

PROJECT SUMMARY:

THE PROJECT SCOPE INCLUDES THE DESIGN, SPECIFICATION, PROCUREMENT, INSTALLATION AND COMMISSIONING OF A COMPLETE, TURN-KEY, GRID-TIED PHOTOVOLTAIC ELECTRIC SYSTEM.

MODULE TYPE	(21) Q CELL Q.PEAK DUO G-5 325
INVERTER	(1) SE6000H-US
OPTIMIZER	(21) SOLAREEDGE P370
ARRAY PITCH	25 AND 40°
ARRAY AZIMUTH	230 AND 140°
RACKING	IRONRIDGE XR100 ALUMINUM RAIL
ATTACHMENT	ALUMINUM L-FEET WITH SS LAG SCREWS, 3 X5/16

AUTHORITIES HAVING JURISDICTION:

BUILDING AUTHORITY	PORTLAND ME
ELECTRICAL AUTHORITY	PORTLAND ME
ZONING/PLANNING AUTHORITY	PORTLAND ME
ELECTRICAL UTILITY	CENTRAL MAINE POWER

DESIGN CRITERIA:

OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	100 MPH
RISK CATEGORY	I
GROUND SNOW LOAD	60 PSF
EXPOSURE CATEGORY	C
ROOF HEIGHT	10' ABOVE GRADE TO EAVES
ROOF COMPOSITION	ASPHALT SHINGLE
RAFTER	ATTIC HATCH SEALED
RAFTER SPACING	

SHEET LIST:

G001	TITLE SHEET
A001	SITE PLAN
A002	MODULE LAYOUT
E001	ONE-LINE DIAGRAM

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH LOCAL AND STATE ORDINANCES AND BUILDING CODES.
2. ELECTRICAL INSTALLATION SHALL COMPLY WITH STATE AND LOCALLY ADOPTED ELECTRICAL CODE.
3. ROOFTOP PENETRATIONS SHALL BE SEALED.
4. ALL EQUIPMENT SHALL BE LISTED AND TESTED BY A RECOGNIZED LABORATORY.
5. SYSTEM SHALL CONFORM TO RAPID SHUTDOWN REQUIREMENTS PER NEC 690.
6. CONDUIT RUNS BETWEEN SUB-ARRAYS, COMBINERS, AND DISCONNECTS SHALL BE INSTALLED IN THE MOST DIRECT ROUTE POSSIBLE.
7. ELECTRICAL EQUIPMENT SHALL BE INSTALLED TO MAINTAIN CLEARANCES REQUIRED BY NEC 110.
8. EQUIPMENT SHALL BE LABELED PER NEC 2017 REQUIREMENTS.



**REVISION
ENERGY**

142 PRESUMSCOT STREET
PORTLAND, ME 04103
(207)-221-6342

CLIENT:

JUSTIN TOURIGNY
7 GREENLEAF STREET
PORTLAND ME, 04101

SYSTEM TYPE:

6.825KW GRID TIED SOLAR
PHOTOVOLTAIC SYSTEM



Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions

12/19/2018

DESIGNED BY: GJD

REVISION: 0

PRINT SIZE: 11" X 17"

DATE: 12/3/2018

DWG TITLE:

TITLE SHEET

DWG NUMBER:

G001

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RAFTER SPACING	

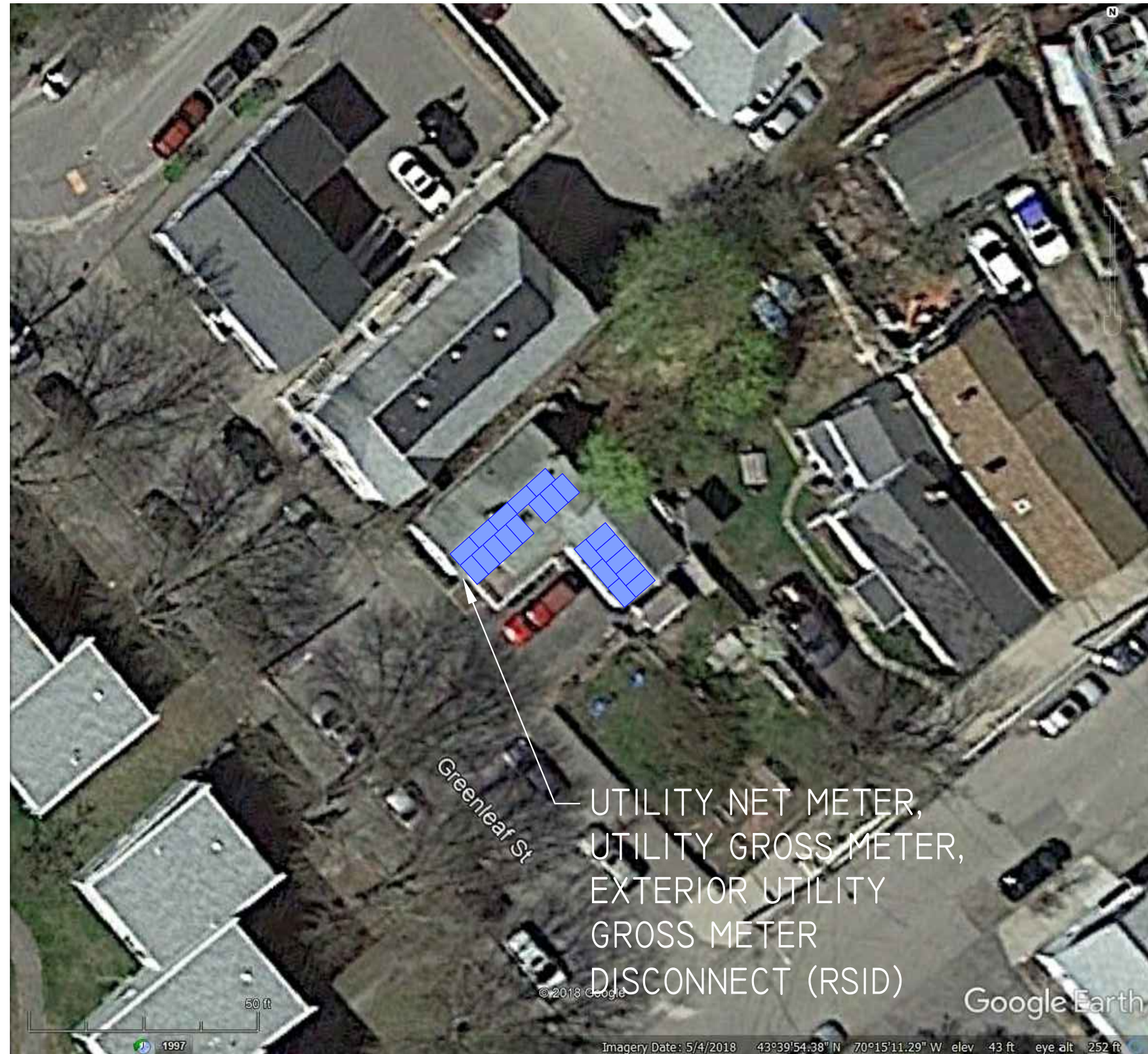
EQUIPMENT LOCATIONS:

BASEMENT INTERIOR:

MAIN LOAD CENTER
SOLAR INVERTER
PV AC TAP DISCONNECT

EXTERIOR:

UTILITY NET METER
UTILITY GROSS METER
UTILITY GROSS METER DISCONNECT (RSID)



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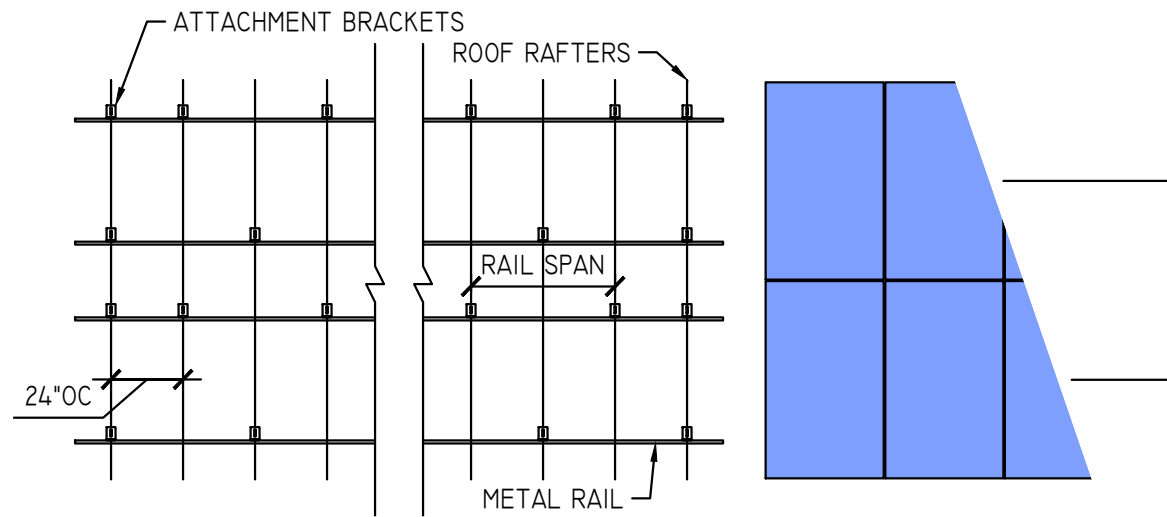
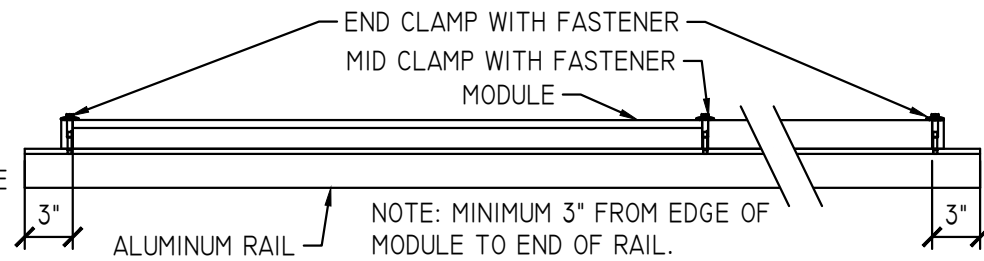
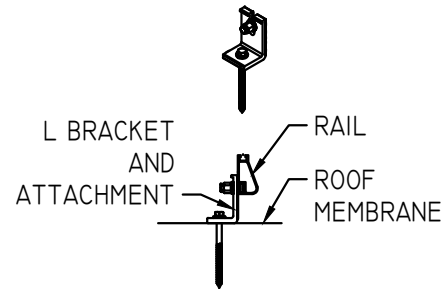
SITE PLAN

DWG NUMBER:

A001

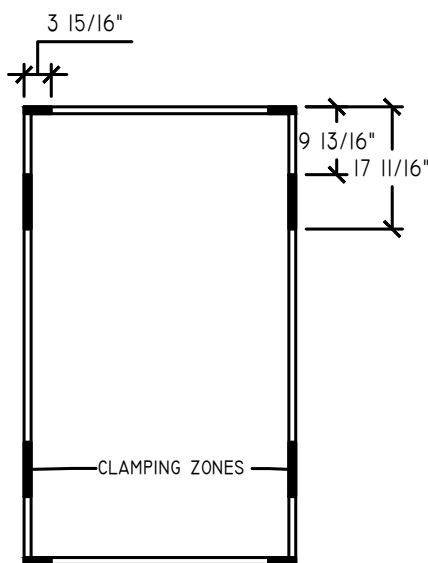
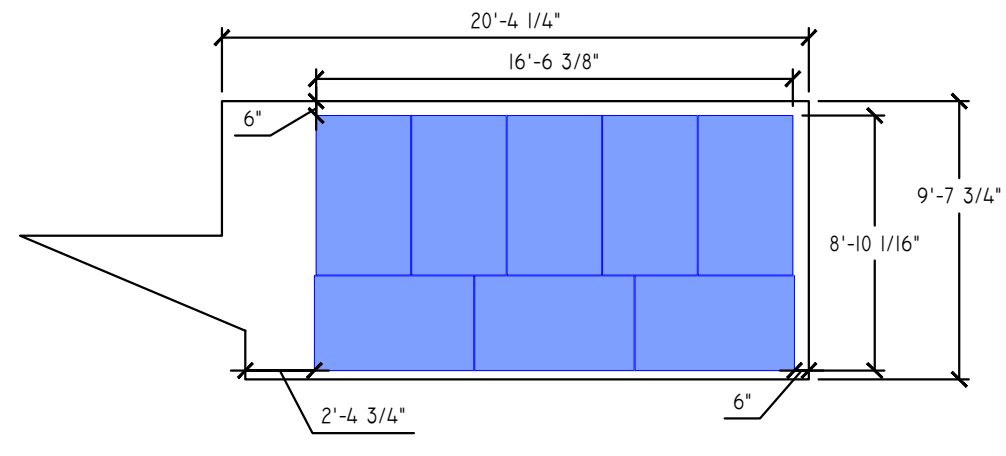
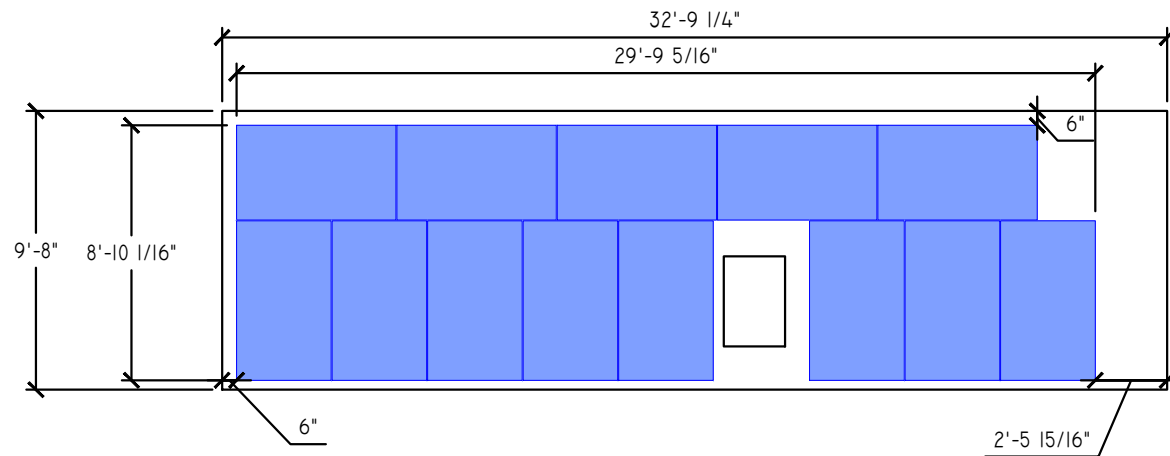
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ATTACHMENT NOTES:

1. MAXIMUM RAIL LENGTH IS 50' BEFORE EXPANSION GAP IS REQUIRED.
2. MAXIMUM RAIL SPAN IS TYPICALLY 4'. THIS DISTANCE WILL VARY BASED ON ROOF SLOPE, SNOW LOAD, WIND SPEED, AND EXPOSURE CATEGORY.
3. MAXIMUM RAIL CANTILEVER DISTANCE IS 0.40 X RAIL SPAN.
4. SEAL ALL ATTACHMENT POINTS WITH GEOCELL. SEALS SHALL BE WATERTIGHT BETWEEN THE ATTACHMENT BRACKETS, ROOF MATERIAL AND STRUCTURAL MEMBERS.
5. ROOF ATTACHMENTS SHALL BE STAGGERED FOR EVEN DISTRIBUTION OF LOAD ON ROOF RAFTERS.
6. CLEARANCE BETWEEN THE ROOF AND THE BOTTOM OF THE RAIL SHALL BE A MINIMUM OF 2"



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MODULE LAYOUT

DWG NUMBER:
A002

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MODULE SPECIFICATIONS	
Q CELL Q.PEAK DUO G-5 325 QTY 21	
STC RATING	325
VMP	33.65
IMP	9.66
Voc	40.4
IsC	10.14
TEMP COEFF. Voc %	-0.0028

MODULE-LEVEL DC OPTIMIZER SPECIFICATIONS	
SOLAREEDGE P370 QTY 21	
NOMINAL DC RATING (WATTS)	370
MAX OUTPUT CURRENT Idc	15

GRID TIED INVERTER SPECIFICATIONS	
SE6000H-US QTY 1	
NOMINAL AC RATING	6000
NOMINAL Vac	240
MAX Iac	25
CEC EFFICIENCY	99.00%

STICKER CALCULATIONS	
MAXIMUM DC VOLTAGE	480V
MAXIMUM CIRCUIT CURRENT	30A
RATED AC OUTPUT CURRENT	25A
NOMINAL OPERATING AC VOLTAGE	240v

DESIGN NOTES:

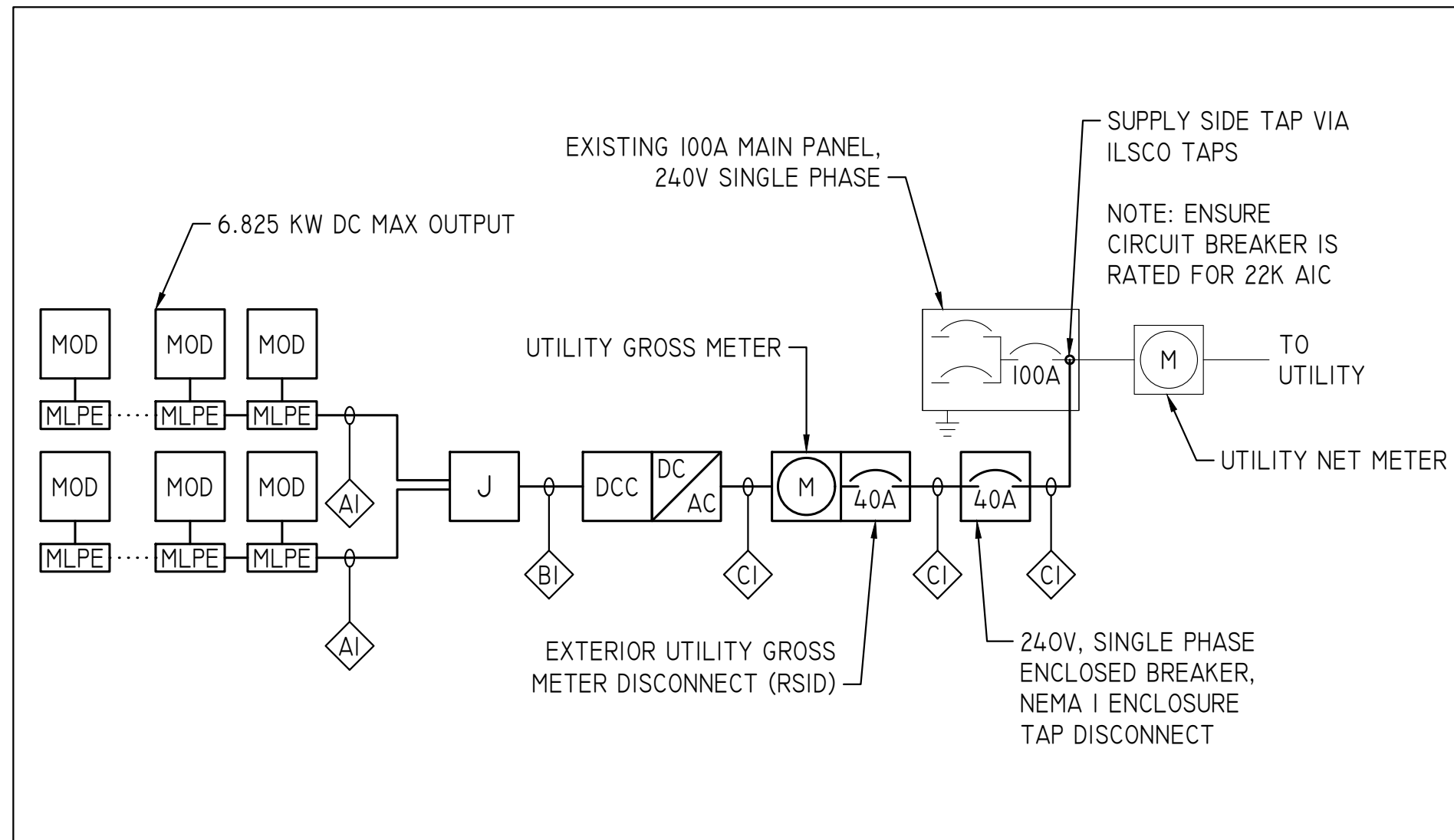
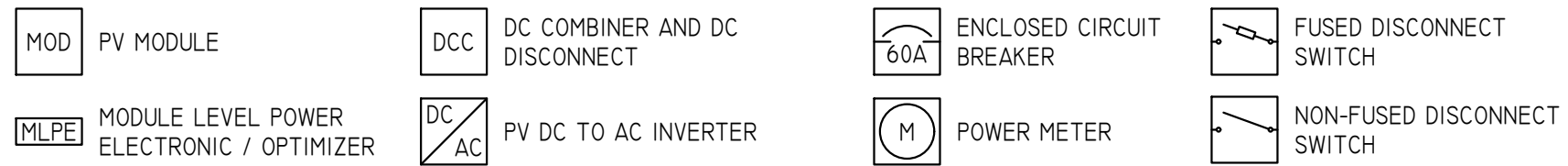
- ALL CONDUCTORS SHALL BE COPPER UNLESS NOTED OTHERWISE.
- SYSTEM VOLTAGE DROP SHALL NOT EXCEED 5%
- LOWEST EXPECTED AMBIENT TEMPERATURE IS BASED ON ASHRAE EXTREME MIN FOR THE SPECIFIED LOCATION.
- AVERAGE HIGH TEMPERATURE IS BASED ON ASHRAE 2% AVG. FOR THE SPECIFIED LOCATION.

LINE TYPES:

- - - DEMOLITION
- EXISTING
- NEW

WIRING SCHEDULE								
TAG	DESCRIPTION	SETS	CABLE	INSULATION	CONDUIT	LENGTH	CONDUIT FILL	VOLTAGE DROP
AI	PV ARRAY TO JUNCTION BOX	1	L:(4)#10 AWG G:(1)#6 AWG	PV		70 FT		0.70%
BI	JUNCTION BOX TO INVERTER	1	L:(4)#10 AWG G:(1)#10 AWG	THWN-2	3/4" EMT	40 FT	19.80%	0.40%
CI	INVERTER TO INTERCONNECTION	1	L:(2)#8 AWG N:(1)#10 AWG G:(1)#10 AWG	THWN-2	3/4" EMT	25 FT	21.70%	0.41%

SYMBOLS:



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