

PHOTOVOLTAIC MODULE GROUND MOUNT SYSTEM

TERRASmart, INC. RACK MODEL: RBI GLIDE WAVE

FOR GENERAL ENERGY CORP

AT
INX HOMEWOOD
1000 MAPLE AVE #2047
HOMewood, IL 60430



terrasmart™

6715 STEGER DRIVE
 CINCINNATI, OH 45237
 513.242.2051
 FAX: 513.242.0816

PROFESSIONAL SEAL

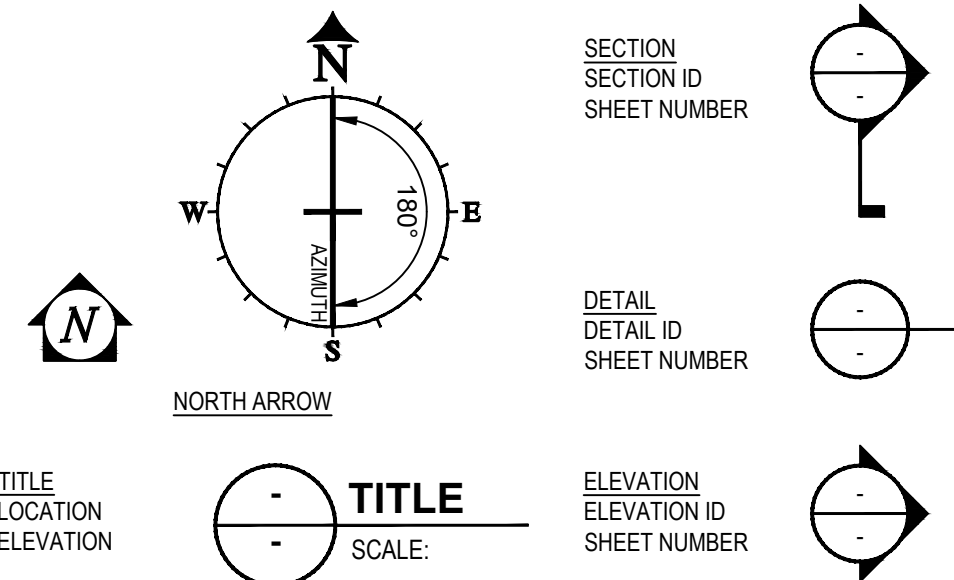
ENGINEER'S SEAL APPLIES TO DESIGN OF STRUCTURAL COMPONENTS ONLY

**NOT FOR
CONSTRUCTION**

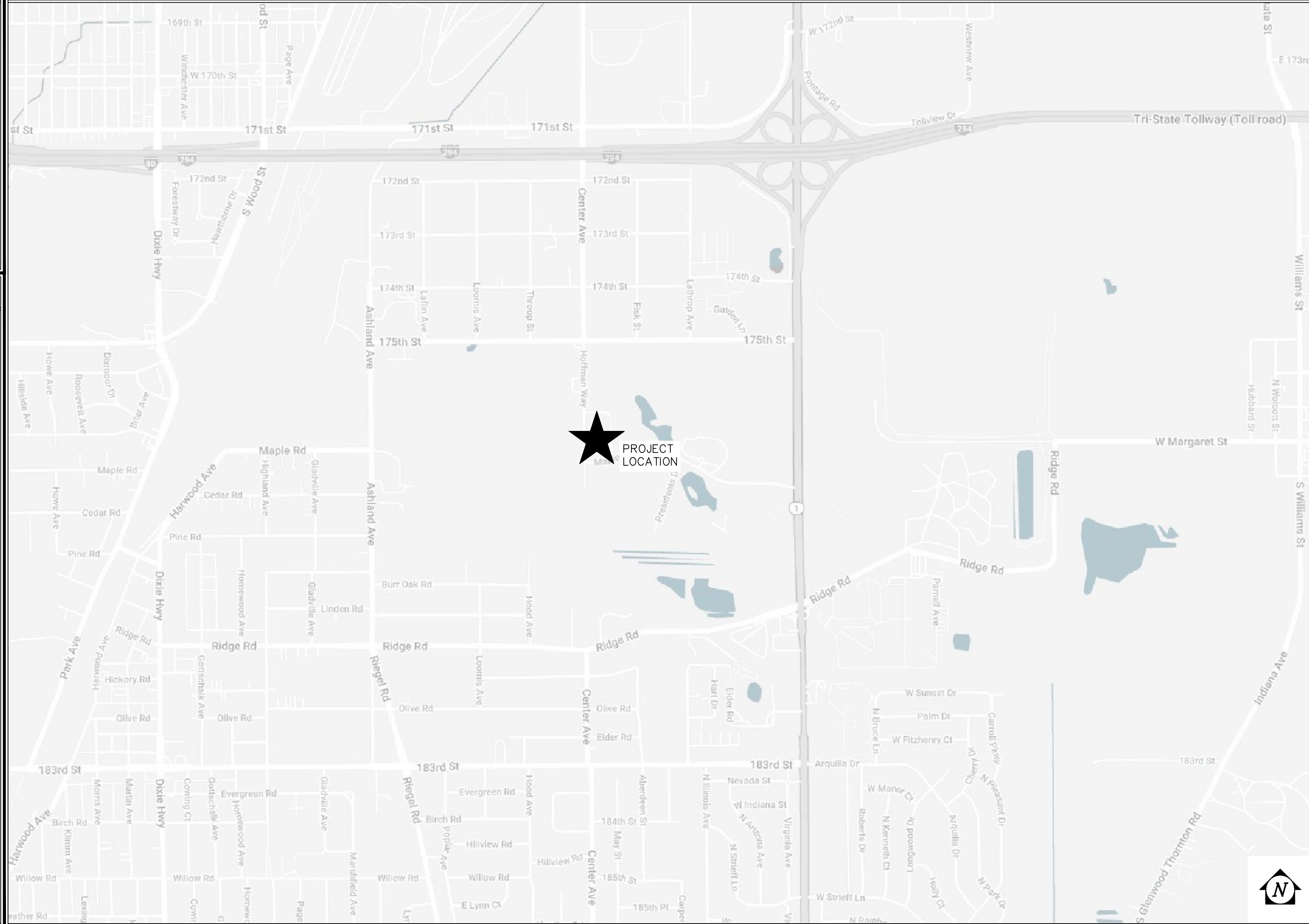
TERRASmart, INC. IS NOT RESPONSIBLE FOR CONSTRUCTION THAT IS BUILT FROM SET LABELED "NOT FOR CONSTRUCTION"

GROUND MOUNT FOR GENERAL ENERGY CORP

SYMBOLS LEGEND



VICINITY MAP



SHEET INDEX

| SHT. No. | SHEET DESCRIPTION | REL. No. | SHT. No. | SHEET DESCRIPTION | REL. No. |
|----------|---|----------|----------|-------------------|----------|
| SG001 | COVER SHEET | 2 | | | |
| SG002 | GENERAL NOTES/MODULE SPECIFICATION SHEETS | 2 | | | |
| SG003 | SITE PLAN & BILL OF MATERIALS | 2 | | | |
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| SG501 | DETAILS | 2 | | | |

GOVERNING CODE

ILLINOIS BUILDING CODE 2021 (IBC 2018)

RISK CATEGORY: I

DESIGN LOADS:

- DEAD LOADS:
 - STRUCTURE: 2.0 PSF
 - GLAZING: 3.0 PSF
 - Z: 5.0 PSF
- ROOF LIVE LOAD = 0 PSF
- SNOW LOAD:
 - $P_g = 25.0$ PSF (GROUND SNOW)
 - $P_f = 15.2$ PSF (FLAT ROOF SNOW)
 - $P_s = 16.0$ PSF (SLOPED ROOF SNOW)
 - $C_d = 0.90$
 - $C_e = 1.20$
 - $C_g = 1.00$
 - $I_s = 0.80$
- WIND LOAD: (MAIN WIND FORCE RESISTING SYSTEM)
 - V = 86 MPH (PER LOCAL WIND STUDY BY WINDSIM)
 - DATED: 07/06/2023
 - REPORT #: 230607_RBI_HOMewood_100_A
 - EXPOSURE: C
- SEISMIC:
 - $S_s = 0.125$
 - $S_1 = 0.067$
 - $S_{d1} = 0.134$
 - $S_{d2} = 0.108$
 - $I_g = 1.00$
 - SITE CLASS: D
 - SEISMIC DESIGN CATEGORY: B
 - SEISMIC FORCE RESISTING SYSTEM = CANTILEVERED COLUMN SYSTEM
 - DESIGN BASE SHEAR: V = 0.067*W
 - $C_u = 2.00$
 - R = 2.00
 - EQUIVALENT LATERAL FORCE ANALYSIS

CUSTOMER SPECIFICATIONS

NOTE:
 THIS SUBMITTAL/CONSTRUCTION SET WAS PRODUCED FROM DOCUMENTS RECEIVED FROM CUSTOMER ON 06/09/2023.

| | |
|--------------------------|-------------------------|
| PV MODULE MANUFACTURER | HANWHA |
| PV MODULE MODEL # | Q.PEAK DUO XL-G10.3_BFG |
| PV MODULE WATTAGE | 490 |
| # OF PV MODULES/STRING | T.B.D. BY CUSTOMER |
| # OF ACTIVE PV MODULES | 1868 |
| # OF INACTIVE PV MODULES | 0 |
| TOTAL # OF PV MODULES | 1868 |
| PV SYSTEM WATTS SUBTOTAL | 915,320 kW |
| TOTAL PV SYSTEM WATTS | 915,320 kW |
| TOPOGRAPHIC RELATIONSHIP | FOLLOW GRADE |
| ARRAY TILT | 10° ±2° |
| MINIMUM MODULE CLEARANCE | 3'-0" |
| ARRAY AZIMUTH* | 180° |

* - NOT ADJUSTED FOR MAGNETIC DECLINATION

RELEASE RECORD

| MARK DATE | DESCRIPTION |
|------------|-----------------|
| 2_07/03/23 | 50% REVIEW (R1) |
| 1_06/12/23 | 50% REVIEW |

PROJECT INFORMATION

TITLE & ADDRESS:
INX HOMEWOOD

1000 MAPLE AVE #2047
 HOMEWOOD, IL 60430

TERRASmart PROJECT No.:
 2330085

DRAWN BY: _____ REVIEWED BY: _____

SHEET TITLE:
 COVER SHEET

SHEET No.:
SG001

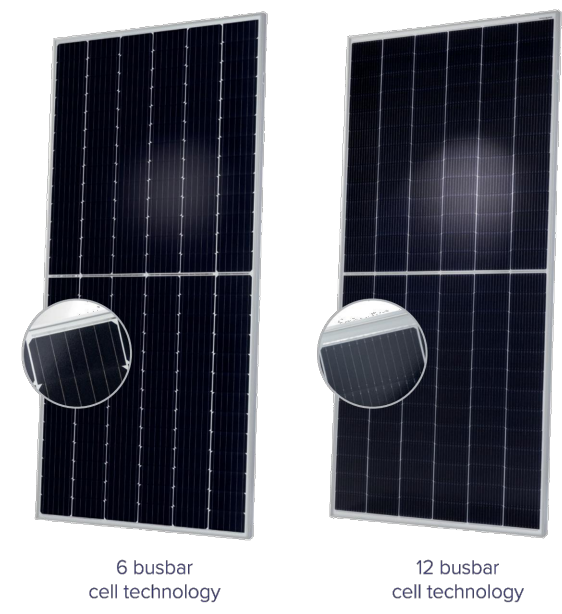
MODULE SPECIFICATION SHEETS

Q.PEAK DUO XL-G10 SERIES



475-490 Wp | 156 Cells
21.2% Maximum Module Efficiency

MODEL Q.PEAK DUO XL-10.3/BFG



- Bifacial energy yield gain of up to 20%**
Bifacial QANTUM solar cells with zero gap cell layout make efficient use of light shining on the module rear-side for radically improved LCOE.
- Low electricity generation costs**
QANTUM DUO Z combines cutting edge cell separation and innovative wiring with QANTUM Technology for higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 21.2%.
- A reliable investment**
Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty.*
- Enduring high performance**
Long-term yield security with Anti LeTID Technology, Anti PID Technology², Hot-Spot Protect.
- Frame for versatile mounting options**
High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400 Pa) and wind loads (3000 Pa).
- Innovative all-weather technology**
Optimal yields, whatever the weather with excellent low-light and temperature behavior.

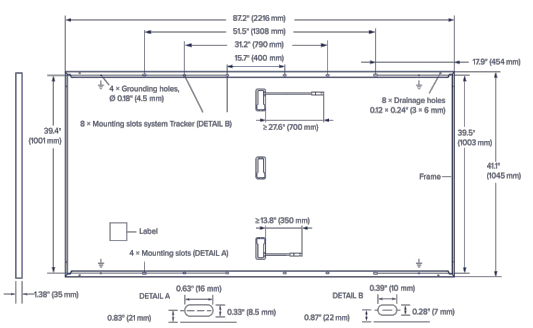
The ideal solution for:
Ground mounted solar panels



Q.PEAK DUO XL-G10 SERIES

Mechanical Specification

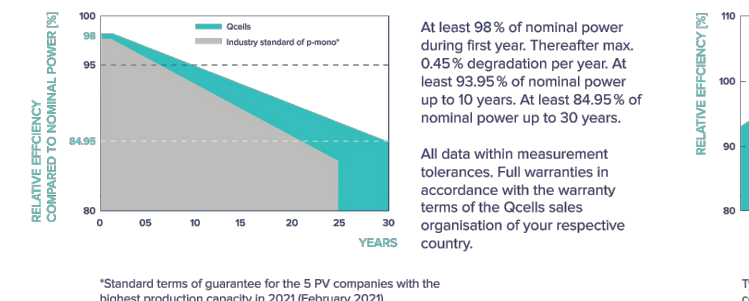
| | |
|--------------|---|
| Format | 872 in x 431 in x 138 in (including frame) (2236 mm x 1095 mm x 35 mm) |
| Weight | 64.2 lbs (291 kg) |
| Front Cover | 0.08 in (2.0 mm) thermally pre-stressed glass with anti-reflection technology |
| Back Cover | 0.08 in (2.0 mm) semi-tempered glass |
| Frame | Anodized aluminum |
| Cell | 6 x 26 monocrystalline QANTUM solar half cells |
| Junction box | 2.09 x 3.98 in x 1.26 x 2.36 in x 0.59 x 0.71 in (53.0 mm x 100.0 mm x 32.4 mm x 61.8 mm x 15.0 mm x 18.0 mm) IP68, with bypass diodes |
| Cable | 4 mm ² Solar cable (1) x 2.76 in (700 mm), (1) x 13.8 in (350 mm) |
| Connector | Stäubli MCA4, Stäubli MCA4-Evo2, Hanwha Q CELLS HCCA, IP68 |



Electrical Characteristics

| POWER CLASS | 475 | 480 | 485 | 490 | | | | | |
|---|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC (POWER TOLERANCE: ±0.5% -0.5%) | | | | | | | | | |
| Power at MPP ¹ | P _{MPP} [W] | 475 | 595.6 | 480 | 525.0 | 485 | 530.5 | 490 | 538.0 |
| Short Circuit Current ¹ | I _{sc} [A] | 11.08 | 12.12 | 11.52 | 12.17 | 11.16 | 12.21 | 11.20 | 12.26 |
| Open Circuit Voltage ¹ | V _{oc} [V] | 53.15 | 53.34 | 53.39 | 53.58 | 53.63 | 53.82 | 53.86 | 54.05 |
| Current at MPP | I _{MPP} [A] | 10.55 | 11.54 | 10.59 | 11.58 | 10.63 | 11.63 | 10.67 | 11.67 |
| Voltage at MPP | V _{MPP} [V] | 45.03 | 45.02 | 45.33 | 45.32 | 45.63 | 45.62 | 45.93 | 45.92 |
| Efficiency ¹ | η [%] | >20.5 | >20.7 | >20.9 | >20.7 | >21.2 | >21.2 | >21.2 | >21.2 |

Ocells PERFORMANCE WARRANTY



TEMPERATURE COEFFICIENTS

| | | | | | |
|---|---------|-------|---|-----------|--------------------------|
| Temperature Coefficient of V _{oc} | α [%/K] | -0.04 | Temperature Coefficient of V _{MPP} | β [%/K] | -0.27 |
| Temperature Coefficient of P _{MPP} | γ [%/K] | -0.34 | Nominal Module Operating Temperature | NMOT [°F] | 109 ± 5.4 (43 ± 3 °C) |

Properties for System Design

| | | | | |
|--|-------------------------|------------------------------|---|--|
| Maximum System Voltage | V _{max} [V] | 1500 | PV module classification | Class B |
| Maximum Series Fuse Rating | I _{sc} [A, DC] | 20 | Fire Rating based on ANSI/UL 61730 | TYPE 2P ² |
| Max. Design Load, Push/Pull ¹ | [lbs/ft ²] | 75 (3600 Pa) / 42 (2000 Pa) | Permitted Module Temperature on Continuous Duty | -40 °F (up to -40 °C) +40 °C (up to +85 °C) |
| Max. Test Load, Push/Pull ¹ | [lbs/ft ²] | 113 (5400 Pa) / 62 (3000 Pa) | | |

Qualifications and Certificates



Ocells pursues minimizing paper output in consideration of the global environment.



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 TERRASART, INC. 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 TERRASART, INC. TERRASART, INC. IS NOT RESPONSIBLE FOR PV MODULE DIMENSIONAL DISCREPANCIES DUE TO FURNISHED PV MODULES NOT MATCHING CUSTOMER FURNISHED PV MODULE DATA SHEETS.

SPECIAL FIELD INSPECTIONS:

SPECIAL INSPECTION NOT REQUIRED BY TERRASART, INC. 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.

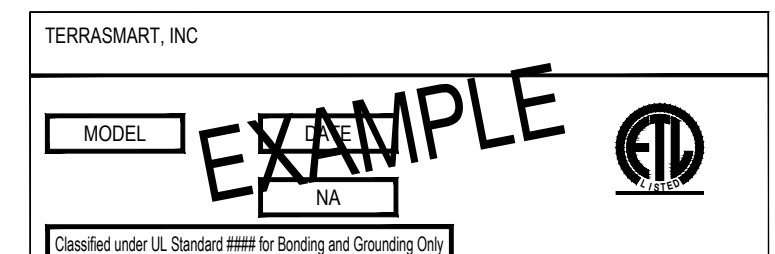
| IBC TABLE 1705 | | |
|---|------------|----------|
| STRUCTURAL STEEL/ALUMINUM FABRICATION | CONTINUOUS | PERIODIC |
| MATERIAL IDENTIFICATION | | X |
| HIGH STRENGTH BOLTS - MATERIAL IDENTIFICATION OF BOLTS, NUTS AND WASHERS | | X |
| WELD FILLER MATERIALS - IDENTIFICATION AND CONFIRMATION OF COMPLIANCE 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. TERRASART, INC. IS NOT RESPONSIBLE FOR PV SYSTEM DESIGN AS IT PERTAINS TO ELECTRICAL OR PV SYSTEM PRODUCTION.

ETL CLASSIFIED:

THIS PROJECT CONTAINS RACKING LABELED AS ETL CLASSIFIED UNDER UL SUBJECT 2703 OR UL STANDARD 2703. LABELS ARE APPLIED AT THE FACTORY ON COMPONENTS THAT MAY BE ASSEMBLED AT THE FACTORY OR IN THE FIELD. SEE DETAIL SHEET IN THIS DRAWING SET FOR MORE INFORMATION.



STRUCTURAL STEEL:

- ALL STRUCTURAL STEEL SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST VERSION OF AISI "MANUAL OF STEEL CONSTRUCTION." LIGHT GAGE 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 TEKS - GALVANIZED
 - F. COLD-FORMED/LIGHT GAGE: 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 TERRASART, INC. RBI GLIDE WAVE MOUNTING SYSTEM 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 - S80 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 TERRASART, INC. RBI GLIDE WAVE MOUNTING SYSTEM INSTALLATION GUIDE.

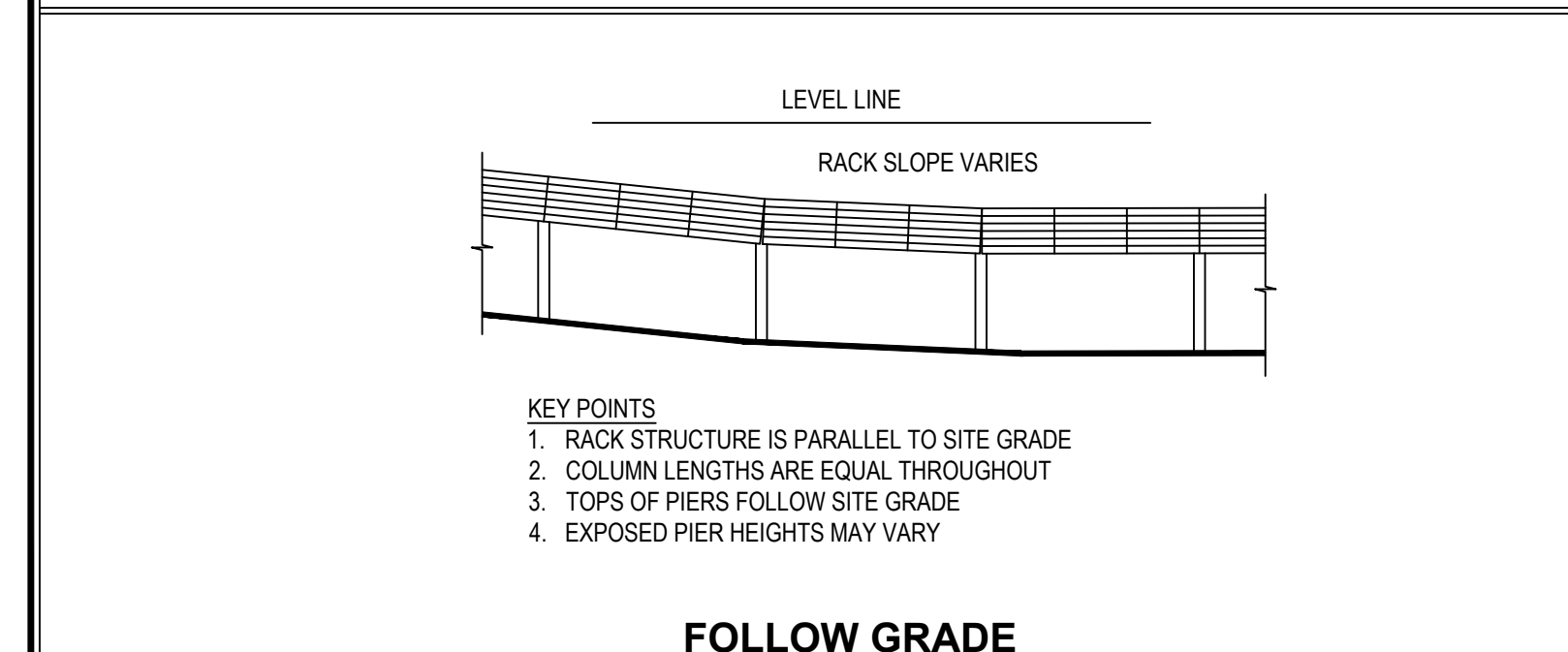
FOUNDATIONS/CONCRETE:

- THE FOUNDATION DESIGN IS BASED ON ASSUMED MINIMUM CODE ALLOWABLE VALUES AND FIELD TESTS PERFORMED BY TERRASART, INC. ON: 06/06/2023
- 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
- GROUT SPECIFICATIONS: 8000 PSI MINIMUM, NON-SHRINK
- REINFORCING STEEL: ASTM A615 GRADE 60 BILLET STEEL
- 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 TERRASART, INC. 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 ENSURING SITE CONDITIONS ARE NOT ALTERED REGARDING CORROSION POTENTIAL FROM WHAT WAS CONSIDERED IN TERRASART'S ANALYSIS.
- INSTALLER/CONTRACTOR SHALL COORDINATE PLACEMENT OF FOUNDATIONS AND/OR ANCHOR BOLTS PER DESIGN DRAWINGS AND/OR MANUFACTURER'S SPECIFICATIONS.
- TERRASART, INC. DESIGNS DRIVEN-PILE AND ALTERNATIVE 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, TERRASART, INC. 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, TERRASART, INC. RECOMMENDS A MINIMUM CLEAR DISTANCE EQUAL TO OR GREATER THAN THE DEPTH OF THE FOUNDATION. IF IN DOUBT OF SOIL CONDITIONS, TERRASART, INC. 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% MODIFIED PROCTOR DENSITY. FOR FURTHER CLARIFICATION ON COMPACTION REQUIREMENTS, TERRASART, INC. RECOMMENDS CONSULTING A QUALIFIED GEOTECHNICAL ENGINEER.
- REFER TO SHEET SG302 FOR REFUSAL REMEDY PROCEDURE AND ALTERNATE FOUNDATION OPTIONS.

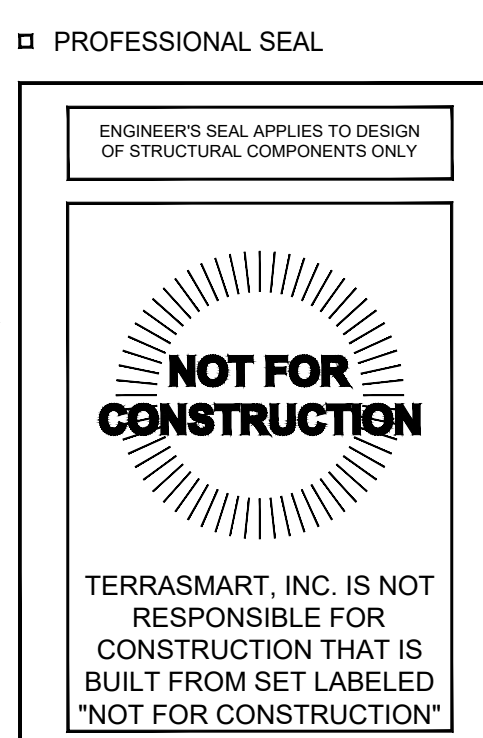
SURVEYING REQUIREMENTS:

- ALL SURVEYING WORK MUST BE COMPLETED BY OTHERS PRIOR TO TERRASART, INC. MOBILIZING ON-SITE UNLESS NOTED OTHERWISE.
- ALL SURVEYING FOR THE RACKING MUST BE BASED OFF OF THE LATEST DOCUMENT SET FROM TERRASART, INC.
- THE FIRST AND LAST RACKING POST IN EVERY ROW MUST HAVE THE CENTER POINTS SURVEYED AND MARKED. THERE MUST BE A FIVE FOOT OFFSET TO THE WEST OF THE WESTERMOST POST LOCATION AND A FIVE FOOT OFFSET TO THE EAST OF THE EASTERMOST POST LOCATION IN EVERY ROW.
- FOR ROWS LONGER THAN 100 FEET, THE CENTERLINE LOCATION MUST BE MARKED WITHIN THE ROW AT EVERY 100 FEET MAXIMUM. THESE ADDITIONAL MARKS SHOULD NOT BE AT A POST LOCATION. DO NOT MARK EACH INDIVIDUAL POST LOCATION WITHIN A ROW AS IT WILL NOT BE ACCURATE DUE TO TOPOGRAPHY.
- EVERY INDIVIDUAL EQUIPMENT POST LOCATION MUST HAVE THE CENTER POINT SURVEYED AND MARKED.

RACK SYSTEM TOPOGRAPHIC RELATIONSHIP



- KEY POINTS
- RACK STRUCTURE IS PARALLEL TO SITE GRADE
 - COLUMN LENGTHS ARE EQUAL THROUGHOUT
 - TOPS OF PIERS FOLLOW SITE GRADE
 - EXPOSED PIER HEIGHTS MAY VARY



GROUND MOUNT FOR GENERAL ENERGY CORP

RELEASE RECORD

| MARK | DATE | DESCRIPTION |
|------|----------|-----------------|
| 2 | 07/03/23 | 50% REVIEW (R1) |
| 1 | 06/12/23 | 50% REVIEW |

PROJECT INFORMATION

TITLE & ADDRESS:
INX HOMEWOOD

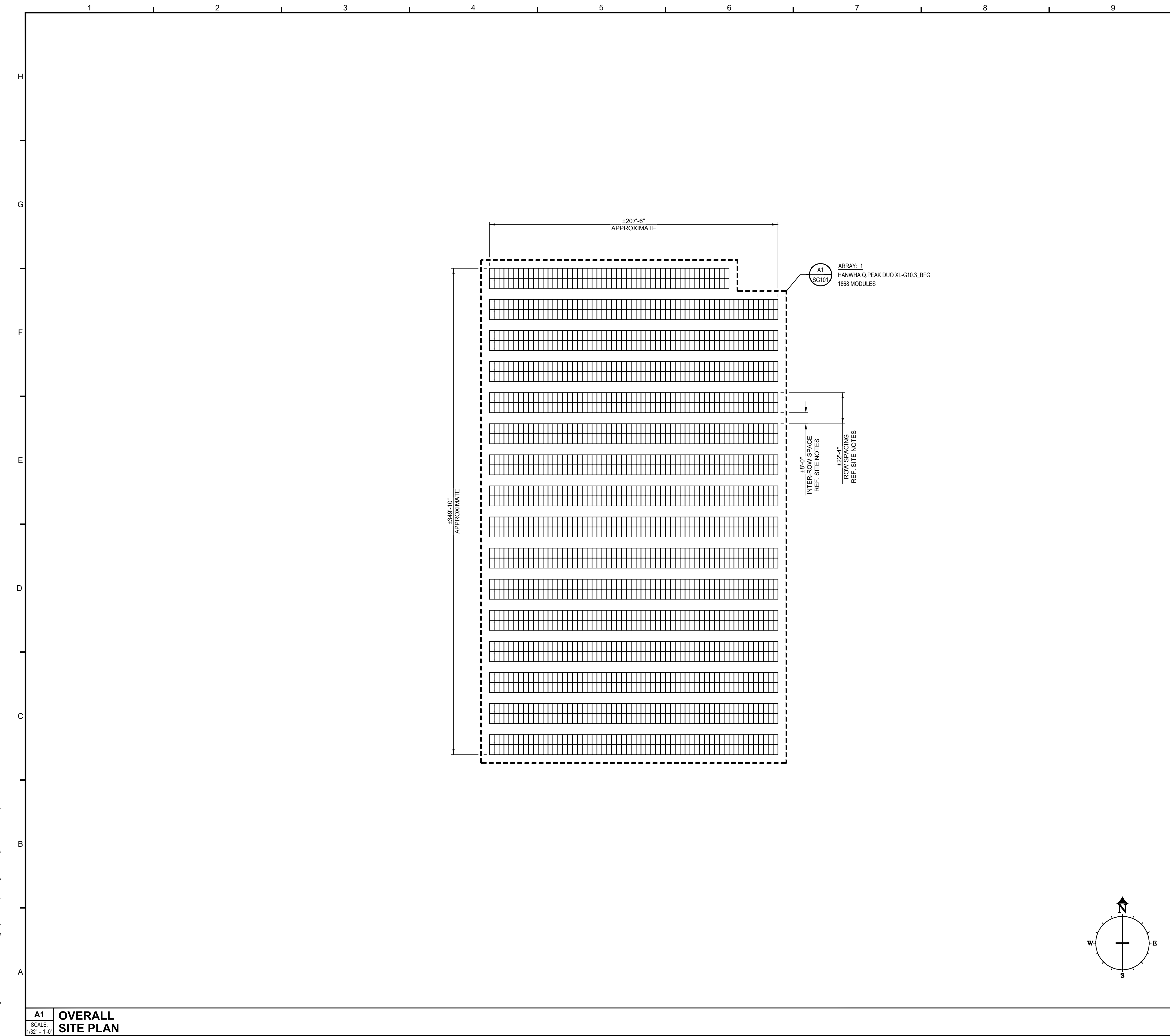
1000 MAPLE AVE #2047
HOMEWOOD, IL 60430

TERRASART PROJECT No.:
2330085

DRAWN BY: _____ REVIEWED BY: _____

SHEET TITLE:
GENERAL NOTES/
MODULE
SPECIFICATION SHEETS

SHEET No.:
SG002



SITE NOTES

1. NO TOPOGRAPHY PROVIDED BY GENERAL ENERGY CORP. 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 TERRASART, INC. SHALL BE NOTIFIED IF ON-SITE CONDITIONS ARE DIFFERENT THAN SHOWN OR PRESUMED.

BAY INFORMATION

| TYPE | QTY. |
|------|------|
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BILL OF MATERIALS

| ITEM | QTY. |
|------|------|
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terrasmart™
 6715 STEGER DRIVE
 CINCINNATI, OH 45237
 513.242.2051
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 ENGINEER'S SEAL APPLIES TO DESIGN OF STRUCTURAL COMPONENTS ONLY



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GROUND MOUNT FOR GENERAL ENERGY CORP

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| 2 | 07/03/23 | 50% REVIEW (R1) |
| 1 | 06/12/23 | 50% REVIEW |

PROJECT INFORMATION

TITLE & ADDRESS:
INX HOMEWOOD
 1000 MAPLE AVE #2047
 HOMEWOOD, IL 60430

TERRASART PROJECT No.:
 2330085

DRAWN BY: REVIEWED BY:
 - -

SHEET TITLE:
 SITE PLAN & BILL OF MATERIALS

SHEET No.:
SG003

A1 OVERALL SITE PLAN
 SCALE: 1/32" = 1'-0"

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terrasmart™

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PROFESSIONAL SEAL

ENGINEER'S SEAL APPLIES TO DESIGN OF STRUCTURAL COMPONENTS ONLY



TERRASMART, INC. IS NOT RESPONSIBLE FOR CONSTRUCTION THAT IS BUILT FROM SET LABELED "NOT FOR CONSTRUCTION"

GROUND MOUNT FOR GENERAL ENERGY CORP

RELEASE RECORD

| MARK | DATE | DESCRIPTION |
|------|----------|-----------------|
| 2 | 07/03/23 | 50% REVIEW (R1) |
| 1 | 06/12/23 | 50% REVIEW |

PROJECT INFORMATION

TITLE & ADDRESS:

INX HOMEWOOD

1000 MAPLE AVE #2047
HOMEWOOD, IL 60430

TERRASMART PROJECT No.:
2330085

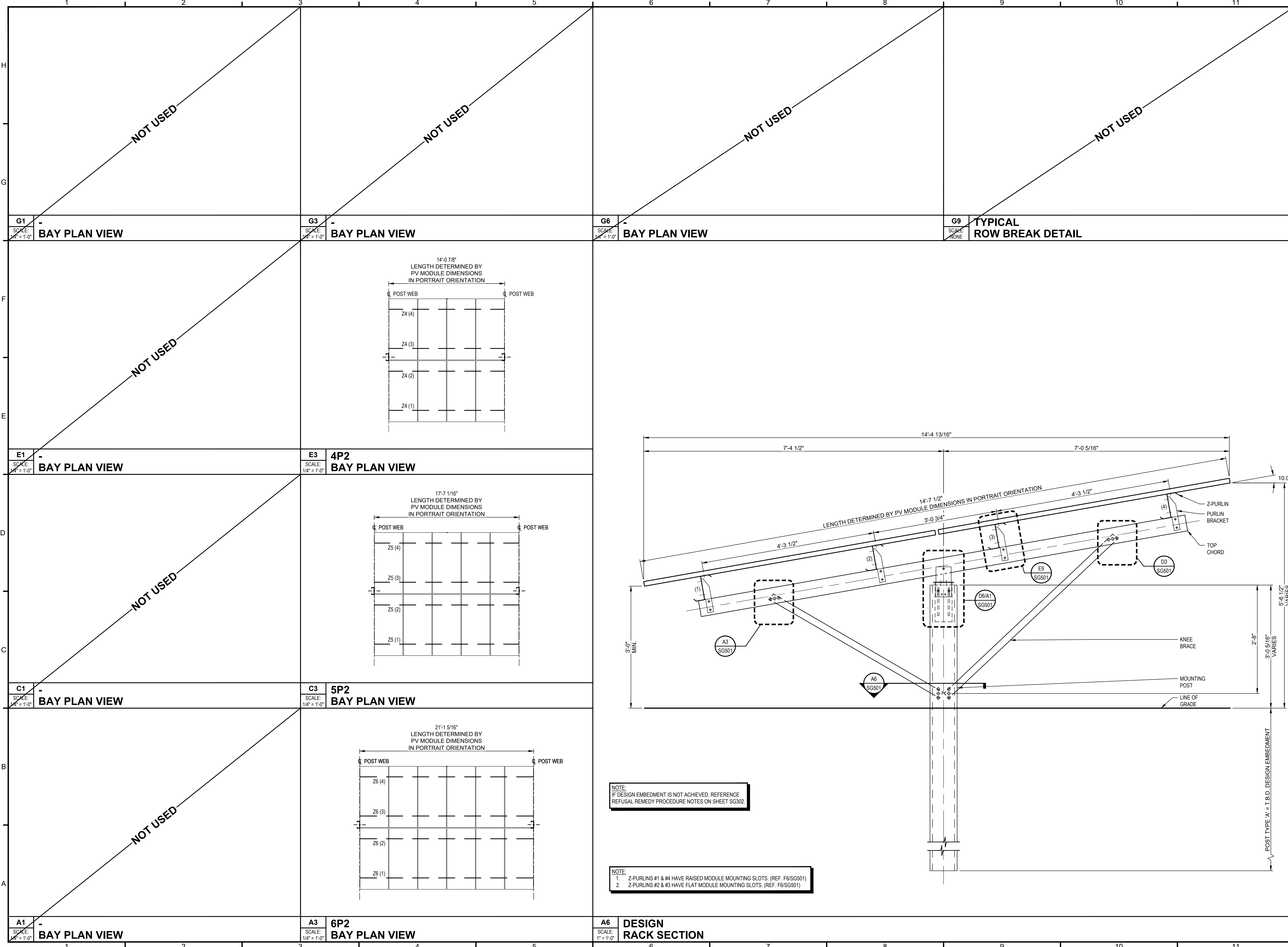
DRAWN BY: REVIEWED BY:

SHEET TITLE:

RACK SECTION & BAY PLAN VIEWS

SHEET No.:

SG301



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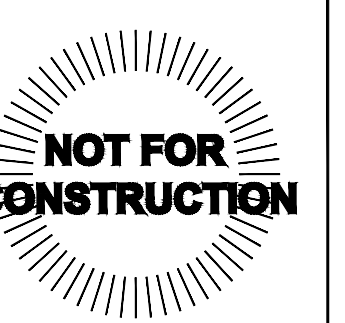


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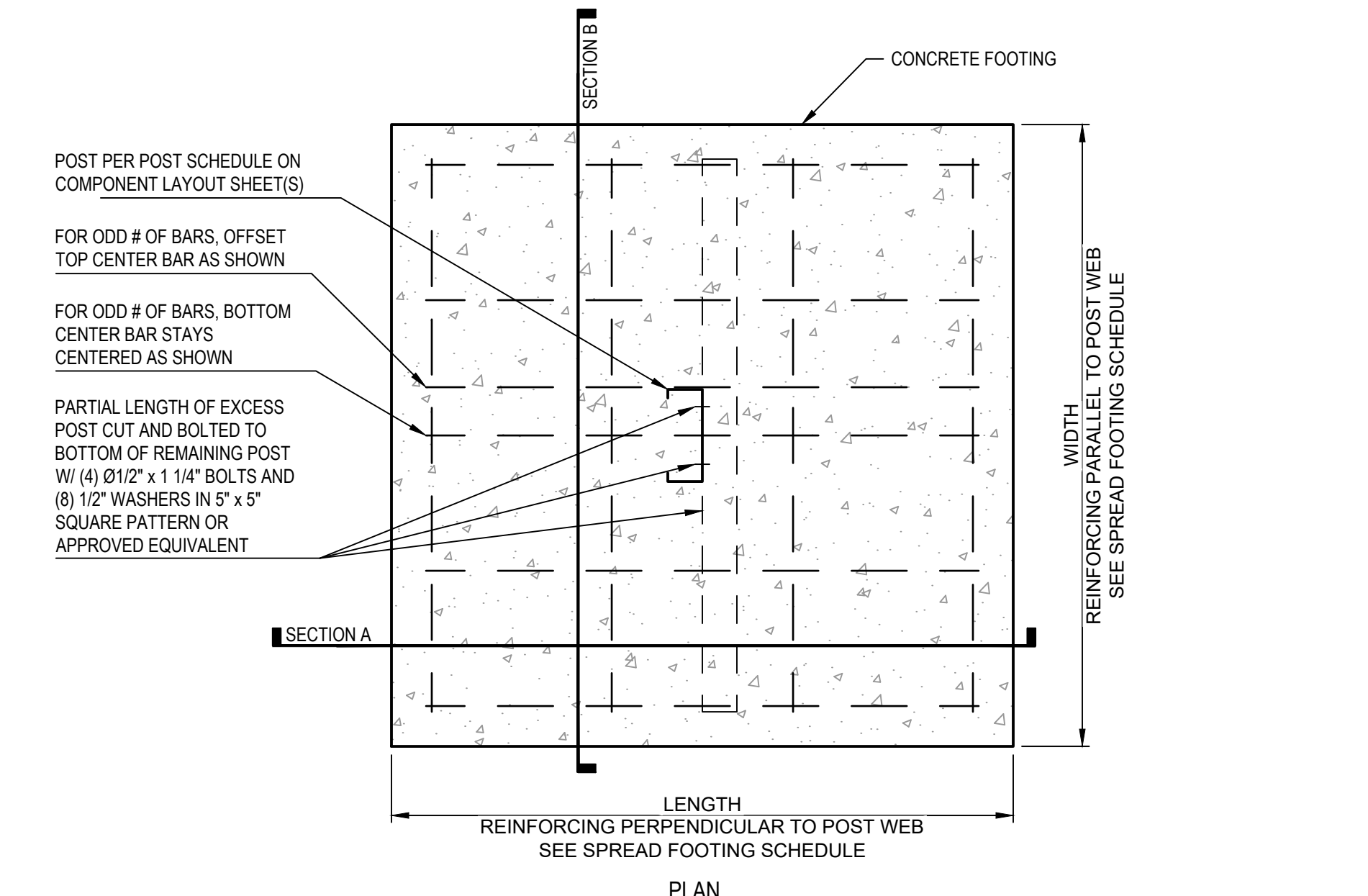
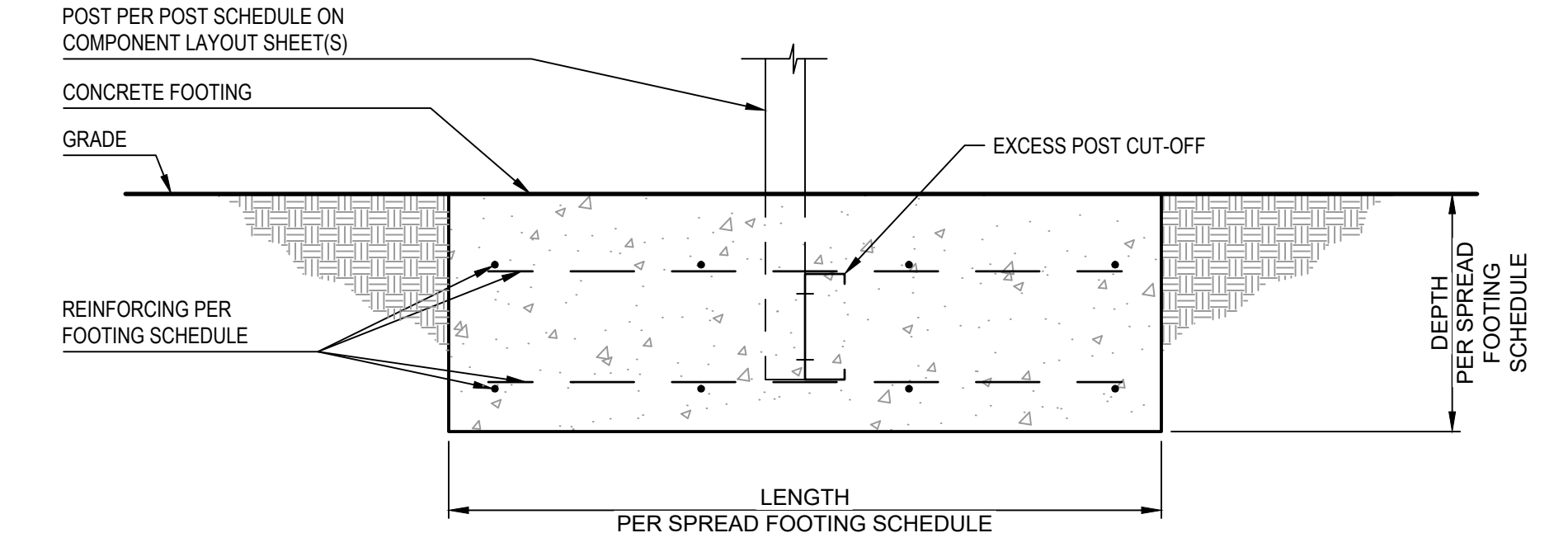
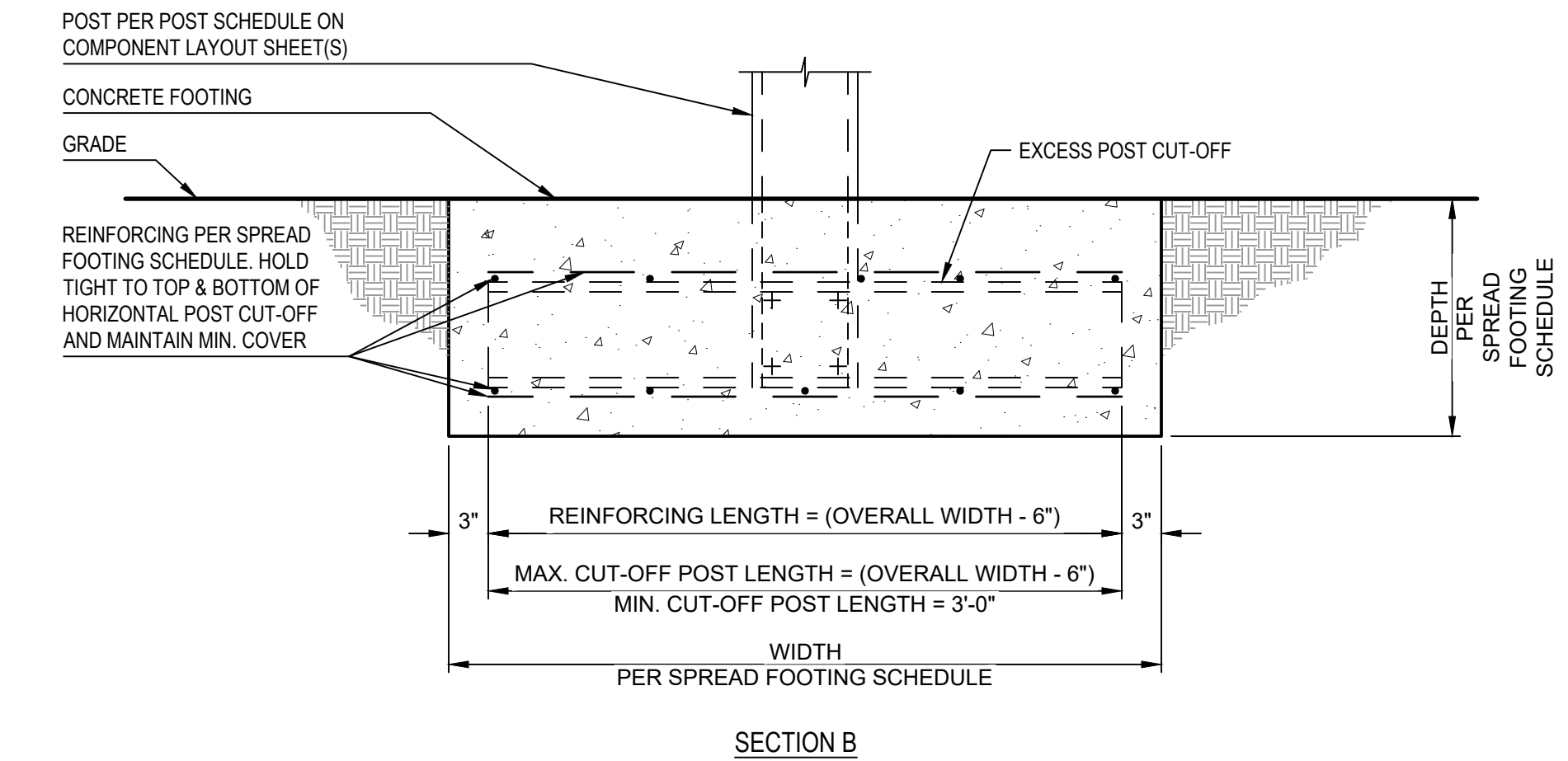
ALTERNATE FOUNDATIONS SECTIONS & DETAILS

SHEET No.:

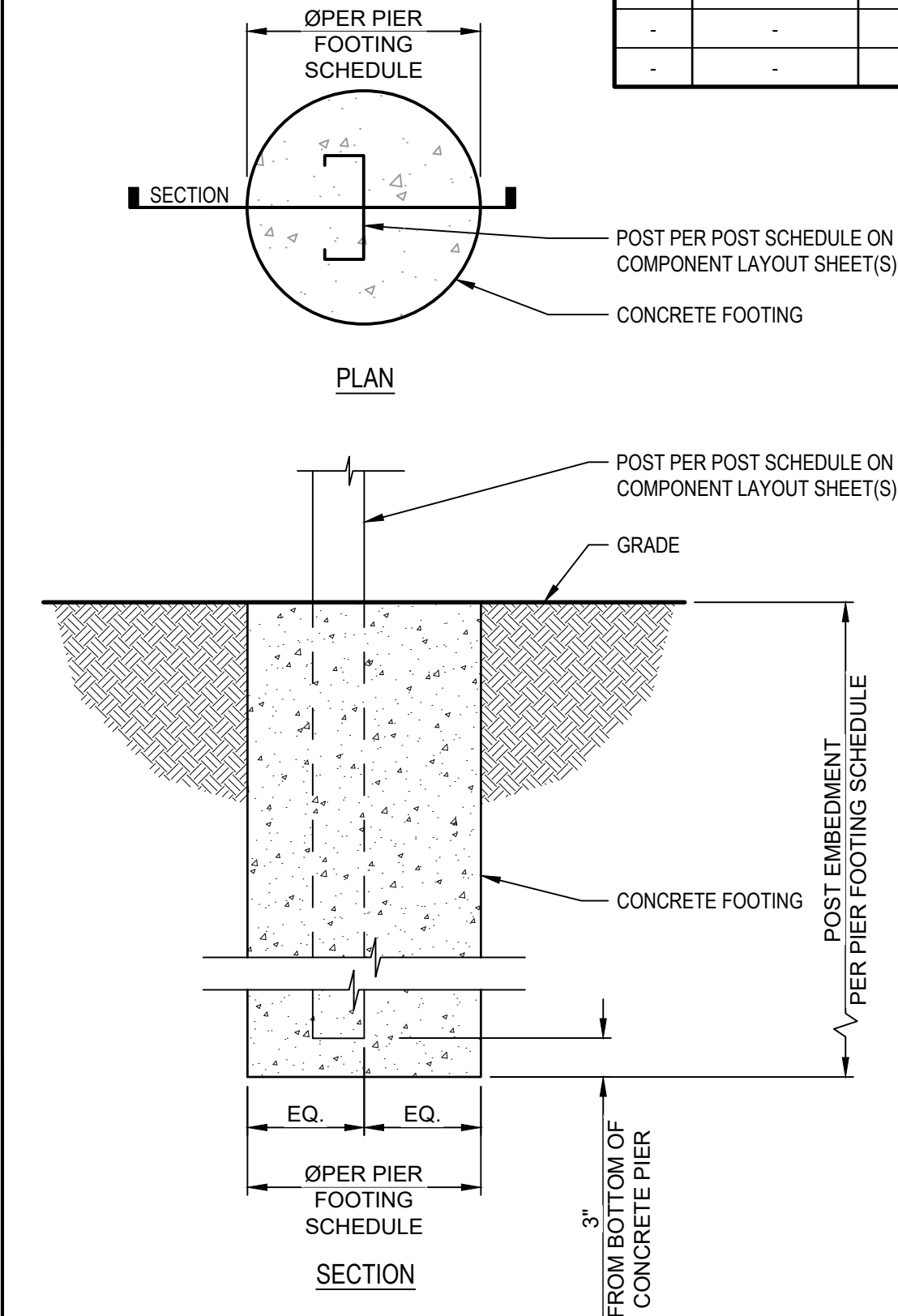
SG302

| 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 | 4'-0" | 4'-0" | 1'-6" | (4) #4 BARS T&B OR (4) #5 BARS T&B | (4) #4 BARS T&B OR (4) #5 BARS T&B | |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |

NOTE: ALL REINFORCING TO HAVE 3" MINIMUM COVER



| PIER FOOTING SCHEDULE | | |
|-----------------------|----------|-------|
| TYPE | DIAMETER | DEPTH |
| ALL | 1'-6" | 7'-0" |
| - | - | - |
| - | - | - |



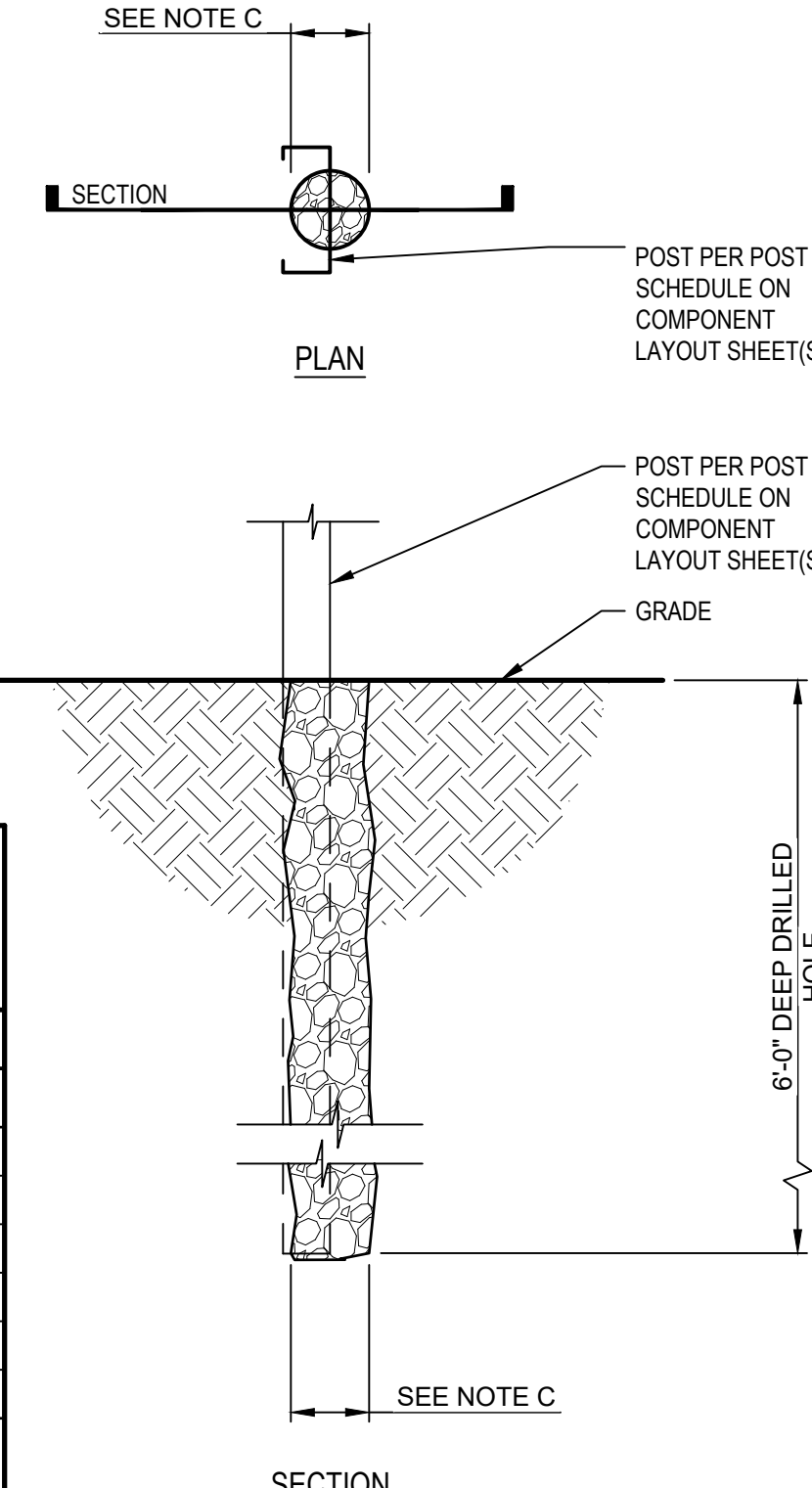
E5 ALTERNATE FOUNDATION PIER FOOTING DETAIL

NOTE:

A. POST NOT REQUIRED TO BE CENTERED IN HOLE.

B. POST SHOULD BOTTOM OUT AT THE HOLE.

C. WHEN DRILLING SOLID ROCK, HOLE TO BE 1/2"-1" LARGER THAN DIAMETER OF POST. WHEN DRILLING LOOSE ROCK & SOFT SOIL, OR STIFF SOIL, HOLE TO BE 1/2"-1" SMALLER THAN DIAMETER OF POST.



| AGGREGATE MATERIAL SPECIFICATION FOR PRE-DRILL, FILL, AND DRIVE | | |
|---|-----------|----------|
| SIEVE | % PASSING | |
| | OPTION A | OPTION B |
| 1" | 100 | 100 |
| 3/4" | 50-85 | 60-100 |
| #4 | 35-65 | 50-85 |
| #10 | 25-50 | 40-70 |
| #40 | 15-30 | 25-45 |
| #200 | <6 | <6 |

NOTE:

1. AGGREGATE SHALL BE CRUSHED STONE, SLAG, GRAVEL, OR CHERT.

2. FINES ARE TO BE MANUFACTURED SAND OR OTHER FINE MATERIALS NATURALLY CONTAINED OR ADDED TO MEET SPECIFICATIONS ABOVE.

3. AGGREGATE TO BE WELL GRADED.

A5 ALTERNATE FOUNDATION PRE-DRILL, FILL, AND DRIVE DETAIL

REFUSAL REMEDY PROCEDURE:

WHEN DRIVEN POSTS DO NOT ACCOMPLISH DESIGN EMBEDMENT DEPTH(S) AS SPECIFIED ON A6/SG301 AND, IF APPLICABLE, SHEET SG201 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.
- ATTEMPT TO DRIVE RELOCATED POST TO THE DESIGN EMBEDMENT DEPTH SPECIFIED ON A6/SG301 AND, IF APPLICABLE, SHEET SG201. IF POST DOES NOT REACH THE MINIMUM EMBEDMENT DEPTH OF 5.5 FEET, AN ALTERNATE FOUNDATION SHALL BE REQUIRED.
- IF POST DOES NOT REACH DESIGN EMBEDMENT DEPTH SPECIFIED ON A6/SG301 AND, IF APPLICABLE, SHEET SG201, BUT REACHED THE MINIMUM EMBEDMENT DEPTH OF 5.5 FEET, THE POST MUST PASS THE FOLLOWING VERTICAL AND LATERAL TESTS:
 - VERTICAL TEST - MINIMUM UPLIFT FORCE 2250 LBS. RESULTING IN VERTICAL DEFLECTION LESS THAN 1/2".
 - LATERAL TEST - MINIMUM LATERAL FORCE 2000 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 5.5 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. TERRASMART, INC. 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 TERRASMART, INC. ENGINEERING DEPARTMENT FOR RECOMMENDATIONS.

A1 REFUSAL REMEDY PROCEDURE

A8 ALTERNATE FOUNDATION SPREAD FOOTING DETAIL

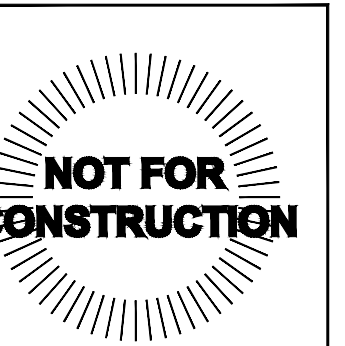


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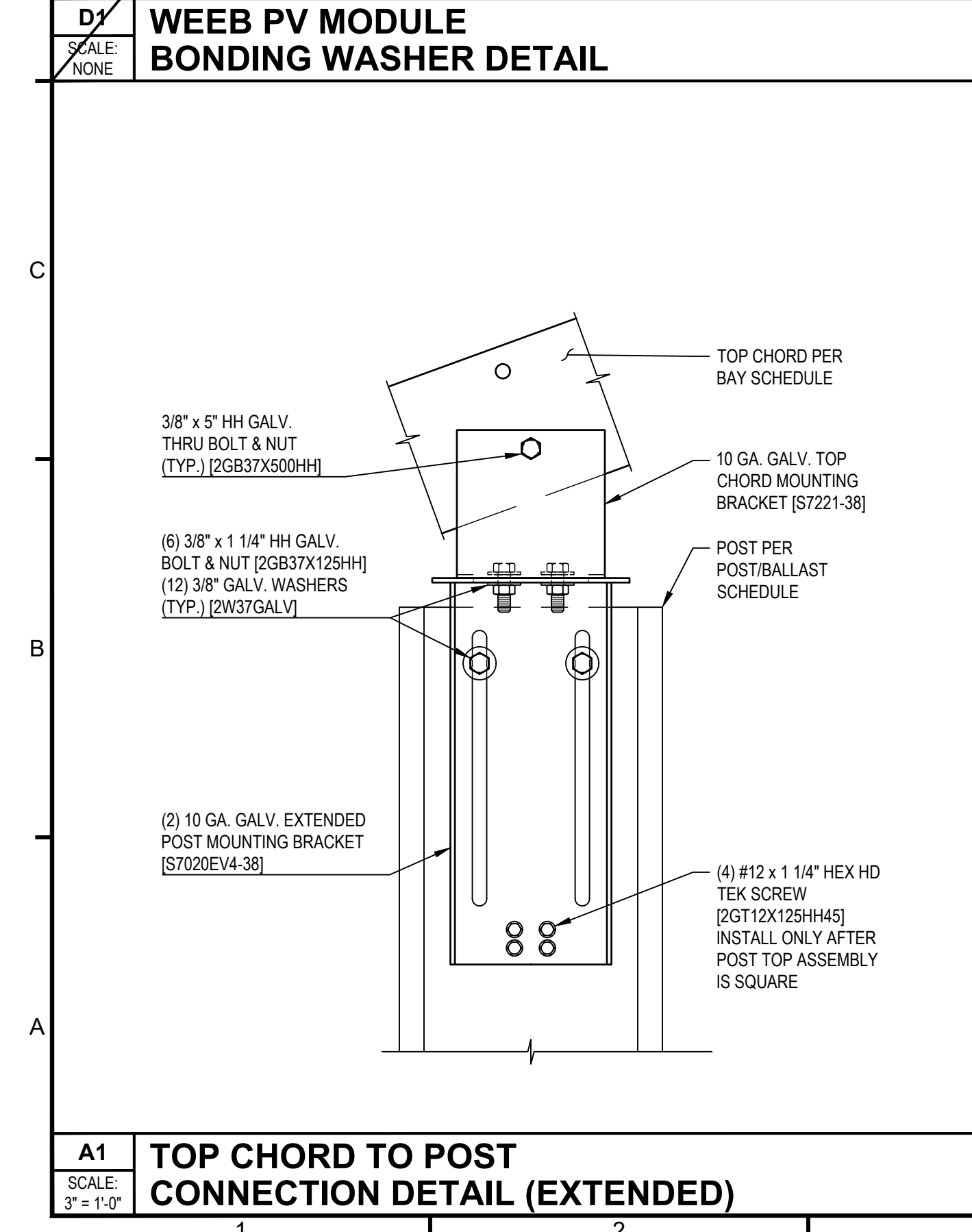
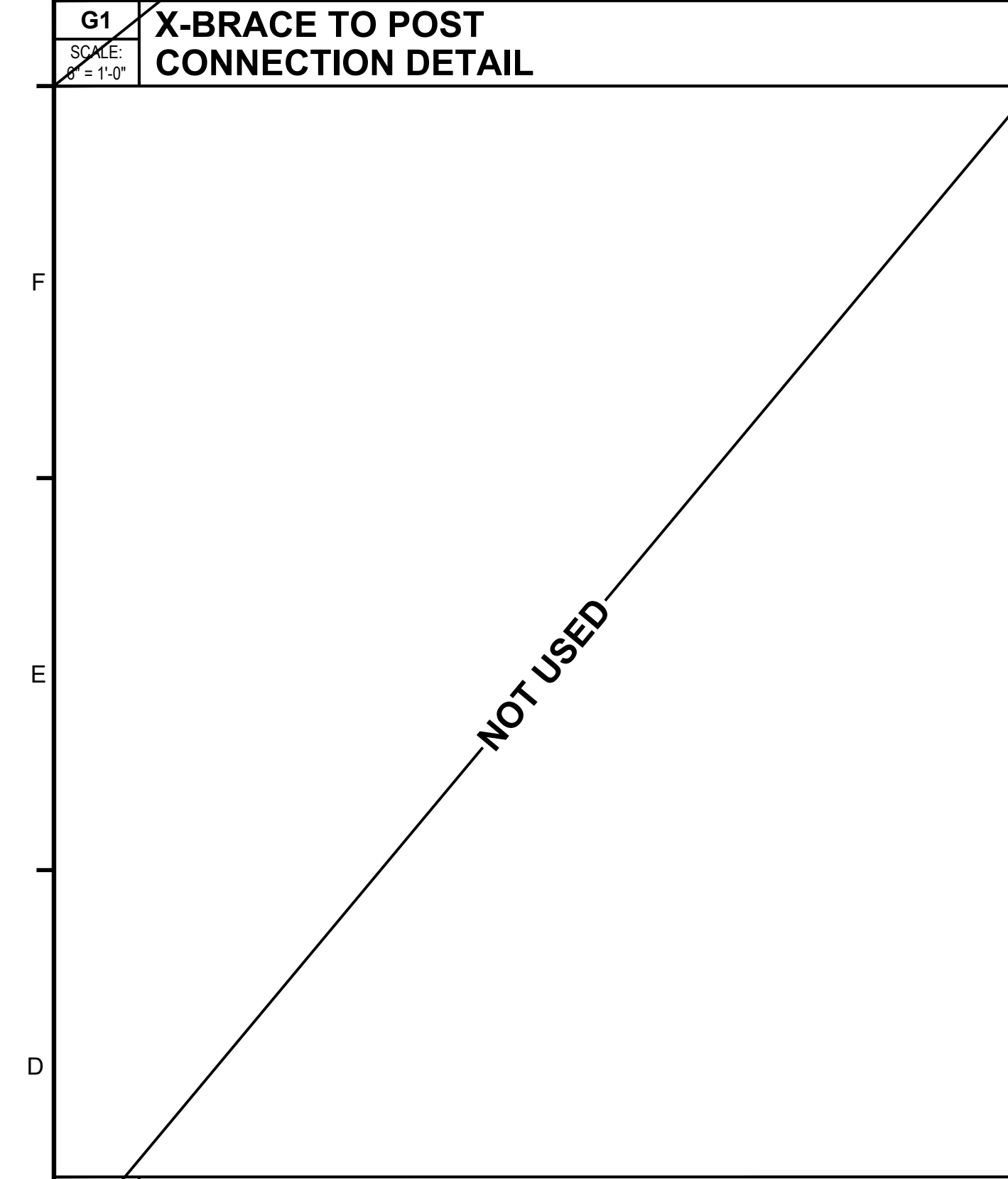
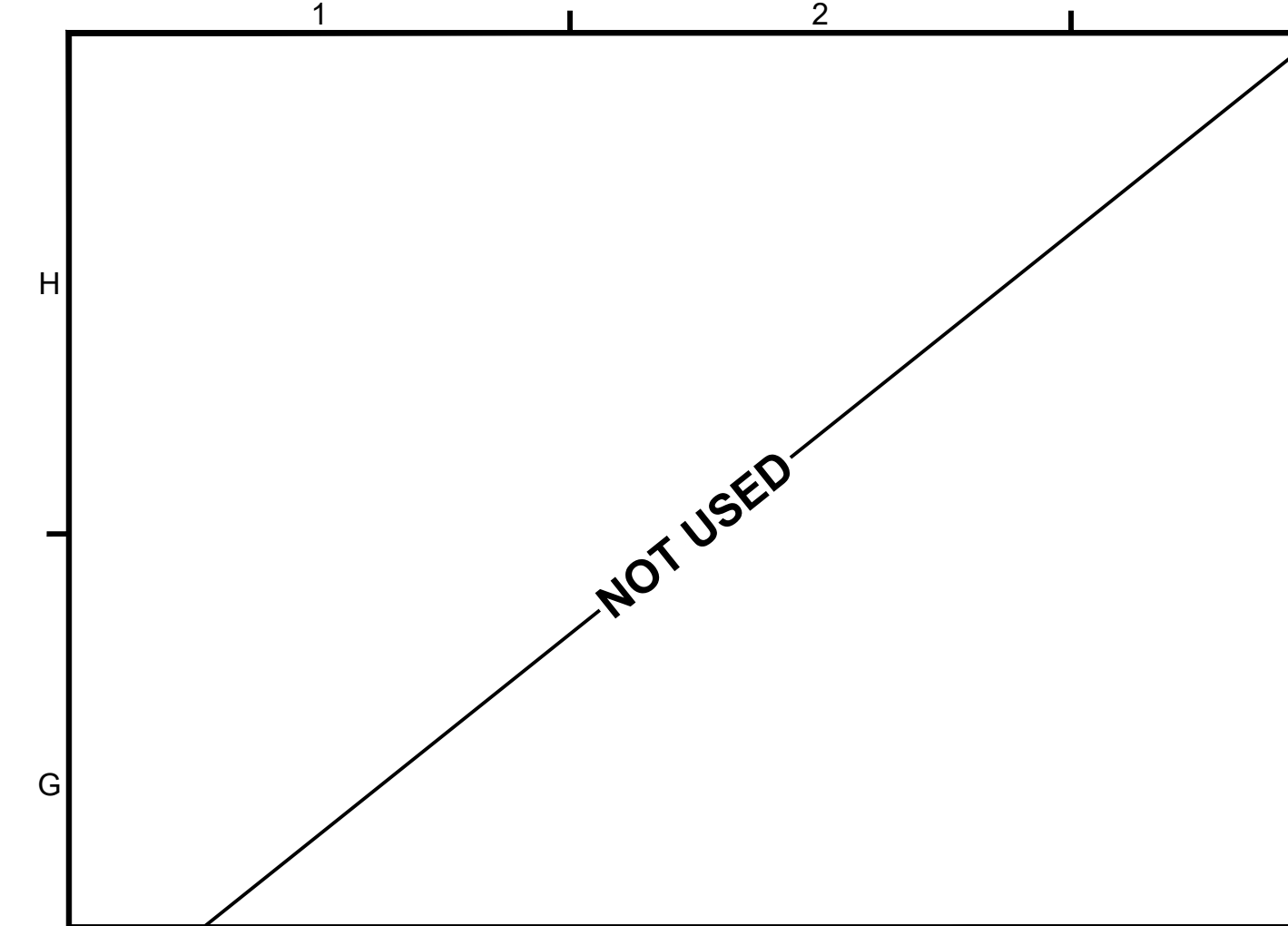
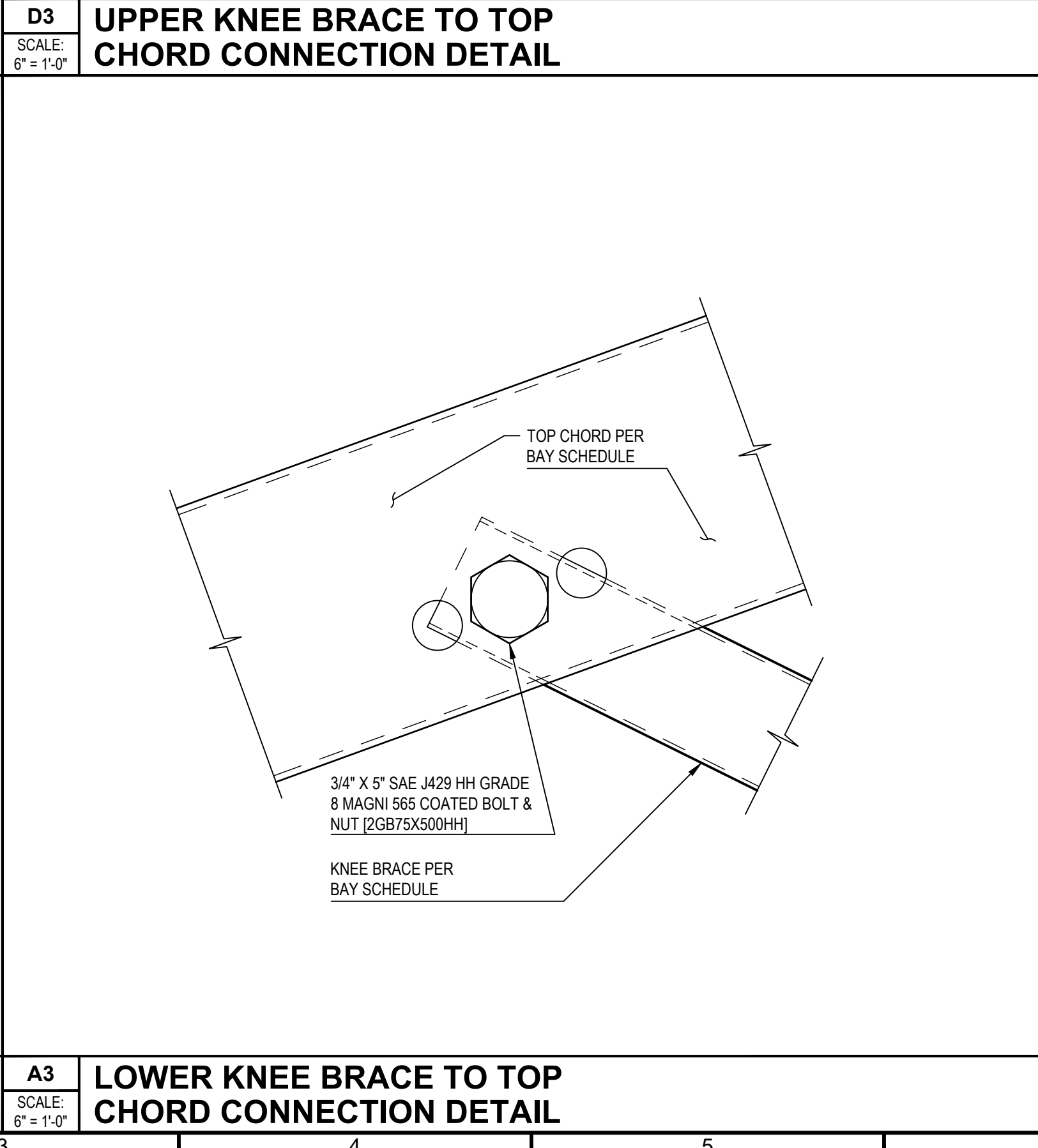
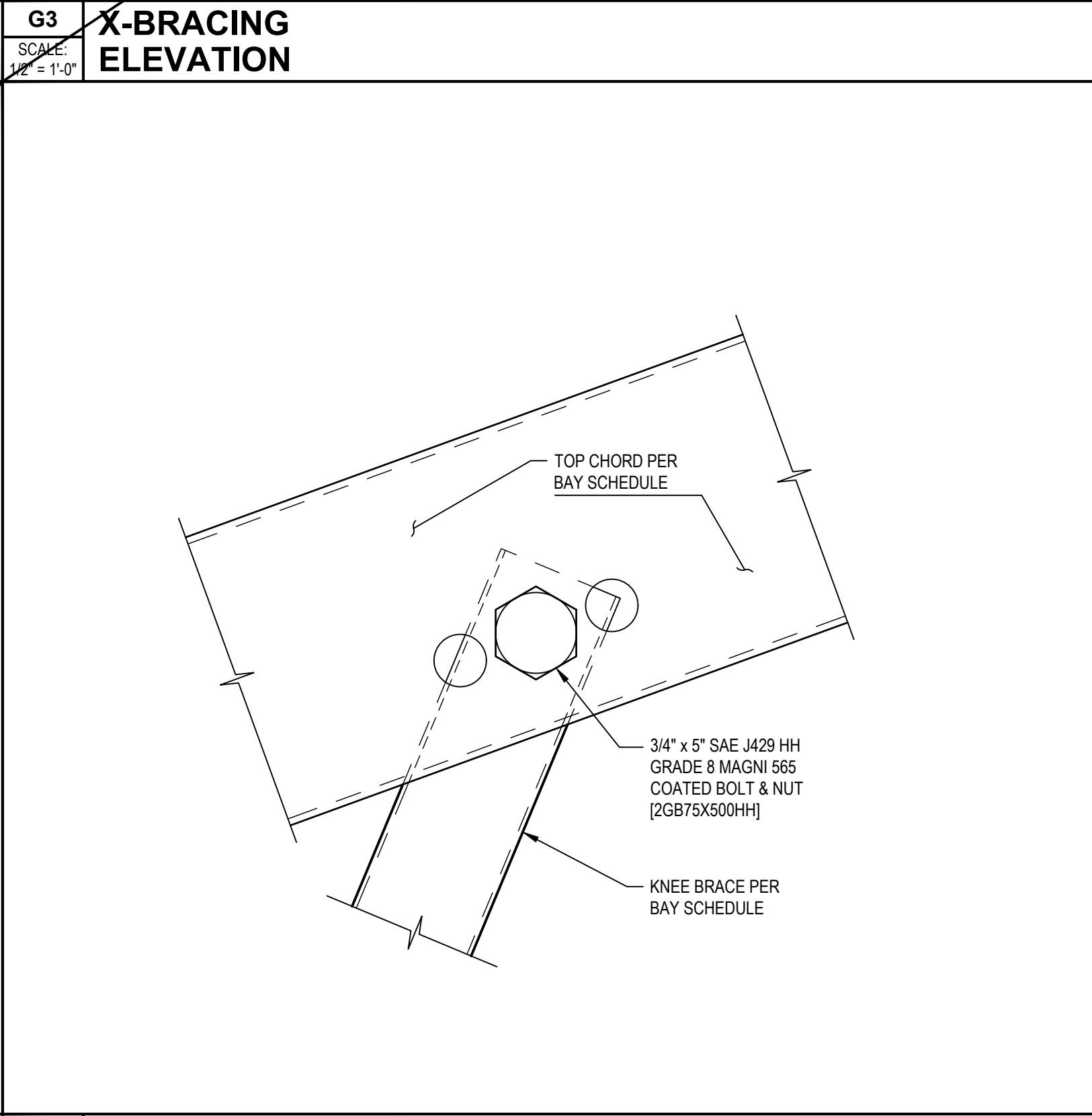
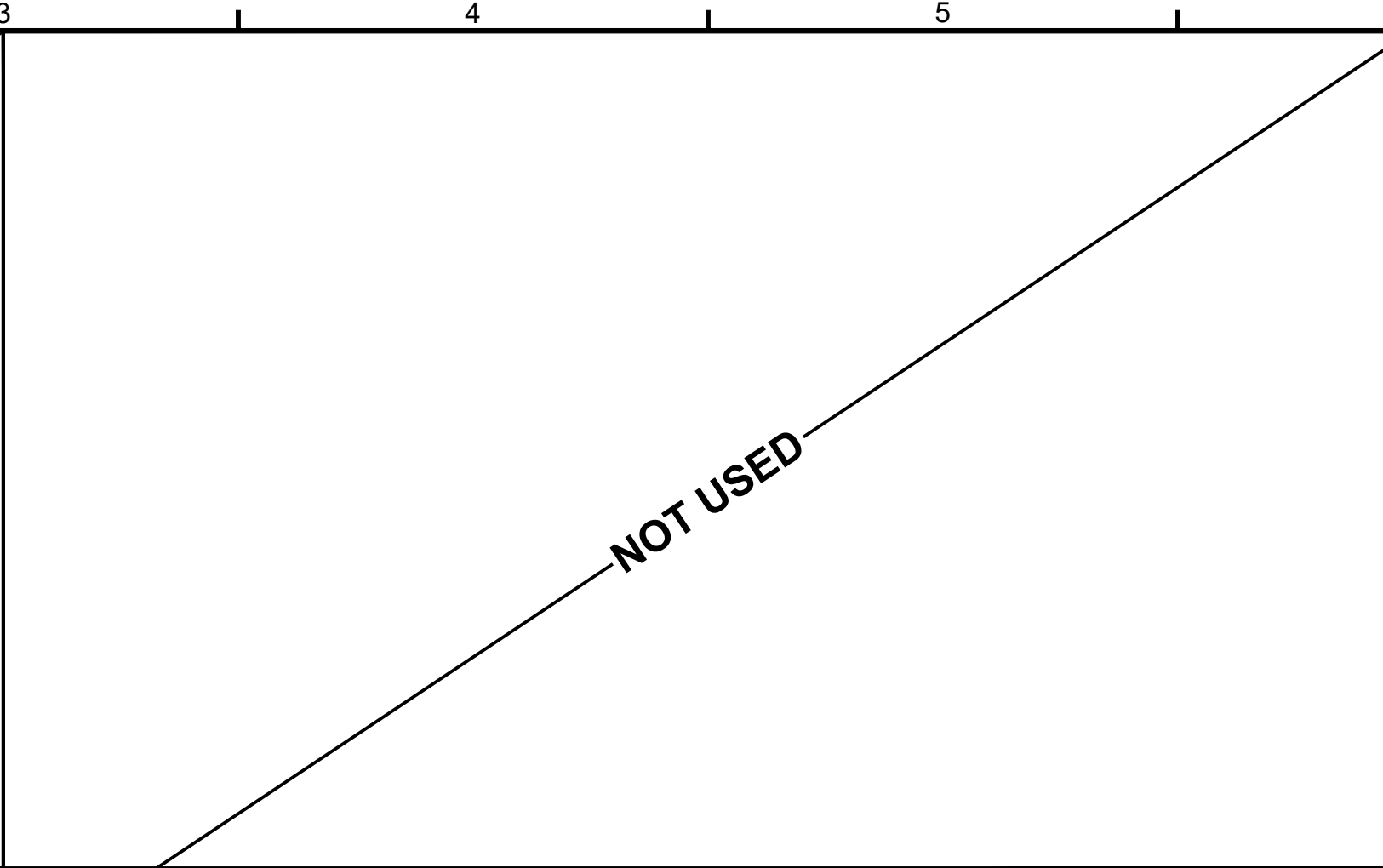
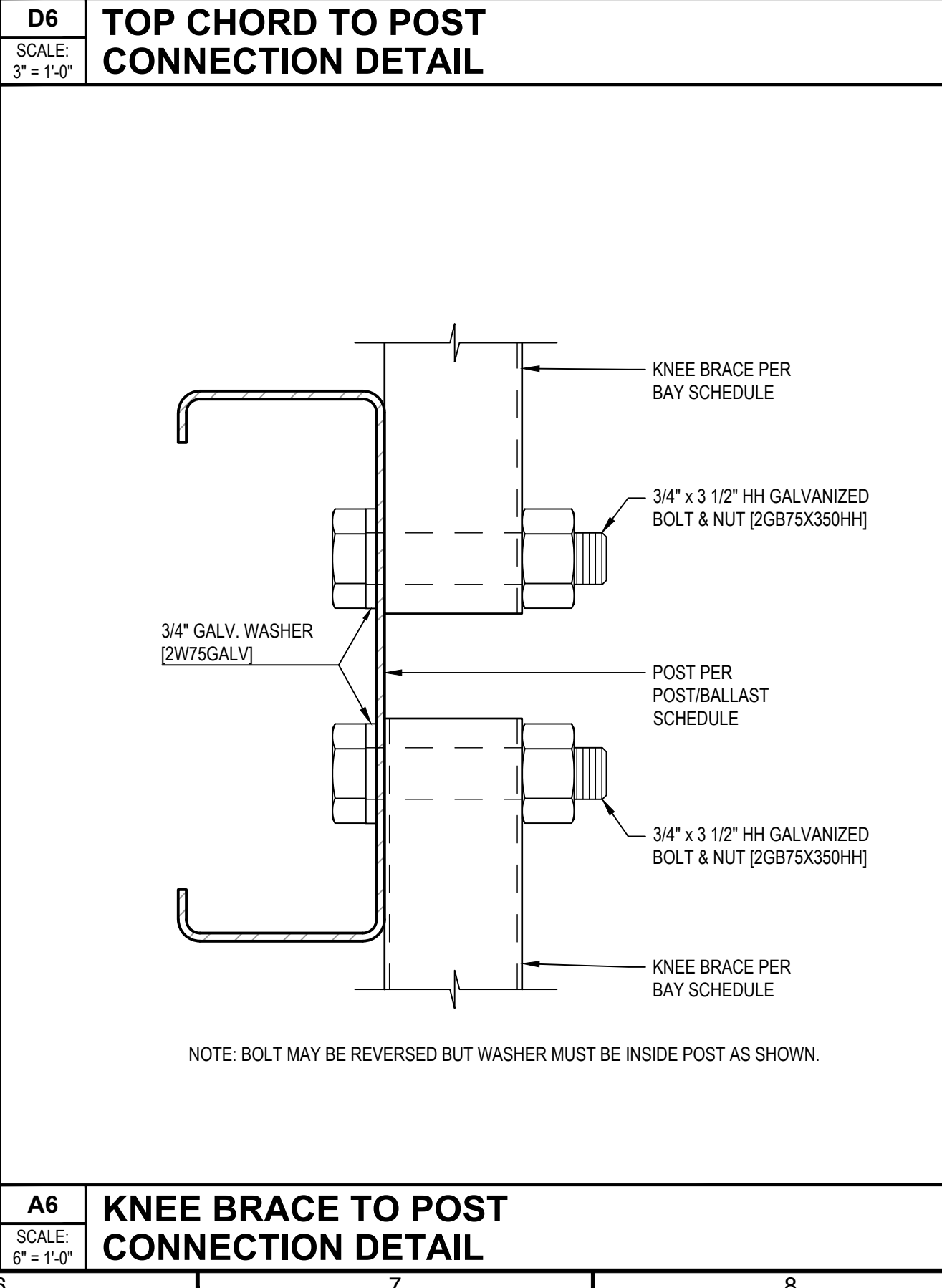
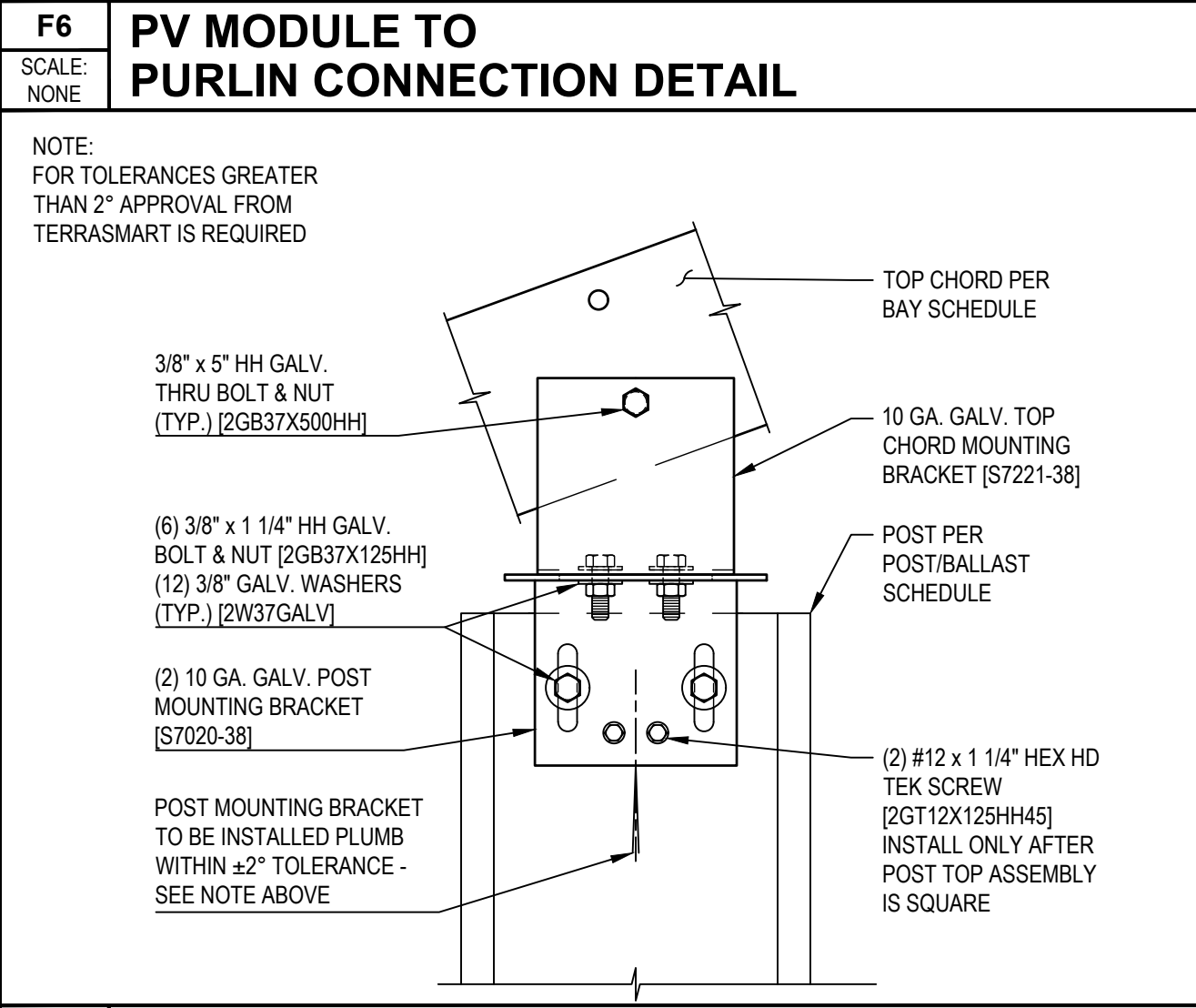
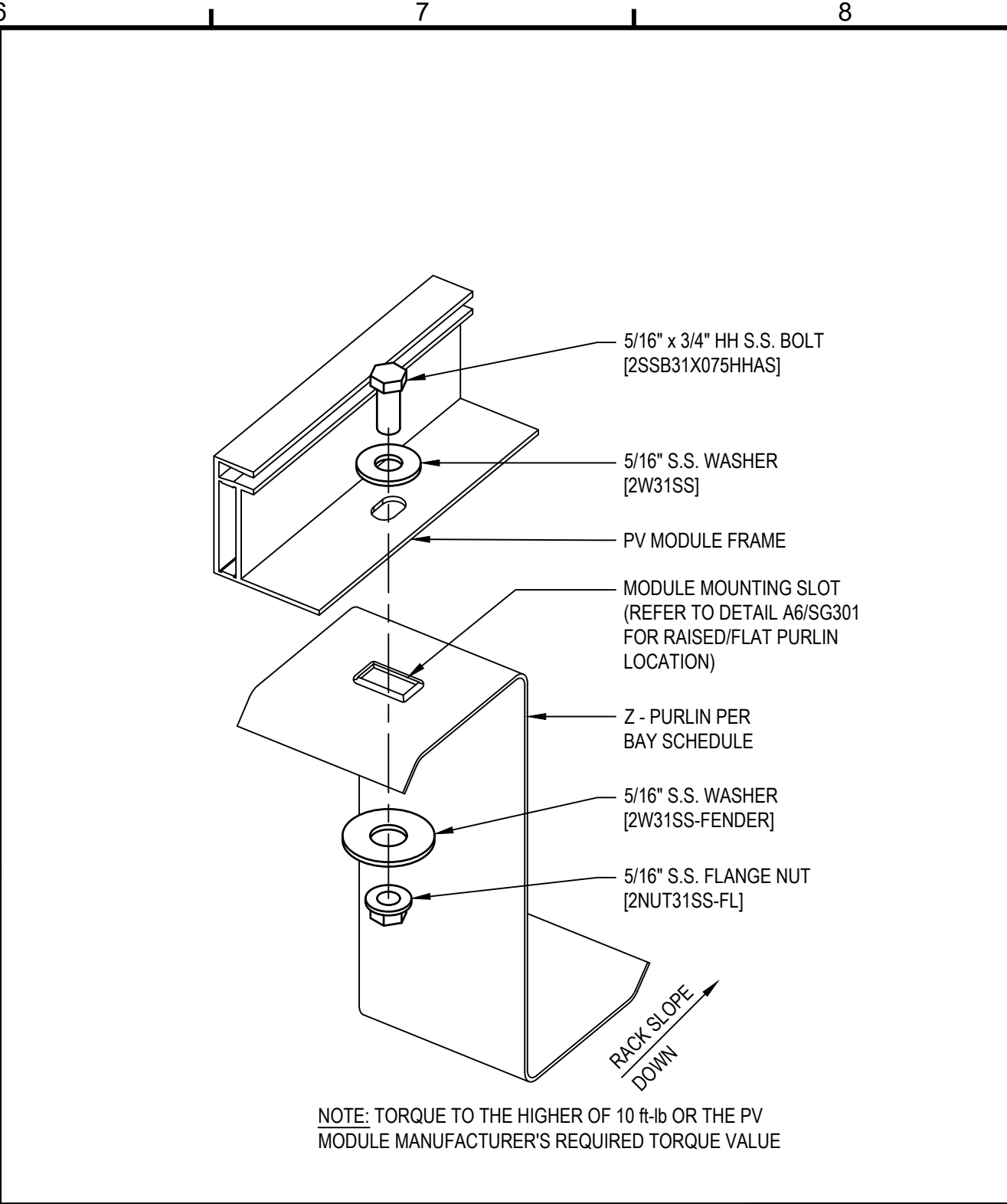
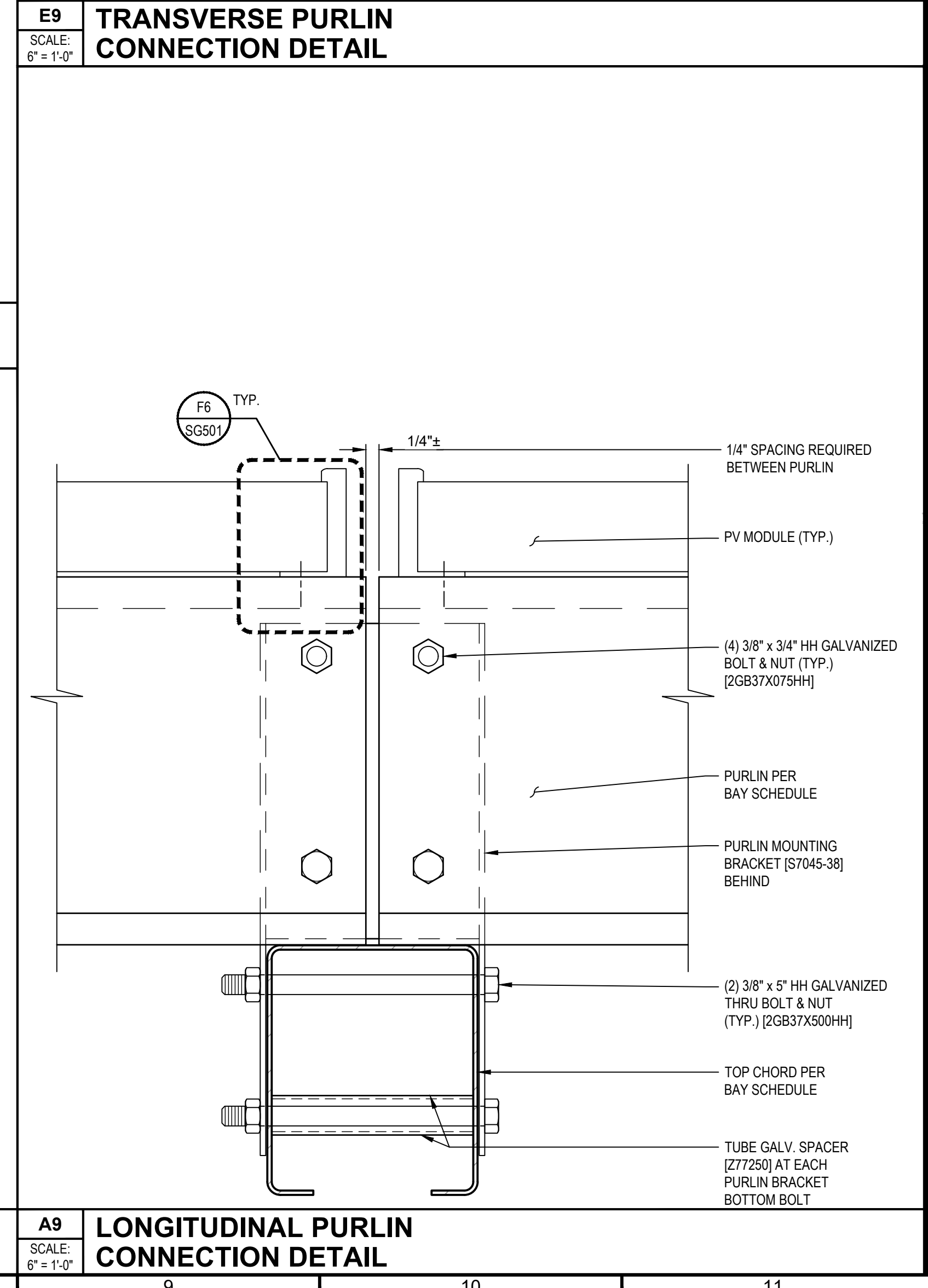
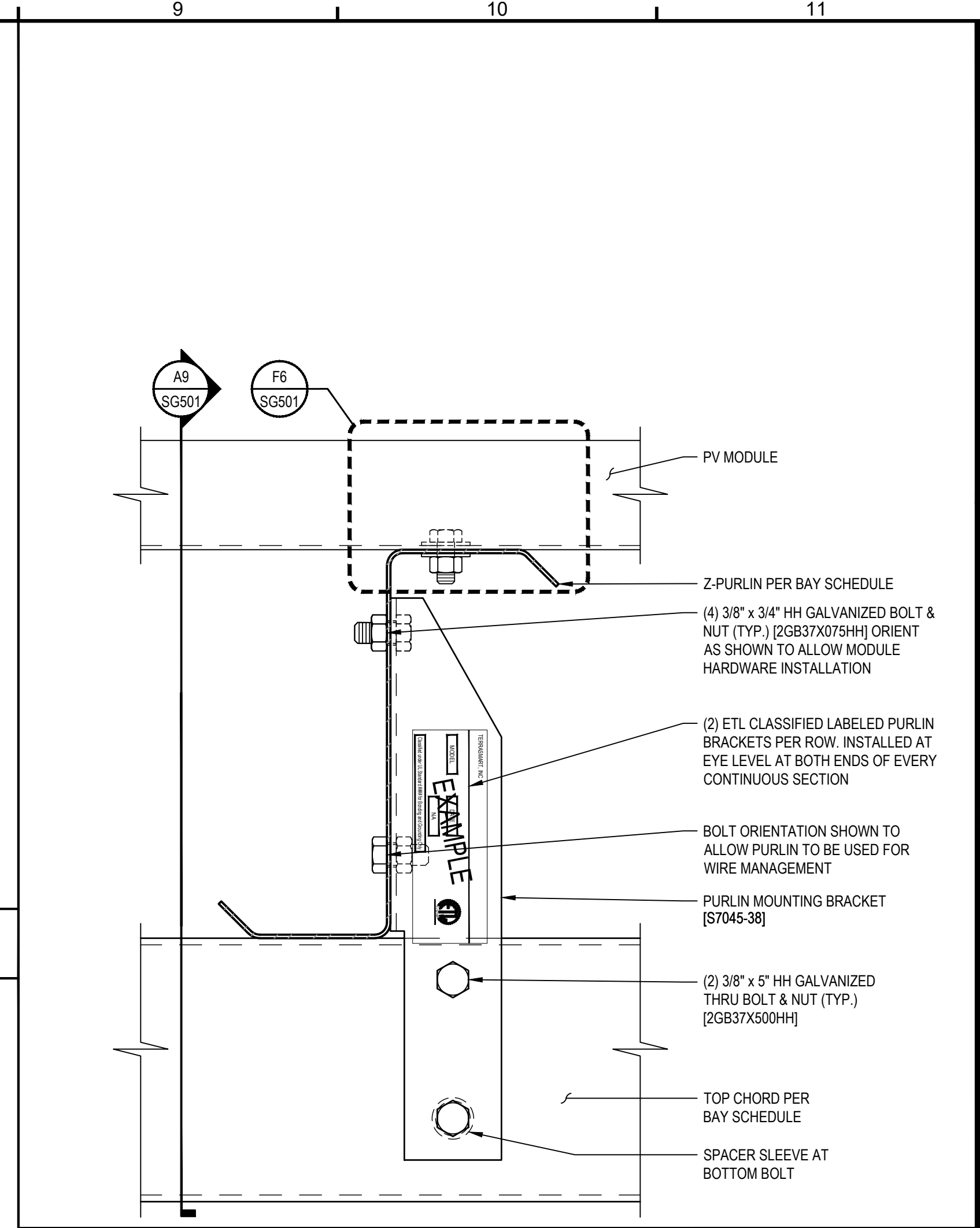
1000 MAPLE AVE #2047
HOMEWOOD, IL 60430

TERRASMART PROJECT No.:
2330085

DRAWN BY: REVIEWED BY:
- -

SHEET TITLE:
DETAILS

SHEET No.:
SG501



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