

Qty	Description	Manufacture	Cat#
162	Solar Module	Helios	6T-250
162	Ballast Racking 15°	Renusol	56077-01
6	Combiner Boxes	Midnite Solar	MNPV6-10A
6	PV Inverter	Eaton	PV260
1	Xantrex	Schneider	XW6048 120240 60
8	Battery 3 Cell Modules	Deka	AVR95-17
1	Battery Rack	Deka	

June 2, 2012

Stuart Building IIT

PV Array Size 40348.692 Watts (STC Rating)
 Battery Size 40000.000 Watts-Hrs
 Critical Load (Inverter) 6000.000 VA
 Peak Sun Hrs/Day 4.400 Hrs/Day

PV Array System
 Module Open Circuit Voltage = 37.400 Volts
 Module Short Circuit Current = 8.720 Amps
 Module Watts = 249.066 Watts
 Number of Modules = 162.000
 MPP Voltage = 30.300 Volts
 MPP Current = 8.220 Amps
 Modules in Series = 9
 Number of Parallel Systems = 18
 PV Array Voltage (PVA V_{oc}) = 336.600 Volts
 PV Array Current (PVA I_{sc}) = 156.960 Amps
 PV Array Current (PVA I_{sc})/PV Inverter = 26.160 Amps
 Maximum OCP Amps = 40.875 Amps
 Wire Sizing Amps = 40.875 Amps

Average kWh/Day Produced = 219.135 kWh/Day

Panel Specification Model: Helios 250W Monocrystalline Solar Pnl 6T-250

Battery System
 DC System Voltage = 48.000 Volts
 DC System Amp-Hrs = 833.333 Amp-Hrs
 Battery Nominal Voltage = 6.000 Volts
 Battery Nominal Charge Voltage = 6.900 Volts
 Battery Amp-Hrs (1.83vpc @ 24 hr) = 911.667 Amp-Hrs (Estimated)
 Batteries in Series = 8
 Number of Parallel Systems = 1
 Number of Batteries = 8
 Average kWh/Day Storage = 43.760 kWh (for 1 day)

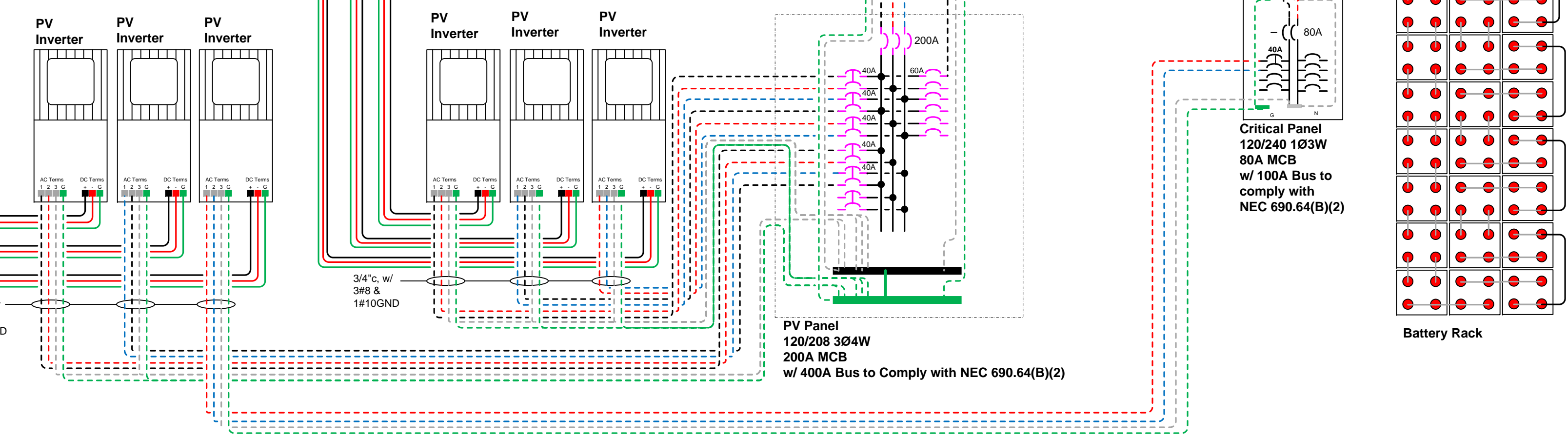
Battery Specification Model: Deka UNIGY II Modules (3-2V Cells) AVR95-17

Inverter/Charger
 Continuous Power = 6000.000 VA
 Surge Power = 12000.000 VA
 DC Input Voltage - Lower Limit = 44.000 Vdc
 DC Input Voltage - Upper Limit = 64.000 Vdc
 Max Output Current = 37.500 Amps
 Max Charging Current = 100.000 Amps
 Charging Voltage = 55.200 Vdc
 Number of Inverter/Chargers = 1

Inverter Charger Specification Model: Xantrex XW Series XW6048 120/240 60
 Xantrex configuration: ACLOAD: Standard 120/240 1P-3W System. AC1 Configured as a 120V 1P input. See Xantrex User Manual 975-240-01-01.

PV Inverter
 Nominal AC Power = 6000 W
 MPPT Voltage Range - Lower Limit = 105 Vdc
 MPPT Voltage Range - Upper Limit = 500 Vdc
 PV Array Voltage = 336.600 Vdc
 Max DC Current = 32 amps
 PV Array Current = 156.960
 Minimum Number of PV Inverters = 5
 Number of PV Inverters Used = 6
 Integral AC Output Disconnect Size = Yes
 Integral DC Input Disconnect Size = Yes
 PV Inverter Continuous DC Current Size = 40.875 Per NEC 690.8 (A)(1) & (B)(2)

Inverter Charger Specification Model: Eaton Grid-Tied Solar Inverter PV260
 The Eaton PV260 shall be configured as a 208V 2P current device. See the Eaton Grid-Tied PV Inverter User Manual Ver. 1.0.



Continental Electric Construction Co. LLC
 815 Commerce Drive, Suite 100
 Oak Brook, IL 60523
 Tel: (630) 288-0200
 Fax: (630) 288-0188

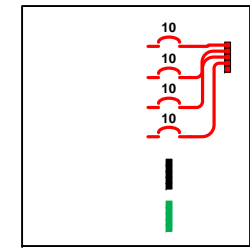
STUART HALL - NEW SOLAR PANELS
10 W. 31st Street
 CHICAGO, ILLINOIS 60616

Illinois Institute of Technology
 Building Owner
 100 W. 33rd Street
 Chicago, Illinois 60616
 Phone 312-567-8873
 Fax 312-567-3343

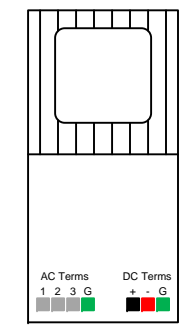
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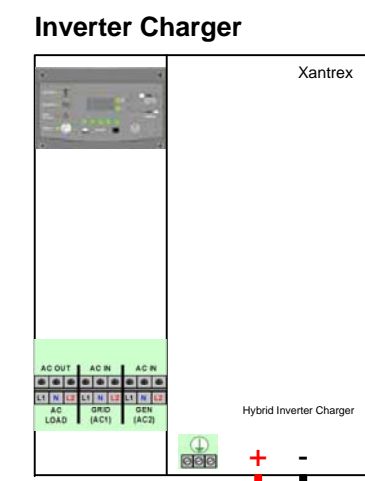
E1
 1 of 3 Sheets



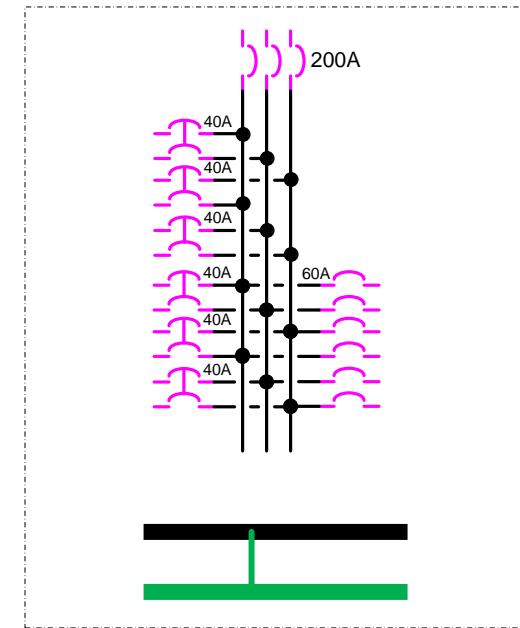
Combiner Box



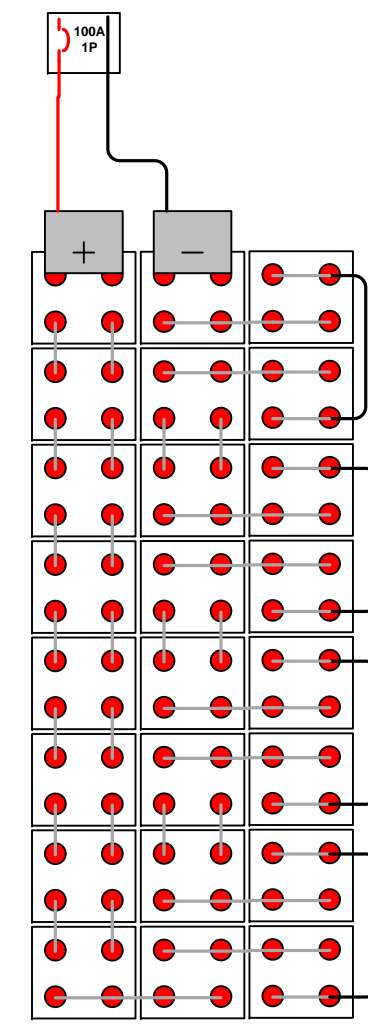
PV Inverter



Inverter Charger



PV Panel
120/208 3Ø4W
200A MCB
w/ 400A Bus to Comply with NEC 690.64(B)(2)



Battery Rack

Existing 480V Distribution with spare 100A-3P Circuit Breaker

DC Label

0-600V DC

DC Disconnect Label

PHOTOVOLTAIC POWER SOURCE	
RATED MPP CURRENT	24.66 Amps
RATED MPP VOLTAGE	272.70 Volts
MAX SYSTEM VOLTAGE	340.88 Volts @-40F
MAX CIRCUIT CURRENT	26.16

Inverter Label and Battery Location Label

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

Inverter OCPD and AC Disconnect

AC POINT OF CONNECTION	
SOLAR PV SYSTEM	
AC OUTPUT CURRENT	24.66 Amps
NOMINAL AC VOLTAGE	120/208 Volts
BATTERY INVERTER	
AC OUTPUT CURRENT	37.50 Amps
NOMINAL AC VOLTAGE	120 Volts
THIS PANEL IS FED BY MULTIPLE SOURCES (UTILITY, SOLAR AND BATTERY INVERTER)	

Inverter Label and Battery Location Label

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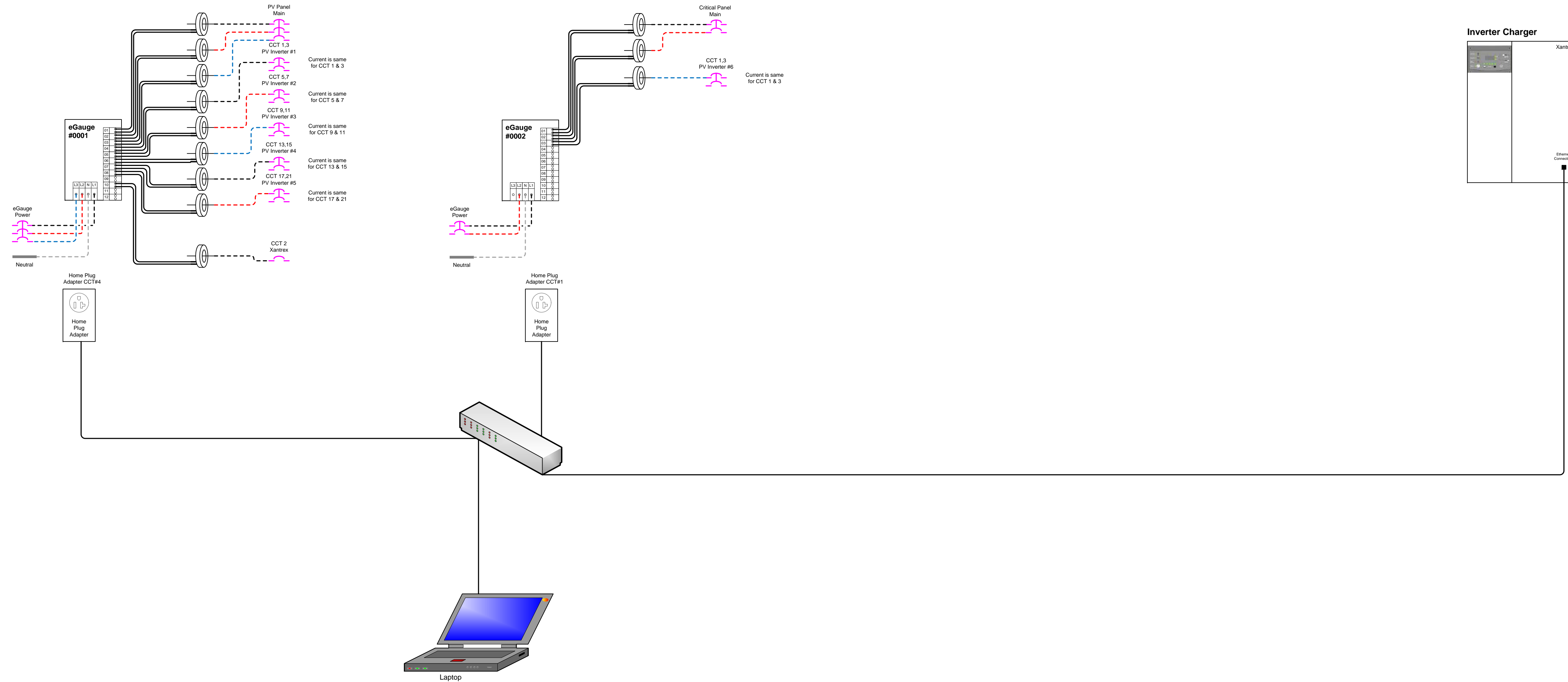
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Inverter Label and Battery Location Label

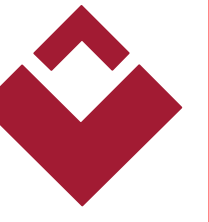
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PV System Disconnect Breaker Label (QTY-6)

PV SYSTEM DISCONNECT



Continental Electric
Construction Co., LLC
815 Congress Drive, Suite 100
Oak Brook, IL 60523
Tel: (630) 288-0200
Fax: (630) 288-0188



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