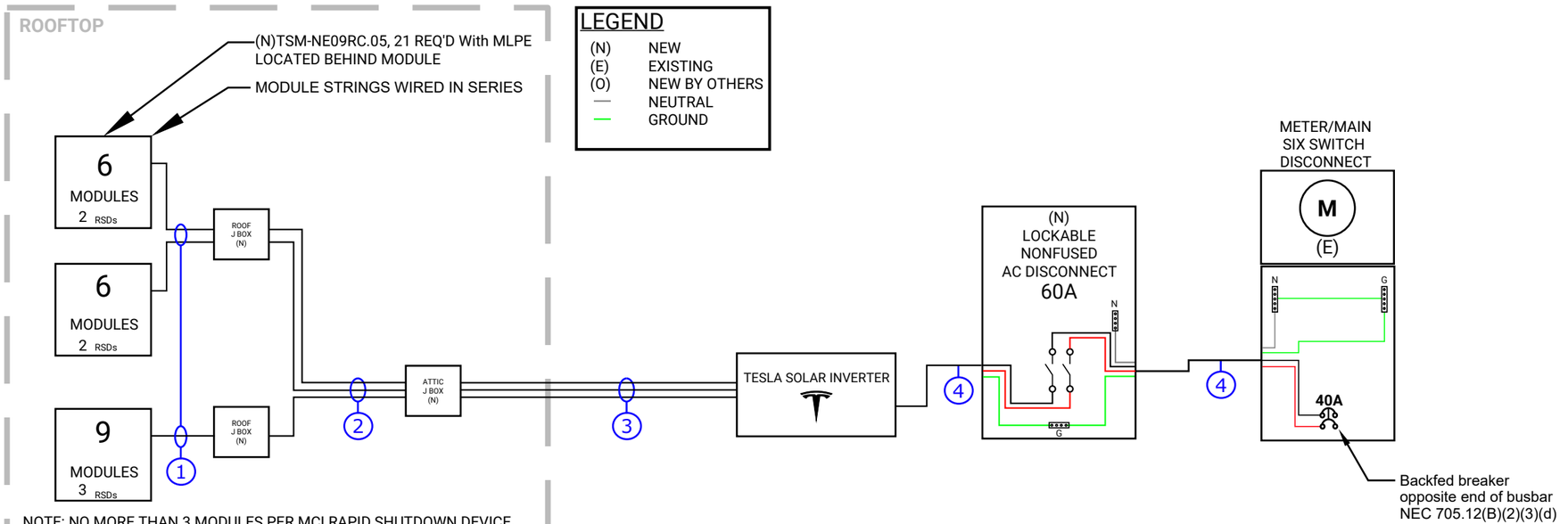
PANEL MODEL: TSM-NE09RC.05, QTY 21 REQ'D, 420W

INVERTER TYPE: 1538000-xx-y, QTY 1 REQ'D, 7600W, 240V

7.600 kW-AC/ 8.820 kW-DC



NOTE: NO MORE THAN 3 MODULES PER MCI RAPID SHUTDOWN DEVICE, AND NO MORE THAN FIVE PER STRING

WIRING SCHEDULE

TAG	CONDUIT SIZE	CONDUCTOR	NEUTRAL	GROUND	NOTES
1	NONE	10 AWG PV Wire	NONE	6 AWG Bare CU	(Mfg.supplied cabling within array)
2	NONE	10/2 MC	NONE	10 AWG	J Box to Attic J Box
3	3/4" EMT or EQUIV	10 AWG CU THWN-2	NONE	10 AWG CU THWN-2	Attic J box to Inverter
4	1" PVC or EQUIV	8 AWG CU THWN-2	8 AWG CU THWN-2	10 AWG CU THWN-2	Inverter to Disconnect to MDP

Min/Max Voltage (V):	Vmp/Voc (V):	Tk Vmp/Tk Voc (%/°C):
38.79	42.8	-0.36
55.74	50.9	-0.28

MPPT Voltage Range	DC Voltage range	MPPT Min/Max	Absolute Min/Max
60	60	2	2
480	550	8	9

PV LEAD	ELECTRICIAN

SITE FLOOD PLANE: ZONE X BFE: N/A

CAPE FEAR SOLAR SYSTEMS
910 S. 2nd St.
Wilmington, NC 28401
910-409-5533
GC LIC. NO. : 65677
ELEC. LIC. NO. : U-33321

8.82 kW DC PV SYSTEM
FORNAH SOLAR PROJECT
183 Tun Tavern Dr, Cameron, NC 28326

LINE DIAGRAM

REVISION LIST

#	REV. DATE	DESC.

DATE:	**March 6, 2025**
DRAWN BY:	**JPN**

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 _____ VOLTS
OPERATING CURRENT _____ AMPS

RAPID SHUTDOWN
PV ARRAY

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

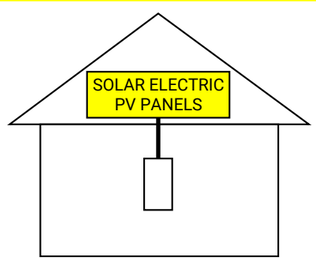
SERVICE DISCONNECT

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

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

NEC 705.30(C) and NEC 690.59

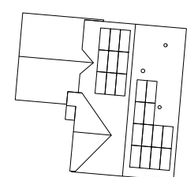
EMT/CONDUIT RACEWAYS

NEC 690.31(D)(2)

PHOTOVOLTAIC POWER SOURCE

CAUTION

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



SERVICE DISCONNECT (EXTERIOR)
PV SYSTEM DISCONNECT (EXTERIOR)
ESS DISCONNECT (EXTERIOR)
METER (EXTERIOR)

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STICKERS

REVISION LIST

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E-02