

Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking efficiency
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Extremely small
- High reliability without any electrolytic capacitors
- Built-in module-level monitoring
- Outdoor and indoor installation
- Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)



	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US
OUTPUT							
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 740V 5000 @ 108V	7600	10000	11400
Max. AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 740V 5000 @ 208V	7600	10000	11400
AC Output Voltage Min./Nom./Max.	115/120/270	✓	✓	✓	✓	✓	✓
AC Output Voltage Min./Nom./Max.	211 / 240 / 264	✓	✓	✓	✓	✓	✓
AC Frequency (Nominal)	60	60	60	59.3-60.4	60	60	60
Maximum Continuous Output Current	16	16	21	24	32	42	47.5
208V							
Maximum Continuous Output Current	12.5	16	21	25	32	42	47.5
@ 240V							
GFDI Threshold	.....	.....	.....	.....	.....	.....	.....
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	.....	.....	.....	.....	.....	.....	.....
INPUT							
Maximum DC Power @ 240V	4650	5900	7750	9380	11800	15500	17650
Maximum DC Power @ 108V	.....	5100	7750	9380	11800	15500	17650
Transformerless, Ungrounded	.....	.....	.....	.....	.....	.....	.....
Maximum Input Voltage	.....	180	180	180	180	400	400
Nominal DC Input Voltage	.....	0	13.1	13.1	13.1	20	20
Maximum Input Current @ 240V	8.5	10.5	13.5	16.5	16.5	27	30
Max. Input Short Circuit Current	.....	.....	.....	.....	.....	.....	.....
Reverse Polarity Protection	.....	.....	.....	.....	.....	.....	.....
Ground Fault Isolation Detection	.....	.....	.....	.....	.....	.....	.....
Maximum Inverter Efficiency	99	99	99	99	99	99	99
Lighting Power Consumption	< 2	< 2	< 2	< 2	< 2	< 2	< 2
ADDITIONAL FEATURES							
Supports Power Optimizers	.....	.....	.....	.....	.....	.....	.....
Grid Code Data, ANSI C12.20	.....	.....	.....	.....	.....	.....	.....
Rapid Shutdown - NEC 2014 and 2017	.....	.....	.....	.....	.....	.....	.....
STANDARD COMPLIANCE							
Safety	UL1741, UL1741 SA, UL1659B, CSA C22.2, Canadian AFCI according to T.L. 61-07	UL1741, UL1741 SA, UL1659B, CSA C22.2, Canadian AFCI according to T.L. 61-07	UL1741, UL1741 SA, UL1659B, CSA C22.2, Canadian AFCI according to T.L. 61-07	UL1741, UL1741 SA, UL1659B, CSA C22.2, Canadian AFCI according to T.L. 61-07	UL1741, UL1741 SA, UL1659B, CSA C22.2, Canadian AFCI according to T.L. 61-07	UL1741, UL1741 SA, UL1659B, CSA C22.2, Canadian AFCI according to T.L. 61-07	UL1741, UL1741 SA, UL1659B, CSA C22.2, Canadian AFCI according to T.L. 61-07
Grid Connection Standards	.....	.....	.....	.....	.....	.....	.....
Emissions	.....	.....	.....	.....	.....	.....	.....
INSTALLATION SPECIFICATIONS							
AC Output Conduit Size / AWG Range	.....	3/4" minimum / 14-6 AWG	3/4" minimum / 14-6 AWG	3/4" minimum / 14-6 AWG	3/4" minimum / 14-6 AWG	3/4" minimum / 14-6 AWG	3/4" minimum / 14-6 AWG
DC Input Conduit Size / # of Strings	.....	3/4" minimum / 1.2 strings / 14-6 AWG	3/4" minimum / 1.2 strings / 14-6 AWG	3/4" minimum / 1.2 strings / 14-6 AWG	3/4" minimum / 1.2 strings / 14-6 AWG	3/4" minimum / 1.2 strings / 14-6 AWG	3/4" minimum / 1.2 strings / 14-6 AWG
AWG Range	.....	17-7 / 14-6 + 6-8 / 4-50 + 370 + 174	17-7 / 14-6 + 6-8 / 4-50 + 370 + 174	17-7 / 14-6 + 6-8 / 4-50 + 370 + 174	17-7 / 14-6 + 6-8 / 4-50 + 370 + 174	17-7 / 14-6 + 6-8 / 4-50 + 370 + 174	17-7 / 14-6 + 6-8 / 4-50 + 370 + 174
Dimensions with Safety Switch (HxWxD)	.....	27 / 10	25.1 / 11.4	26.7 / 11.9	26.7 / 11.9	38.8 / 17.6	38.8 / 17.6
Weight with Safety Switch	.....	< 25	< 25	< 25	< 25	< 50	< 50
Roof	.....	Natural Convection	Natural Convection	Natural Convection	Natural Convection	Natural Convection	Natural Convection
Operating Temperature Range	.....	13 to 140 / -25 to 140	13 to 140 / -25 to 140	13 to 140 / -25 to 140	13 to 140 / -25 to 140	13 to 140 / -25 to 140	13 to 140 / -25 to 140
Protection Rating	.....	IP64 (SA Inverter, with Safety Switch)	IP64 (SA Inverter, with Safety Switch)	IP64 (SA Inverter, with Safety Switch)	IP64 (SA Inverter, with Safety Switch)	IP64 (SA Inverter, with Safety Switch)	IP64 (SA Inverter, with Safety Switch)

* All other electrical ratings are based on ambient temperature of 40°C.
 * Maximum temperature is 40°C (104°F).
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 * All other electrical ratings are based on ambient temperature of 40°C.



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SOLAR'S MOST TRUSTED

REC N-PEAK SERIES

PREMIUM MONO N-TYPE SOLAR PANELS WITH SUPERIOR PERFORMANCE



MONO N-TYPE, THE MOST EFFICIENT CELL TECHNOLOGY



NO LIGHT INDUCED DEGRADATION



SUPER STRONG FRAME WITH HIGH PAW LOAD



LEISURE INSTALLATION OPTIONS



HIGH POWER (18% EFFICIENCY)



FEATURES REC'S TWIN DESIGN



330 WP POWER

GENERAL DATA

Cell type: 120 half-cut bifacial-type mono c-Si cells
 6 strings of 20 cells in series
 0.137 (3.2mm) solar glass with anti-reflection surface treatment
 Backsheet: Highly resistant polymeric construction
 Frame: Anodized aluminum
 Junction box: 3-part, 3 bypass diodes, IP67 rated in accordance with IEC 62780
 Cable: 12 AWG (4mm²) PV wire, 39.47 (1m × 1.2m) in accordance with IEC 60338
 Connectors: Standard MC4 PV-KB14 (ASTA 12 AWG/4mm²) MC4 connectors with REC 62MS2 MC4 connectors when connected
 Origin: Made in Singapore

MECHANICAL DATA

Dimensions: 65.9 × 39.25 × 111 (675 × 997 × 30mm)
 Area: 1798.4 (167 m²)
 Weight: 39.7 lbs (18 kg)

MAXIMUM RATINGS

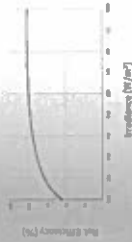
Operational temperature: -40 ~ +85°F (-40 ~ +85°C)
 Maximum system voltage: 1000V
 Maximum test load (front): +7000 Pa (146 lb/ft² sq ft)
 Maximum test load (rear): -4000 Pa (83.5 lb/ft² sq ft)
 Max series fusing rating: 25A
 Max reverse current: 25A
*See installation manual for mounting instructions. Design load = Test load / 1.5 (Safety factor)

TEMPERATURE RATINGS

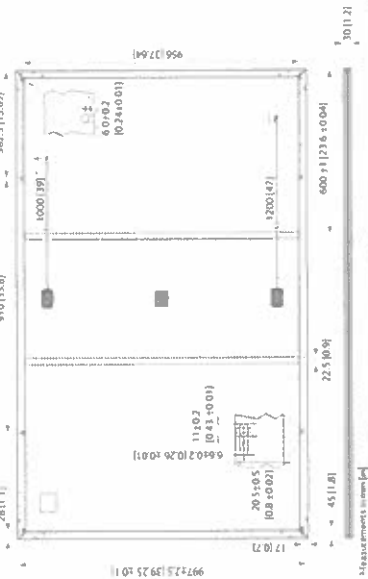
Nominal Operating Cell Temperature: 44°C (110°F)
 Temperature coefficient of P_{max}: -0.35%/°C
 Temperature coefficient of V_{oc}: -0.27%/°C
 Temperature coefficient of I_{sc}: 0.04%/°C
The temperature coefficients listed are linear values.

LOW LIGHT BEHAVIOUR

Type 1, low irradiance profile (performance of module at 51°C)



REC N-PEAK SERIES



ELECTRICAL DATA @ 51°C

Product code ¹	REC XHP	Product code ²	REC XHP
Nominal Power P _{max} (Wp)	305	310	315
Watt Class Sorting (W)	0/-5	0/+5	0/+5
Nominal Power Voltage V _{max} (V)	33.3	33.6	33.9
Nominal Power Current I _{max} (A)	9.17	9.24	9.31
Open Circuit Voltage V _{oc} (V)	39.3	39.7	40.0
Short Circuit Current I _{sc} (A)	10.06	10.12	10.17
Panel Efficiency (%)	18.3	18.6	18.9

ELECTRICAL DATA @ NOCT

Product code ¹	REC XHP	Product code ²	REC XHP
Nominal Power P _{max} (Wp)	231	234	238
Nominal Power Voltage V _{max} (V)	31.1	31.4	31.7
Nominal Power Current I _{max} (A)	7.41	7.46	7.52
Open Circuit Voltage V _{oc} (V)	36.7	37.1	37.4
Short Circuit Current I _{sc} (A)	8.13	8.17	8.21

CERTIFICATIONS

UL 61730 (Type 2) IEC 61738, IEC 61340
 IEC 62109-1 IEC 62109-2 IEC 62716 IEC 62717
 IEC 62718 IEC 62719 IEC 62720 IEC 62721 IEC 62722

WARRANTY

Standard	REC Pro Trust
Installed by REC Certified Solar Professional	No Yes
System size	any <25 kW <25000 Wp
Product Warranty (yrs)	20 25 15
Power Warranty (yrs)	25 25 25
Labor Warranty (yrs)	0 25 10
Power in Year	98% 98% 98%
Annual Degradation	0.5% 0.5% 0.5%
Power in Year 25	86% 86% 86%

The warranty is void where prohibited by law. Some conditions apply.

Founded in 1996, REC Group is an international pioneering solar energy company, dedicated to empowering consumers with clean, affordable solar power. As Solar's Most Trusted, REC is committed to high quality innovation and a low carbon footprint in the solar materials and solar panels it manufactures. Headquartered in Norway with operational headquarters in Singapore, REC also has regional hubs in North America, Europe, and Asia Pacific.



www.recgroup.com

Specifications subject to change without notice



March 30, 2021

To: ReVision Energy
7 Commercial Drive
Brentwood, NH 03833

Subject: Structural Certification for Installation of Solar Panels
Martin Residence
285 Grantham Mountain Road
Plainfield, NH. 03781

To Whom It May Concern,

A design check for the subject residence was done on the existing roofing and framing systems for the installation of solar panels over the roof. From a field inspection of the property, the existing roof support structures were observed by the client's auditors as follows:

The roof structure of the indoor riding arena consists of composition shingle on plywood sheathing that is supported by pre-engineered trusses at 24" o.c.. The trusses has nominal 2x8/2x10 top chords, nominal 2x10 bottom chords, and nominal 2x6/2x4 web members. The horizontal span of the trusses is approximately 85'-0" between exterior load bearing walls, with a slope of 15 degrees. The trusses are simply supported by top plates on triple 2x6 studs at 24" o.c. as exterior load bearing walls. The truss members are connected by steel gusset plates. The max unsupported horizontal span for the 2x8 top chords is 9'-6" near the peak, and the max unsupported by horizontal span for the 2x10 top chords is 14'-6" near the eave.

The existing roof framing system of the riding arena is judged to be adequate to withstand the loading imposed by the installation of the solar panels. No reinforcement is necessary.

The spacing of the solar standoffs should be kept at 48" o.c. with a staggered pattern to ensure proper distribution of loads for all the interior PV modules, and 24" o.c. for exterior perimeter PV modules.

I further certify that all applicable loads required by the codes and design criteria listed below were applied to the Ironridge solar rail system and analyzed. Furthermore, the installation crews have been thoroughly trained to install the solar panels based on the specific roof installation instructions developed by Ironridge for the racking system and Ecofasten for the roof connections. Finally, I accept the certifications indicated by the solar panel manufacturer for the ability of the panels to withstand high wind and snow loads.

Design Criteria:

- Applicable Codes = 2015 IBC/IRC, ASCE 7-10, and 2015 NDS
- Roof Dead Load = 7 psf (2x10 top chord) -- 7 psf (2x8 top chord)
- Roof Live Load = 20 psf
- Wind Speed = 115 mph, Exposure C
- Ground Snow Load = 90 psf - Roof Snow Load = 69.3 psf

Please contact me with any further questions or concerns regarding this project.

Sincerely,

Elaine Huang, P.E.
Project Engineer



Wind Calculations Per ASCE 7-10 Components and Cladding

Input Variables

Wind Speed	115 mph
Exposure Category	C
Roof Shape	Gable/Hip
Roof Slope	15 degrees
Mean Roof Height	20 ft
Building Least Width	40 ft
Effective Wind Area	17.5 ft

Design Wind Pressure Calculations

Wind Pressure $P = qh^*(G^*Cp)$

$qh = 0.00256 * Kz * Kzt * Kd * V^2 * I$ (Eq. 30.3-1)

Kz (Exposure Coefficient) = 0.9 (Table 30.3-1)

Kzt (topographic factor) = 1 (Fig. 26.8-1)

Kd (Wind Directionality Factor) = 0.85 (Table 26.6-1)

V (Design Wind Speed) = 115 mph

I Importance Factor = 1 (Table 1.5-1)

$qh = 25.90$

Standoff Uplift Calculations

	Zone 1	Zone 2	Zone 3	Positive	
$Gc_p =$	-0.85	-1.45	-2.30	0.40	(Fig. 6-11)
Uplift Pressure =	-22.01 psf	-37.55 psf	-59.57 psf	10.4 psf	
X Standoff Spacing =	4.00	4.00	4.00		
Y Standoff Spacing =	2.75	2.75	2.75		
Tributary Area =	11.00	11.00	11.00		
Footing Uplift =	-242 lb	-413 lb	-655 lb		

Standoff Uplift Check

Maximum Design Uplift = -413 lb

Standoff Uplift Capacity = 450 lb

450 lb capacity > 413 lb demand Therefore, OK

Fastener Uplift Capacity Check

Fastener = 1 - 5/16" dia Lag

Number of Fasteners = 1

Embedment Depth = 2.5

Pullout Capacity Per Inch = 205 lb (NDS Eq 12.2-1)

Fastener Capacity = 513 lb (NDS Eq 11.3-1)

w/ F.S. of 1.0 = 513 lb

513 lb capacity > 413 lb demand Therefore, OK

Fastener Shear Capacity Check

Embedment Depth Reduction Factor = 1

Lateral Force From Gravity Loads = 197

Attachment Lateral Capacity = 288

(NDS Table 12K)

288 lb capacity > 198 lb demand Therefore, OK

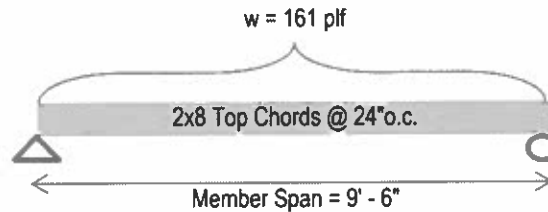
Framing Check

(2x8 top chord)

PASS

Dead Load 7.2 psf
 PV Load 4.0 psf
 Snow Load 69.3 psf

Governing Load Combo = DL + SL
Total Load 80.5 psf



Member Properties

Member Size	S (in ³)	I (in ⁴)	Lumber Sp/Gr	Member Spacing
2x8	13.14	47.63	1800Fb/1.6E	@ 24" o.c.

Check Bending Stress

Fb (psi) =	fb	x	Cd	x	Cf	x	Cr	(NDS Table 4.3.1)
	1800	x	1.15	x	1	x	1.15	

Allowed Bending Stress = 2380.5 psi

$$\begin{aligned} \text{Maximum Moment} &= (wL^2) / 8 \\ &= 1817.34 \text{ ft}\# \\ &= 21808.1 \text{ in}\# \end{aligned}$$

$$\begin{aligned} \text{Actual Bending Stress} &= (\text{Maximum Moment}) / S \\ &= 1659.6 \text{ psi} \end{aligned}$$

Allowed > Actual - 69.8% Stressed -- Therefore, OK

Check Deflection

$$\begin{aligned} \text{Allowed Deflection (Total Load)} &= L/180 \quad (E = 1600000 \text{ psi Per NDS}) \\ &= 0.633 \text{ in} \end{aligned}$$

$$\begin{aligned} \text{Deflection Criteria Based on} &= \text{Simple Span} \\ \text{Actual Deflection (Total Load)} &= (5 \cdot w \cdot L^4) / (384 \cdot E \cdot I) \\ &= 0.388 \text{ in} \\ &= L/294 < L/180 \quad \text{Therefore OK} \end{aligned}$$

$$\begin{aligned} \text{Allowed Deflection (Live Load)} &= L/240 \\ &= 0.475 \text{ in} \\ \text{Actual Deflection (Live Load)} &= (5 \cdot w \cdot L^4) / (384 \cdot E \cdot I) \\ &= 0.334 \text{ in} \\ &= L/342 < L/240 \quad \text{Therefore OK} \end{aligned}$$

Check Shear

Member Area =	10.9 in ²	Fv (psi) =	135 psi	(NDS Table 4A)
Allowed Shear =	Fv * A / 1.5 = 979 lb	Max Shear (V) =	w * L / 2 =	765 lb

Allowed > Actual -- 78.2% Stressed -- Therefore, OK

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	(84) REC N-PEAK 330
INVERTER	(2) SEI1400H-US
OPTIMIZER	(84) SOLAREEDGE P370
ARRAY PITCH	35°
ARRAY AZIMUTH	180°
RACKING	BLACK IRONRIDGE XR100 ALUMINUM RAIL
ATTACHMENT	ECOSFASTEN GREENFASTEN GFI WITH SS 3" X 5/16" LAG SCREWS

AUTHORITIES HAVING JURISDICTION:

BUILDING AUTHORITY	PLAINFIELD NH
ELECTRICAL AUTHORITY	PLAINFIELD NH
ZONING/PLANNING AUTHORITY	PLAINFIELD NH
ELECTRICAL UTILITY	LIBERTY

DESIGN CRITERIA:

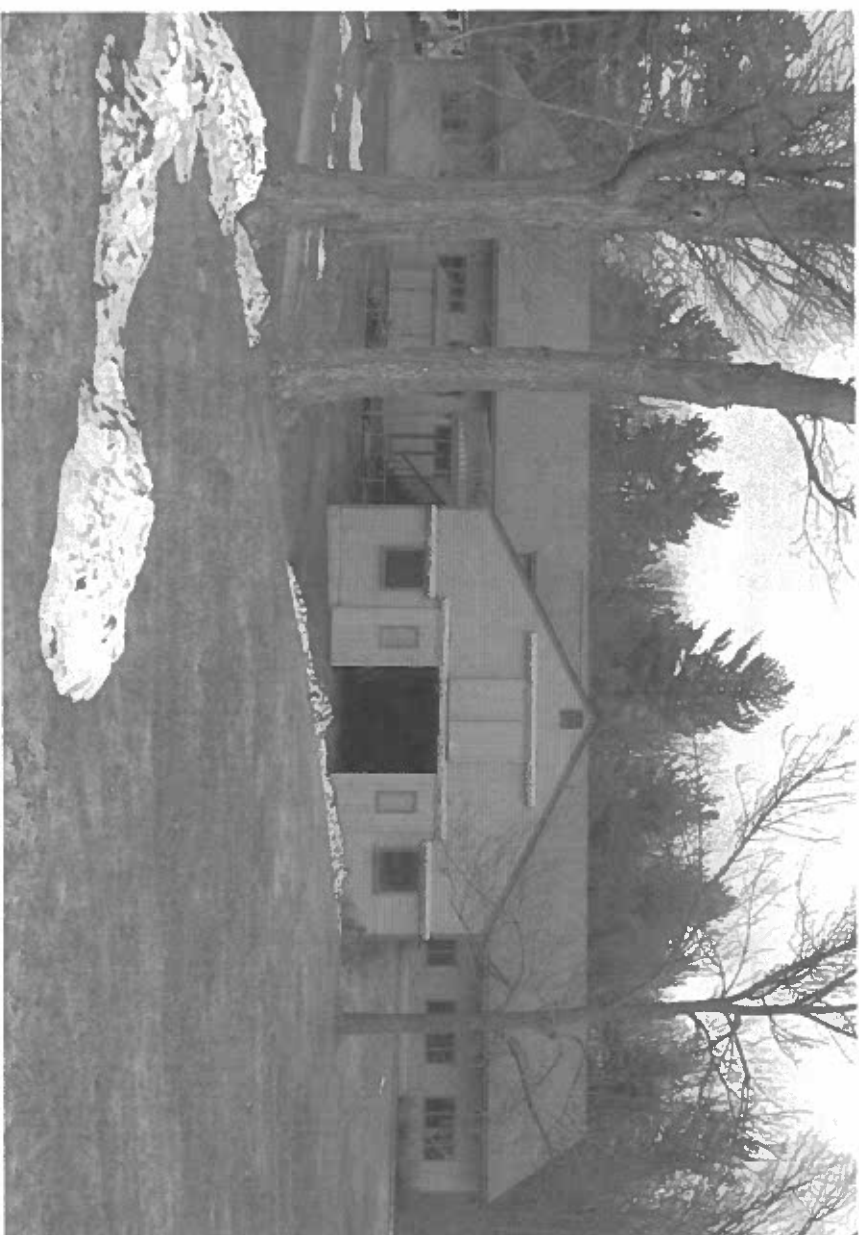
OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	115 MPH
RISK CATEGORY	I
GROUND SNOW LOAD	90 PSF
EXPOSURE CATEGORY	C
ROOF HEIGHT	16' ABOVE GRADE TO EAVES
ROOF COMPOSITION	ASPHALT SHINGLE
RAFTER	2"X10" TRUSSES
RAFTER SPACING	24" O.C.

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. ROOF-TOP PENETRATIONS SHALL BE SEALED.
4. ALL EQUIPMENT SHALL BE LISTED AND TESTED BY A RECOGNIZED LABORATORY.
5. MODULE CONNECTORS MUST BE MATCHING BRAND AND TYPE OR BE A UL LISTED ASSEMBLY.
6. SYSTEM SHALL CONFORM TO RAPID SHUTDOWN REQUIREMENTS PER NEC 690.
7. CONDUIT RUNS BETWEEN SUB-ARRAYS, COMBINERS, AND DISCONNECTS SHALL BE INSTALLED IN THE MOST DIRECT ROUTE POSSIBLE.
8. ELECTRICAL EQUIPMENT SHALL BE INSTALLED TO MAINTAIN CLEARANCES REQUIRED BY NEC 110.
9. EQUIPMENT SHALL BE LABELED PER NEC 2017 REQUIREMENTS.



**REVISION
ENERGY**

78 MAIN STREET
ENFIELD, NH 03748
(603)-632-1263

CLIENT:

PETER M MARTIN
285 GRANTHAM MTN. RD
PLAINFIELD NH, 03781

SYSTEM TYPE:

27.7KW DC GRID TIED SOLAR
PHOTOVOLTAIC SYSTEM

FOR CONSTRUCTION

DESIGNED BY: PJCF
REVIS ON: 0
PRINT SIZE: 11" X 17"
DATE: 3/30/2021
DWG TITLE: TITLE SHEET

DWG NUMBER:

G001

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THIS DIAGRAM IS PROVIDED AS A GENERAL GUIDE ONLY. THE INFORMATION SUPPLIED IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS. THE NATIONAL APPLICABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND LOCAL GOVERNMENTAL AUTHORITIES.

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ATTACHMENT	ECOSFASTEN GREENFASTEN GFI WITH SS 3 X 5/16" LAG SCREWS

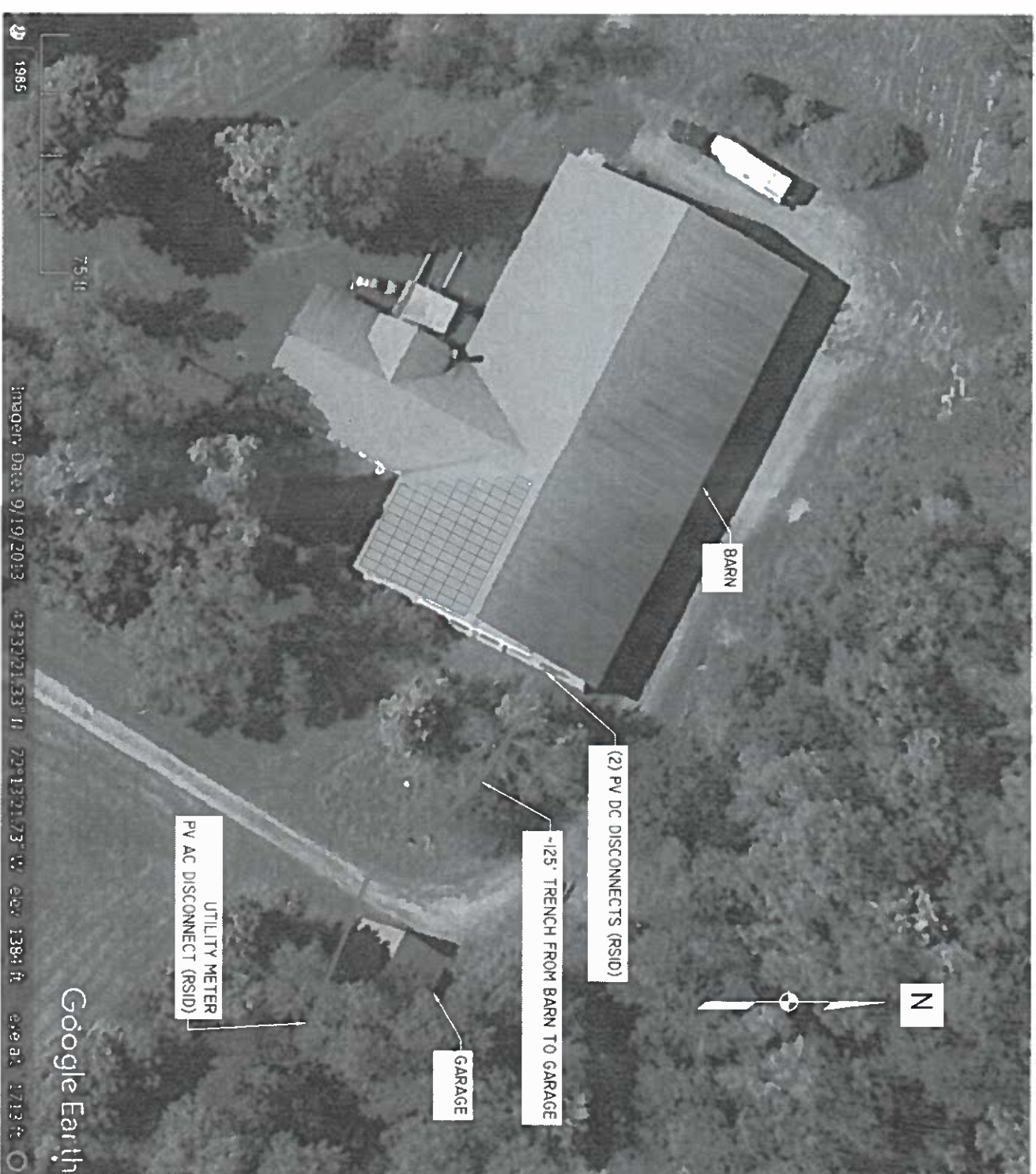
DESIGN CRITERIA:

OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	115 MPH
RISK CATEGORY	1
GROUND SNOW LOAD	90 PSF
EXPOSURE CATEGORY	C
ROOF HEIGHT	6' ABOVE GRADE TO EAVES
ROOF COMPOSITION	ASPHALT SHINGLE
RAFTER	2'X10" TRUSSES
RAFTER SPACING	24" O.C.

EQUIPMENT LOCATIONS:

GARAGE INTERIOR:
 AUTO TRANSFER SWITCH
 MAIN LOAD CENTER
 PV AC COMBINER PANEL
 (2) SOLAR INVERTERS
 PV AC DISCONNECT

GARAGE EXTERIOR:
 UTILITY NET METER
 PV RAPID SHUTDOWN DISCONNECT (RSID)
 BARN EXTERIOR:
 (2) PV DC DISCONNECTS (RSID)



REVISION ENERGY

78 MAIN STREET
 ENFIELD, NH 03748
 (603)-632-1265

CLIENT:

PETER M MARTIN
 285 GRANTHAM MTN. RD
 PLAINFIELD NH, 03781

SYSTEM TYPE:

27.72KW DC GRID TIED SOLAR
 PHOTOVOLTAIC SYSTEM

FOR CONSTRUCTION

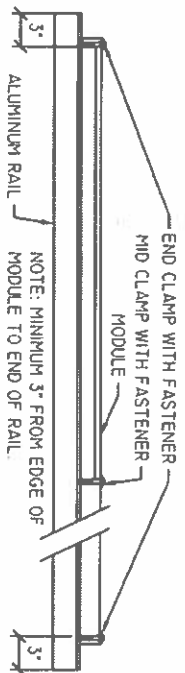
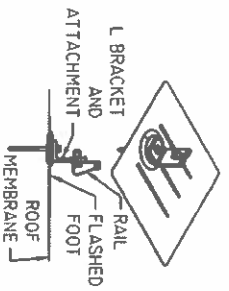
DESIGNED BY: MCF
 REVISION: 0
 PRINT SIZE: 11" X 17"
 DATE: 3/30/2021

SITE PLAN

FIG. MESSAGE: A001

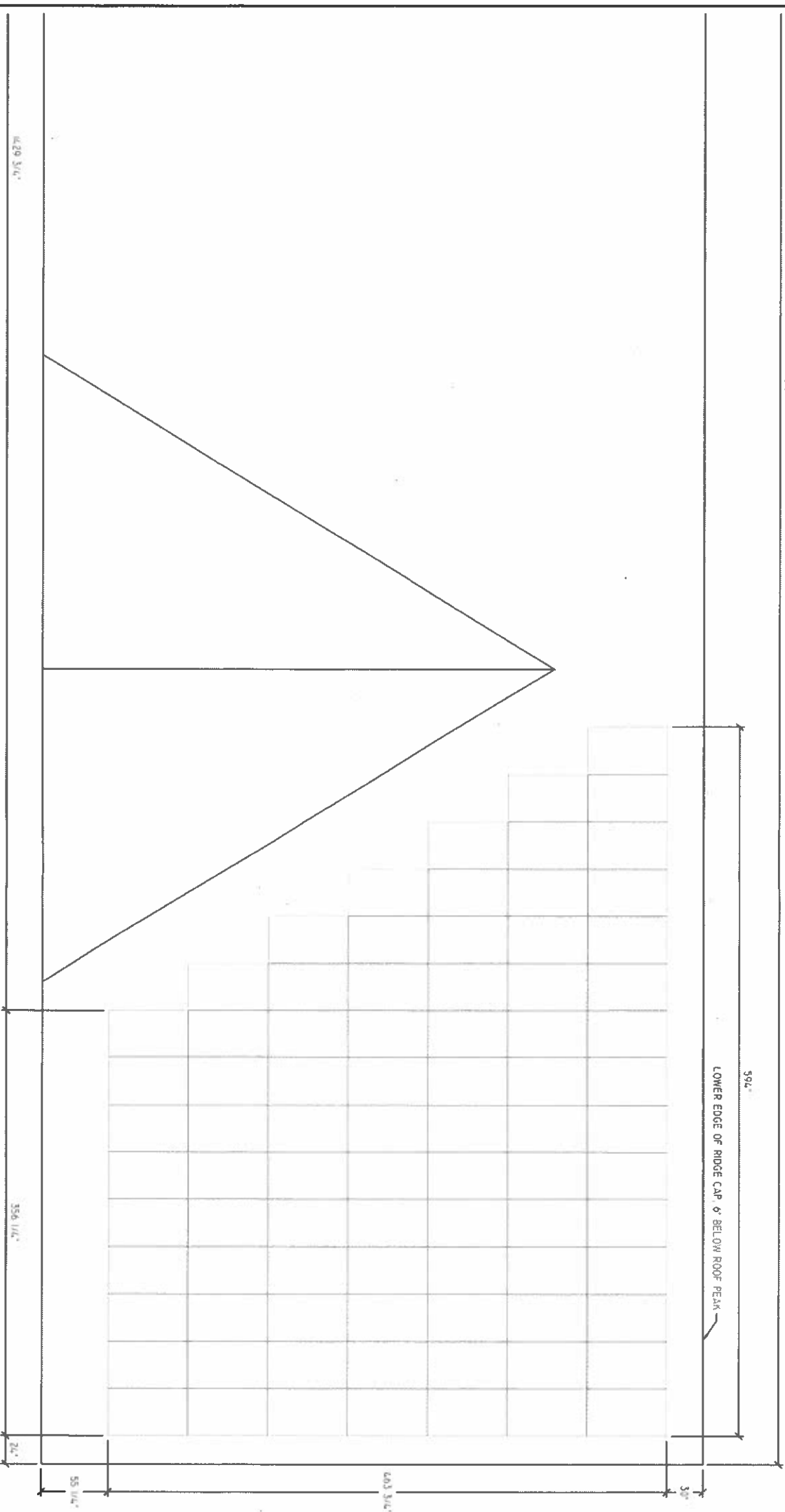
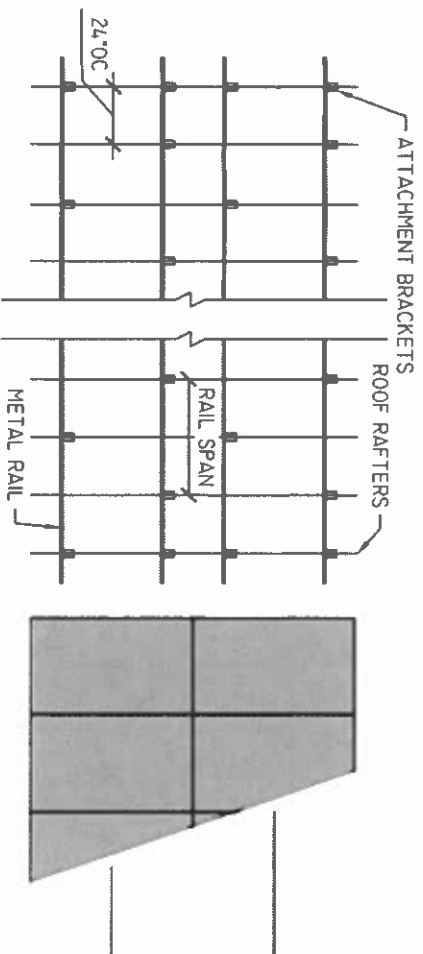
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- ATTACHMENT NOTES:
1. MAXIMUM RAIL LENGTH IS 50' BEFORE EXPANSION GAP IS REQUIRED
 2. MAXIMUM RAIL SPAN IS TYPICALLY 4'. THIS DISTANCE WILL VARY BASED ON ROOF SLOPE, SNOW LOAD, WIND SPEED, AND EXPOSURE CATEGORY.
 3. MAXIMUM RAIL CANTILEVER DISTANCE 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"

1810'



REVISION ENERGY
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SYSTEM TYPE:

27.72KW DC GRID TIED SOLAR
 PHOTOVOLTAIC SYSTEM

FOR CONSTRUCTION

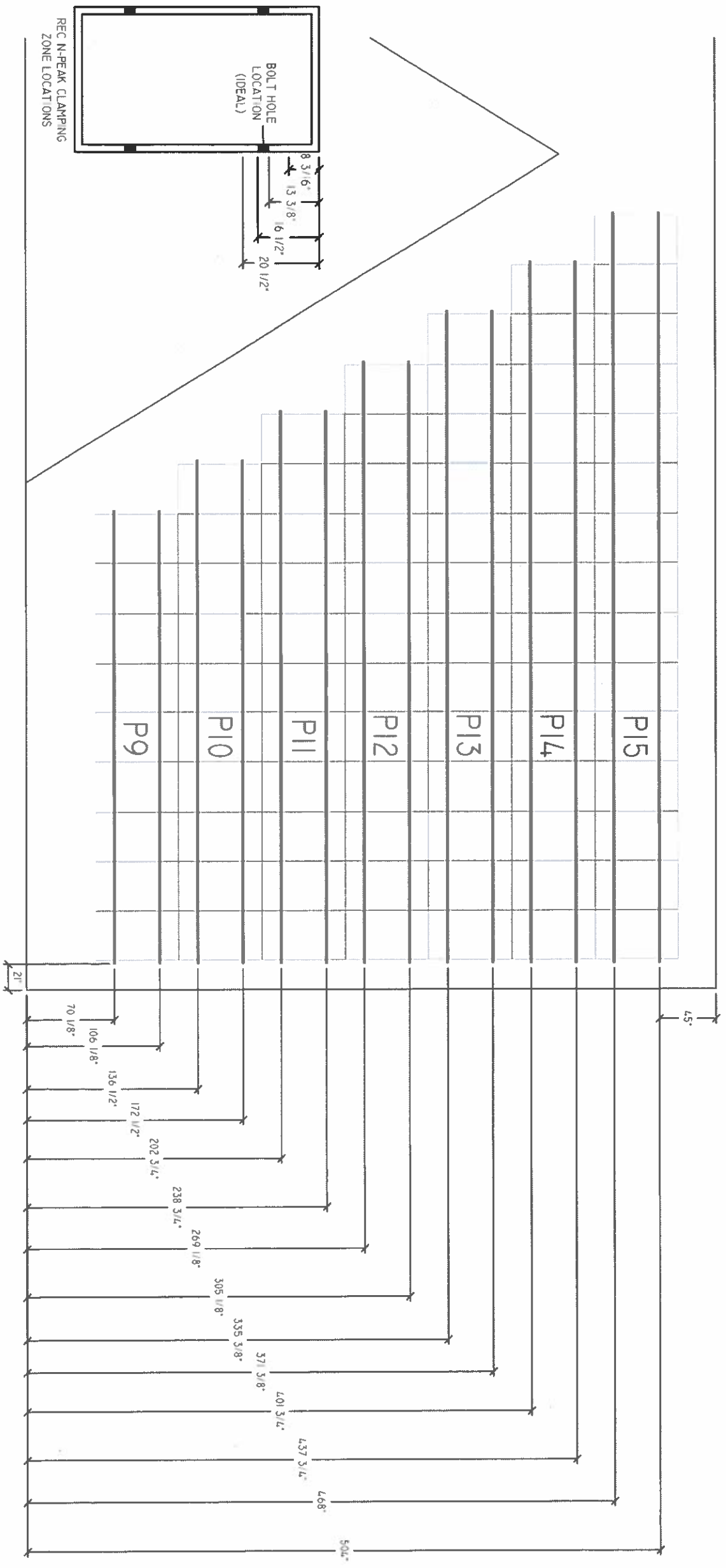
DESIGNED BY:	MCF
REVISION:	0
PRINT SIZE:	11" X 17"
DATE:	3/30/2021
DWG TITLE:	MODULE LAYOUT
DWG NUMBER:	A002

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SUMMARY			
TYPE	PRODUCT	DIMENSIONS	QUANTITY
MODULE:	REC N-PEAK 330	39.25IN X 65.94IN	84
RAIL:	IRON RIDGE XR100	24.8 IN	(18) FULL (16) CUT
FASTENERS:	IRON RIDGE UFO	0.375 IN	182 MIN
INVERTER		WATTS / STRING	MAX MODS PER STRING
SEI1400H-US		6000	18

RAIL LENGTH									
RAIL SECTION TAG	NUMBER OF RAIL SECTIONS	QTY OF PANELS IN SECTION	RAFTER SPACING	MODULE ORIENTATION	RAIL ORIENTATION	RAIL LENGTH (IN)	FULL STICKS	CUT PIECE (IN)	
P9	2	9	24"	PORTRAIT	HORIZONTAL	362 1/4	1	(1) 114 1/4	
P10	2	10	24"	PORTRAIT	HORIZONTAL	401 7/8	1	(1) 153 7/8	
P11	2	11	24"	PORTRAIT	HORIZONTAL	441 1/2	1	(1) 193 1/2	
P12	2	12	24"	PORTRAIT	HORIZONTAL	481 1/8	1	(1) 233 1/8	
P13	2	13	24"	PORTRAIT	HORIZONTAL	520 3/4	1	(2) 136 3/8	
P14	2	14	24"	PORTRAIT	HORIZONTAL	560 3/8	2	(1) 64 3/8	
P15	2	15	24"	PORTRAIT	HORIZONTAL	600	2	(1) 104	

CUT LIST		
RAIL LENGTH (IN)	QTY	
FULL	18	
114 1/4	2	
153 7/8	2	
193 1/2	2	
233 1/8	2	
136 3/8	4	
64 3/8	2	
104	2	



PETER M. MARTIN
 285 GRANTHAM MTN RD
 PLAINFIELD NH, 03781

MODULE SPECIFICATIONS		
REC NYPEAK 330 QTY 84		
STC RATING	310	W
VMP	34.6	V
IMP	9.95	A
VOC	41	V
ISC	10.33	A
TEMP COEFF VMP	-0.27	%/C

MODULE LEVEL DC OPTIMIZER SPECIFICATIONS		
SQUAREAGE P310 QTY 84		
NOMINAL DC RATING (WATTS)	310	W
MAX OUTPUT CURRENT IDC	15	A

GRID TIED INVERTER SPECIFICATIONS		
SEMIKRON US QTY 2		
NOMINAL AC RATING	1400	W
NOMINAL VAC	240	V
MAX IAC	47.5	A
CEC EFFICIENCY	99.00%	%

- DESIGN NOTES:**
1. ALL CONDUCTORS SHALL BE COPPER UNLESS NOTED OTHERWISE.
 2. SYSTEM VOLTAGE DROP SHALL NOT EXCEED 5%.
 3. LOWEST EXPECTED AMBIENT TEMPERATURE IS BASED ON ASHRAE EXTREME MIN FOR THE SPECIFIED LOCATION.
 4. ASHRAE 2% AVG. FOR THE SPECIFIED LOCATION.

LINE TYPES:

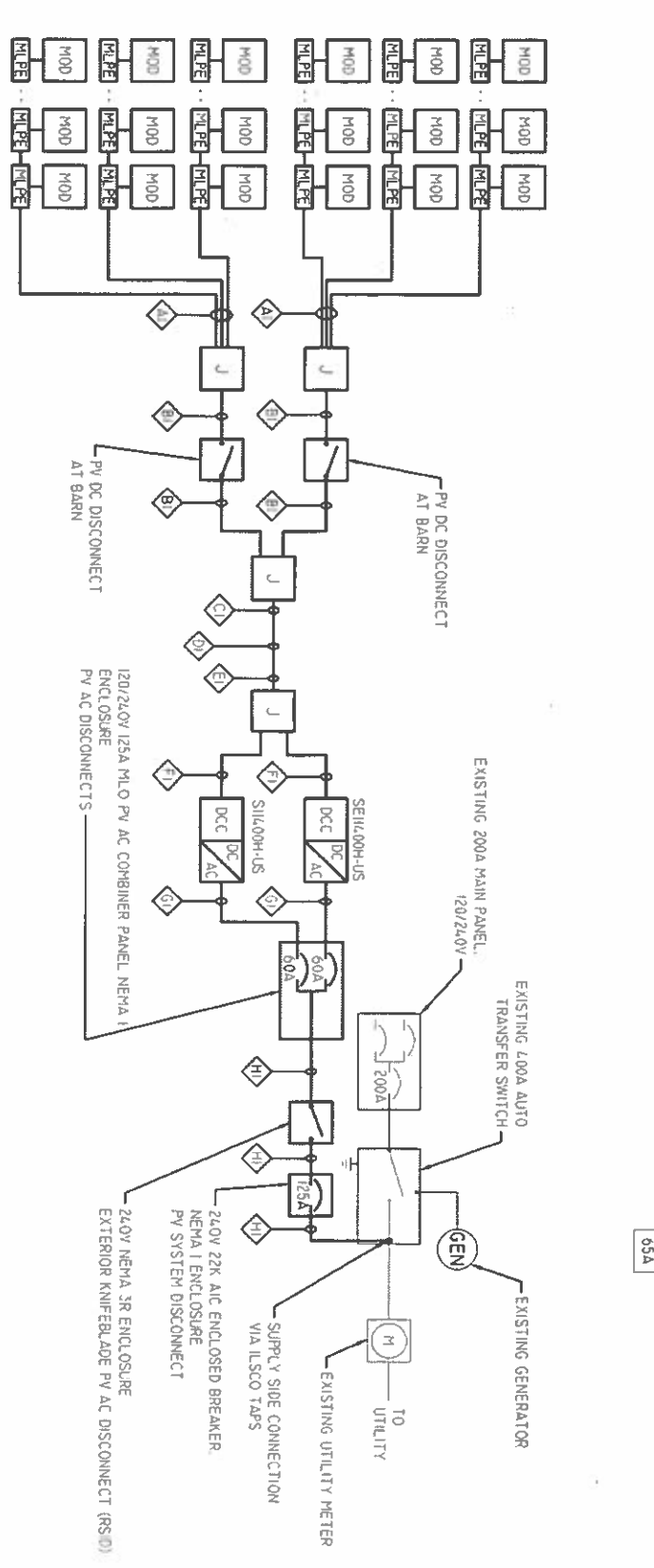
--- DEMOLITION


— EXISTING

— NEW

WIRING SCHEDULE						
TAG	FROM / TO	CONDUCTORS	WIRE TYPE	LENGTH (FT)	AS BUILT LENGTH (FT)	VOLTAGE DROP
A1	PV ARRAY / JUNCTION BOX (JB) TYPICAL OF 2)	L:(6) #6 G:(1) #6	PV WIRE 1000V CU	20		0.0%
B1	JUNCTION BOX / TRENCH JB (TYPICAL OF 2)	L:(6) #10 G:(1) #10	THWN-2 600V CU	100		0.95%
C1	TRENCH JB / TRENCH	L:(2) #10 G:(1) #10	THWN-2 600V CU	10		0.09%
D1	TRENCH	L:(2) #10 G:(1) #10	THWN-2 600V CU	125		1.18%
E1	TRENCH / TRENCH JB	L:(2) #10 G:(1) #10	THWN-2 600V CU	10		0.09%
F1	TRENCH JB / INVERTER (TYPICAL OF 2)	L:(6) #10 G:(1) #10	THWN-2 600V CU	20		0.9%
G1	INVERTER / PV AC COMBINER PANEL (TYPICAL OF 2)	L:(2) #6 N:(1) #10 G:(1) #10	THWN-2 600V CU	10		0.0%
H1	PV AC COMBINER PANEL / INTERCONNECTION	L:(2) #1 N:(1) #6 G:(1) #6	THWN-2 600V CU	20		0.25%

- SYMBOLS:**
- MOD PV MODULE
 - MLPE MODULE LEVEL POWER ELECTRONIC / OPTIMIZER
 - DCC DC COMBINER AND DC DISCONNECT
 - DC/AC PV DC TO AC INVERTER
 - FUSED DISCONNECT SWITCH
 - NON-FUSED DISCONNECT SWITCH
 - ENCLOSED CIRCUIT BREAKER
 - POWER METER





REVISION ENERGY
 78 MAIN STREET
 ENFIELD, NH 03748
 (603)-632-1263

CLIENT: PETER M MARTIN
 285 GRANTHAM MTN RD
 PLAINFIELD NH, 03781

SYSTEM TYPE: 27.72KW DC GRID TIED SOLAR PHOTOVOLTAIC SYSTEM

FOR CONSTRUCTION

DESIGNED BY: MCF
 REVISION: 0
 PRINT SIZE: 11" X 17"
 DATE: 5/30/2021

ONE LINE AND EQUIPMENT SPECIFICATIONS

DWG NUMBER: E001

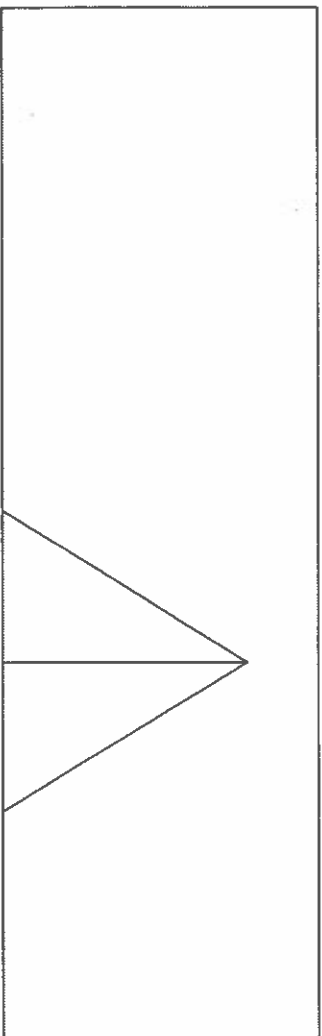
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- SAFETY SHEET NOTES:**
1. DRAW IN APPROXIMATE ANCHOR LOCATIONS AND SWING RADIUS
 2. DRAW IN APPROXIMATE RESTRICTED ACCESS ZONE (RULE OF THUMB 10' FOR EVERY STORY OF BUILDING)
 3. DRAW IN MACHINERY OR PERSONNEL ACCESS PATHS

- ANCHOR POINT ATTACHMENT NOTES:**
1. ANCHOR POINTS REQUIRING FASTENERS MUST BE INSTALLED INTO BUILDING STRUCTURE (RAFTERS OR PURLINS)
 2. ANCHOR POINTS TO BE INSTALLED A MINIMUM OF 72" FROM ROOF RAKE
 3. MAXIMUM SPACING BETWEEN ANCHOR POINTS IS 96"
 4. LEAVE BEHIND ANCHOR TO BE INSTALLED UNDER TOP LEFT AND TOP RIGHT PANELS TO FACILITATE SAFE ROOF EXIT
 5. 3 MINIMUM ANCHORS PER ROOF
 6. ANCHOR POINT 1! (ONE PERSON PER ANCHOR POINT AT A TIME)
 7. WORK IS TO BE DONE WITHIN WITHIN 30 DEGREES OF ANCHOR.



**REVISION
ENERGY**

78 MAIN STREET
ENFIELD, NH 03748
(603)-632-1263

CLIENT:

PETER M. MARTIN
285 GRANTHAM MTN. RD
PLANFIELD NH, 03781

SYSTEM TYPE:

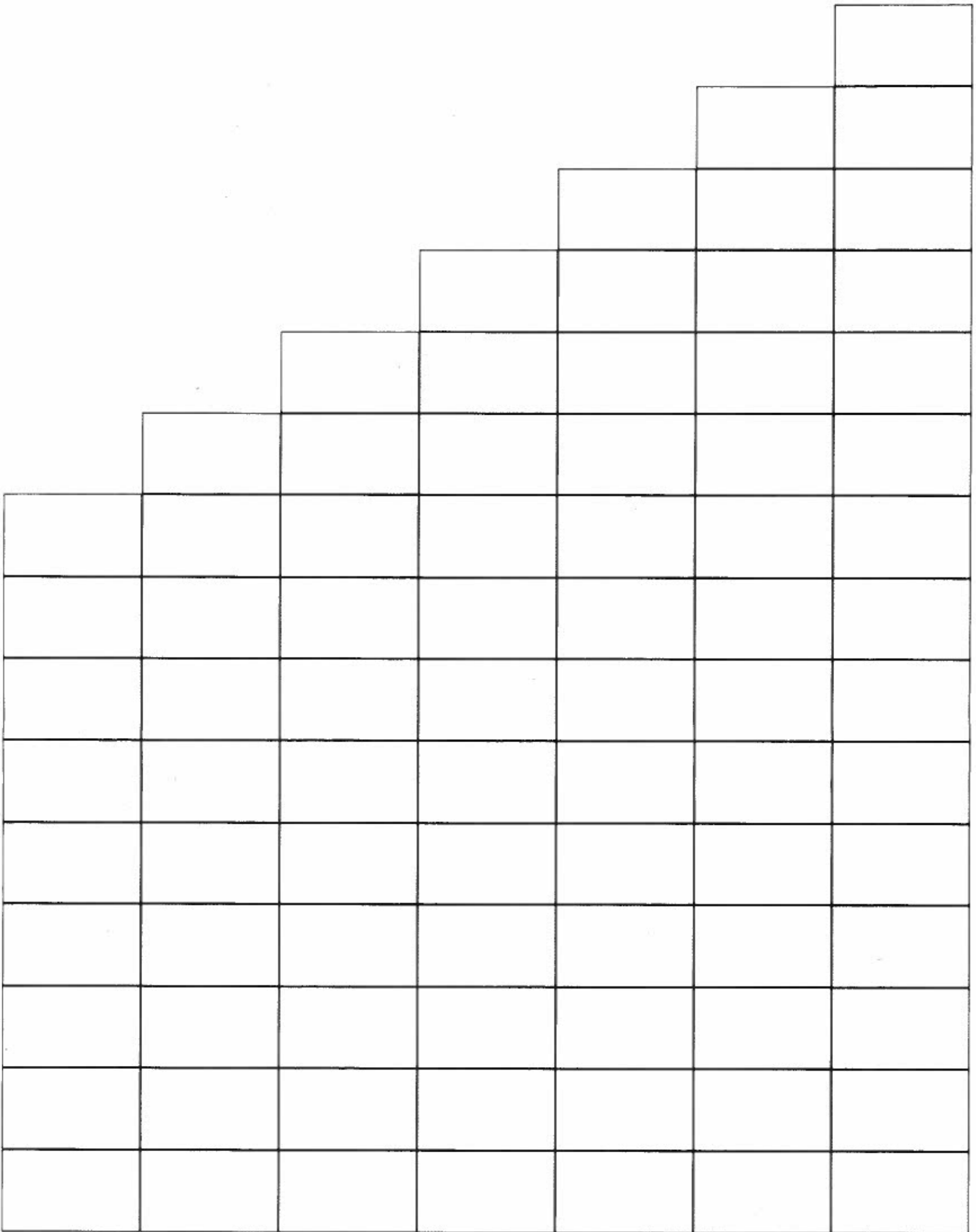
27.72KW DC GRID TIED SOLAR
PHOTOVOLTAIC SYSTEM

FOR CONSTRUCTION

DESIGNED BY: MCE
 REVISION: 0
 PRINT SIZE: 11" X 17"
 DATE: 1/30/2022
 DWG TITLE: SAFETY SHEET
 DWG NUMBER:

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INVERTER
STICKER
HERE

INVERTER
STICKER
HERE

STRING AND STICKER MAP

PLEASE CONNECT MODULES
AS STRING. PLEASE SHOW
ROOF PENETRATIONS.

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PLAINFIELD NH, 05781

