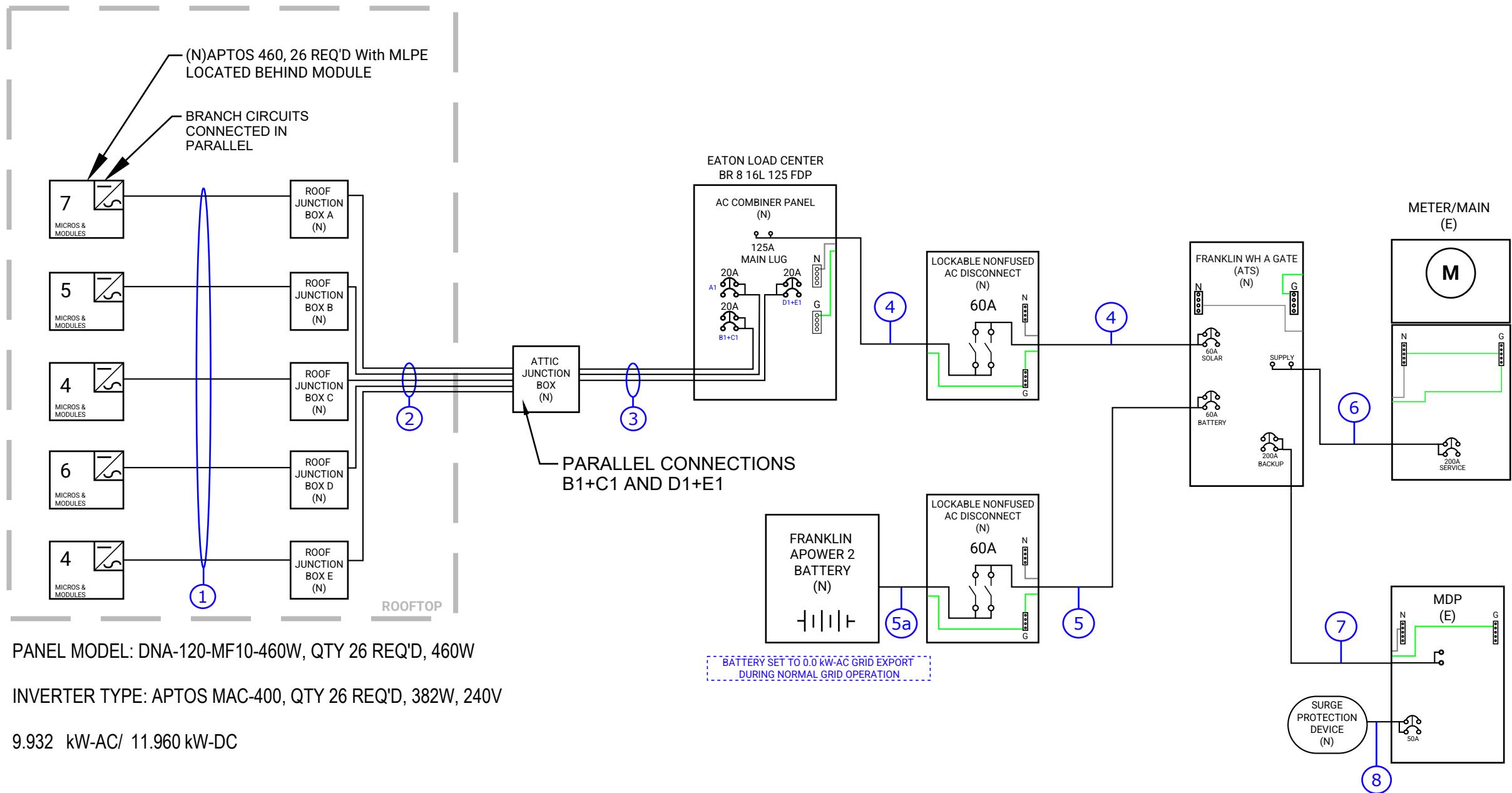




GC LIC. NO. : 65677  
ELEC. LIC. NO. : U-33321

## LINE DIAGRAM

**11.96 kW DC PV SYSTEM**  
**NAURAIN SOLAR PROJECT**



## WIRING SCHEDULE

WIRING SCHEDULE						
Tag	Conduit Size	Cable Type	Conductor	Neutral	Ground	Notes
1	NONE	12/2 Trunk Cable	12 AWG CU	NONE	6 AWG Bare CU	Mfg.supplied cabling within array
2	NONE	12/2 NM-B	12 AWG CU	NONE	12 AWG	Roof J Boxes to Attic J Box
3	3/4" PVC or EQUIV	N/A	10 AWG CU THWN-2	NONE	10 AWG CU THWN-2	Attic J Box to AC Combiner
4	1" PVC or EQUIV	N/A	6 AWG CU THWN-2	6 AWG CU THWN-2	10 AWG CU THWN-2	AC Combiner to Disconnect to ATS
5	1" PVC or EQUIV	N/A	6 AWG CU THWN-2	6 AWG CU THWN-2	10 AWG CU THWN-2	Battery Disconnect to ATS
5a	NONE	#6 CU SER	6 AWG CU	6 AWG CU	6 AWG CU	Battery to Disconnect
6	2" PVC or LFNC	N/A	4/0 AWG AL THWN-2	4/0 AWG AL THWN-2	6 AWG CU THWN-2	Meter/Main to ATS
7	2" PVC or LFNC	4/0 AL SER	4/0 AWG AL	4/0 AWG AL	2/0 AWG AL	ATS to MDP
8	NONE	MFG. SUPPLIED WIRING	12 AWG CU	12 AWG CU	12 AWG CU	MDP to Surge Protection Device

## INVERTER AMPERAGE

CIRCUIT SIZES	CIRCUIT AMPERAGE
7	13.91
5	9.9
4	7.95
6	11.925
4	7.95

TOTAL  
AMPERAGE  
= 51.68

LEGEND

(N)	NEW
(E)	EXISTING
(O)	NEW BY OTHERS
—	NEUTRAL
—	GROUND

(INVERTER OUTPUT) X (1.25) = BRANCH CIRCUIT AMPERAGE

PV LEAD	ELECTRICIAN

## REVISION LIST

#	REV. DATE	REV. BY
1	10/8/25	JAX

DATE:	October 8, 2025
DRAWN BY:	SAM

**Sheet No.**

**E-01**



**GENERAL ELECTRICAL NOTES**

1. Equipment shall be new unless otherwise noted.
2. Equipment shall be listed unless otherwise noted.
3. Equipment shall be installed providing adequate working space in compliance with NEC.
4. Copper conductors shall be used and shall have insulation rating 600v, 90°C unless otherwise noted.
5. Conductors shall be sized in accordance with the NEC and ampacity shall be derated for temperature increase, conduit fill & voltage drop.
6. All conductors shall be installed in approved conduits. Conduits shall be adequately supported in accordance with the NEC.
7. AC Disconnect is optional, however it may be required by the utility.
8. Exposed non-current carrying metal parts shall be grounded in accordance with the NEC.
9. All work shall comply with the NEC and all applicable local electrical code requirements.
10. Contractor will provide labeling in accordance with the NEC, Article 110, 225, 690, and 705.

PV SYSTEM DISCONNECT/ COMBINER BOX  
BREAKER PANELS

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

**PHOTOVOLTAIC SYSTEM  
AC DISCONNECT**  
OPERATING VOLTAGE 240V VOLTS  
OPERATING CURRENT 44.66 AMPS

**RAPID SHUTDOWN  
PV ARRAY**

NEC 110.27(C) & OSHA 1910.145(f)(7)

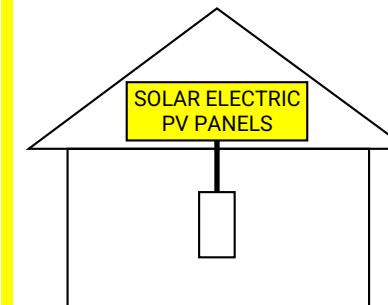
SERVICE DISCONNECT

**MAIN PHOTOVOLTAIC SYSTEM  
DISCONNECT**

NEC 690.13(B)

**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.



IFC 605.11.3(1) & NEC 690.12(D)

NET METER w/ BATTERY

**WARNING**  
THREE POWER SOURCES

SOURCES: UTILITY GRID, BATTERY AND  
PV SOLAR ELECTRIC SYSTEM

NEC 705.30(C) and NEC 690.59  
ENERGY STORAGE SYSTEMS

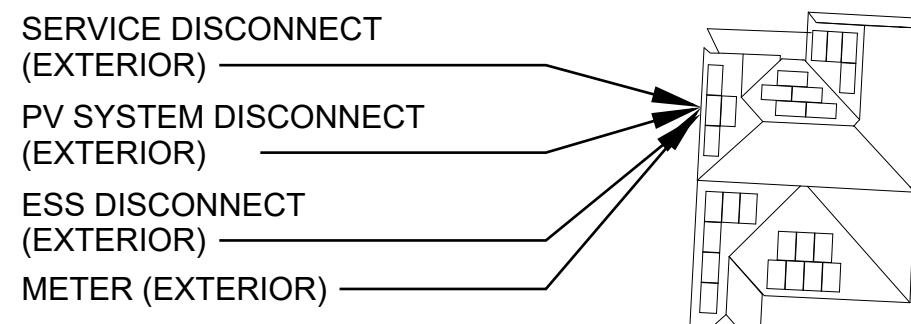
**BATTERY  
DISCONNECT**

NEC 706.7(E)(2)

**11.96 kW DC PV SYSTEM  
NAURAIN SOLAR PROJECT**  
696 Thomas Gage Dr, Fuquay-Varina, NC  
27526

**STICKERS**

**CAUTION**  
POWER TO THIS BUILDING IS SUPPLIED FROM THE FOLLOWING  
SOURCES WITH DISCONNECTS LOCATED AS SHOWN:



**REVISION LIST**

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1	10/8/25	JAX

DATE: October 8, 2025

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Sheet No.

**E-02**