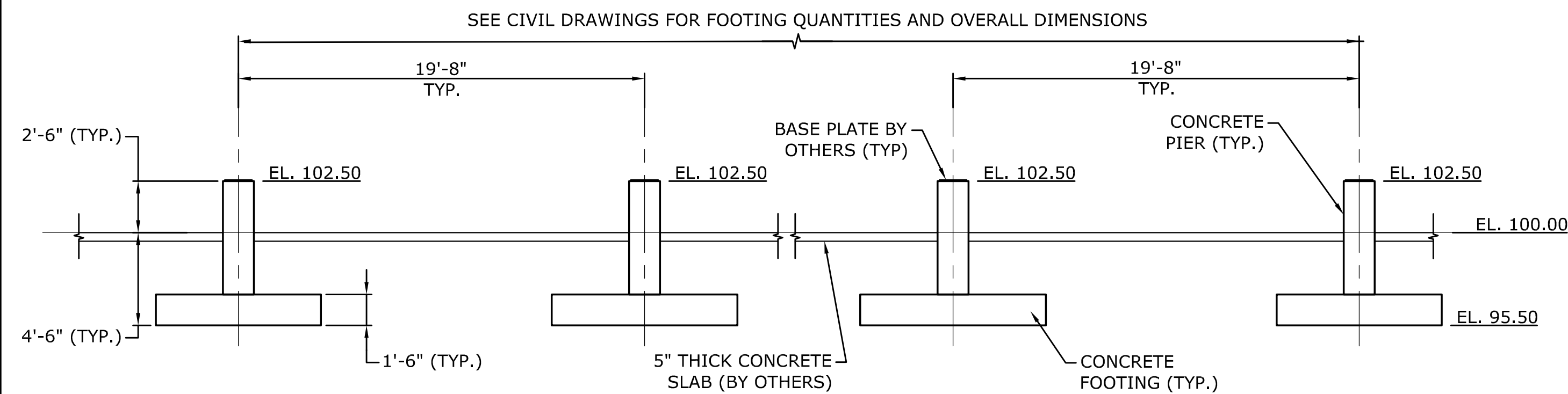


## SOLAR INSTALLATION - FOUNDATION PLAN

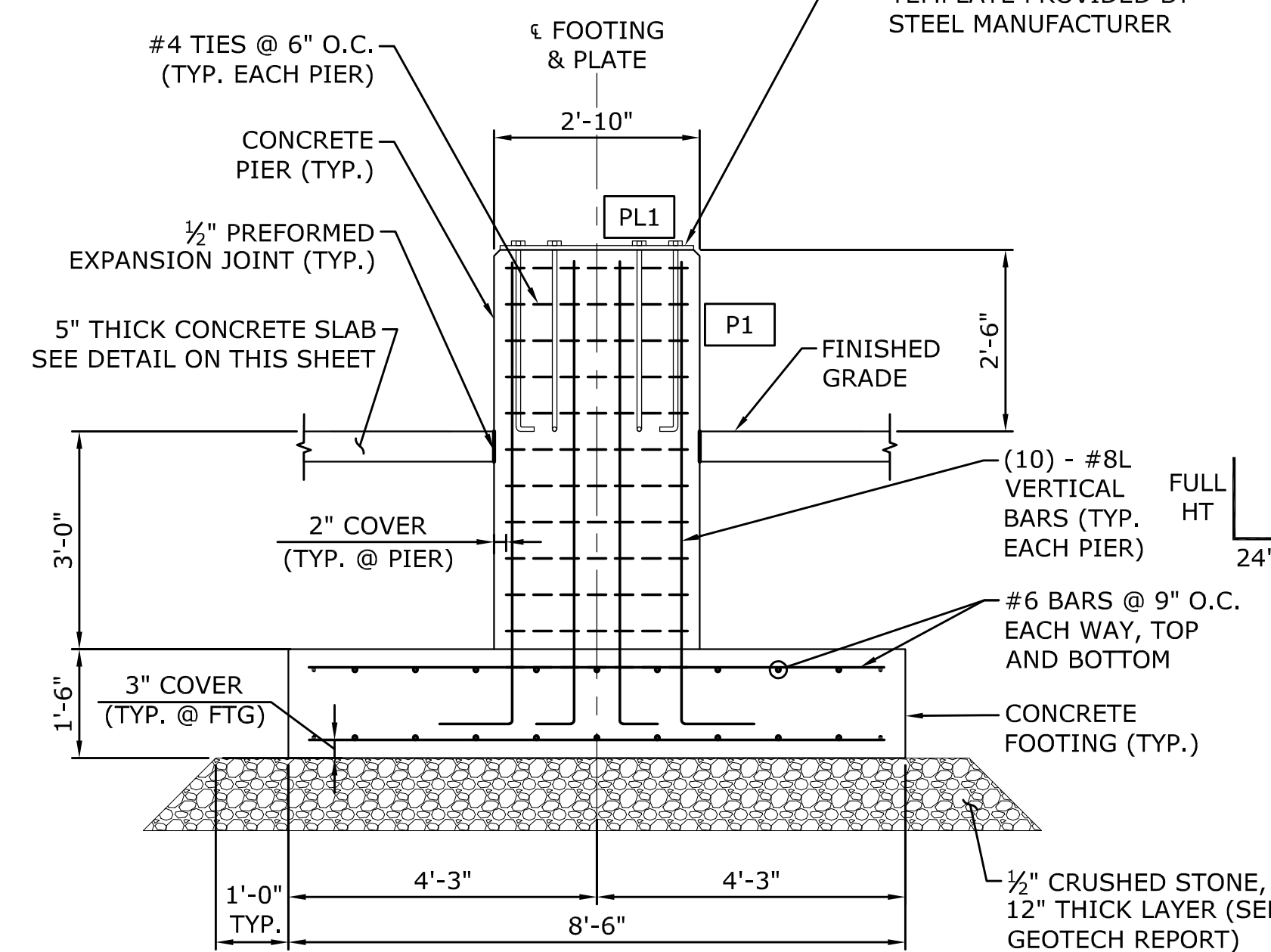
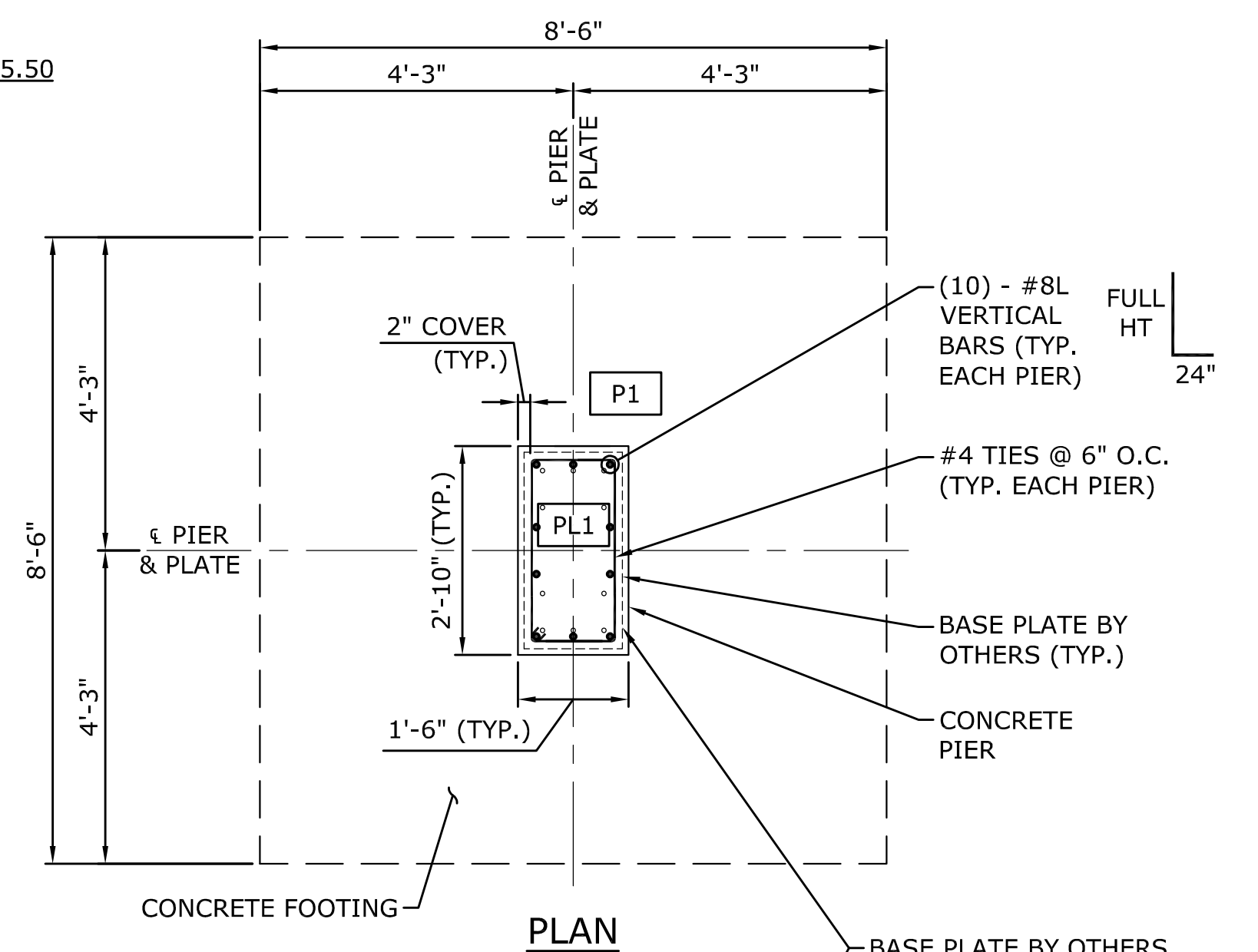
FOOTING LIST		
FOOTING	FOOTING SIZE	# REQUIRED
F1	8'-6" x 8'-6"	SEE CIVIL PLANS
F2	9'-0" x 9'-0"	SEE CIVIL PLANS



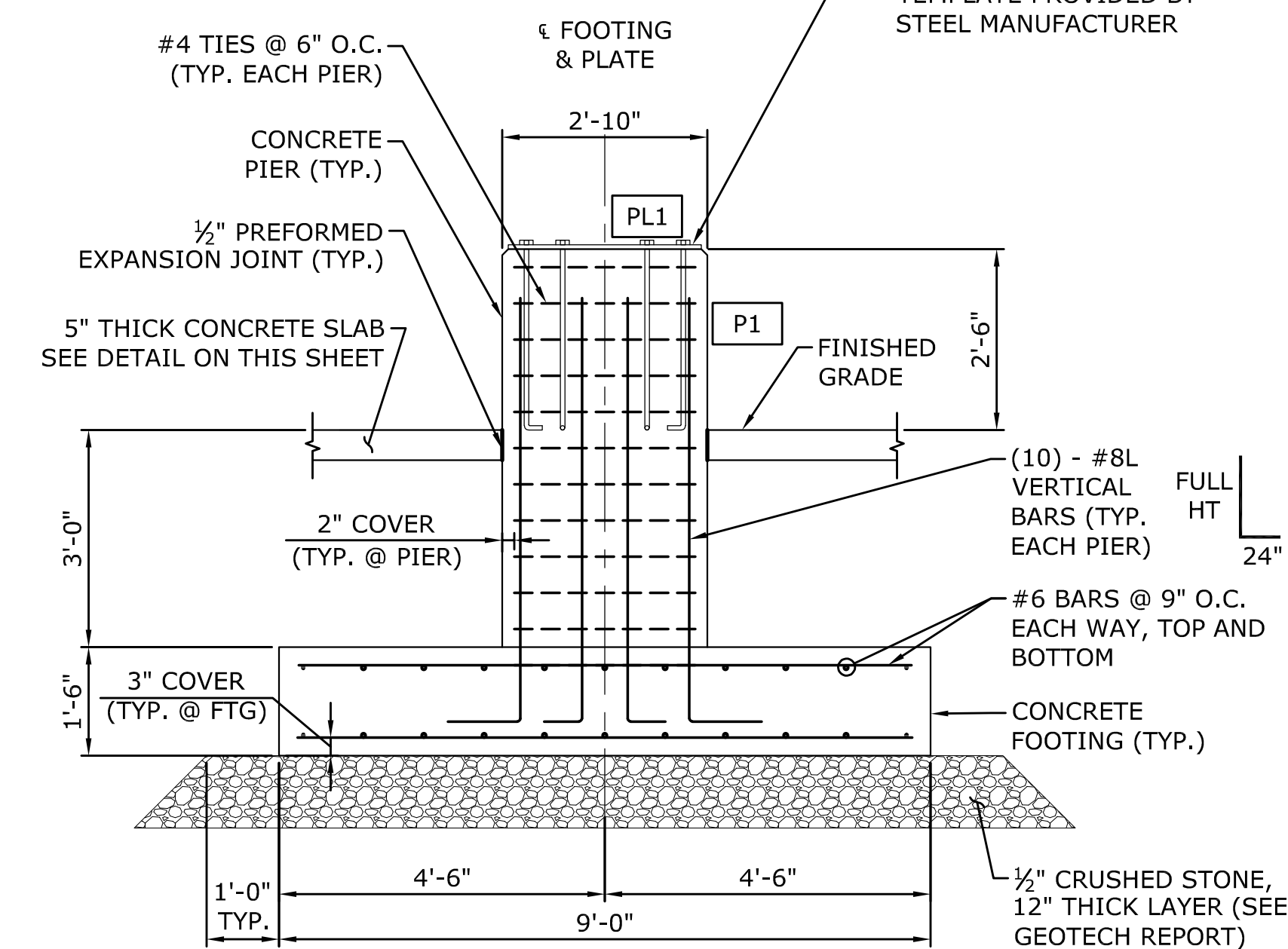
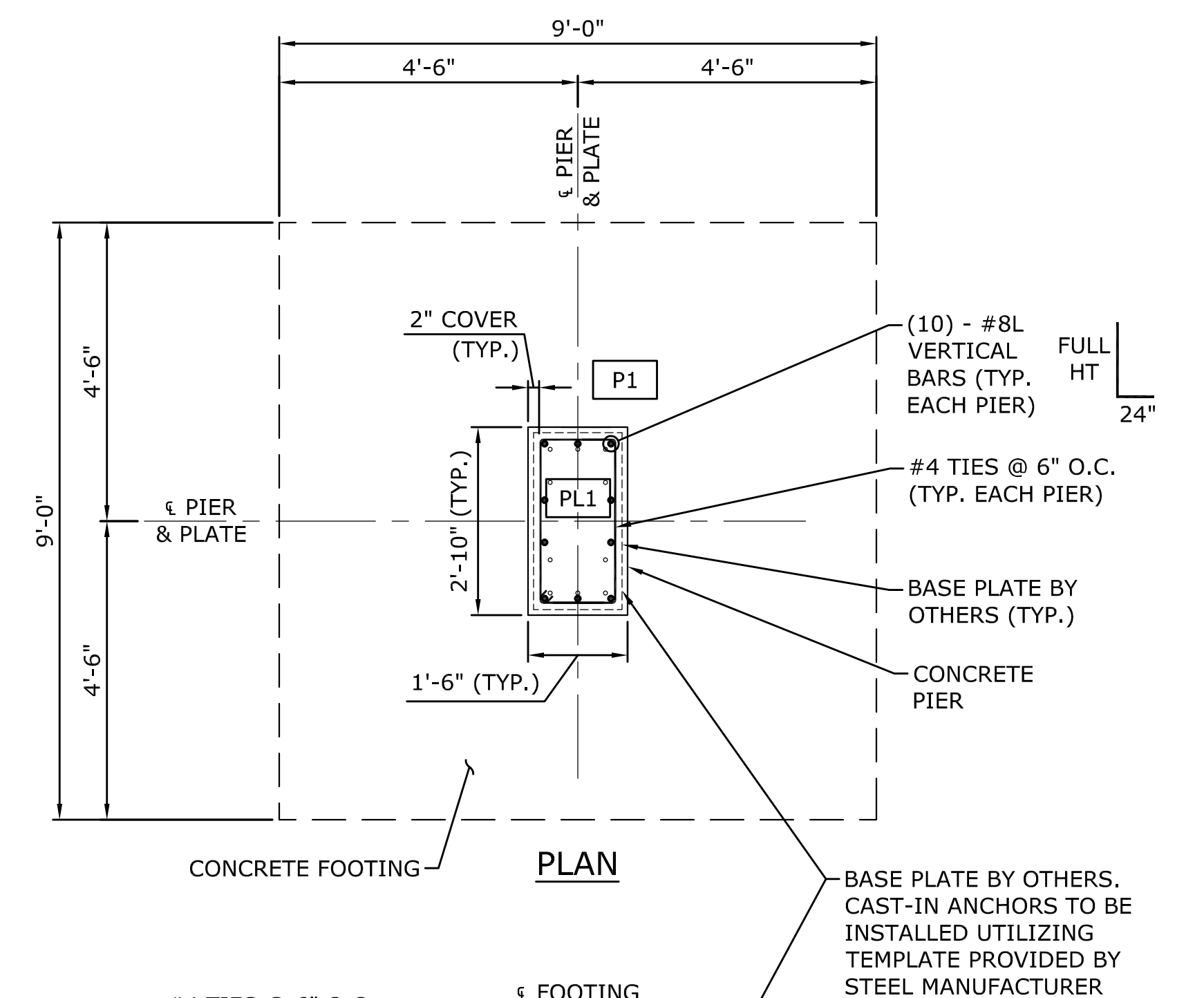
## SOLAR INSTALLATION - FOUNDATION ELEVATION

NOTES:

1. REFERENCE EL. 100.00 ABOVE IS EQUIVALENT TO PROPOSED FINISHED GRADE, SEE CIVIL DRAWINGS.
2. ABOVE ARRANGEMENT PLAN TO BE USED FOR BOTH SINGLE SLOPE (CANTILEVER) AND DUAL SLOPE SOLAR SUPERSTRUCTURE ASSEMBLIES. SEE CIVIL PLANS FOR LOCATIONS AND QUANTITIES OF EACH.

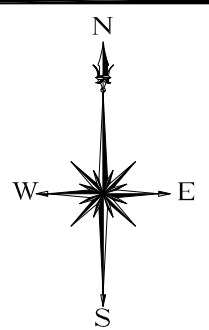


SECTION  
**FOOTING - F1**  
SCALE: 1/2"=1'-0"



SECTION  
**FOOTING - F2**  
SCALE: 1/2"=1'-0"

Leeder Hill A System Size: 255.0 kW (DC) 192.0 kW (AC)  
Leeder Hill B System Size: 725.9 kW (DC) 600.0 kW (AC)

[illegible]

## **DUAL SLOPE ASSEMBLY - FOUNDATION PLAN, ELEVATION & DETAILS**

ACES WHITNEY ACADEMY  
PARKING AREA SOLAR INSTALLATION  
130-B LEEDER HILL DRIVE  
HAMDEN, CONNECTICUT

MFQ DESIGNED	MFQ DRAWN	KP CHECKED
AS NOTED		
SCALE		
JUNE 22, 2024		
DATE		
21840-01		
PROJECT NO.		
1 OF 1		
SHEET NO.		

STR-1



THE NOTES SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS.  
DO NOT SCALE FROM DRAWINGS, ALL DIMENSIONS SHOULD BE READ OR COMPUTED.  
UNLESS OTHERWISE NOTED ON THE DRAWINGS, DIMENSIONS ARE GIVEN  
IN MILLIMETERS AND LEVELS IN METERS.  
STEEL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH ALL RELATED CONTRACT  
DRAWINGS.  
LEVELS AND DIMENSIONS ARE TO BE VERIFIED BY SITE MEASUREMENTS  
PRIOR TO FABRICATION OF STEEL.  
ALL MISSING CONNECTION DETAILS ARE TO BE DESIGNED BY THE CONTRACTOR  
TO THE FULL CAPACITY OF THE MEMBER AND SHOWN IN THE SHOP DRAWINGS  
FOR THE ENGINEER'S APPROVAL.

- 1- LIVE LOADS ARE IN ACCORDANCE WITH UBC-2006 CODE UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- 2- SEISMIC LOADS ARE IN ACCORDANCE WITH ASCE 7-16.
- 3- WIND LOADS ARE IN ACCORDANCE WITH ASCE 7-16-BASIC WIND SPEED 115 MPH, EXPOSURE C.
- 4- TEMPERATURE  $\Delta T = 70^{\circ} F$ .

C- THE DESIGN IS IN ACCORDANCE WITH THE FOLLOWING STANDARDS

- 1- MANUAL OF STEEL CONSTRUCTION-AMERICAN INSTITUTE OF STEEL CONSTRUCTION  
AISC 13TH EDITION.
- 2- COLD FORMED STEEL DESIGN MANUAL-AMERICAN IRON AND STEEL INSTITUTE (AISI) 1996 EDITION.
- 3- STRUCTURAL WELDING CODE: AMERICAN WELDING SOCIETY AWS D1.1 /D1.1M : 2002 OR BS:499
- 4- STEEL STRUCTURE PAINTING MANUAL: STEEL STRUCTURES PAINTING COUNCIL LATEST EDITION  
OR BS:5493.

- 1- STRUCTURAL STEEL PLATES AND HOT ROLLED SECTIONS ARE TO CONFORM TO ASTM A36 WITH MINIMUM YIELD STRESS 36 Ksi  
ALL HOLLOW RECTANGULAR SECTIONS ARE ASTM A500 GRADE 46
- 2- ANCHOR BOLTS ARE TO CONFORM TO ASTM F 1554, GRADE "36".
- 3- HIGH-STRENGTH BOLTS, NUTS, AND WASHERS: ASTM A 325M, OR DIN 6914 GRADE 8.8  
HEAVY HEX STEEL STRUCTURAL BOLTS, HEAVY HEX CARBON-STEEL NUTS, AND HARDENED CARBON-STEEL WASHERS, UNCOATED OR ASTM A 490M, TYPE 1 OR DIN 6914 GRADE 10.9  
HEAVY HEX STEEL STRUCTURAL BOLTS, HEAVY HEX CARBON-STEEL NUTS, AND HARDENED CARBON-STEEL WASHERS, UNCOATED.
- 4- WELDING MATERIALS: CONFORM TO AWS CODE AND AWS FILLER METAL SPECIFICATIONS.  
SELECT MATERIALS WHICH ARE SUITABLE FOR USE WITH TYPES OF STEEL TO BE JOINED.  
UNLESS OTHERWISE INDICATED, CONNECTIONS ARE DESIGNED FOR:
  - METAL-ARC WELDING ELECTRODES: TO E70XX SERIES OF THE SPECIFICATION FOR MILD STEEL COVERED ARC-WELDING ELECTRODES, AWS A5.1, OR THE SPECIFICATION FOR LOW-ALLOY STEEL COVERED ARC-WELDING ELECTRODES, AWS A5.5.
  - BARE ELECTRODES AND GRANULAR FLUX USED IN THE SUBMERGED-ARC PROCESS ARE TO CONFORM TO F7 X-EXXX AWS FLUX CLASSIFICATIONS OF THE SPECIFICATION FOR BASE MILD STEEL ELECTRODES AND FLUXES FOR SUBMERGED ARC WELDING, AWS A5.17, OR A5.23 OR THE OF AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- 5- PURLINS AND GIRTS SHALL BE OF COLD FORMED STEEL AND CONFORM TO THE SPECIFICATION OF ASTM A446-76 (GRADE D) OR APPROVED EQUAL WITH A MINIMUM YIELD STRESS OF 50000 PSI AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM
6. AS PER GEOTECH DATA SOIL BEARING PRESSURE IS 4000 psf. THIS VALUE IS TO BE VERIFIED AT THE TIME OF EXCAVATION BY A QUALIFIED SOILS ENGINEER PRIOR TO CONSTRUCTION
7. UNLESS NOTED OTHERWISE, ALL INTERIOR AND EXTERIOR SLABS ON EARTH, INCLUDING STEPS, SHALL BE 5" THICK REINFORCED WITH 6x6-W1.4xW1.4 W.W.F. PLACED 2" DOWN FROM TOP OF SLAB - LAP W.W.F. ONE SPACE ALL SIDES AT SPLICES.
8. PROPORTIONING OF REINFORCED CONCRETE MEMBERS AND THEIR STEEL REINFORCING ARE BASED ON AN ULTIMATE STRENGTH DESIGN IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318).
9. CONCRETE SHALL BE CLASS PCC04460 WITH A DESIGN COMPRESSIVE STRENGTH OF 4000 PSI.  
THE CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 6.01 - CONCRETE FOR STRUCTURES, AND M.03 - PORTLAND CEMENT CONCRETE OF THE CANNDOT STANDARD SPECIFICATION
10. ALL REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A767 CLASS 1, INCLUDING SUPPLEMENTAL REQUIREMENTS

13	CONCRETE PROTECTION FOR REINFORCEMENT:	MINIMUM COVER (INCHES)
	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
	CONCRETE EXPOSED TO EARTH OR WEATHER	
	# 5 BAR, W31 OR D31 WIRE, AND SMALLER	1-1/2
	# 6 THROUGH # 18 BARS	2
	CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
	SLABS, WALLS, JOISTS: #11 BAR AND SMALLER	3/4
	BEAMS COLUMNS: PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	1-1/2
14.	PROVIDE BAR SUPPORTS AND SPACERS IN ACCORDANCE WITH ACI 315R MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES	

- 1- ALL DIMENSIONS GIVEN ON CONTRACT DRAWINGS ARE TO BE CHECKED AGAINST EXISTING BY THE STEEL FABRICATOR PRIOR TO FABRICATION.
- 2- THE CONTRACTOR SHALL PROVIDE ALL HOLES IN THE STEELWORK REQUIRED BY OTHER TRADES SUBJECT TO THE APPROVAL OF THE ENGINEER
- 3- THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AND SUPPORTS REQUIRED DURING ERECTION FOR THE PROPER ALIGNMENT AND ALSO AS NECESSARY TO GIVE AND MAINTAIN PROPER STABILITY OF ALL STRUCTURES.
- 4- THE THREADING OF THE PRESET ANCHOR BOLTS IS TO BE TESTED TO GUARANTEE THAT NO SLIP OF NUTS OCCURS BEFORE. THE ANCHOR BOLTS MATERIAL FAILURE.
- 5- FABRICATION, ERECTION AND QUALITY CONTROL (INCLUDING TOLERANCES) TO BE AS DICTATED BY ASTM A6, AWS D1.1 AND AISC – ASD (MANUAL OF STEEL CONSTRUCTION).
- 6- ALL HOLES FOR STEEL BOLTS SHALL BE AS PER AISC 13TH ED, (UNLESS OTHERWISE NOTED.)
- 7- TORQUE TIGHTENING OF ALL HEAD PLATES CONNECTIONS AND BOLTED SPLICES ARE BEARING-TYPE CONNECTIONS THAT REQUIRES FULL PRE TENSIONING AS PER THE REQUIREMENTS OF RCSC SPECIFICATIONS FOR STRUCTURAL JOINTS. UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- 8- PAINTING OF ALL FAYING SURFACES FOR HEAD PLATE CONNECTIONS AND SPLICE PLATES ARE TO BE CONSIDERED AS PER THE REQUIREMENTS OF SURFACE CONDITIONS OF SLIP CRITICAL CONNECTIONS AS SPECIFIED IN RCSC SPECIFICATIONS FOR STRUCTURAL JOINTS.
- 9- MINIMUM SIZE OF FILLET WELDS IS  $S=0.196"$ . UNLESS OTHERWISE NOTED.
- 10- NON-SHRINK GROUT TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5000KSI TO BE USED FOR GROUTING BENEATH BASEPLATE
- 11- CONTRACTOR IS TO SUBMIT WORKSHOP DETAILED DRAWINGS FOR THE ENGINEER'S APPROVAL PRIOR TO EXECUTION.
- 12- REHEAT AND COOLING TREATMENT:  
THE PREHEAT AND INTERPASS TEMPERATURE MUST BE SUFFICIENT TO PREVENT CRACKING. FLANGES, AT LOCATION OF WEB WELD, SHALL BE PREHEATED TO A TOTAL WIDTH OF 8". MAINTAIN SPECIFIED TEMPERATURE DURING WELDING. AVOID OVERHEATING. COOLING RATE SHOULD BE SLOW TO AVOID CRACKING, AND TO ENSURE WELDED JOINT DUCTILITY. THE CONTRACTOR SHALL SUBMIT A METHOD STATEMENT ON PREHEATING/COOLING PROCEDURES AND TECHNIQUES BASED ON AWS D1.1 REGULATIONS FOR THE ENGINEER'S
- 13- WELD TESTING IS TO BE AS FOLLOWS :
  - GROOVE-XRAY / ULTRASONIC – 10% OF ALL WELDS TO BE INCREASED IF FAILURE IS ENCOUNTERED.
  - FILLET – LIQUID DYE PENETRANT – 10% ON ROOT AND FINAL PASS TO BE INCREASED IF FAILURE IS ENCOUNTERED.
- 14- ALL STEEL MEMBERS ARE TO RECEIVE CORROSION PROTECTION IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- 15- FOR FIRE PROOFING (IF APPLICABLE) ON STEEL MEMBERS, APPLY A 2 HOURS RATING INTUMESCENT PAINT.

1- FOR BUILT UP MEMBERS: FABRICATOR TO ENSURE THAT WELD BETWEEN FLANGE AND WEB IS TO BE CONTINUOUS AND IS ABLE TO WITHSTAND THE HORIZONTAL SHEAR FLOW AT ANY POINT. THIS SHOULD BE REFLECTED IN SHOP DRAWINGS FOR THE ENGINEER'S APPROVAL.

[illegible]

SYSTEM SIZE :  
725.9 kWp (DC)  
600 kW (AC)

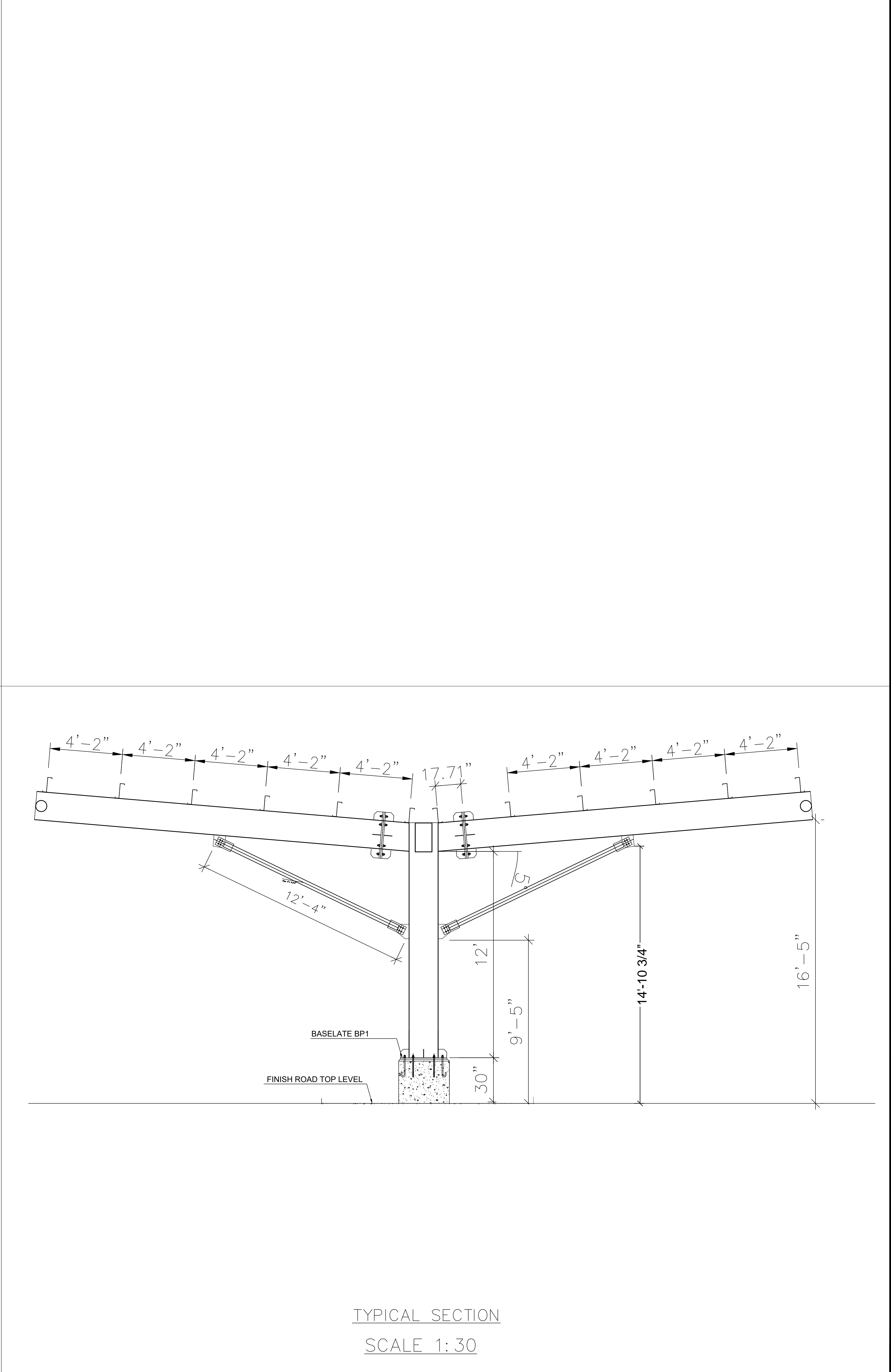
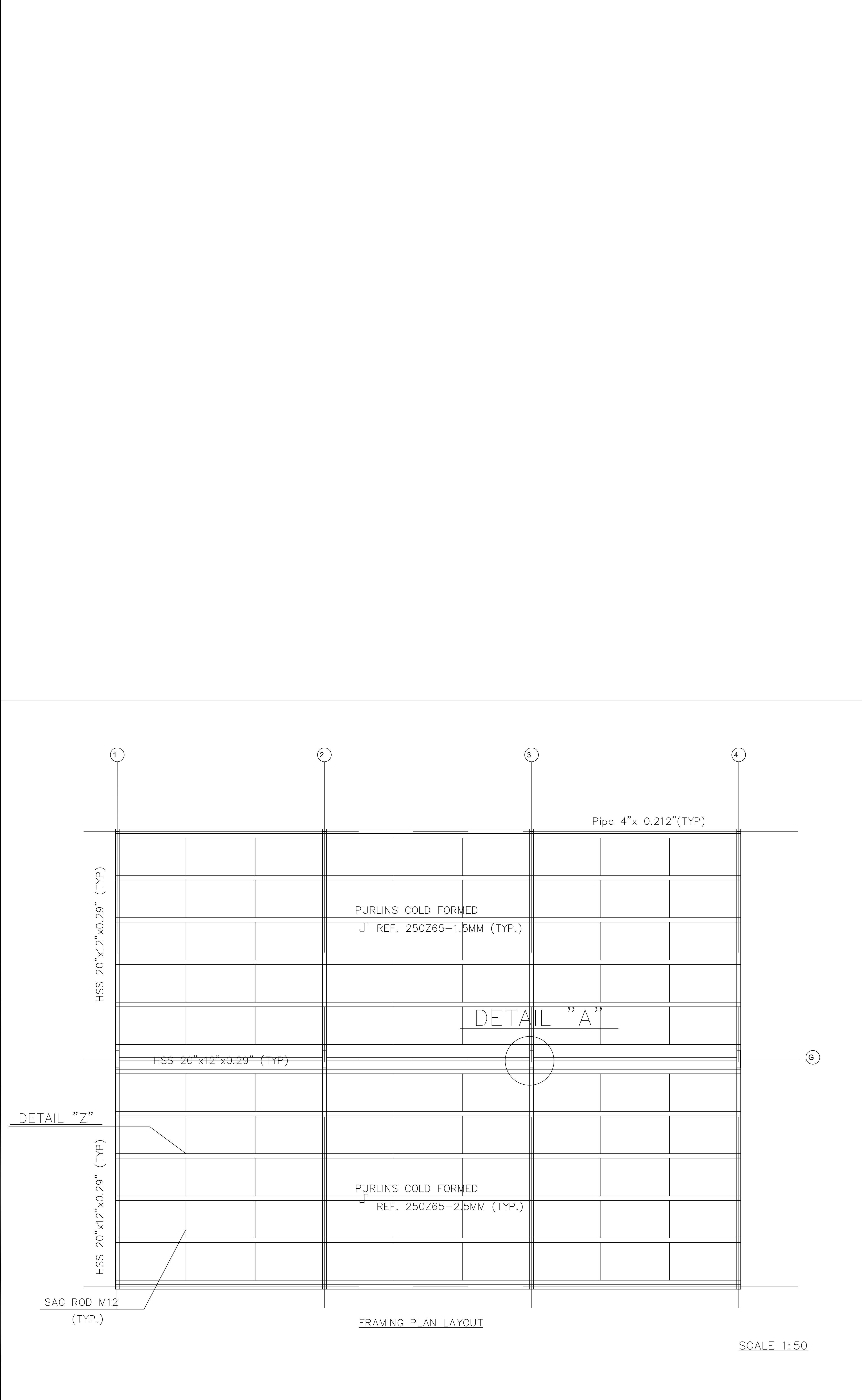
**ACES WHITNEY ACADEMY**  
130-A Leeder Hill - B Drive Hamden CT  
Leeder Hill A System Size: 255.0 kW (DC) 192.0 kW (AC)  
Leeder Hill B System Size: 725.9 kW (DC) 600.0 kW (AC)

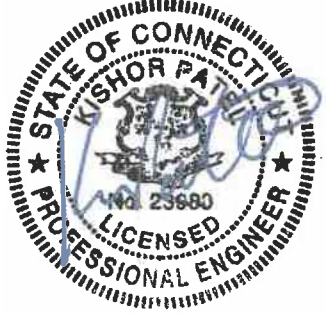
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Date: 06/12/2024	Design By: SD
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Drawing No.:

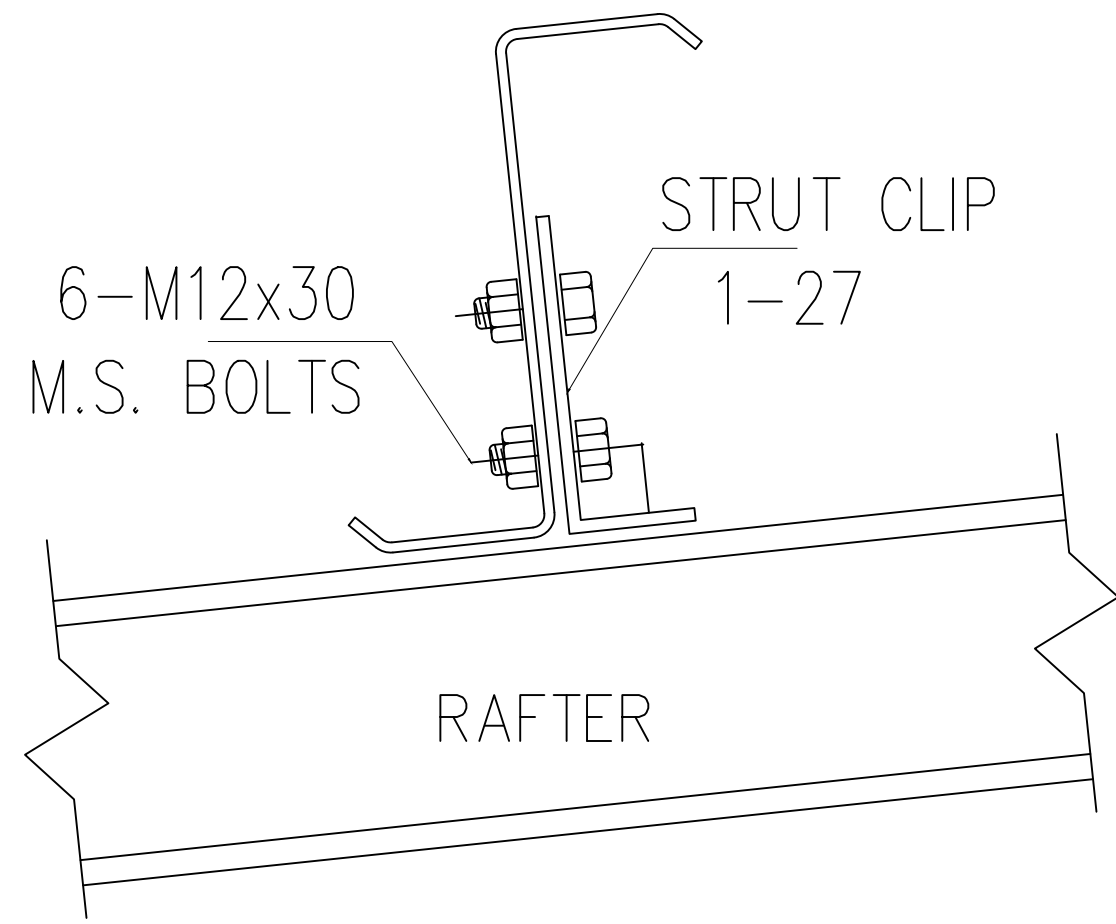
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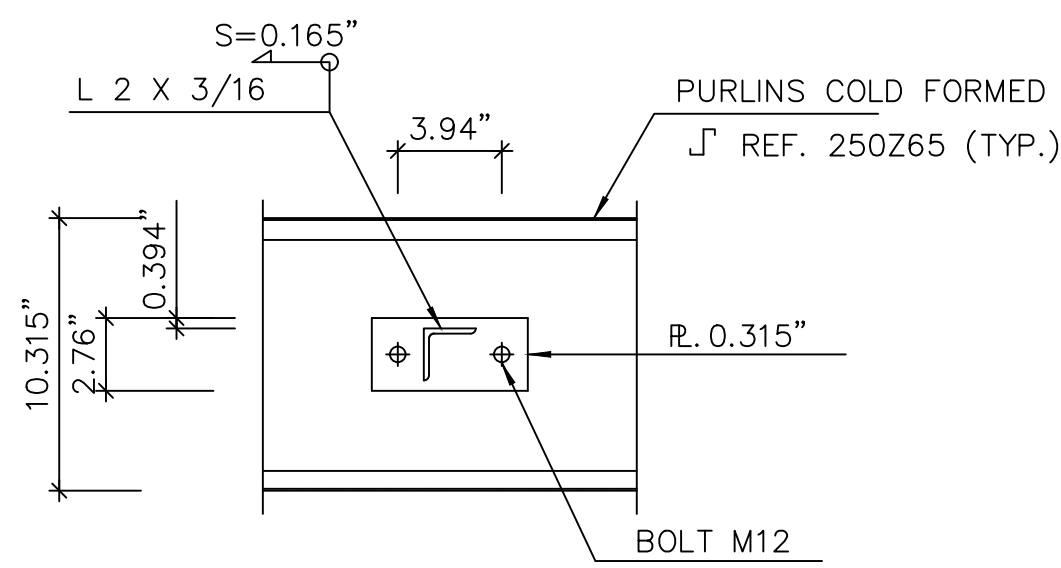
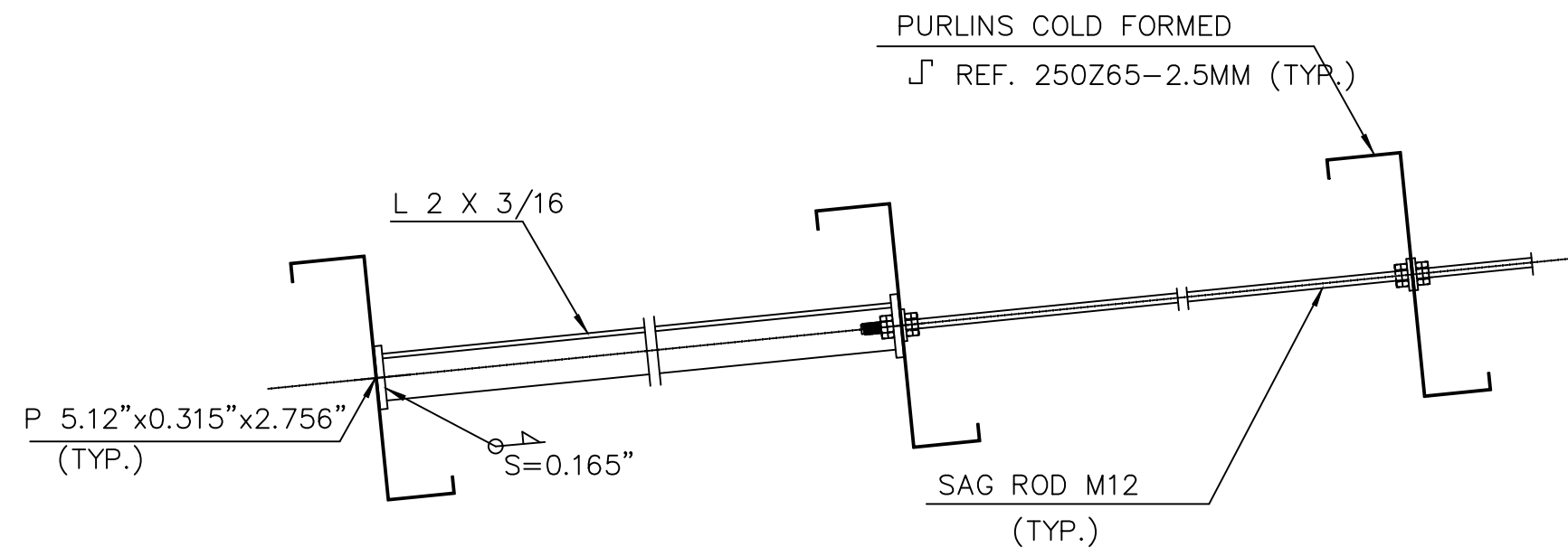
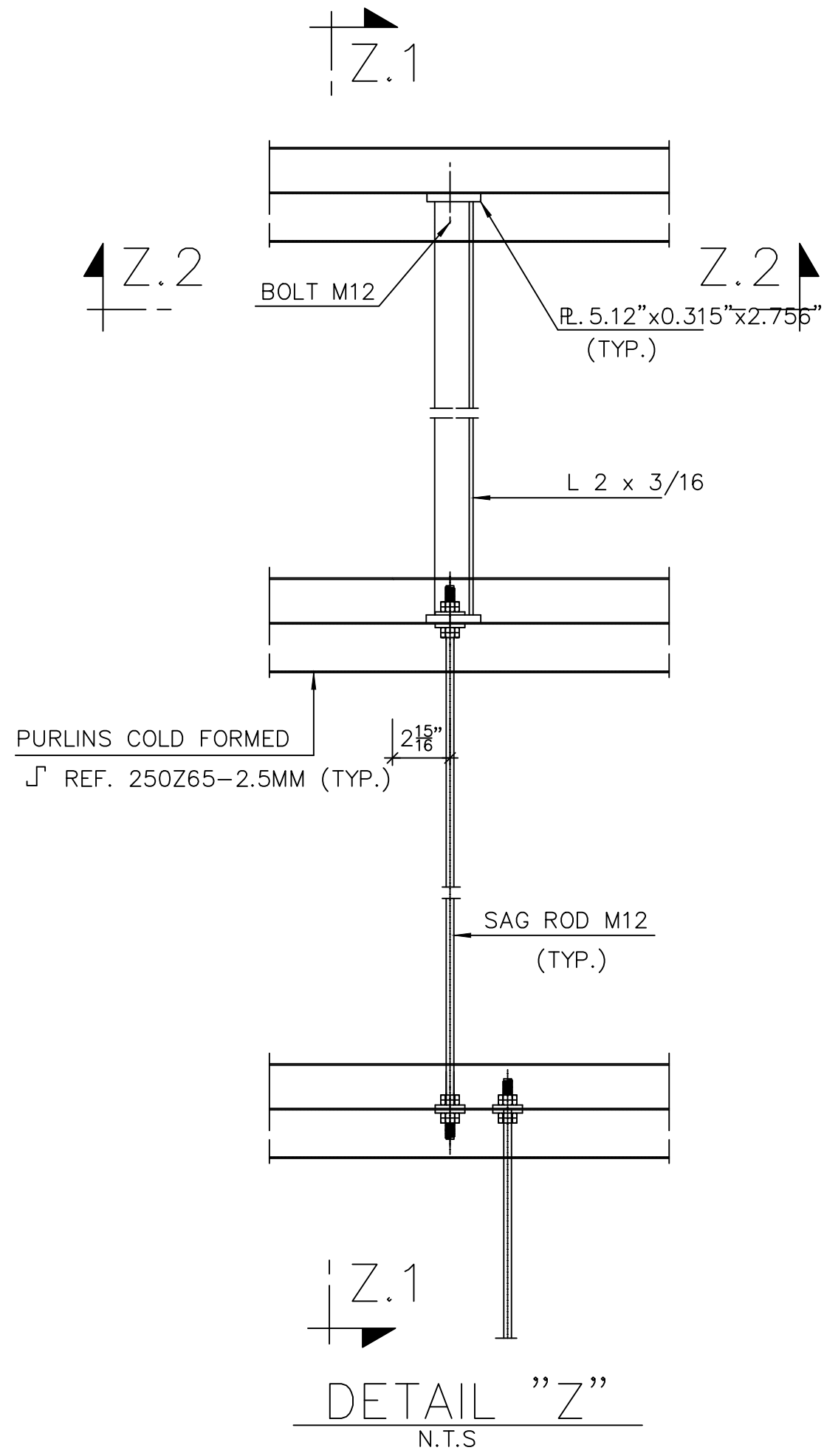


	
SYSTEM SIZE : 725.9 kWp (DC) 600 kW (AC)	
ACES WHITNEY ACADEMY 130-A Leeder Hill -B Drive Hamden CT Leeder Hill A System Size: 255.0 kW (DC) 192.0 kW (AC) Leeder Hill B System Size: 725.9 kW (DC) 600.0 kW (AC)	
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Date: 05/29/2024	Design By: SD
Scale:	Check By: SS
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S2.0	

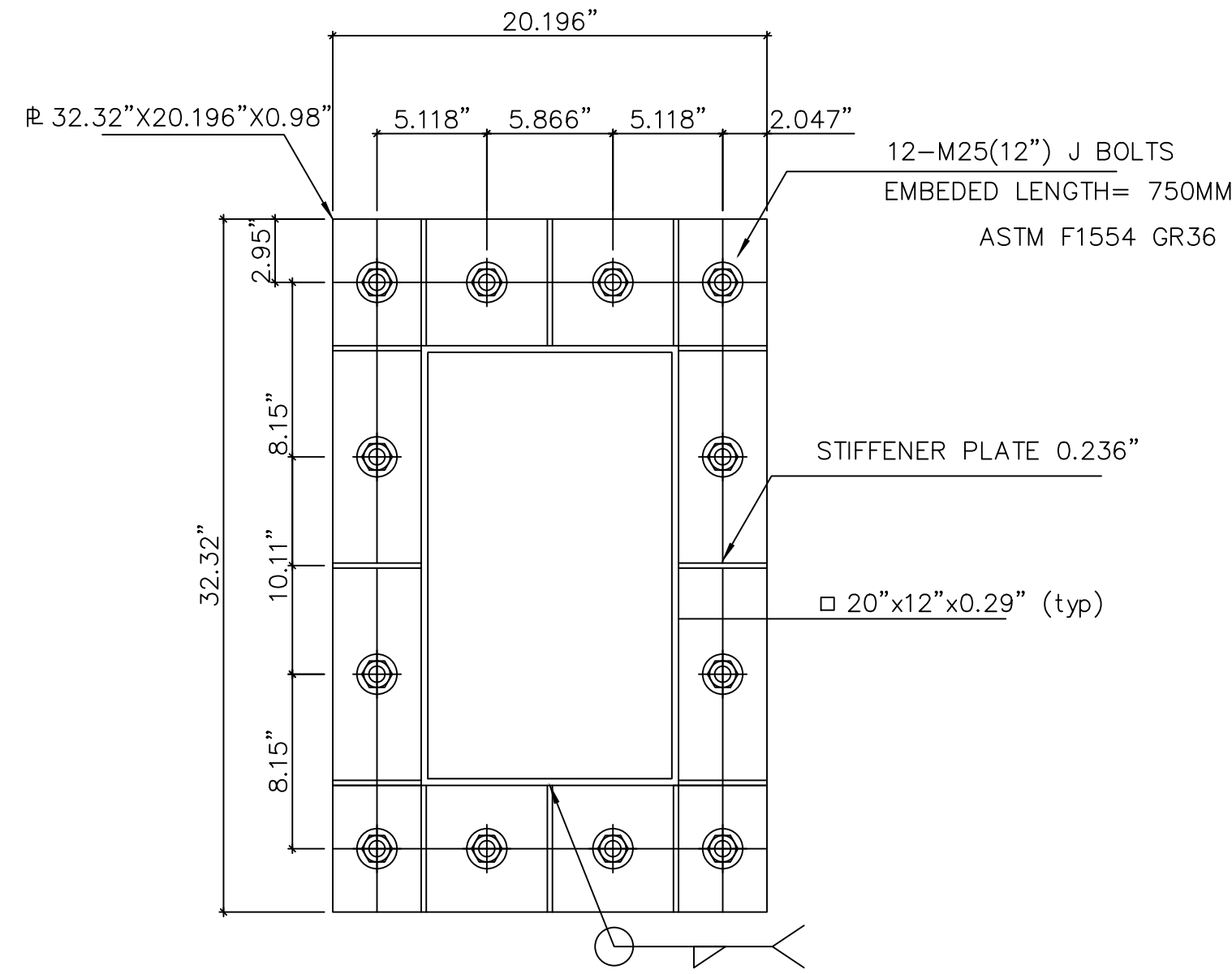
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01	05/08/2024	ISSUED FOR UTILITY INTERCONNECTION



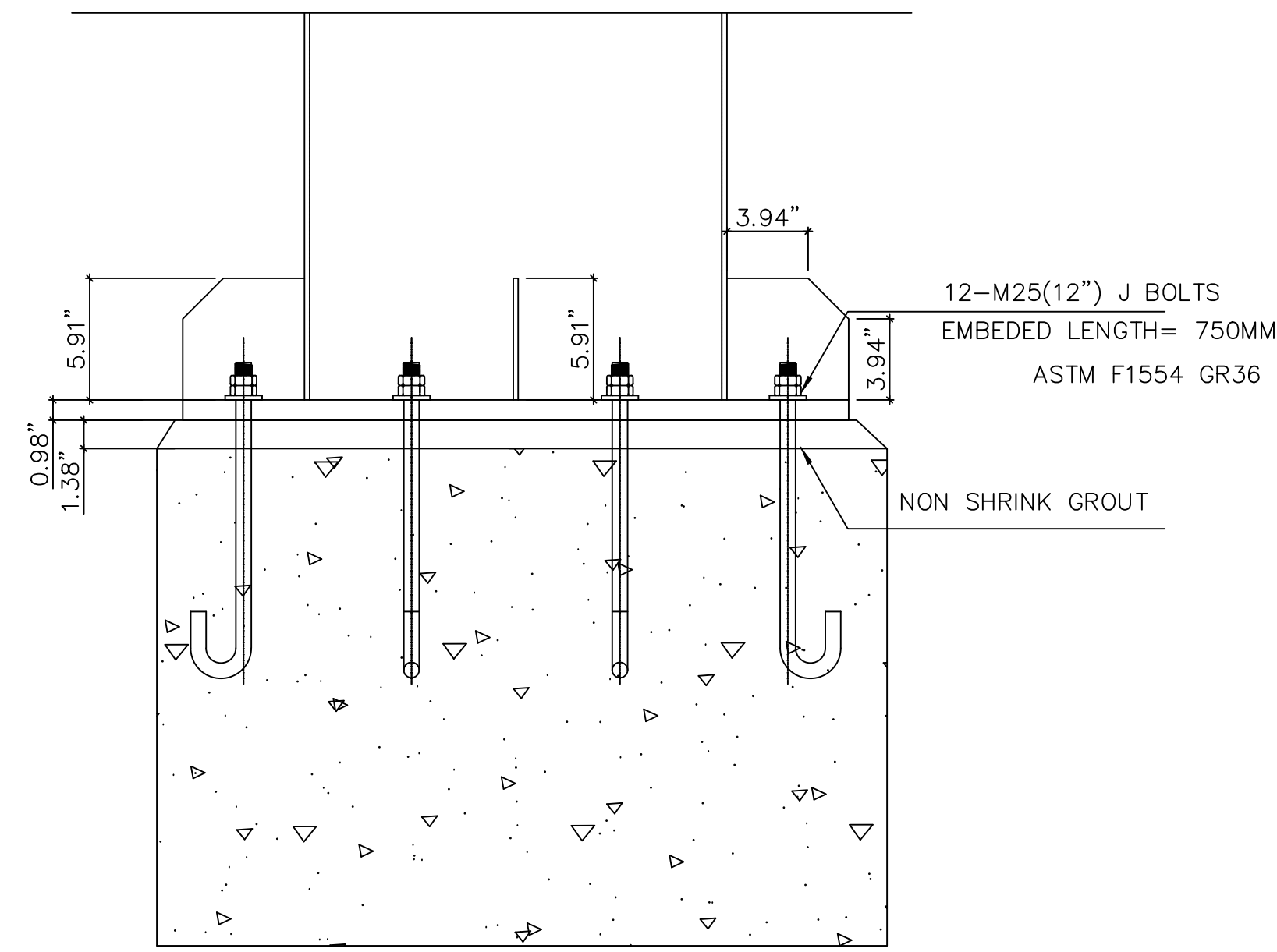
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CONNECTION



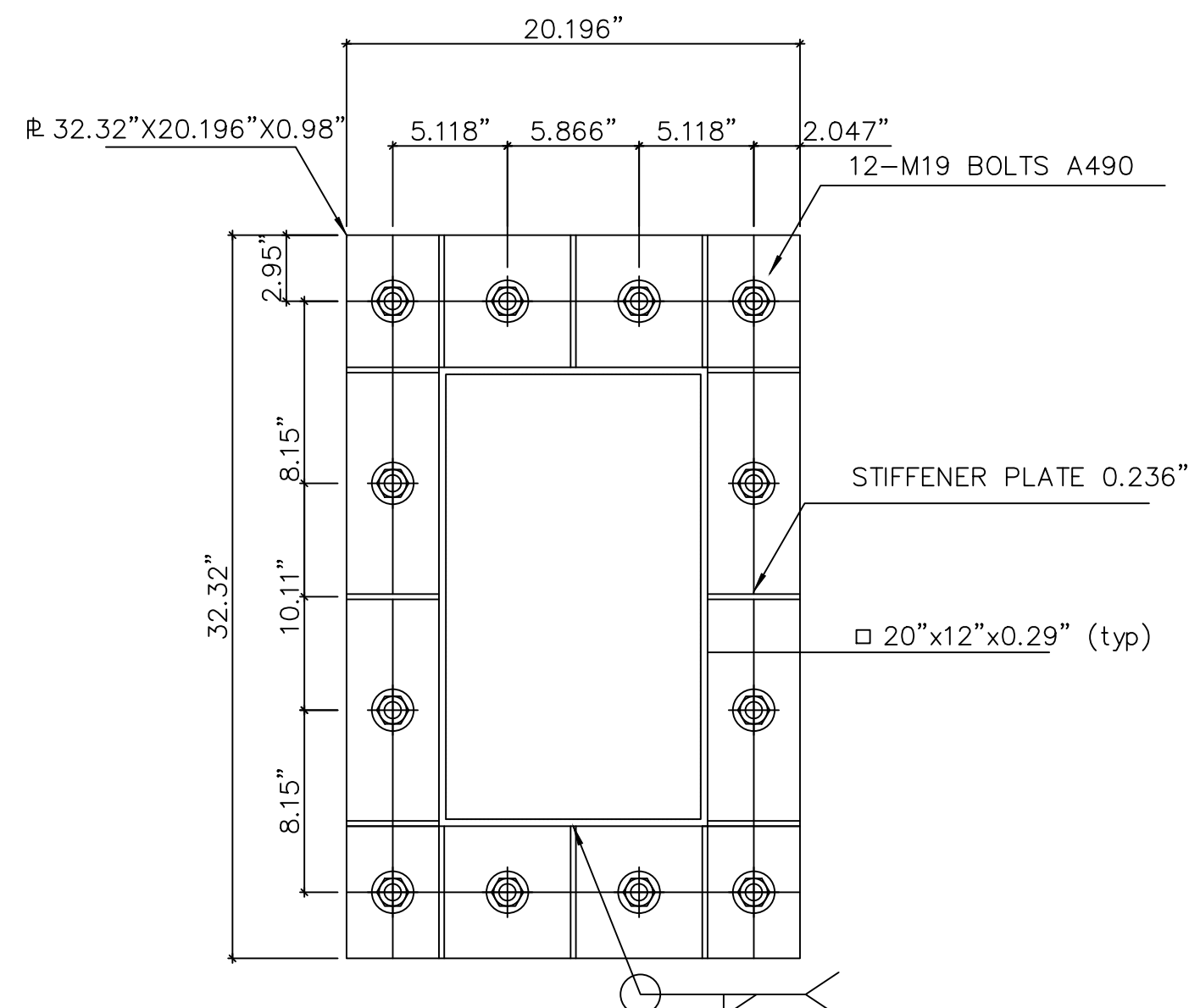
SECT. Z.2-Z.2



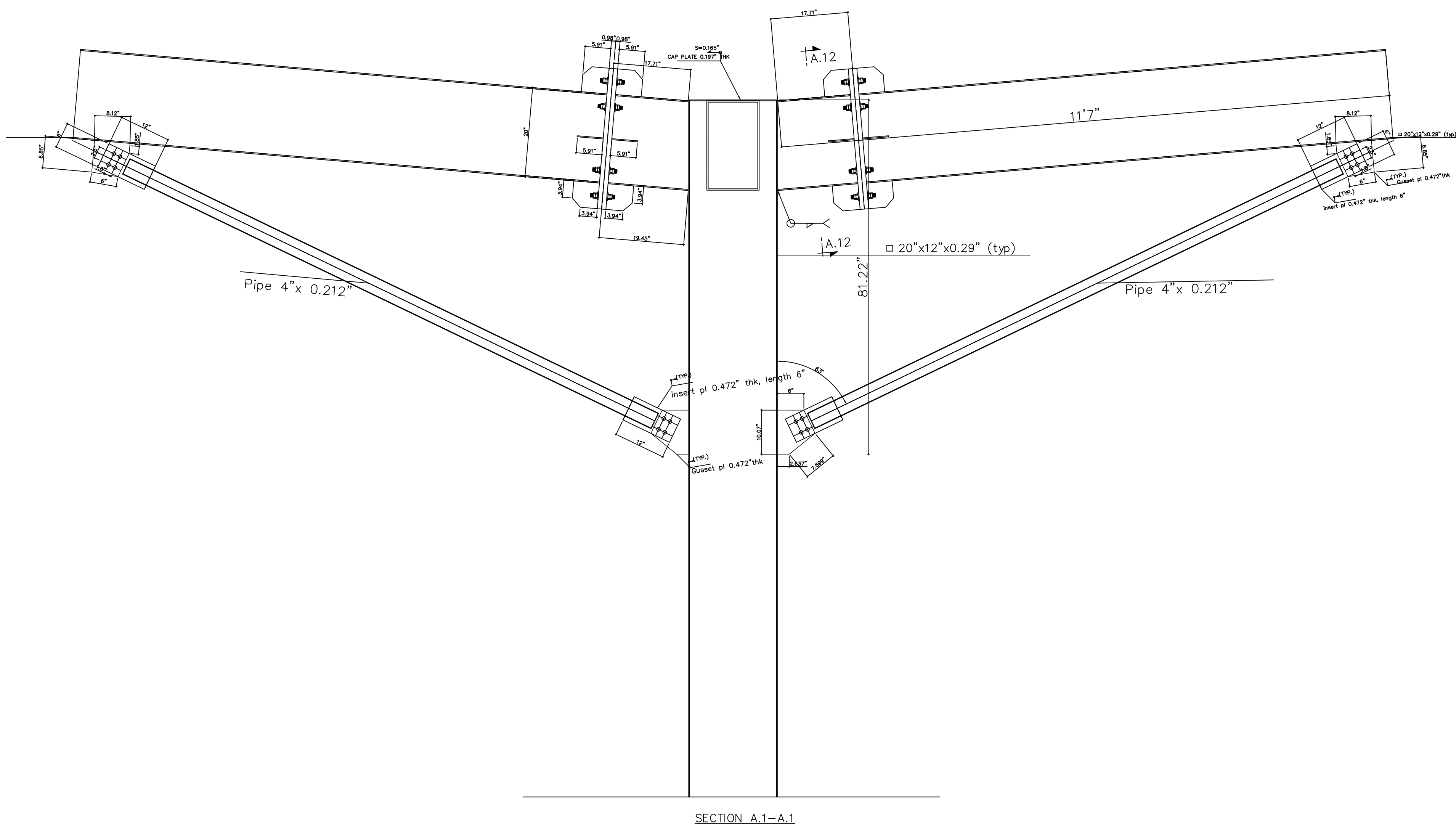
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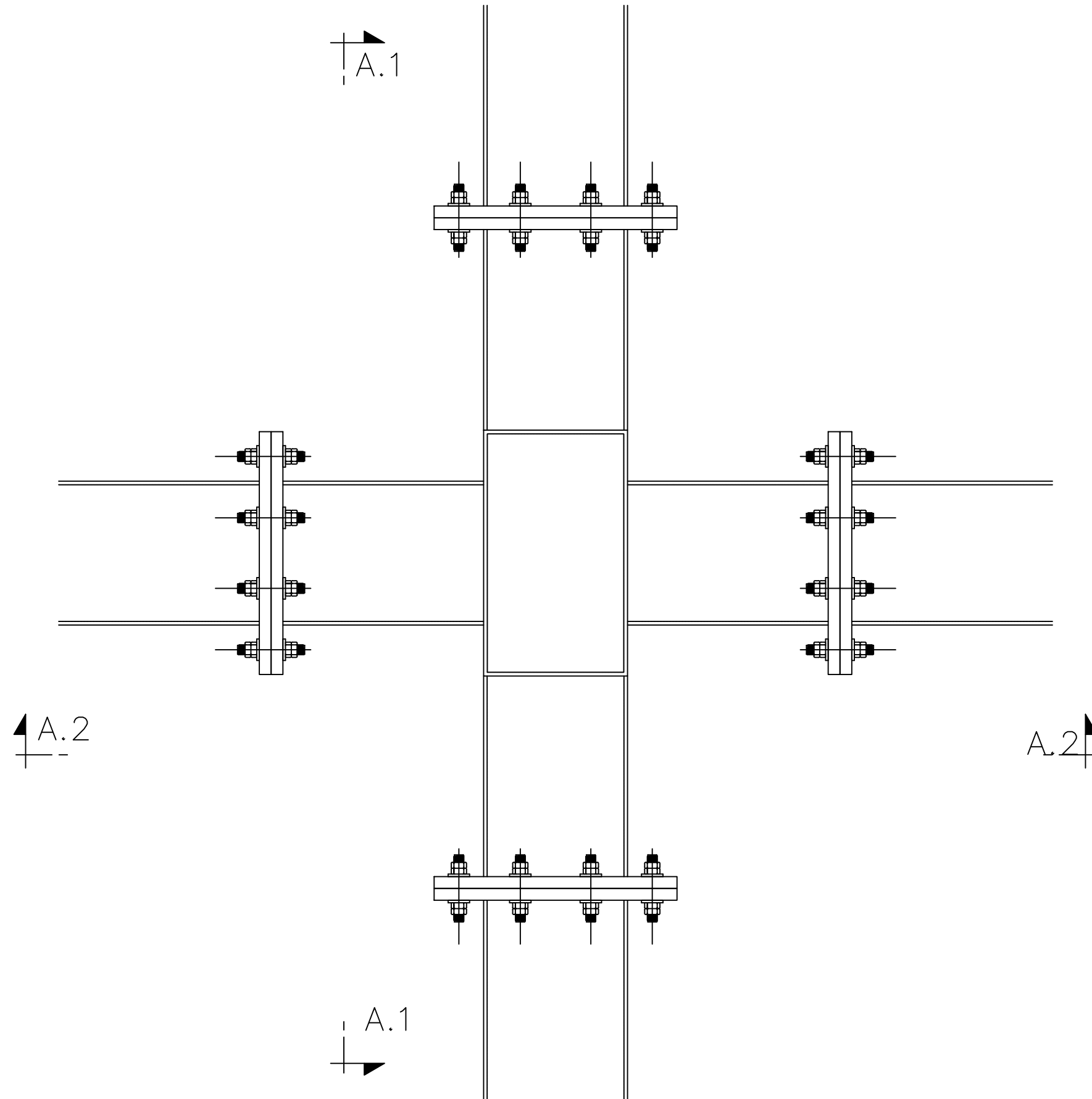
BASEPLATE BP1 SECTION



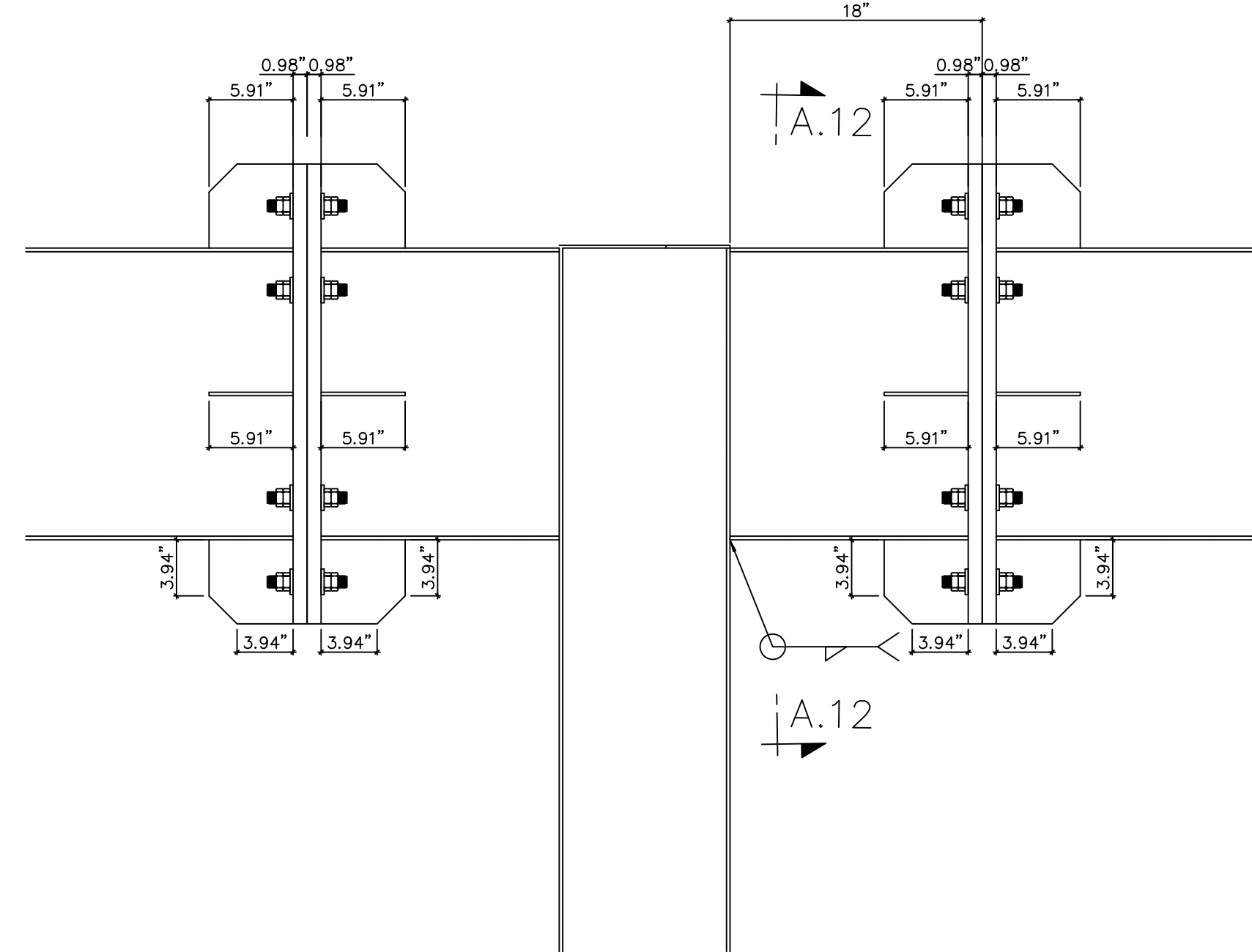
SECTION A.12-A.12



SECTION A.1-A.1



DETAIL "A"  
TOP VIEW



SECTION A.2-A.2



SYSTEM SIZE :  
725.9 kWp (DC)  
600 kW (AC)

ACES WHITNEY ACADEMY  
130-A Leeder Hill -A Drive Hamden CT  
Leeder Hill A System Size: 255.0 kW (DC) 192.0 kW (AC)  
Leeder Hill B System Size: 725.9 kW (DC) 600.0 kW (AC)

Project No.:

Drawn By:

RK

Date:

06/12/2024

Design By:

SD

Scale:

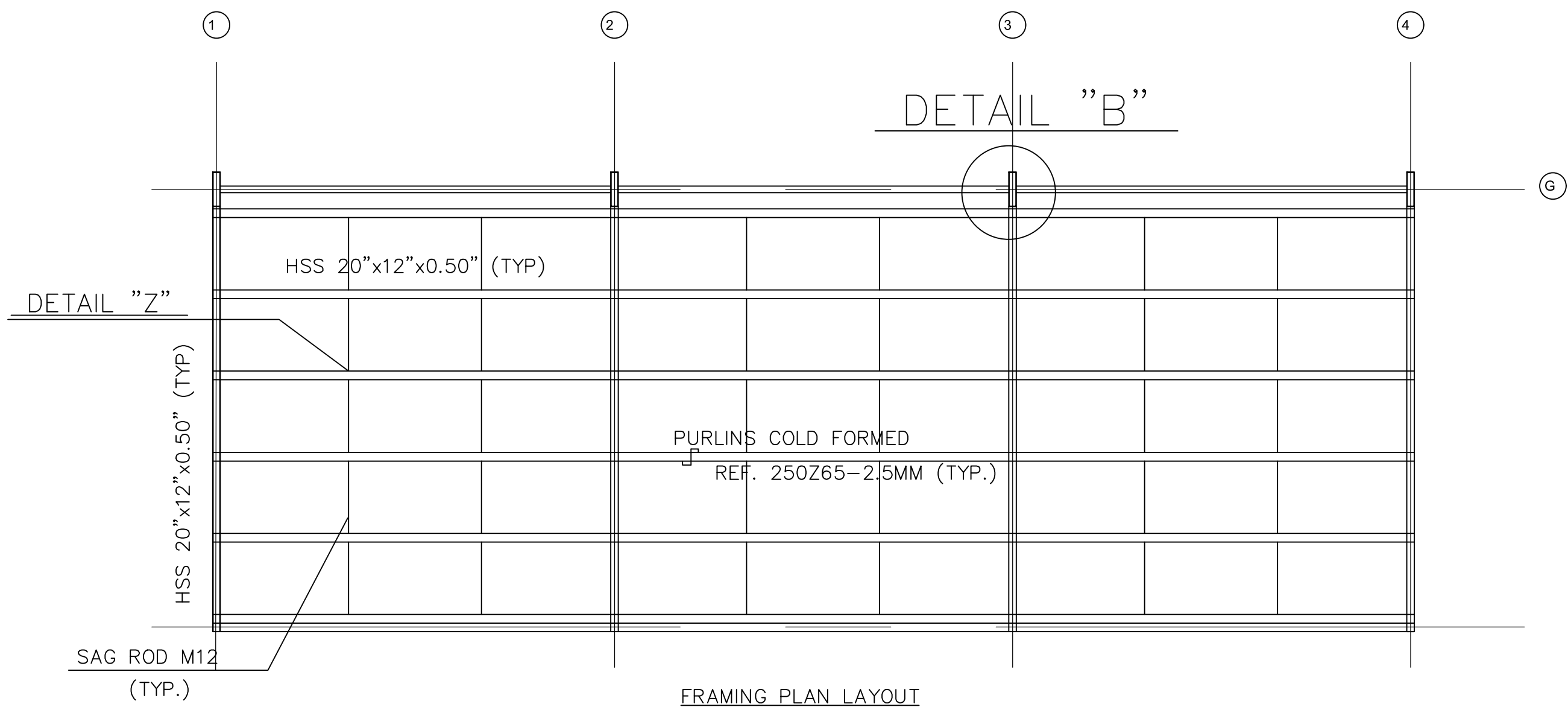
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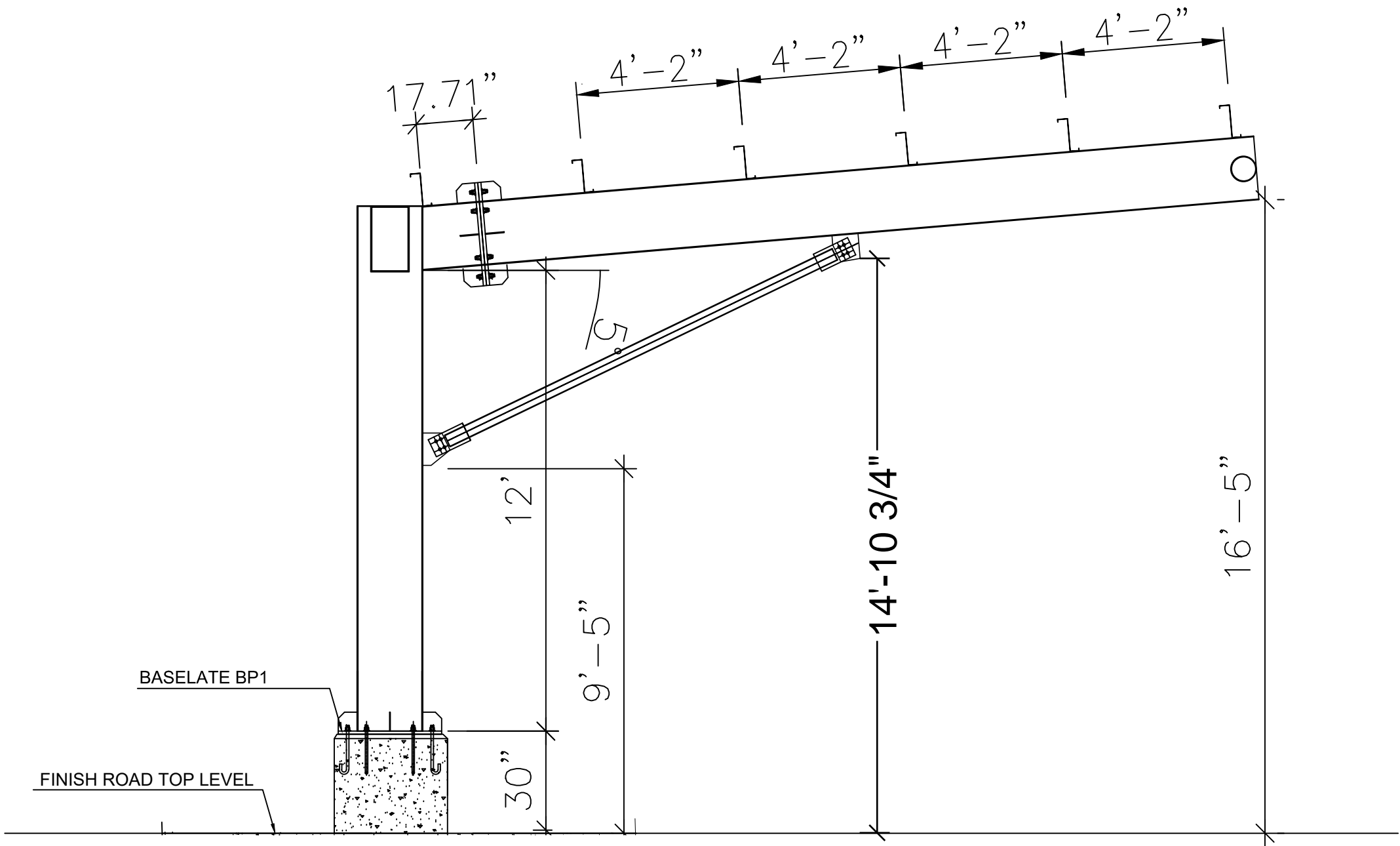
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FRAMING PLAN LAYOUT

SCALE 1:50



TYPICAL SECTION (MONOSLOPE)

SCALE 1:30



SYSTEM SIZE :  
725.9 kWp (DC)  
600 kW (AC)

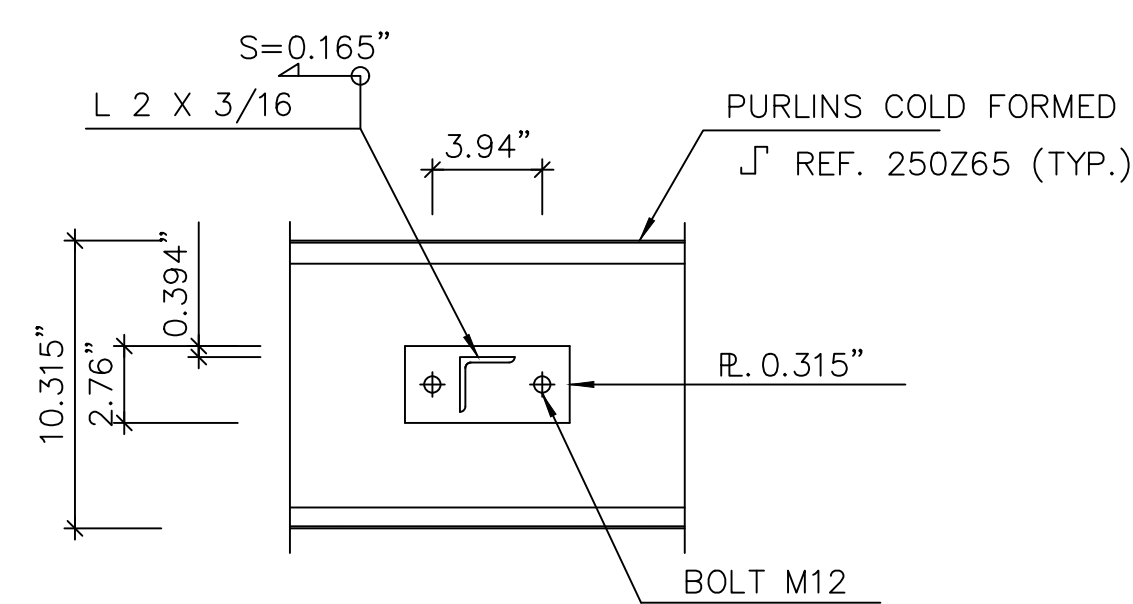
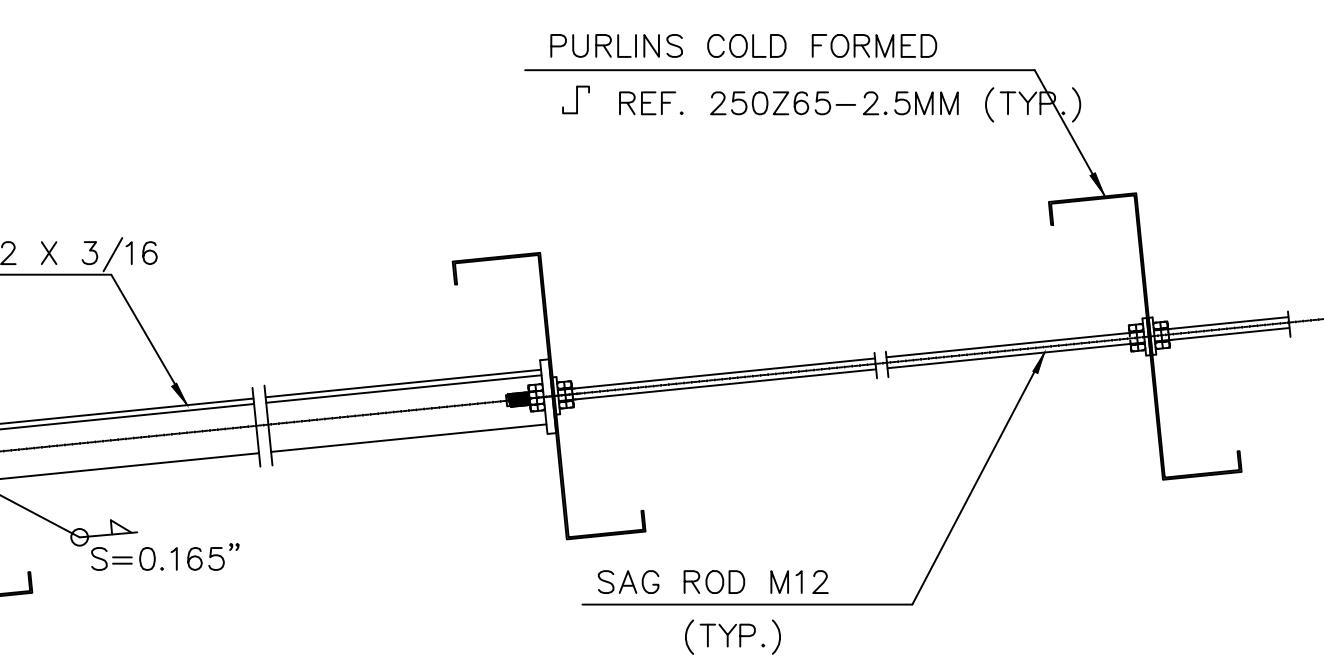
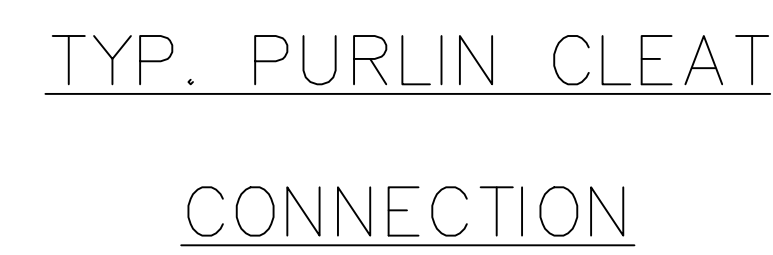
ACES WHITNEY ACADEMY  
130-A Leeder Hill -B Drive Hamden CT  
Leeder Hill A System Size: 255.0 kW (DC) 192.0 kW (AC)  
Leeder Hill B System Size: 725.9 kW (DC) 600.0 kW (AC)

Project No.:	Drawn By: RK
Date: 05/29/2024	Design By: SD
Scale:	Check By: SS

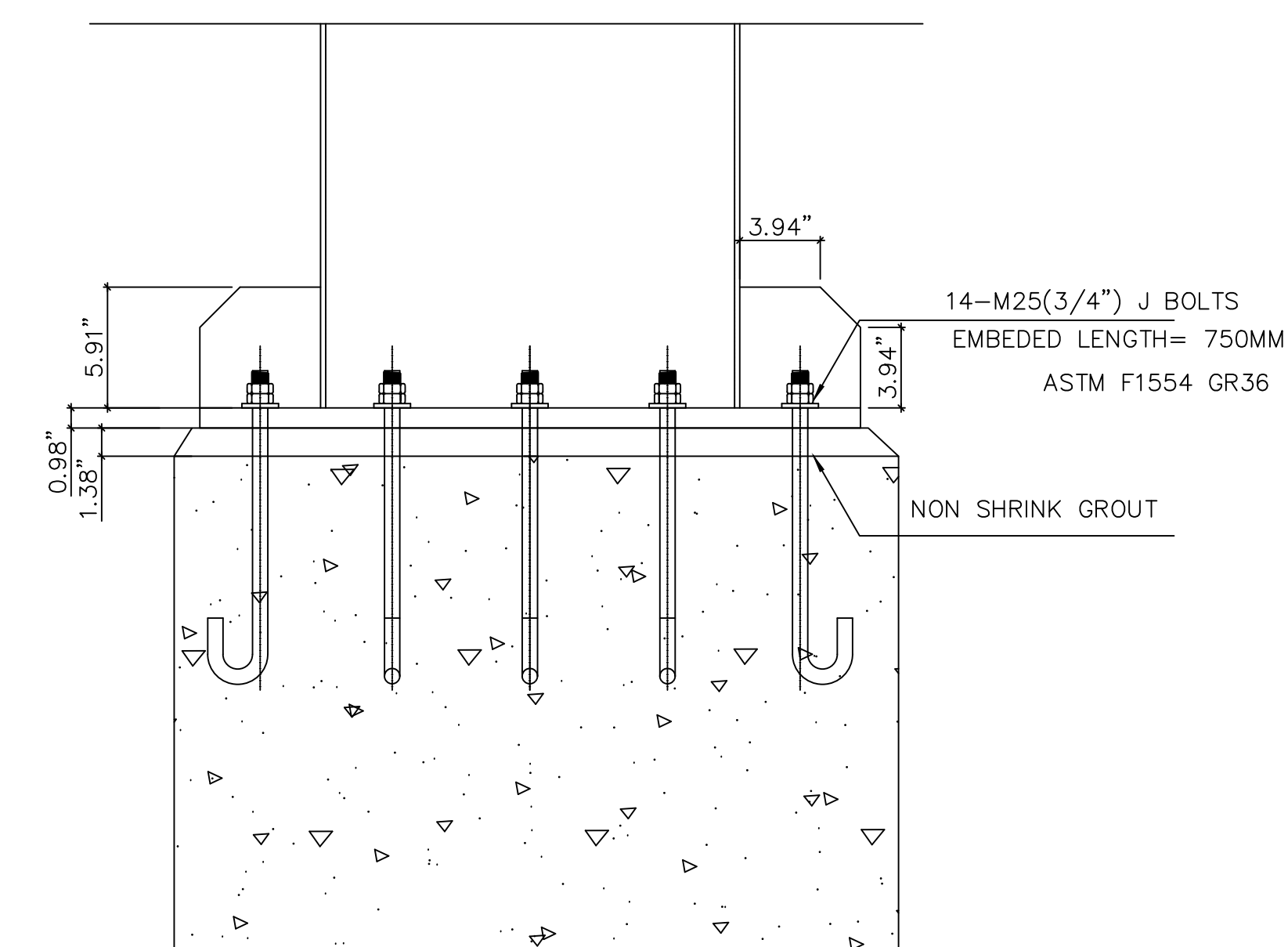
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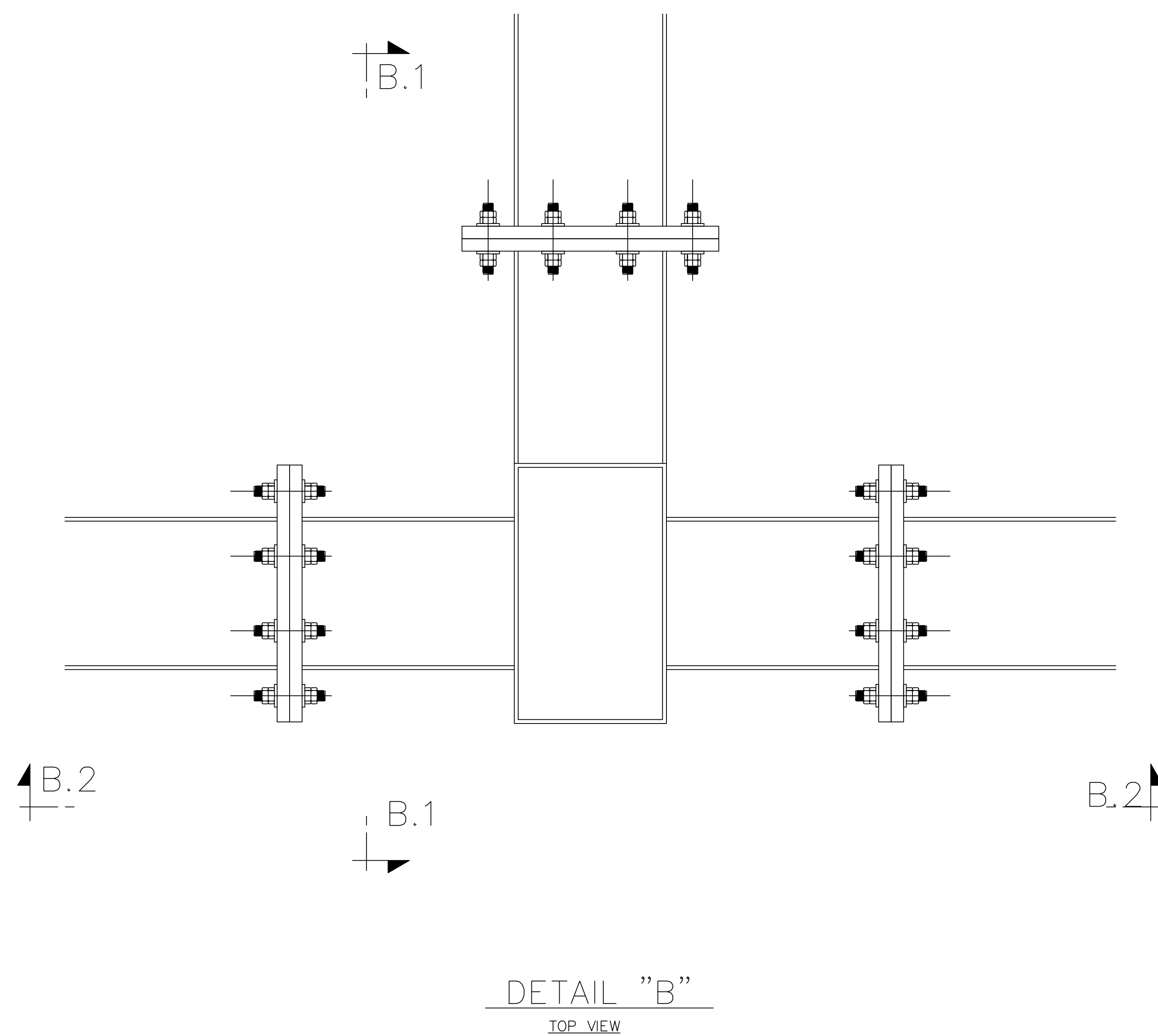
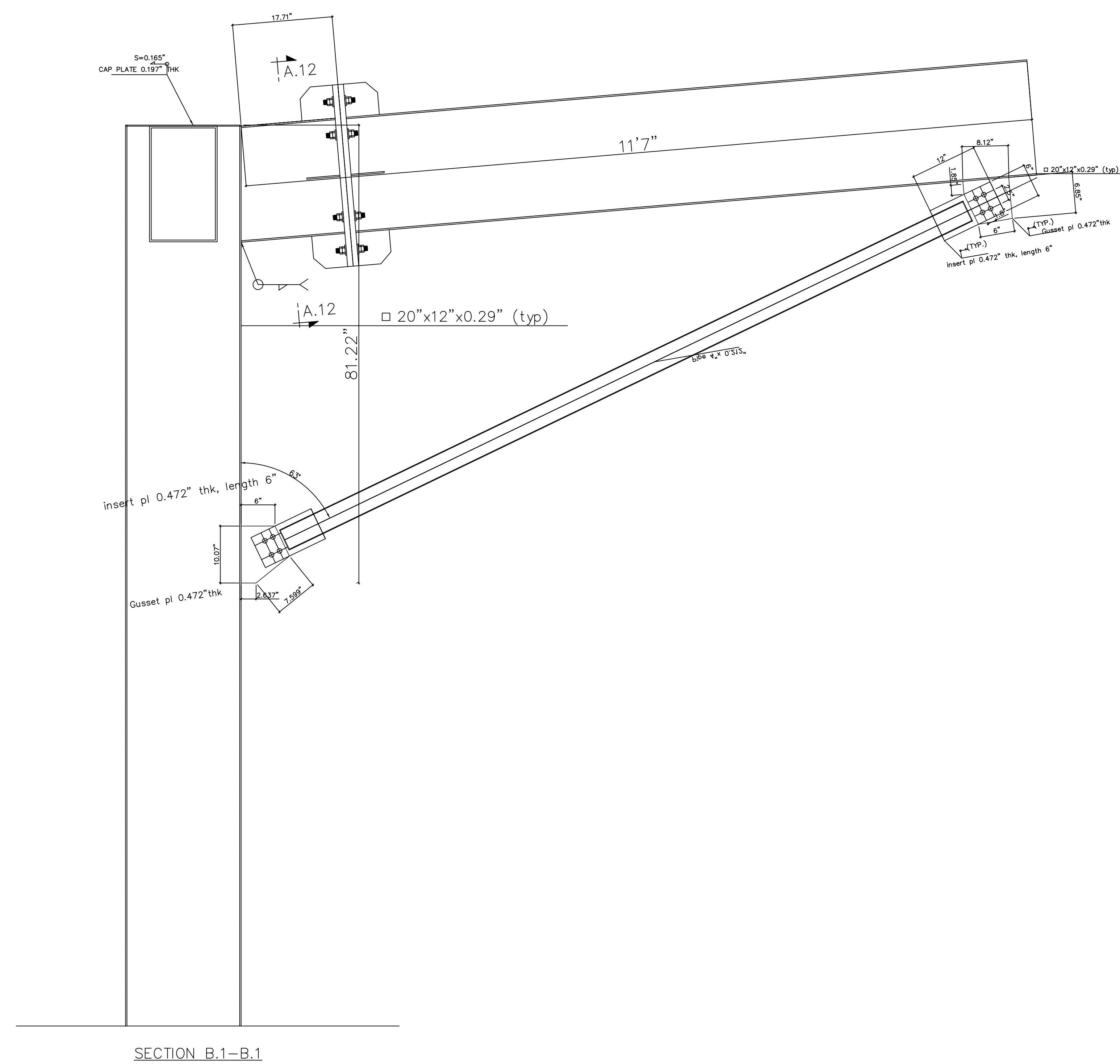
Rev.	Date	Description
01	06/12/2024	ISSUED FOR UTILITY INTERCONNECTION



SECT. Z.2-Z.2

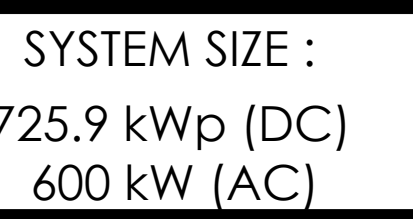


BASEPLATE BP2 SECTION



DETAIL "B"

TOP VIEW



**ACES WHITNEY ACADEMY**  
130-A Leeder Hill -A Drive Hamden CT  
Leeder Hill A System Size: 255.0 kW (DC) 192.0 kW (AC)  
Leeder Hill B System Size: 725.9 kW (DC) 600.0 kW (AC)

Project No.:	Drawn By: RK
Date: 06/12/2024	Design By: SD
Scale:	Check By: SS

Drawing No.:

\$5.0

[illegible]