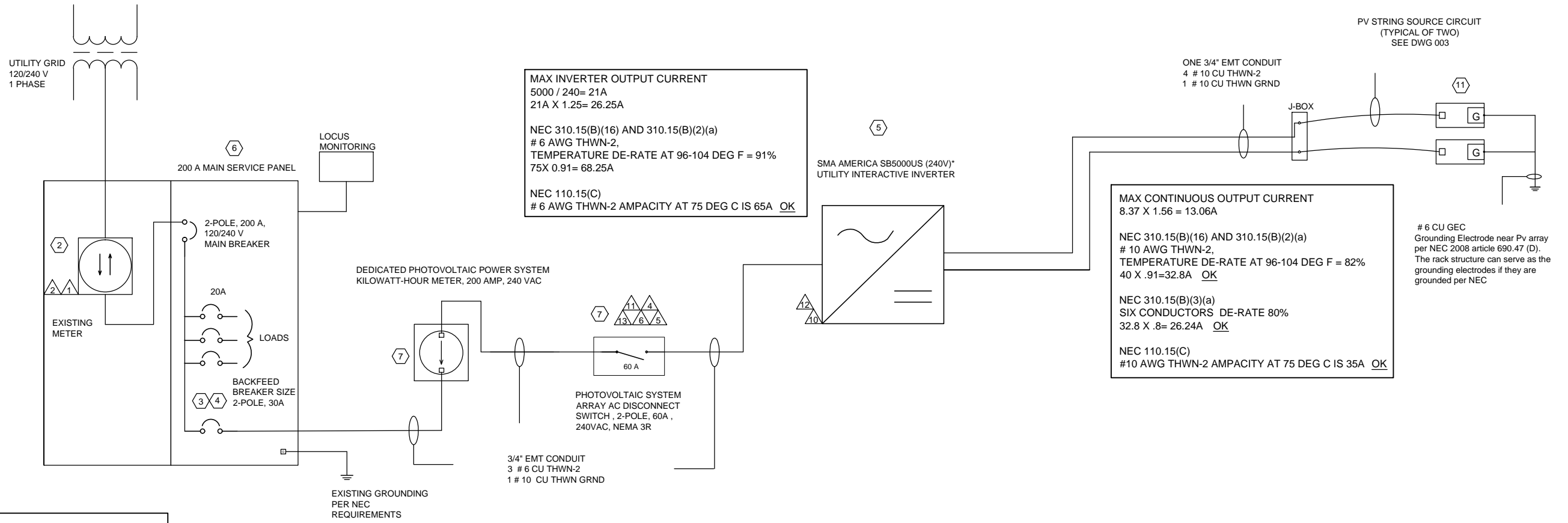


PHOTOVOLTAIC SYSTEM INFORMATION
 6240 WATT PHOTOVOLTAIC ARRAY
 2 PARALLEL STRINGS OF (13) TRINA SOLAR TSM-240PA05.05 MODULES
 ONE SMA AMERICA SB5000US (240V)* INVERTER
 FOR A TOTAL OF 26 MODULES



MAX INVERTER OUTPUT CURRENT
 $5000 / 240 = 21A$
 $21A \times 1.25 = 26.25A$

NEC 310.15(B)(16) AND 310.15(B)(2)(a)
 # 6 AWG THWN-2,
 TEMPERATURE DE-RATE AT 96-104 DEG F = 91%
 $26.25 \times 0.91 = 23.9A$

NEC 110.15(C)
 # 6 AWG THWN-2 AMPACITY AT 75 DEG C IS 65A OK

MAX CONTINUOUS OUTPUT CURRENT
 $8.37 \times 1.56 = 13.06A$

NEC 310.15(B)(16) AND 310.15(B)(2)(a)
 # 10 AWG THWN-2,
 TEMPERATURE DE-RATE AT 96-104 DEG F = 82%
 $13.06 \times 0.82 = 10.71A$ OK

NEC 310.15(B)(3)(a)
 SIX CONDUCTORS DE-RATE 80%
 $13.06 \times 0.8 = 10.45A$ OK

NEC 110.15(C)
 #10 AWG THWN-2 AMPACITY AT 75 DEG C IS 35A OK

BACKFED BREAKER SIZING
 MAX AC CONTINUOUS OUTPUT
 $21A \times 1.25 = 26.25A$ MINIMUM BREAKER SIZE

NEC 690.64(B)(2)
 $200A \times 1.2 = 240A$
 240-200A MAIN BREAKER = 40A ALLOWABLE BACKFEED

6 CU GEC
 Grounding Electrode near Pv array
 per NEC 2008 article 690.47 (D).
 The rack structure can serve as the
 grounding electrodes if they are
 grounded per NEC