEC 690.12 (A-D), UL1741	Grounding	NEC Article 250.30(A)
Disconnecting Means	NEC 690.13	Conduit Fill	NEC Table C.9, 310.15(B)(3)(a)
Feeder Sizing	NEC Table 310, 15(B)(16, 17)	Interconnection	NEC 705.12
Over current Protection	NEC 690.9		



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Note: Service Side Work: Power Drop Required

32 X Q.TRON BLK M-G2+ 425W
425W
TESLA MCI-2 (Mid Circuit Interrupter)
RAPID SHUTDOWN EQUIPPED



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Sheet Name:

Electrical One Line Diagram

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PV4

Voltage Drop Calculation:

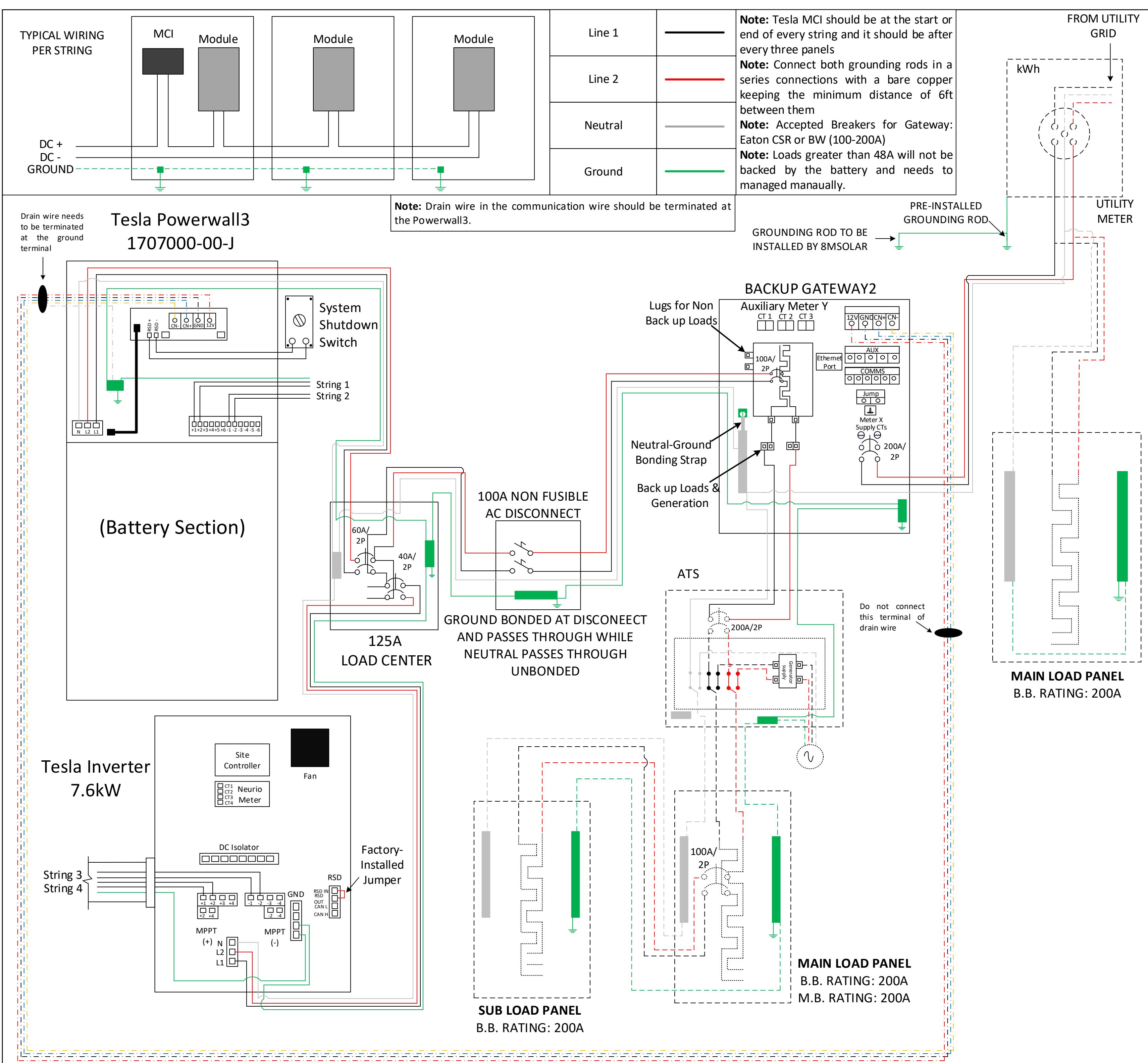
- Voltage Drop: 2.41V
- Voltage Drop Percentage: 0.44%
- Voltage at End: 547.59V
- Trench Path: 40' approximately
- Total wire length: 55' approx

- System Size: 13,600W DC
- Battery Total Energy: 13.5 KWh
- (32) Q.TRON BLK M-G2+ 425W
- (12) 1879359-00-X: Tesla MCI-2
- (01) Tesla Powerwall3 (1707000-00-J)
- Inverter Output: 48A max @ 240 VAC (each)
- (01) 1538000-45-y: Tesla Solar Inverter 7.6kW
- Inverter Output: 32A max @ 240 VAC
- 19.1 kVA AC output max

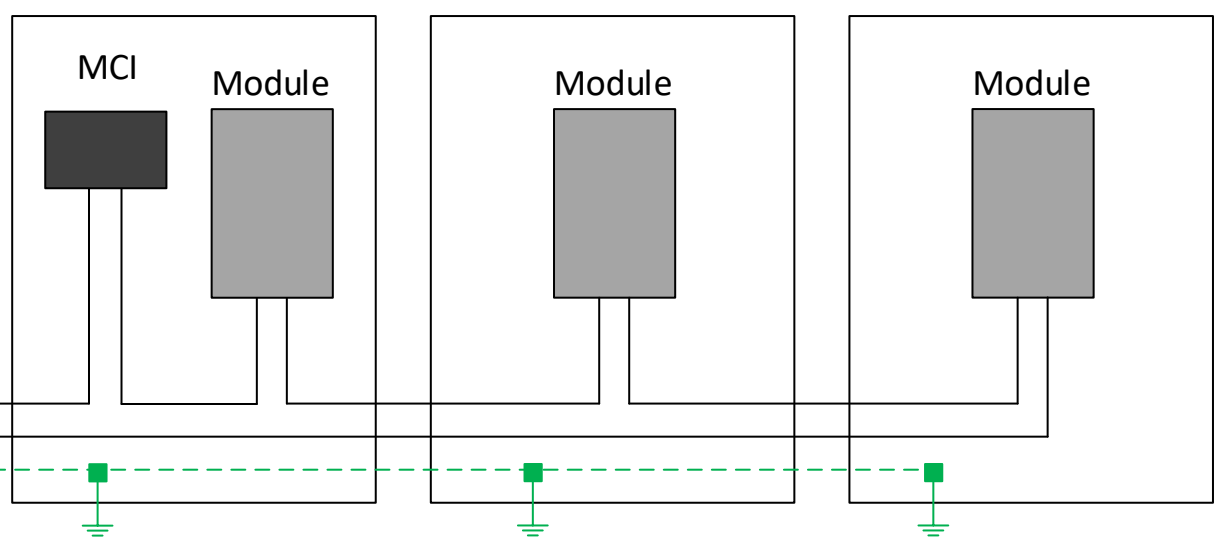
- Grounding will be done via Pegasus grounding lugs and mid-clamps to ensure the rail and panels are continuously grounded.
- Rapid Shutdown is included in the Mid Circuit Interrupter, refer to Mid Circuit Interrupter and Inverter attached datasheets.
- The load center / disconnect will be visible, lockable accessible to utility linesmen and will be properly labelled as per NEC requirements. It will be located on the exterior wall of the building, next to the utility meter.

Sr.No	#Wire	Conduit Size	Ground Wire	Amperage
1	2 x #10 PV		#10 Bare Cu	20.24
2	4 x #10 PV Wire	Rigid Conduit	#10 Bare Cu	20.24
3	4 x #10 THHN Cu	3/4" LFMC	#10 Green Cu	20.24
4	4 x #10 THHN Cu	3/4" EMT	#10 Green Cu	20.24
5	3 x #6 THHN Cu	1" EMT	#8 Green Cu	60
6	3 x #6 THHN Cu	1" LFMC	#8 Green Cu	60
7	3 x #8 THHN Cu	1" LFNC	#10 Green Cu	40
8	3 x #3 THHN Cu	1.25" PVC	#6 Green Cu	100
9	3 x #3/0 THHN Cu	2" PVC		200
10	3 x #3/0 THHN Cu	2" PVC	#6 Green Cu	200
11	4-conductor shielded (1 twisted pair) 16 AWG			
12	2-conductor shielded 18 AWG	1/2" LFNC		





TYPICAL WIRING PER STRING



Line 1	— (Black)
Line 2	— (Red)
Neutral	— (White)
Ground	— (Green)

Note: Tesla MCI should be at the start or end of every string and it should be after every three panels
Note: Connect both grounding rods in a series connections with a bare copper keeping the minimum distance of 6ft between them
Note: Accepted Breakers for Gateway: Eaton CSR or BW (100-200A)
Note: Loads greater than 48A will not be backed by the battery and needs to be managed manually.

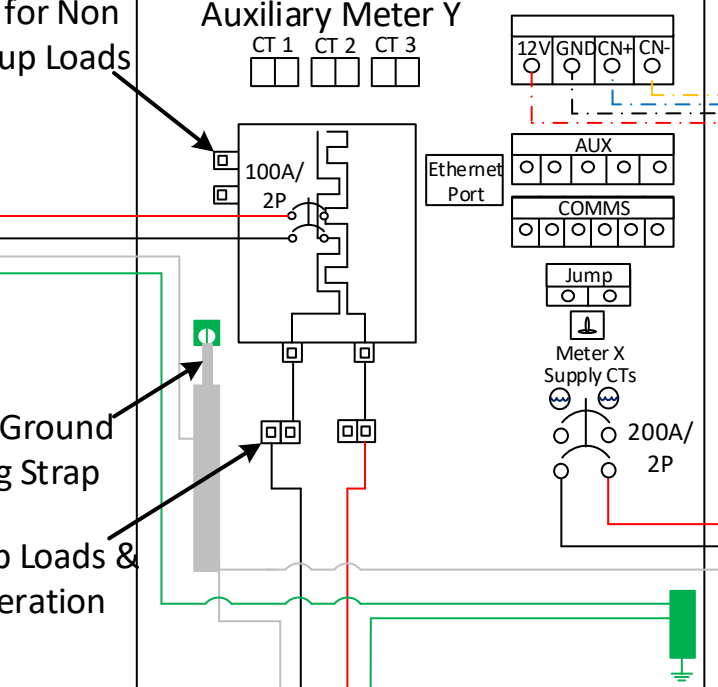
Note: Drain wire in the communication wire should be terminated at the Powerwall3.

Tesla Powerwall3
1707000-00-J

Drain wire needs to be terminated at the ground terminal

(Battery Section)

BACKUP GATEWAY2



100A NON FUSIBLE AC DISCONNECT

GROUND BONDED AT DISCONNECT AND PASSES THROUGH WHILE NEUTRAL PASSES THROUGH UNBONDED

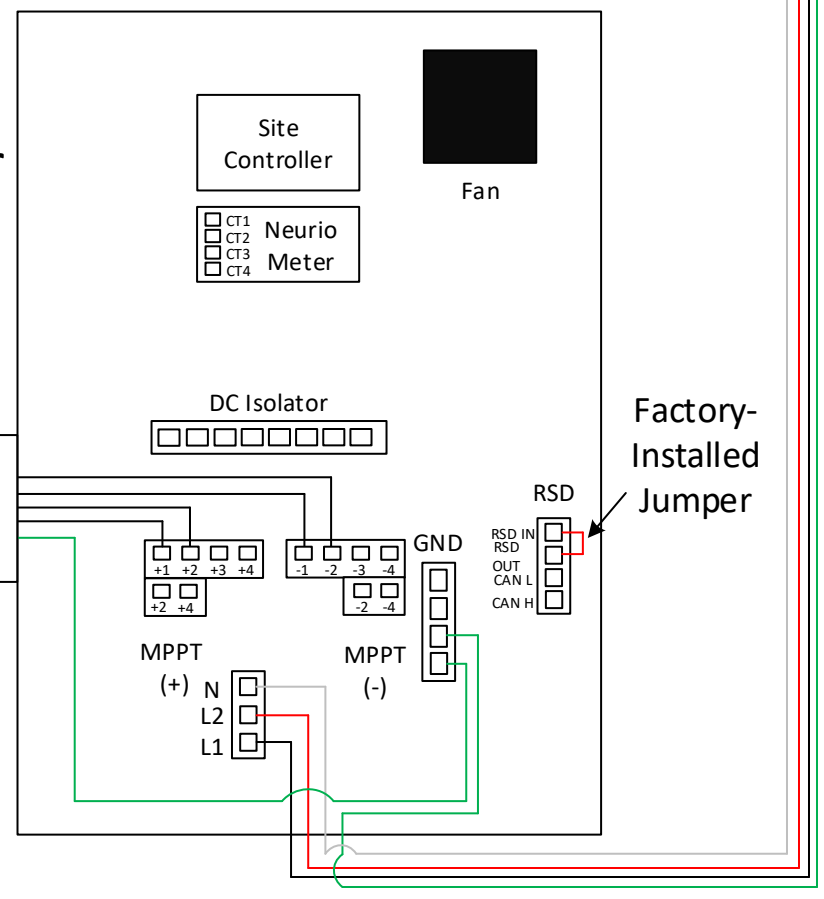
125A LOAD CENTER

ATS

Do not connect this terminal of drain wire

MAIN LOAD PANEL
B.B. RATING: 200A

Tesla Inverter
7.6kW



SUB LOAD PANEL
B.B. RATING: 200A

MAIN LOAD PANEL
B.B. RATING: 200A
M.B. RATING: 200A



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Detailed Electrical Diagram

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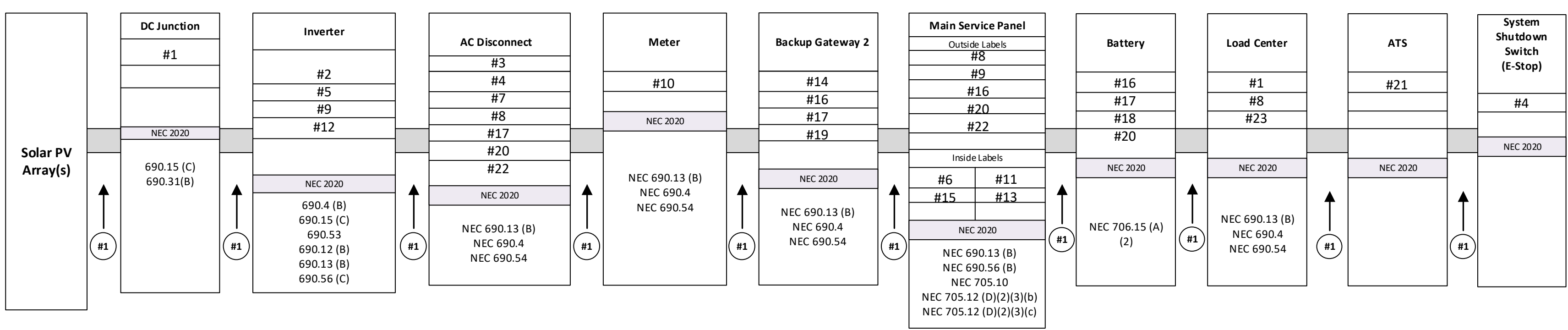
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PV5





8MSOLAR
ADVANCING ENERGY INDEPENDENCE

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LABELING AND WARNING SIGNS: NEC 2020

A. PURPOSE
PROVIDE EMERGENCY RESPONDERS WITH APPROPRIATE WARNING AND GUIDANCE WITH RESPECT TO ISOLATING THE SOLAR ELECTRIC SYSTEM. THIS CAN FACILITATE IDENTIFYING ENERGIZED ELECTRICAL LINES THAT CONNECT THE SOLAR PANELS TO THE INVERTER, AS SHOULD NOT BE CUT WHEN VENTING FOR SMOKE REMOVAL.

B. MAIN SERVICE DISCONNECT:
1. RESIDENTIAL BUILDINGS- THE MARKING MAY BE PLACED WITHIN THE MAIN SERVICE DISCONNECT. THE MARKING SHALL BE PLACED ON THE OUTSIDE COVER IF THE MAIN SERVICE DISCONNECT IS OPERABLE WITH THE SERVICE PANEL CLOSED.

2. COMMERCIAL BUILDINGS- THE MARKINGS SHALL BE PLACED ADJACENT TO THE MAIN SERVICE DISCONNECT CLEARLY VISIBLE FROM THE LOCATION WHERE THE LEVER IS OPERATED

3. MARKINGS, VERBIAGE, FORMAT AND TYPE OF MATERIAL
- a. VERBIAGE: CAUTION; SOLAR ELECTRIC SYSTEM CONNECTED
 - b. FORMAT:
 - (1) WHITE LETTERING ON A RED BACKGROUND
 - (2) MINIMUM 3/8 INCH LETTER HEIGHT
 - (3) ALL LETTERS SHALL BE CAPITALIZED
 - (4) ARIAL OR SIMILAR FONT, NON-BOLD

- c. MATERIAL:
 - (1) REFLECTIVE, WEATHER RESISTANT MATERIAL SUITABLE FOR THE ENVIRONMENT (USE UL-969) AS STANDARD FOR WEATHER RATING); DURABLE ADHESIVE MATERIALS MEET THIS REQUIREMENT.

C. MARKING REQUIREMENTS ON DC CONDUIT, RACEWAYS, ENCLOSURES, CABLE ASSEMBLIES, DC COMBINERS AND JUNCTION BOXES;

1. MARKING: PLACEMENT, VERBIAGE, FORMAT AND TYPE OF MATERIAL.

a. PLACEMENT: MARKINGS SHALL BE PLACED EVERY 10 (TEN) FEET ON ALL INTERIOR AND EXTERIOR DC CONDUITS, RACEWAYS, ENCLOSURES AND CABLE ASSEMBLIES, AT TURNS ABOVE AND/OR BELOW PENETRATIONS, ALL DC COMBINERS AND JUNCTION

- BOXES.
- b. VERBIAGE: CAUTION SOLAR CIRCUIT
- c. THE FORMAT AND TYPE OF MATERIAL SHALL ADHERE TO SECTION B-3.B & C ABOVE

D. INVERTERS ARE NOT REQUIRED TO HAVE CAUTION MARKINGS

#1 **WARNING: PHOTOVOLTAIC POWER SOURCE**

#2 **PHOTOVOLTAIC DC DISCONNECT**

#3 **PHOTOVOLTAIC AC DISCONNECT**

#4 **RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM**

#5 **MAXIMUM VOLTAGE 550Vdc**
MAX. RATED CIRCUIT CURRENT 12.98Adc
OF THE CHARGE CONTOLLER OR DC-TO-DC CONVERTER (IF INSTALLED)

#6 **PHOTOVOLTAIC POWER SOURCE**
OPERATING AC VOLTAGE 240 V
MAXIMUM OPERATING AC OUTPUT CURRENT 48 A

#7 **AC DISCONNECT PHOTOVOLTAIC SYSTEM POWER SOURCE**
RATED AC OUTPUT CURRENT 48 AMPS
NOMINAL OPERATING AC VOLTAGE 240 VOLTS

#8 **WARNING**
ELECTRIC SHOCK HAZARD
TERMINAL ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

#9 **WARNING**
DUAL POWER SUPPLY
SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

#10 **WARNING**
THREE POWER SOURCES
SOURCES: UTILITY GRID, BATTERY AND PV SOLAR ELECTRIC SYSTEM

#11 **WARNING**
TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL

#12 **WARNING**
BIPOLAR PHOTOVOLTAIC ARRAY DISCONNECT OF NEUTRAL GROUNDED CONDUCTORS MAY RESULT IN OVERVOLTAGE ON ARRAY OR INVERTER

#13 **WARNING**
POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE

#14 **WARNING**
SOLAR ELECTRIC CIRCUIT BREAKER IS BACKFEED

#15 **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

#16 **SOLAR AC DISCONNECT LOCATED AT SOUTH SIDE WALL OF THE HOUSE BESIDE THE UTILITY METER**

#17 **SERVICE DISCONNECT LOCATED IN THE BACKUP GATEWAY2 PANEL**

#18 **BATTERY**

#19 **MAIN BATTERY SYSTEM DISCONNECT**

#20 **BATTERY DISCONNECT LOCATED IN THE BACKUP GATEWAY 2 PANEL**

#21 **CAUTION**
POWER TO THIS BUILDING IS SUPPLIED FROM THE FOLLOWING SOURCES
UTILITY GRID
ELECTRICAL GENERATOR
PV SOLAR ELECTRICAL SYSTEM

#22 **GENERATOR WILL BE MANAGED BY ATS**

#23 **WARNING**
THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RARTING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR

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Sheet Name:

PV Labels

JOB NUMBER:

24-49-RP

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A

Sheet Size:

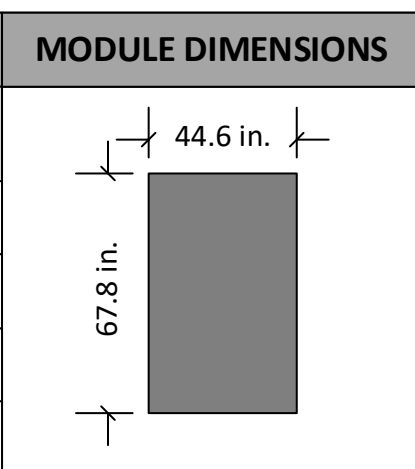
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17" X 22"

Sheet Number:

PV6



ROOF DESCRIPTION			
	PITCH/TILT	AZIMUTH	NO. OF MODULES
Array A	30°	180°	18
Roof A	40°	174°	14



Rails and Splices : PSR-B84 (BLACK)
Rails (Ground mount) : XR100

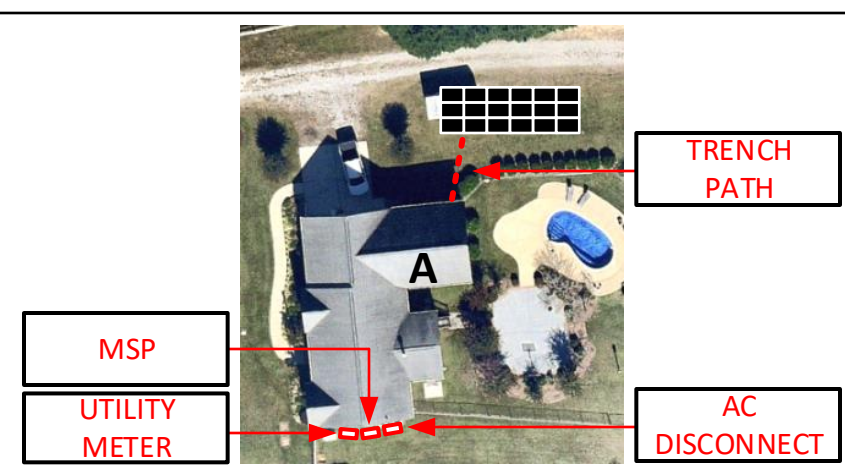
Rafter Spacing : 16 in

Attachment Span: 4ft

Roof Attachment : Pegasus Comp Mount
Roof Attachment: Krinner Screws

There is one layer of shingles
Roofing material is asphalt shingles

The roof is located in 110mph wind zone



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Trench 40ft.

PV LABELS			
Sr No	Code	Qty	
01	02-314	12	
02	03-301	02	
03	03-302	01	
04	02-316	02	
05	03-308	02	
06	03-390	01	
07	03-306	01	
08	05-215	02	
09	05-211	03	
10	03-230	01	
11	05-372	01	
12	05-103	02	
13	05-216	01	
14	05-342	02	
15	07-111	01	
16	8M-001	03	
17	8M-002	03	
18	03-395	01	
19	04-304	01	
20	8M-004	03	
21	8M-005	01	
22	8M-003	02	
23	05-108	01	

- RAILS**
- 12 x XR-100-168A: XR100, Rail 168" Clear
- CLAMPS & GROUNDING**
- 24 x UFO-CL-01-B1: Universal Module Clamp, Black
 - 24 x CAMO-01-M1: Hidden End Cam (universal clamp)
 - 01 x XR-LUG-03-A1: Grounding Lug, Low Profile
- SUBSTRUCTURE**
- 16 x 70-0200-SGA: SGA Top Cap at 2"
 - 24 x GM-BRC2-01-M1: Ground Mount Bonded Rail Connector - 2"
 - 64 x GM-HSHW-01-M1: Hex Head Set Screw
- ACCESSORIES**
- 02 x XR-100-CAP: Kit, End Cap XR100 (10 sets per bag)
- GROUNDING SCREWS AND PIPES**
- 16 x KRINN 25529 : 2" GROUND SCREW 1600MM
 - 19 x CONDR RACKGALV2-3/8X144: 2" IRON GM STR PIPE 12' (37) 2-3/8" OD 12GAUGE GALV PIPE 144" (2.0" IRIDG)
 - 02 x CONDR RACKGALV2X96: 2" IRON GM COUPLER 8' (37) 2" OD 9GAUGE GALV PIPE 96" (COUPLING)

- RAILS AND MOUNTING SYSTEM**
- 16 x PSR-B84: Pegasus Rail, Black, 84" (7 Feet)
 - 12 x PSR-SPL: Pegasus - Bonded, Structural Splice
 - 24 x PSR-MCB: Pegasus - Multicomp, Mid/End, 30 to 40 mm, Black
 - 08 x PSR-HEC: Pegasus - Hidden End Clamp
 - 08 x PSR-LUG: Pegasus - Grounding Lug
 - 21 x PSR-WMC: Pegasus - Wire Management Clip
 - 03 x PSR-CBG: Pegasus - Cable Grip
 - 08 x PSR-CAP: Pegasus - End Cap
 - 28 x PSCR-UBBDT: Pegasus Comp Mount - Open Slot, Black L Foot, Black Flashing, Dovetail 3/8" T-Bolt
 - 64 x Heyco Wire Clips

- SOLAR MODULES**
- 32 x Q.TRON BLK M-G2+ 425W
- INVERTER & SUPPORTING ITEMS**
- 01 x 1707000-00-J :Tesla Powerwall3
 - 01 x 1538000-45-y: Tesla Solar Inverter 7.6kW
 - 12 x 1879359-00-X: Tesla MCI-2
 - 01 x 1232100-00-X: Backup GateWay 2
 - 01 x 1529623-00-X: Internal Panelboard Kit
 - 01 x 1549184-00-X: 02" Conduit Hub Kit

- Wire**
- 500 ft x #10 PV WIRE BLK (Cu)
- ELECTRICAL ITEMS**
- 01 x BW2200: Gateway Main Breaker-Eaton BW2200
 - 01 x BR2100: Eaton BR 100/2
 - 01 x HOM816L125PRB: Combiner Sub Panel (Sq D HOMELINE) 125A MLO/4-8 space minimum (NEMA 3R)
 - 01 x HOM260: SQ D HOM 60/2
 - 01 x HOM240: SQ D HOM 40/2
 - 01 x EATON M22-PV-K01: EMG STOP W/ CONTACTOR
 - 01 x Eaton M22-11-PG: Emergency Stop Enclosure
 - 01 x DG223URB: 250volt/100amp/2pole non fusible disconnect (NEMA 3R)
 - 01 x EZSLR JB-1.2: SolaDeck Boxes

Customer Information:

Robert Pietrocola

165 Buie Farm Ln
Lillington NC 27546

Customer Signature:

Sheet Name:

Bill of Material

JOB NUMBER:

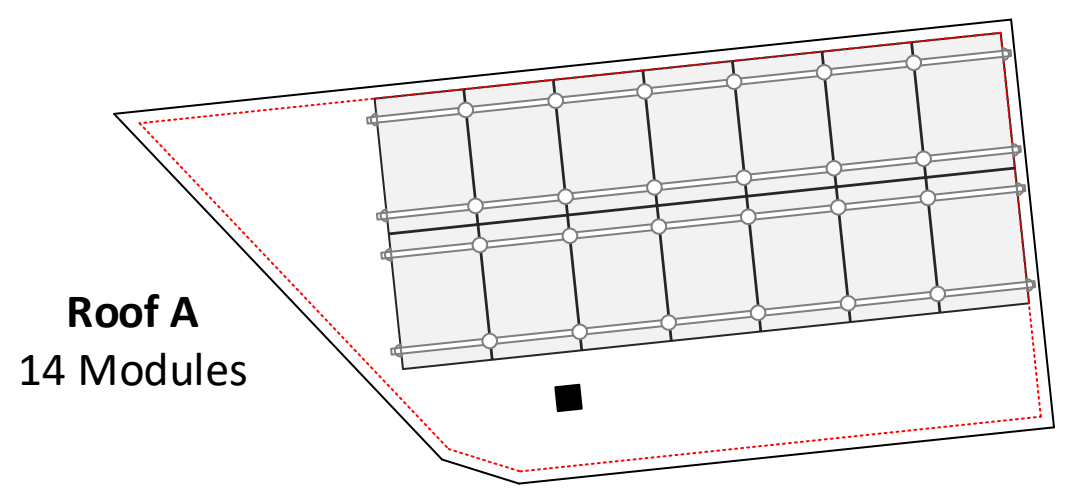
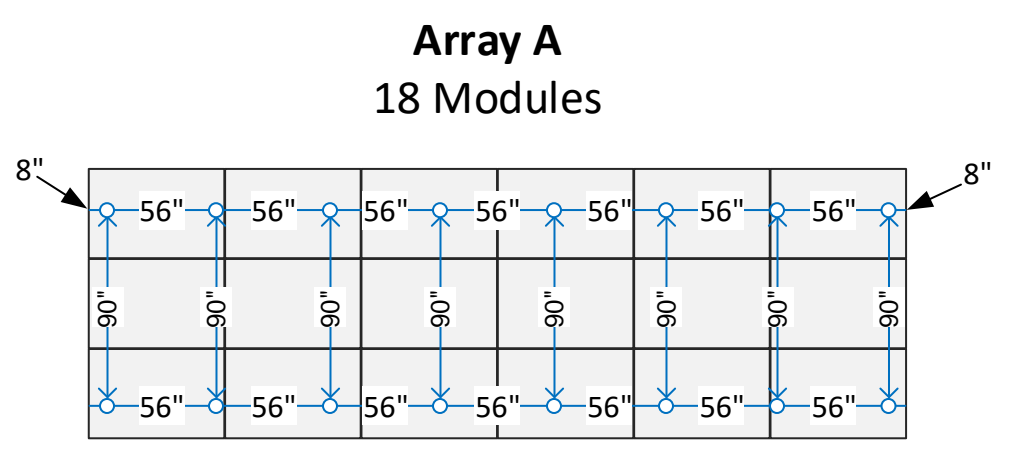
24-49-RP

Date: 03/13/2024

Revision: A

Sheet Size: ANSI C
17" X 22"

Sheet Number: PV7



6in setback from sides of the roof

BILL OF MATERIAL
SCALE: 1/8" - 1'



Customer Information:

Robert Pietrocola

165 Buie Farm Ln
Lillington NC 27546

Customer Signature:

Sheet Name:

Attachment Details

JOB NUMBER:

24-49-RP

Date:

03/13/2024

Revision:

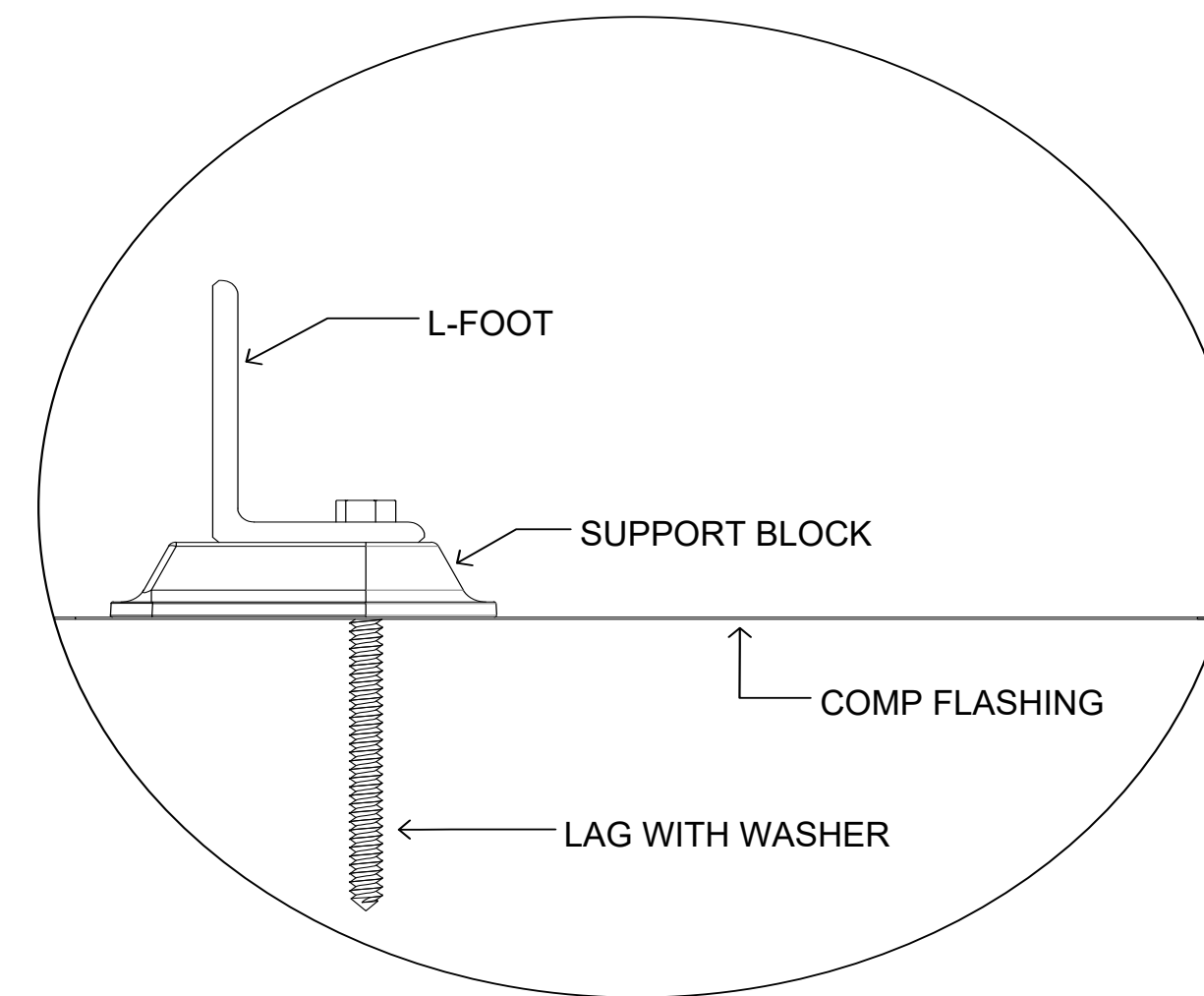
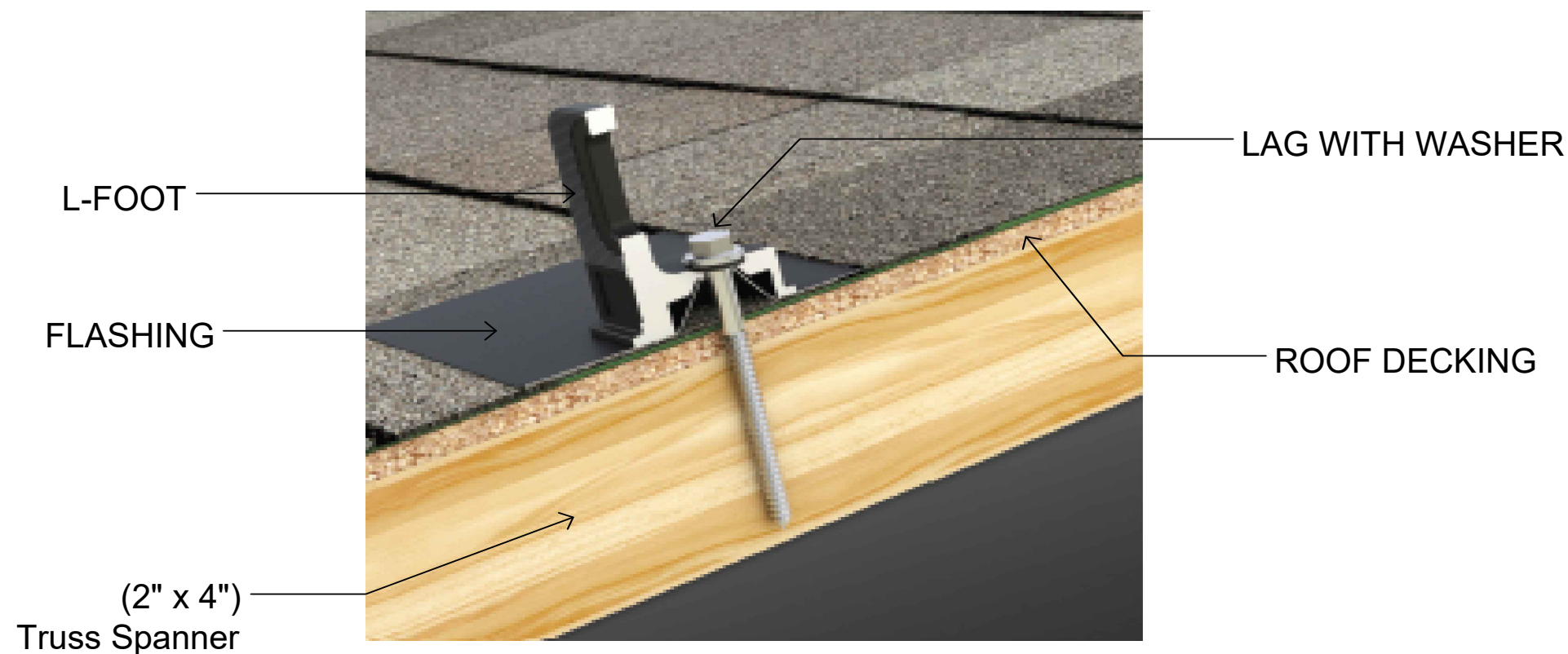
A

Sheet Size:

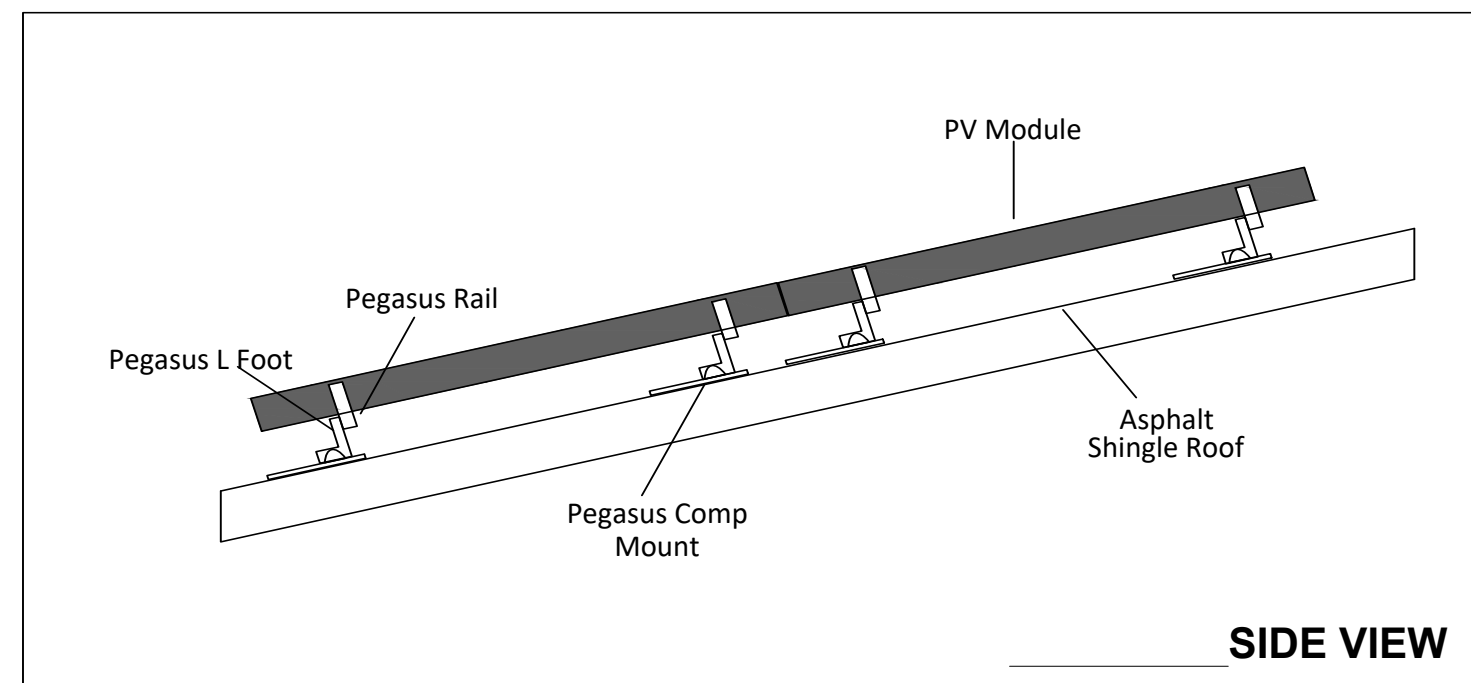
ANSI C
17" X 22"

Sheet Number:

PV8

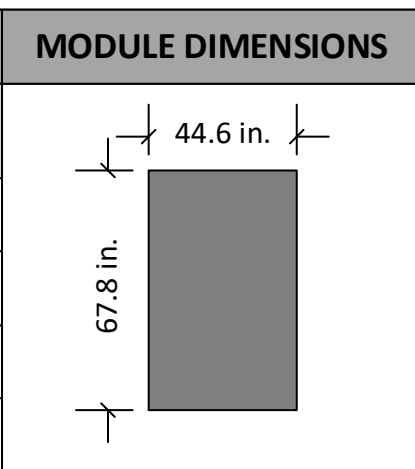


					
Multi-Clamp	Hidden End Clamp	MLPE Mount	Dovetail T-Bolt	Ground Lug	Cable Grip
Torque Value 100 in-lbs.	Torque Value 135 in-lbs.	Torque Value 135 in-lbs.	Torque Value 300 in-lbs.	Torque Value 135 in-lbs.	Torque Value 135 in-lbs.

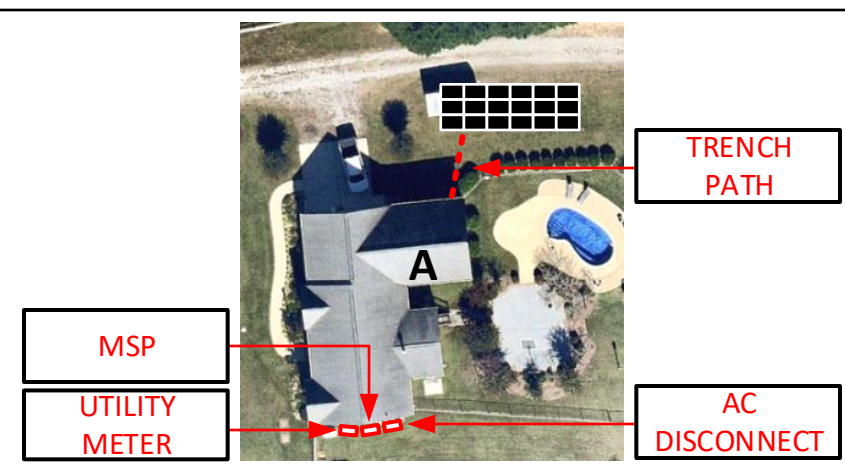


PV Dead Load	
Roof A	<p>PV System Dead Load (Panel + Racking weight) / PV System Area (14 panels x 47.2 lbs./panel + 105 ft. of racking x 1.17 lb.ft) / (14 panels x 5.65' x 3.71') = 2.66 psf</p>

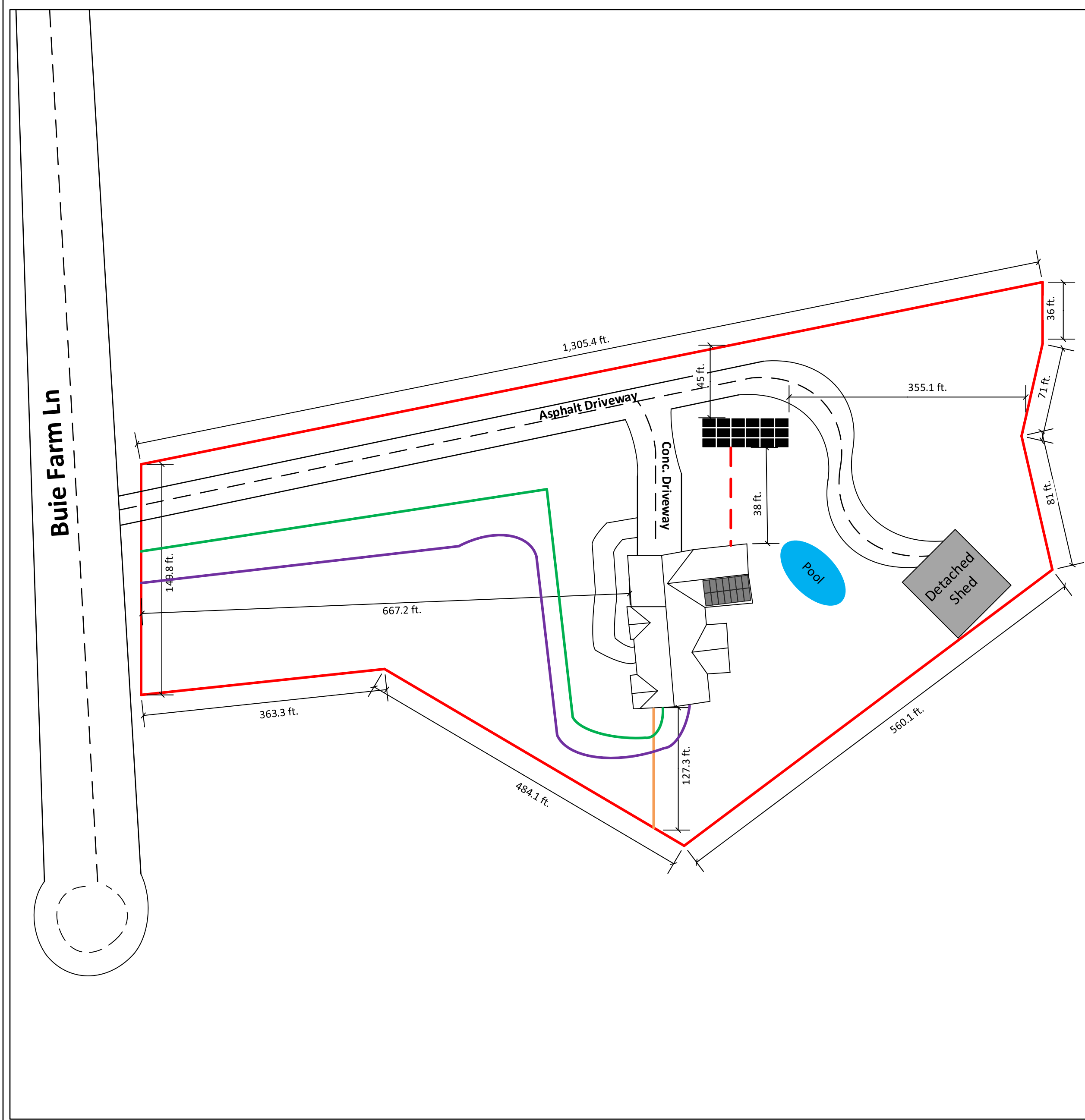
ROOF DESCRIPTION			
	PITCH	AZIMUTH	NO. OF MODULES
Array A	30°	180°	18
Roof A	40°	174°	14



Trench 40ft.



5112 Departure Drive,
Raleigh NC 27616
O: 919.948.6474
E: info@8msolar.com



SYSTEM DETAILS

NUMBER OF PANELS : 32
 PANELS MODEL : Q.TRON BLK M-G2+ 425W
 DC SIZE : 13.6 KW
 AC SIZE : 19.1 KVA

Solar Panel on Ground Array (A)	
Solar Panel on Roof Roof (A)	
Trench Path	
Electrical Lines	
Gas Line	
Septic Tank	

Customer Information:

Robert Pietrocola
 165 Buie Farm Ln
 Lillington NC 27546

Customer Signature:

Sheet Name:

Plot Plan

JOB NUMBER:

24-49-RP

Date:	Revision:
03/13/2024	A

Sheet Size:	Sheet Number:
ANSI C 17" X 22"	PV9

