

ABBREVIATIONS

Table of abbreviations and their corresponding full names, such as A.B. for ANCHOR BOLT, A.C.I. for AMERICAN CONCRETE INSTITUTE, etc.

GENERAL STRUCTURAL NOTES

Applies unless noted otherwise on drawings

BUILDING CODE:

2012 EDITION OF THE IBC.

LOADS:

ROOFS: ROOF DEAD LOAD = ACTUAL WEIGHT OF MEMBER SNOW LOAD = VARIES

LATERAL:

WIND: 3 SECOND WIND GUST = 105 MPH. RISK CATEGORY I EXPOSURE C.

FOUNDATIONS:

BALLASTED FOOTING SHALL BEAR ON FINISHED GRADE. FINISHED GRADE SHALL BE LEVEL OR AT 10 DEGREE MAXIMUM SLOPE AND PREPARED PER THE PROJECT SPECIFICATIONS.

CONCRETE:

SPECIFIED 28 DAY COMPRESSIVE STRENGTH F'c: BALLAST FILL----- 2,500 PSI

STRUCTURAL STEEL:

GENERAL:

ALL CONSTRUCTION PER LATEST AISC STEEL CONSTRUCTION MANUAL. ALL MISCELLANEOUS STEEL UNLESS NOTED OTHERWISE SHALL BE ASTM A36 (Fy = 36 KSI). IF CALLED OUT ON PLANS, Fy = 50 KSI PLATE STEEL SHALL BE ASTM A529 OR A572.

BOLTS:

U.N.O. ALL BOLTS SHALL BE ASTM A307 AND SHALL BE INSTALLED WITH THREADS INCLUDED IN SHEAR PLANE. TIGHTEN BOLTS PER AISC SPECIFICATIONS. AT TELESCOPING COLUMNS THE BOLTS MUST BE A325 SLIP CRITICAL TIGHTENED BOLTS DUE TO THE SLOTTED HOLES.

STEEL CONNECTORS:

SCREW FASTENERS:

ALL STEEL SCREWS SHALL BE IN ACCORDANCE WITH AISI-GENERAL AND AISI-NAS. Fy = 50 ksi AND Ft = 70 ksi FOR ALL SCREWS.

- 1. MINIMUM SPACING OF SCREWS SHALL NOT BE LESS THAN 3 TIMES THE NOMINAL DIAMETER. MINIMUM EDGE DISTANCE FOR SCREWS SHALL NOT BE LESS THAN 1.5 TIMES THE NOMINAL SCREW DIAMETER. 2. THE HEAD OF THE SCREW OR WASHER SHALL HAVE A DIAMETER, DW, OF NOT LESS THAN 5/16". WASHERS SHALL BE AT LEAST 0.05" THICK.

Table with columns: SCREW NUMBER DESIGNATION, 8, 10, 12 (12-14), 14. Rows: NOMINAL DIAMETER, 0.164", 0.190", 0.216", 0.250".

COLD FORMED STRUCTURAL STEEL FRAMING:

GENERAL:

ALL COLD FORMED STEEL COMPONENTS INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE FABRICATED AND ERRECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" BY THE AISI.

GALVANIZING:

ALL STEEL PILES AND STEEL PLATE WASHERS SHALL BE HOT DIP GALVANIZED PER ASTM A123/A123M OR ASTM A153/A153M.

STEEL SHEETS USED FOR PURLINS AND RAFTERS SHALL BE GALVANIZED PER ASTM A653/A653M WITH A MINIMUM G90 THICKNESS.

GALVANIZING DAMAGED DURING THE DRIVING OF PILES, IS TO BE REPAIRED USING A COLD GALVANIZING COMPOUND. OTHER DAMAGE DUE TO FIELD CUTTING ETC. MAY BE REPAIRED USING AN OXIDE COATING.

FRAMING:

ALL STRUCTURAL STEEL FRAMING MATERIAL AND ITS ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN IRON AND STEEL INSTITUTE "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBER". ALL WELDING TO BE PERFORMED BY WELDERS HOLDING A VALID CERTIFICATE AND HAVING CURRENT EXPERIENCE IN LIGHT GAUGE STEEL. CERTIFICATES SHALL BE ISSUED BY AN ACCEPTED TESTING AGENCY. DO NOT NOTCH FLANGES OF MEMBERS WITHOUT EXPRESSED APPROVAL OF THE ENGINEER OF RECORD. ALL WELDING TO BE PERFORMED IN AN APPROVED FABRICATORS SHOP.

STRUCTURAL STEEL MEMBERS ARE FURNISHED TO A SPECIFIED MINIMUM Fy = 55,000 PSI. U.N.O. THE GRADE AND THE ASTM SPECIFICATION NUMBER OR OTHER SPECIFICATION DESIGNATION SHALL BE INDICATED BY PAINTING, DECAL, TAGGING OR OTHER SUITABLE MEANS ON EACH BUNDLE OF FABRICATED ELEMENTS. IT IS ACCEPTABLE TO USE THE Fy SHOWN ON THE MILL CERTIFICATION IN LIEU OF THE "ORDERED" Fy. IT IS ACCEPTABLE TO USE STEEL WITH Fy = 70 KSI IF THE STEEL USE IS IN THE AISI AND/OR AISC SPECIFICATION, THE ELONGATION IN A 2" COUPON IS A MINIMUM OF 10% AND THE RATIO OF Ft OVER Fy IS AT LEAST 1.05.

Table with columns: MILS, GAGE NO., MIN DELIVERED THICKNESS, DESIGN THICKNESS, OUTER RADIUS\* (MIN,MAX). Rows include gages 12, 14, 16, 33, 43, 54, 68, 97, 118, 150.

GENERAL NOTES:

THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. EXCEPT WHERE NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE STRUCTURAL ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO (NOR SHALL OBSERVATION VISITS TO THE SITE INCLUDE INSPECTION OF THESE ITEMS).

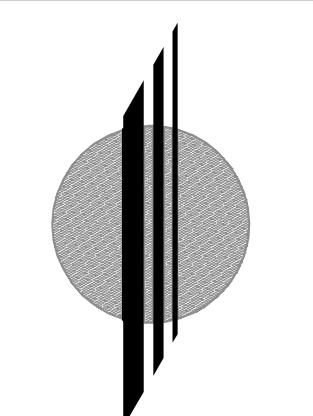
WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDA. ANY ENGINEERING DESIGN, PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF A REGISTERED ENGINEER RECOGNIZED BY THE BUILDING CODE JURISDICTION OF THIS PROJECT.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. RESOLVE ANY DISCREPANCY WITH THE ARCHITECT. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL ITEMS WITH THE APPROPRIATE TRADE DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

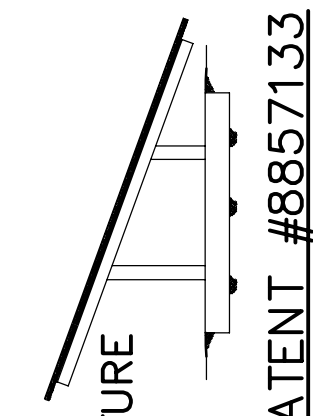
TYPICAL DETAILS MAY NOT NECESSARILY BE CUT ON PLANS, BUT APPLY UNLESS NOTED OTHERWISE. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.

OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION IS CHOSEN, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, APPROVALS AND THE COORDINATION OF THE WORK WITH ALL RELATED TRADES AND SUPPLIERS.

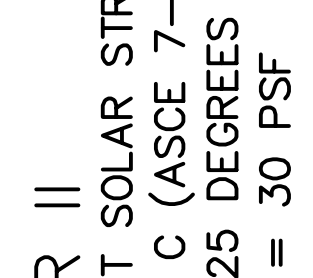


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JUPITER II GROUND MOUNTED BALLAST SOLAR STRUCTURE WIND: 105 MPH, EXP. C (ASCE 7-10) MAXIMUM TILT = 25 DEGREES



MAXIMUM SNOW = 30 PSF

PATENT #8857133

PATENT #8857133



THESE DRAWINGS/CALCULATIONS ARE CONSIDERED PRELIMINARY - NOT FOR CONSTRUCTION OR RECORDING UNLESS THE STRUCTURAL ENGINEER OF RECORD'S SEAL IS AFFIXED WITH WRITTEN SIGNATURE.

JOB NUMBER: 12-895.7

DRAWN: ATB ENGINEER: SYT CHECKED: PGS

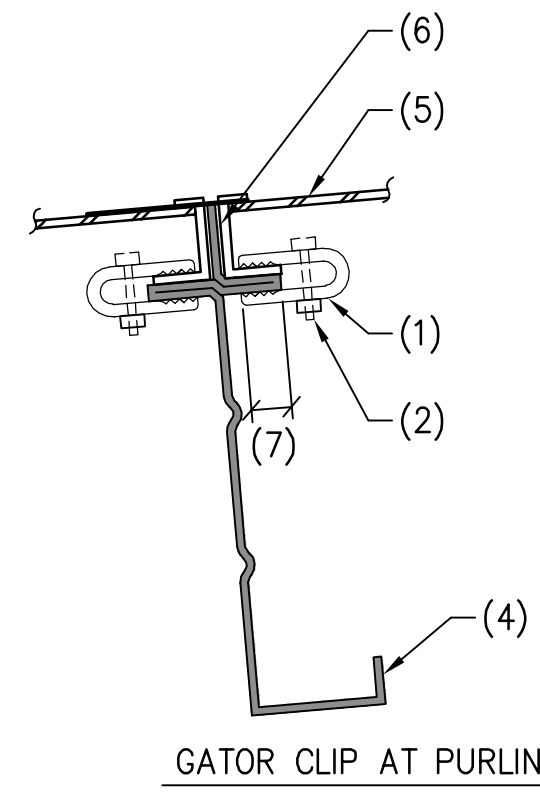
DATE: 5/6/15

SHEET: GM-PS#3 S1

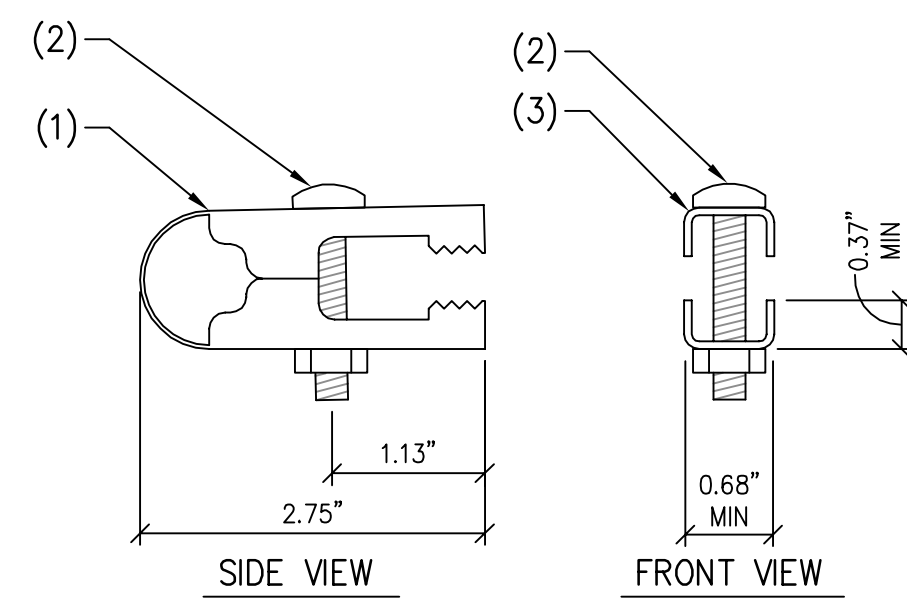
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NOTES:

- 16 GA GATOR CLIP (Fy=50 KSI) WITH G90 GALVANIZATION. LOCATE PER ISOMETRIC DRAWING ON THIS SHEET.
- GRADE 5 1/4" DIA BOLT WITH NUT, GALVANIZED PER ASTM F 2329. TIGHTEN UNTIL FULL CONTACT OF ALL MEMBERS, THEN ONE FULL TURN OF THE NUT.
- 90 DEGREE BEND ±2 DEG.
- SUPER PURLIN.
- PV MODULE IN ALUMINUM FRAME.
- 0.25" MAXIMUM GAP BETWEEN EDGE OF ALUMINUM FRAME AND SUPER PURLIN AS SHOWN.
- MIN 3/4" BEARING ON PURLIN.



GATOR CLIP AT PURLIN

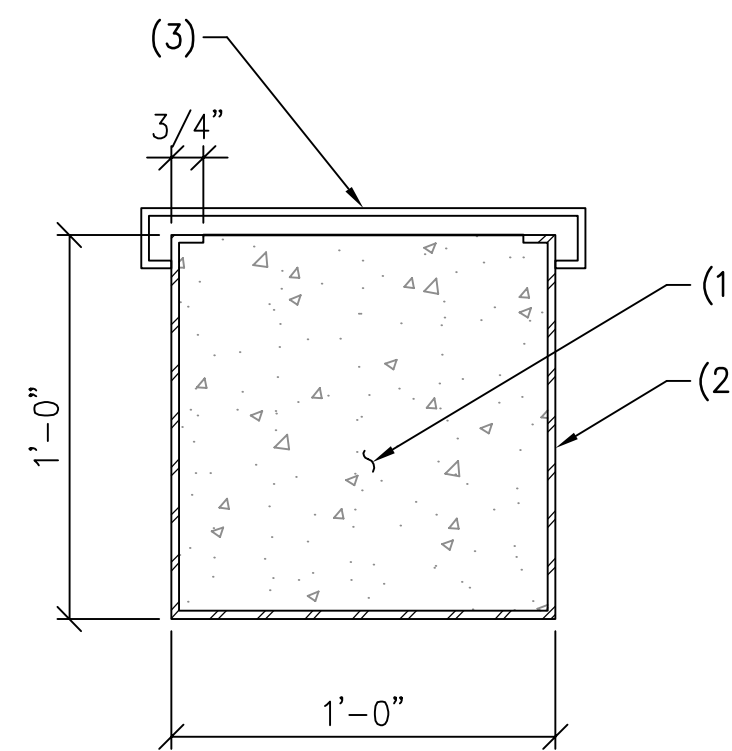


GATOR CLIP

04 GATOR CLIP 12-895.7 NO SCALE

NOTES:

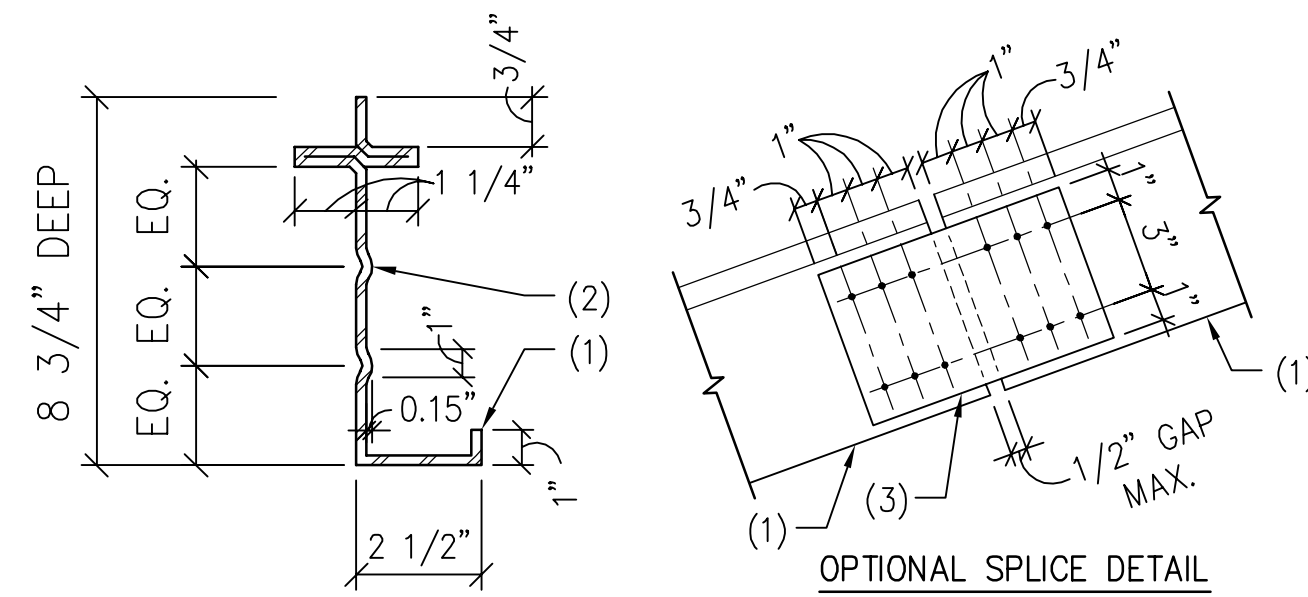
- 2,500 PSI CONCRETE FILL.
- STEEL BENT PLATE.
- TEMPORARY YOKE TO HOLD TOP OF LIGHT GAGE STEEL SECTION TOGETHER AS REQUIRED FOR CONCRETE TO HARDEN.



05 BALLAST CONCRETE IN LIGHT GAGE STEEL SECTION 12-895.7 NO SCALE

NOTES:

- SOLAR PURLIN.
- TWO STIFFENING RIBS SPACED EQUALLY IN WEB ±1/2".
- 10 GAGE SPLICE PLATE 5"x10" ON ONE SIDE ONLY WITH 12 #14 SCREWS TOTAL AS SHOWN.



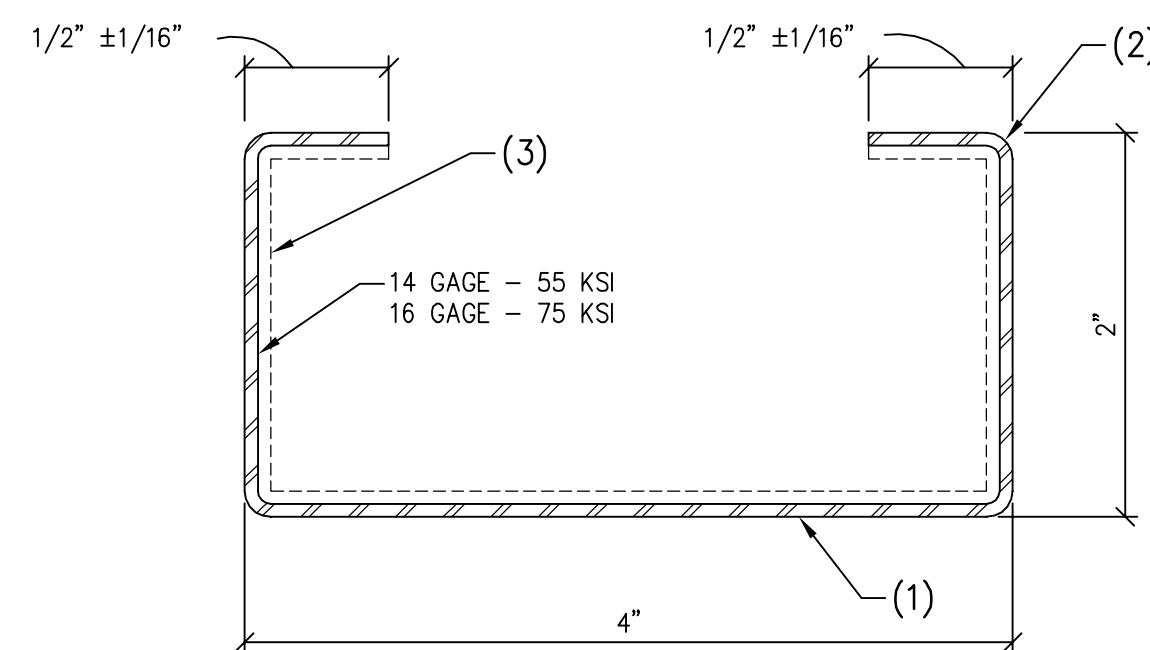
OPTIONAL SPLICE DETAIL

NOTE: FOR ADDITIONAL INFORMATION, SEE PURLIN INFORMATION AT SECTION B ON THIS SHEET.

01 POWERS 'SUPER' PURLIN 12-895.7 NO SCALE

NOTES:

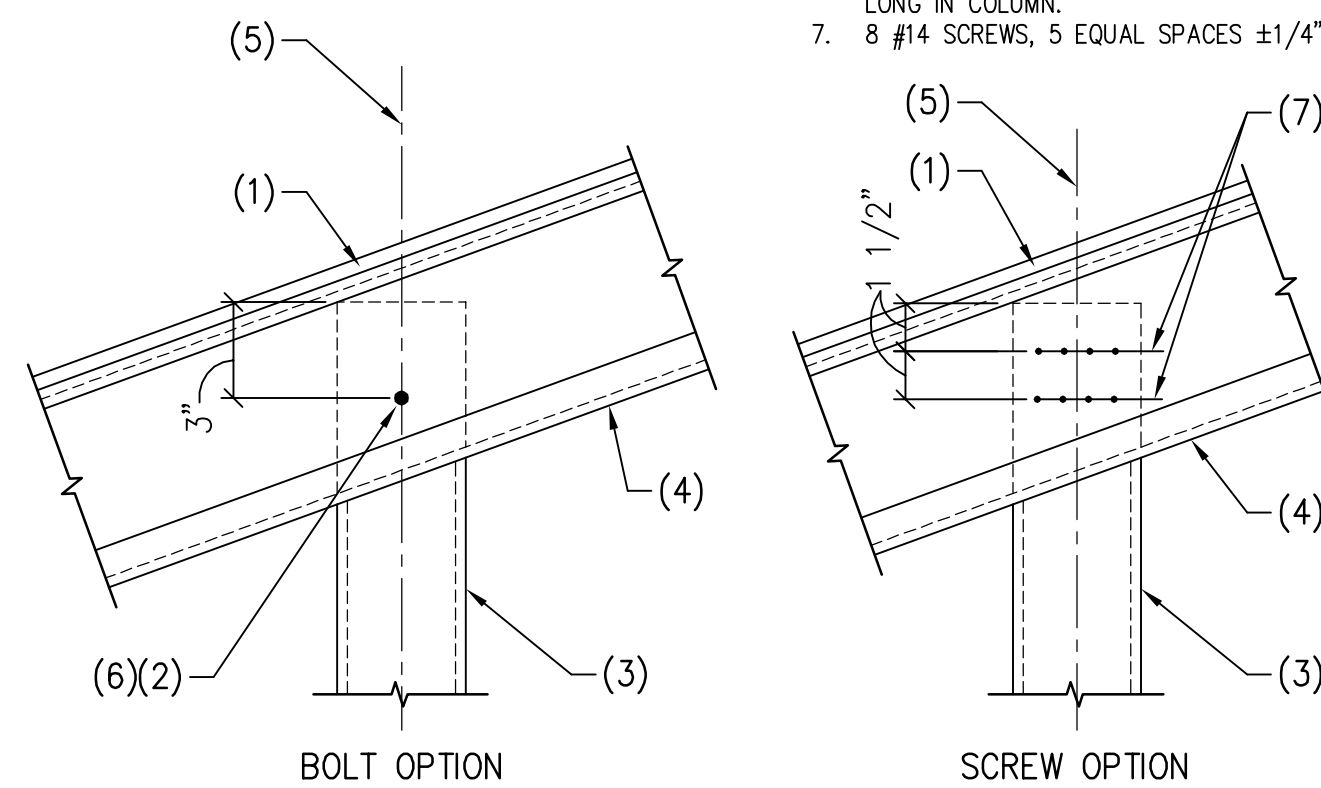
- STEEL COLUMN.
- RADIUS = 0.0938" MIN 0.2250" MAX
- TELESCOPING COLUMN (SAME GAGE, Fy AS COLUMN) X 2'-0" LONG MAX WHERE USED. USE LONG SLOTTED HOLES 13/16" X 1 7/8" LONG AT 4" O.C. CENTERLINE OF SLOTTED HOLE TO CENTERLINE OF SLOTTED HOLE. PLACE BOLT AT TOP OF TELESCOPING COLUMN AND TOP OF NON TELESCOPING COLUMN.



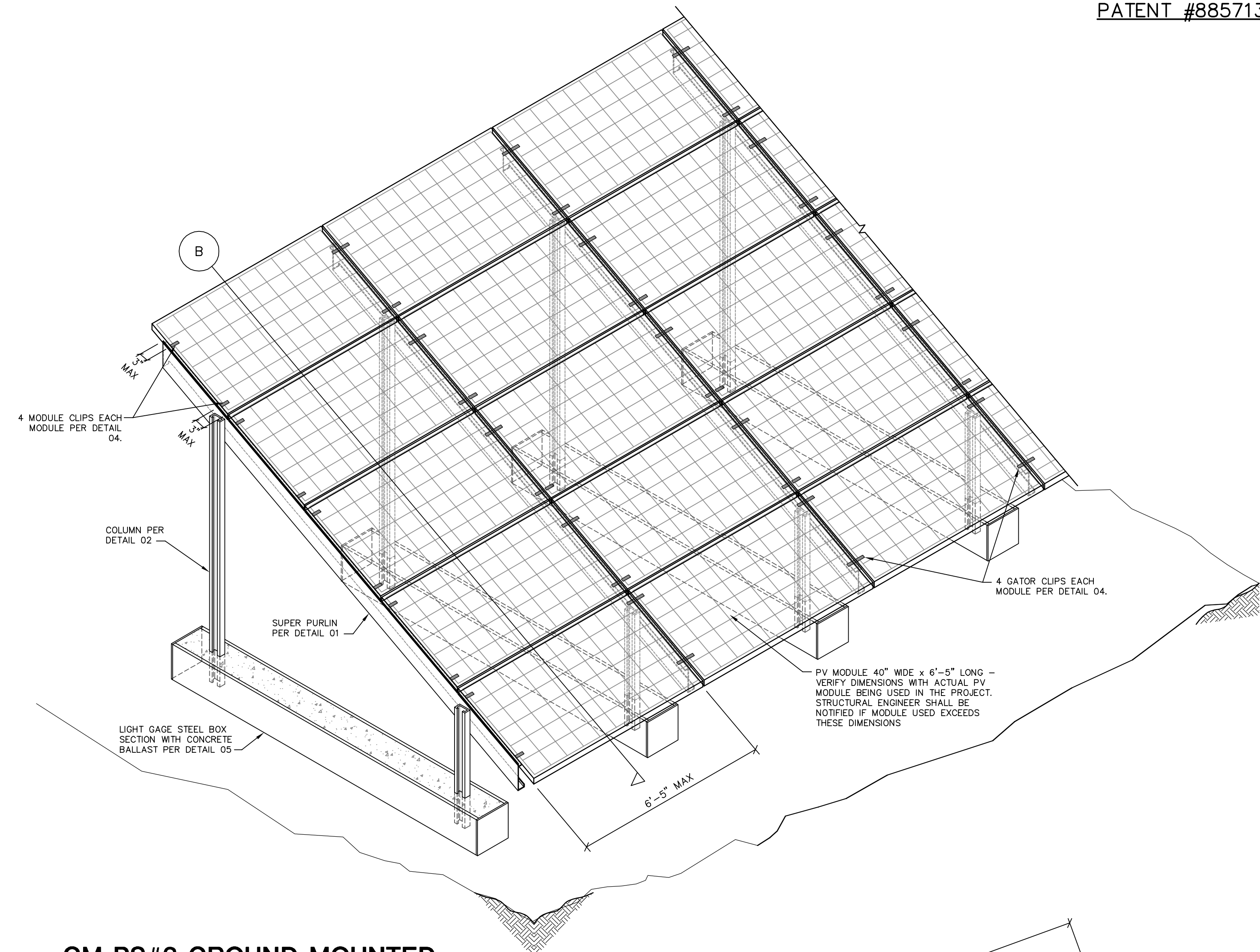
02 STEEL COLUMN 12-895.7 NO SCALE

NOTES:

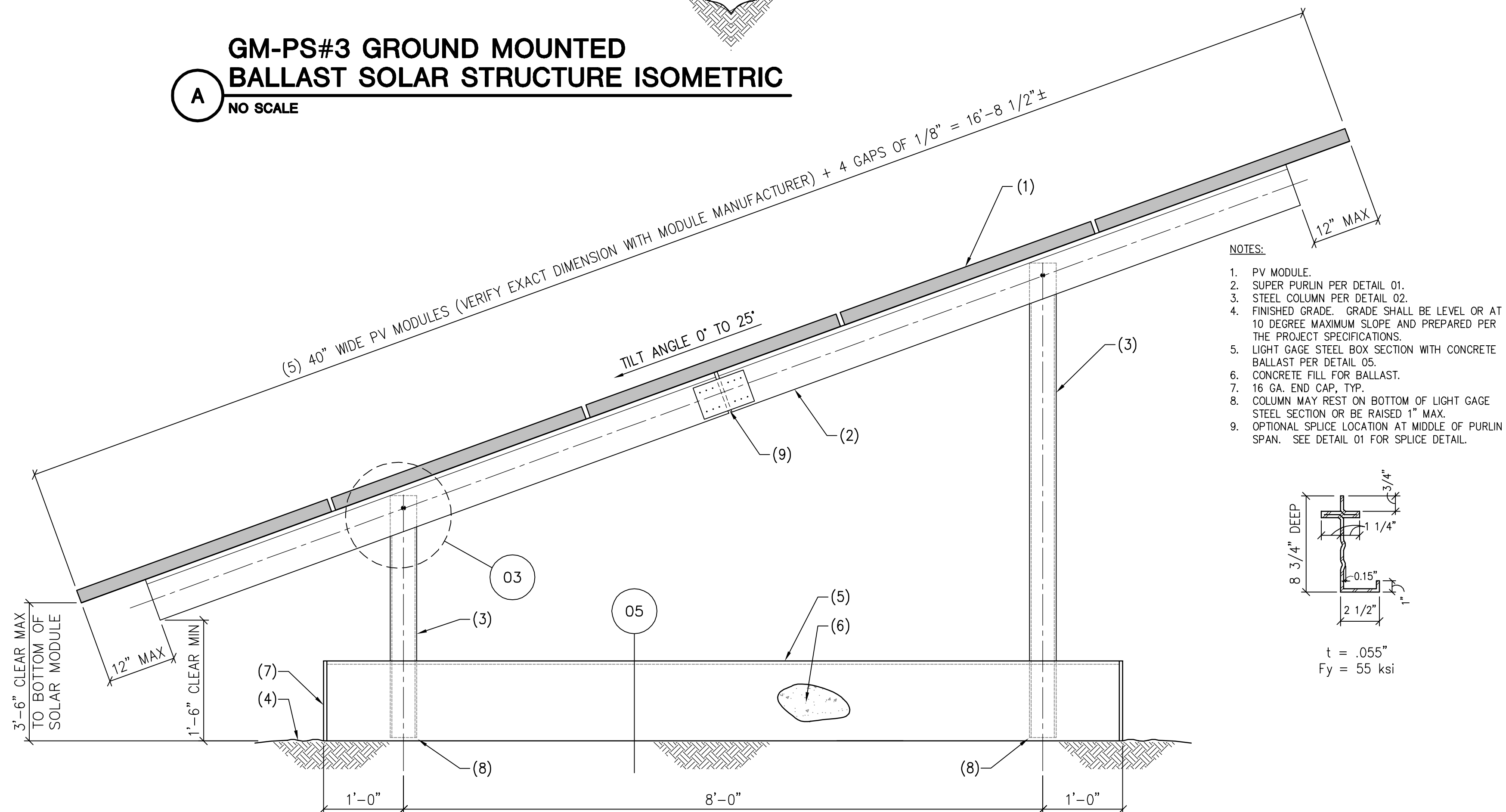
- PV MODULE NOT SHOWN FOR CLARITY.
- 3/4" DIA A325 BOLT W/ DIRECT TENSION INDICATOR, (DTI) WASHERS AND 2"x2 1/4" STEEL PLATE WASHER. IF NO SLOTTED HOLES ARE USED, USE 3/4" DIA A307 BOLT.
- STEEL COLUMN.
- SUPER PURLIN.
- CENTERLINE OF COLUMN.
- STANDARD HOLE PER AISC, TYP. IN BEAM; SLOTTED HOLE 13/16" X 1 7/8" LONG IN COLUMN.
- 8 #14 SCREWS, 5 EQUAL SPACES ±1/4".



03 PURLIN TO COLUMN 12-895.7 NO SCALE

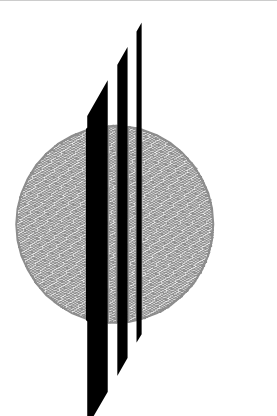


A GM-PS#3 GROUND MOUNTED BALLAST SOLAR STRUCTURE ISOMETRIC NO SCALE



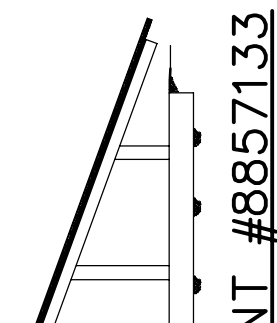
B GM-PS#3 GROUND MOUNTED BALLAST SOLAR STRUCTURE SECTION NO SCALE MAXIMUM TILT = 25 DEGREES MAXIMUM SNOW = 30 PSF

NOTE: SNOW LOAD IS SHOWN AS GROUND SNOW LOAD AND MAY BE REDUCED PER ASCE 7 PROVISIONS FOR ROOF SNOW.



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JOB NUMBER: 12-895.7 DRAWN: ATB ENGINEER: SYT CHECKED: PGS DATE: 5/6/15 SHEET: GM-PS#3 S2