

PHOTOVOLTAIC MODULE GROUND MOUNT SYSTEM RBI SOLAR RACK MODEL: GM-2

FOR

GREENSKIES CLEAN ENERGY

AT

STONINGTON TAUGWONK
35 TAUGWONK SPUR ROAD
STONINGTON, CT 06378



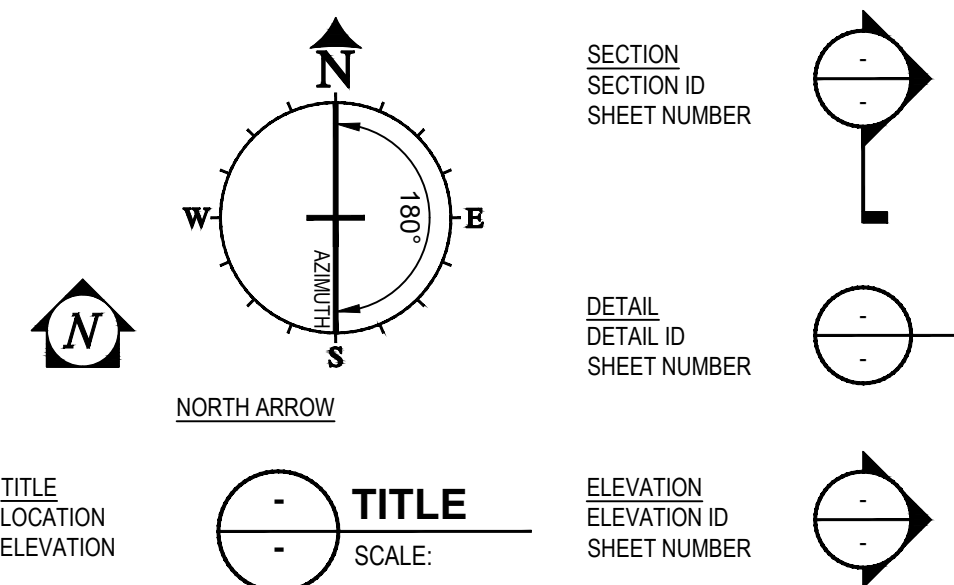
PROFESSIONAL SEAL

ENGINEER'S SEAL APPLIES TO DESIGN OF STRUCTURAL COMPONENTS ONLY

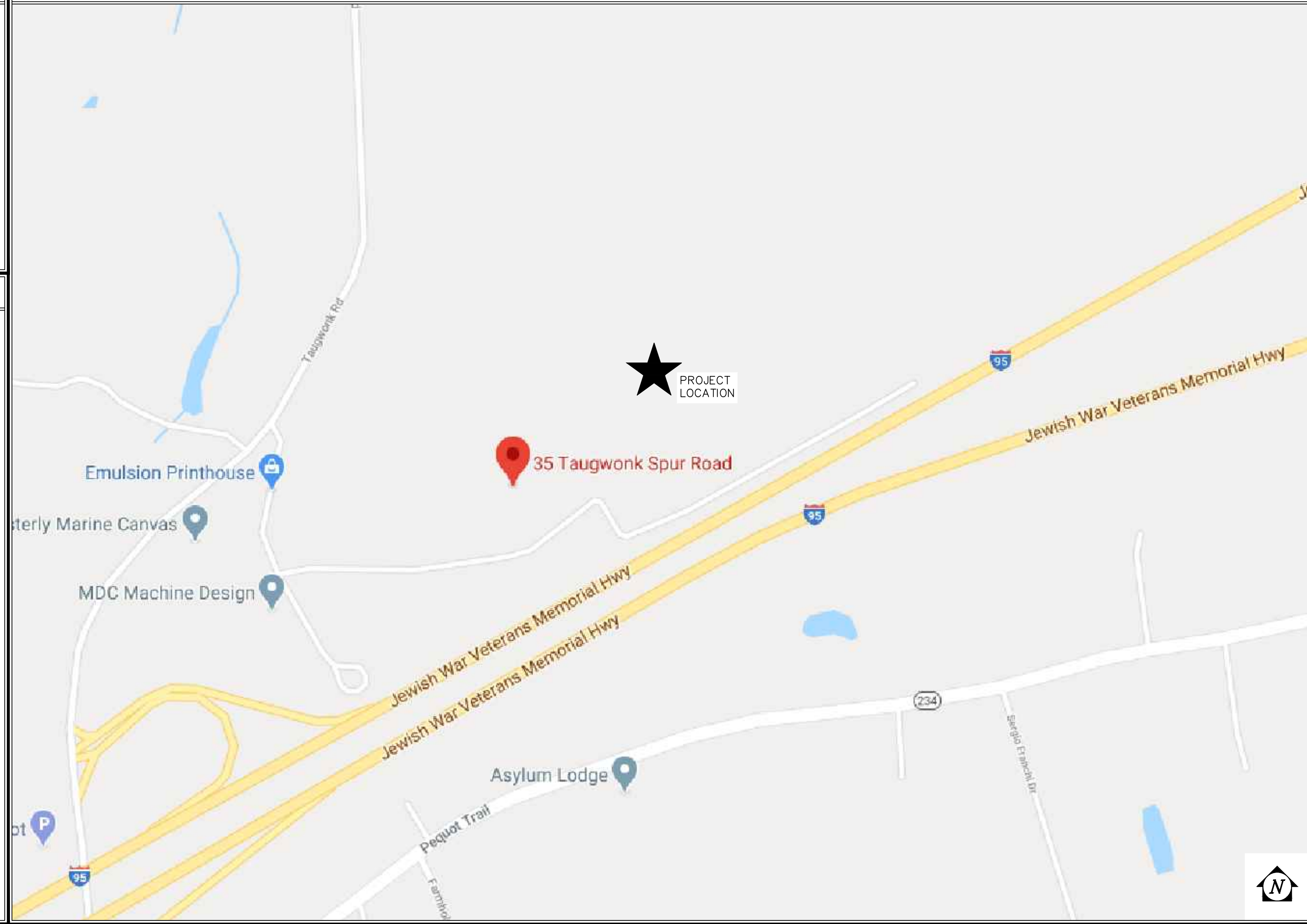


GROUND MOUNT FOR GREENSKIES CLEAN ENERGY

SYMBOLS LEGEND



VICINITY MAP



SHEET INDEX

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GOVERNING CODE

2018 CONNECTICUT STATE BUILDING CODE (IBC 2015)

RISK CATEGORY: I

DESIGN LOADS:

- DEAD LOADS:
 - STRUCTURE: 2.0 PSF
 - GLAZING: 3.0 PSF
 - Roof: 5.0 PSF
- ROOF LIVE LOAD = 0 PSF
- SNOW LOAD:
 - $P_g = 30.0$ PSF (GROUND SNOW)
 - $P_f = 30.0$ PSF (FLAT ROOF SNOW)
 - $P_s = 24.5$ PSF (SLOPED ROOF SNOW)
 - $C_d = 0.90$
 - $C_e = 1.20$
 - $C_g = 0.82$
 - $I_e = 0.80$
- WIND LOAD: (MAIN WIND FORCE RESISTING SYSTEM)
 - $V = 125$ MPH
 - EXPOSURE: C
- SEISMIC:
 - $S_s = 0.159$
 - $S_1 = 0.058$
 - $S_{10} = 0.170$
 - $S_{H1} = 0.093$
 - $I_m = 1.00$
 - SITE CLASS: D
 - SEISMIC DESIGN CATEGORY: B
 - SEISMIC FORCE RESISTING SYSTEM = CANTILEVERED COLUMN SYSTEM
 - DESIGN BASE SHEAR: $V = 0.085W$
 - $C_u = 0.085$
 - $R = 2.00$
 - EQUIVALENT LATERAL FORCE ANALYSIS

CUSTOMER SPECIFICATIONS

NOTE: THIS SUBMITTAL/CONSTRUCTION SET WAS PRODUCED FROM DOCUMENTS RECEIVED FROM CUSTOMER ON 3/10/2020.

PARAMETER	CANADIAN SOLAR	CANADIAN SOLAR
PV MODULE MANUFACTURER	CANADIAN SOLAR	CANADIAN SOLAR
PV MODULE MODEL #	CS3W PB-AG	CS3U PB-AG
PV MODULE WATTAGE	400	360
# OF PV MODULES/STRING	26	26
# OF ACTIVE PV MODULES	7774	8294
# OF INACTIVE PV MODULES	0	0
TOTAL # OF PV MODULES	7774	8294
TOTAL PV SYSTEM WATTS	6.0954 MW DC	
TOPOGRAPHIC RELATIONSHIP	FOLLOW GRADE	
ARRAY TILT	25° +/- 2°	
MINIMUM MODULE CLEARANCE	3'-0"	
ARRAY AZIMUTH	180° (NOT ADJUSTED FOR MAGNETIC DECLINATION)	

RELEASE RECORD

MARK	DATE	DESCRIPTION
4	03/16/20	FOR CONSTRUCTION
3	03/13/20	90% REVIEW
2	03/10/20	90% REVIEW
1	02/28/20	50% REVIEW

PROJECT INFORMATION

TITLE & ADDRESS:
STONINGTON TAUGWONK
35 TAUGWONK SPUR ROAD
STONINGTON, CT 06378
RBI SOLAR PROJECT No.: 2030067
DRAWN BY: JAB REVIEWED BY: BDS / LKS
SHEET TITLE: COVER SHEET
SHEET No.: **SG001**

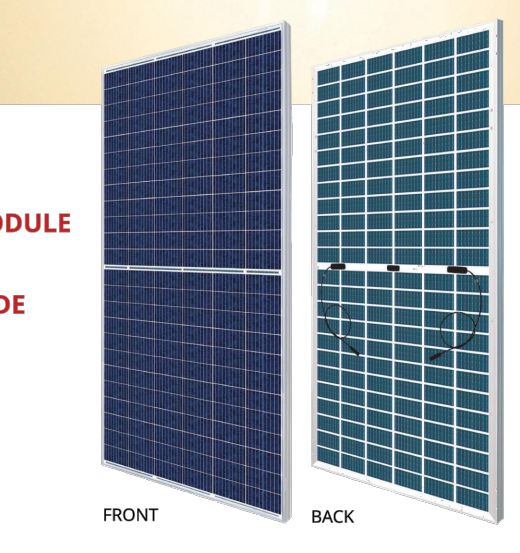
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MODULE SPECIFICATION SHEETS

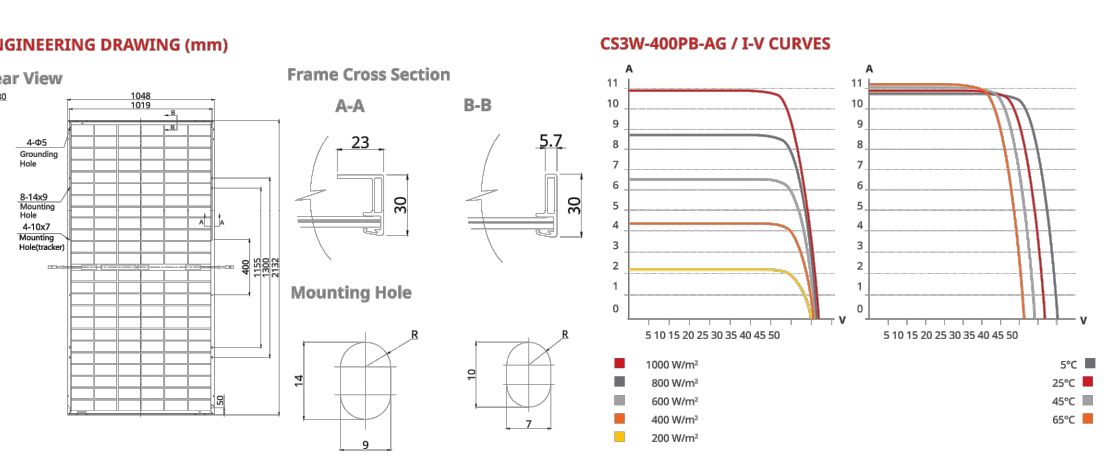


BiHiKu SUPER HIGH POWER BIFACIAL POLY PERC MODULE 390 W ~ 410 W UP TO 30% MORE POWER FROM THE BACK SIDE CS3W-390|395|400|405|410PB-AG

- MORE POWER**
 - Up to 30% more power from the back side
 - 24% more front side power than conventional modules
 - Low NMOT: 41 ± 3 °C
 - Better shading tolerance
- MORE RELIABLE**
 - Lower internal current, lower hot spot temperature
 - Minimizes micro-cracks and snail trails
 - Heavy snow load up to 5400 Pa, wind load up to 2400 Pa*
 - Fire Class A and Type 3 / Type 13



MANAGEMENT SYSTEM CERTIFICATES*
ISO 9001:2015 / Quality management system
ISO 14001:2015 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety



ELECTRICAL DATA | STC*

Model	Nominal Power (W)	Opt. Power (W)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)	Module Efficiency (%)	
CS3W-390PB-AG	390 W	38.3 V	10.19 A	46.8 V	17.42%	
Bifacial	405 W	38.3 V	11.21 A	46.8 V	19.20%	
Gain**	20%	468 W	38.3 V	12.23 A	46.8 V	20.95%
CS3W-400PB-AG	400 W	39.3 V	13.25 A	46.8 V	22.69%	
Bifacial	415 W	38.5 V	11.3 A	47.1 V	19.47%	
Gain**	20%	474 W	38.5 V	12.31 A	47.1 V	21.21%
CS3W-405PB-AG	405 W	39.5 V	13.84 A	47.1 V	22.96%	
Bifacial	420 W	38.7 V	10.86 A	47.2 V	18.60%	
Gain**	20%	490 W	38.7 V	11.87 A	47.2 V	19.94%
CS3W-405PB-AG	405 W	38.9 V	10.42 A	47.4 V	18.13%	
Bifacial	425 W	38.9 V	10.94 A	47.4 V	19.26%	
Gain**	20%	485 W	38.9 V	11.96 A	47.4 V	20.52%
CS3W-410PB-AG	410 W	39.1 V	10.49 A	47.6 V	18.35%	
Bifacial	430 W	39.1 V	11.03 A	47.6 V	19.29%	
Gain**	20%	495 W	39.1 V	12.05 A	47.6 V	20.58%
CS3W-410PB-AG	410 W	39.1 V	10.49 A	47.6 V	18.35%	
Bifacial	435 W	39.1 V	11.54 A	47.6 V	20.18%	
Gain**	20%	495 W	39.1 V	12.56 A	47.6 V	22.21%

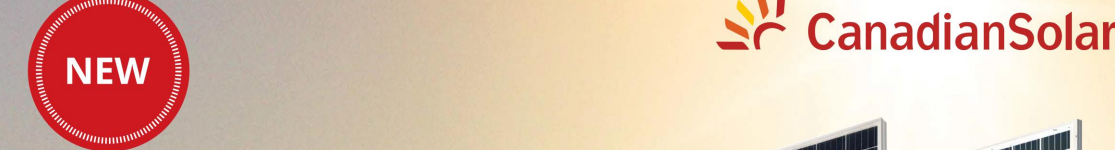
ELECTRICAL DATA | NMOT*

Model	Nominal Power (W)	Opt. Power (W)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)	Module Efficiency (%)	
CS3W-390PB-AG	291 W	35.7 V	8.15 A	46.6 V	17.45%	
Bifacial	307 W	39.2 V	9.83 A	46.6 V	19.19%	
Gain**	20%	455 W	39.2 V	11.62 A	46.6 V	22.68%
CS3W-400PB-AG	355 W	39.4 V	9.02 A	46.8 V	17.70%	
Bifacial	371 W	39.4 V	9.47 A	46.8 V	18.60%	
Gain**	20%	426 W	39.4 V	10.82 A	46.8 V	21.24%
CS3W-405PB-AG	390 W	39.6 V	9.1 A	47.1 V	17.95%	
Bifacial	406 W	39.6 V	9.56 A	47.1 V	18.85%	
Gain**	20%	452 W	39.6 V	10.91 A	47.1 V	21.54%
CS3W-405PB-AG	390 W	39.6 V	9.1 A	47.1 V	17.95%	
Bifacial	402 W	39.6 V	10.1 A	47.2 V	19.04%	
Gain**	20%	458 W	39.6 V	11.02 A	47.2 V	21.84%
CS3W-410PB-AG	415 W	39.8 V	11.93 A	47.2 V	21.68%	

TEMPERATURE CHARACTERISTICS

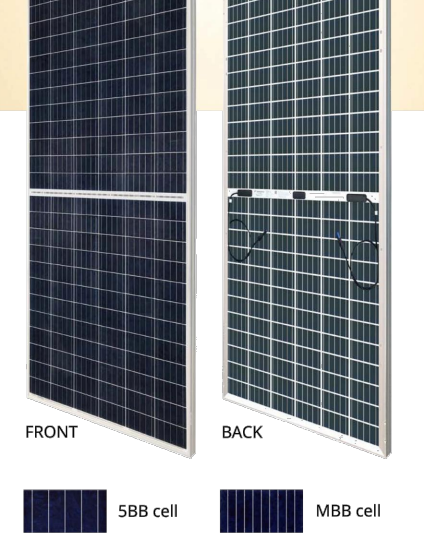
Specification	Data
Module Fire Performance	TYPE 3 (UL 7103) or CLASS A (IEC61730)
Max. Series Fuse Rating	25 A
Application Classification	Class A
Power Tolerance	0 ± 5 W
Power Bifaciality**	72 %
Nominal Module Operating Temperature	41 ± 3 °C

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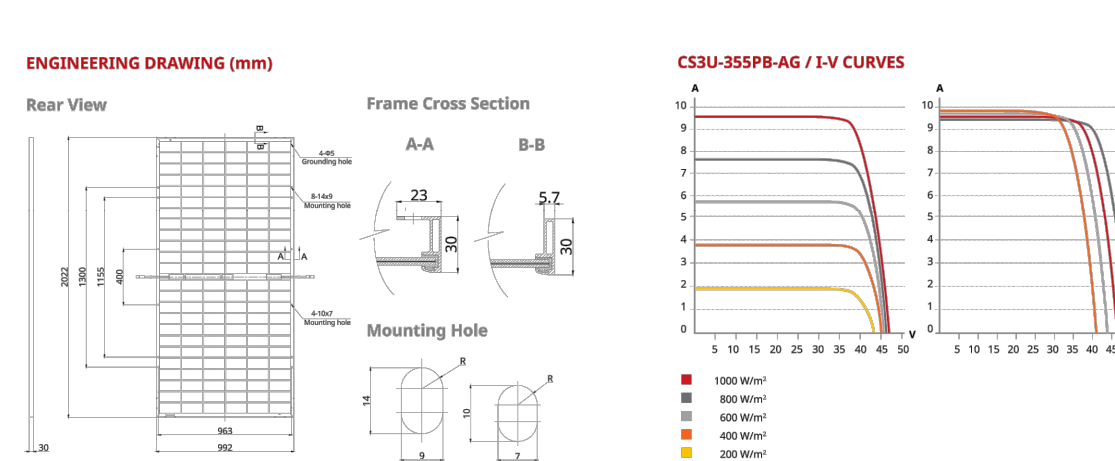


BiKu MODULE NEW GENERATION BIFACIAL MODULE FRONT POWER RANGE: 350W ~ 365W UP TO 30% MORE POWER FROM THE BACK SIDE CS3U-350|355|360|365PB-AG

- MORE POWER**
 - Up to 30% more power from the back side
 - Low NMOT: 41 ± 3 °C
 - Better shading tolerance
- MORE RELIABLE**
 - Lower internal current, lower hot spot temperature
 - Minimizes micro-cracks and snail trails
 - Heavy snow load up to 5400 Pa, wind load up to 2400 Pa*
 - Fire Class A and Type 3 / Type 13



MANAGEMENT SYSTEM CERTIFICATES*
ISO 9001:2015 / Quality management system
ISO 14001:2015 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety



ELECTRICAL DATA | STC*

Model	Nominal Power (W)	Opt. Power (W)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)	Module Efficiency (%)	
CS3U-350PB-AG	350 W	35.2 V	8.94 A	46.6 V	17.45%	
Bifacial	366 W	39.2 V	9.83 A	46.6 V	19.19%	
Gain**	20%	420 W	39.2 V	10.73 A	46.6 V	20.94%
CS3U-355PB-AG	355 W	35.5 V	11.62 A	46.6 V	22.68%	
Bifacial	371 W	39.4 V	9.02 A	46.8 V	17.70%	
Gain**	20%	426 W	39.4 V	9.47 A	46.8 V	18.60%
CS3U-360PB-AG	360 W	36.1 V	8.27 A	46.4 V	18.73%	
Bifacial	376 W	39.6 V	9.56 A	47.1 V	18.85%	
Gain**	20%	432 W	39.6 V	10.92 A	47.1 V	21.54%
CS3U-365PB-AG	365 W	36.5 V	11.83 A	47.1 V	21.33%	
Bifacial	381 W	39.8 V	9.64 A	47.2 V	19.09%	
Gain**	20%	438 W	39.8 V	11.02 A	47.2 V	21.84%

ELECTRICAL DATA | NMOT*

Model	Nominal Power (W)	Opt. Power (W)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)	Module Efficiency (%)	
CS3U-350PB-AG	250 W	32.2 V	8.15 A	46.6 V	17.45%	
Bifacial	266 W	35.7 V	9.83 A	46.6 V	19.19%	
Gain**	20%	310 W	35.7 V	11.62 A	46.6 V	22.68%
CS3U-355PB-AG	255 W	32.5 V	9.02 A	46.8 V	17.70%	
Bifacial	271 W	32.5 V	9.47 A	46.8 V	18.60%	
Gain**	20%	316 W	32.5 V	10.82 A	46.8 V	21.24%
CS3U-360PB-AG	260 W	32.6 V	8.1 A	47.1 V	17.95%	
Bifacial	276 W	32.6 V	8.56 A	47.1 V	18.85%	
Gain**	20%	322 W	32.6 V	9.91 A	47.1 V	21.54%
CS3U-365PB-AG	265 W	32.7 V	11.83 A	47.1 V	21.33%	
Bifacial	281 W	32.9 V	9.64 A	47.2 V	19.09%	
Gain**	20%	328 W	32.9 V	11.02 A	47.2 V	21.84%

TEMPERATURE CHARACTERISTICS

Specification	Data
Module Fire Performance	TYPE 3 (UL 7103) or CLASS A (IEC61730)
Max. Series Fuse Rating	25 A
Application Classification	Class A
Power Tolerance	0 ± 5 W
Power Bifaciality**	70 %
Nominal Module Operating Temperature	41 ± 3 °C

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GENERAL NOTES

- GENERAL/CONSTRUCTION/SAFETY:**
 - ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE CONSTRUCTION CODE AND THE PROJECT SPECIFICATIONS.
 - LOCATION OF UNDERGROUND UTILITIES SHALL BE VERIFIED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - DIMENSIONS SHOWN ON PLAN SHALL BE VERIFIED IN FIELD.
 - LAYOUT IS SUBJECT TO CHANGE PER REQUEST AND/OR EXISTING CONDITIONS IN THE FIELD.
 - ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY CONTRACTOR.
 - CONTRACTOR SHALL FIELD MEASURE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. ANY UNEXPECTED CONDITIONS OR DISCREPANCIES WITH THE DESIGN DOCUMENTS SHALL BE REPORTED TO THE ENGINEER PRIOR TO INSTALLATION OR ERECTION OF MATERIALS.
 - THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. WHEN ON SITE, THE ENGINEER IS RESPONSIBLE FOR HIS OWN SAFETY BUT HAS NO RESPONSIBILITY FOR THE SAFETY OF OTHER PERSONNEL OR SAFETY CONDITIONS AT THE SITE.
 - NO PERSONNEL SHALL STEP OR STAND ON PHOTOVOLTAIC (PV) MODULES (SOLAR PANELS) AT ANY TIME. RACK STRUCTURE AND PV MODULES ARE NOT DESIGNED FOR LIVE LOADS AND MAY VOID WARRANTY.
 - THIS RBI SOLAR CONSTRUCTION SET IS DESIGNED FROM PV MODULE DATA SHEET(S) PROVIDED BY THE CUSTOMER. CUSTOMER IS RESPONSIBLE FOR VERIFYING THAT THE PV MODULE(S) DELIVERED TO SITE MATCH DATA SHEET(S) PROVIDED TO RBI SOLAR. RBI SOLAR IS NOT RESPONSIBLE FOR PV MODULE DIMENSIONAL DISCREPANCIES DUE TO FURNISHED PV MODULES NOT MATCHING CUSTOMER FURNISHED PV MODULE DATA SHEETS.
- STRUCTURAL STEEL:**
 - ALL STRUCTURAL STEEL SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST VERSION OF AISI "MANUAL OF STEEL CONSTRUCTION." LIGHT GAUGE COLD-FORMED SECTIONS SHALL CONFORM TO LATEST VERSION OF AISI SPECIFICATIONS FOR COLD-FORMED STEEL STRUCTURAL MEMBERS.
 - MATERIALS:
 - A. ROLLED SHAPES: ASTM A992 OR A572 GRADE 55, F_y = 55 KSI MINIMUM
 - B. PLATES: ASTM A36
 - C. TUBULAR SHAPES: ASTM A500 GRADE C, F_y = 50 KSI MINIMUM
 - D. FIELD BOLTS (TYP. U.N.O.): SAE J429 GRADE 5
 - E. SCREWS: #12 TEK-S GALVANIZED
 - F. COLD-FORMED/LIGHT GAUGE: ASTM A653 GRADE 55
 - G. ANCHOR RODS: ASTM A307 (TYPICAL U.N.O.)
 - TEK SCREWS ARE TO BE INSTALLED USING A 2500 RPM MAX. NON-IMPACTING VARIABLE SPEED DRILL WITH CLUTCH OUT.
 - REFER TO THE LATEST RBI SOLAR MODEL GM-1 OR GM-2 INSTALLATION GUIDE FOR STRUCTURAL CONNECTION TORQUE VALUES.
 - ALL WELDING OF STEEL SHALL BE DONE IN ACCORDANCE WITH THE LATEST VERSION OF THE AMERICAN WELD SOCIETY'S SPECIFICATIONS - AWS D1.1. ELECTRODES SHALL BE E70 SERIES UNLESS NOTED OTHERWISE.
 - GALVANIZING SPECIFICATIONS
 - A. STRUCTURAL SHAPES: HOT-DIPPED GALVANIZING SHALL BE PER ASTM A123.
 - B. PRE-GALVANIZED MATERIALS SHALL COMPLY WITH ASTM A653 - G90 MINIMUM.
 - C. ALL STRUCTURAL HARDWARE (NOT MODULE MOUNTING HARDWARE): HOT-DIPPED GALVANIZING SHALL BE PER ASTM F2329 UNLESS NOTED OTHERWISE.
- MISCELLANEOUS FASTENERS:**
 - ALL BOLTS SHALL BE THE TYPE AND SIZE INDICATED ON DRAWINGS.
 - ALL HARDWARE USED FOR MOUNTING PV MODULES SHALL BE STAINLESS STEEL UNLESS NOTED OTHERWISE.
 - ALL PV MODULE MOUNTING HARDWARE SHALL BE INSTALLED AND TORQUED PER THE LATEST RBI SOLAR MODEL GM-2 INSTALLATION GUIDE.
- FOUNDATIONS/CONCRETE:**
 - THE FOUNDATION DESIGN IS BASED ON ASSUMED MINIMUM CODE ALLOWABLE VALUES AND FIELD TESTS PERFORMED BY RBI SOLAR ON: 03/06/20 AND GEOTECHNICAL REPORT PREPARED BY: MILONE & MACROOM. DATED: 12/12/2019 (REPORT: #6763-05)
 - CONCRETE SPECIFICATIONS: STRENGTH: 2500 PSI MINIMUM @ 28 DAYS FOR FOOTINGS OR 4000 PSI MINIMUM @ 28 DAYS FOR BALLASTS. AIR CONTENT: 4-6%. AGGREGATE SIZE: 3/4" MAXIMUM. MINIMUM COVER: 3" UNLESS NOTED OTHERWISE.
 - REINFORCING STEEL: 8000 PSI MINIMUM, NON-SHRINK.
 - CUSTOMER IS RESPONSIBLE FOR VERIFYING FINAL SOIL CONDITIONS DURING CONSTRUCTION HAVE NOT BEEN PURPOSELY ALTERED IN ANY WAY TO ENSURE THE SOIL IS CONSISTENT WITH FINDINGS INCLUDED IN GEOTECHNICAL REPORT. IF APPLICABLE, AND/OR FIELD TESTS PERFORMED BY RBI SOLAR. VARIATIONS IN SOIL CONDITIONS SHALL BE REPORTED TO GEOTECHNICAL ENGINEER AND/OR ENGINEER OF RECORD RESPONSIBLE FOR FOUNDATION DESIGN PRIOR TO INSTALLATION OF ANY FOUNDATION MATERIALS.
 - CUSTOMER IS RESPONSIBLE FOR VERIFYING CORROSION COMPATIBILITY WITH FOUNDATIONS AND/OR DRIVEN POSTS.
 - INSTALLER/CONTRACTOR SHALL COORDINATE PLACEMENT OF FOUNDATIONS AND/OR ANCHOR BOLTS PER DESIGN DRAWINGS AND/OR MANUFACTURER'S SPECIFICATIONS.
 - RBI SOLAR, INC. DESIGNS DRIVEN-PILE AND ALTERNATE FOUNDATIONS BASED ON SOIL PROPERTIES OUTLINED IN CERTIFIED GEOTECHNICAL REPORTS AND/OR DATA FROM FIELD TESTING. ALL DESIGNS ASSUME UNDISTURBED SOIL CONDITIONS, AND DO NOT TAKE INTO ACCOUNT TRENCHING NEAR FOUNDATIONS. FOR CASES WHERE TRENCHING FOR ELECTRICAL WORK IS AT OR NEAR A FOUNDATION, RBI SOLAR RECOMMENDS A MINIMUM OF 3'-0" CLEAR FROM THE EDGE OF THE TRENCH TO THE EDGE OF THE FOUNDATION FOR "NORMAL GOOD SOIL CONDITIONS." IN CASES OF "POOR SOIL" CONDITIONS, RBI SOLAR RECOMMENDS A MINIMUM CLEAR DISTANCE EQUAL TO OR GREATER THAN THE DEPTH OF THE FOUNDATION. IF IN DOUBT OF SOIL CONDITIONS, RBI SOLAR RECOMMENDS CONSULTING A QUALIFIED GEOTECHNICAL ENGINEER TO ASSESS SOIL CONDITIONS AT THE SITE.
 - NOTE: TRENCHING/EXCAVATION WITHIN 3'-0" OF ANY RACK SUPPORT POST REQUIRES REPLACING THE ORIGINAL SOIL AND COMPACTION TO 90% STANDARD PROCTOR DENSITY. FOR FURTHER CLARIFICATION ON COMPACTION REQUIREMENTS, RBI SOLAR RECOMMENDS CONSULTING A QUALIFIED GEOTECHNICAL ENGINEER.
 - REFER TO SHEET SG302 FOR REFUSAL REMEDY PROCEDURE AND ALTERNATE FOUNDATION OPTIONS.

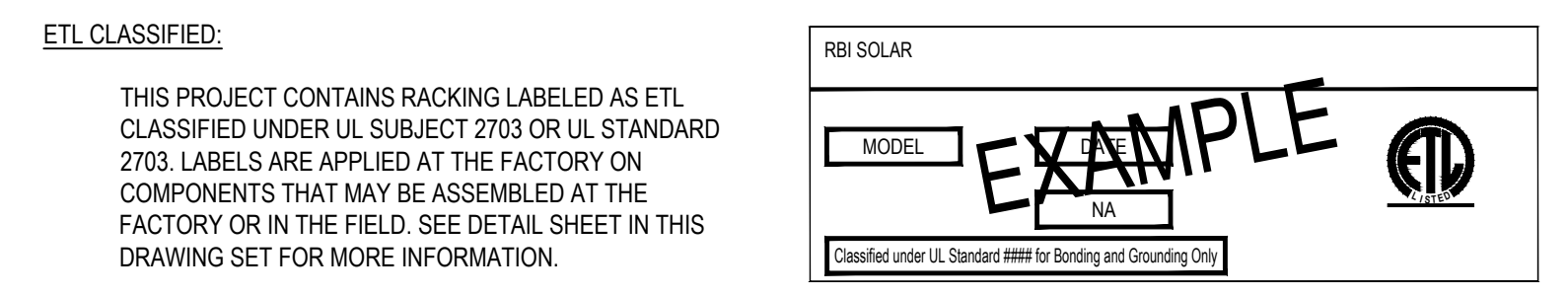
- SPECIAL FIELD INSPECTIONS:**

SPECIAL INSPECTION NOT REQUIRED BY RBI SOLAR. AS REQUIRED BY OWNER/CUSTOMER AND/OR AUTHORITY HAVING JURISDICTION, MINIMUM INSPECTION SHALL INCLUDE THE FOLLOWING NOTES AND TABLE:

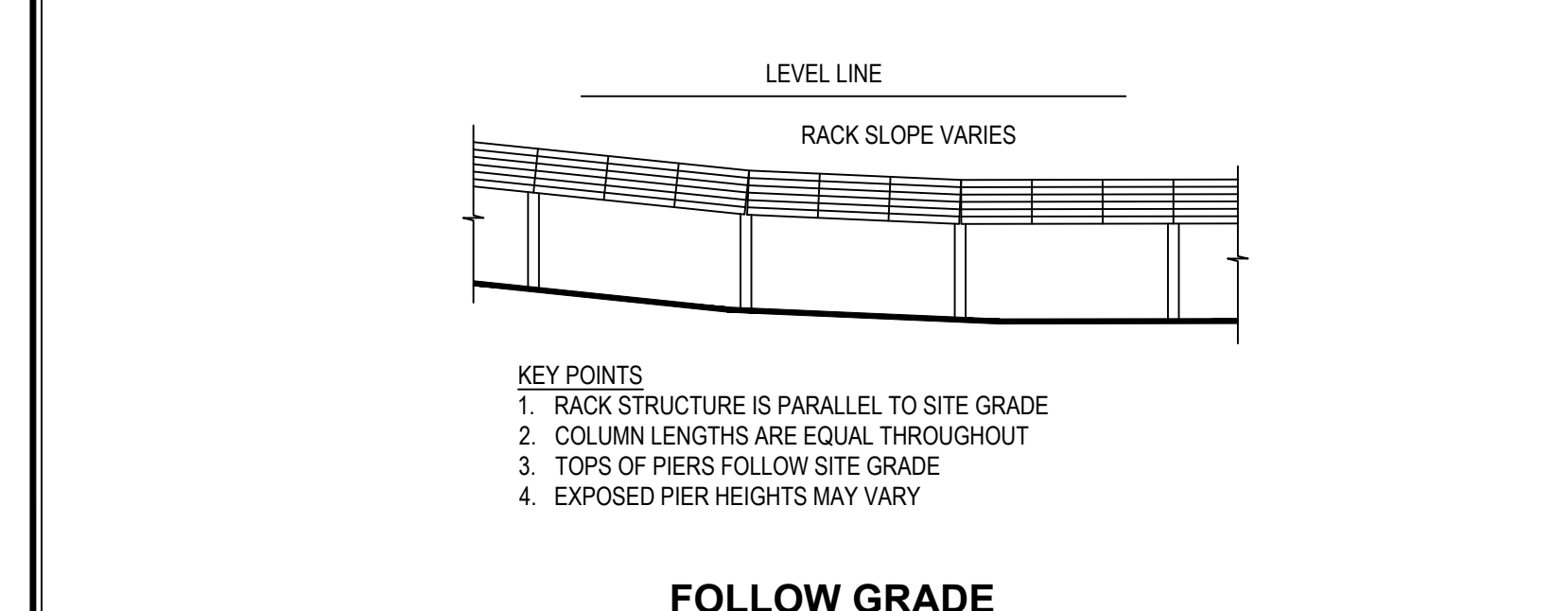
 - ALL SPECIAL INSPECTORS SHALL BE RETAINED BY OWNER/CUSTOMER. THE EXTENT OF THE INSPECTION SHALL COMPLY WITH THE CONTRACT DOCUMENTS, THE BUILDING CODE REQUIREMENTS, AND LOCAL JURISDICTION. IT IS THE OWNER/CUSTOMER'S RESPONSIBILITY TO GIVE PROPER NOTIFICATION TO THE SPECIAL INSPECTOR AND PROCEED WITH THE WORK ONLY AFTER THE SPECIAL INSPECTOR'S APPROVAL.
 - FAILURE TO NOTIFY THE SPECIAL INSPECTOR MAY RESULT IN OWNER/CUSTOMER HAVING TO REMOVE WORK FOR THE PURPOSE OF INSPECTION AT THE OWNER'S/CUSTOMER'S EXPENSE.
 - PREMATURE NOTIFICATION FOR INSPECTION WILL RESULT IN AN ADDITIONAL INSPECTION WITH ALL EXPENSES AND FEES PAID BY THE OWNER/CUSTOMER.
 - SPECIAL INSPECTORS SHALL KEEP RECORDS OF ALL INSPECTIONS. RECORDS SHALL BE FURNISHED TO THE OWNER, ENGINEER OF RECORD, AND LOCAL JURISDICTION AS REQUIRED. ANY AND ALL DISCREPANCIES SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR. CORRECTIONS SHALL BE MADE AND A FINAL REPORT OF INSPECTIONS SHALL BE PROVIDED NOTING COMPLETION OF INSPECTIONS AND CORRECTIONS OF DISCREPANCIES. FAILURE TO CORRECT DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER OF RECORD AND THE LOCAL JURISDICTION AND MAY RESULT IN REMOVAL OF COMPLETED WORK AND ADDITIONAL WORK TO CORRECT DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.

IBC TABLE 1705		
STRUCTURAL STEEL/ALUMINUM FABRICATION	CONTINUOUS	PERIODIC
MATERIAL IDENTIFICATION		X
HIGH STRENGTH BOLTS - MATERIAL IDENTIFICATION OF BOLTS, NUTS AND WASHERS		X
WELD FILLER MATERIALS - IDENTIFICATION AND CONFIRMATION OF COMPLIANCE WITH DESIGN DOCUMENTS		X
STRUCTURAL STEEL/ALUMINUM ERECTION		
MATERIAL IDENTIFICATION		X
INSTALLATION OF HIGH STRENGTH BOLTS		X
WELDED CONNECTIONS		X
MEMBER SIZES AND PLACEMENT		X
GENERAL CONFORMANCE WITH DESIGN DOCUMENTS		X
CONCRETE CONSTRUCTION		
MATERIAL IDENTIFICATION		X
MIX DESIGN VERIFICATION		X
SIZE AND PLACEMENT OF REINFORCING STEEL		X
PLACEMENT OF CONCRETE USING PROPER TECHNIQUES		X
CONCRETE SAMPLES FOR SLUMP, AIR CONTENT, TEMPERATURE, STRENGTH TESTS, ETC. IN ACCORDANCE WITH ACI 318		X
PROPER MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X
FOUNDATIONS		
SIZE AND LOCATION OF FOUNDATION EXCAVATIONS		X
PLACEMENT OF REINFORCING STEEL AS REQUIRED		X

- WORK BY OTHERS:**
 - SITE WORK AND DEVELOPMENT.
 - ALL ELECTRICAL WORK INCLUDING WIRING, CONDUIT, PANELS AND LIGHTS TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
 - GROUNDING REQUIREMENTS.
 - ALL SHADING ANALYSIS AND/OR PRODUCTION ANALYSIS SHALL BE PERFORMED AND VERIFIED BY OTHERS. RBI SOLAR IS NOT RESPONSIBLE FOR PV SYSTEM DESIGN AS IT PERTAINS TO ELECTRICAL OR PV SYSTEM PRODUCTION.



RACK SYSTEM TOPOGRAPHIC RELATIONSHIP



Total Solar Service: Design * Fabrication
Installation * Parts * Repair Service

5513 VINE STREET
CINCINNATI, OH 45217
513.242.205
FAX: 513.242.0816

PROFESSIONAL SEAL

ENGINEER'S SEAL APPLIES TO DESIGN OF STRUCTURAL COMPONENTS ONLY

GROUND MOUNT FOR GREENSKIES CLEAN ENERGY

RELEASE RECORD

MARK	DATE	DESCRIPTION
4	03/16/20	FOR CONSTRUCTION
3	03/13/20	90% REVIEW
2	03/10/20	90% REVIEW
1	02/28/20	90% REVIEW

PROJECT INFORMATION

TITLE & ADDRESS:
STONINGTON TAUGWONK

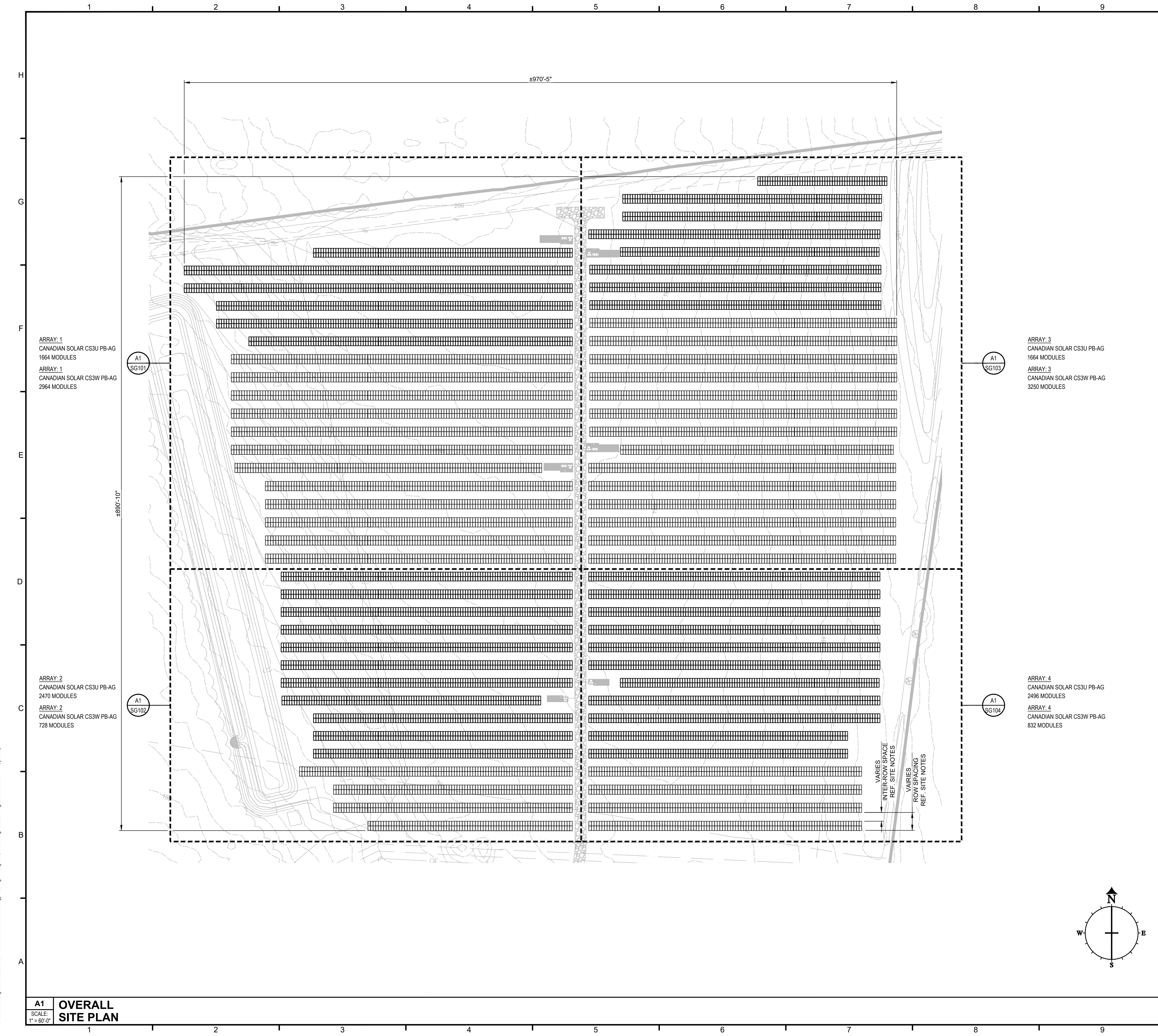
35 TAUGWONK SPUR ROAD
STONINGTON, CT 06378

RBI SOLAR PROJECT No.:
2030067

DRAWN BY: JAB REVIEWED BY: BDS / LKS

SHEET TITLE:
GENERAL NOTES/
MODULE SPECIFICATION SHEETS

SHEET No.:
SG002



SITE NOTES

1. TOPOGRAPHY PROVIDED BY GREENSKIES CLEAN ENERGY ON 02/26/2020. DIMENSIONS SHOWN FOR REFERENCE ONLY. PRESUMPTIVE OR INADEQUATE TOPOGRAPHY USED FOR THIS DESIGN MAY REQUIRE ADDITIONAL MATERIALS. ACTUAL ON-SITE CONDITIONS SHALL BE FIELD VERIFIED AND RBI SOLAR SHALL BE NOTIFIED IF ON-SITE CONDITIONS ARE DIFFERENT THAN SHOWN OR PRESUMED.

BAY INFORMATION

TYPE	QTY.
BAY TYPE 3EP2A	16
BAY TYPE 3P2A	53
BAY TYPE 3WP2A	18
BAY TYPE 4EP2A	51
BAY TYPE 4EP2B	71
BAY TYPE 4P2A	773
BAY TYPE 4P2B	148
BAY TYPE 4WP2A	49
BAY TYPE 4WP2B	71
BAY TYPE 5P2B	569
TOTAL # OF BAYS	1819

BILL OF MATERIALS

ITEM	QTY.
RACKING POSTS:	
POST TYPE A	1027
POST TYPE B	930
TOTAL # OF RACKING POSTS	1957
PURLINS:	
PURLIN MARK Z3A	252
PURLIN MARK Z3WA	72
PURLIN MARK Z4EA	204
PURLIN MARK Z4A	3092
PURLIN MARK Z4WA	196
PURLIN MARK Z4EB	284
PURLIN MARK Z4B	572
PURLIN MARK Z4WB	284
PURLIN MARK Z5B	2292
PURLIN MARK Z3EA	64
TOTAL # OF PURLINS	7312
TOTAL # OF TOP CHORD ASSEMBLIES	1957
TOTAL # OF STANDARD POST TOP ASSEMBLIES	1681
TOTAL # OF EXTENDED POST TOP ASSEMBLIES	276
45 13/16" x 2" SQ. 15 GA. GALVANIZED KNEE BRACES	1957
74 1/2" x 2" SQ. 15 GA. GALVANIZED KNEE BRACES	1957
KNEE BRACE CLIPS	7828
3/4" X 5" MAGNI BOLT WITH NUT	3914
3/8" X 1 1/4" GALV. BOLT WITH NUT	19570
1/2" x 3" GALV. BOLT WITH NUT	3914
3/8" X 3/4" GALV. BOLT WITH NUT	31312
3/8" X 5" GALV. BOLT WITH NUT	1957
3/8" GALV. WASHER	7828
#12 X 1 1/4" HEX HEAD TEK SCREW	4466
MODULE S.S. HARDWARE STACK (BOLT, 2 WASHER, FLANGE NUT)	64272

A1
SCALE:
1" = 60'-0"

**OVERALL
SITE PLAN**

RBI SOLAR
Total Solar Service: Design * Fabrication
Installation * Parts * Repair Service
5513 VINE STREET
CINCINNATI, OH 45217
513.242.2051
FAX: 513.242.0816

PROFESSIONAL SEAL

ENGINEER'S SEAL APPLIES TO DESIGN OF STRUCTURAL COMPONENTS ONLY

GROUND MOUNT FOR GREENSKIES CLEAN ENERGY

RELEASE RECORD

MARK	DATE	DESCRIPTION
4	03/16/20	FOR CONSTRUCTION
3	03/13/20	90% REVIEW
2	03/10/20	90% REVIEW
1	02/28/20	50% REVIEW

PROJECT INFORMATION

TITLE & ADDRESS:
STONINGTON TAUGWONK

35 TAUGWONK SPUR ROAD
STONINGTON, CT 06378

RBI SOLAR PROJECT No.:
2030067

DRAWN BY: JAB	REVIEWED BY: BDS / LKS
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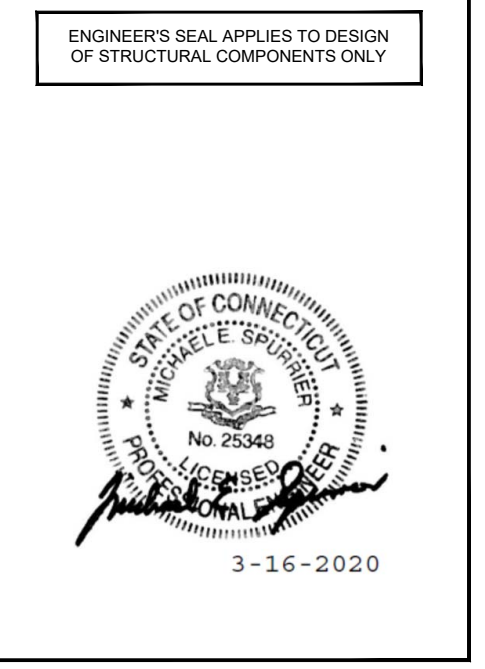
SHEET TITLE:
SITE PLAN & BILL OF MATERIALS

SHEET No.:
SG003

S:\RBI Solar\Design\2020 Jobs\2030067 - Greenskies Renewable Energy - Stonington Taugwonk, CT\Drawings\2030067.dwg, 3/16/2020, 1:38:47 PM, jalknap

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PROFESSIONAL SEAL



GROUND MOUNT FOR GREENSKIES CLEAN ENERGY

RELEASE RECORD

MARK	DATE	DESCRIPTION
4	03/16/20	FOR CONSTRUCTION
3	03/13/20	90% REVIEW
1	03/10/20	90% REVIEW

PROJECT INFORMATION

TITLE & ADDRESS:
STONINGTON TAUGWONK
 35 TAUGWONK SPUR ROAD
 STONINGTON, CT 06378
 RBI SOLAR PROJECT No.:
 2030067
 DRAWN BY: JAB REVIEWED BY: BDS / LKS
 SHEET TITLE:
 ARRAY: 1 COMPONENT LAYOUT
 SHEET No.:
SG101

LEGEND

	SYMBOL REPRESENTS 6" WIDE ROW BREAK PER DETAIL G9/SG301
	SYMBOL REPRESENTS 6" WIDE ROW BREAK PER DETAIL G9/SG302

POST SCHEDULE

SYMBOL	MARK	DESCRIPTION	LENGTH	PIECES	DETAIL
X# OR PER PLAN	A	W6x9 POST	13'-4"	390	A6/SG301
	B	W6x9 POST	13'-4"	183	A6/SG302

POST SETTING NOTES:
 1. ALL POST DIMENSIONS SHOWN ARE CENTERLINE TO CENTERLINE OF POST WEB.
 2. REFERENCE DETAIL A6/SG301 & A6/SG302 FOR ADDITIONAL INFORMATION ON REQUIRED POST EMBED DEPTHS.
 3. POST LENGTH INCLUDES ADDITIONAL MATERIAL TO ALLOW FOR TOPOGRAPHICAL VARIANCE.

"A" CS3W - BAY SCHEDULE

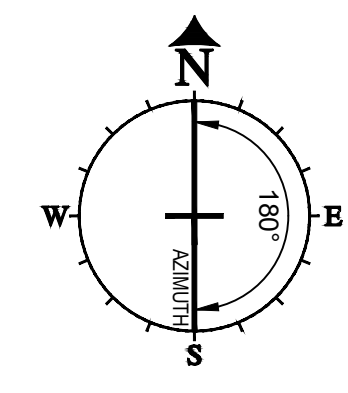
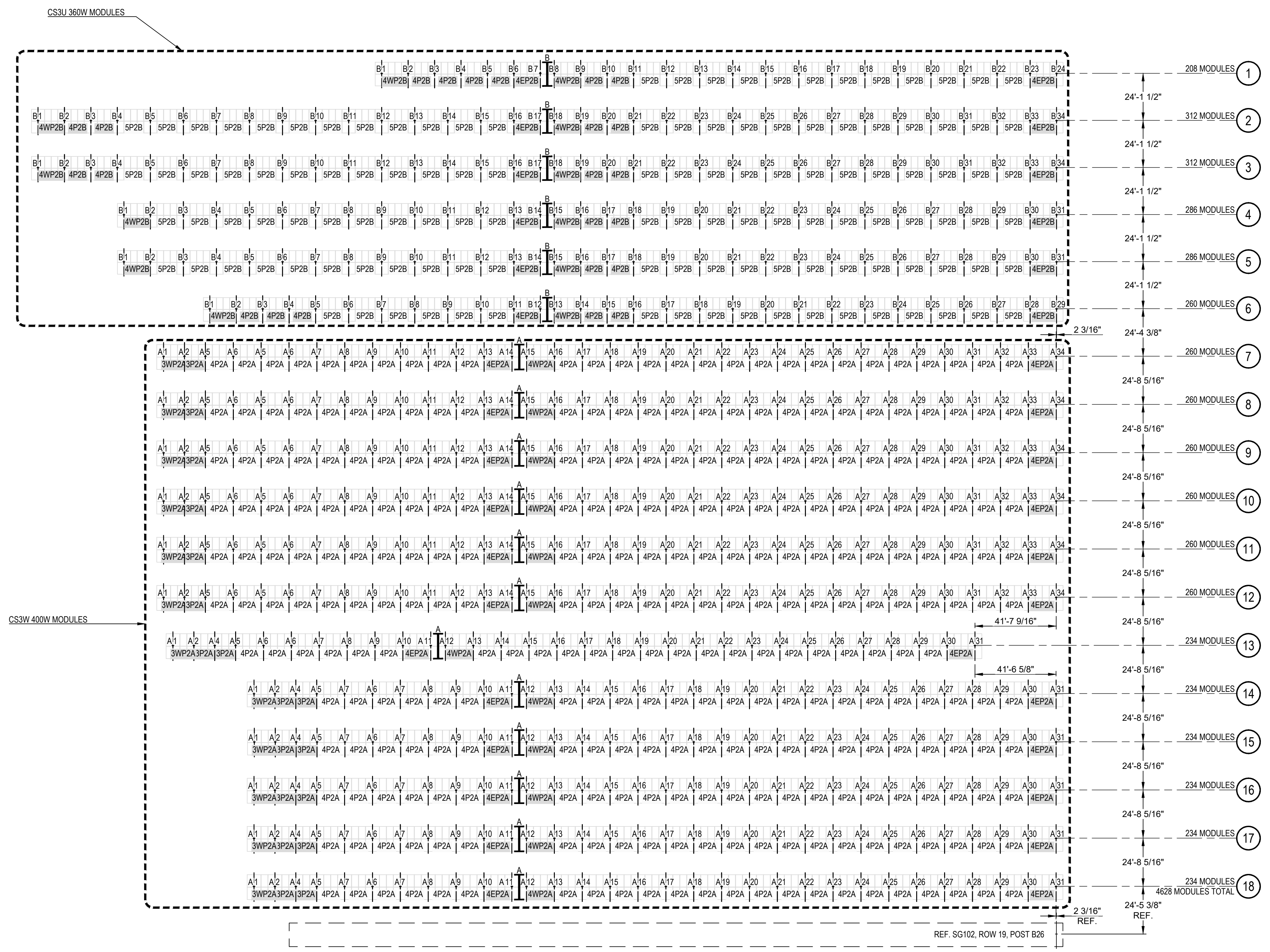
BAYS			PURLINS			DETAIL
TYPE	QTY.	POST-POST	DESCRIPTION	MARK	#/BAY	
3P2A	18	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 3 WIDE x 2 HIGH AND 25.0° TILT	Z3A	4	72 C3/SG301
3WP2A	12	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 3 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 25.0° TILT	Z3WA	4	48 E3/SG301
4EP2A	24	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 25.0° TILT	Z4EA	4	96 G3/SG301
4P2A	300	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH AND 25.0° TILT	Z4A	4	1200 A1/SG301
4WP2A	12	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 25.0° TILT	Z4WA	4	48 C1/SG301

NOTES THIS BAY:
 1. PURLINS ARE 2 1/2" x 7" x 2 1/2" ZEE 16 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 2. TOP CHORDS ARE 136 7/16" x 4" x 4 3/4" CEE 14 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 3. LOWER KNEE BRACES ARE 45 13/16" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 4. UPPER KNEE BRACES ARE 74 1/2" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 5. INSTALL EXTENDED POST TOP ASSEMBLY AT EACH ROW END UNDER CANTILEVER BAY TYPES.

"B" CS3U - BAY SCHEDULE

BAYS			PURLINS			DETAIL
TYPE	QTY.	POST-POST	DESCRIPTION	MARK	#/BAY	
4EP2B	12	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 25.0° TILT	Z4EB	4	48 A3/SG302
4P2B	23	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH AND 25.0° TILT	Z4B	4	92 C3/SG302
4WP2B	12	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 25.0° TILT	Z4WB	4	48 E3/SG302
5P2B	124	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 5 WIDE x 2 HIGH AND 25.0° TILT	Z5B	4	496 G3/SG302

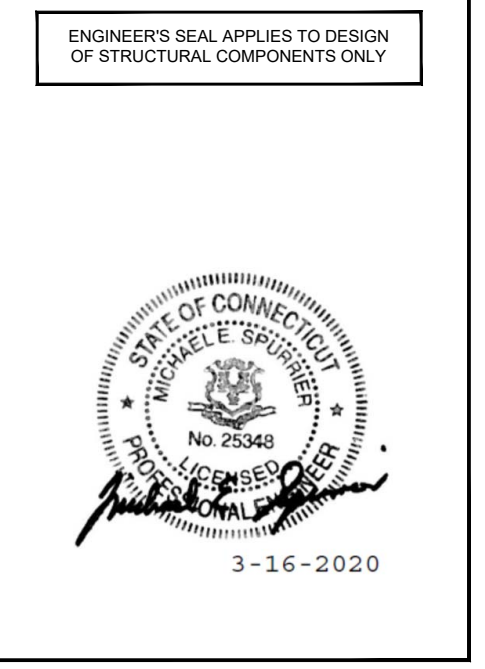
NOTES THIS BAY:
 1. PURLINS ARE 2 1/2" x 7" x 2 1/2" ZEE 16 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 2. TOP CHORDS ARE 132 1/16" x 4" x 4 3/4" CEE 14 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 3. LOWER KNEE BRACES ARE 44 5/8" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 4. UPPER KNEE BRACES ARE 72 11/16" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 5. INSTALL EXTENDED POST TOP ASSEMBLY AT EACH ROW END UNDER CANTILEVER BAY TYPES.



A1
 SCALE:
 1/32" = 1'-0"

**ARRAY: 1
 COMPONENT LAYOUT**

PROFESSIONAL SEAL



GROUND MOUNT FOR GREENSKIES CLEAN ENERGY

RELEASE RECORD

MARK	DATE	DESCRIPTION
4	03/16/20	FOR CONSTRUCTION
3	03/13/20	90% REVIEW
1	03/10/20	90% REVIEW

PROJECT INFORMATION

TITLE & ADDRESS:
STONINGTON TAUGWONK
 35 TAUGWONK SPUR ROAD
 STONINGTON, CT 06378
 RBI SOLAR PROJECT No.: 2030067
 DRAWN BY: JAB REVIEWED BY: BDS / LKS
 SHEET TITLE: ARRAY: 2 COMPONENT LAYOUT
SG102

LEGEND

	SYMBOL REPRESENTS 6' WIDE ROW BREAK PER DETAIL G9/SG301
	SYMBOL REPRESENTS 8' WIDE ROW BREAK PER DETAIL G9/SG302

POST SCHEDULE

SYMBOL	MARK	DESCRIPTION	LENGTH	PIECES	DETAIL
X#	A	W6x9 POST	13'-4"	97	A6/SG301
X#	B	W6x9 POST	13'-4"	278	A6/SG302

POST SETTING NOTES:
 1. ALL POST DIMENSIONS SHOWN ARE CENTERLINE TO CENTERLINE OF POST WEB.
 2. REFERENCE DETAIL A6/SG301 & A6/SG302 FOR ADDITIONAL INFORMATION ON REQUIRED POST EMBED DEPTHS.
 3. POST LENGTH INCLUDES ADDITIONAL MATERIAL TO ALLOW FOR TOPOGRAPHICAL VARIANCE.

"A" CS3W - BAY SCHEDULE

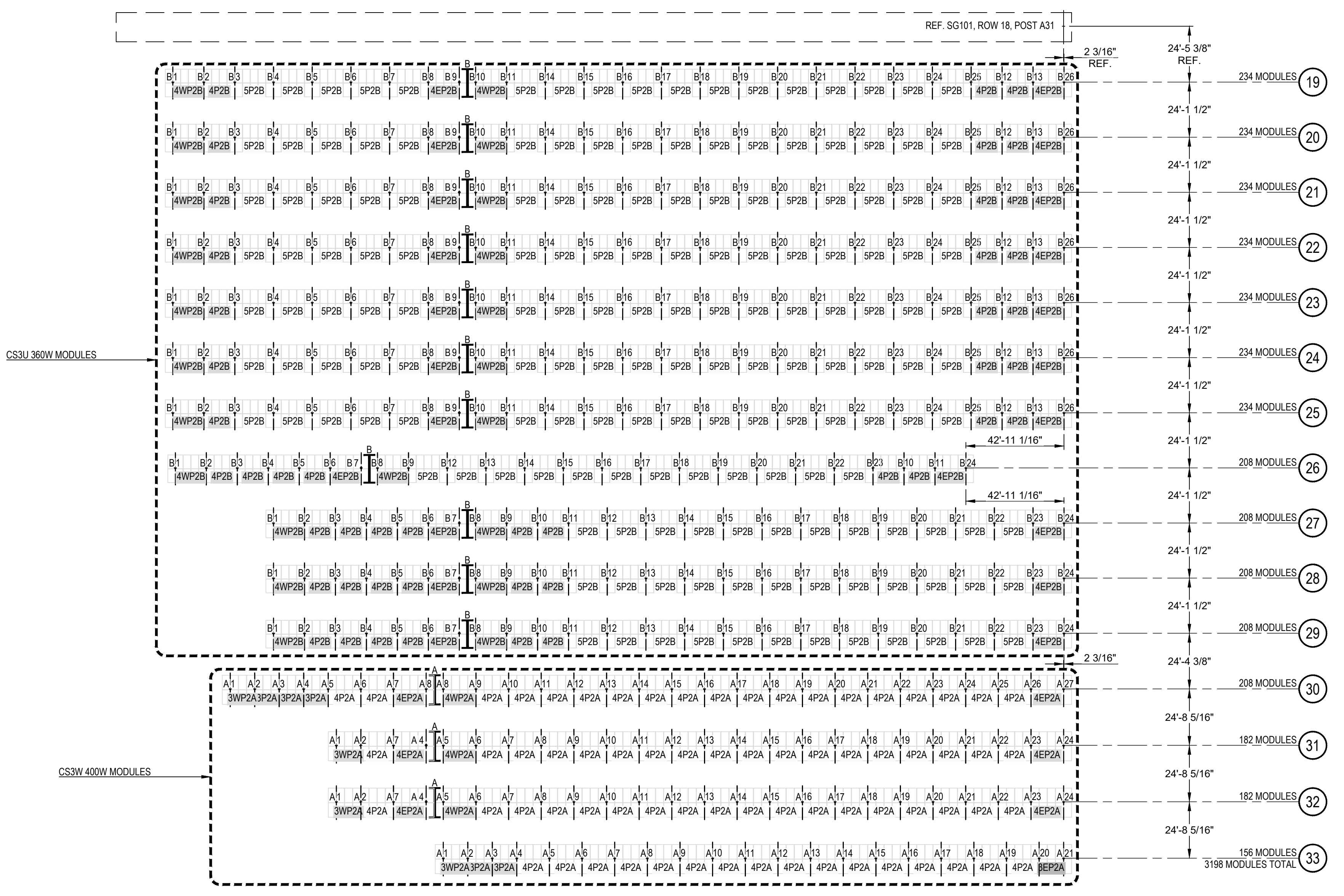
TYPE	QTY.	POST-POST	DESCRIPTION	PURLINS			DETAIL
				MARK	#/BAY	PCS.	
3EP2A	1	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 3 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 25.0° TILT	Z3EA	4	4	A3/SG301
3P2A	5	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 3 WIDE x 2 HIGH AND 25.0° TILT	Z3A	4	20	C3/SG301
3WP2A	4	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 3 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 25.0° TILT	Z3WA	4	16	E3/SG301
4EP2A	6	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 25.0° TILT	Z4EA	4	24	G3/SG301
4P2A	71	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH AND 25.0° TILT	Z4A	4	284	A3/SG301
4WP2A	3	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 25.0° TILT	Z4WA	4	12	C3/SG301

NOTES THIS BAY:
 1. PURLINS ARE 2 1/2" x 7" x 2 1/2" ZEE 16 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 2. TOP CHORDS ARE 136 7/16" x 4" x 4 3/4" CEE 14 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 3. LOWER KNEE BRACES ARE 45 13/16" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 4. UPPER KNEE BRACES ARE 74 1/2" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 5. INSTALL EXTENDED POST TOP ASSEMBLY AT EACH ROW END UNDER CANTILEVER BAY TYPES.

"B" CS3U - BAY SCHEDULE

TYPE	QTY.	POST-POST	DESCRIPTION	PURLINS			DETAIL
				MARK	#/BAY	PCS.	
4EP2B	22	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 25.0° TILT	Z4EB	4	88	A3/SG302
4P2B	45	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH AND 25.0° TILT	Z4B	4	180	C3/SG302
4WP2B	22	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 25.0° TILT	Z4WB	4	88	E3/SG302
5P2B	167	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 5 WIDE x 2 HIGH AND 25.0° TILT	Z5B	4	668	G3/SG302

NOTES THIS BAY:
 1. PURLINS ARE 2 1/2" x 7" x 2 1/2" ZEE 16 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 2. TOP CHORDS ARE 132 1/16" x 4" x 4 3/4" CEE 14 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 3. LOWER KNEE BRACES ARE 44 5/8" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 4. UPPER KNEE BRACES ARE 72 11/16" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 5. INSTALL EXTENDED POST TOP ASSEMBLY AT EACH ROW END UNDER CANTILEVER BAY TYPES.



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PROFESSIONAL SEAL

ENGINEER'S SEAL APPLIES TO DESIGN OF STRUCTURAL COMPONENTS ONLY



GROUND MOUNT FOR GREENSKIES CLEAN ENERGY

RELEASE RECORD

MARK	DATE	DESCRIPTION
4	03/16/20	FOR CONSTRUCTION
3	03/13/20	90% REVIEW
1	03/10/20	90% REVIEW

PROJECT INFORMATION

TITLE & ADDRESS:
STONINGTON TAUGWONK

35 TAUGWONK SPUR ROAD
STONINGTON, CT 06378

RBI SOLAR PROJECT No.:
2030067

DRAWN BY: JAB REVIEWED BY: BDS / LKS

SHEET TITLE:
ARRAY: 3
COMPONENT LAYOUT

SHEET No.:
SG103

LEGEND

	SYMBOL REPRESENTS 6" WIDE ROW BREAK PER DETAIL G9/SG301
	SYMBOL REPRESENTS 6" WIDE ROW BREAK PER DETAIL G9/SG302

POST SCHEDULE

SYMBOL	MARK	DESCRIPTION	LENGTH	PIECES	DETAIL
"X" # OR PER PLAN	A	W6x9 POST	13'-4"	430	A6/SG301
	B	W6x9 POST	13'-4"	188	A6/SG302

POST SETTING NOTES:
1. ALL POST DIMENSIONS SHOWN ARE CENTERLINE TO CENTERLINE OF POST WEB.
2. REFERENCE DETAIL A6/SG301 & A6/SG302 FOR ADDITIONAL INFORMATION ON REQUIRED POST EMBED DEPTHS.
3. POST LENGTH INCLUDES ADDITIONAL MATERIAL TO ALLOW FOR TOPOGRAPHICAL VARIANCE.

"A" CS3W - BAY SCHEDULE

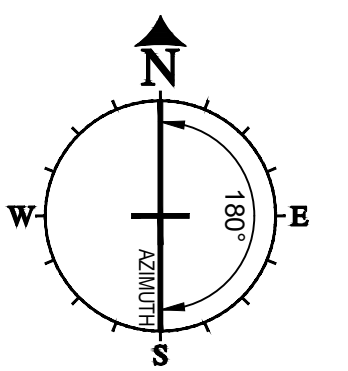
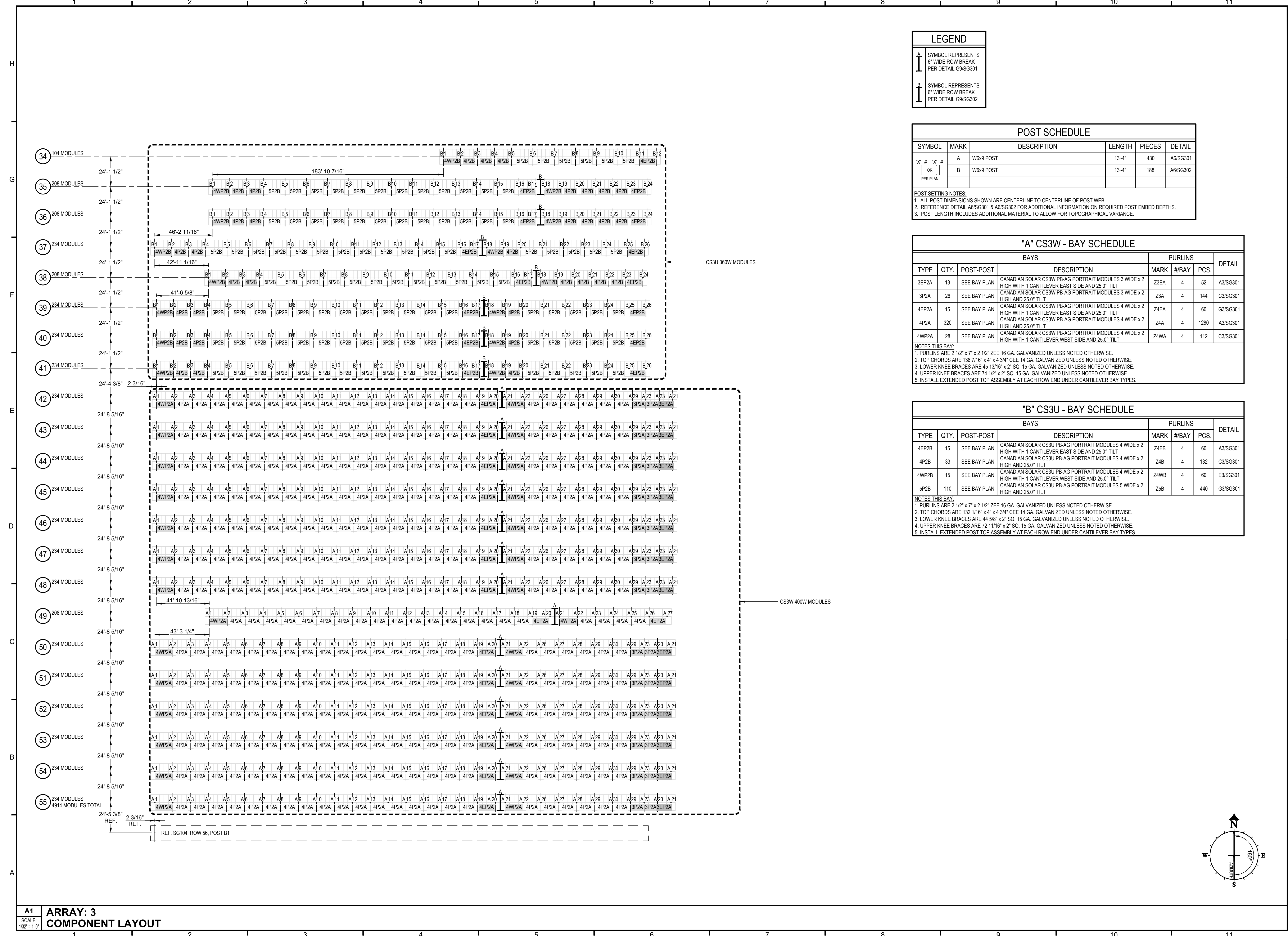
TYPE	QTY.	POST-POST	BAYS			PURLINS			DETAIL
			MARK	#/BAY	PCS.	MARK	#/BAY	PCS.	
3EP2A	13	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 3 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 25.0° TILT	Z3EA	4	52	A3/SG301		
3P2A	26	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 3 WIDE x 2 HIGH AND 25.0° TILT	Z3A	4	144	C3/SG301		
4EP2A	15	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 25.0° TILT	Z4EA	4	60	G3/SG301		
4P2A	320	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH AND 25.0° TILT	Z4A	4	1280	A3/SG301		
4WP2A	28	SEE BAY PLAN	CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 25.0° TILT	Z4WA	4	112	C3/SG301		

NOTES THIS BAY:
1. PURLINS ARE 2 1/2" x 7" x 2 1/2" ZEE 16 GA. GALVANIZED UNLESS NOTED OTHERWISE.
2. TOP CHORDS ARE 136 7/16" x 4" x 4 3/4" CEE 14 GA. GALVANIZED UNLESS NOTED OTHERWISE.
3. LOWER KNEE BRACES ARE 45 13/16" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
4. UPPER KNEE BRACES ARE 74 1/2" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
5. INSTALL EXTENDED POST TOP ASSEMBLY AT EACH ROW END UNDER CANTILEVER BAY TYPES.

"B" CS3U - BAY SCHEDULE

TYPE	QTY.	POST-POST	BAYS			PURLINS			DETAIL
			MARK	#/BAY	PCS.	MARK	#/BAY	PCS.	
4EP2B	15	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 25.0° TILT	Z4EB	4	60	A3/SG301		
4P2B	33	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH AND 25.0° TILT	Z4B	4	132	C3/SG301		
4WP2B	15	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 25.0° TILT	Z4WB	4	60	E3/SG301		
5P2B	110	SEE BAY PLAN	CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 5 WIDE x 2 HIGH AND 25.0° TILT	Z5B	4	440	G3/SG301		

NOTES THIS BAY:
1. PURLINS ARE 2 1/2" x 7" x 2 1/2" ZEE 16 GA. GALVANIZED UNLESS NOTED OTHERWISE.
2. TOP CHORDS ARE 132 1/16" x 4" x 4 3/4" CEE 14 GA. GALVANIZED UNLESS NOTED OTHERWISE.
3. LOWER KNEE BRACES ARE 44 5/8" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
4. UPPER KNEE BRACES ARE 72 11/16" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
5. INSTALL EXTENDED POST TOP ASSEMBLY AT EACH ROW END UNDER CANTILEVER BAY TYPES.



A1
SCALE:
1/32" = 1'-0"

**ARRAY: 3
COMPONENT LAYOUT**

S:\RBI Solar\Design\2020_Job\2030067 - Greenskies Renewable Energy - Stonington Taugwonk, CT\Drawings\2030067.dwg, 3/16/2020, 1:38:59 PM, jhalkap

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PROFESSIONAL SEAL

ENGINEER'S SEAL APPLIES TO DESIGN OF STRUCTURAL COMPONENTS ONLY



GROUND MOUNT FOR GREENSKIES CLEAN ENERGY

RELEASE RECORD

MARK	DATE	DESCRIPTION
4	03/16/20	FOR CONSTRUCTION
3	03/13/20	90% REVIEW
1	03/10/20	90% REVIEW

PROJECT INFORMATION

TITLE & ADDRESS:
STONINGTON TAUGWONK
 35 TAUGWONK SPUR ROAD
 STONINGTON, CT 06378
 RBI SOLAR PROJECT No.: 2030067
 DRAWN BY: JAB REVIEWED BY: BDS / LKS
 SHEET TITLE: ARRAY: 4 COMPONENT LAYOUT
 SHEET No.: **SG104**

LEGEND

	SYMBOL REPRESENTS 6' WIDE ROW BREAK PER DETAIL G9/SG301
	SYMBOL REPRESENTS 6' WIDE ROW BREAK PER DETAIL G9/SG302

POST SCHEDULE

SYMBOL	MARK	DESCRIPTION	LENGTH	PIECES	DETAIL
X' # OR Y' # PER PLAN	A	W6x9 POST	13'-4"	110	A6/SG301
	B	W6x9 POST	13'-4"	281	A6/SG302

POST SETTING NOTES:
 1. ALL POST DIMENSIONS SHOWN ARE CENTERLINE TO CENTERLINE OF POST WEB.
 2. REFERENCE DETAIL A6/SG301 & A6/SG302 FOR ADDITIONAL INFORMATION ON REQUIRED POST EMBED DEPTHS.
 3. POST LENGTH INCLUDES ADDITIONAL MATERIAL TO ALLOW FOR TOPOGRAPHICAL VARIANCE.

"A" CS3W - BAY SCHEDULE

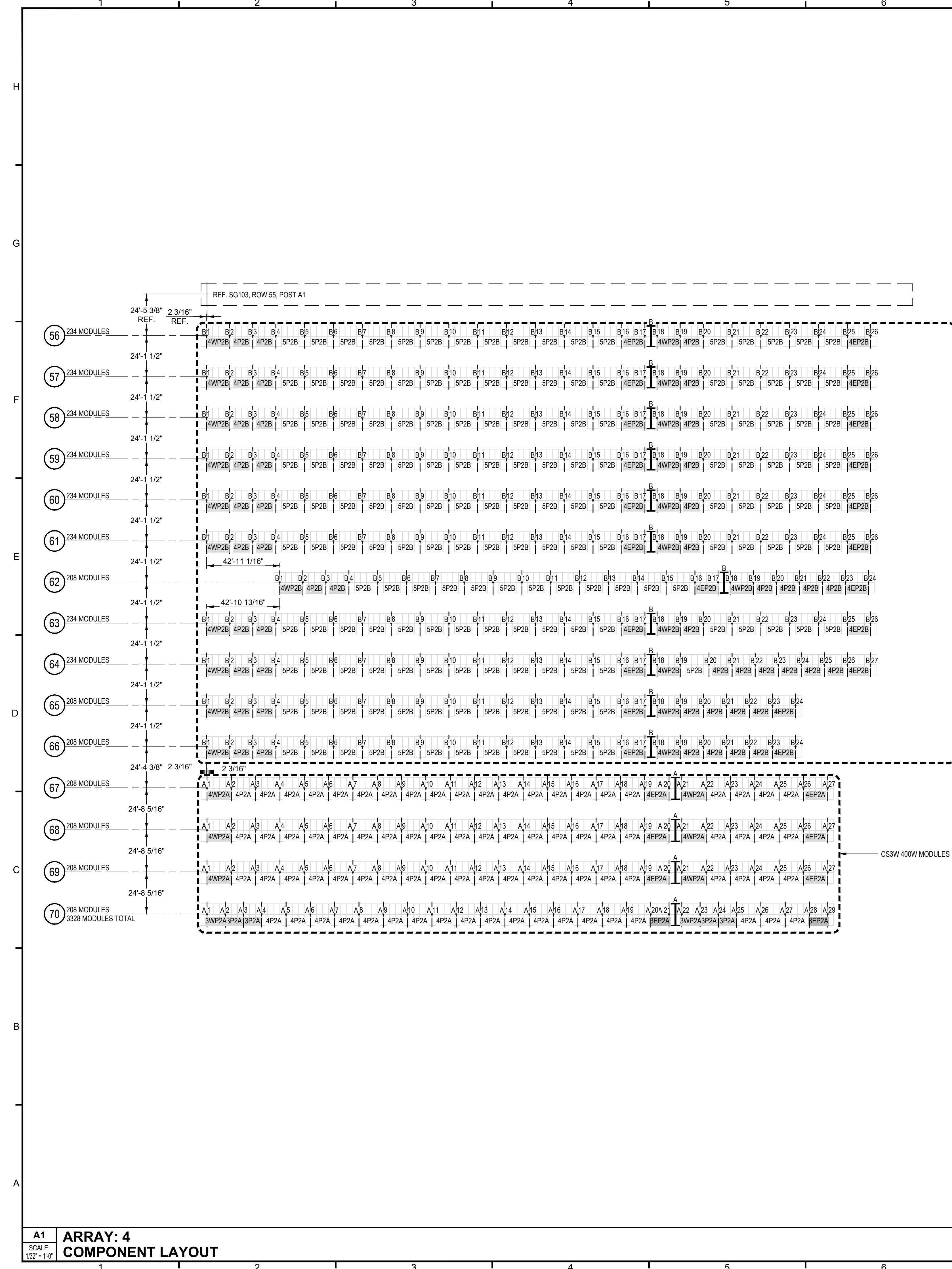
BAYS			PURLINS			DETAIL
TYPE	QTY.	POST-POST DESCRIPTION	MARK	#/BAY	PCS.	
3EP2A	2	SEE BAY PLAN CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 3 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 25.0° TILT	Z3EA	4	8	A3/SG301
3P2A	4	SEE BAY PLAN CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 3 WIDE x 2 HIGH AND 25.0° TILT	Z3A	4	16	C3/SG301
3WP2A	2	SEE BAY PLAN CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 3 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 25.0° TILT	Z3WA	4	8	E3/SG301
4EP2A	6	SEE BAY PLAN CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 25.0° TILT	Z4EA	4	24	G3/SG301
4P2A	82	SEE BAY PLAN CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH AND 25.0° TILT	Z4A	4	328	A1/SG301
4WP2A	6	SEE BAY PLAN CANADIAN SOLAR CS3W PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 25.0° TILT	Z4WA	4	24	C1/SG301

NOTES THIS BAY:
 1. PURLINS ARE 2 1/2" x 7" x 2 1/2" ZEE 16 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 2. TOP CHORDS ARE 136 7/16" x 4" x 4 3/4" CEE 14 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 3. LOWER KNEE BRACES ARE 45 11/16" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 4. UPPER KNEE BRACES ARE 74 1/2" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 5. INSTALL EXTENDED POST TOP ASSEMBLY AT EACH ROW END UNDER CANTILEVER BAY TYPES.

"B" CS3U - BAY SCHEDULE

BAYS			PURLINS			DETAIL
TYPE	QTY.	POST-POST DESCRIPTION	MARK	#/BAY	PCS.	
4EP2B	22	SEE BAY PLAN CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER EAST SIDE AND 25.0° TILT	Z4EB	4	88	A3/SG302
4P2B	47	SEE BAY PLAN CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH AND 25.0° TILT	Z4B	4	168	C3/SG302
4WP2B	22	SEE BAY PLAN CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 4 WIDE x 2 HIGH WITH 1 CANTILEVER WEST SIDE AND 25.0° TILT	Z4WB	4	88	E3/SG302
5P2B	168	SEE BAY PLAN CANADIAN SOLAR CS3U PB-AG PORTRAIT MODULES 5 WIDE x 2 HIGH AND 25.0° TILT	Z5B	4	688	G3/SG302

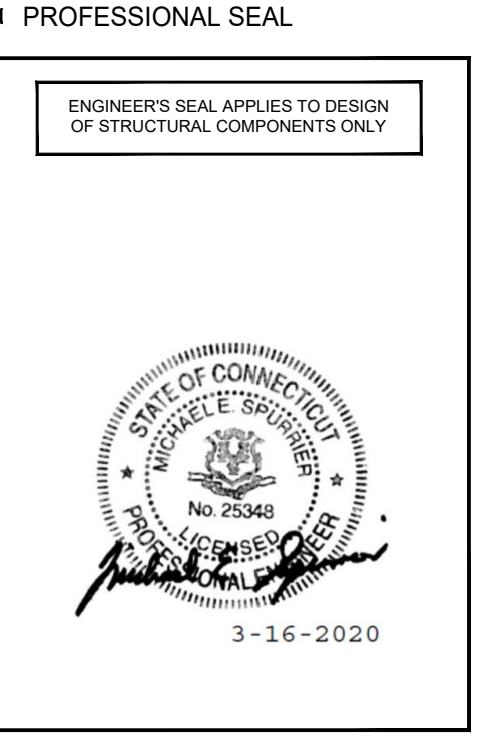
NOTES THIS BAY:
 1. PURLINS ARE 2 1/2" x 7" x 2 1/2" ZEE 16 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 2. TOP CHORDS ARE 132 1/16" x 4" x 4 3/4" CEE 14 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 3. LOWER KNEE BRACES ARE 44 5/8" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 4. UPPER KNEE BRACES ARE 72 11/16" x 2" SQ. 15 GA. GALVANIZED UNLESS NOTED OTHERWISE.
 5. INSTALL EXTENDED POST TOP ASSEMBLY AT EACH ROW END UNDER CANTILEVER BAY TYPES.



A1
 SCALE: 1/32" = 1'-0"
ARRAY: 4 COMPONENT LAYOUT

S:\RBI Solar\Design\2020_Job\2030067 - GreenSkies Renewable Energy - Stonington Taugwonk, CT\Drawings\2030067 Array_3/16/2020_146:03 PM_RJK.dwg

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**GROUND MOUNT FOR
 GREENSKIES CLEAN
 ENERGY**

RELEASE RECORD

MARK	DATE	DESCRIPTION
4	03/16/20	FOR CONSTRUCTION
3	03/13/20	90% REVIEW
2	03/10/20	90% REVIEW
1	02/28/20	50% REVIEW

PROJECT INFORMATION

TITLE & ADDRESS:
**STONINGTON
 TAUGWONK**

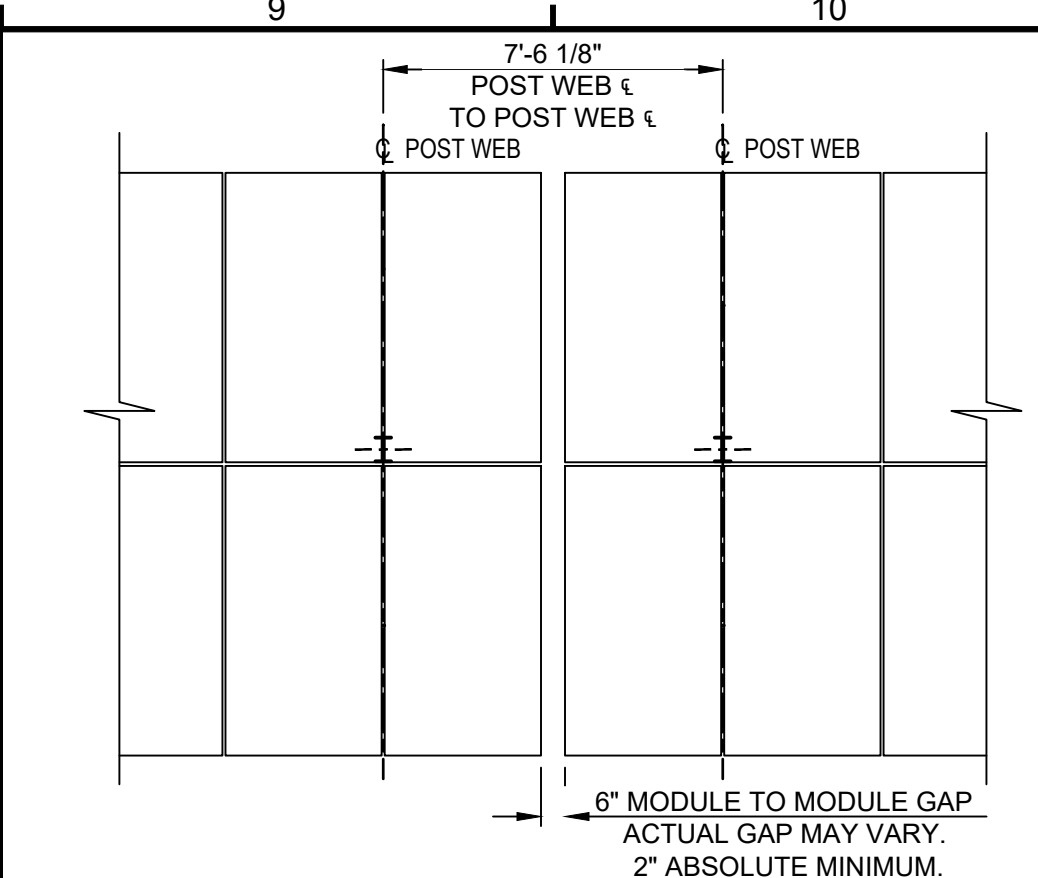
35 TAUGWONK SPUR
 ROAD
 STONINGTON, CT 06378

RBI SOLAR PROJECT No.:
 2030067

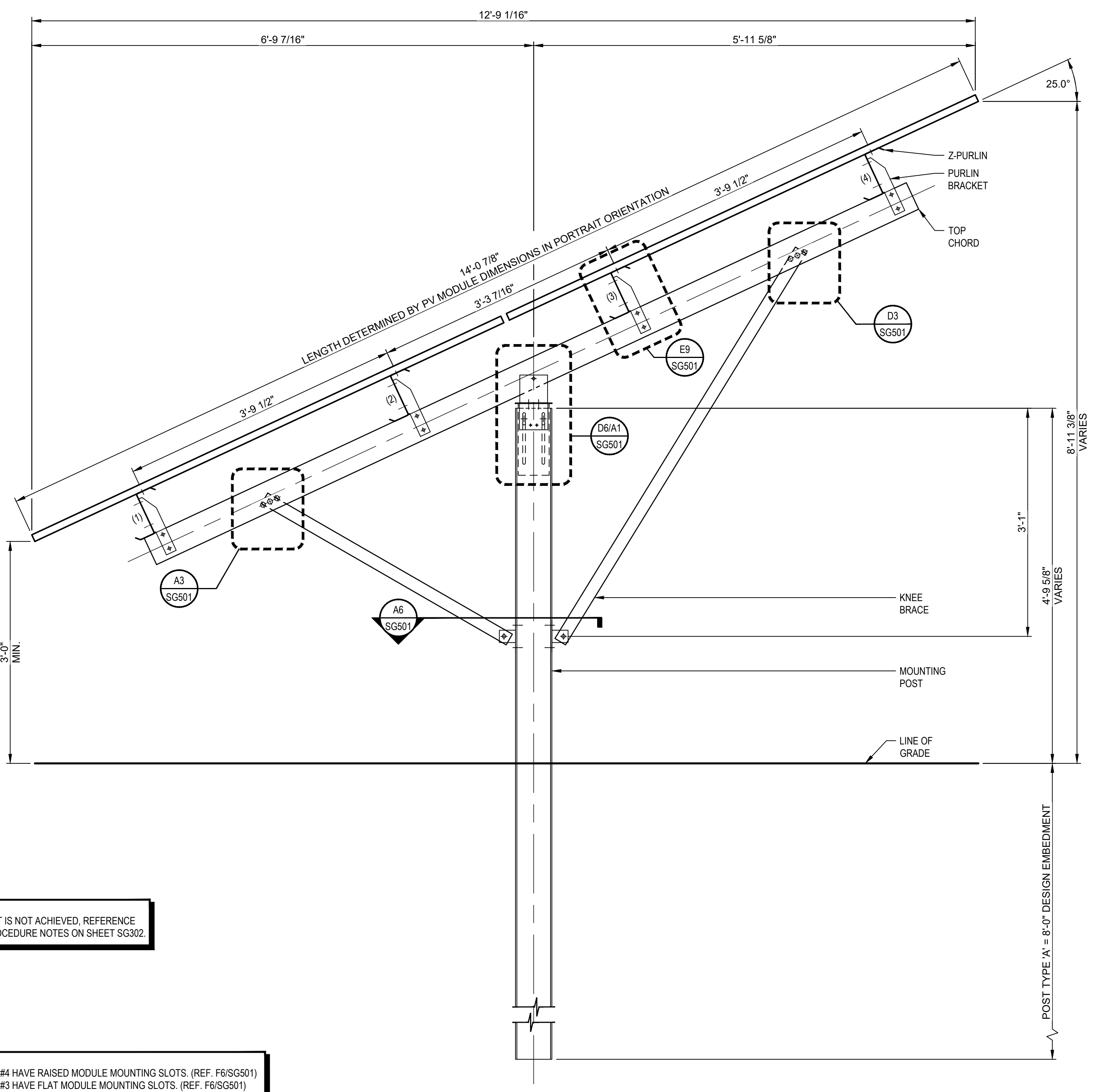
DRAWN BY: JAB REVIEWED BY: BDS / LKS

SHEET TITLE:
**"A" CS3W PB-AG
 RACK SECTION
 & BAY PLAN VIEWS**

SHEET No.:
SG301

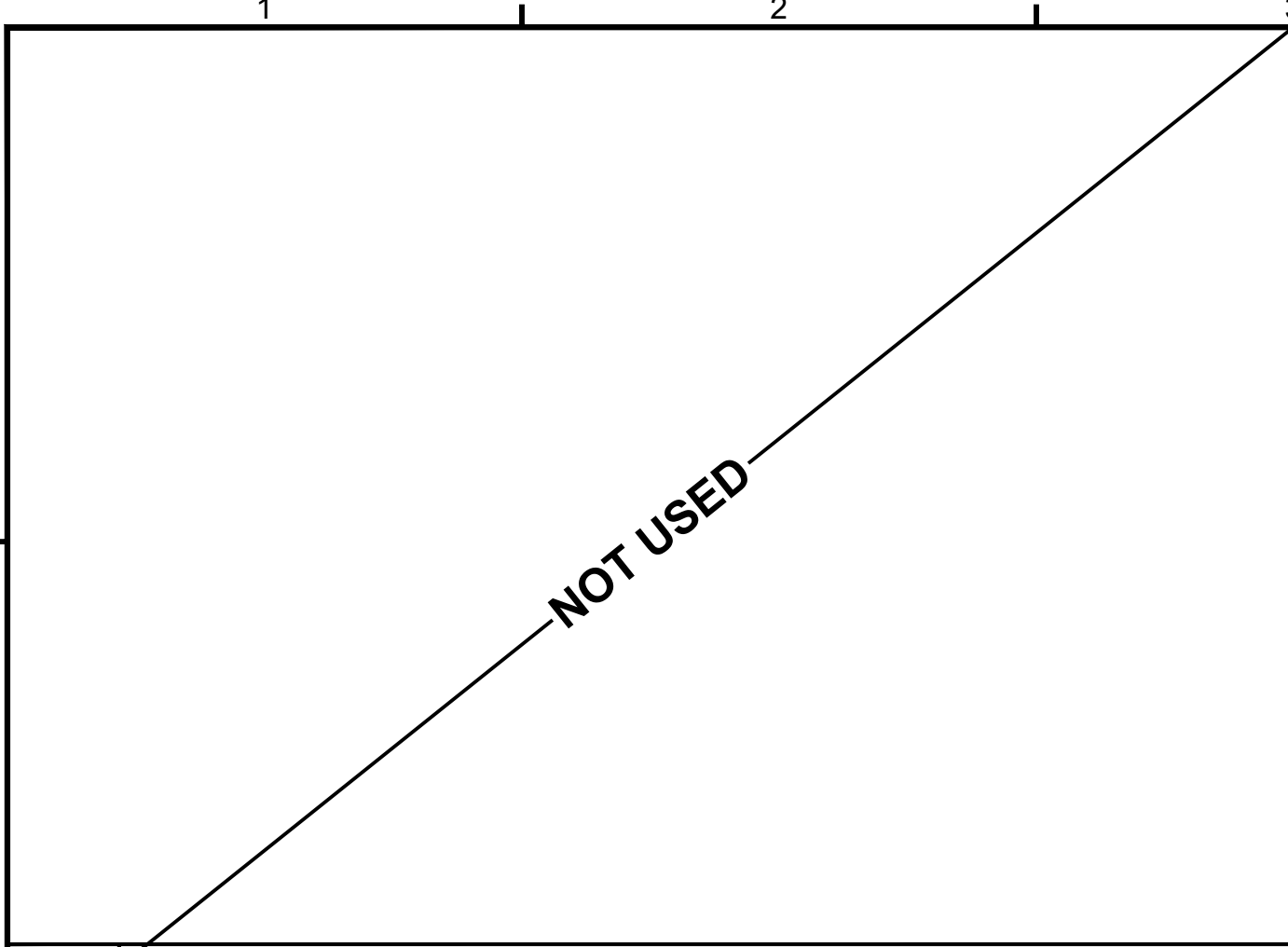


NOTE: COMPONENTS SHOWN MAY VARY FROM ACTUAL CONFIGURATION.
 SEE INDIVIDUAL BAY PLANS THIS SHEET FOR MORE DETAILED PLANS.
 INSTALL EXTENDED POST TOP ASSEMBLY AT EITHER SIDE OF ROW BREAK PER DETAIL A1/SG501.

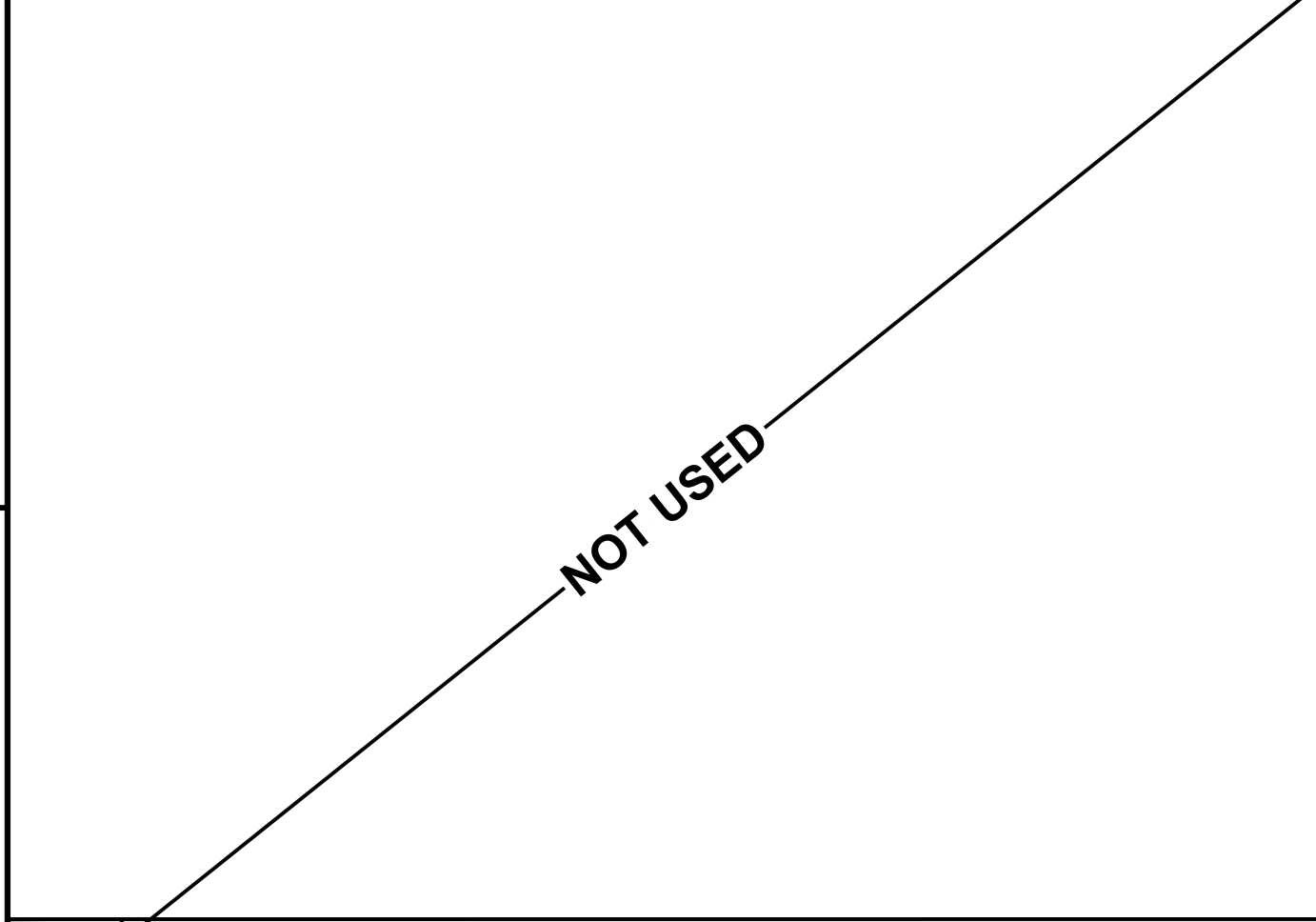


NOTE:
 IF DESIGN EMBEDMENT IS NOT ACHIEVED, REFERENCE
 REFUSAL/REMEDY PROCEDURE NOTES ON SHEET SG302

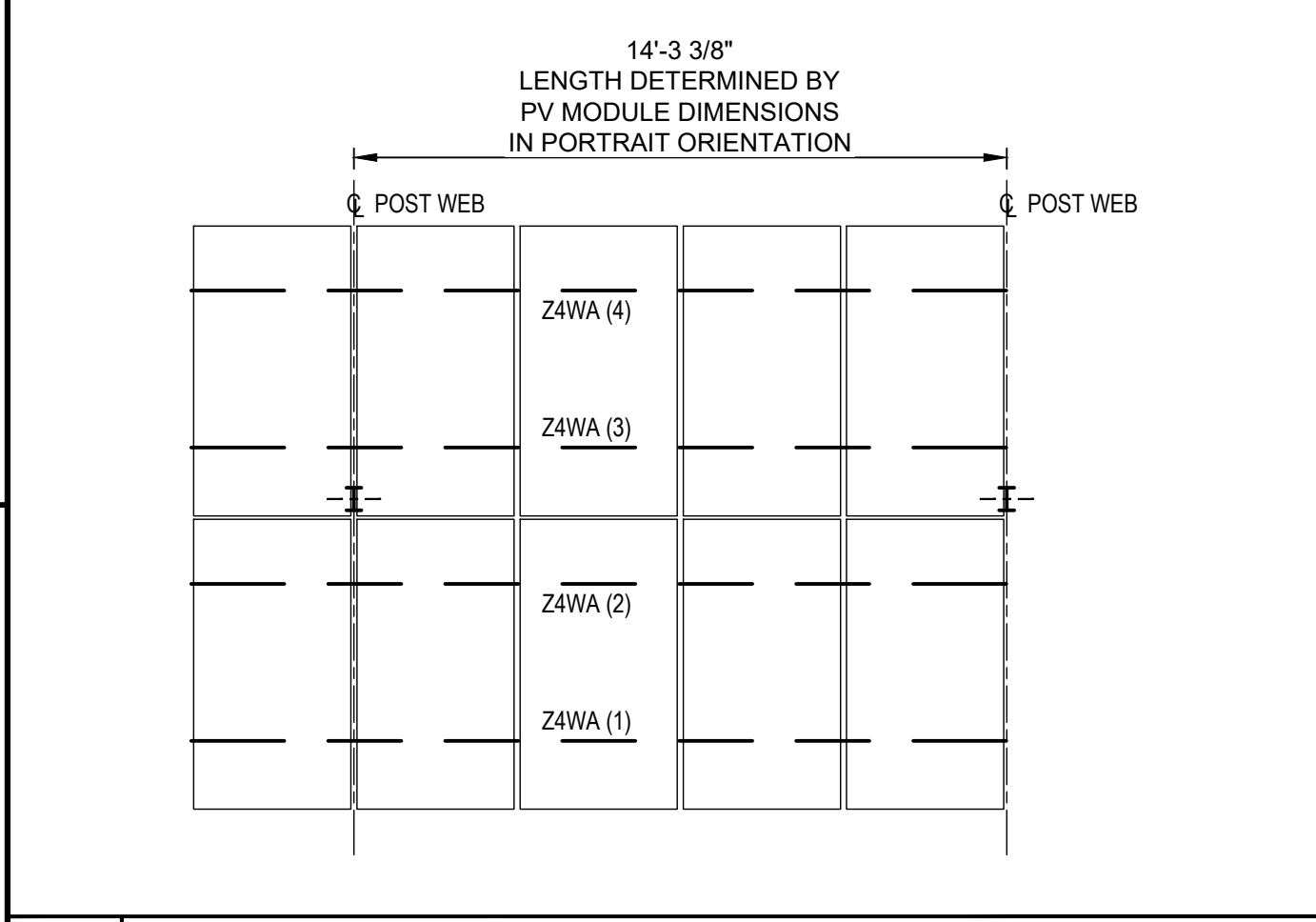
NOTE:
 1. Z-PURLINS #1 & #4 HAVE RAISED MODULE MOUNTING SLOTS. (REF. F6/SG501)
 2. Z-PURLINS #2 & #3 HAVE FLAT MODULE MOUNTING SLOTS. (REF. F6/SG501)



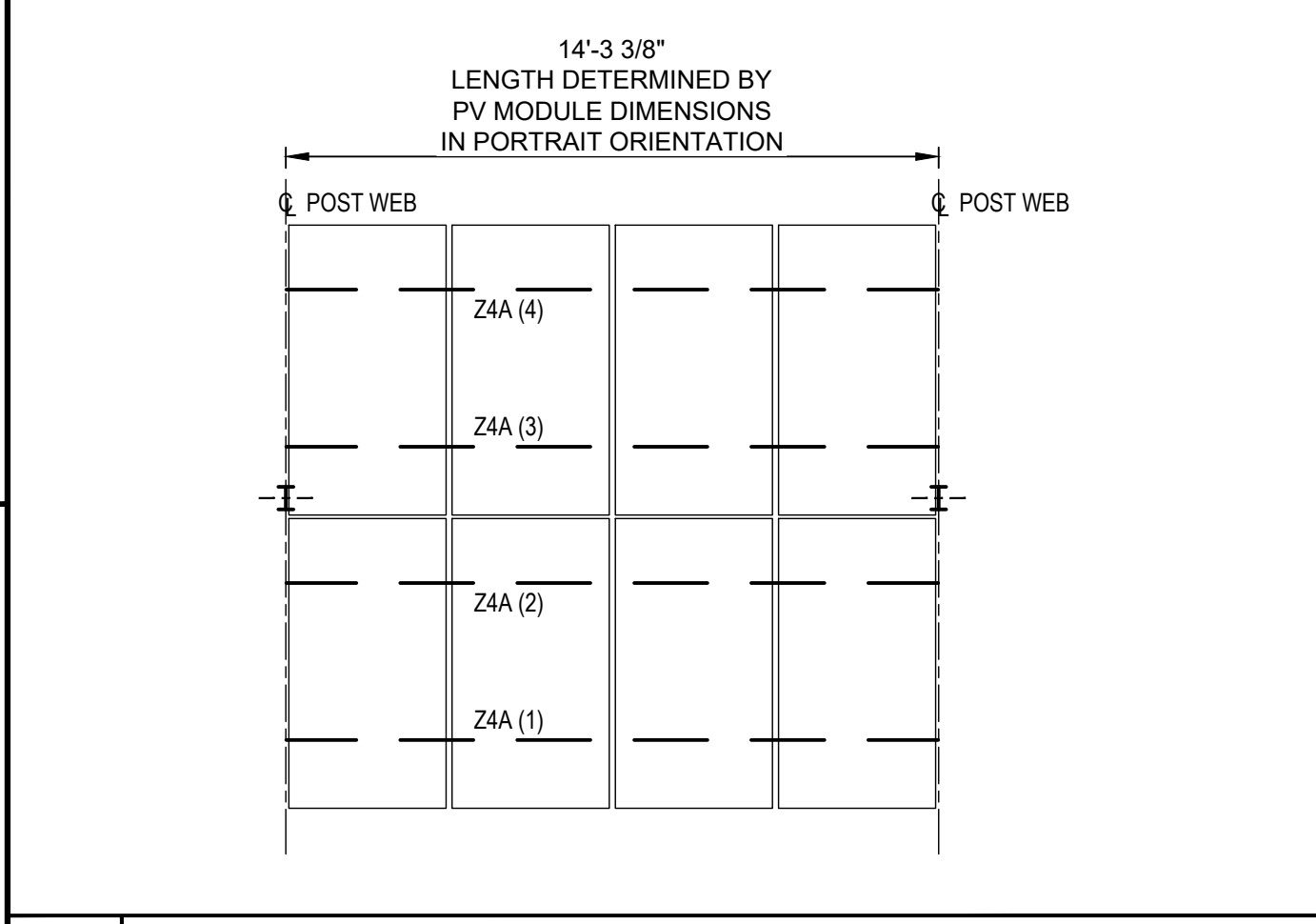
G1
 SCALE: 1/4" = 1'-0"
BAY PLAN VIEW



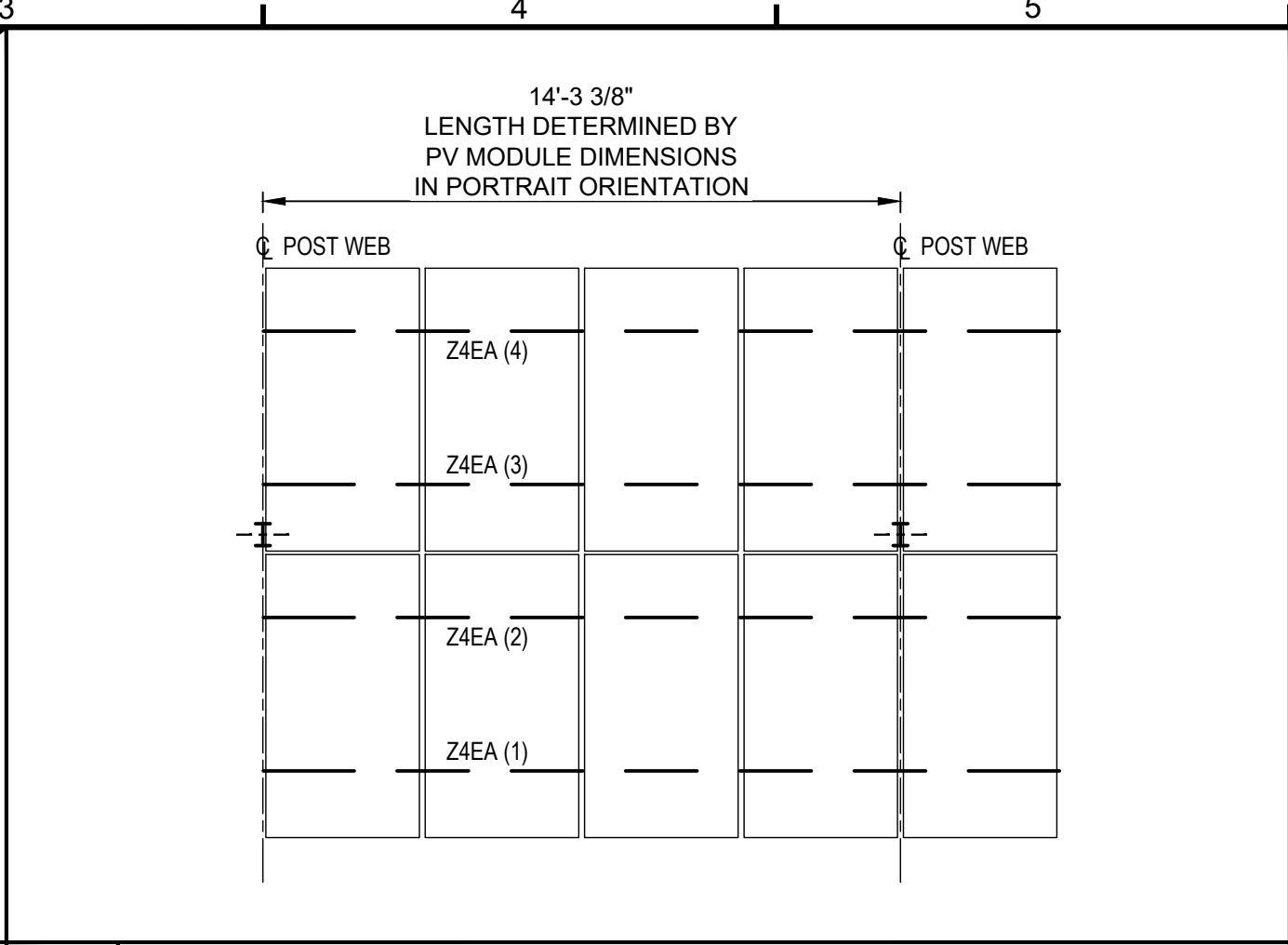
E1
 SCALE: 1/4" = 1'-0"
BAY PLAN VIEW



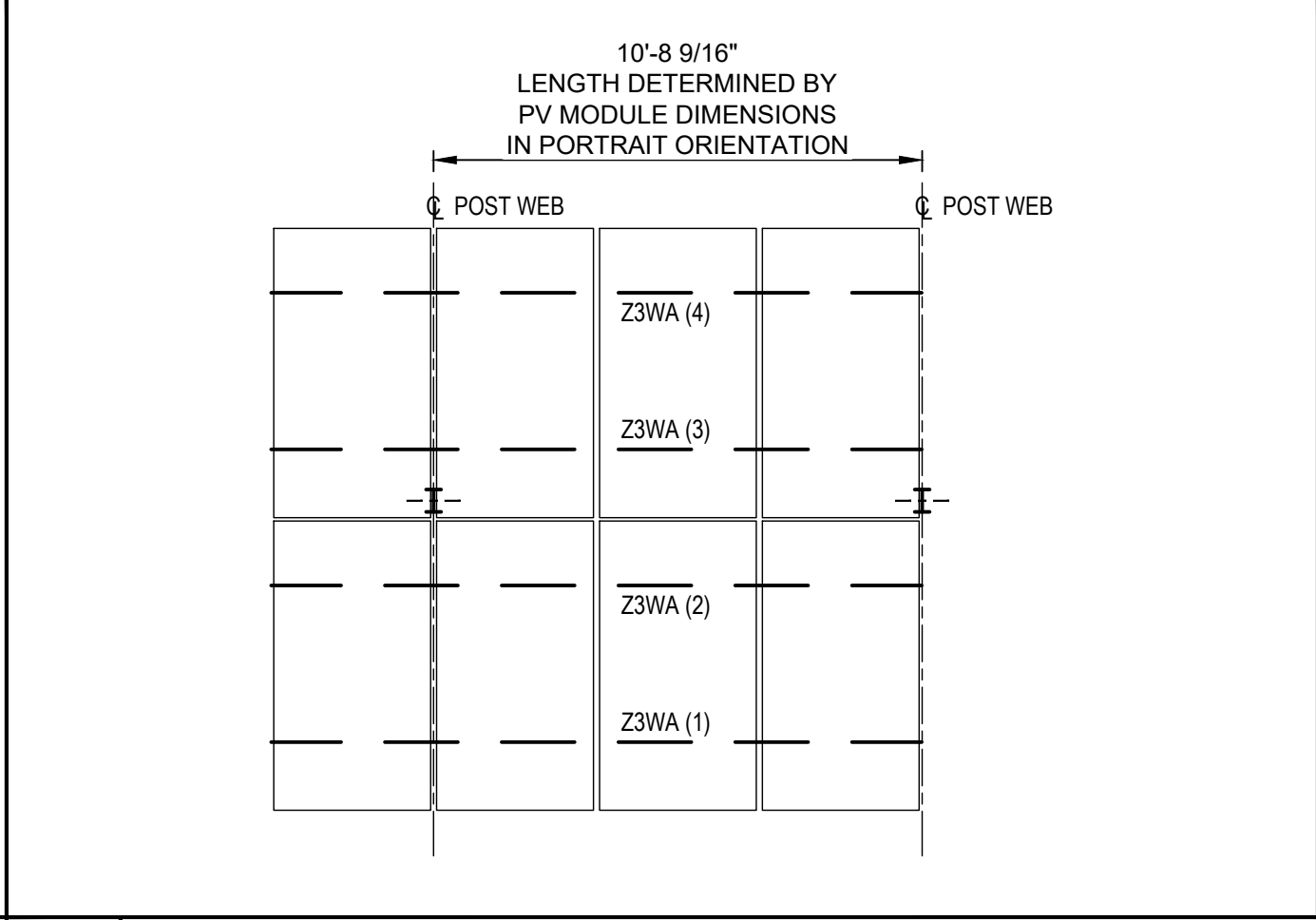
C1
 SCALE: 1/4" = 1'-0"
4WP2A BAY PLAN VIEW



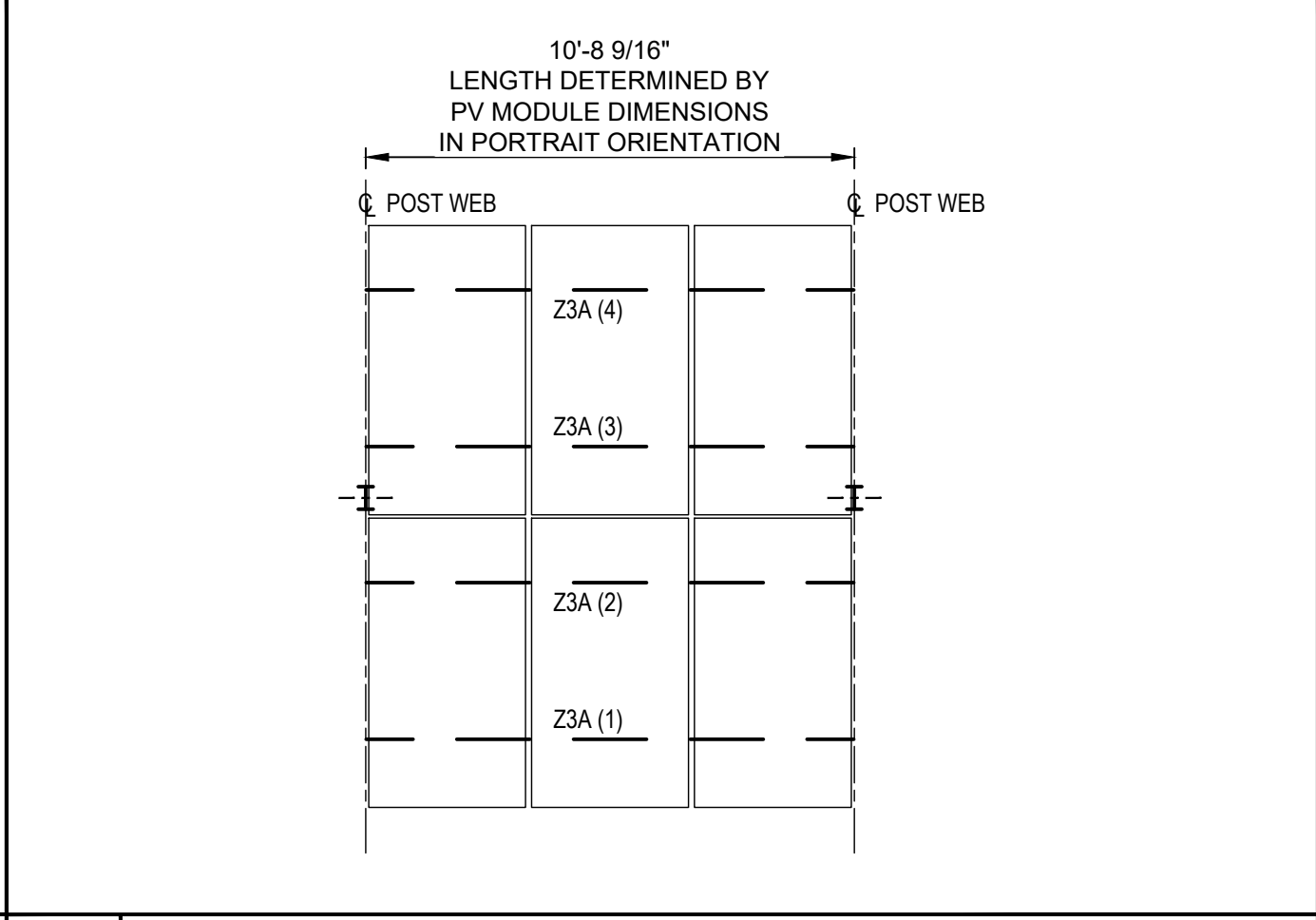
A1
 SCALE: 1/4" = 1'-0"
4P2A BAY PLAN VIEW



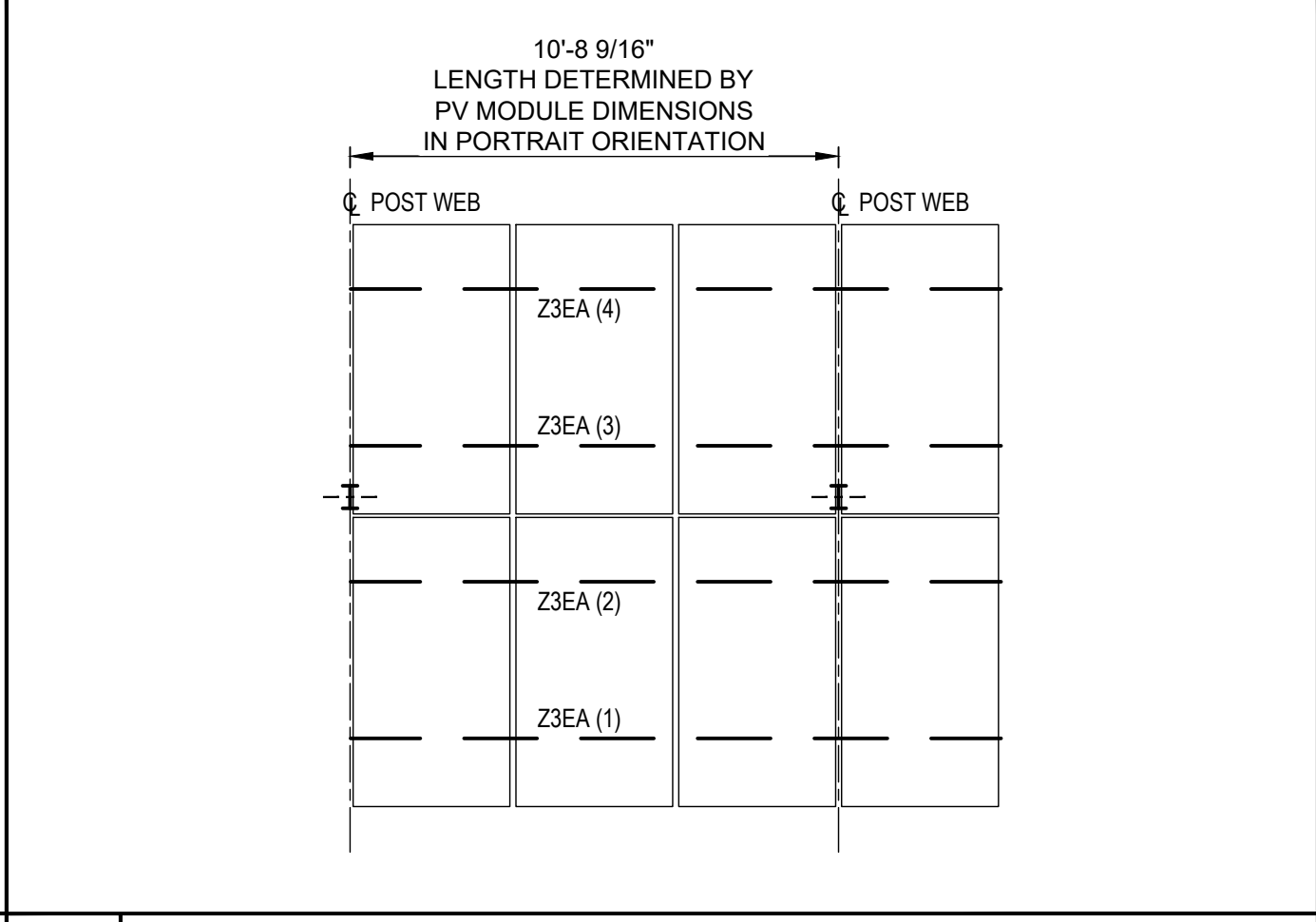
G3
 SCALE: 1/4" = 1'-0"
4EP2A BAY PLAN VIEW



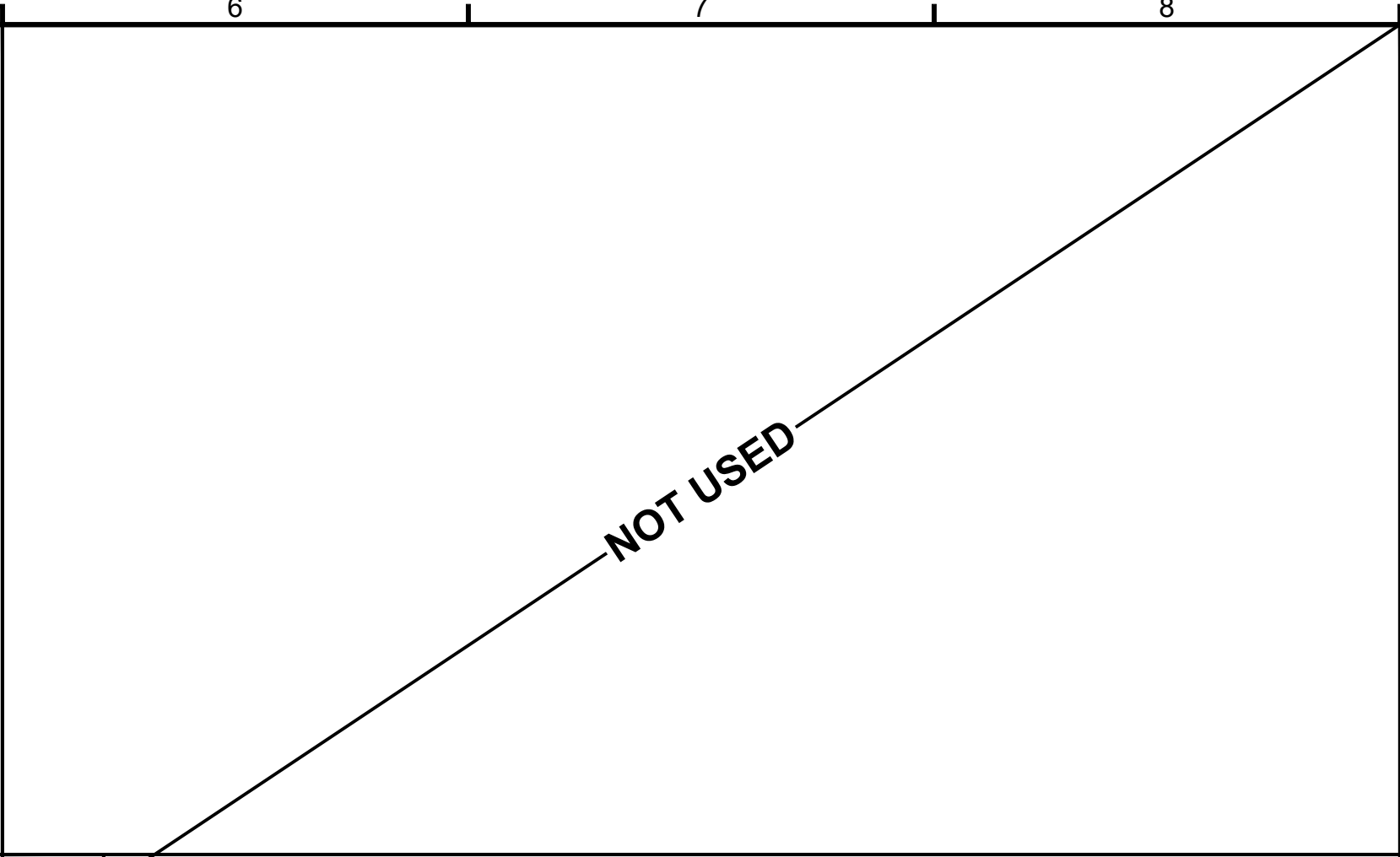
E3
 SCALE: 1/4" = 1'-0"
3WP2A BAY PLAN VIEW



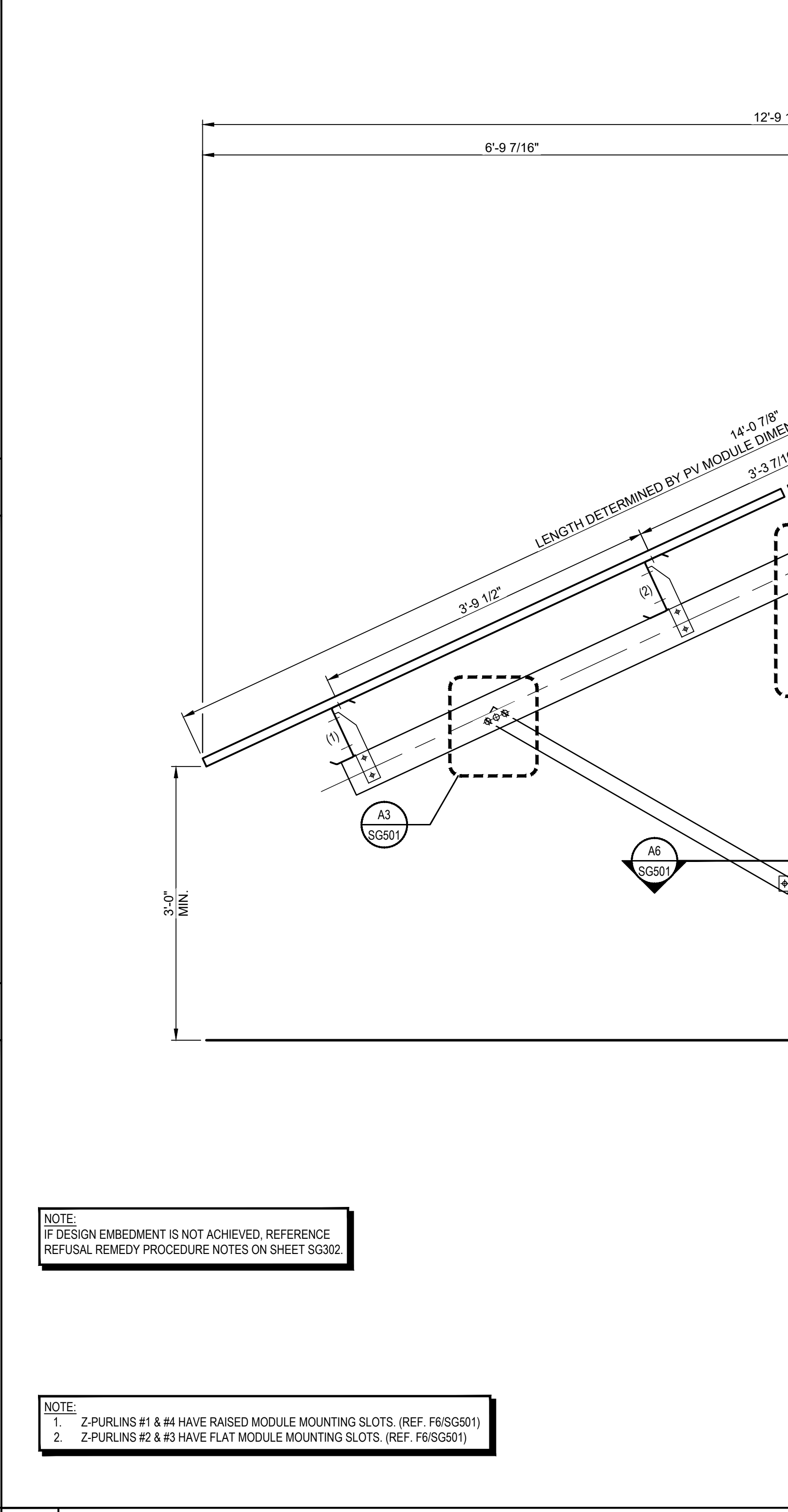
C3
 SCALE: 1/4" = 1'-0"
3P2A BAY PLAN VIEW



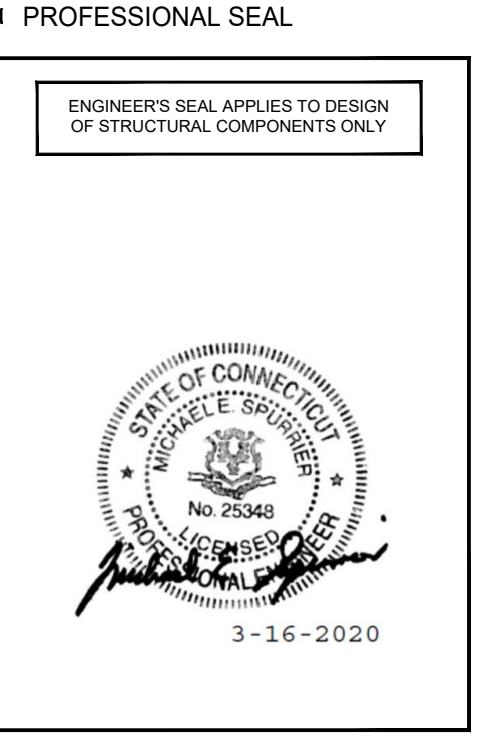
A3
 SCALE: 1/4" = 1'-0"
3EP2A BAY PLAN VIEW



G6
 SCALE: 1/4" = 1'-0"
BAY PLAN VIEW



A6
 SCALE: 1" = 1'-0"
"A" CS3W PB-AG RACK SECTION



**GROUND MOUNT FOR
 FOR
 GREENSKIES CLEAN
 ENERGY**

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2	03/10/20	90% REVIEW
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PROJECT INFORMATION

TITLE & ADDRESS:
**STONINGTON
 TAUGWONK**

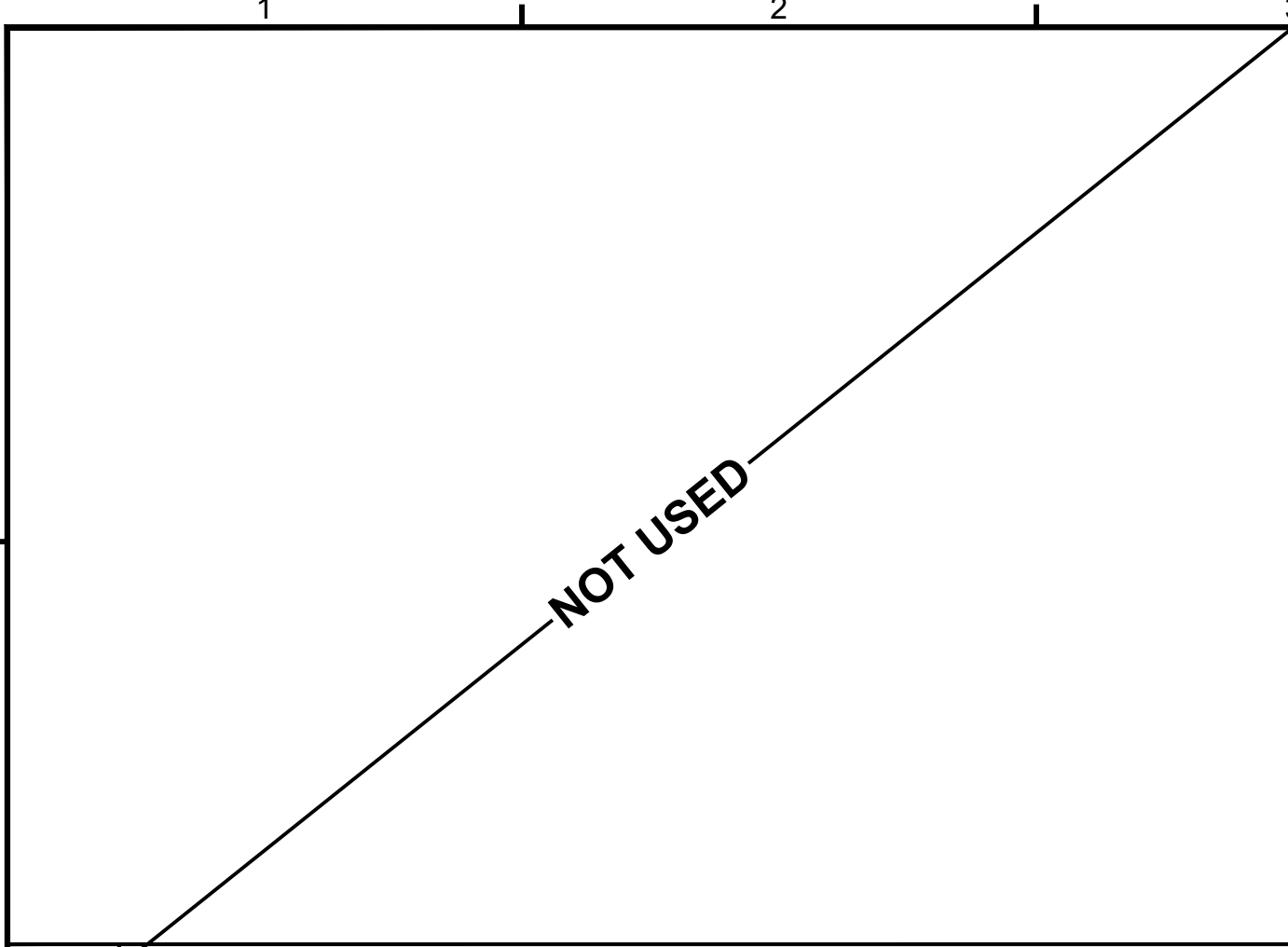
35 TAUGWONK SPUR
 ROAD
 STONINGTON, CT 06378

RBI SOLAR PROJECT No.:
 2030067

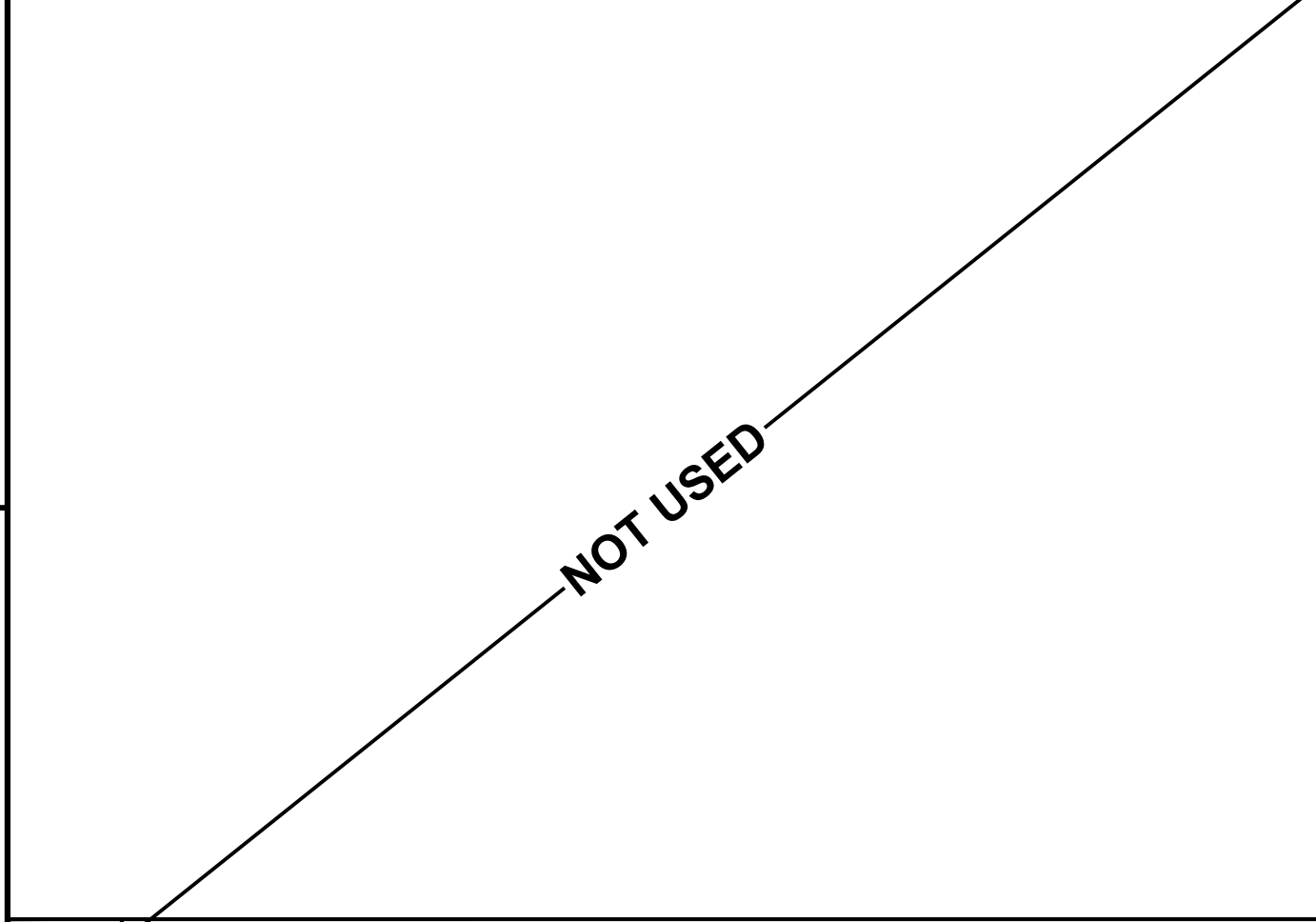
DRAWN BY: JAB REVIEWED BY: BDS / LKS

SHEET TITLE:
**"B" CS3U PB-AG
 RACK SECTION
 & BAY PLAN VIEWS**

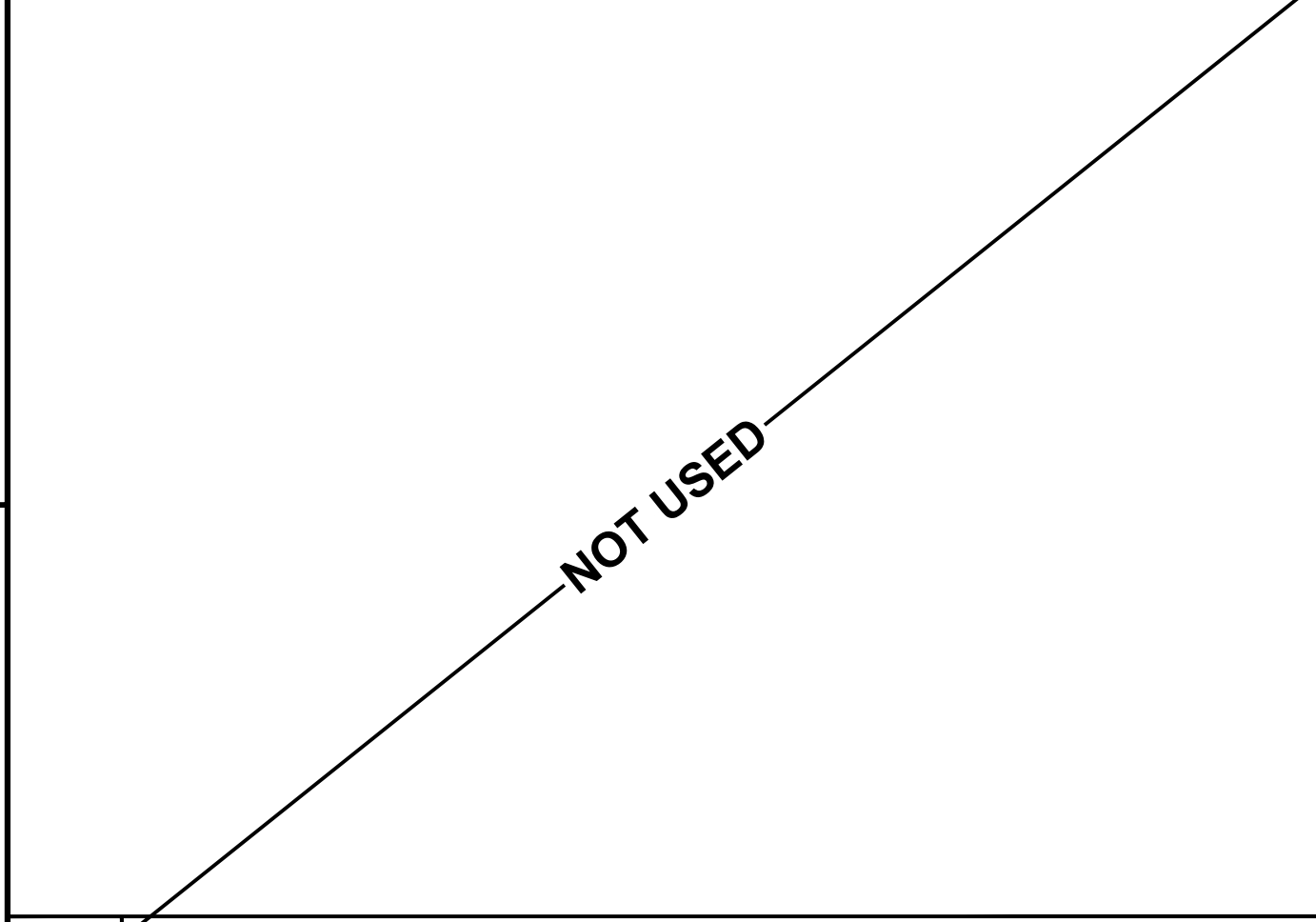
SHEET No.:
SG302



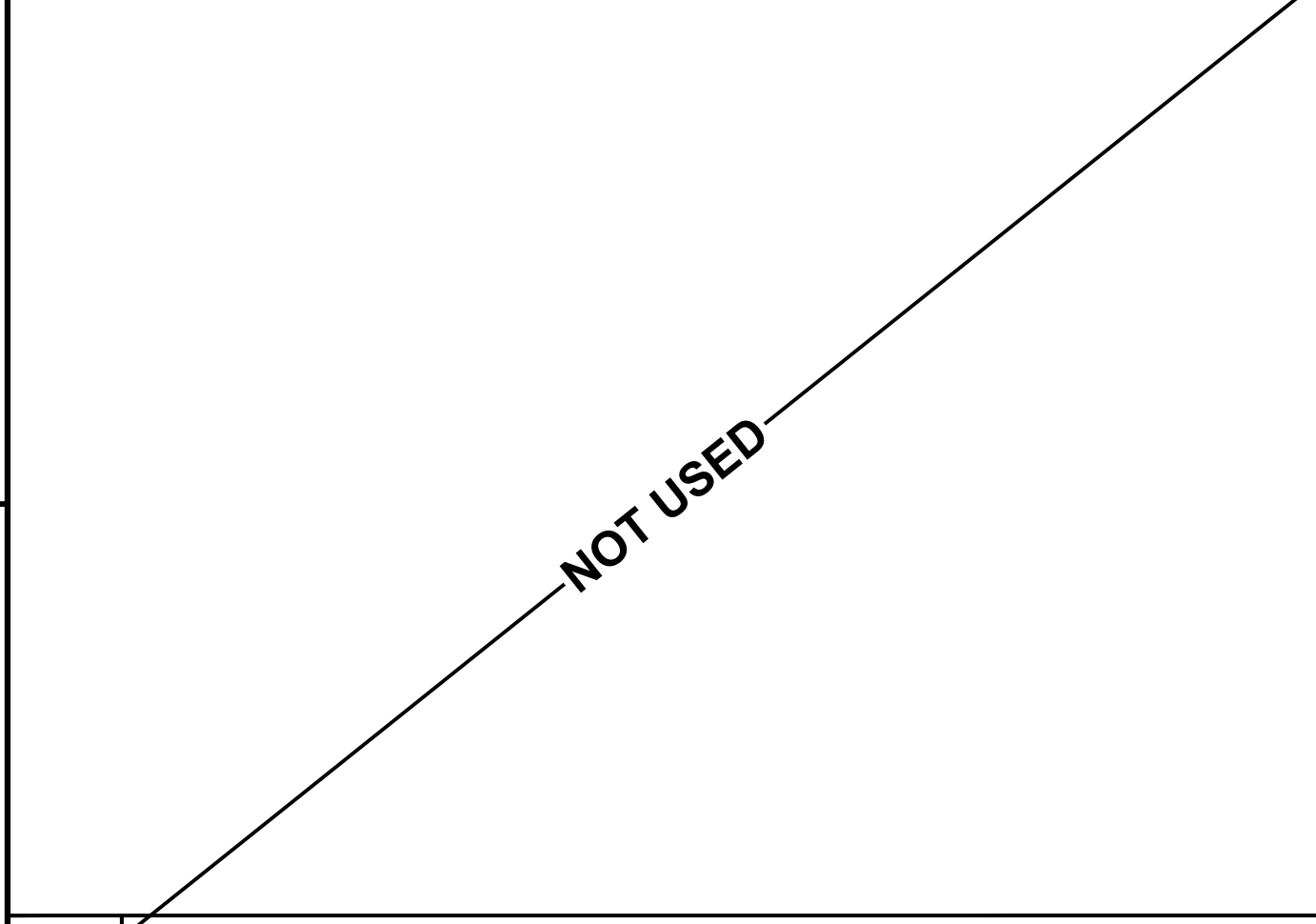
G1 - BAY PLAN VIEW
 SCALE: 1/4" = 1'-0"



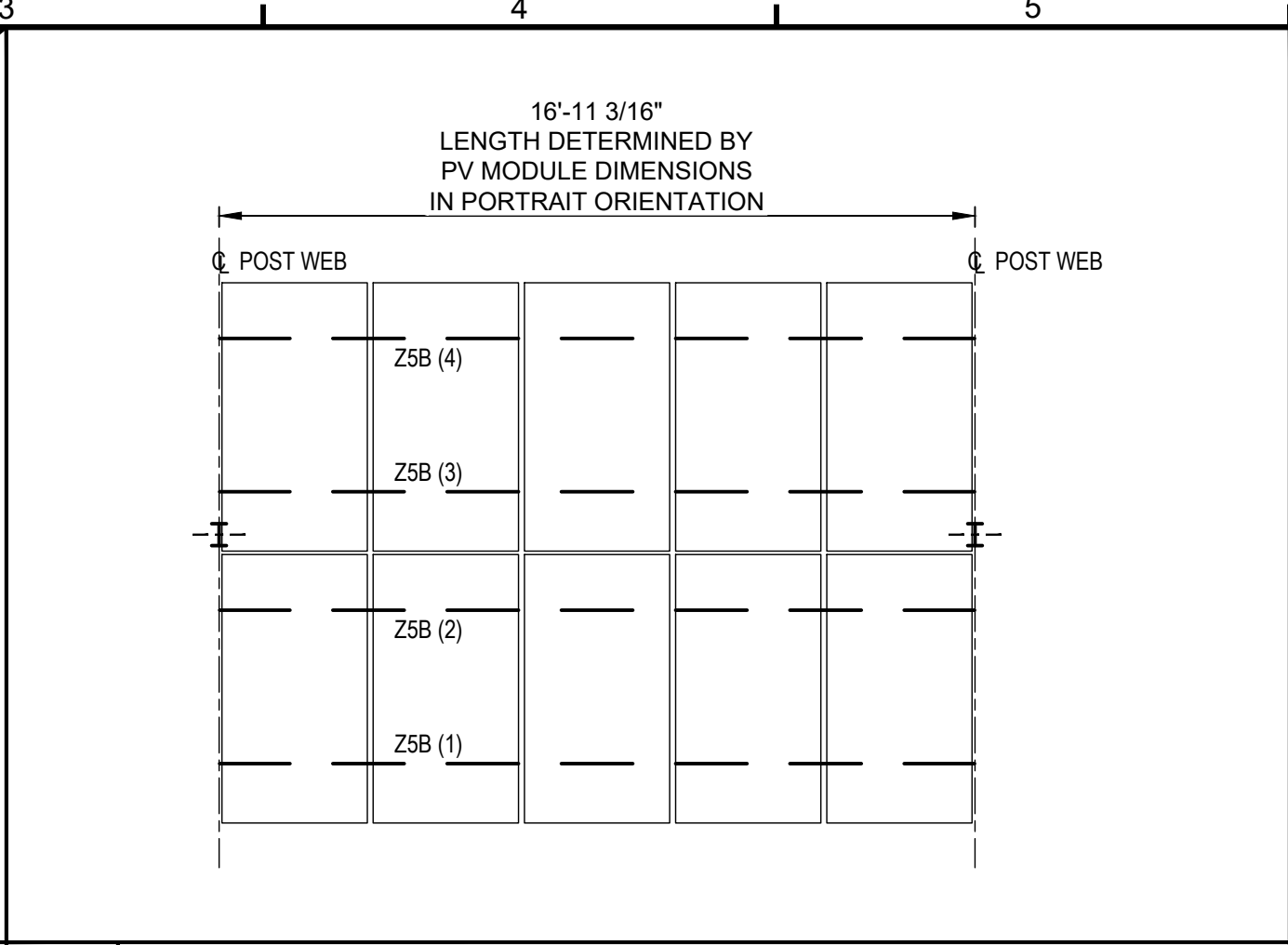
E1 - BAY PLAN VIEW
 SCALE: 1/4" = 1'-0"



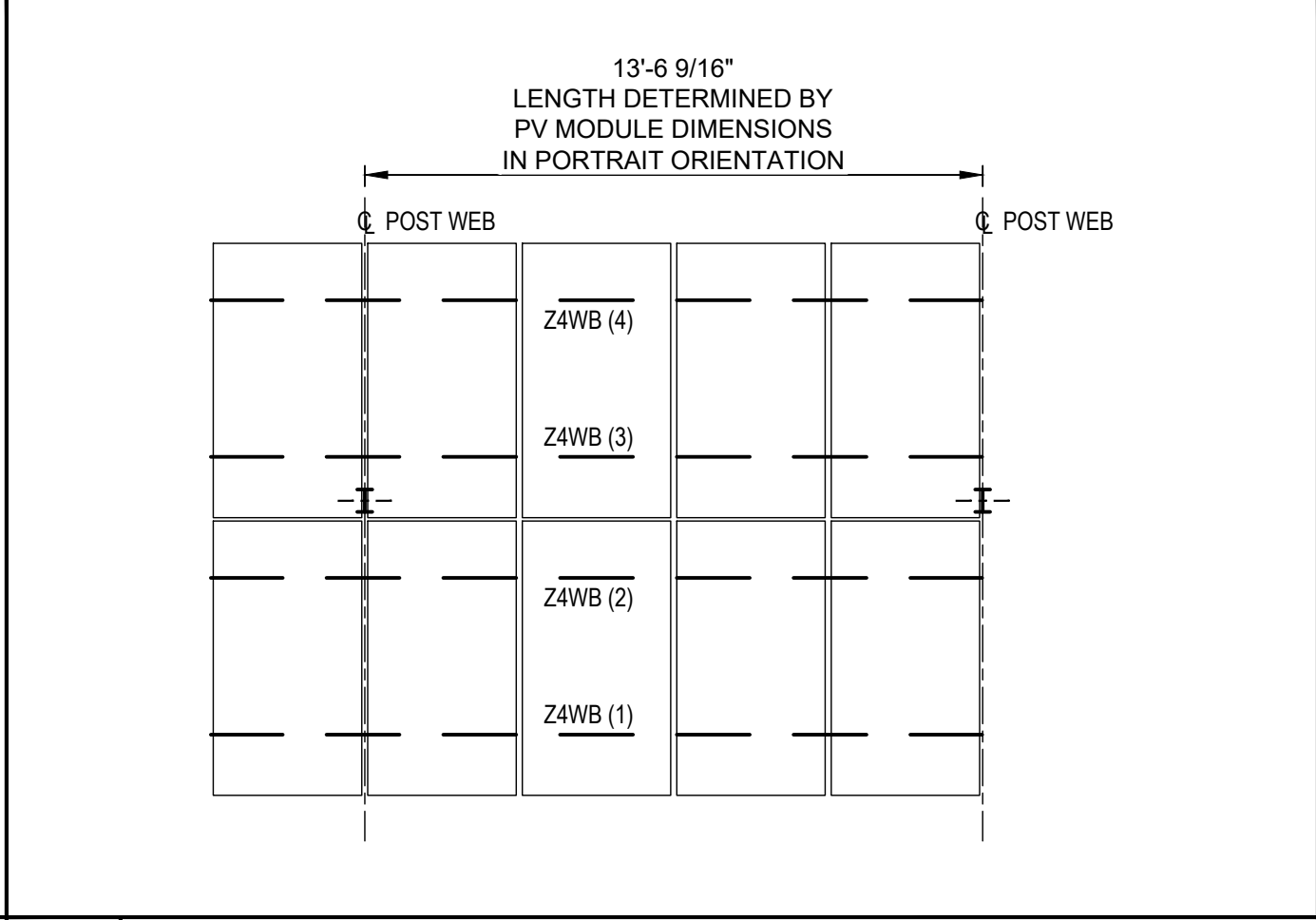
C1 - BAY PLAN VIEW
 SCALE: 1/4" = 1'-0"



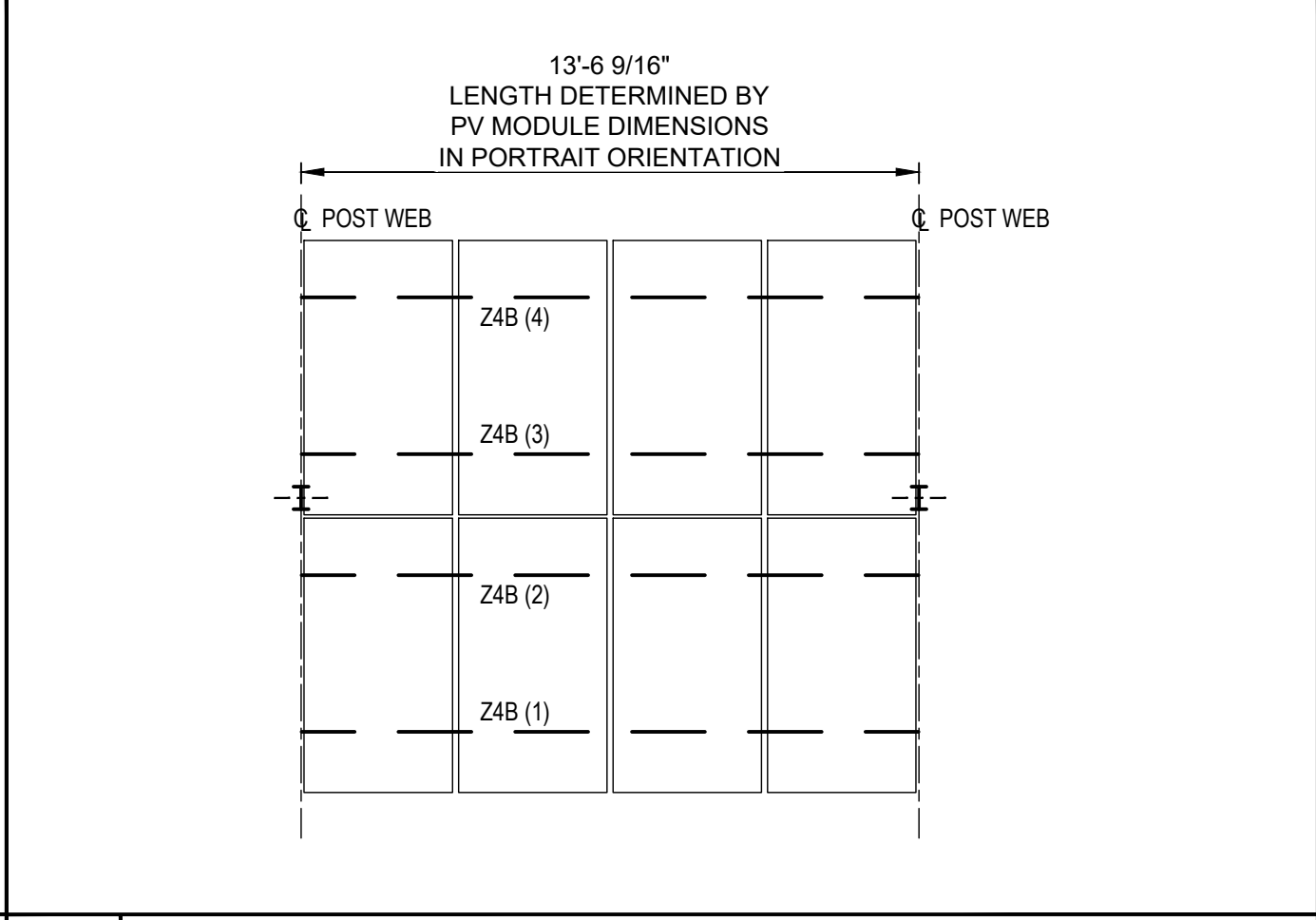
A1 - BAY PLAN VIEW
 SCALE: 1/4" = 1'-0"



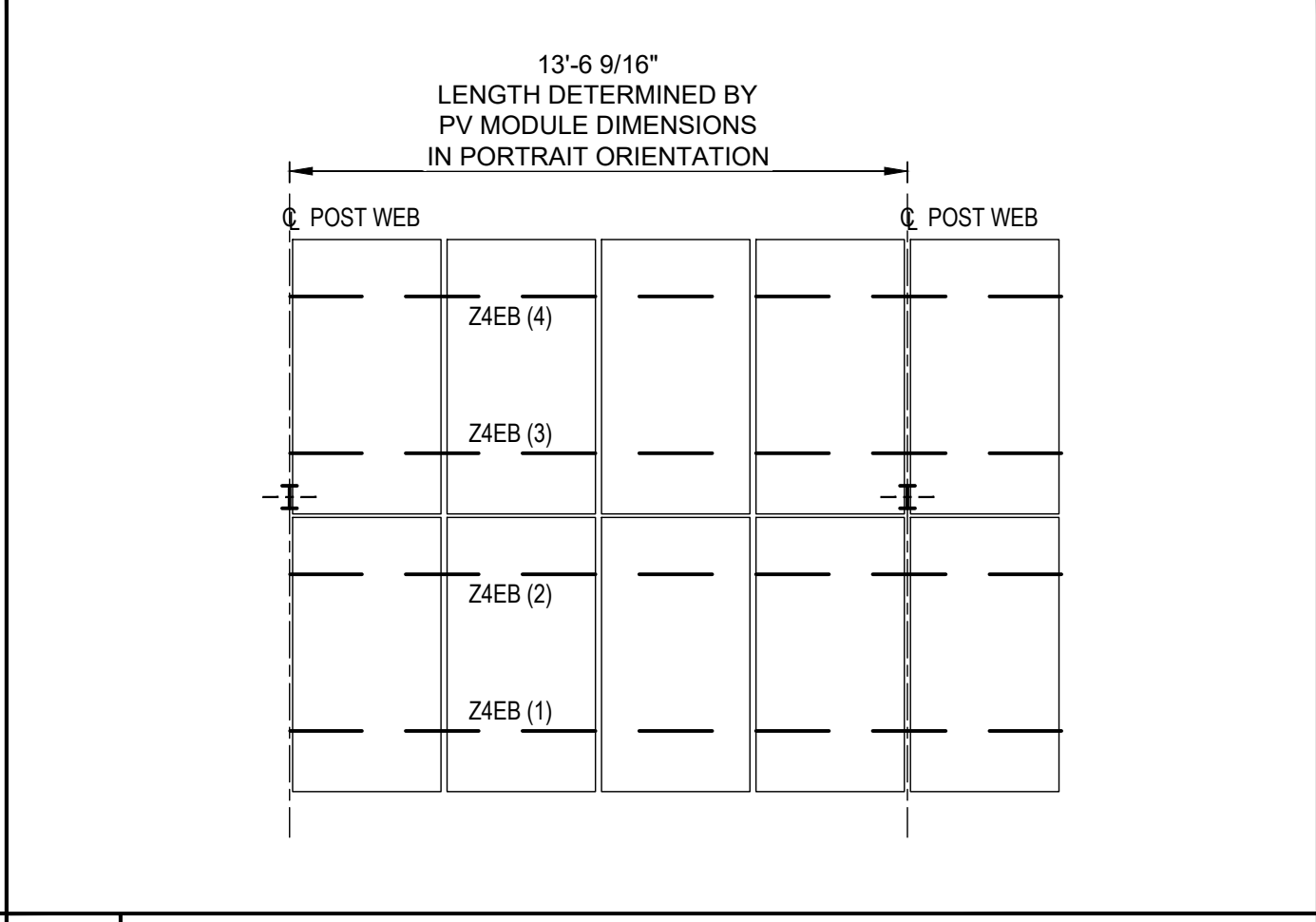
G3 5P2B BAY PLAN VIEW
 SCALE: 1/4" = 1'-0"



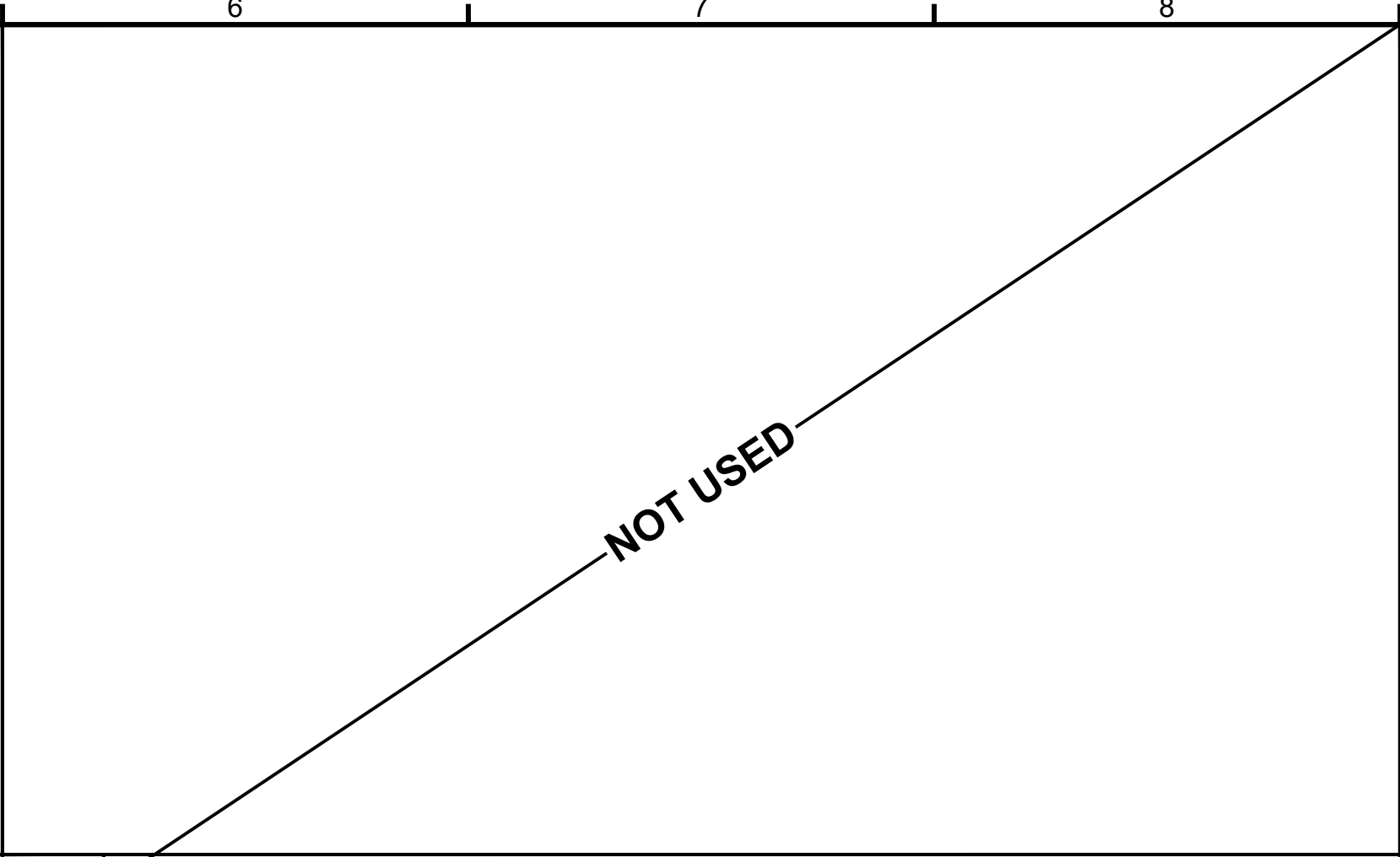
E3 4WP2B BAY PLAN VIEW
 SCALE: 1/4" = 1'-0"



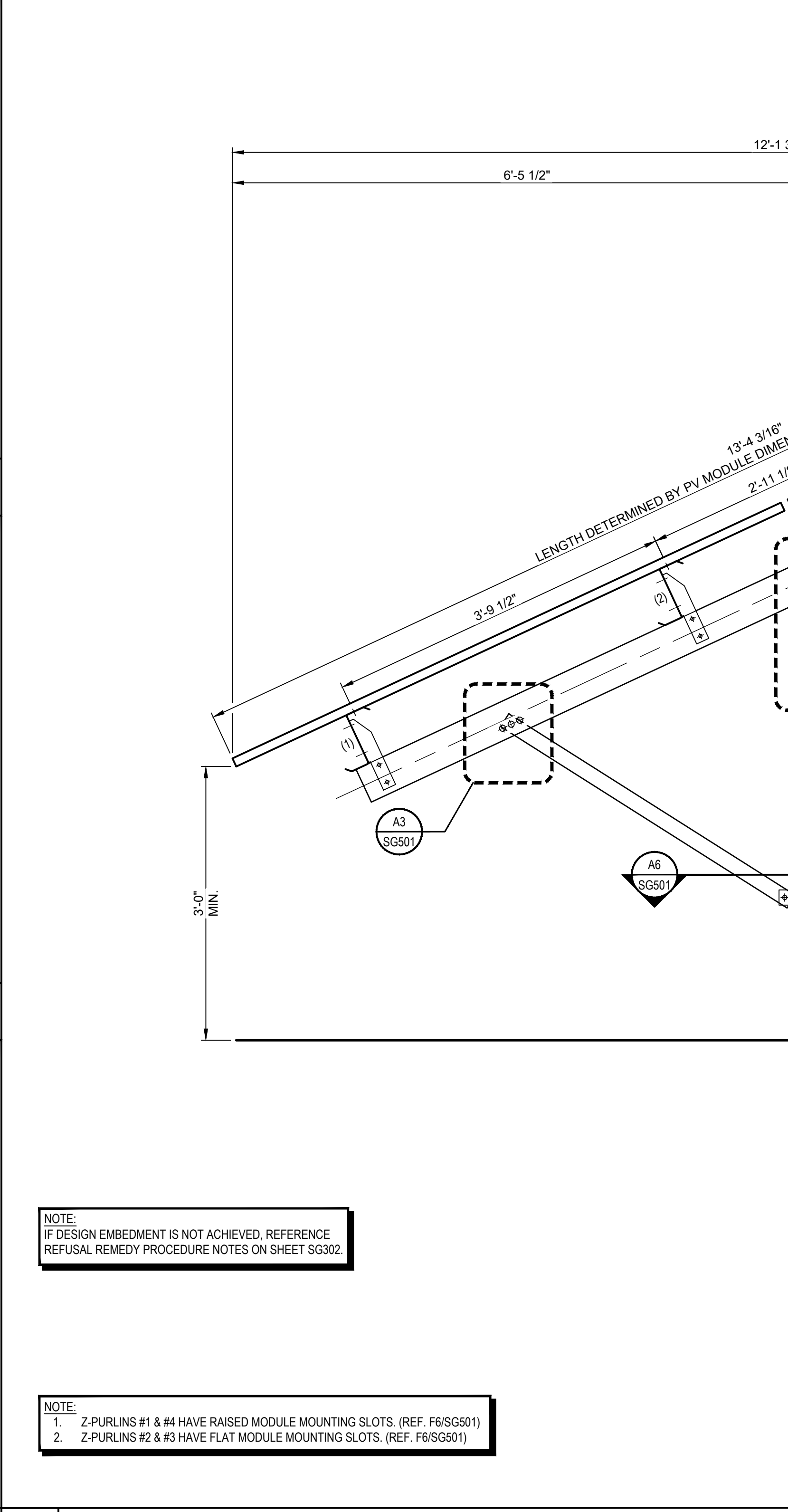
C3 4P2B BAY PLAN VIEW
 SCALE: 1/4" = 1'-0"



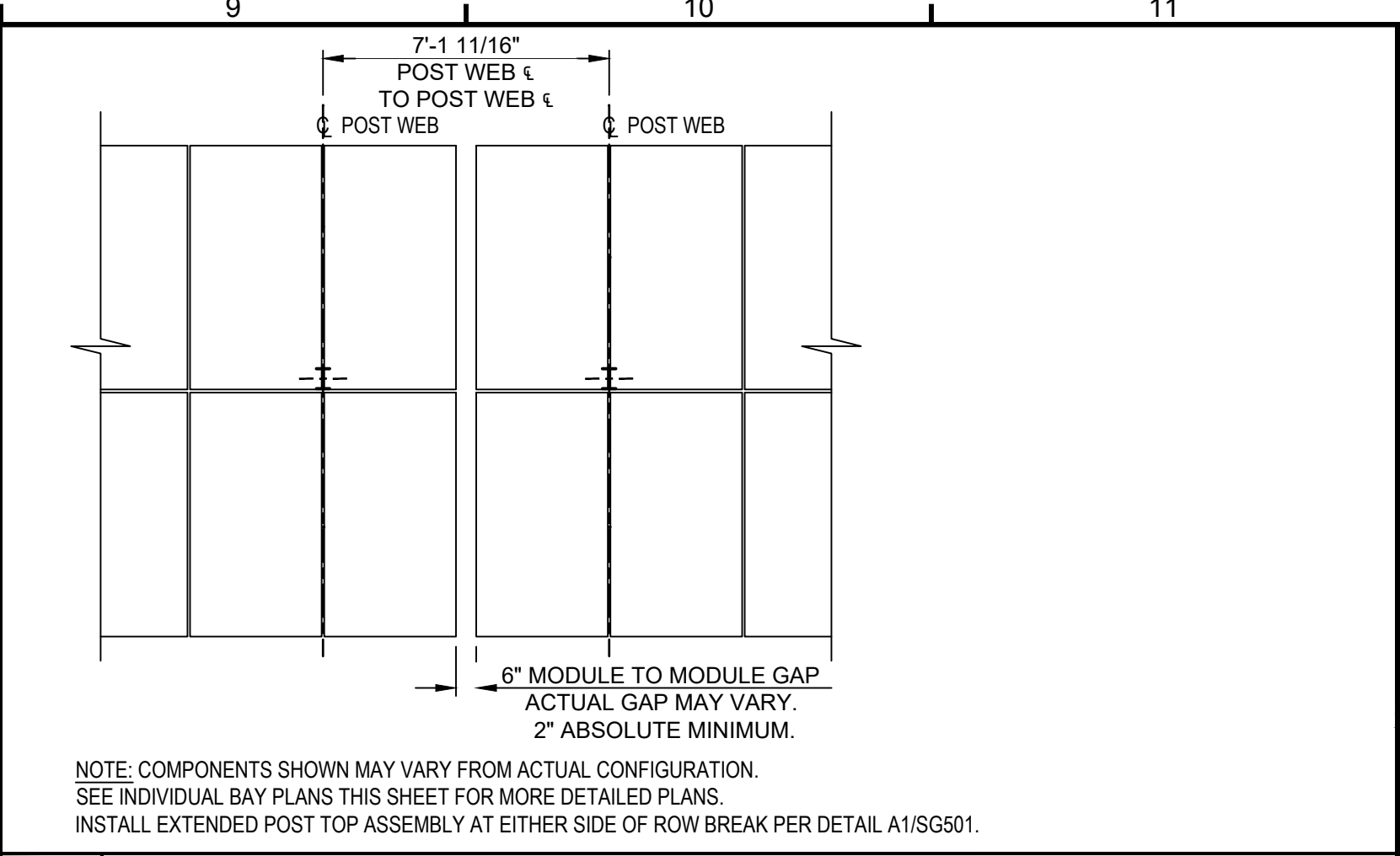
A3 4EP2B BAY PLAN VIEW
 SCALE: 1/4" = 1'-0"



G6 - BAY PLAN VIEW
 SCALE: 1/4" = 1'-0"



A6 "B" CS3U PB-AG RACK SECTION
 SCALE: 1" = 1'-0"



G9 TYPICAL ROW BREAK DETAIL
 SCALE: NONE

S:\RBI Solar\Design\2020_Jobs\2030067 - Greenskies Renewable Energy - Stonington Taugwonk, CT\Drawings\2030067.dwg, 3/16/2020, 1:46:59 PM, jbaikap
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RELEASE RECORD

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1	02/28/20	50% REVIEW

PROJECT INFORMATION

TITLE & ADDRESS:
STONINGTON TAUGWONK

35 TAUGWONK SPUR ROAD
 STONINGTON, CT 06378

RBI SOLAR PROJECT No.:
 2030067

DRAWN BY: JAB	REVIEWED BY: BDS / LKS
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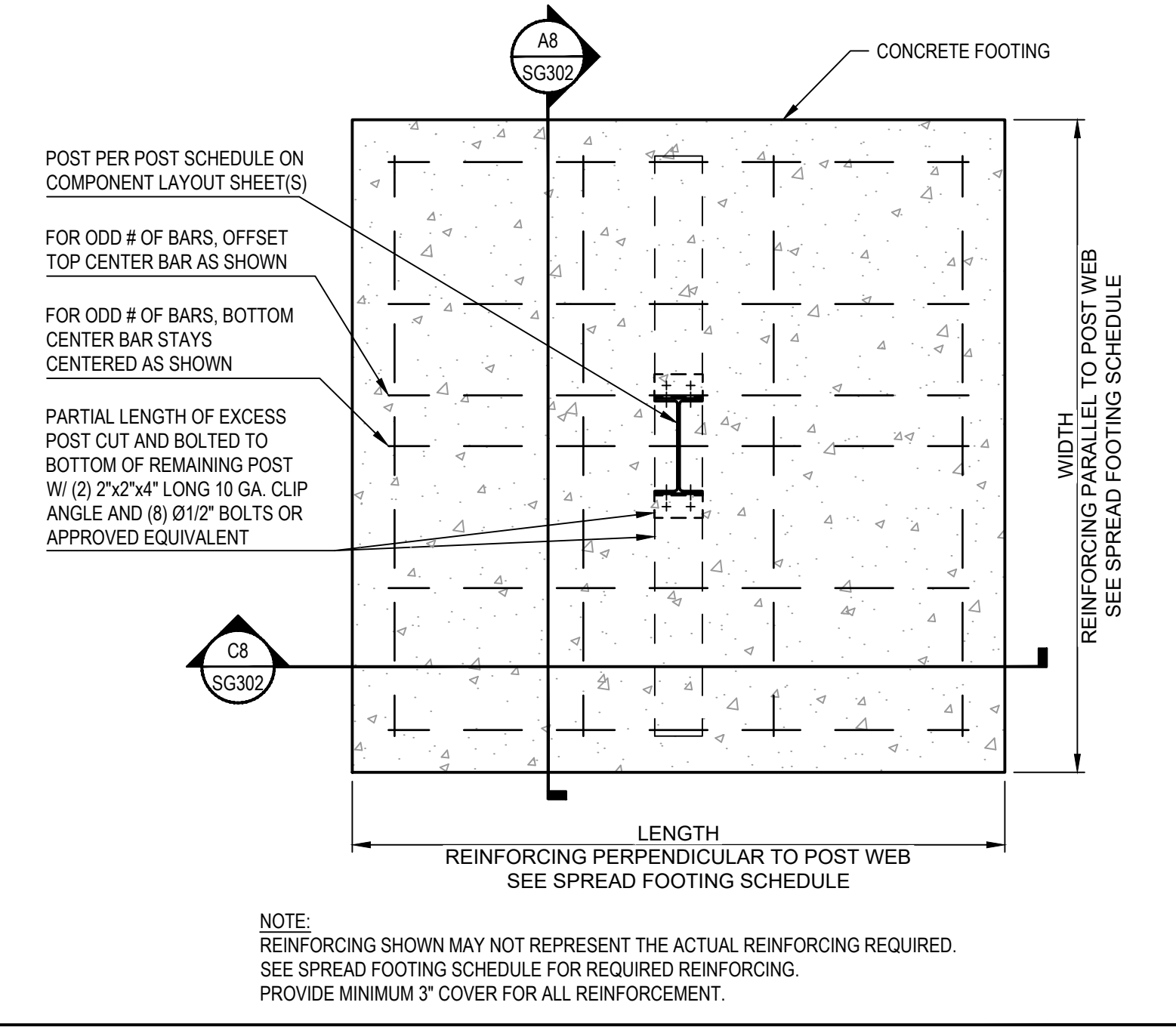
SHEET TITLE:
 ALTERNATE FOUNDATIONS SECTIONS & DETAILS

SHEET No.:
SG303

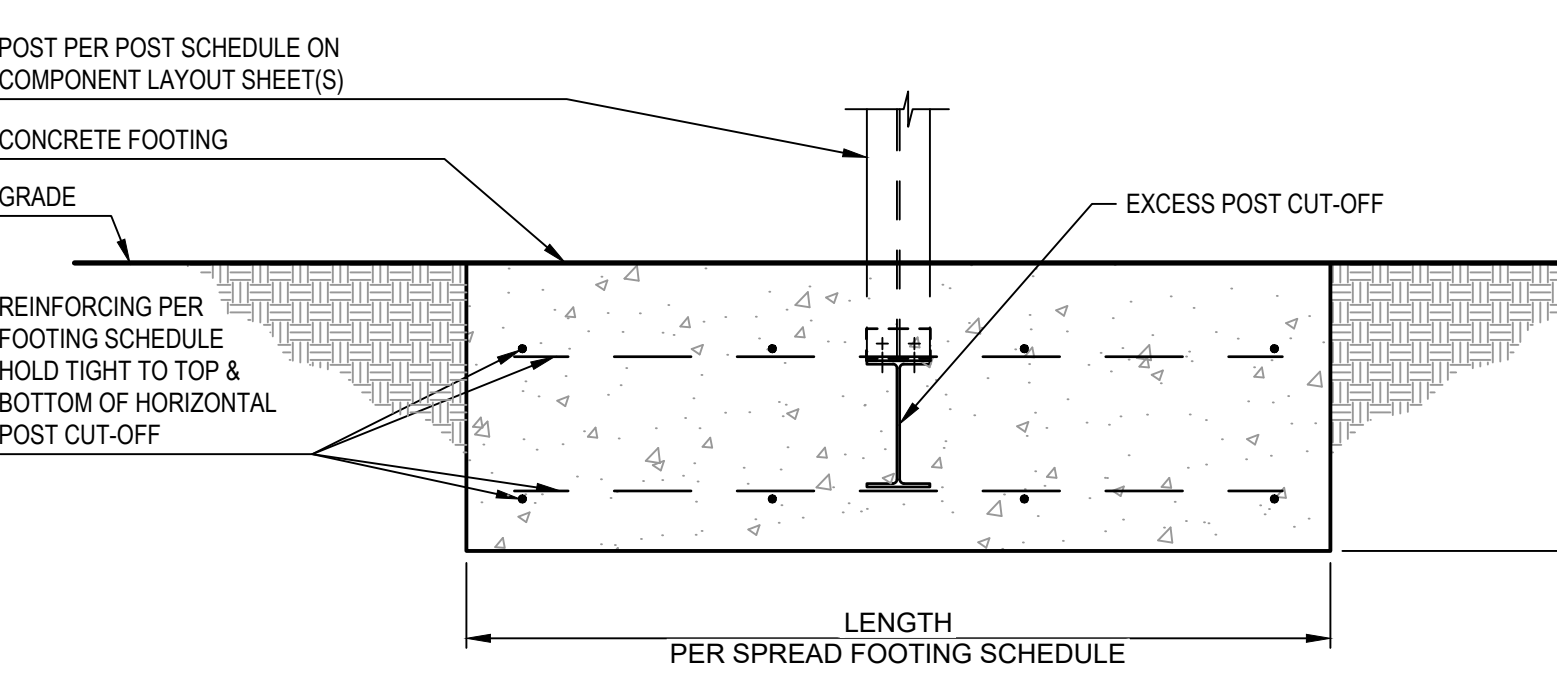
SPREAD FOOTING SCHEDULE

TYPE	LENGTH	WIDTH	DEPTH	REINFORCING PARALLEL TO POST WEB AND POST CUT-OFF	REINFORCING PERPENDICULAR TO POST WEB AND POST CUT-OFF
ALL	6'-9"	6'-9"	1'-6"	(6) #4 BARS T&B OR (6) #5 BARS T&B	(7) #4 BARS T&B OR (6) #5 BARS T&B
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

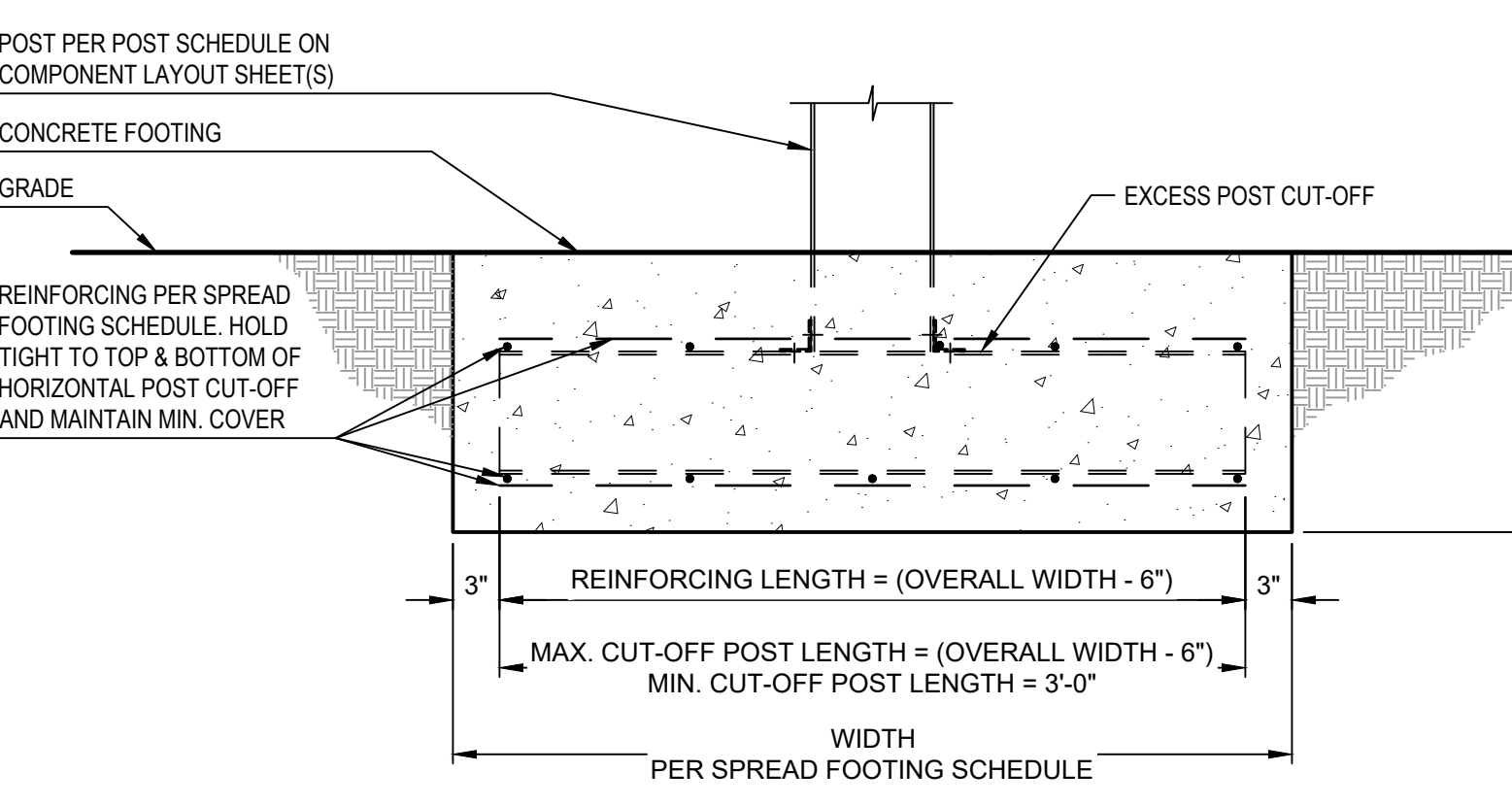
NOTE: ALL REINFORCING TO HAVE 3" MINIMUM COVER



E8
 SCALE: 1" = 1'-0"
SPREAD FOOTING PLAN



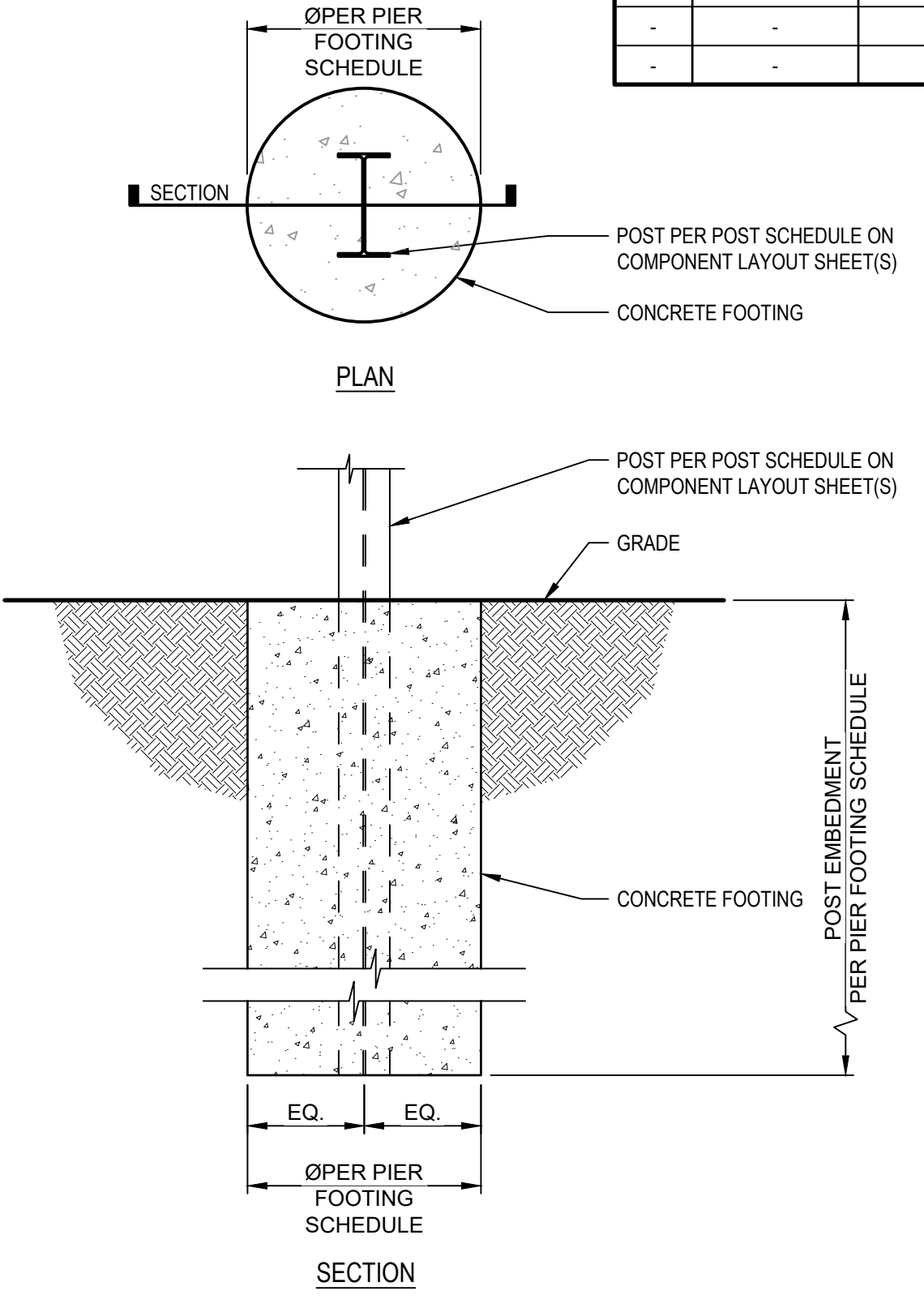
C8
 SCALE: 1" = 1'-0"
SPREAD FOOTING SECTION



A8
 SCALE: 1" = 1'-0"
SPREAD FOOTING SECTION

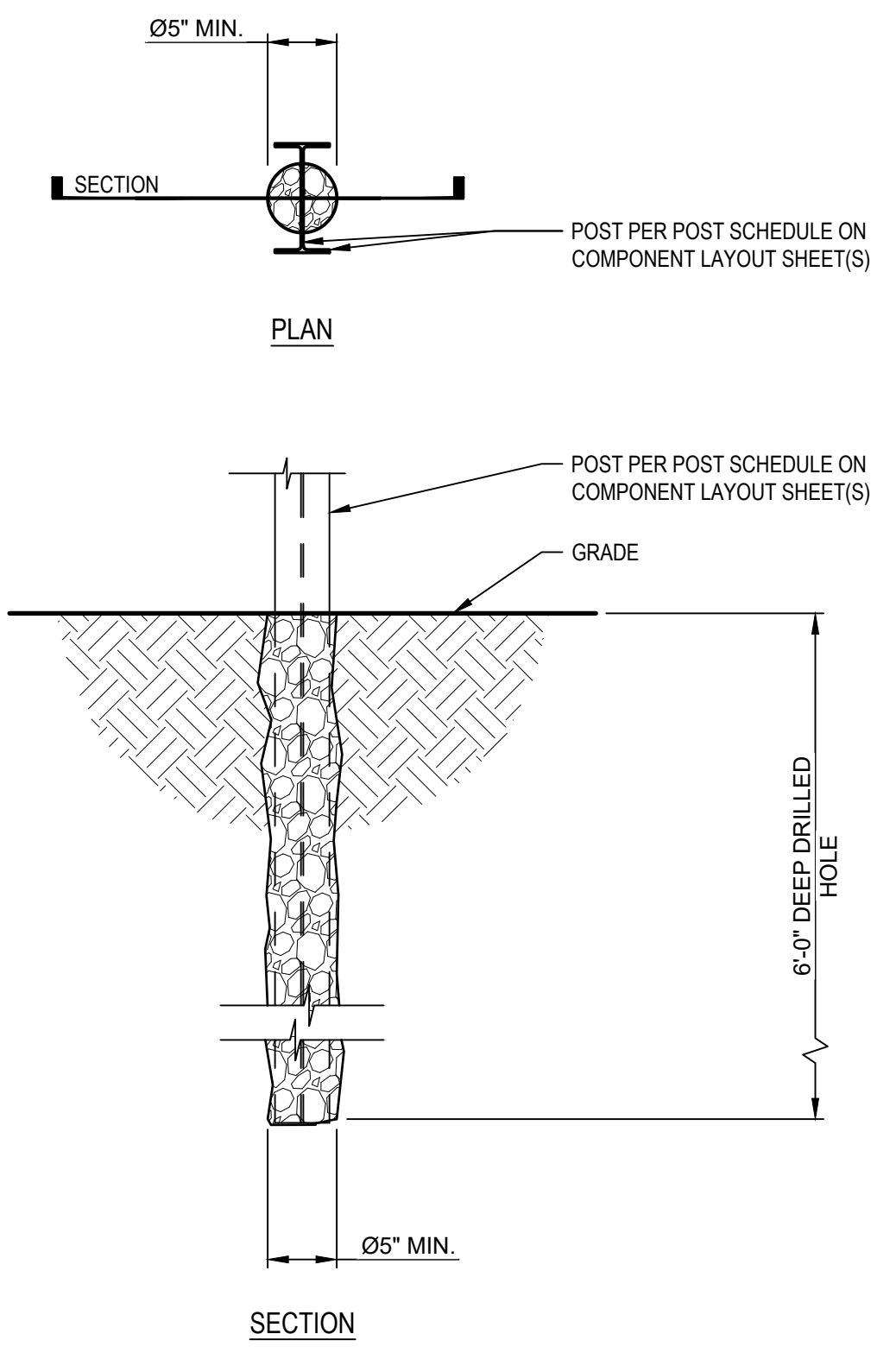
PIER FOOTING SCHEDULE

TYPE	DIAMETER	DEPTH
ALL	1'-6"	6'-6"
-	-	-
-	-	-
-	-	-



NOTE: CONCRETE PIER DEPTH SHALL MEET OR EXCEED DESIGN EMBEDMENT. BOTTOM OF STEEL POST MAY BE RAISED A MAXIMUM OF 1'-0" ABOVE DESIGN EMBEDMENT AS REQUIRED.

E5
 SCALE: 1" = 1'-0"
PIER FOOTING DETAIL



NOTE:
 1. POST NOT REQUIRED TO BE CENTERED IN HOLE.
 2. CONTACT RBI SOLAR PROJECT MANAGER FOR PRE-DRILL AND DRIVE PROCEDURE.
 3. POST SHOULD BOTTOM OUT AT THE HOLE.

A5
 SCALE: 1" = 1'-0"
PRE-DRILL & DRIVE DETAIL

- REFUSAL REMEDY PROCEDURE:**
- WHEN DRIVEN POSTS DO NOT ACCOMPLISH DESIGN EMBEDMENT DEPTH(S) AS SPECIFIED ON A6/SG301 DUE TO REFUSAL, FOLLOW THIS PROCEDURE:
- WHEN REFUSAL IS ENCOUNTERED, EFFORTS TO DRIVE THE POST FURTHER SHOULD BE STOPPED AND DRIVEN POST DEPTH AND LOCATION SHALL BE RECORDED.
 - IF POST DID NOT REACH THE REFUSAL MINIMUM EMBEDMENT DEPTH OF 5.0 FEET, RELOCATE POST LOCATION 16-24 INCHES EAST OR WEST (WITH EXCEPTION OF START/END OF ROW POSTS) IN THE SAME LONGITUDINAL PLANE FROM THE ORIGINAL POST. START/END OF ROW POSTS SHALL BE RELOCATED IN THE DIRECTION THAT REDUCES THE PURLIN MEMBER CANTILEVER LENGTH BY 18-24 INCHES.
 - ATTEMPT TO DRIVE RELOCATED POST TO THE DESIGN EMBEDMENT DEPTH SPECIFIED ON A6/SG301. IF POST DOES NOT REACH THE MINIMUM EMBEDMENT DEPTH OF 5.0 FEET, AN ALTERNATE FOUNDATION SHALL BE REQUIRED.
 - IF POST DOES NOT REACH DESIGN EMBEDMENT DEPTH SPECIFIED ON A6/SG301 BUT REACHED THE MINIMUM EMBEDMENT DEPTH OF 5.0 FEET, THE POST MUST PASS THE FOLLOWING VERTICAL AND LATERAL TESTS:
 - VERTICAL TEST - MINIMUM UPLIFT FORCE 4500 LBS. RESULTING IN VERTICAL DEFLECTION LESS THAN 1/2".
 - LATERAL TEST - MINIMUM LATERAL FORCE 3750 LBS. APPLIED AT 4 FEET ABOVE GRADE AND POST DEFLECTION < 1.00 INCH MEASURED AT GRADE.
 - ANY POST BELOW THE DESIGN EMBEDMENT DEPTH THAT DOES NOT PASS THE VERTICAL AND LATERAL TEST SHALL REQUIRE AN ALTERNATE FOUNDATION.
 - IF THE POST REACHED THE MINIMUM EMBEDMENT DEPTH OF 5.0 FEET AND PASSED THE VERTICAL AND LATERAL TESTS SPECIFIED ABOVE, THE POST CAN BE FIELD-CUT AND DRILLED ACCORDINGLY.
 - ALL FIELD-CUT SURFACES SHALL BE PAINTED WITH BRUSH-ON GALVANIZING PAINT. RBI SOLAR DOES NOT RECOMMEND SPRAY GALVANIZING FOR REPAIR AND PAINTING OF CUT SURFACES.
 - FOR INSTANCES WHERE IT IS DESIRED TO REDUCE THE POST EMBEDMENT BUT REFUSAL IS NOT ENCOUNTERED, PLEASE CONTACT THE RBI SOLAR ENGINEERING DEPARTMENT FOR RECOMMENDATIONS.

A2
 SCALE: NONE
REFUSAL REMEDY PROCEDURE

RELEASE RECORD

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1	02/28/20	50% REVIEW

PROJECT INFORMATION

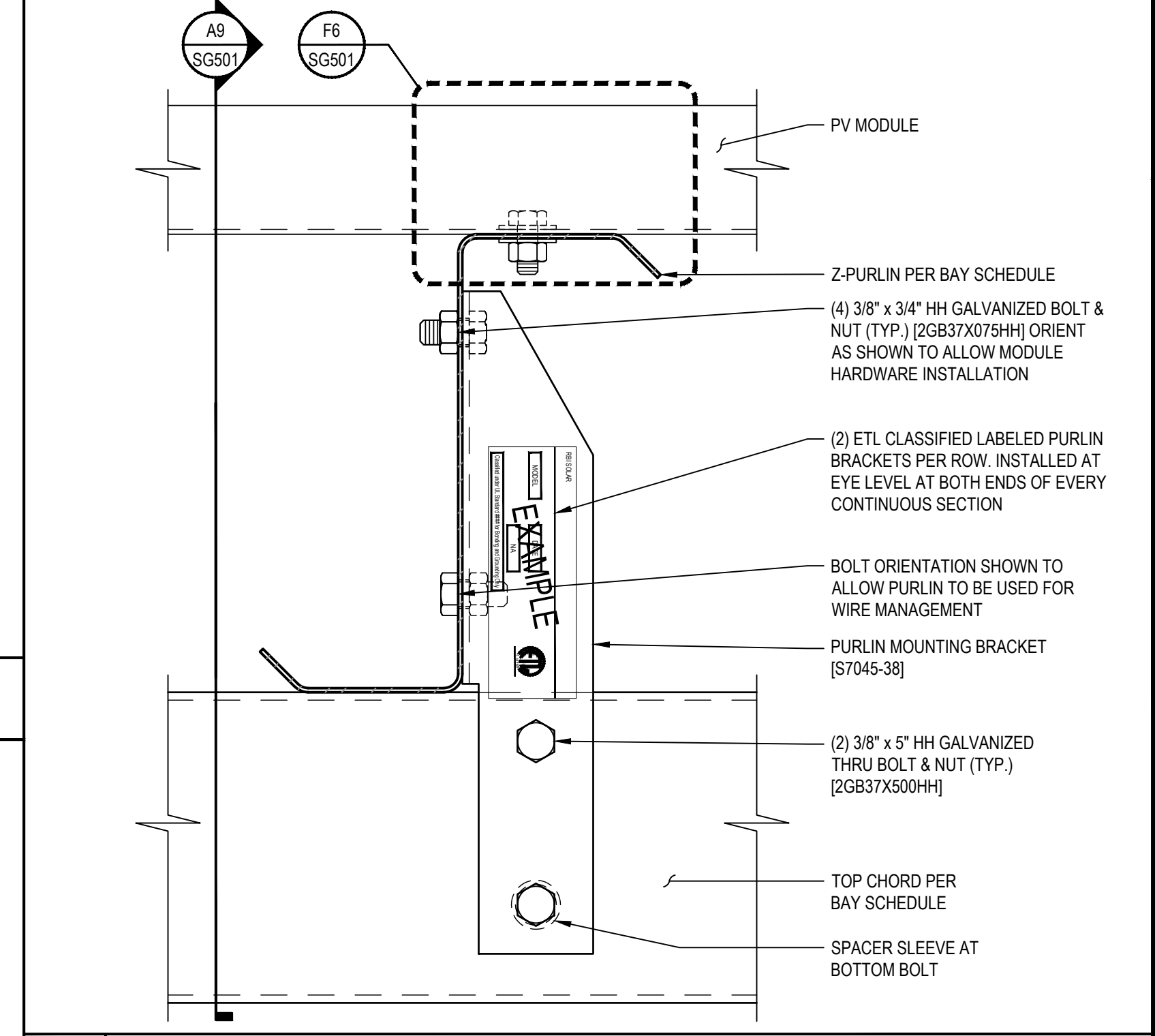
TITLE & ADDRESS:
STONINGTON TAUGWONK

35 TAUGWONK SPUR ROAD
 STONINGTON, CT 06378

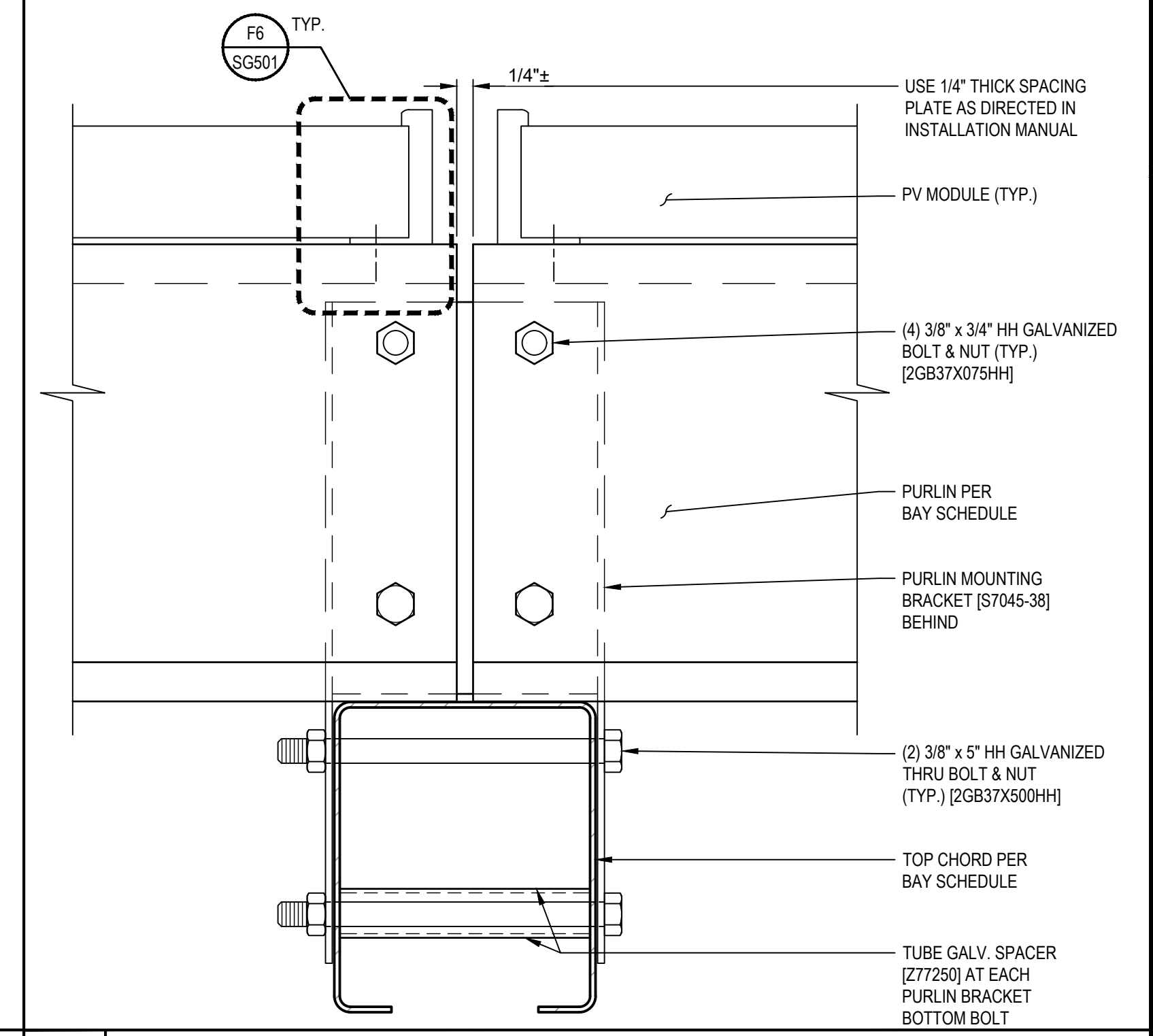
RBI SOLAR PROJECT No.:
 2030067

DRAWN BY: JAB REVIEWED BY: BDS / LKS

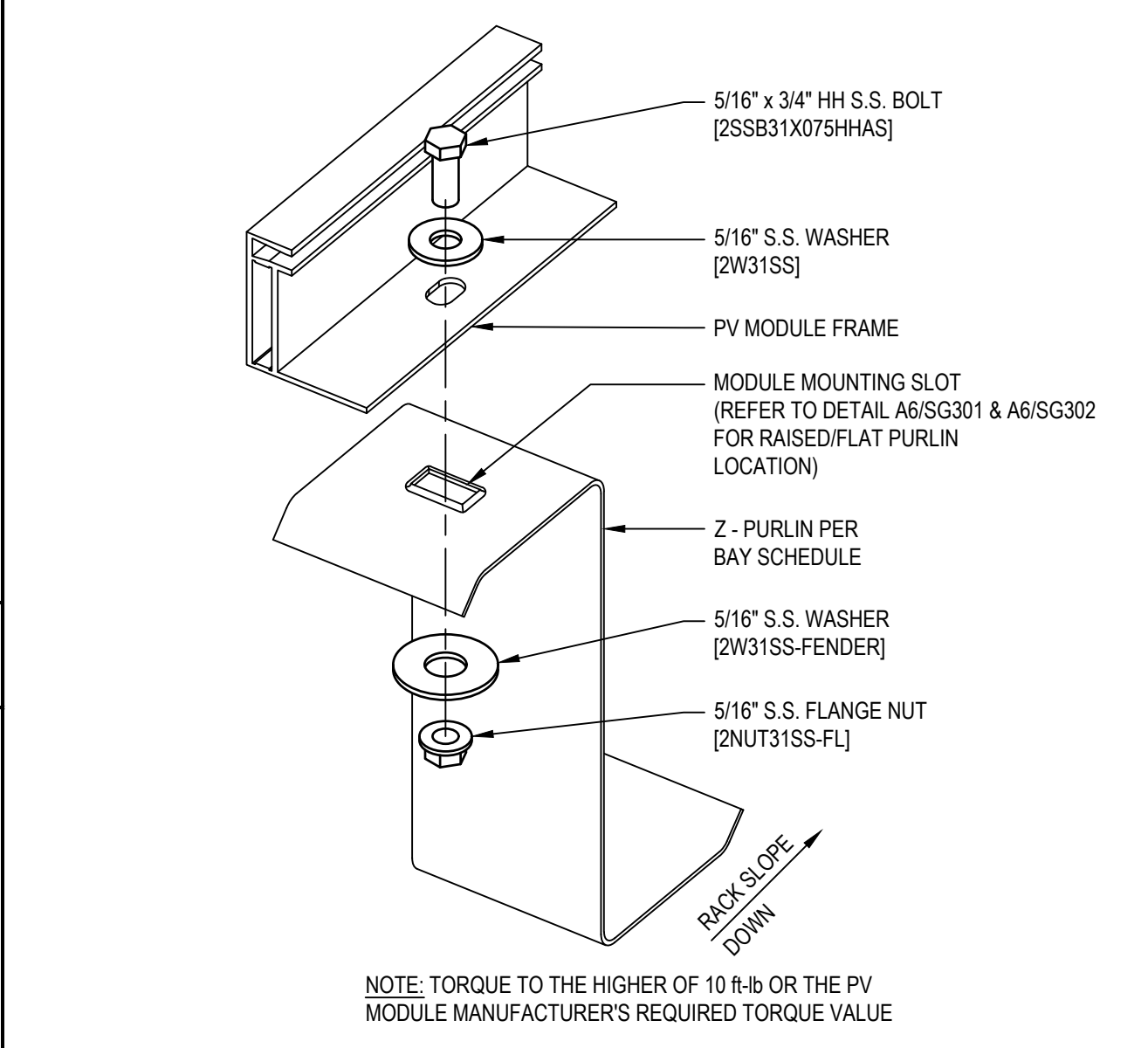
SHEET TITLE:
DETAILS
 SHEET No.: **SG501**



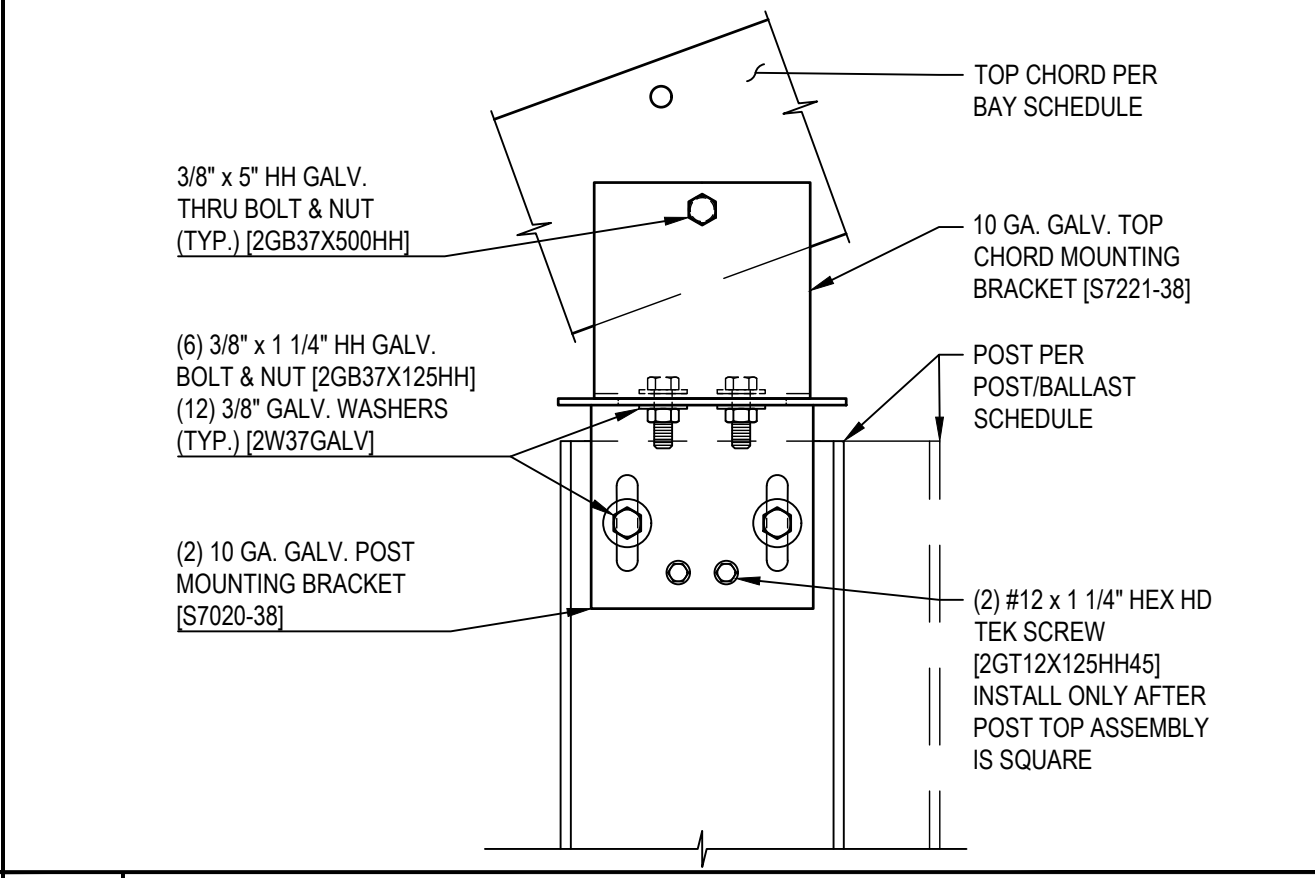
E9 TRANSVERSE PURLIN CONNECTION DETAIL
 SCALE: 6" = 1'-0"



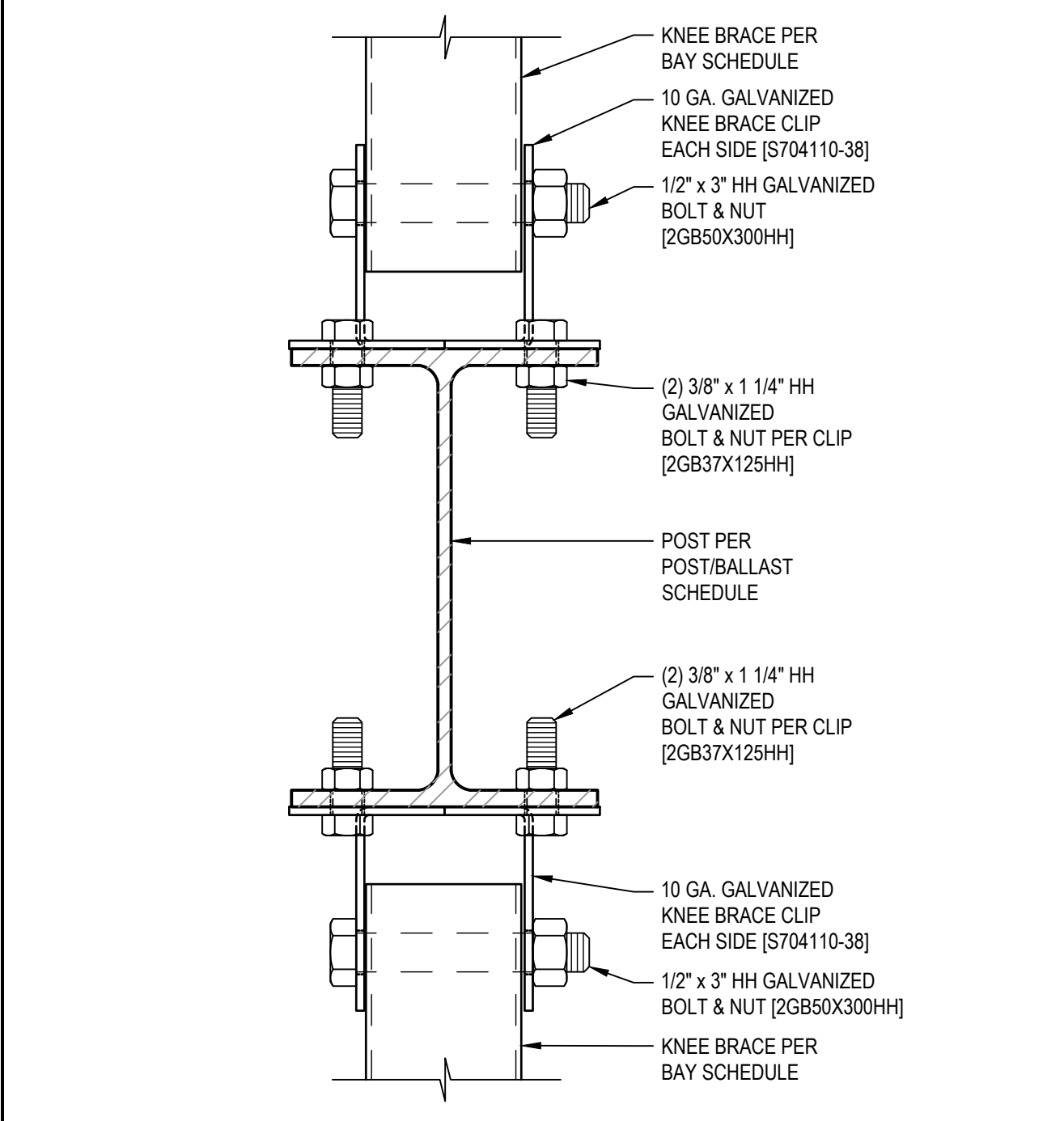
A9 LONGITUDINAL PURLIN CONNECTION DETAIL
 SCALE: 6" = 1'-0"



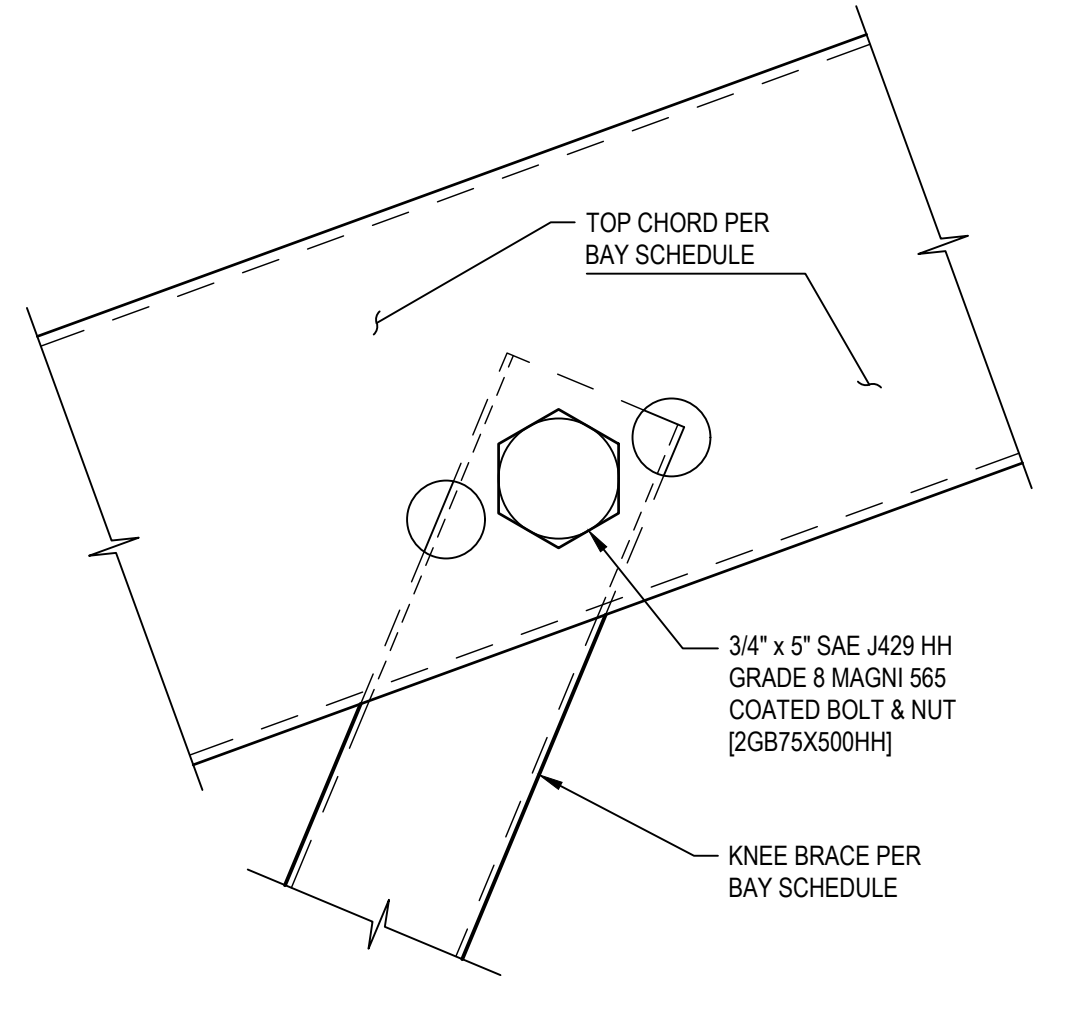
F6 PV MODULE TO PURLIN CONNECTION DETAIL
 SCALE: NONE



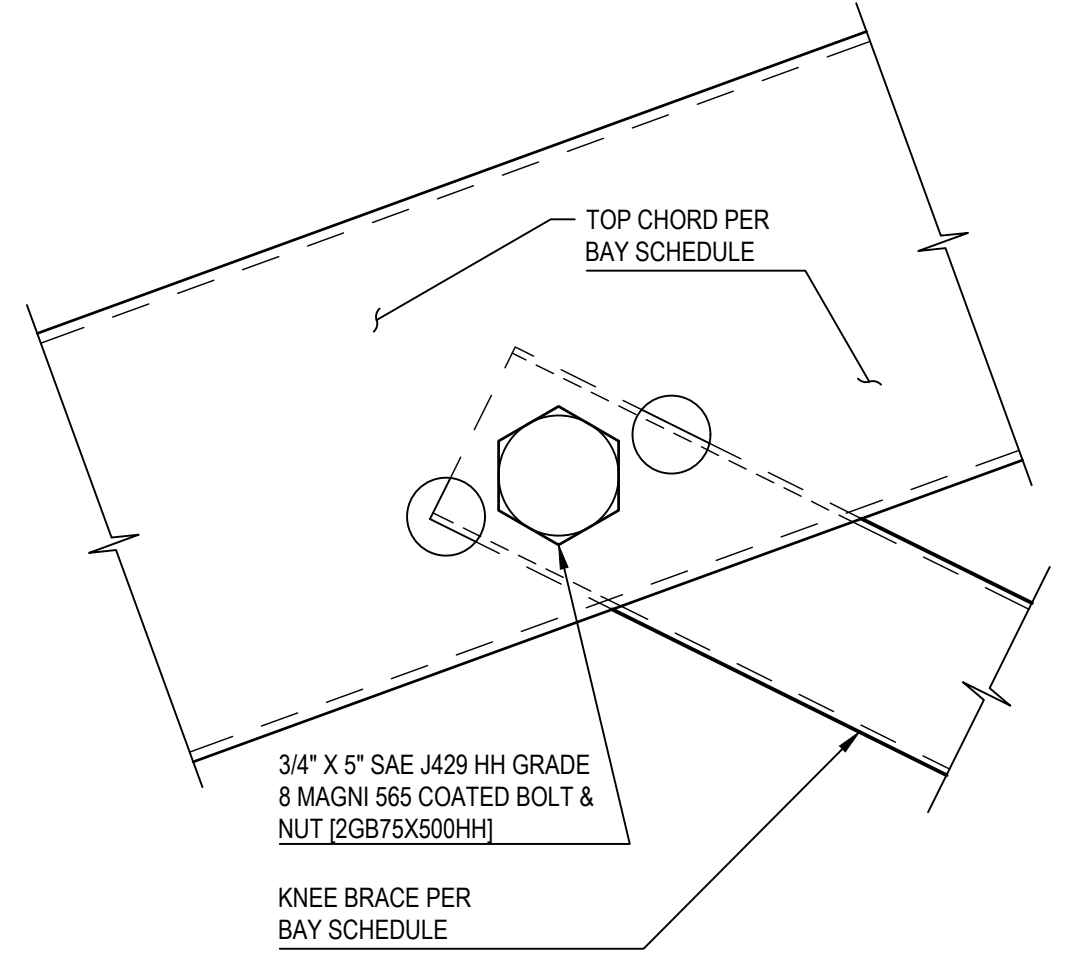
D6 TOP CHORD TO POST CONNECTION DETAIL
 SCALE: 3" = 1'-0"



A6 KNEE BRACE TO POST CONNECTION DETAIL
 SCALE: 6" = 1'-0"



D3 UPPER KNEE BRACE TO TOP CHORD CONNECTION DETAIL
 SCALE: 6" = 1'-0"



A3 LOWER KNEE BRACE TO TOP CHORD CONNECTION DETAIL
 SCALE: 6" = 1'-0"

G1 X-BRACE TO POST CONNECTION DETAIL
 SCALE: 1/2" = 1'-0"

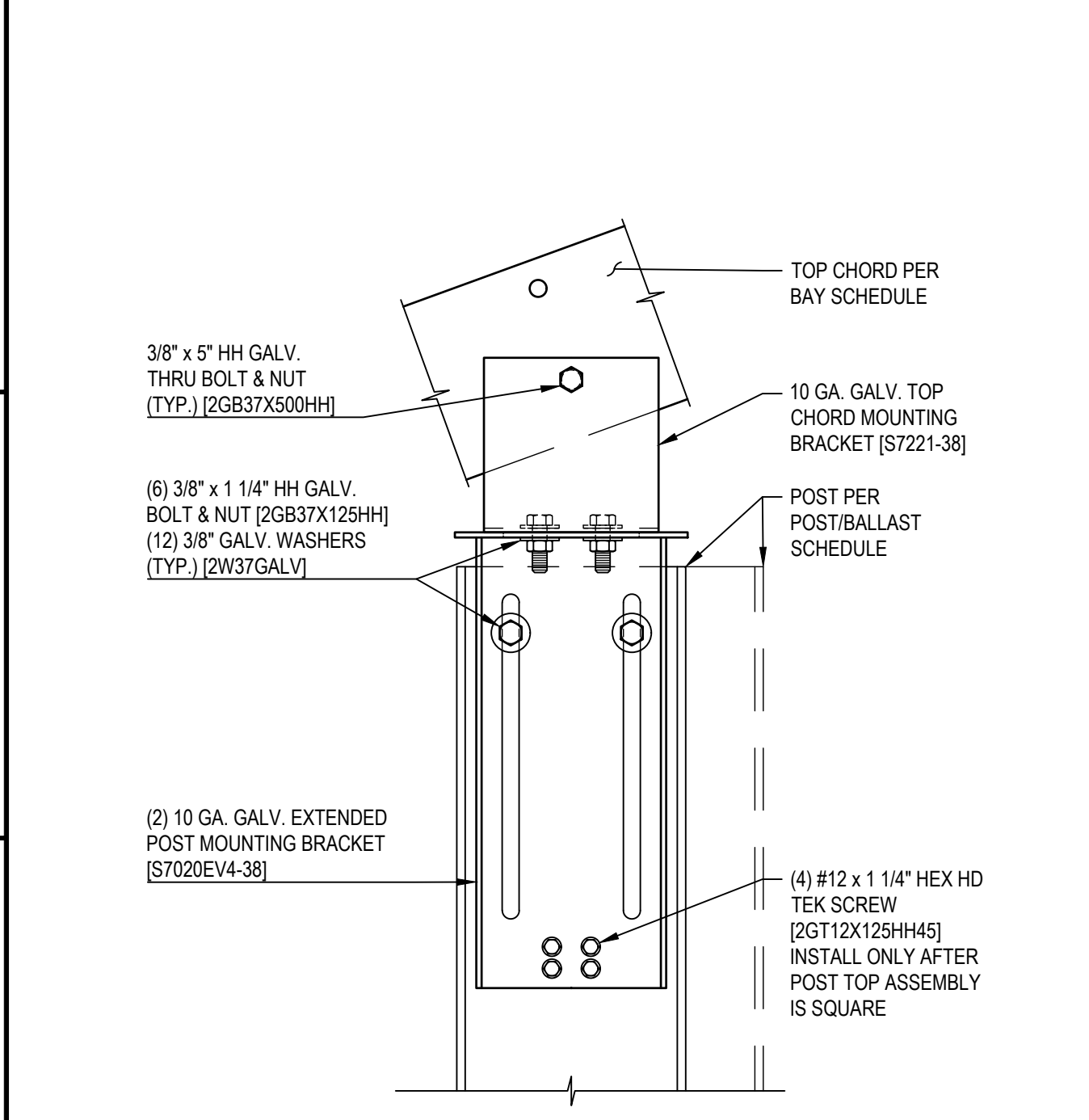
NOT USED

G3 X-BRACING ELEVATION
 SCALE: 1/2" = 1'-0"

NOT USED

D1 WEEB PV MODULE BONDING WASHER DETAIL
 SCALE: NONE

NOT USED



A1 TOP CHORD TO POST CONNECTION DETAIL (EXTENDED)
 SCALE: 3" = 1'-0"