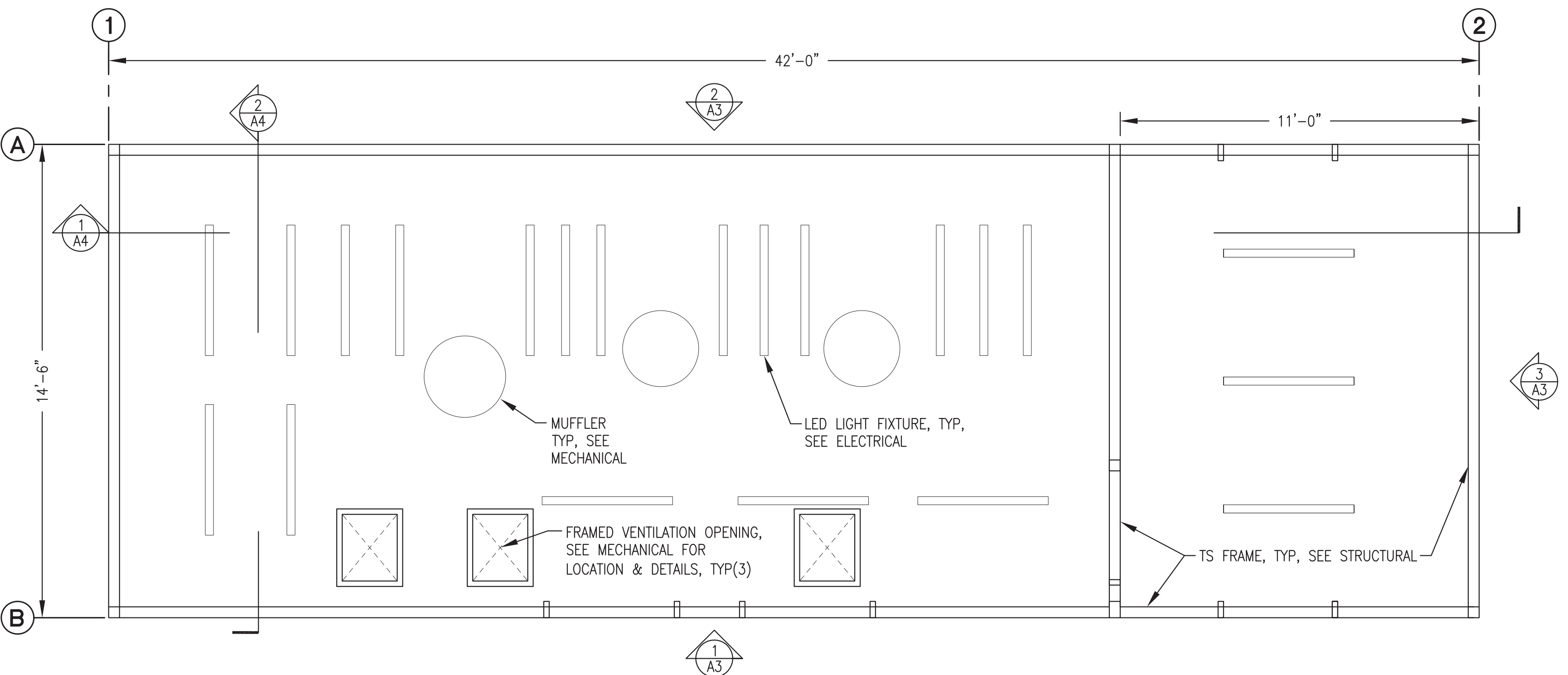


1 FLOOR PLAN  
3/8"=1'-0"



2 REFLECTED CEILING PLAN  
3/8"=1'-0"

**CODE ANALYSIS – 2012 EDITION INTERNATIONAL BUILDING CODE**

<b>OCCUPANCY CLASSIFICATION</b>		REF: IBC-2012, SEC. 306.2
GROUP F-1: FACTORY INDUSTRIAL MODERATE HAZARD – ELECTRIC GENERATION PLANT		
<b>TYPE OF CONSTRUCTION</b>		REF: IBC-2012, TABLE 601
TYPE V-B (NON-RATED)		REF: IBC-2012, SEC. 602.5
<b>BUILDING HEIGHTS AND AREAS</b>		REF: IBC-2012, TABLE 503
ALLOWED 40'-0" 1 STORY 8,500 S.F.	PROVIDED: 17'-0" 1 STORY 610 S.F.	
<b>FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS</b>		REF: IBC-2012, TABLE 601
STRUCTURAL FRAME 0 HR	BEARING WALLS 0 HR	INTERIOR PARTITIONS 0 HR
FLOOR 0 HR	ROOF 0 HR	
<b>FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS</b>		REF: IBC-2012, TABLE 602
EXTERIOR WALLS 10' ≤ X ≤ 30'	0 HR	
<b>FIRE PROTECTION SYSTEM</b>		REF: IBC-2012, SEC. 903.2.4
FIRE PROTECTION NOT REQUIRED. WATER MIST FIRE SUPPRESSION SYSTEM PROVIDED (SEE MECHANICAL).		
<b>OCCUPANT LOAD</b>		REF: IBC-2012, TABLE 1004.1.2
MECHANICAL/STORAGE = 300 S.F./PERSON	610 S.F./300 S.F. PER OCCUPANT = 2 OCCUPANTS	
<b>MEANS OF EGRESS – TRAVEL DISTANCE</b>		REF: IBC-2012, TABLE 1016.2
REQUIRED 200'	PROVIDED 20'	

**ARCHITECTURAL GENERAL NOTES:**

- SEE CIVIL SITE PLAN FOR LOCATION AND LAYOUT. PROVIDE SEPARATION TO PROPERTY BOUNDARIES IN ACCORDANCE WITH CODE ANALYSIS.
- DO NOT BLOCK OR OBSTRUCT ACCESS, REQUIRED PARKING AREAS, OR REQUIRED EGRESS FROM NEIGHBORING FACILITIES. PROVIDE TEMPORARY BARRICADES OR OTHER FORMS OF PROTECTION TO PROTECT EMPLOYEES, RESIDENTS, AND VISITORS FROM INJURIES DURING CONSTRUCTION ACTIVITIES
- PROJECT MANAGER SHALL BE RESPONSIBLE FOR ALL BUILDING PERMITS, LETTERS OF NON-OBJECTION, UTILITY SERVICES AND APPLICATIONS AS REQUIRED. PROJECT MANAGER OR CONSTRUCTION MANAGER TO BE RESPONSIBLE FOR ALL REQUIRED SAFETY PRECAUTIONS, METHODS AND TECHNIQUES.
- PROVIDE A COMPLETE AND OPERATIONAL FACILITY. ALL WORK TO BE IN ACCORDANCE WITH CURRENT APPROVED EDITIONS OF THE IBC, IMC, IFC, AND NEC INCLUDING STATE OF ALASKA AMENDMENTS.
- SEE SHEETS A3 AND A4 FOR DESCRIPTION OF FIELD INSTALLED ROOF SYSTEM.
- INSULATE ALL WALLS, FLOORS, AND CEILINGS WITH HIGH TEMPERATURE MINERAL FIBER ACOUSTICAL FIRE BATT INSULATION, MIN R VALUE 4 PER INCH, MIN 2000F MELTING TEMP. ROXUL AFB OR EQUAL. FILL ALL PANEL VOIDS OR PROVIDE THICKNESS AS INDICATED ON DRAWINGS. MECHANICALLY FASTEN FLOOR INSULATION TIGHT TO FLOOR.
- UPON COMPLETION OF FABRICATION ROUND ALL CORNERS AND GRIND EDGES SMOOTH AND PAINT ALL INTERIOR AND EXTERIOR EXPOSED STEEL. PERFORM ALL PAINTING IN A WARM DRY ENVIRONMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS INCLUDING DRYING TIME TO RE-COAT.
- SANDBLAST EXTERIOR SURFACE TO SSPC-SP-10. PRIME WITH ONE COAT OF REINFORCED INORGANIC ZINC PRIMER, DEVOE CATHA-COAT 302, NO SUBSTITUTES, COLOR GREEN, TO 3 MILS DRY FILM THICKNESS. COVER WITH TWO COATS OF EPOXY, DEVOE BAR-RUST 236, NO SUBSTITUTES, TO 12 MILS DRY FILM THICKNESS. FIRST COAT COLOR GRAY, SECOND COAT COLOR WHITE.
- FINISH EXTERIOR WALLS AND SKIDS (ALL EXPOSED VERTICAL EXTERIOR SURFACES) WITH ONE COAT OF ALIPHATIC URETHANE ENAMEL, DEVOE DEVTHANE 389, NO SUBSTITUTES, COLOR WHITE, TO 3 MILS DRY FILM THICKNESS.
- SANDBLAST INTERIOR SURFACE TO SSPC-SP-6. PRIME AND FINISH WITH TWO COATS OF EPOXY, SHERWIN WILLIAMS MACROPOXY 646, NO SUBSTITUTES, TO 8 MILS TOTAL DRY FILM THICKNESS. CEILING COLOR WHITE. WALL AND FLOOR COLOR STRUCTURAL GRAY 4031. NOTE THAT FIRST COAT ON WALLS AND FLOOR MAY BE WHITE.

Note: Mechanical and electrical not part of module scope, see exclusions.

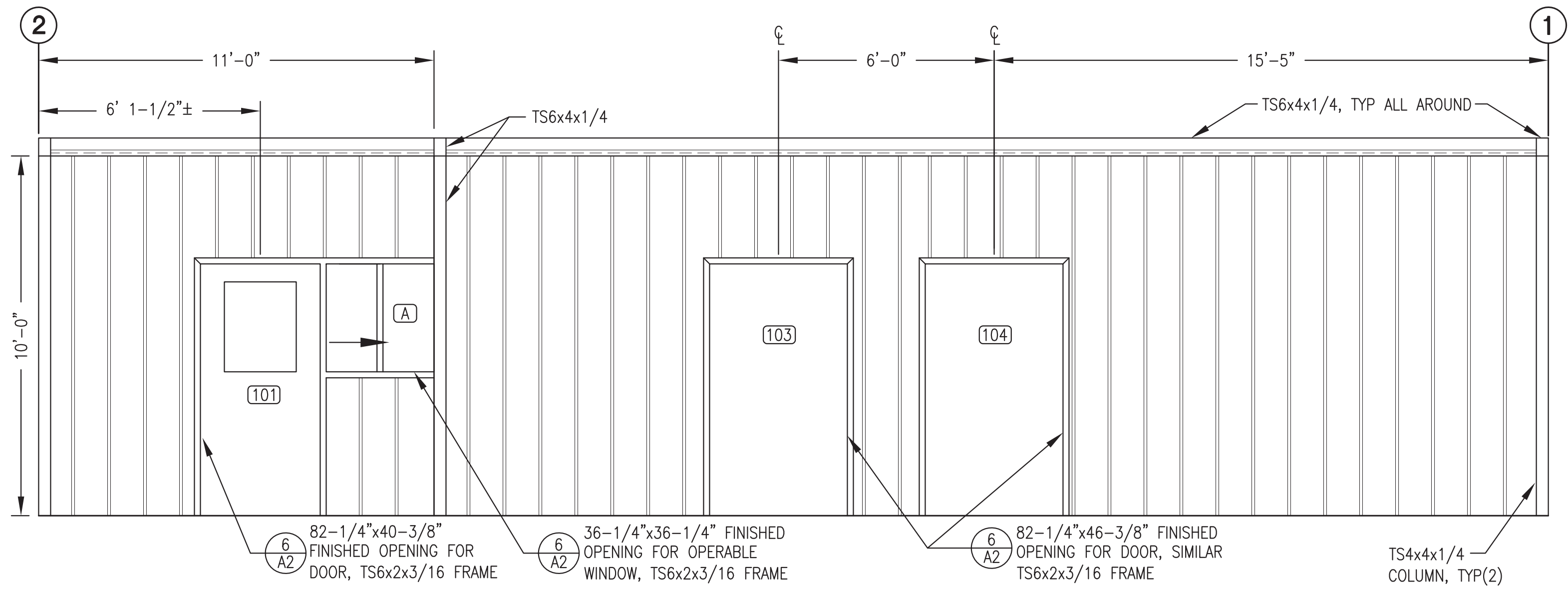
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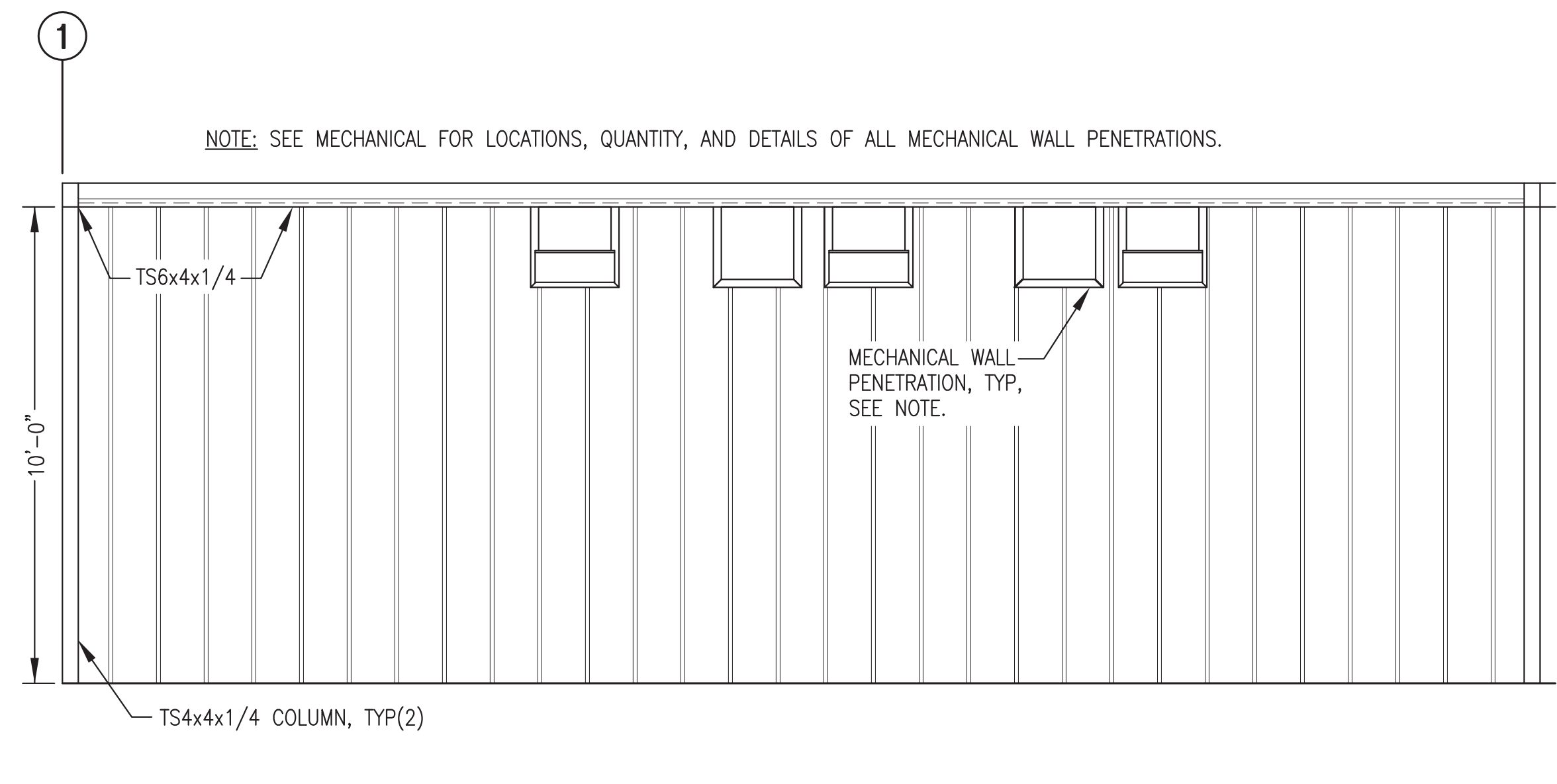
ALASKA ENERGY AUTHORITY

PROJECT:	PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE	
TITLE:	FLOOR PLAN, REFLECTED CEILING PLAN, CODE ANALYSIS, & GENERAL NOTES	
DRAWN BY:	JTD	SCALE: AS NOTED
DESIGNED BY:	BCG/DGT	DATE: 10/16/18
FILE NAME:	PTH PPU A1-4	SHEET: A1 OF 4
PROJECT NUMBER:		

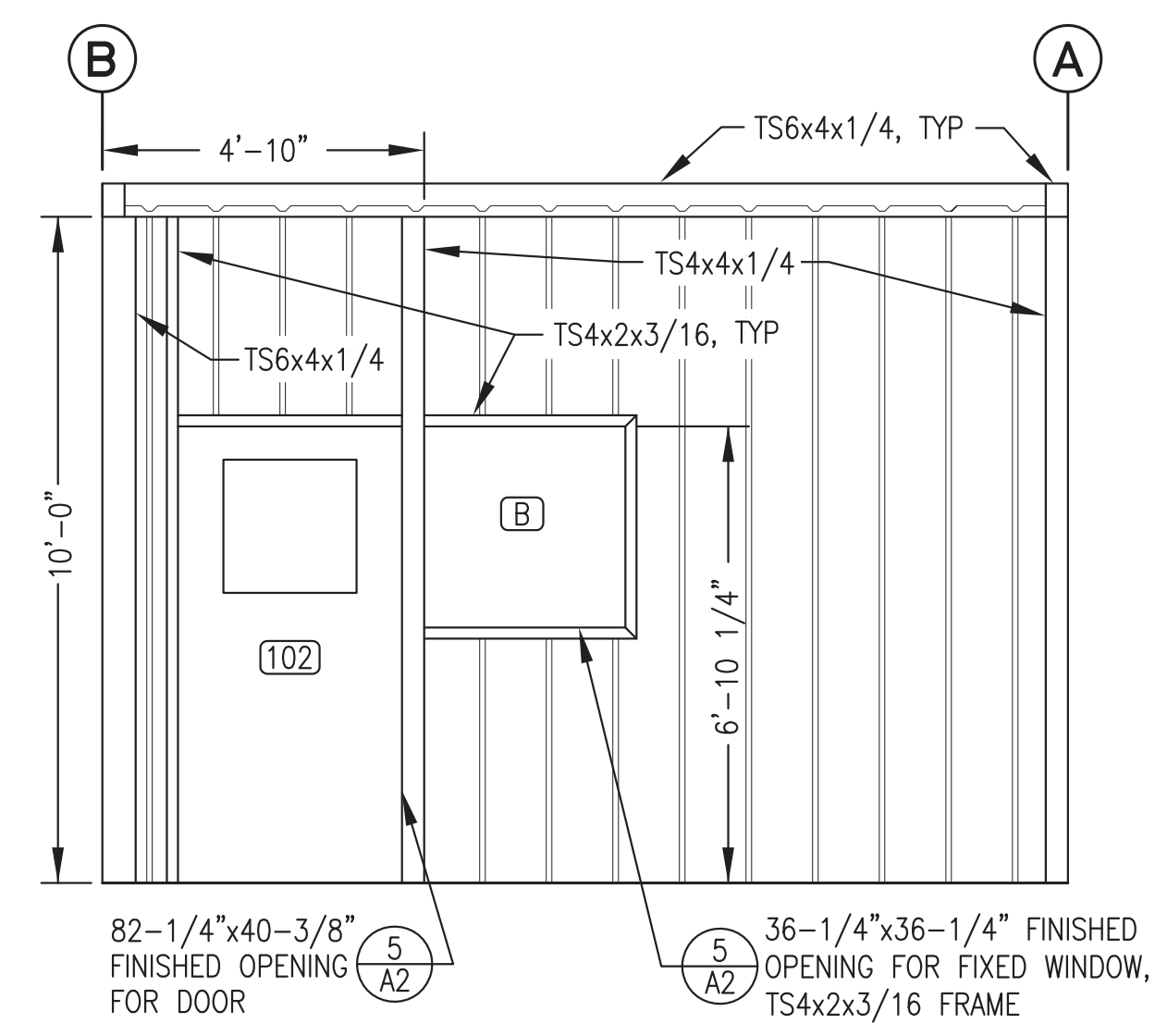




1 FRONT WALL INTERIOR ELEVATION  
A2 3/8"=1'-0"



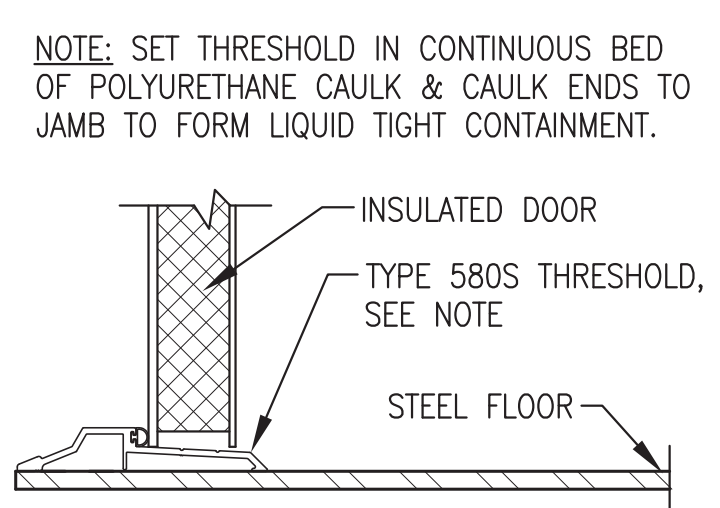
2 PARTIAL GENERATOR ROOM BACK WALL INTERIOR ELEVATION  
A2 3/8"=1'-0"



3 CONTROL ROOM WALL INTERIOR ELEVATION  
A2 3/8"=1'-0"

**FRAMED OPENING NOTES:**

- FABRICATE FRAMED OPENINGS FOR DOORS, WINDOWS, ETC, WITH MITERED CORNERS AND FULL PENETRATION GROOVE WELDS. GRIND OUT INSIDE OF MITERED CORNERS TO PROVIDE FULL CLEAR OPENING.
- FABRICATE TO FINISHED INSIDE (CLEAR) DIMENSIONS INDICATED AND LOCATE TO INSIDE EDGE OR CENTERLINE AS INDICATED.



4 TYPICAL DOOR THRESHOLD  
A2 NO SCALE

DOOR CONSTRUCTION						FRAME CONSTRUCTION									
DOOR NO.	WIDTH	HEIGHT	THICKNESS	MATERIAL	CORE	REMARKS	WALL THICK.	MATERIAL	TYPE	PROFILE	PREP.	FIRE RATING	HW-1	HW-2	HW-3
101	3'-0"	6'-8"	1-3/4"	16 GA. H.M.	POLYURETHANE	24"x24" RE-LIGHT {4}	N/A	16 GA. H.M.	WELDED	SINGLE RABBETED	DIMPLE & PUNCH	NONE	HW-1		
102	3'-0"	6'-8"	1-3/4"	16 GA. H.M.	POLYURETHANE	24"x24" RE-LIGHT {4}	N/A	16 GA. H.M.	WELDED	SINGLE RABBETED	DIMPLE & PUNCH	NONE	HW-2		
103	3'-6"	6'-8"	1-3/4"	16 GA. H.M.	POLYURETHANE		N/A	16 GA. H.M.	WELDED	SINGLE RABBETED	DIMPLE & PUNCH	NONE	HW-3		
104	3'-6"	6'-8"	1-3/4"	16 GA. H.M.	POLYURETHANE		N/A	16 GA. H.M.	WELDED	SINGLE RABBETED	DIMPLE & PUNCH	NONE	HW-3		
105	3'-0"	6'-8"	1-3/4"	16 GA. H.M.	POLYURETHANE	24"x24" RE-LIGHT {4}	N/A	16 GA. H.M.	WELDED	SINGLE RABBETED	DIMPLE & PUNCH	NONE	HW-1		

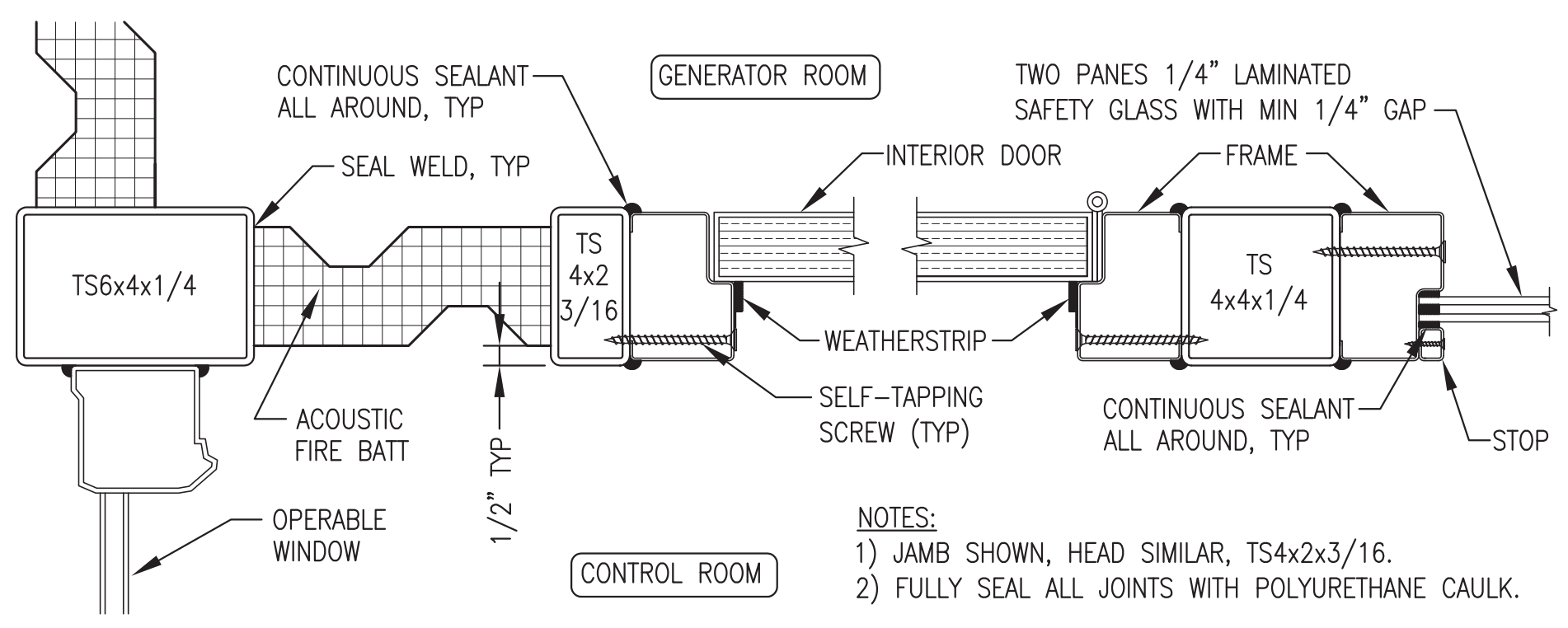
  

DOOR HARDWARE:				DOOR FRAME PROFILE:			
<b>HW-1</b>	3 EA	HINGES	HAGER BB1191 4.5 x 4.5NRP x 630	<b>HW-3</b>	3 EA	HINGES	HAGER BB1191 4.5 x 4.5NRP x 630
	1 EA	EXIT DEVICE	PRECISION 2108 x 4908AX3 x 630		1 EA	EXIT LOCK	SCHLAGE ND25D x RHODES x 626
	1 EA	CORE	BEST BROWN CONSTRUCTION CORE		1 EA	OVERHEAD STOP	ROCKWOOD OH1004M x US32D
	1 EA	DOOR CLOSER	LCN 4040 x CUSH x 689		1 EA	WEATHER STRIP	PEMCO 2891AS x 42 (HEAD)
	1 EA	KICK PLATE	ROCKWOOD K1050 10 x 34 x 630		2 EA	WEATHER STRIP	PEMCO 290AS x 80 (SIDE JAMBS)
	1 EA	WEATHER STRIP	PEMCO 2891AS x 36 (HEAD)		1 EA	THRESHOLD	HAGER 580S x 42
	2 EA	WEATHER STRIP	PEMCO 290AS x 80 (SIDE JAMBS)				
	1 EA	THRESHOLD	HAGER 580S x 36				
<b>HW-2</b>	3 EA	HINGES	HAGER BB1191 4.5 x 4.5 x 630				
	1 EA	EXIT DEVICE	PRECISION 2108 x 4908AX3 x 630				
	1 EA	DOOR CLOSER	LCN 4040 x CUSH x 689				
	1 EA	KICK PLATE	ROCKWOOD K1050 10 x 34 x 630				
	1 EA	MOP PLATE	ROCKWOOD K1050 10 x 35 x 630				
	1 EA	SOUND SEAL	PEMCO 2891AS x 36 (HEAD)				
	2 EA	SOUND SEAL	PEMCO 290AS x 80 (SIDE JAMBS)				
	1 EA	THRESHOLD	HAGER 580S x 36				

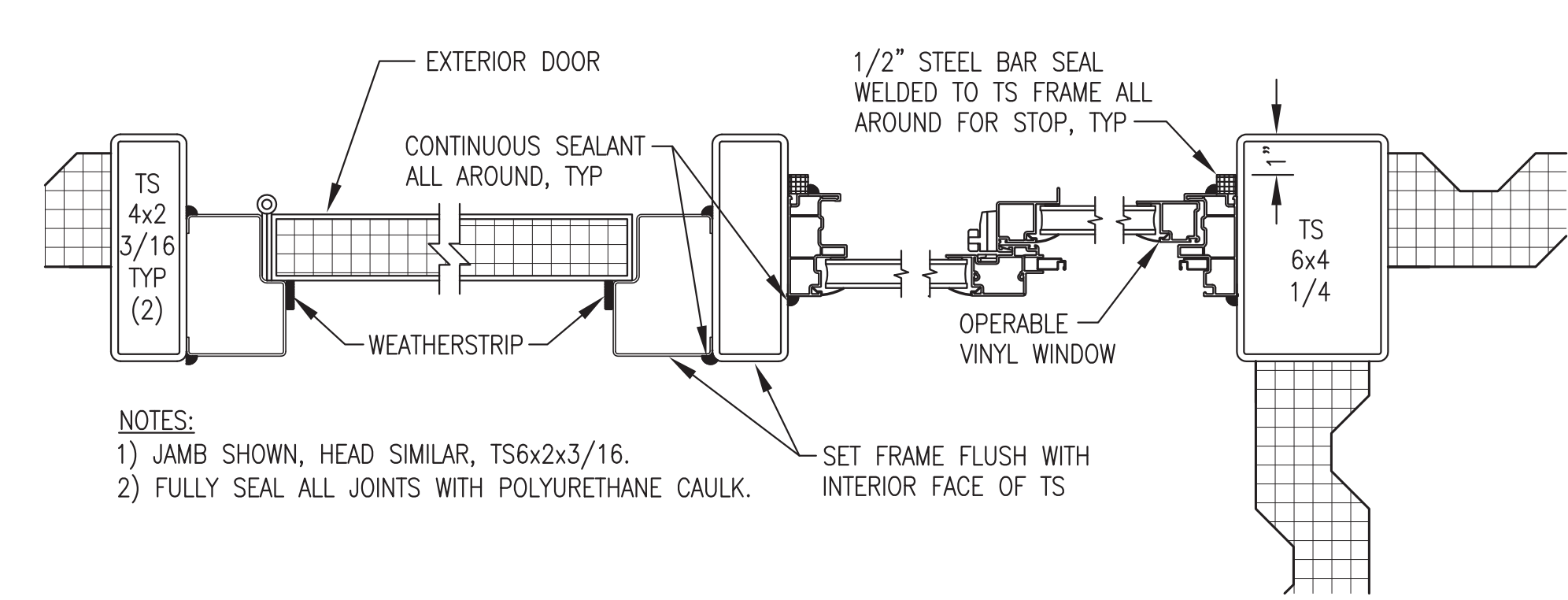
  

**NOTES:**

- DOORS AND HOLLOW METAL FRAMES GALVANIZED AND FACTORY PRIMED. ALL FRAMES WELDED CONSTRUCTION, DIMPLED AND PUNCHED.
- DOORS TO HAVE SOLID POLYURETHANE INSULATION CORE WITH TOPS INVERTED AND CAULKED WATER TIGHT.
- FINISH ALL DOORS AND HOLLOW METAL FRAMES WITH TWO COATS OF SHERWIN WILLIAMS MACROPOXY 646, NO SUBSTITUTES, COLOR STRUCTURAL GRAY 4031.
- INSTALL INSULATED RE-LIGHT WITH TWO PANES OF 1/4" LAMINATED SAFETY GLASS WITH 1/2" AIR GAP IN EACH DOOR PANEL, 24"x24" OR 24"x18" AS INDICATED.



5 INTERIOR DOOR AND WINDOW JAMB/HEAD  
A2 3/8"=1'-0"



6 TYPICAL EXTERIOR DOOR AND WINDOW JAMB/HEAD  
A2 3/8"=1'-0"

Note: Doors and windows not part of module scope, see exclusions.

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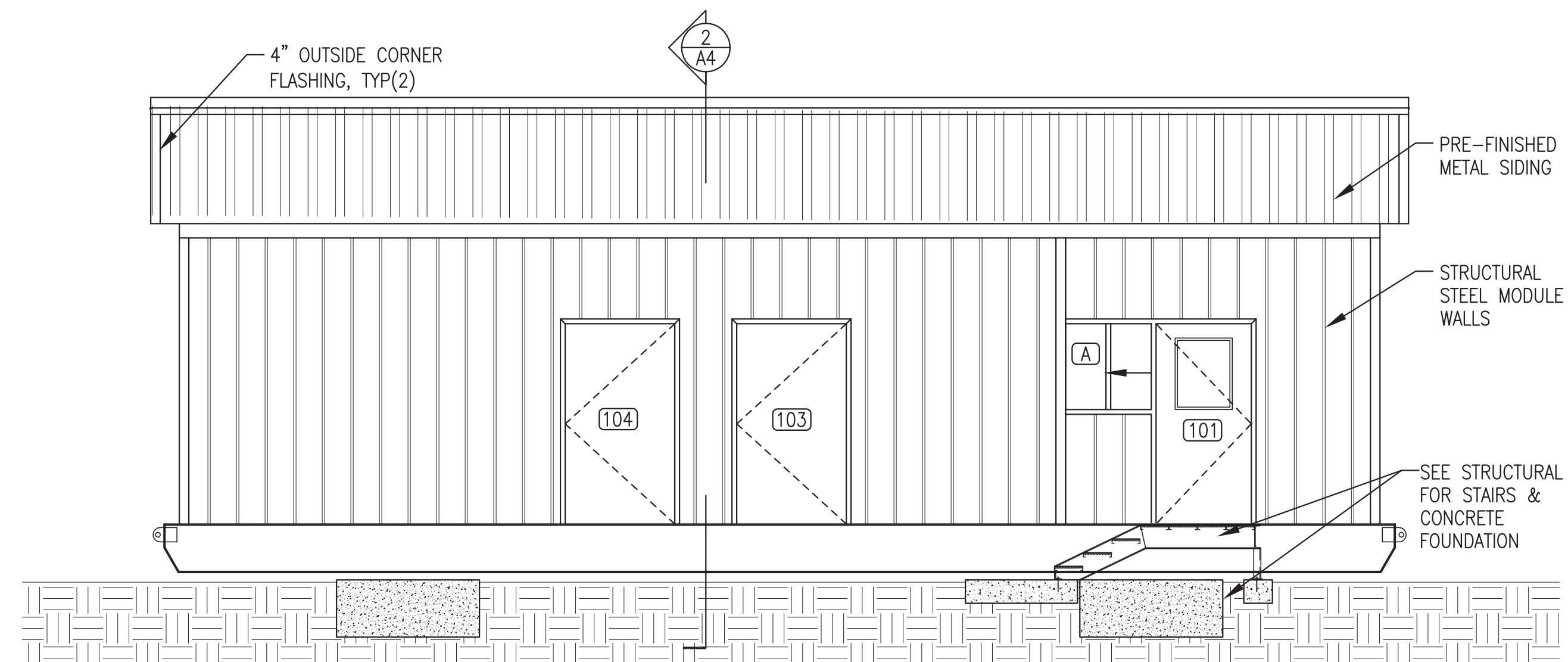
PROJECT: PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE

TITLE: INTERIOR ELEVATIONS & DOOR/WINDOW DETAILS

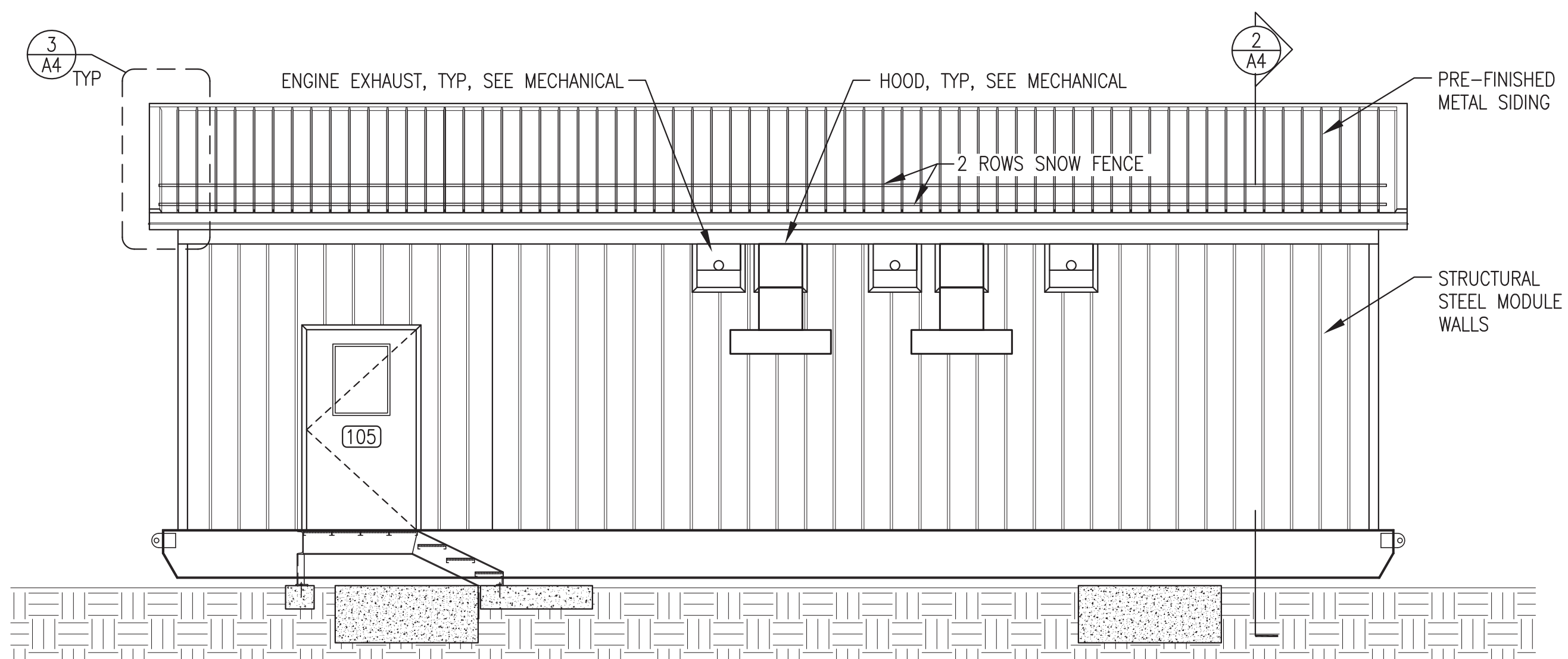
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DRAWN BY: JTD  
DESIGNED BY: BCG/DGT  
FILE NAME: PTH PPU A1-4  
PROJECT NUMBER:

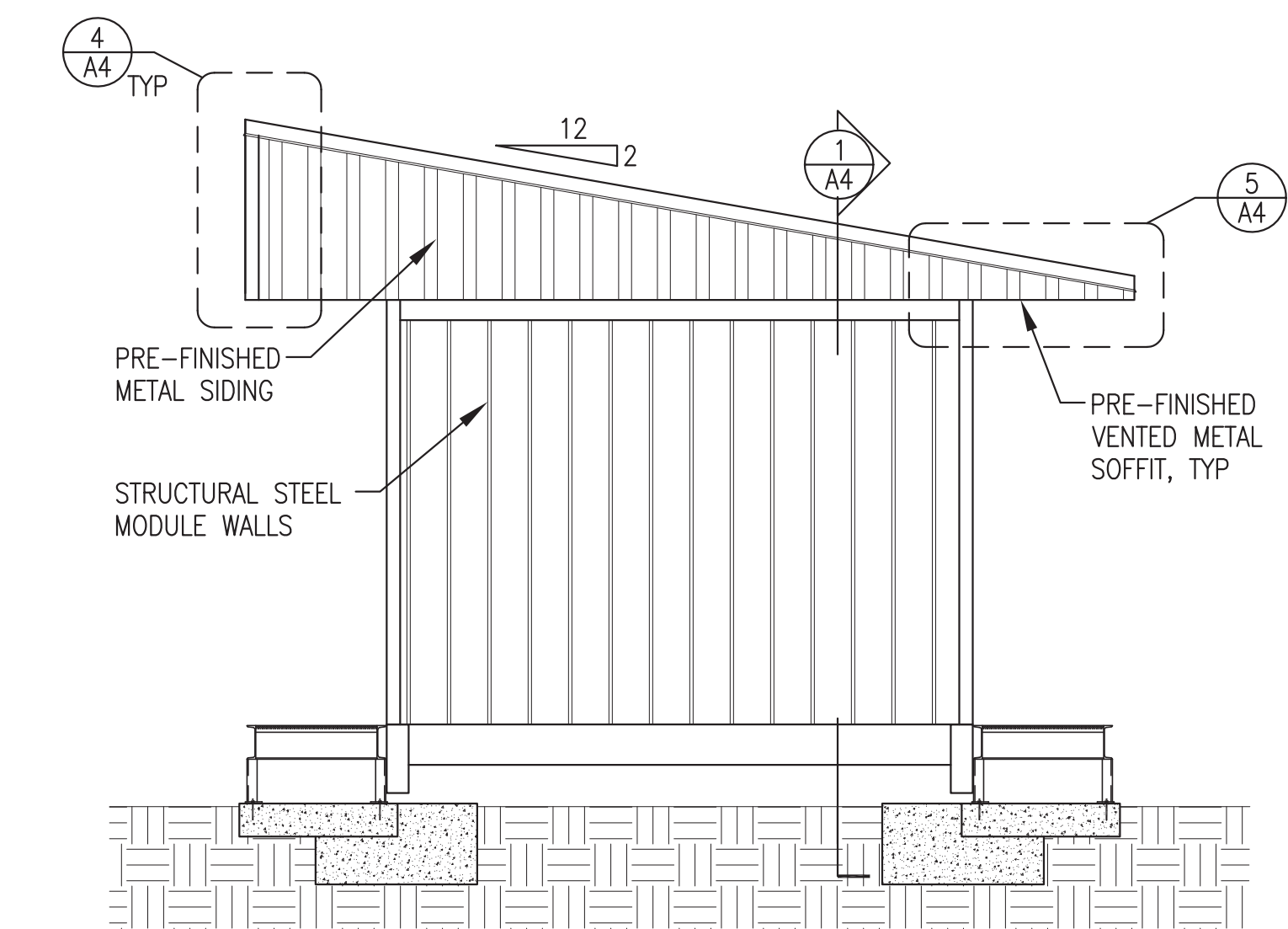
SCALE: AS NOTED  
DATE: 10/16/18  
SHEET: A2 OF 4



**1 FRONT EXTERIOR ELEVATION**  
1/4"=1'-0"



**2 BACK EXTERIOR ELEVATION**  
1/4"=1'-0"

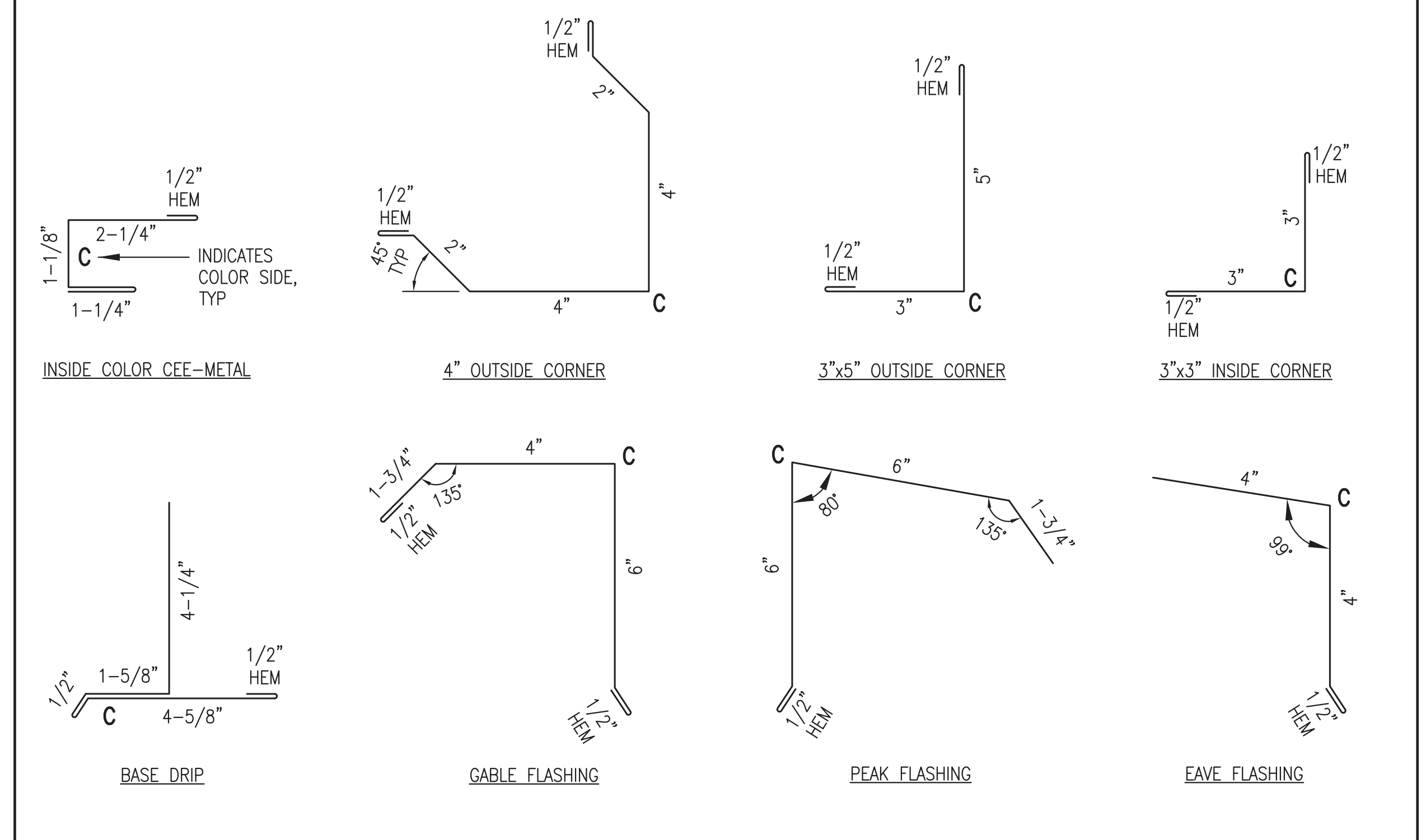


**3 END EXTERIOR ELEVATION**  
1/4"=1'-0"

**ROOFING SYSTEM NOTES:**

- 1) FIELD INSTALL TRUSSES TO MODULE STRUCTURE, SEE STRUCTURAL. FIELD INSTALL PLYWOOD SHEATHING, ICE AND WATER SHIELD, AND METAL ROOFING/SIDING AS INDICATED. SEAL AND FLASH ALL SEAMS TO FORM A CONTINUOUS WEATHERPROOF SEAL.
- 2) ALL ROOFING, SIDING, SOFFIT, TRIM, AND FLASHING SHALL BE MIN 24 GAUGE GALVANIZED STEEL WITH KYNAR FINISH, COLOR JADE GREEN. ALL FASTENERS SHALL BE CORROSION RESISTANT STAINLESS STEEL SCREWS AND ALUMINUM RIVETS.
- 3) ROOFING SHALL BE STANDING SEAM TYPE, 24 GAUGE, 16" NET COVERAGE, 1-5/8" HIGH RIBS AT 8" O.C. AEP SPAN KLIP-RIB OR EQUAL. FURNISH CLIPS AND FASTENERS AS REQUIRED TO MEET LOAD CONDITIONS INDICATED ON SHEET S1.
- 4) SIDING SHALL BE LOW PROFILE, 24 GAUGE, 36" NET COVERAGE, 1-1/4" HIGH MAJOR RIBS AND 1/4" HIGH MINOR RIBS AT 12" O.C. AEP SPAN SUPER-SPAN OR EQUAL. FURNISH FASTENERS AS REQUIRED TO MEET LOAD CONDITIONS INDICATED ON SHEET S1.1.
- 5) VENTED SOFFIT PANELS SHALL BE 24 GAUGE GALVANIZED STEEL, 12" NET COVERAGE, KYNAR FINISH, 1" STANDOFF FROM SUBSTRATE, CONCEALED FASTENERS, WITH TWO PENCIL RIBS PROVIDING MINIMUM 7.8% NET FREE AREA. AEP SPAN FLUSH PANEL OR EQUAL.

**ROOFING SYSTEM TRIM & FLASHING:**



**SNOW FENCE SPECIFICATIONS:**

- 1) PROVIDE 2 ROWS OF SNOW RETENTION FENCE AS INDICATED.
- 2) SNOW FENCE SHALL BE L.M. CURBS COLOR GUARD OR APPROVED EQUAL. FURNISH COMPLETE SYSTEM INCLUDING UNPUNCHED COLOR GUARD, SPLICES, VERSA CLIPS, SNO CLIPS III, S5 KHD CLAMPS, 6" INSERTS, AND ALL REQUIRED FASTENERS.

**Note: Roof system not part of module scope, see exclusions.**

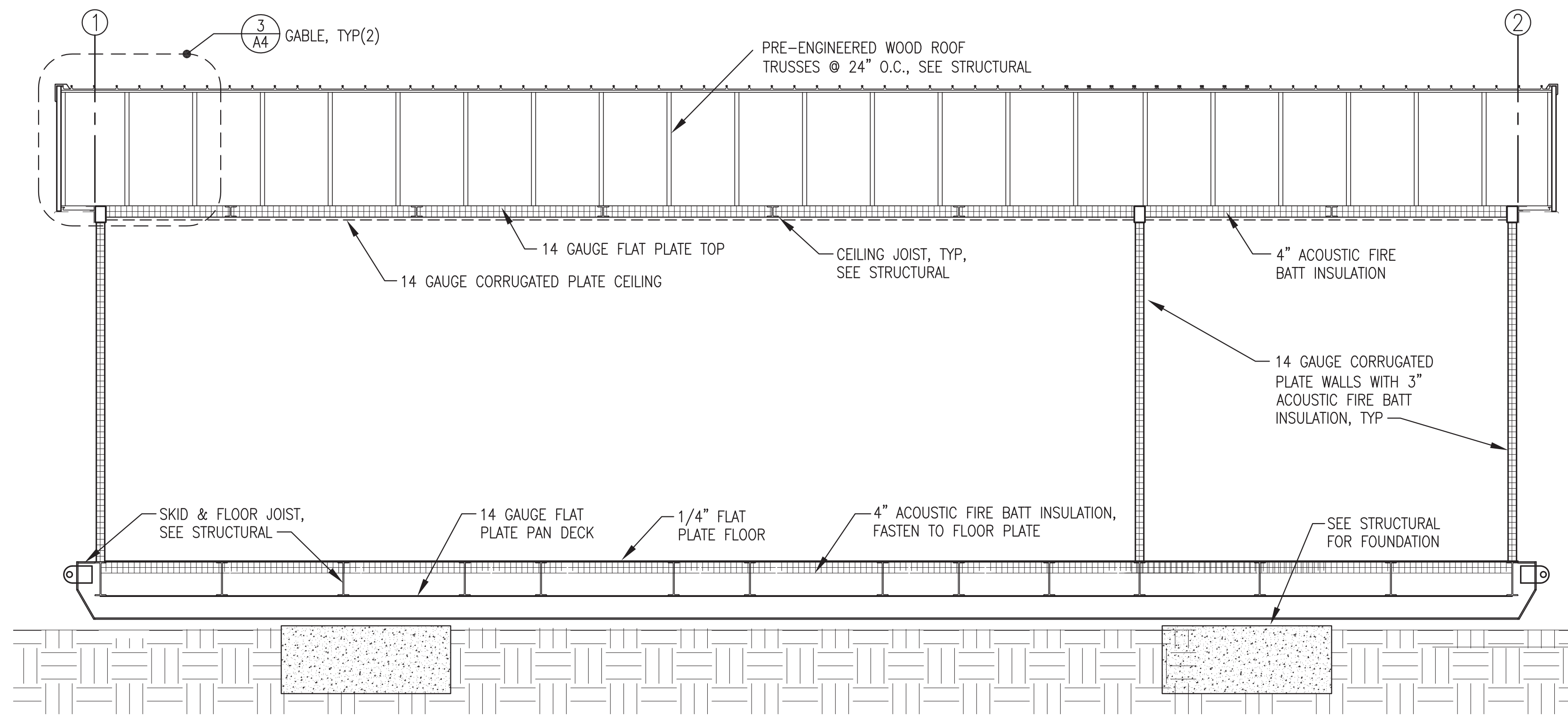
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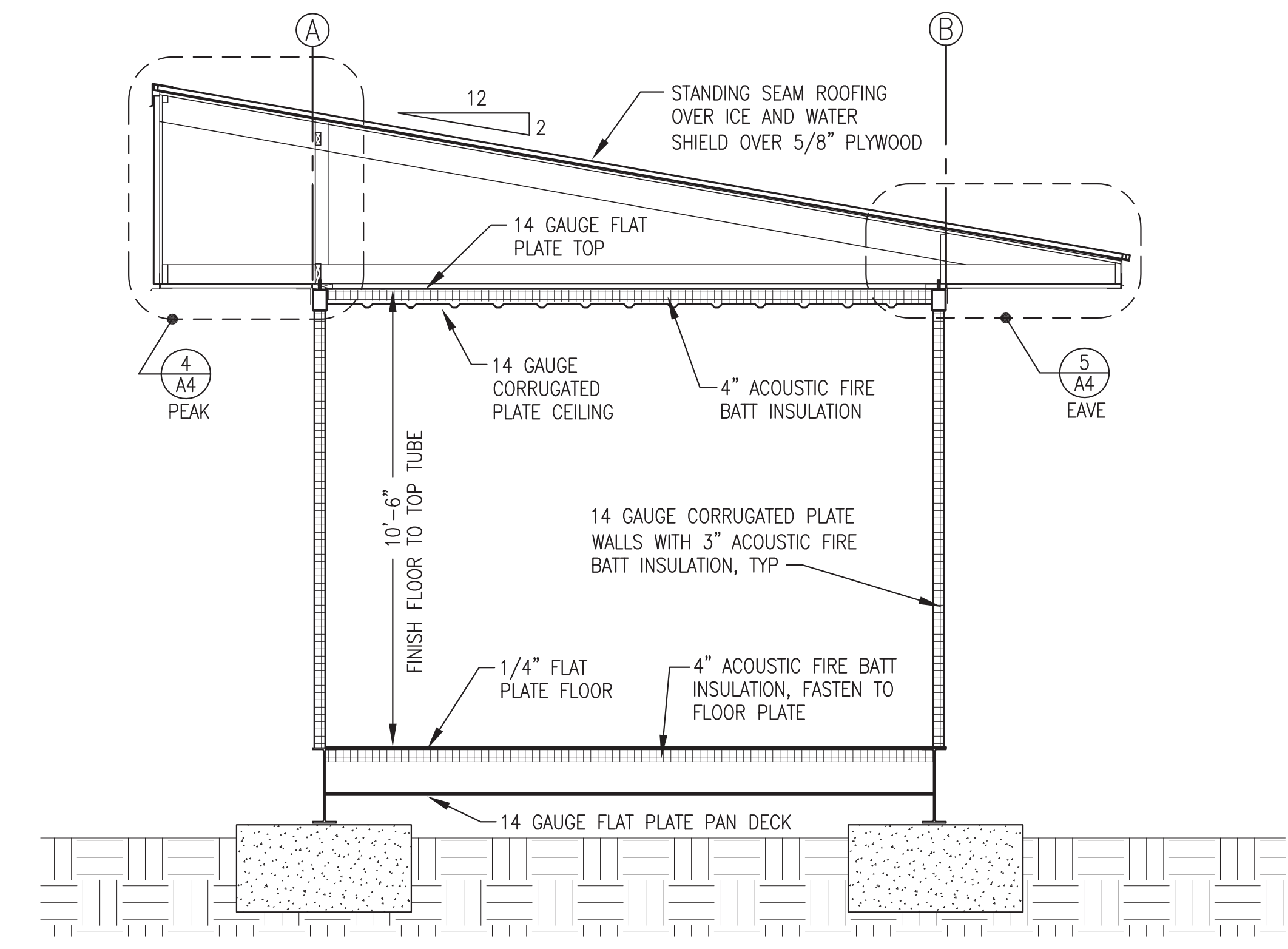
ALASKA ENERGY AUTHORITY

PROJECT:	PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE	
TITLE:	EXTERIOR ELEVATIONS & ROOFING NOTES/TRIM	
DRAWN BY:	JTD	SCALE: AS NOTED
DESIGNED BY:	BCG/DGT	DATE: 10/16/18
FILE NAME:	PTH_PPU_A1-4	SHEET:
PROJECT NUMBER:		<b>A3</b> OF 4

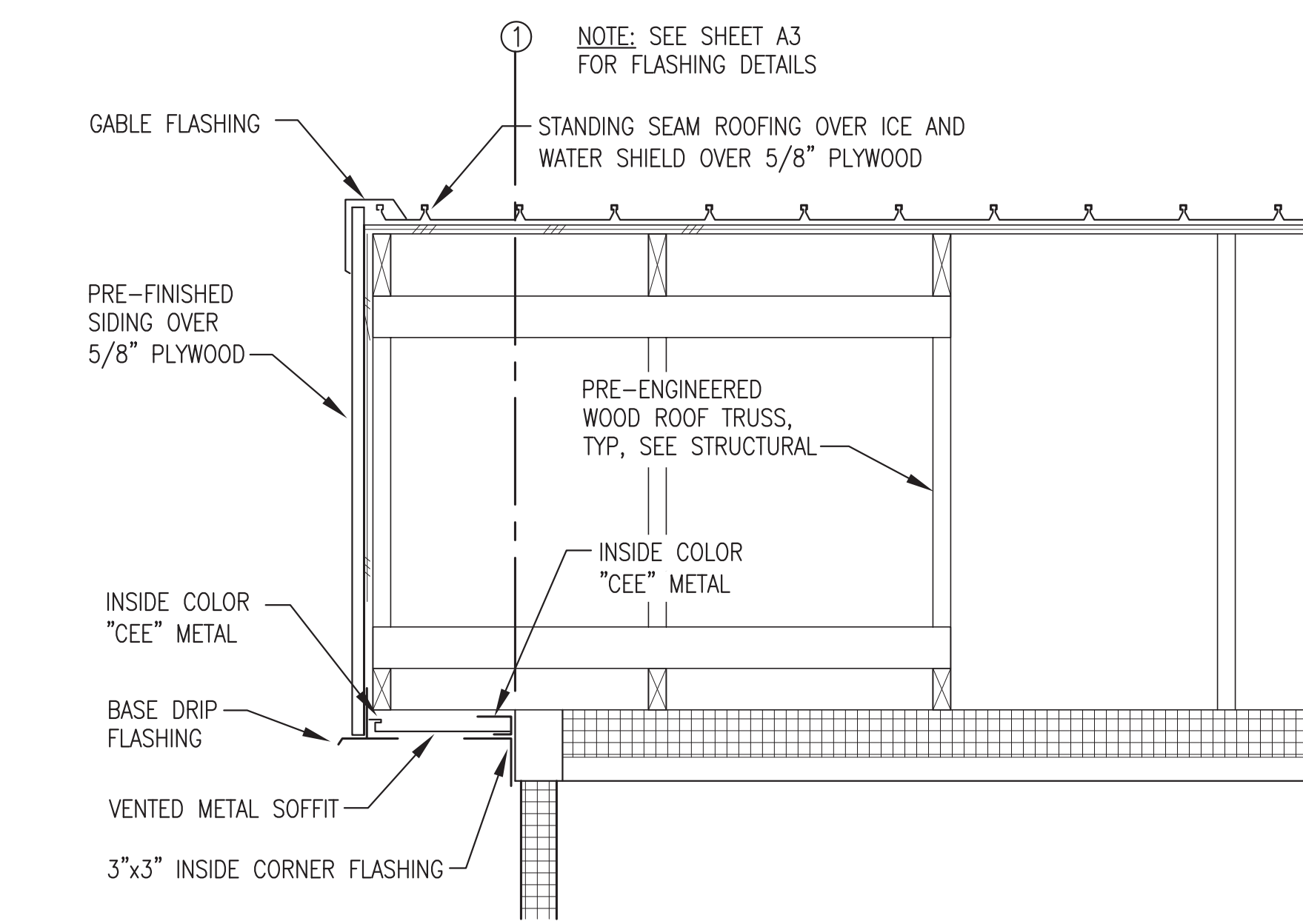
**Gray Stassel Engineering, Inc.**  
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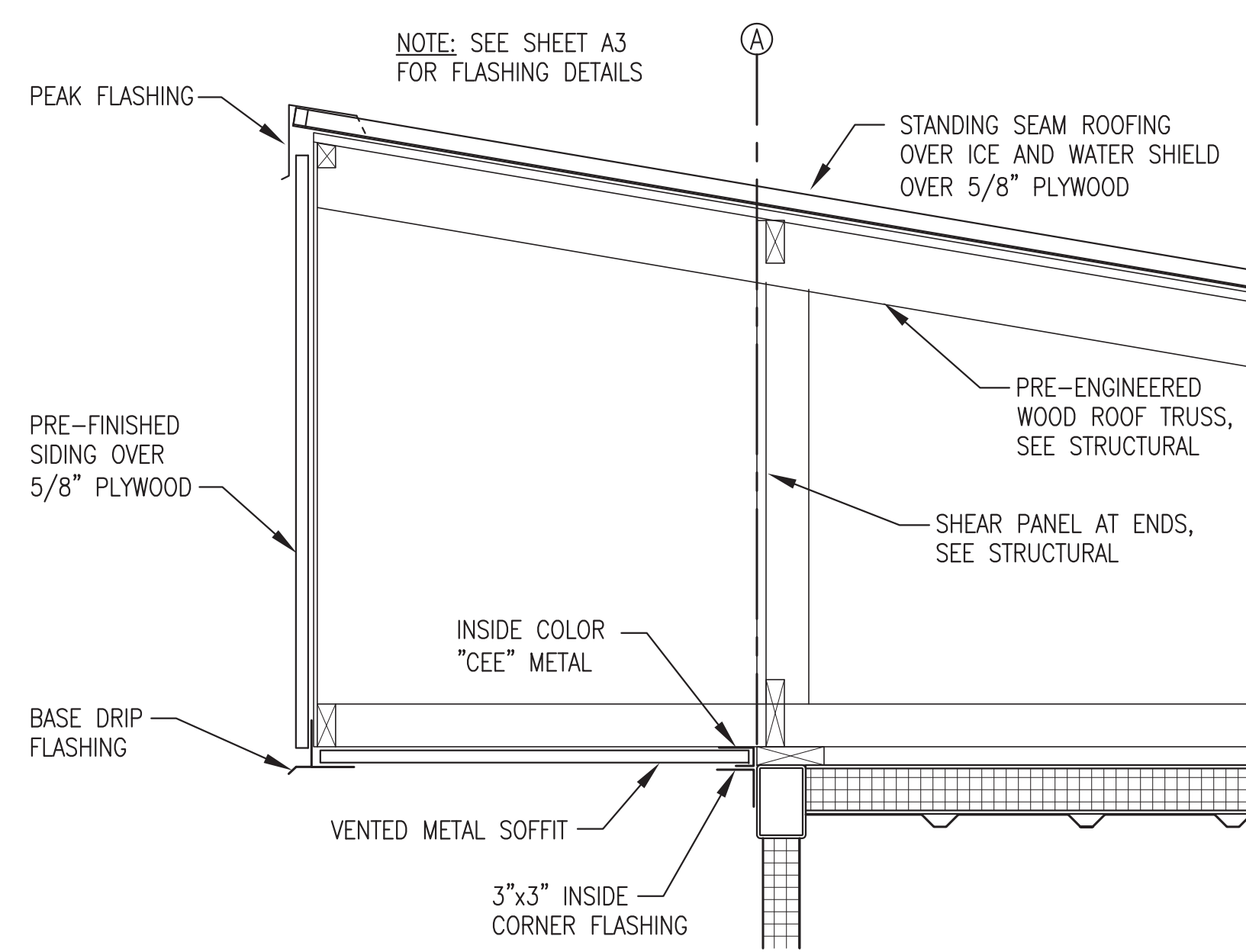
**1** BUILDING SECTION  
A4 3/8"=1'-0"



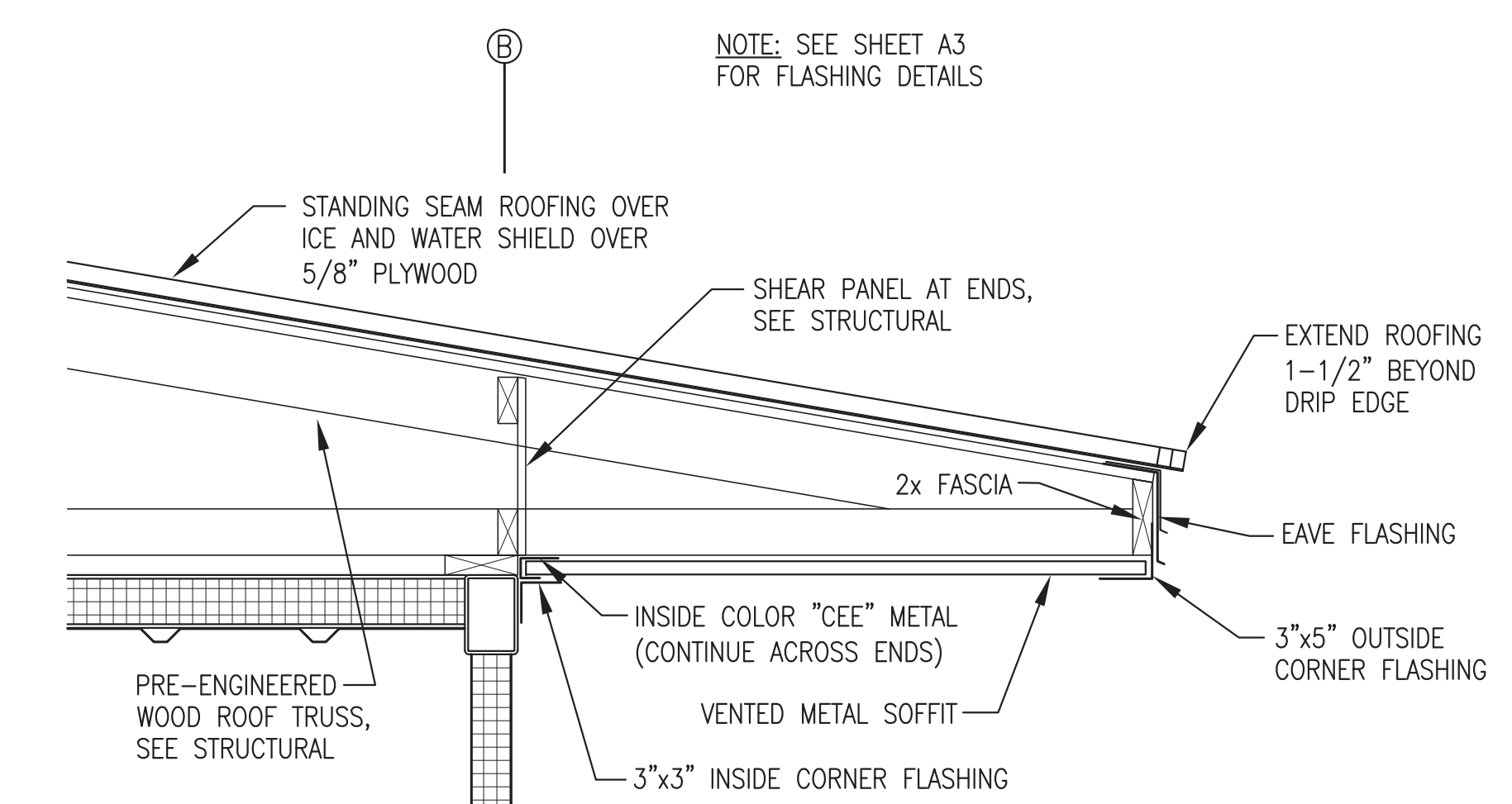
**2** BUILDING SECTION  
A4 3/8"=1'-0"



**3** GABLE DETAIL  
A4 1"=1'-0"



**4** PEAK DETAIL  
A4 1"=1'-0"





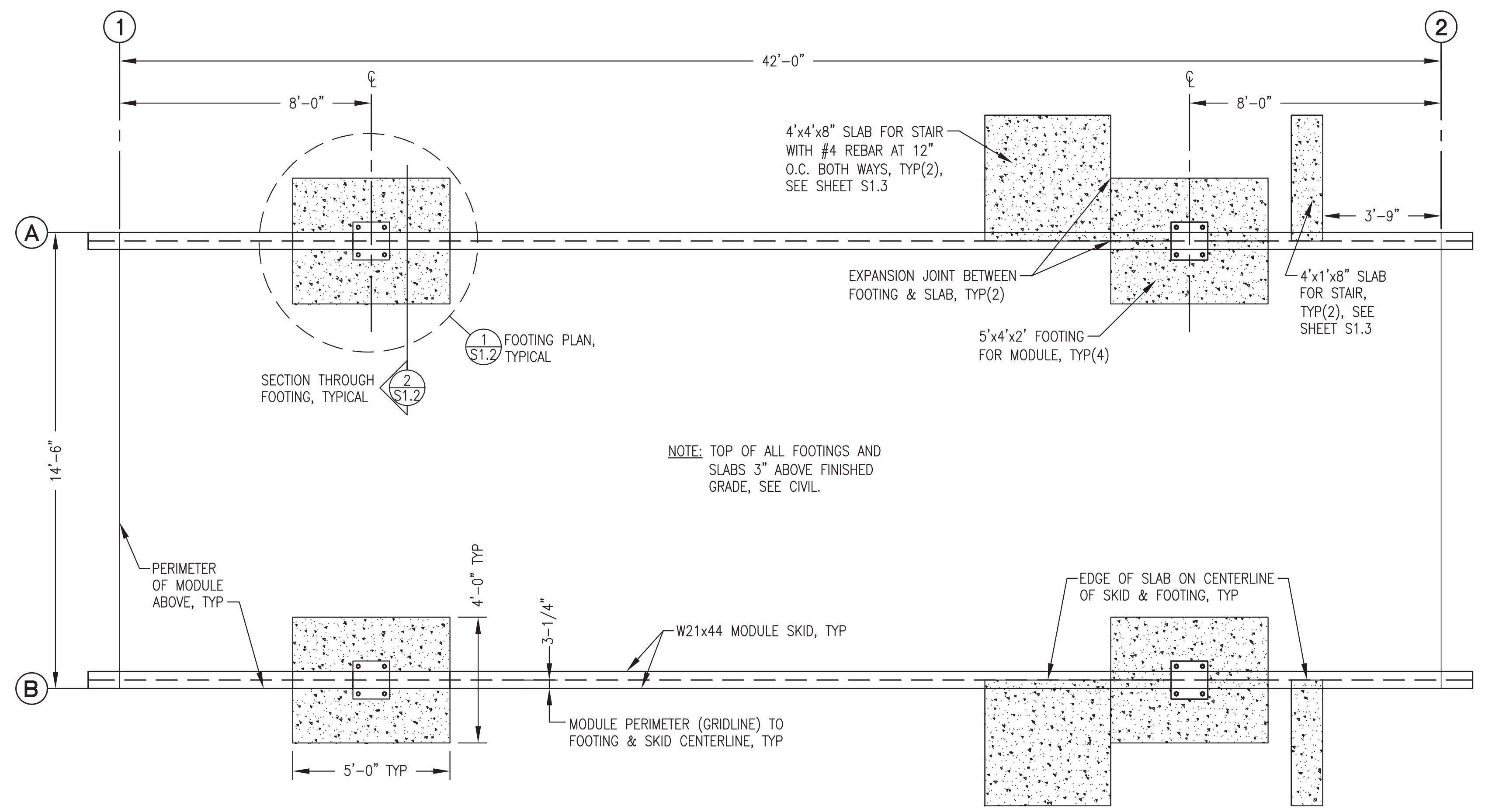
**5** EAVE DETAIL  
A4 1"=1'-0"

Note: Roof system not part of module scope, see exclusions.

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PROJECT: PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE		
TITLE: BUILDING SECTIONS & DETAILS		
 Gray Stassel Engineering, Inc. P.O. 111405, Anchorage, AK 99511 (907)349-0100	DRAWN BY: JTD DESIGNED BY: BCG/DGT FILE NAME: PTH PPU A1-4 PROJECT NUMBER:	SCALE: AS NOTED DATE: 10/16/18 SHEET: A4 OF 4



**1**  
**S1** FOUNDATION PLAN  
3/8"=1'-0"

**STRUCTURAL GENERAL NOTES:**

**1.0 DESIGN LOADS:**

A. BUILDING CODE: 2012 INTERNATIONAL BUILDING CODE (IBC 2009)

B. FLOOR LIVE LOADS: (IBC TABLE 1607.1)  
LIGHT STORAGE/MANUFACTURING 125 PSF OR 2000 POUND POINT LOAD  
MAXIMUM GENERATOR UNIT WEIGHT 6,000 POUNDS

C. SNOW LOADS: (ASCE 7-10)  
GROUND SNOW LOAD,  $P_g$  = 40 PSF  
COEFFICIENT OF EXPOSURE,  $C_e$  = 1.0 PARTIALLY EXPOSED  
SNOW IMPORTANCE FACTOR,  $I_s$  = 1.2 CATEGORY IV  
THERMAL COEFFICIENT,  $C_t$  = 1.2 COLD, VENTILATED ROOF  
ROOF/FLAT SNOW LOAD,  $P_f$  = 40 PSF

D. WIND LOADS:  
BASIC WIND SPEED = 160 MPH, 3 SECOND GUST  
RISK CATEGORY = CATEGORY IV  
EXPOSURE CLASSIFICATION = EXPOSURE D

E. SEISMIC LOADING:  
SEISMIC =  $S_s = 1.0$   $S_1 = 0.50$   
SEISMIC IMPORTANCE FACTOR = 1.50, CATEGORY IV  
SITE CLASS = "D"  
BASIC SEISMIC FORCE RESISTANCE SYSTEM = BUILDING - BEARING WALL WITH STEEL SHEAR PANELS  
FOUNDATION - SPREAD CONCRETE FOOTINGS  
SEISMIC RESPONSE COEFFICIENT,  $R$  = 7.0

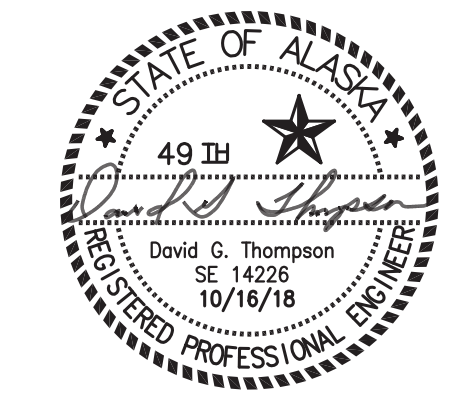
**2.0 FOUNDATIONS:**  
A. SEE CIVIL FOR NFS STRUCTURAL GRAVEL PAD.  
B. PROVIDE REINFORCED CONCRETE FOUNDATIONS IN ACCORDANCE WITH SPECIFICATIONS AND AS DETAILED ON SHEET S1.2.

**3.0 STRUCTURAL STEEL:**  
A. THE DESIGN, FABRICATION, AND ERECTION OF ALL STRUCTURAL STEEL SHALL COMPLY WITH THE CODE OF STANDARD PRACTICE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.  
B. ALL STEEL PLATE, SHAPES, AND ROLLED SECTIONS SHALL BE ASTM A36. ALL STEEL TUBING SHALL BE ASTM A500, GRADE B.  
C. ALL METAL TO METAL CONNECTIONS SHALL BE EQUAL TO STANDARD CONNECTION, OR AS DETAILED USING A325 BOLTS (BEARING TYPE CONNECTIONS). TIGHTEN HIGH STRENGTH BOLTS WITH PROPERLY CALIBRATED WRENCHES, BY TURN-OF-THE-NUT METHOD, OR BY LOAD WASHERS. ALL CONNECTIONS UNLESS OTHERWISE DETAILED, SHALL HAVE THE MAXIMUM NUMBER OF 3/4" DIAMETER BOLTS USING STANDARD GAUGES AND CLEARANCES.  
D. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH THE CURRENT CODE OF THE AMERICAN WELDING SOCIETY. USE AWS 5.1 E70XX ELECTRODES. MINIMUM FILLET WELD SHALL BE 3/16" EXCEPT FOR SEAL WELDS TO GAUGE METAL AS INDICATED.  
E. ALL EXPOSED STEEL SURFACES SHALL BE PREPARED AND PAINTED AS INDICATED IN THE ARCHITECTURAL DRAWINGS.

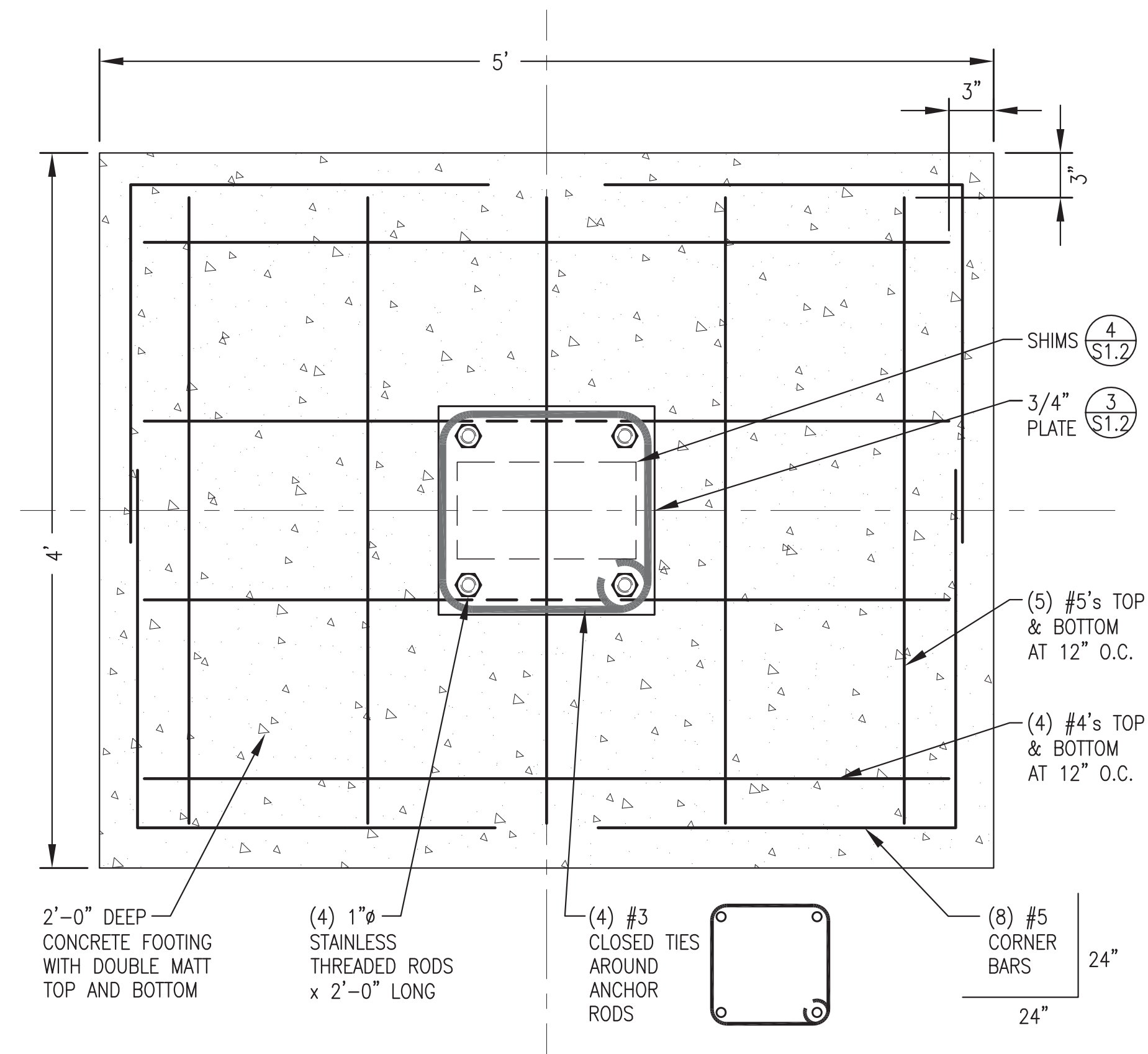
**4.0 WOOD:**  
A. 5/8" PLYWOOD SHALL HAVE A PANEL SPAN RATING OF 32/16 - MINIMUM NAILING FOR PANELS, UNLESS OTHERWISE NOTED, SHALL EQUAL 10d NAILS AT 4" CENTERS AROUND PLYWOOD PANEL EDGES AND 10d'S @ 12" CENTERS ALONG INTERMEDIATE FRAMING. BLOCK ALL DIAPHRAGM PANEL EDGES WITH 2X4 FLAT BLOCKING. OSB PANELS WILL NOT BE ACCEPTED.  
B. FRAMING MATERIAL: DOUGLAS FIR OR HEM FIR, NO. 2 OR BETTER MINIMUM FOR JOISTS, STUDS, PANEL JOINTS, WOOD PLATES, BLOCKING, AND HEADERS. MAXIMUM MOISTURE CONTENT SHALL BE 19%. FOR FRAMING SPECIFICALLY INDICATED AS TREATED PROVIDE LUMBER TREATED FOR GROUND CONTACT TO 0.4 RETENTION MINIMUM.  
C. ALL METAL TO WOOD OR WOOD TO WOOD CONNECTIONS SHALL BE STANDARD OR AS DETAILED ON THE DRAWINGS. ALL FASTENERS SHALL BE GALVANIZED OR STAINLESS STEEL.  
D. ALL METAL FRAMING ANCHORS AND SPLICE PLATES SHALL BE FABRICATED FROM GALVANIZED STEEL AND SHALL SUPPORT THE LOADS INDICATED ON THE DRAWINGS. ANCHORS INDICATED ON THE DRAWINGS ARE "SIMPSON COMPANY" OR EQUAL.  
E. MINIMUM NAILING SHALL EQUAL THAT INDICATED IN 2012 IBC TABLE 2304.9.1 UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS. MINIMUM NAILING FOR EXTERIOR PLYWOOD PANELS SHALL EQUAL 10d NAILS AT 4" CENTERS AROUND PLYWOOD PANEL EDGES AND 10d'S @ 12" CENTERS ALONG INTERMEDIATE FRAMING. BLOCK ALL DIAPHRAGM PANEL EDGES WITH 2x4 OR 2x6 BLOCKING.  
F. ERECT WOOD FRAMING MEMBERS TRUE TO LINES AND LEVELS. DO NOT DEVIATE FROM TRUE ALIGNMENT MORE THAN 1/4 INCH.  
G. PREMANUFACTURED ROOF TRUSSES: ALL PRE-MANUFACTURED WOOD TRUSSES SHALL BE "GANG NAIL" OR EQUAL AND SHALL BE FABRICATED WITH GALVANIZED PLATES AND FASTENERS AS INDICATED ABOVE. TRUSSES SHALL BE DESIGNED FOR THE GRAVITY LOADS, WIND & SEISMIC LATERAL & UPLIFT LOADS, AND SUPPORT CONDITIONS AS INDICATED ON THE DRAWINGS. NO DURATION OF LOAD INCREASE IN STRESSES WILL BE ALLOWED FOR SNOW LOADING. UNBALANCED SNOW AND DRIFT LOADING IS REQUIRED. SUBMIT TRUSS DESIGNS STAMPED BY AN ENGINEER LICENSED TO PRACTICE IN THE STATE OF ALASKA. TRUSS DRAWINGS SHALL INDICATE ALL MATERIALS OF CONSTRUCTION.

Note: Foundation system not part of module scope, see exclusions.

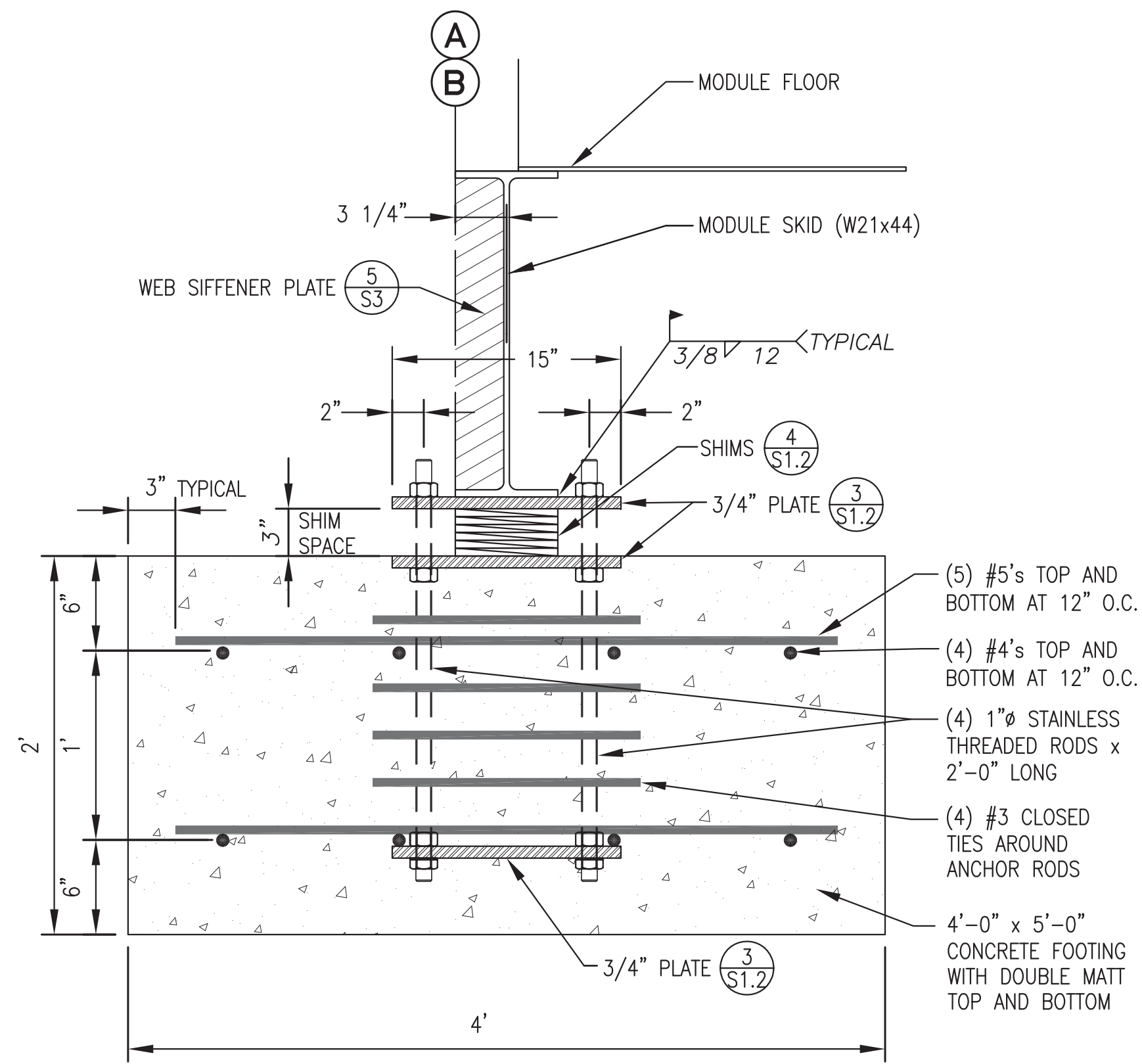
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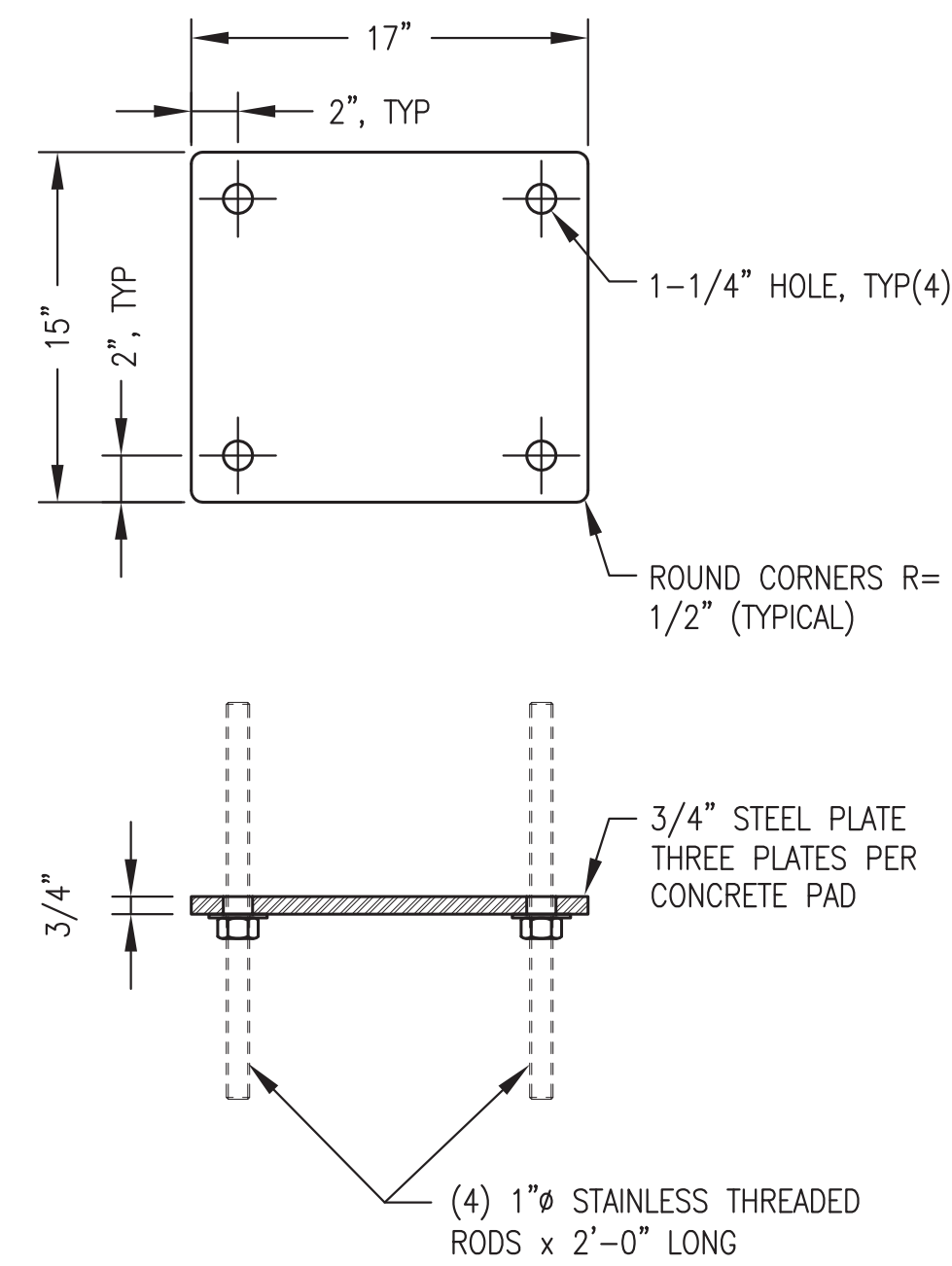
ALASKA ENERGY AUTHORITY		
PROJECT:	PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE	
TITLE:	FOUNDATION PLAN, CODE ANALYSIS, & STRUCTURAL NOTES	
DRAWN BY:	JTD	SCALE: AS NOTED
DESIGNED BY:	BCG/DGT	DATE: 10/16/18
FILE NAME:	PTH PPU S1-4	SHEET:
PROJECT NUMBER:		<b>S1.1</b> OF 4
P.O. 111405, Anchorage, AK 99511 (907)349-0100		



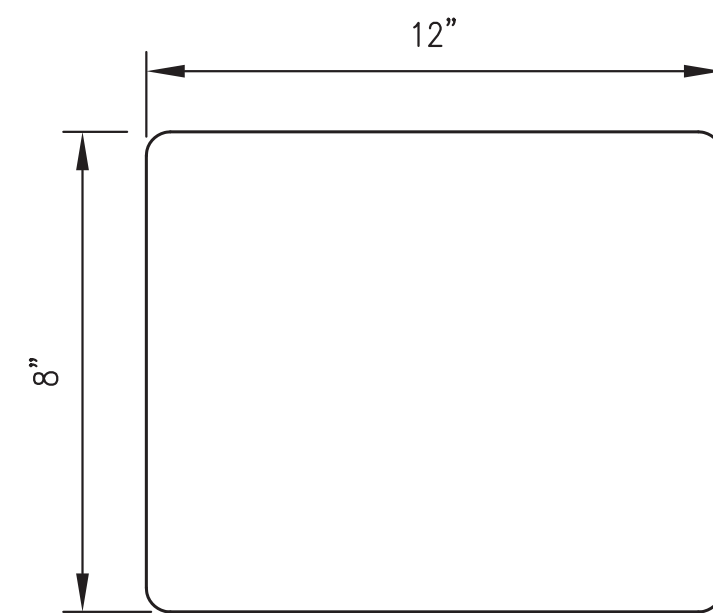
**1** FOOTING PLAN  
S1.2 1 1/2"=1'-0"



**2** SECTION THROUGH FOOTING  
S1.2 1 1/2"=1'-0"



**3** TYPICAL STEEL PLATE  
S1.2 NO SCALE

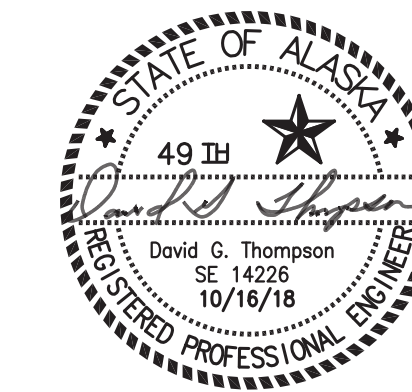


**4** TYPICAL SHIM  
S1.2 NO SCALE

SHIM FABRICATION TABLE		
THICKNESS	QUANTITY	MATERIAL
1/4"	16	ALUMINUM
1/2"	8	ALUMINUM
1"	4	ALUMINUM

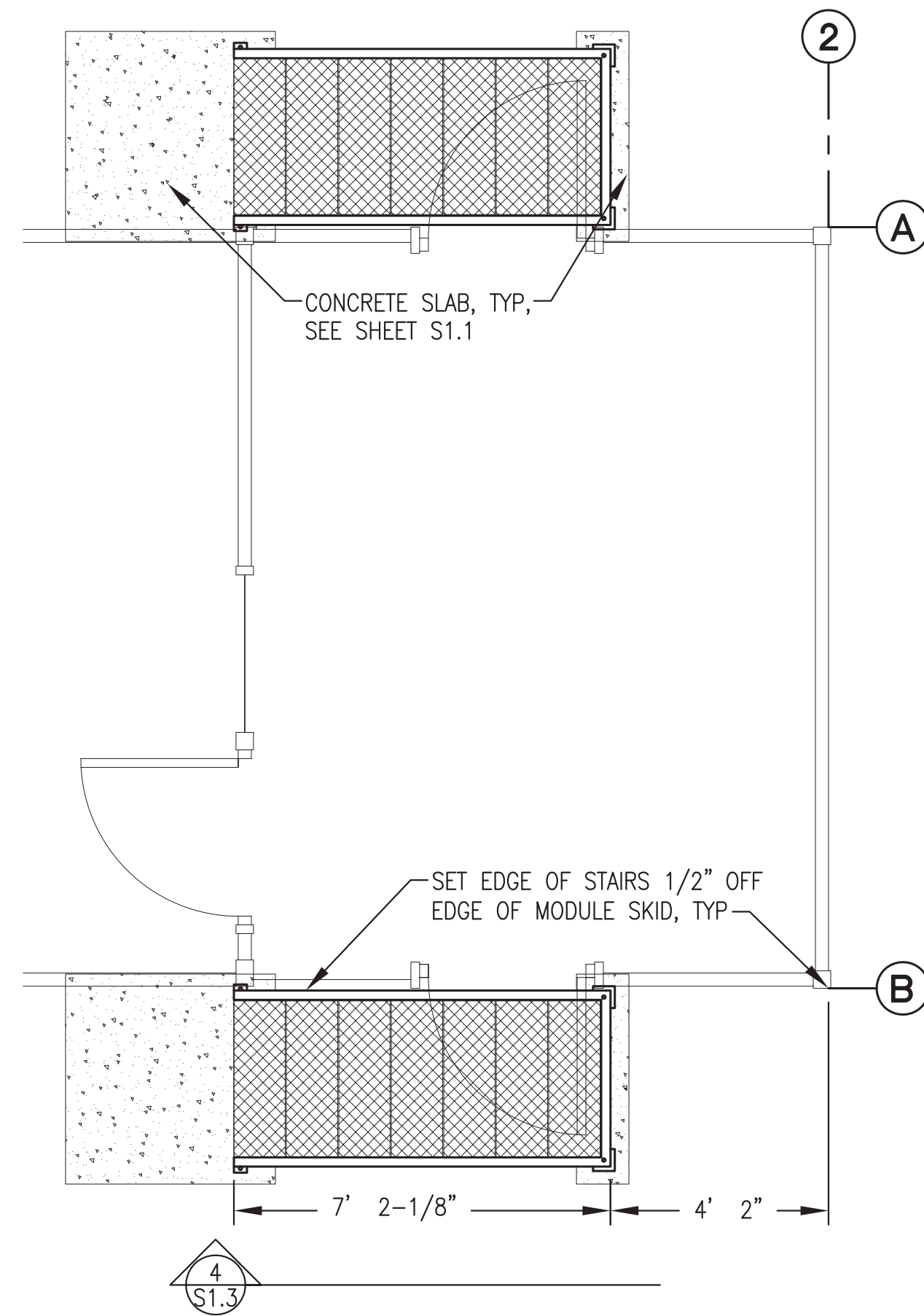
Note: Foundation system not part of module scope, see exclusions.

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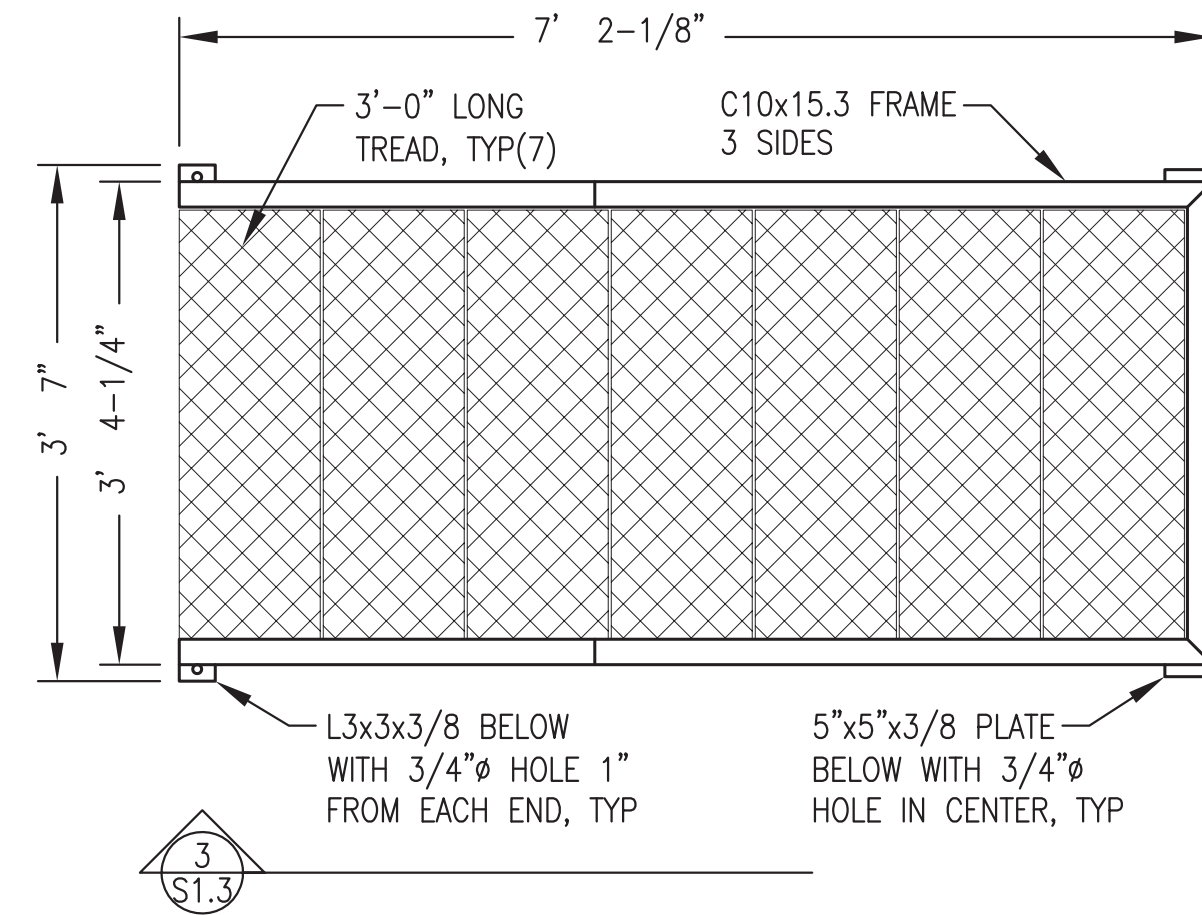


PROJECT: PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE	
TITLE: FOUNDATION DETAILS	
DRAWN BY: JTD	SCALE: AS NOTED
DESIGNED BY: BCG/DGT	DATE: 10/16/18
FILE NAME: PTH PPU S1-4	SHEET: S1.2 OF 4
PROJECT NUMBER: P.O. 111405, Anchorage, AK 99511 (907)349-0100	



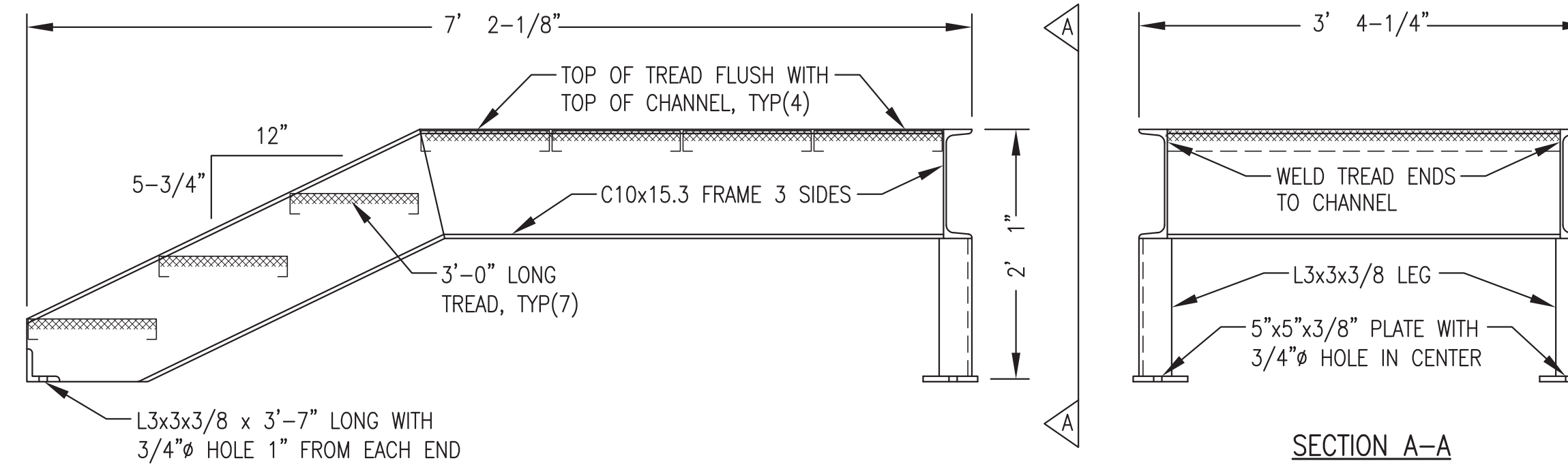


**1** STAIR INSTALLATION PLAN  
S1.3 3/8"=1'-0"

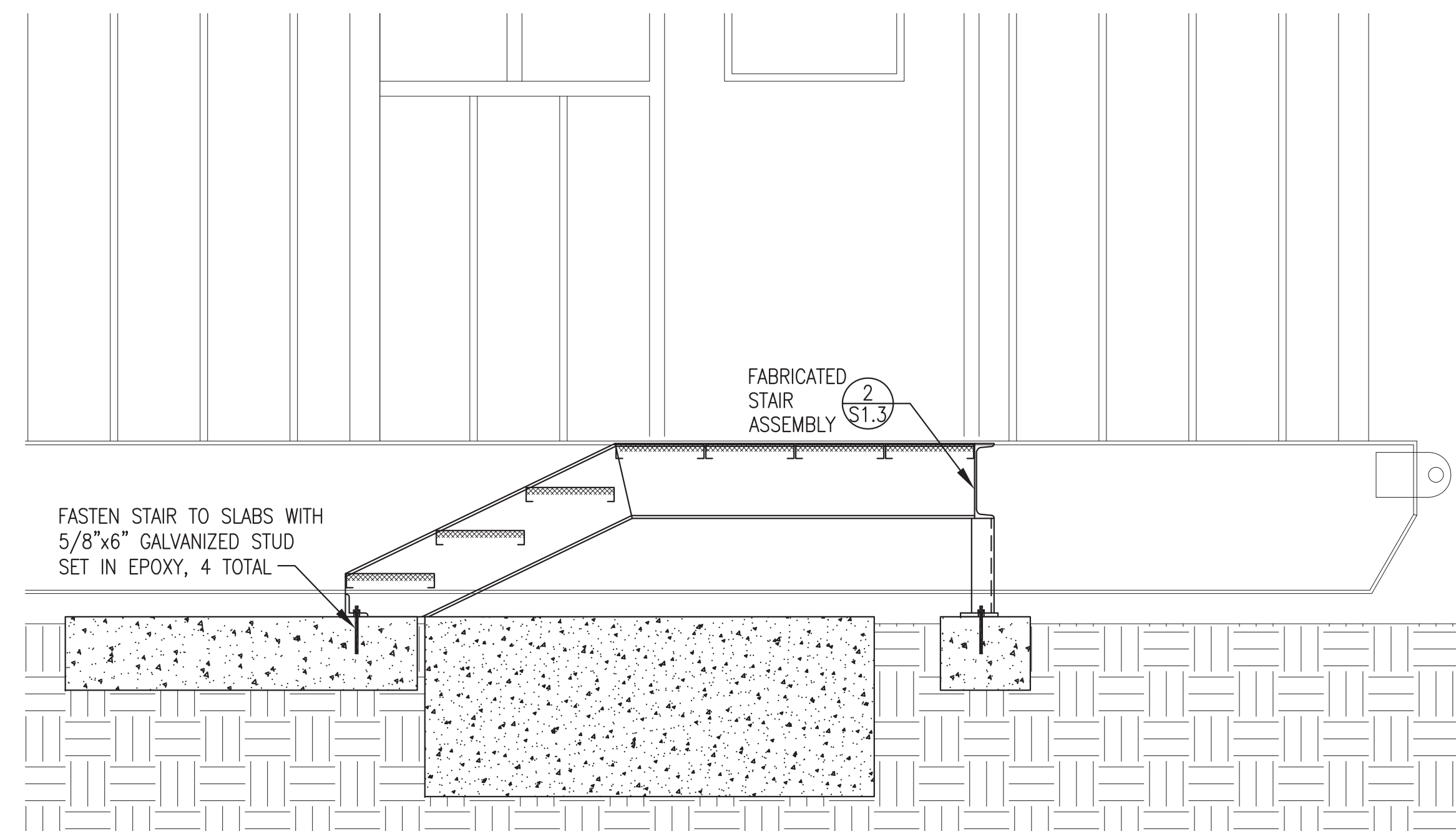


**2** STAIR FABRICATION PLAN  
S1.3 3/4"=1'-0"

- STAIR FABRICATION NOTES:**
- 1) FABRICATE TWO IDENTICAL STAIR ASSEMBLIES.
  - 2) FABRICATE FROM ASTM A-36 STEEL SHAPES AND PLATE AS INDICATED. STAIR AND PLATFORM TREADS TO BE 2"x11-3/4"x12 GA. GRIP STRUT.
  - 3) MAKE ALL JOINTS AND CONNECTIONS WITH CONTINUOUS GROOVE OR FILLET WELDS.
  - 4) UPON COMPLETION OF FABRICATION ROUND ALL OUTSIDE CORNERS AND GRIND ALL EDGES SMOOTH.
  - 5) PREPARE COMPLETED ASSEMBLIES FOR GALVANIZING UTILIZING A CAUSTIC BATH, ACID PICKLE, AND FLUX. ALTERNATIVELY, STEEL MAY BE NEAR WHITE BLAST CLEANED TO SPCC-SP10 AND FLUXED. HOT-DIP GALVANIZE COMPLETED ASSEMBLIES IN ACCORDANCE WITH ASTM A 123.



**3** STAIR FABRICATION ELEVATION  
S1.3 1"=1'-0"





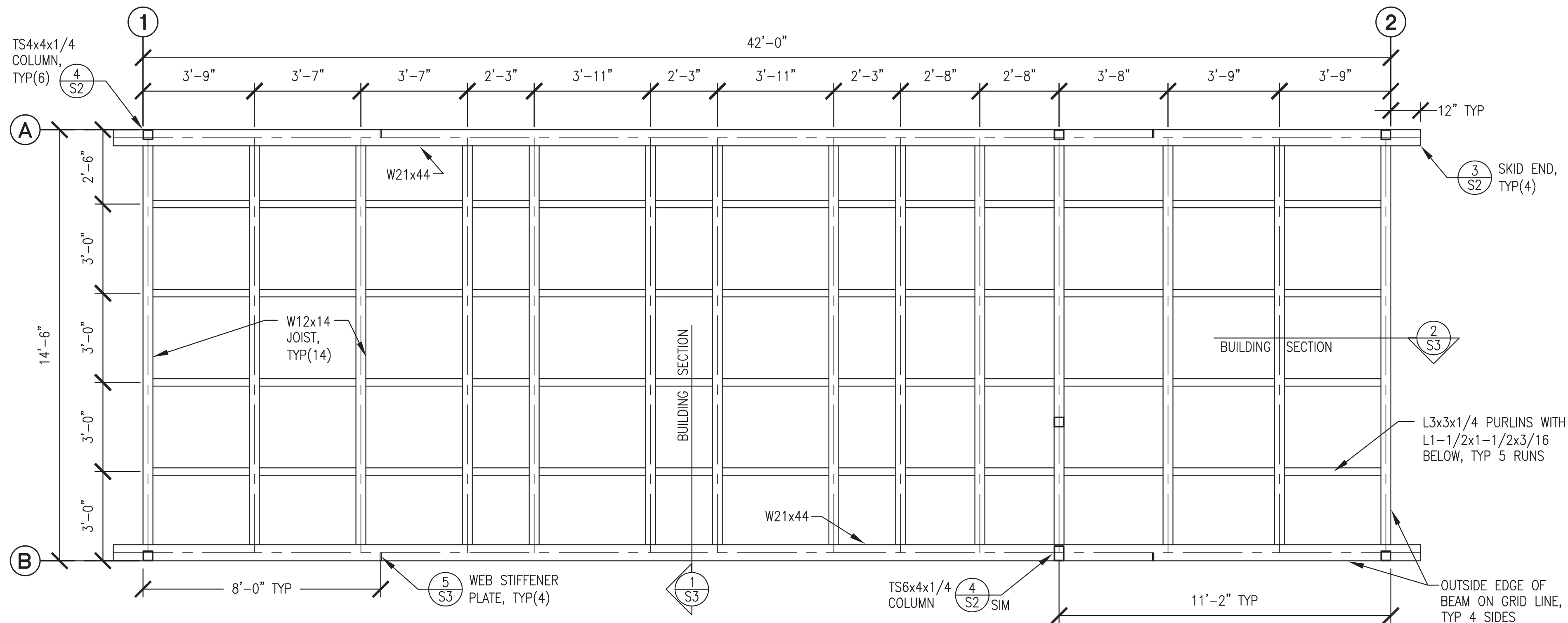
**4** STAIR INSTALLATION ELEVATION  
S1.3 3/4"=1'-0"

Note: Foundation system not part of module scope, see exclusions.

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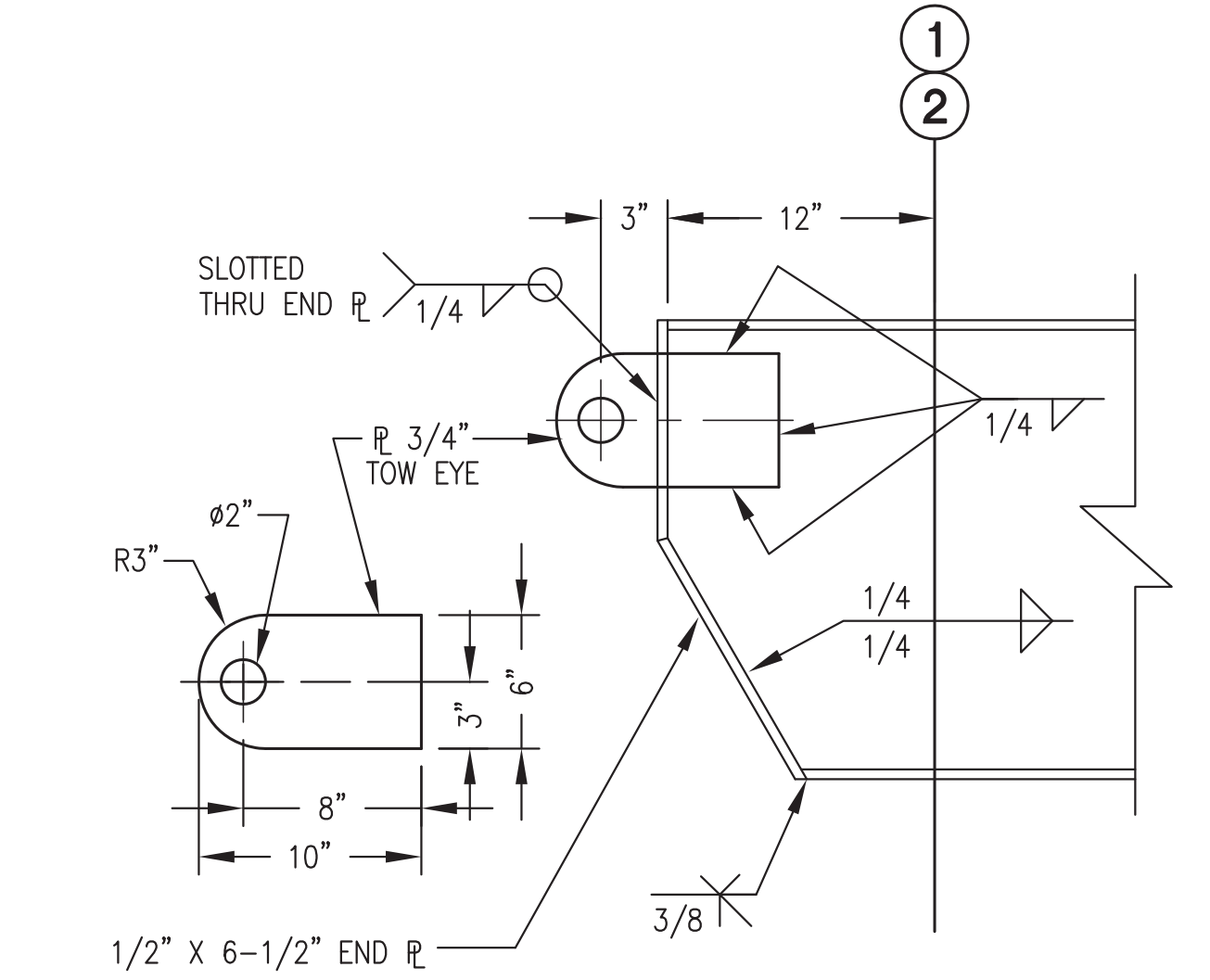


 ALASKA ENERGY AUTHORITY		
PROJECT:	PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE	
TITLE:	STAIR PLAN & DETAILS	
DRAWN BY:	JTD	SCALE: AS NOTED
DESIGNED BY:	BCG/DGT	DATE: 10/16/18
FILE NAME:	PTH PPU S1-4	SHEET:
PROJECT NUMBER:		<b>S1.3</b> OF 4
 P.O. 111405, Anchorage, AK 99511 (907)349-0100		

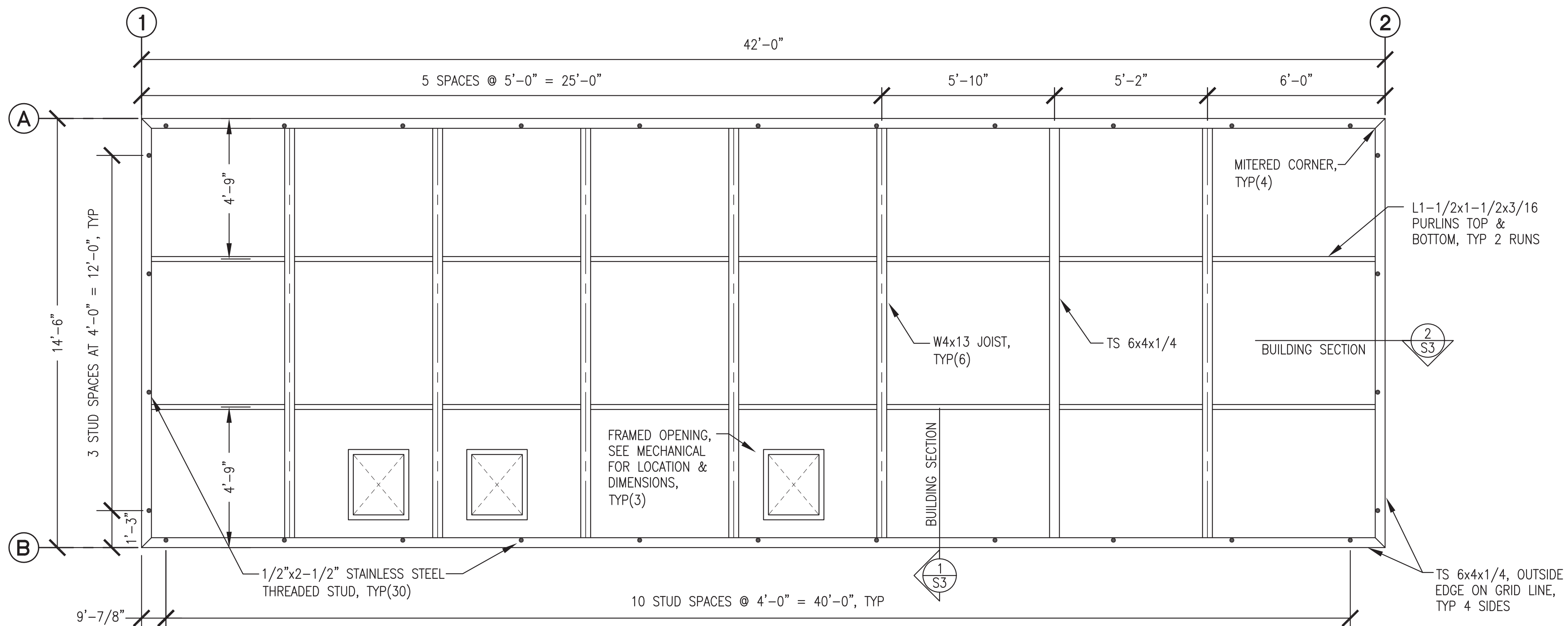


NOTES: 1) FABRICATE FLOOR AND PAN DECKS USING SHEETS CUT SO THAT ALL JOINTS ARE CENTERED ON PURLINS AND/OR JOISTS.  
 2) SEE MECHANICAL SUPPORT PLAN M2.2 FOR GENERATOR SUPPORT PEDESTAL LOCATIONS AND FABRICATION.

**1 FLOOR FRAMING PLAN**  
 S2 3/8"=1'-0"

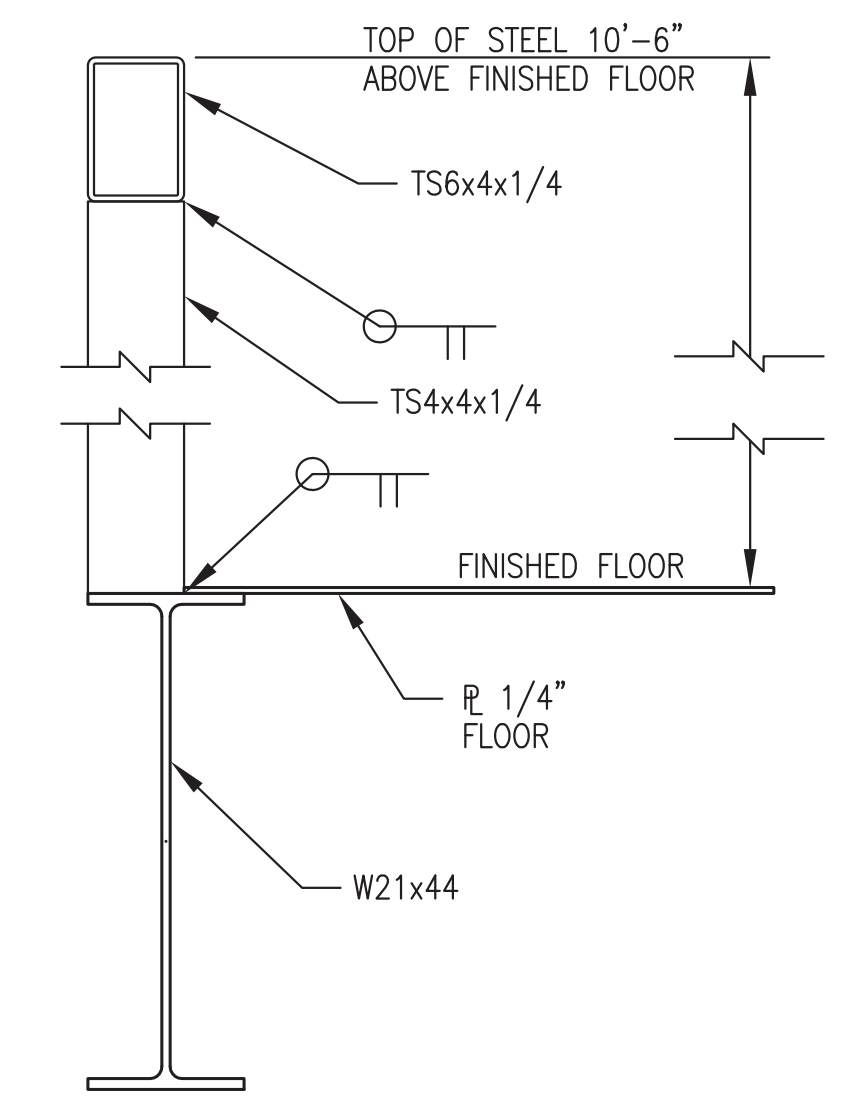


**3 TYPICAL SKID END**  
 S2 1-1/2"=1'-0"



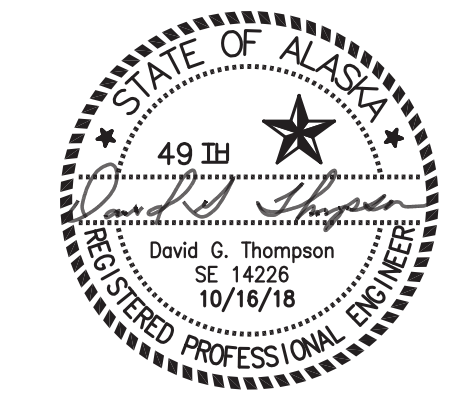
NOTES: 1) FABRICATE CEILING FLAT AND CORRUGATED DECKS USING SHEETS CUT SO THAT ALL JOINTS ARE CENTERED ON PURLINS AND/OR JOISTS.  
 2) SEE MECHANICAL SUPPORT PLAN M2.2 FOR CEILING CORRUGATION LAYOUT AND STRUT SUPPORT LOCATION AND INSTALLATION.

**2 CEILING FRAMING PLAN**  
 S2 3/8"=1'-0"



**4 TYP CORNER COLUMN**  
 S2 1-1/2"=1'-0"

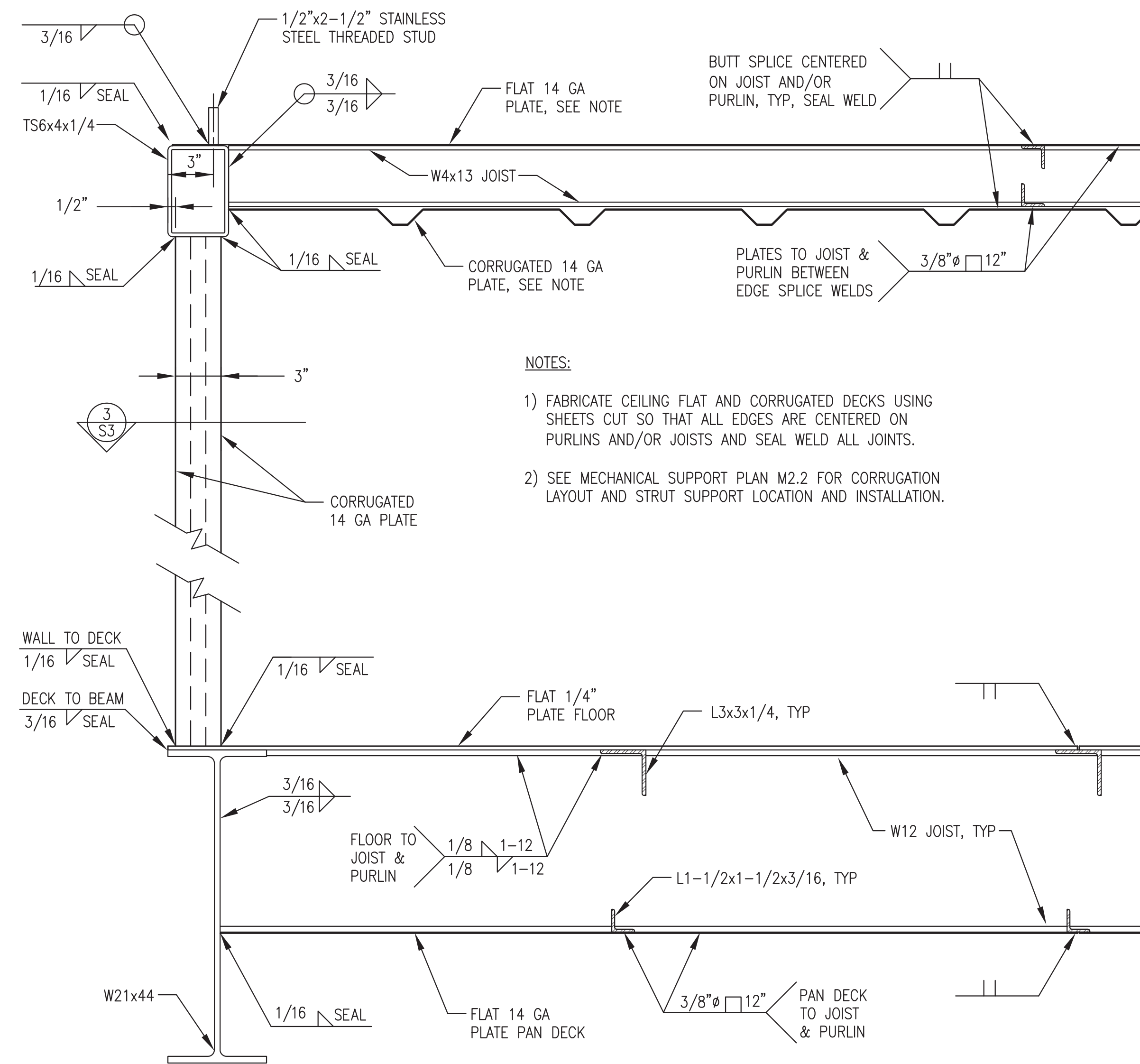
ISSUED FOR  
 CONSTRUCTION  
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ALASKA ENERGY AUTHORITY	
PROJECT:	PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE
TITLE:	FRAMING PLANS & DETAILS
DRAWN BY: JTD	SCALE: AS NOTED
DESIGNED BY: BCG/DGT	DATE: 10/16/18
FILE NAME: PTH PPU S1-4	SHEET: S2 OF 4
PROJECT NUMBER:	



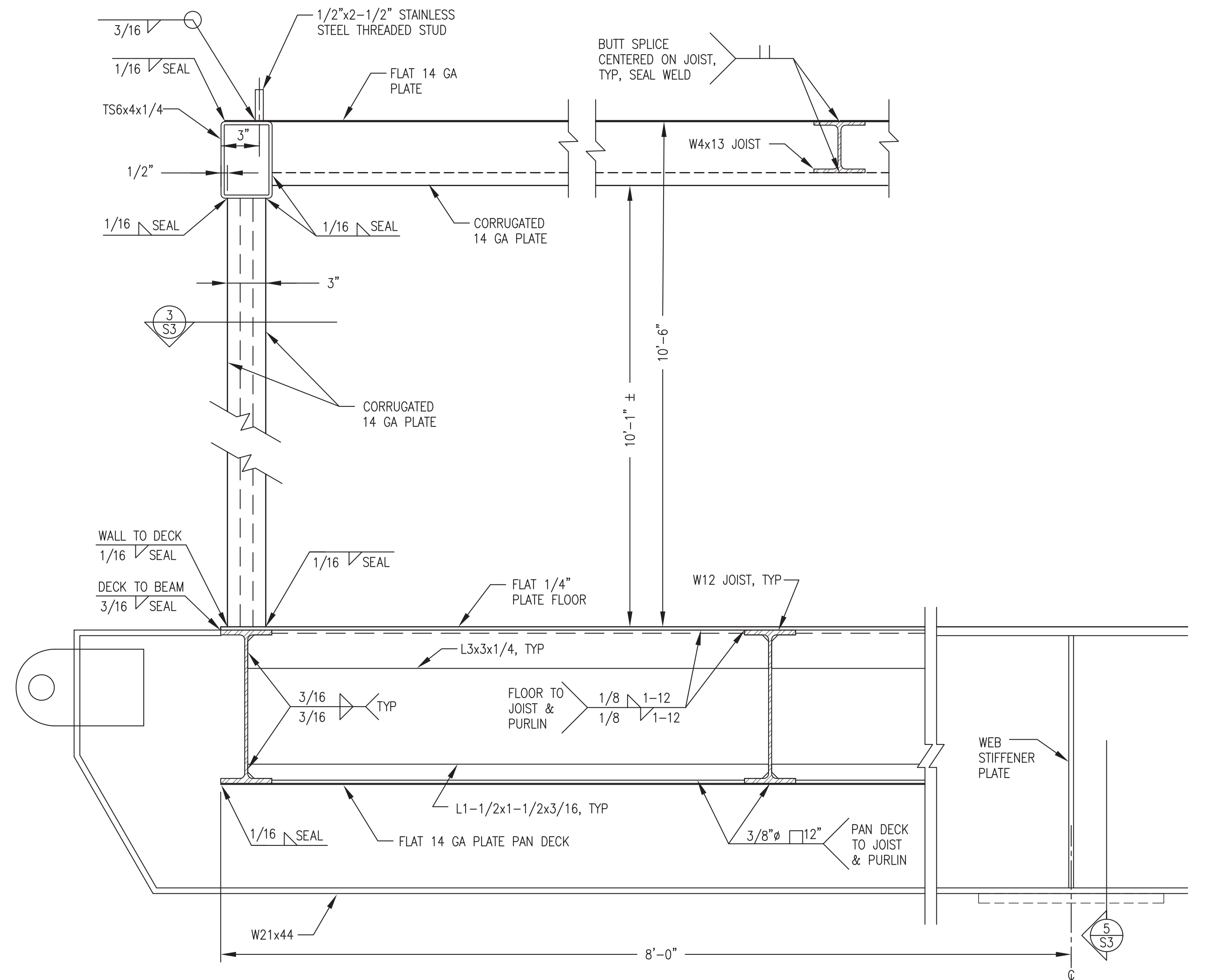




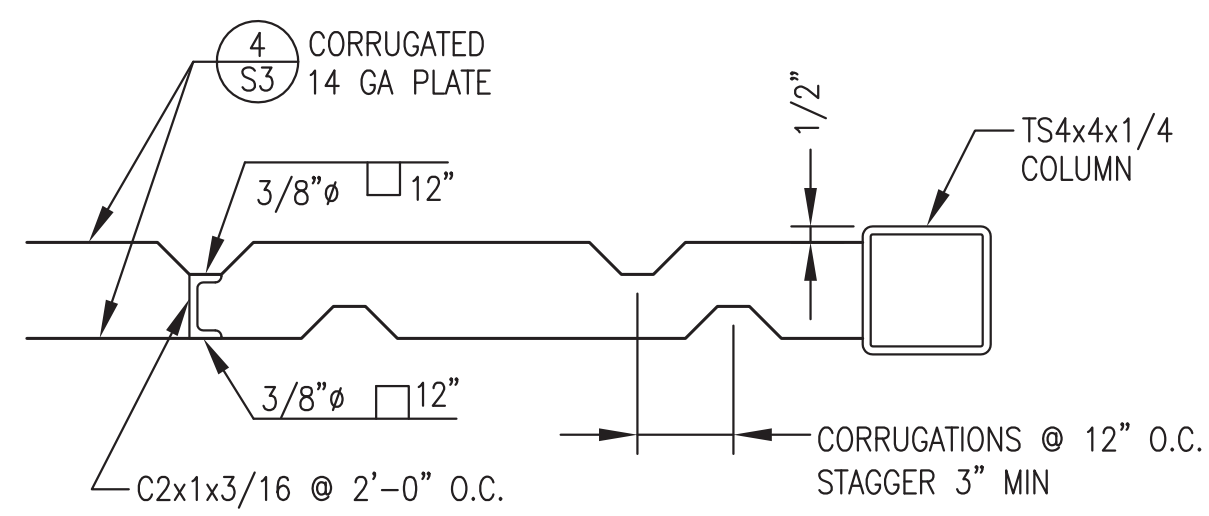
**NOTES:**

- 1) FABRICATE CEILING FLAT AND CORRUGATED DECKS USING SHEETS CUT SO THAT ALL EDGES ARE CENTERED ON PURLINS AND/OR JOISTS AND SEAL WELD ALL JOINTS.
- 2) SEE MECHANICAL SUPPORT PLAN M2.2 FOR CORRUGATION LAYOUT AND STRUT SUPPORT LOCATION AND INSTALLATION.

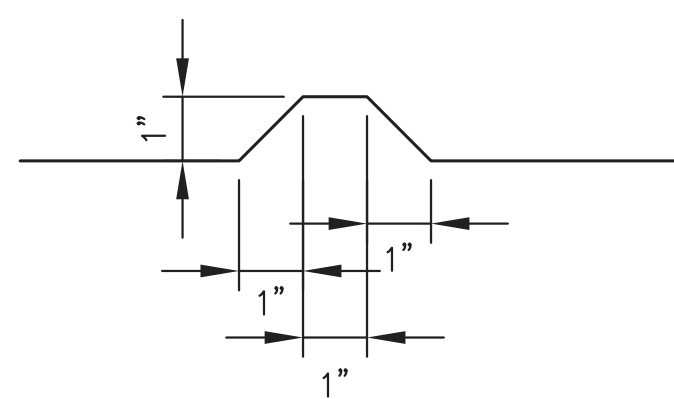
**1** TYPICAL BUILDING SECTION  
S3 2'-1'-0"



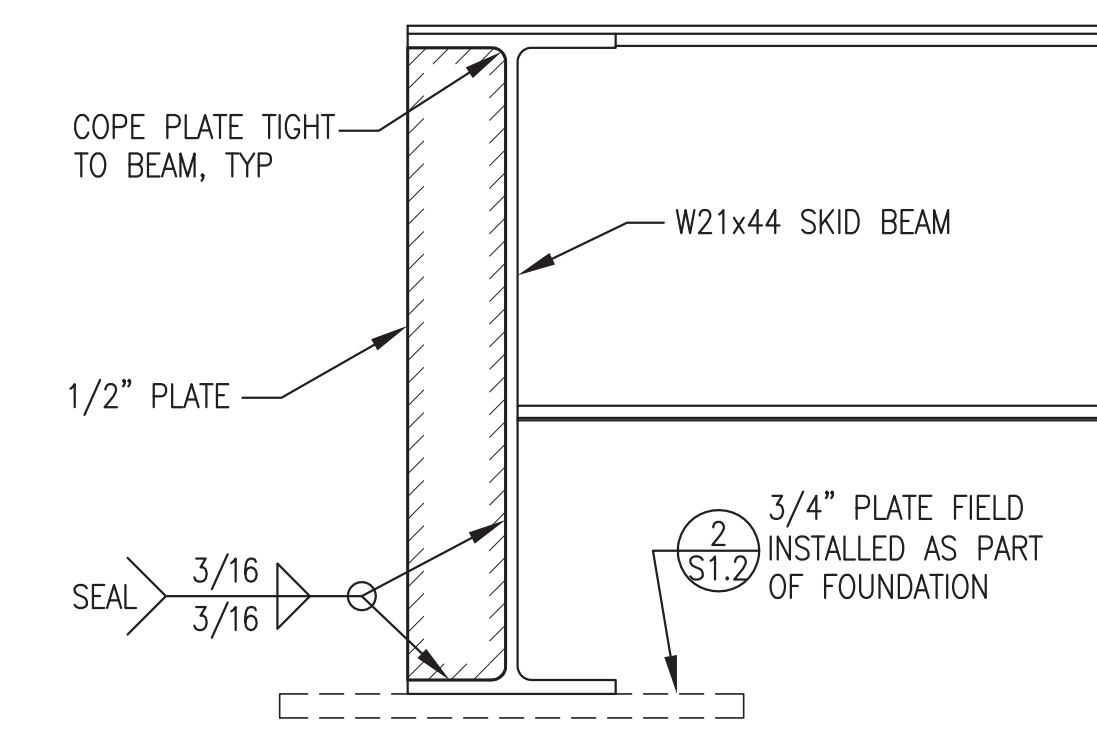
**2** TYPICAL BUILDING SECTION  
S3 2'-1'-0"



**3** TYPICAL EXTERIOR WALL - PLAN VIEW  
S3 2'-1'-0"

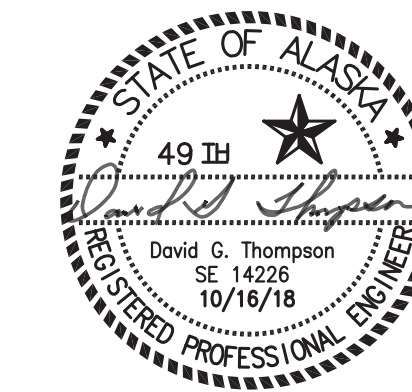


**4** TYPICAL CORRUGATION  
S3 4'-1'-0"



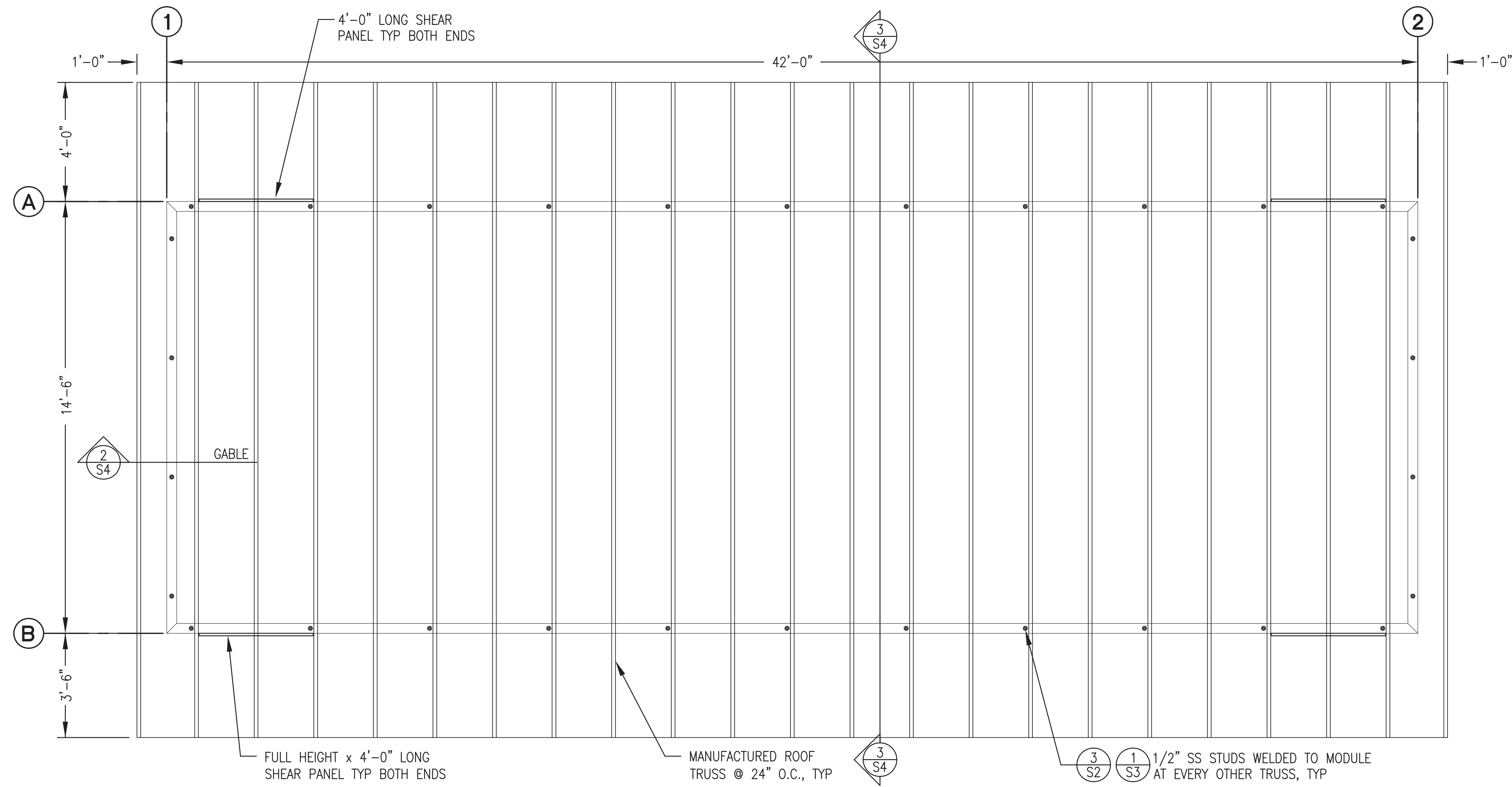
**5** WEB STIFFENER PLATE  
S3 2'-1'-0"

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CONSTRUCTION  
OCTOBER 2018

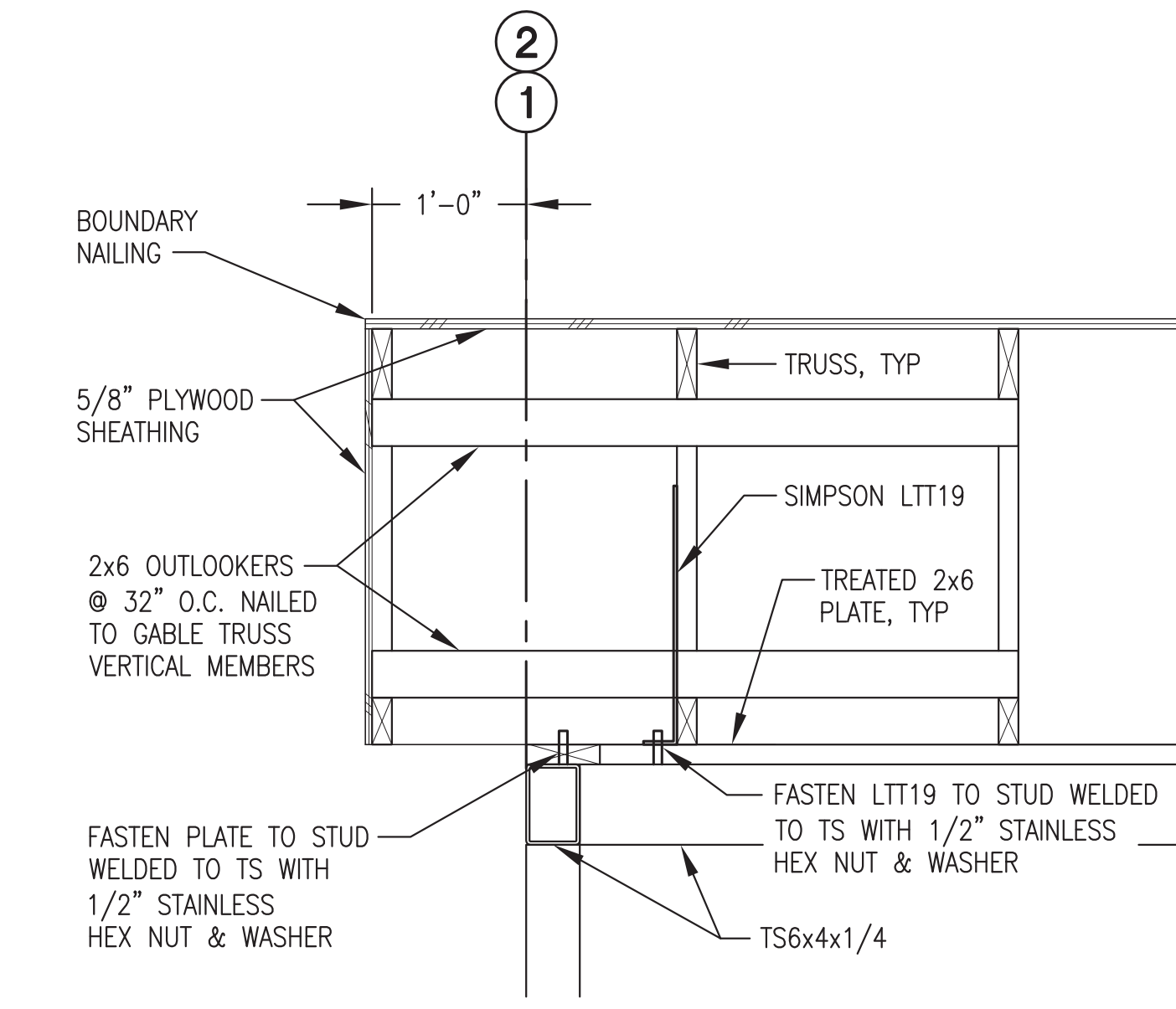


PROJECT: PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE	
TITLE: SECTIONS & DETAILS	
DRAWN BY: JTD	SCALE: AS NOTED
DESIGNED BY: BCG/DGT	DATE: 10/16/18
FILE NAME: PTH PPU S1-4	SHEET: S3 OF 4
PROJECT NUMBER:	

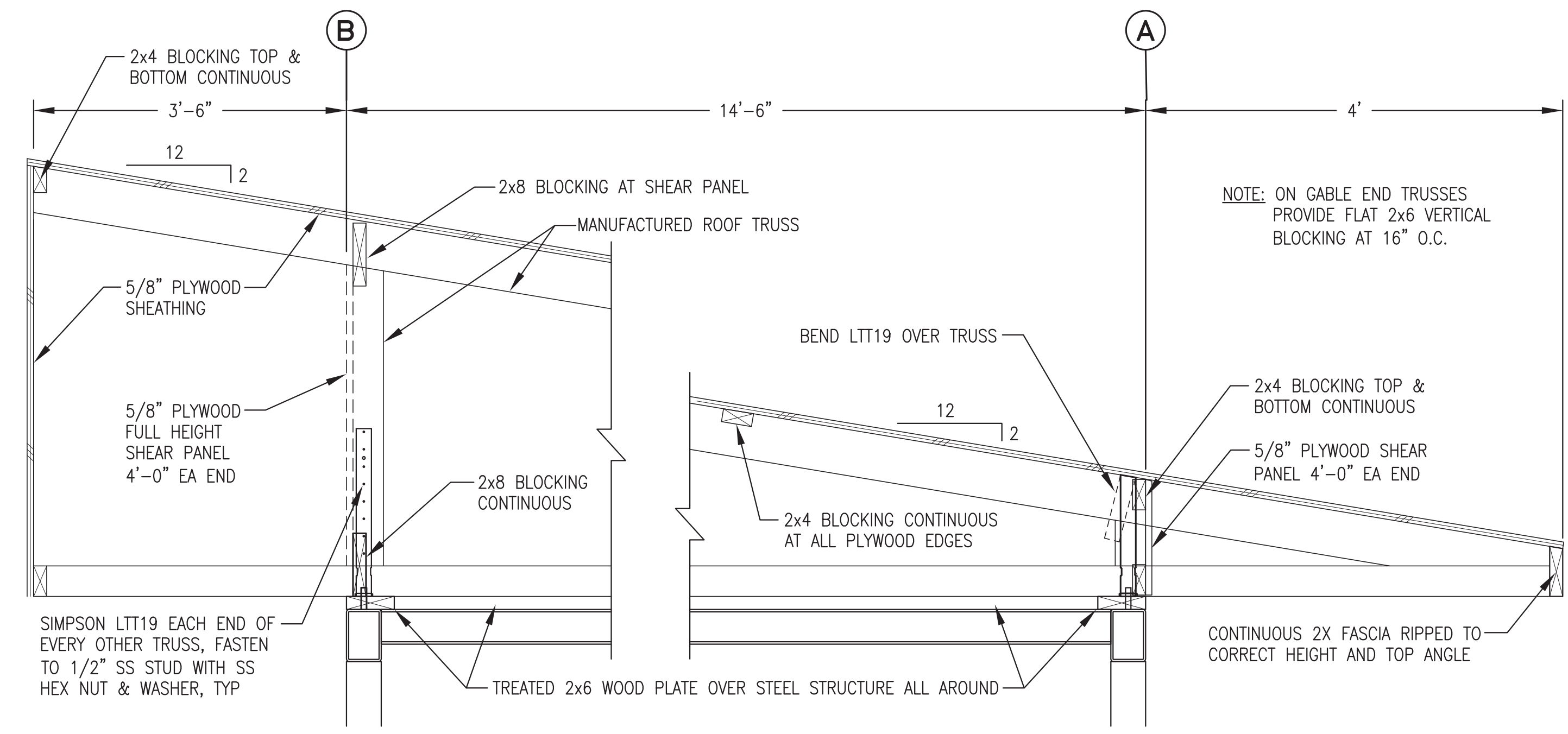




**1**  
S4  
ROOF FRAMING PLAN  
3/8"=1'-0"



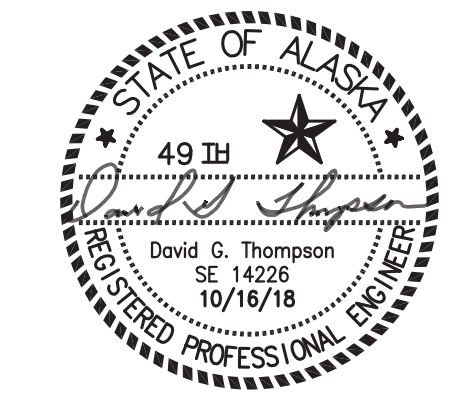
**2**  
S4  
TYPICAL GABLE  
1"=1'-0"





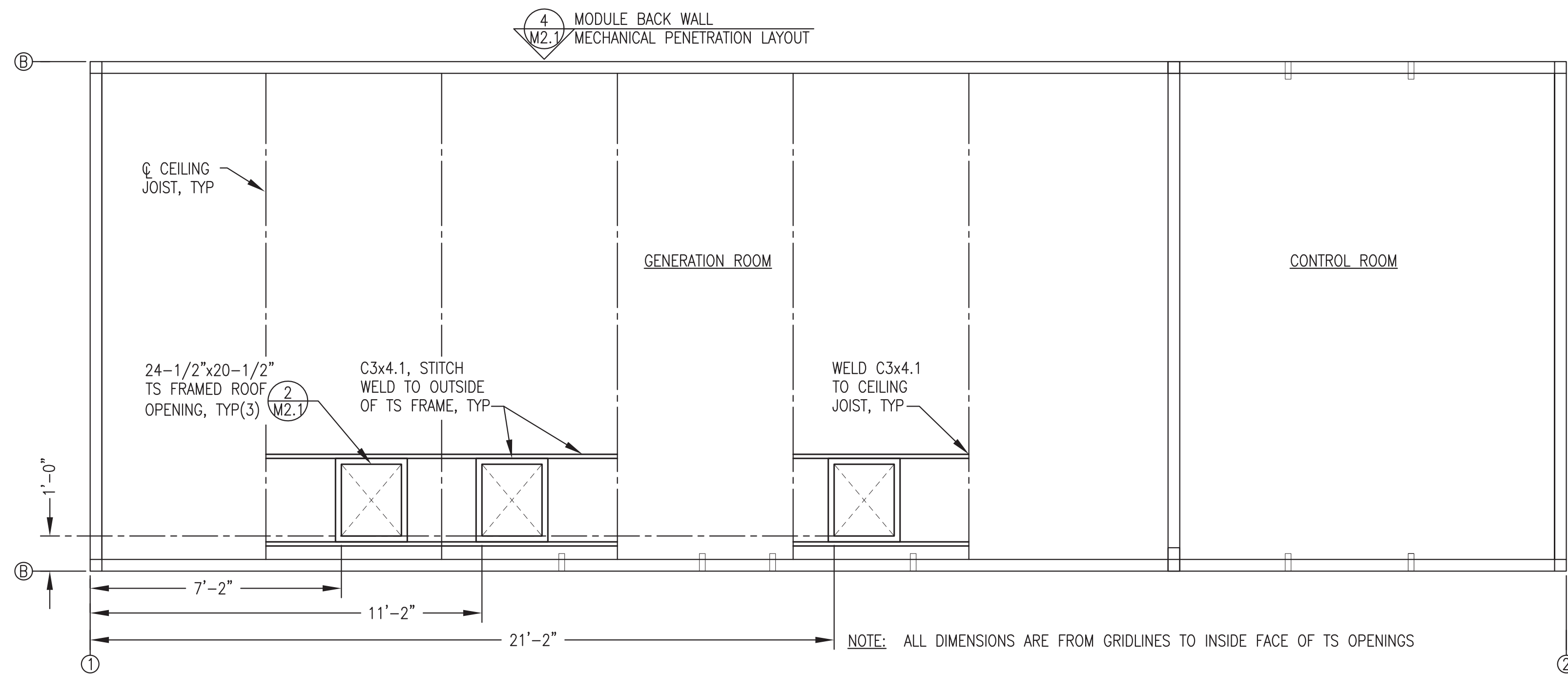
**3**  
S4  
ROOF TRUSS INSTALLATION  
NO SCALE

Note: Roof system not part of module scope, see exclusions.

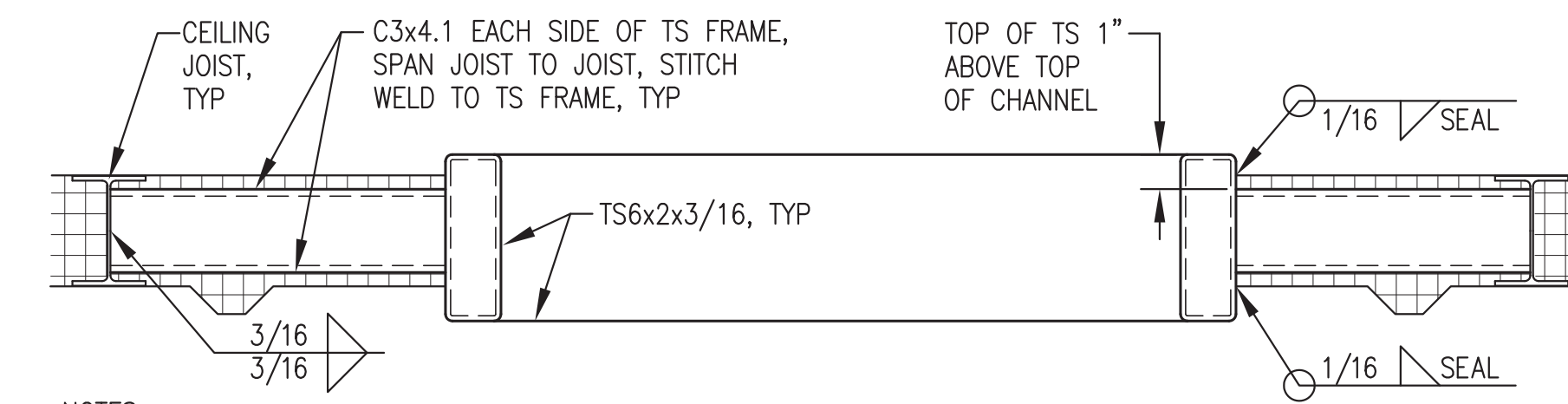
ISSUED FOR  
CONSTRUCTION  
OCTOBER 2018



 ALASKA ENERGY AUTHORITY		
PROJECT: PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE		
TITLE: ROOF FRAMING PLAN & DETAILS		
DRAWN BY: JTD	SCALE: AS NOTED	
DESIGNED BY: BCG/DGT	DATE: 10/16/18	
FILE NAME: PTH PPU S1-4	SHEET: S4	OF 4
PROJECT NUMBER:		
 Gray Stassel Engineering, Inc. P.O. 111405, Anchorage, AK 99511 (907)349-0100		

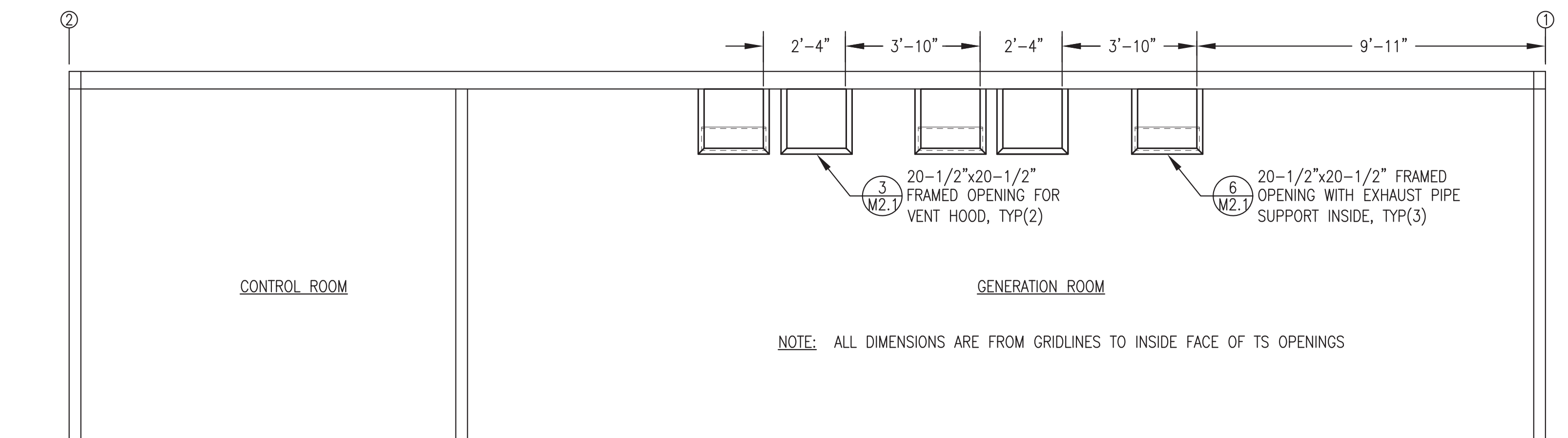


1 MODULE MECHANICAL ROOF PENETRATION PLAN  
M2.1 3/8"=1'-0"

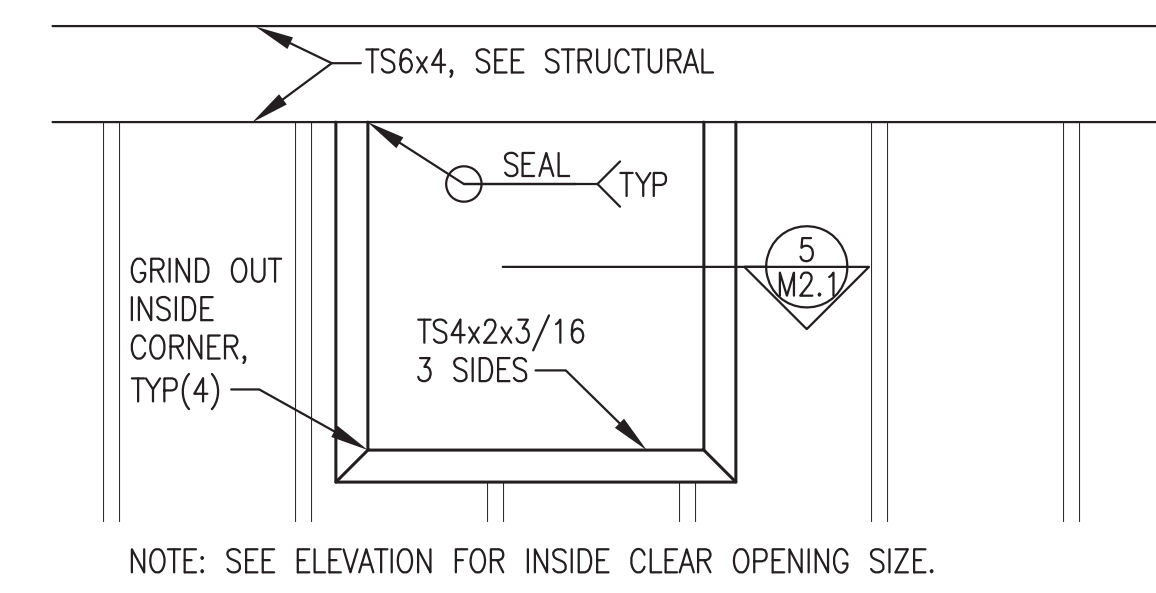


- NOTES:
- 1) FABRICATE FRAMED OPENING WITH MITERED CORNERS AND FULL PENETRATION GROOVE WELDS.
  - 2) FABRICATE TO FINISHED INSIDE (CLEAR) DIMENSIONS INDICATED ON PLANS.
  - 3) GRIND OUT INSIDE OF MITERED CORNERS TO PROVIDE FULL CLEAR OPENING.

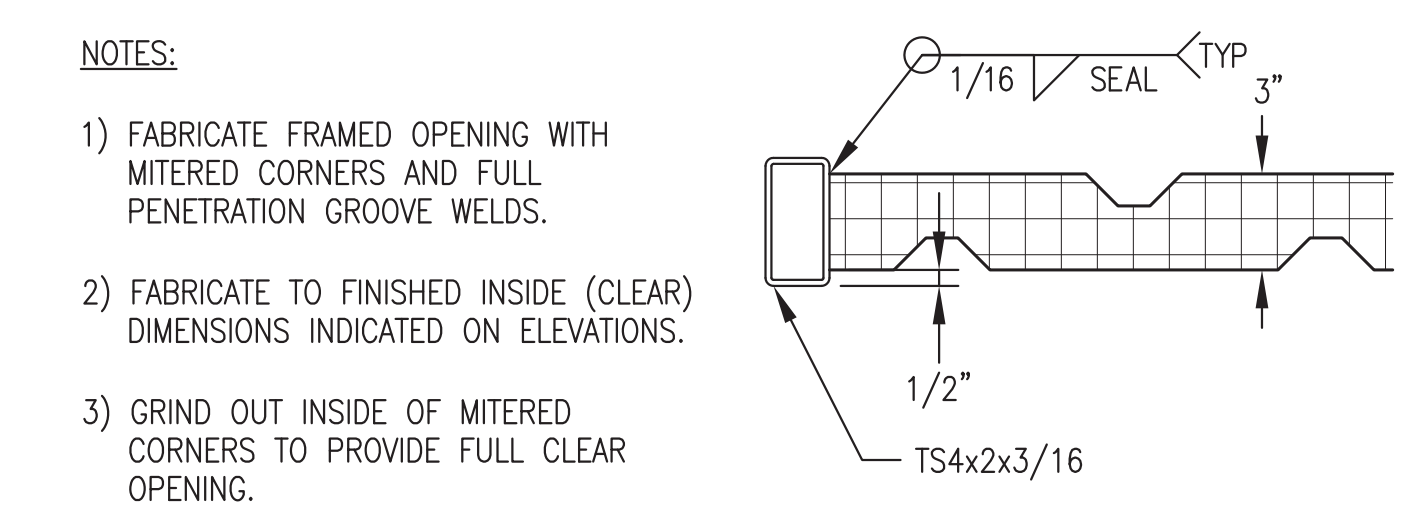
2 TYPICAL ROOF OPENING DETAIL  
M2.1 2"=1'-0"



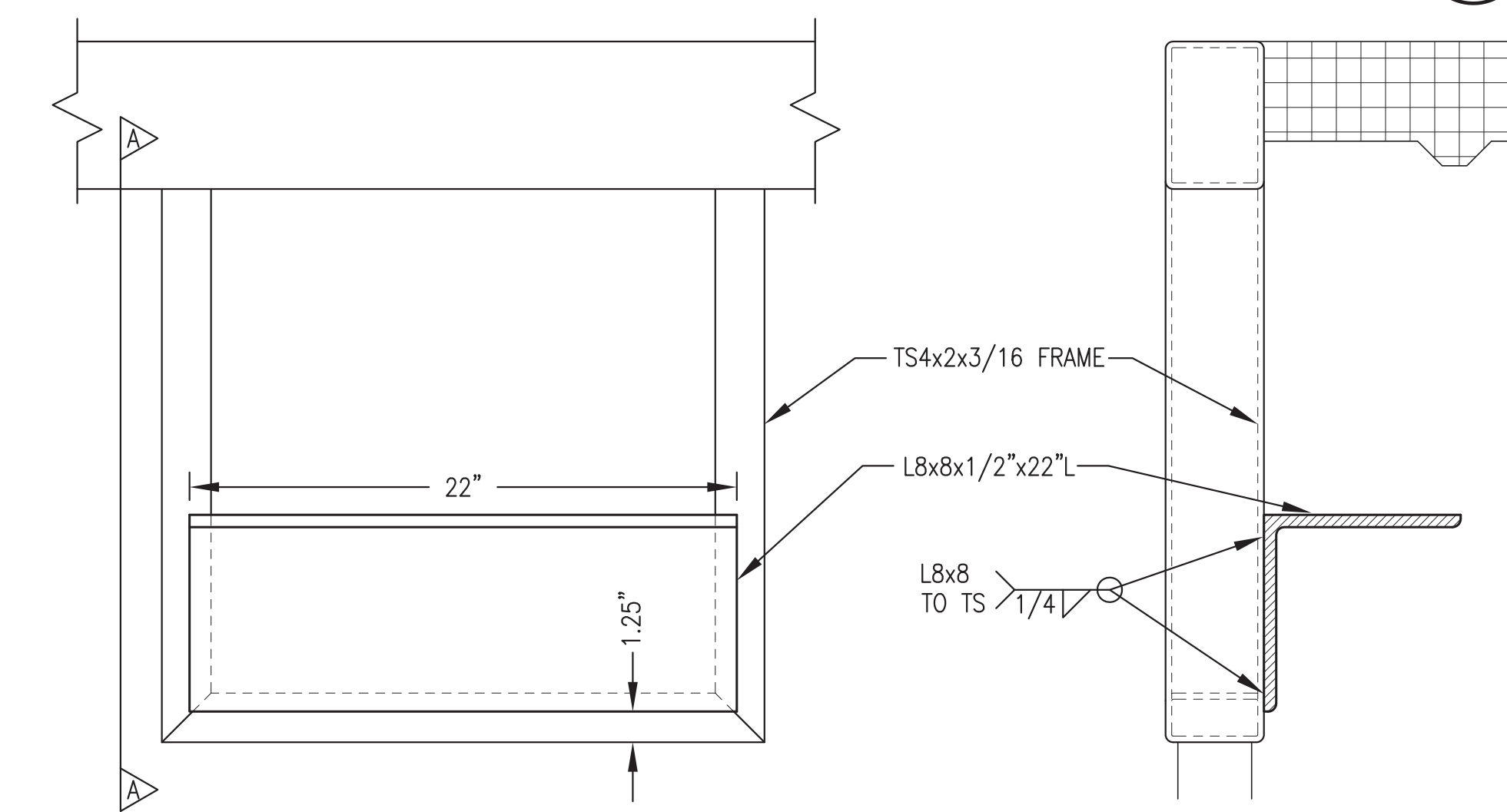
4 MODULE MECHANICAL WALL PENETRATIONS AT GRID A - EXTERIOR ELEVATION  
M2.1 1/2"=1'-0"



3 TYPICAL WALL OPENING - ELEVATION  
M2.1 1"=1'-0"



5 TYPICAL SECTION THROUGH WALL OPENING  
M2.1 2"=1'-0"



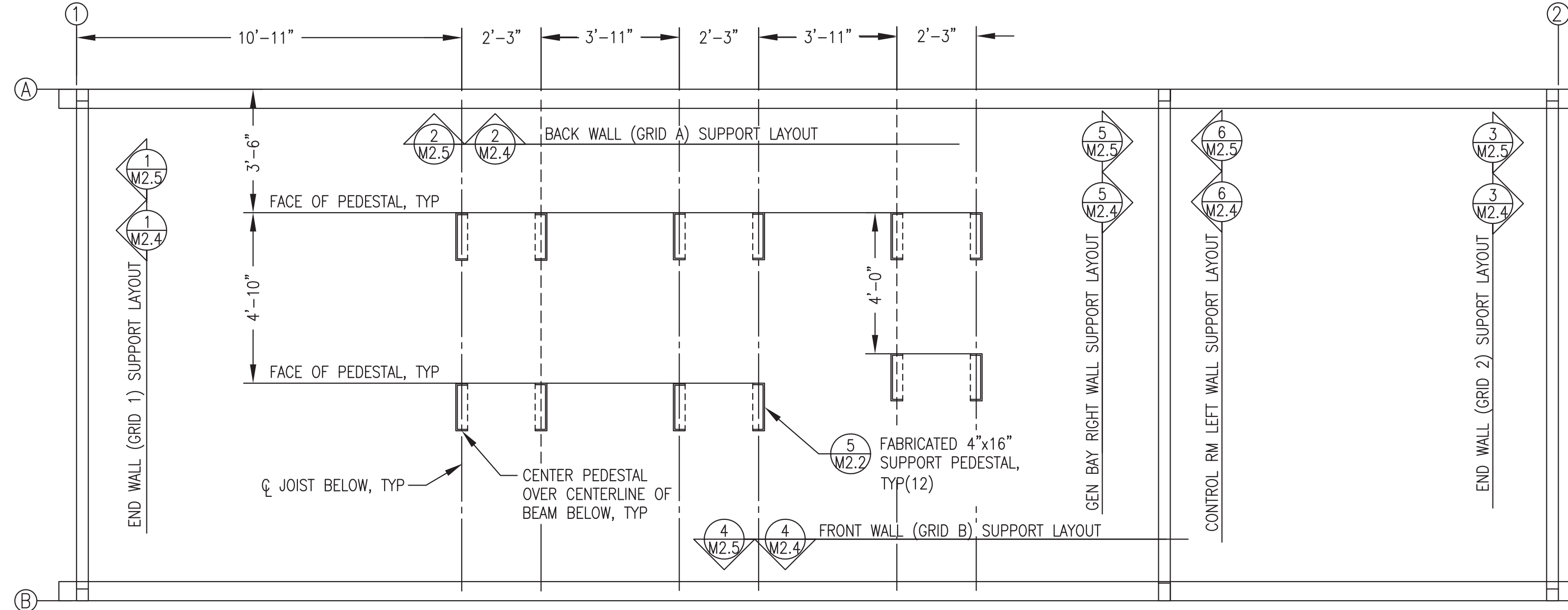
6 EXHAUST PIPE SUPPORT AT FRAMED OPENING  
M2.1 2"=1'-0"

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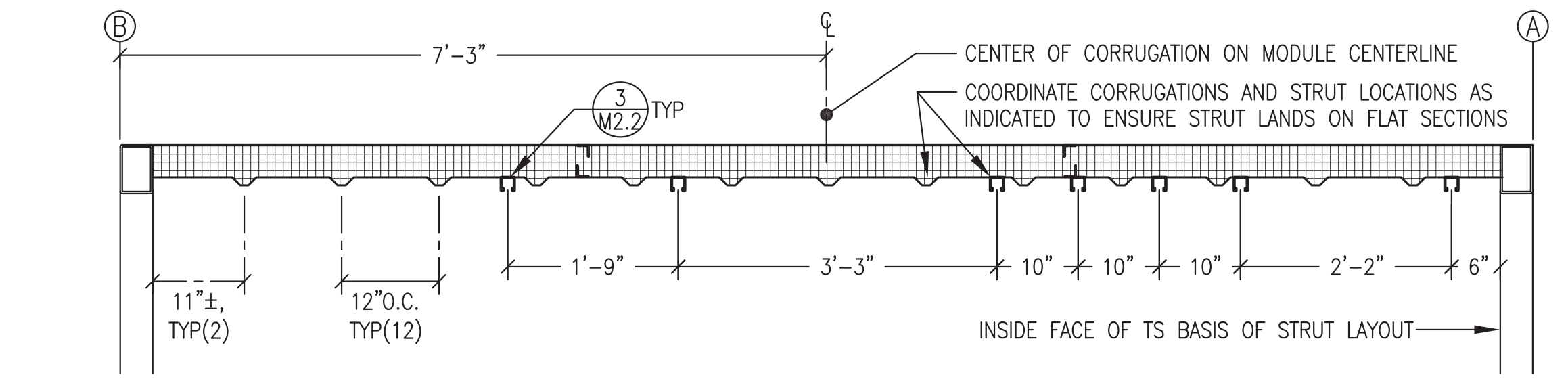


PROJECT: PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE		
TITLE: MECHANICAL PENETRATIONS PLAN, ELEVATION, & DETAILS		
DRAWN BY: JTD	SCALE: AS NOTED	DESIGNED BY: BCG
FILE NAME: PTH PPU M2-7	SHEET: M2.1	PROJECT NUMBER: 8
P.O. 111405, Anchorage, AK 99511 (907)349-0100		

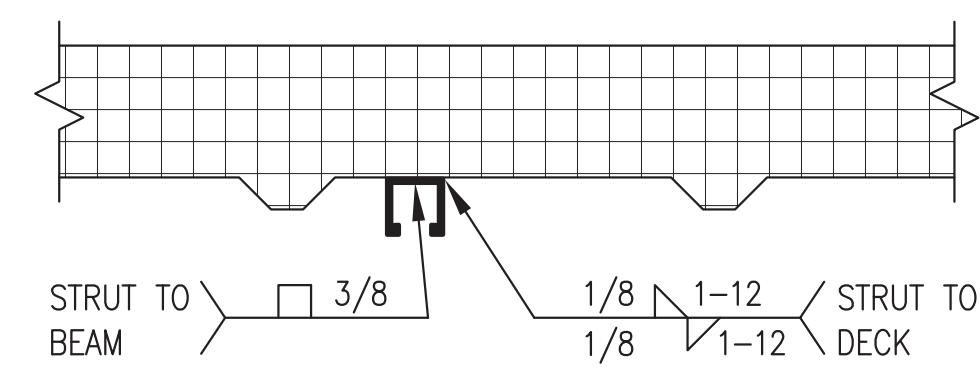
NOTE: ALL DIMENSIONS FROM GRIDLINE (OUTSIDE OF DECK)



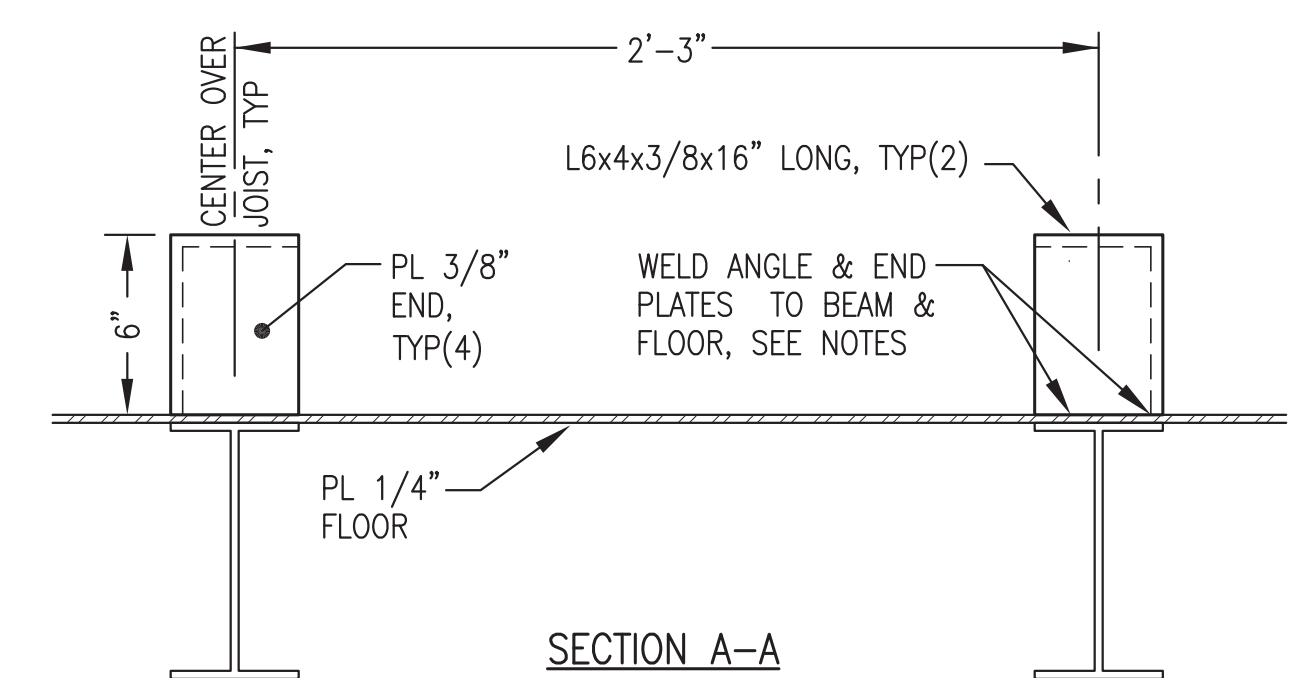
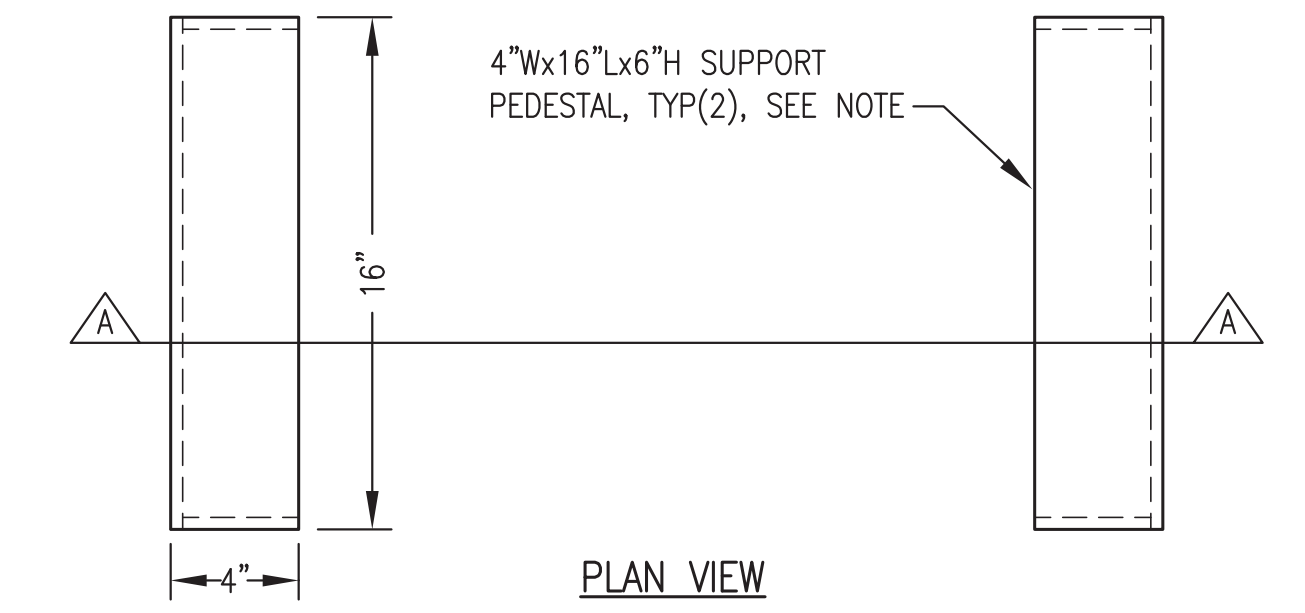
**1** MODULE MECHANICAL SUPPORT PLAN  
M2.2 3/8"=1'-0"



**2** SECTION THROUGH CEILING - CORRUGATION & STRUT LAYOUT  
M2.2 3/4"=1'-0"



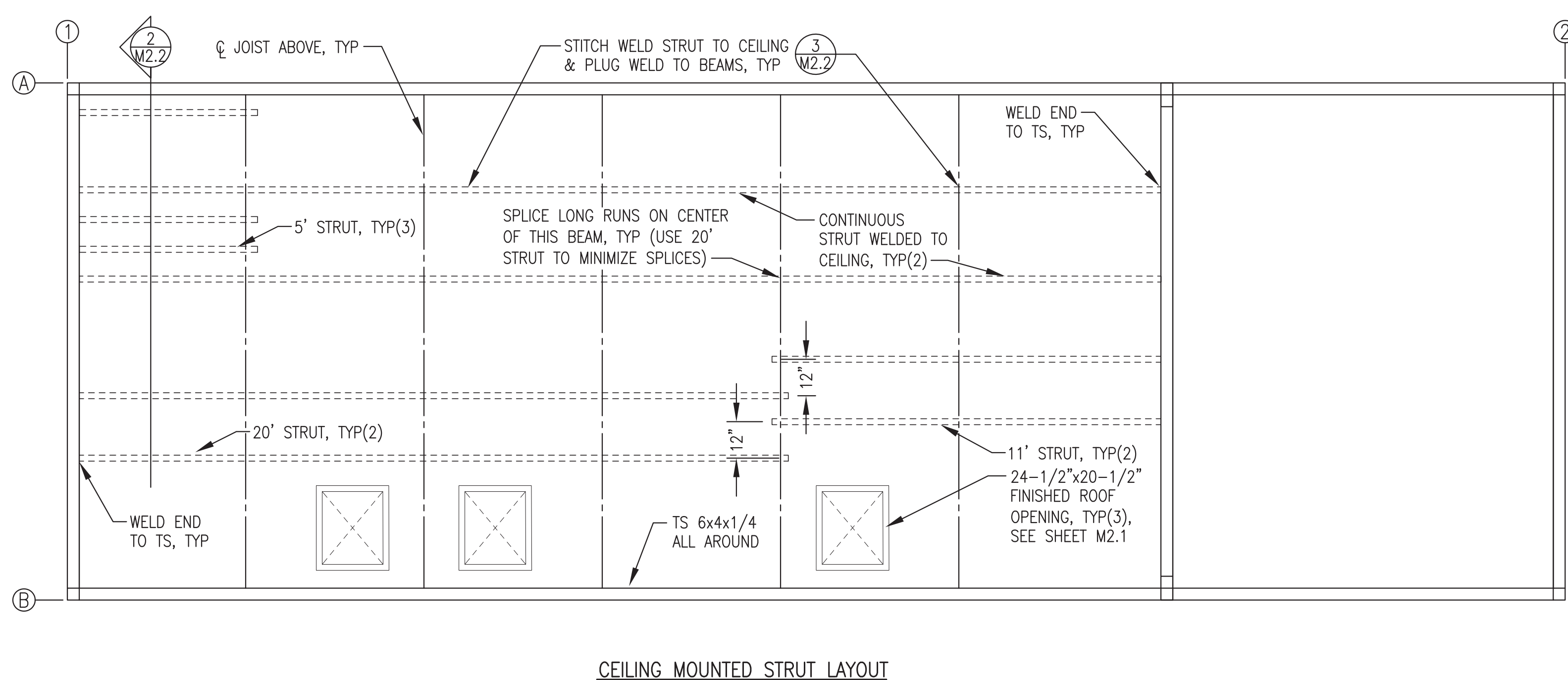
**3** STRUT ATTACHMENT TO CEILING  
M2.2 NO SCALE



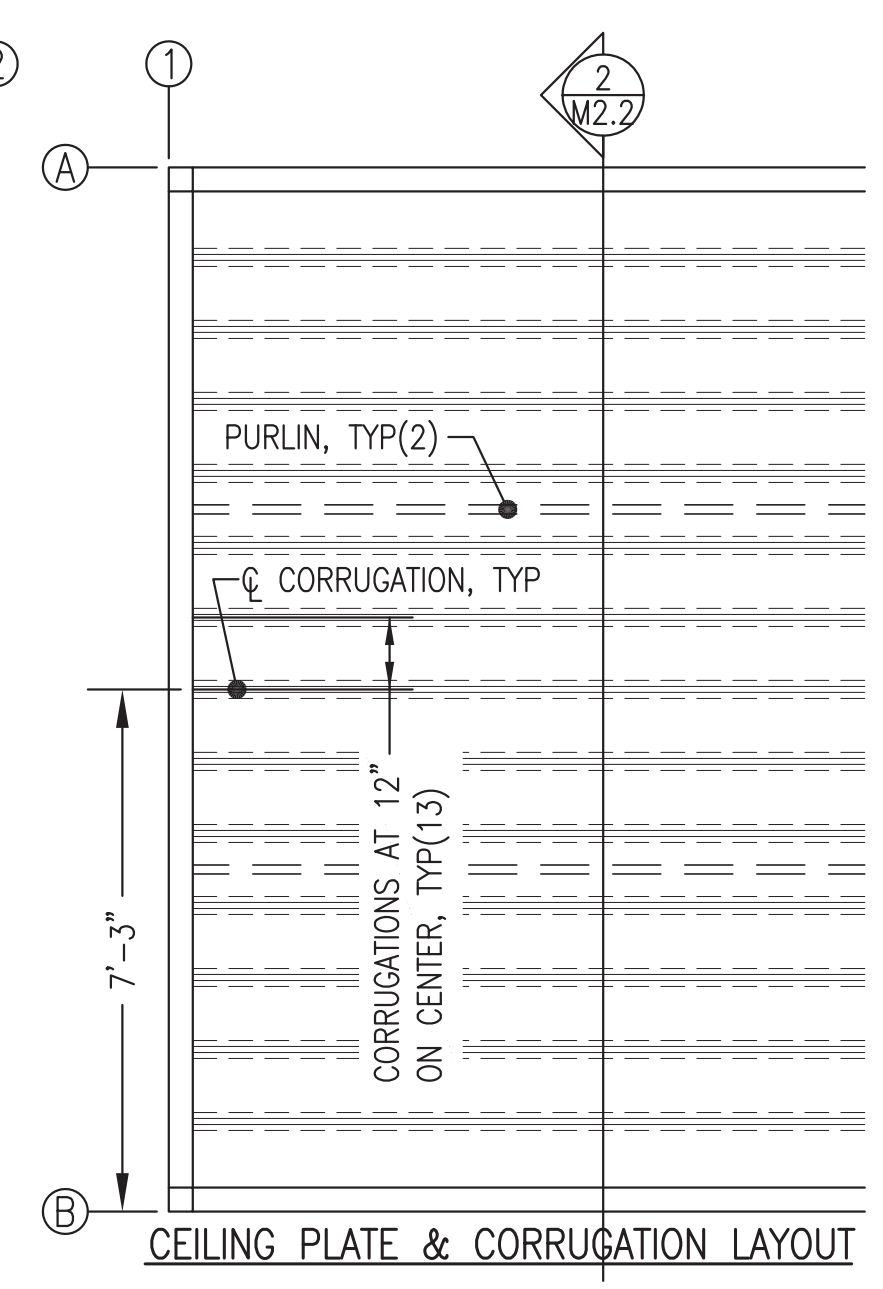
NOTES: 1) MAKE ALL JOINTS WITH CONTINUOUS GROOVE OR FILLET WELDS.  
2) SLOT FLOOR PLATE 3 SIDES THEN WELD PEDESTAL TO TOP OF BEAM AND SEAL WELD TO FLOOR PLATE ALL AROUND.

**5** SUPPORT PEDESTAL FABRICATION  
M2.2 2"=1'-0"

- GENERAL NOTES:**
- 1) FABRICATE PEDESTALS FROM ASTM A36 ANGLE AND PLATES AS SHOWN.
  - 2) ALL STRUT 12 GAUGE 1-5/8"x1-5/8" SOLID BACK PLAIN (UNFINISHED). B-LINE B22-PLN OR EQUAL. PURCHASE IN 20' LENGTHS TO MINIMIZE SPLICES.
  - 3) INSTALL ALL SUPPORTS INDICATED AND GRIND SMOOTH PRIOR TO SANDBLASTING MODULE. SANDBLAST AND PAINT ALL SUPPORTS THIS SHEET EQUIVALENT TO MODULE INTERIOR. SEE SHEET A1 FOR PAINTING SPECIFICATIONS.





**4** CEILING STRUT SUPPORT LAYOUT PLAN  
M2.2 3/8"=1'-0"

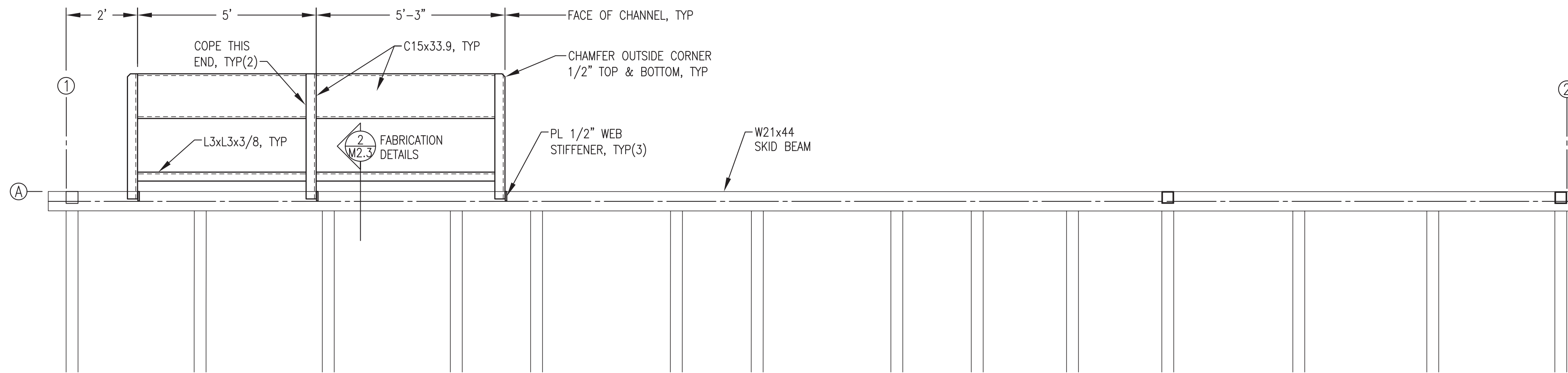


CEILING PLATE & CORRUGATION LAYOUT

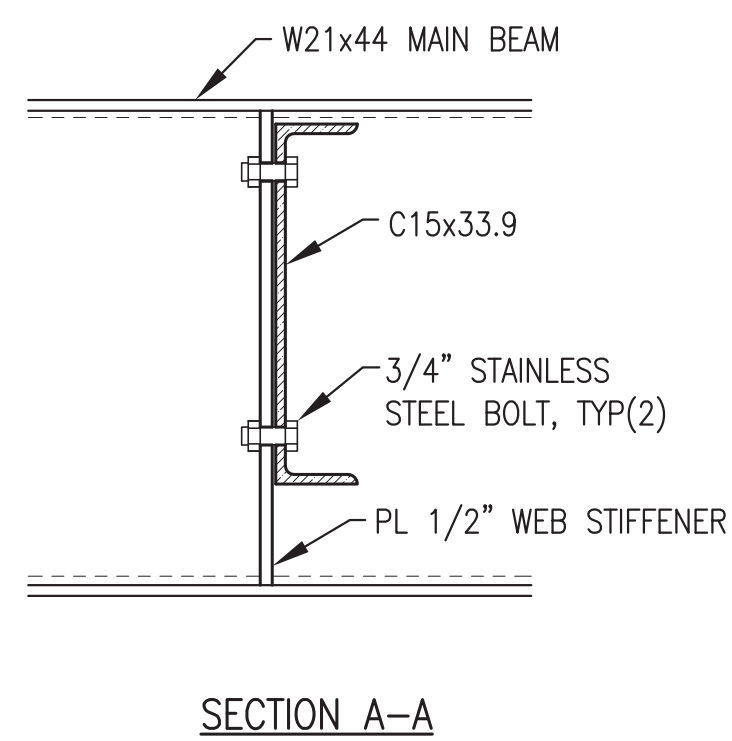
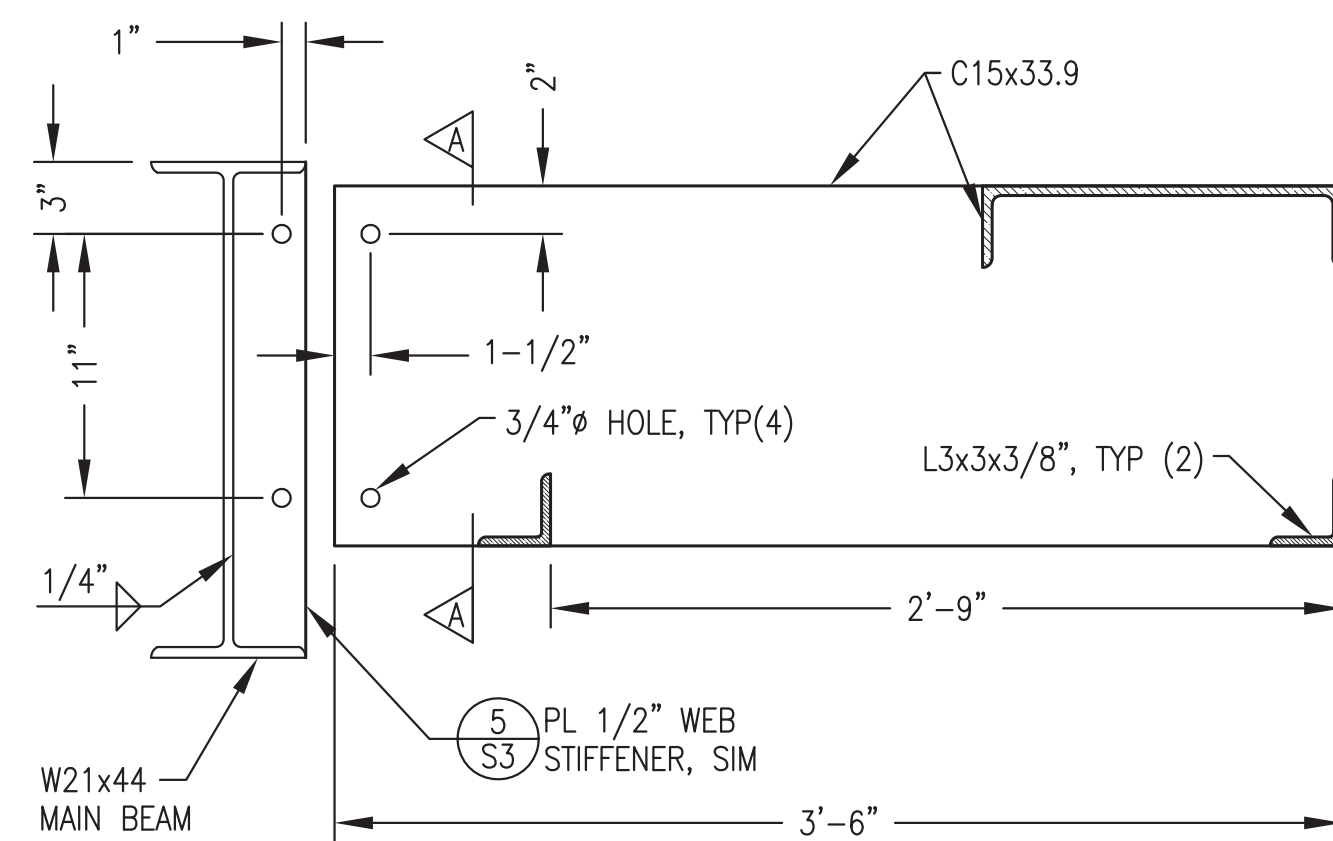
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MODULE  
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OCTOBER 2018



 ALASKA ENERGY AUTHORITY		
PROJECT: PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE		
TITLE: MECHANICAL SUPPORT PLANS & DETAILS		
 Gray Stassel Engineering, Inc. P.O. 111405, Anchorage, AK 99511 (907)349-0100	DRAWN BY: JTD DESIGNED BY: BCG FILE NAME: PTH PPU M2-7 PROJECT NUMBER:	SCALE: AS NOTED DATE: 10-19-18 SHEET: M2.2 OF 8



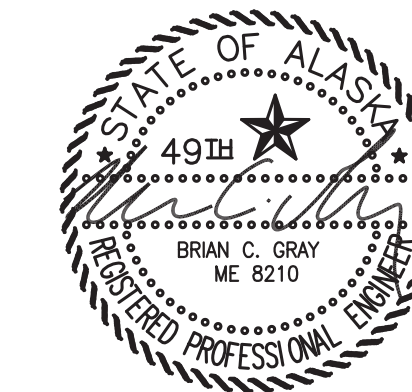
1 RADIATOR SUPPORT PLAN  
M2.3 1/2"=1'-0"



- SUPPORT FABRICATION NOTES:**
- 1) FABRICATE SUPPORT FROM ASTM A36 ANGLE & CHANNEL AS SHOWN.
  - 2) RACK ALL SUPPORT BRACKETS LEVEL & PERPENDICULAR TO SKID WITH CONNECTIONS BOLTED TIGHT PRIOR TO WELDING.
  - 3) UPON COMPLETION OF WELDING ROUND CORNERS AND GRIND EDGES SMOOTH.
  - 4) PRIOR TO SANDBLASTING MODULE REMOVE SUPPORTS THEN SANDBLAST AND PAINT EQUIVALENT TO MODULE EXTERIOR WALLS. SEE SHEET A1 FOR PAINTING SPECIFICATIONS.

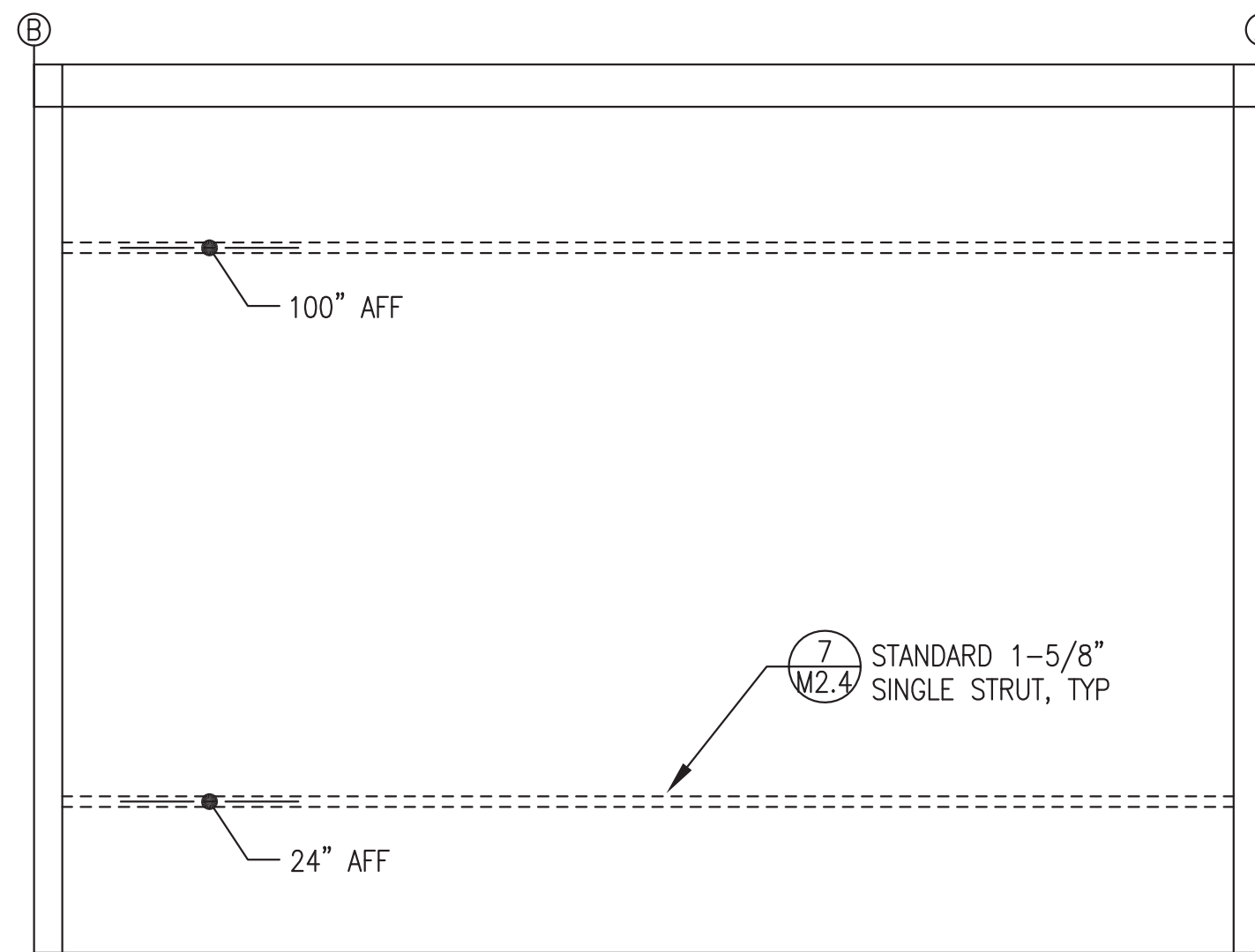
2 RADIATOR SUPPORT FABRICATION  
M2.3 1-1/2"=1'-0"

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MODULE  
PROCUREMENT  
OCTOBER 2018

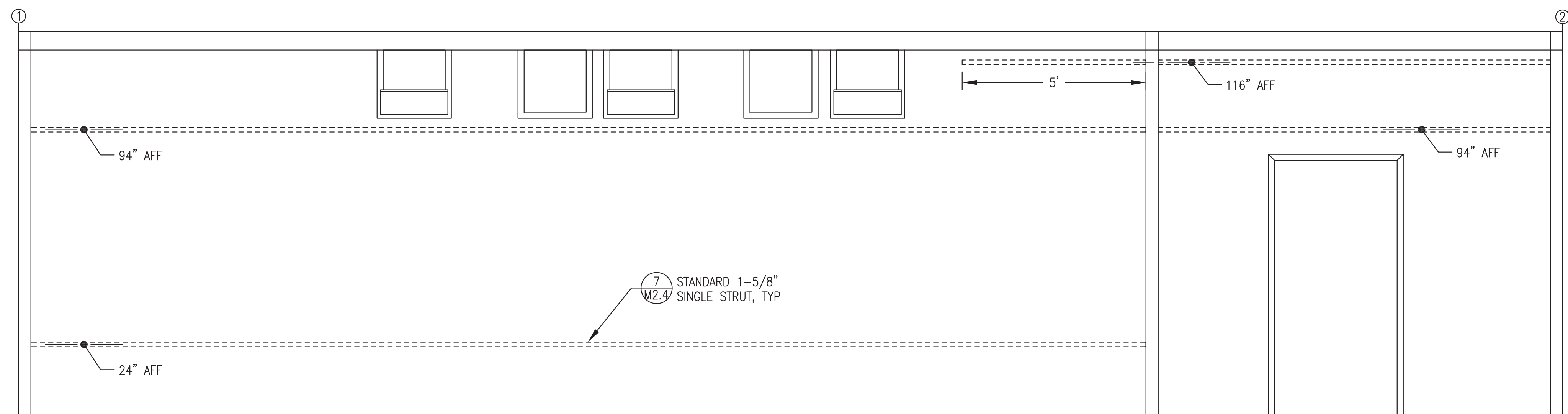


PROJECT: PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE		
TITLE: RADIATOR SUPPORT PLAN & DETAILS		
DRAWN BY: JTD	SCALE: AS NOTED	
DESIGNED BY: BCG	DATE: 10-19-18	
FILE NAME: PTH PPU M2-7	SHEET: M2.3	OF 8
PROJECT NUMBER: P.O. 111405, Anchorage, AK 99511 (907)349-0100		

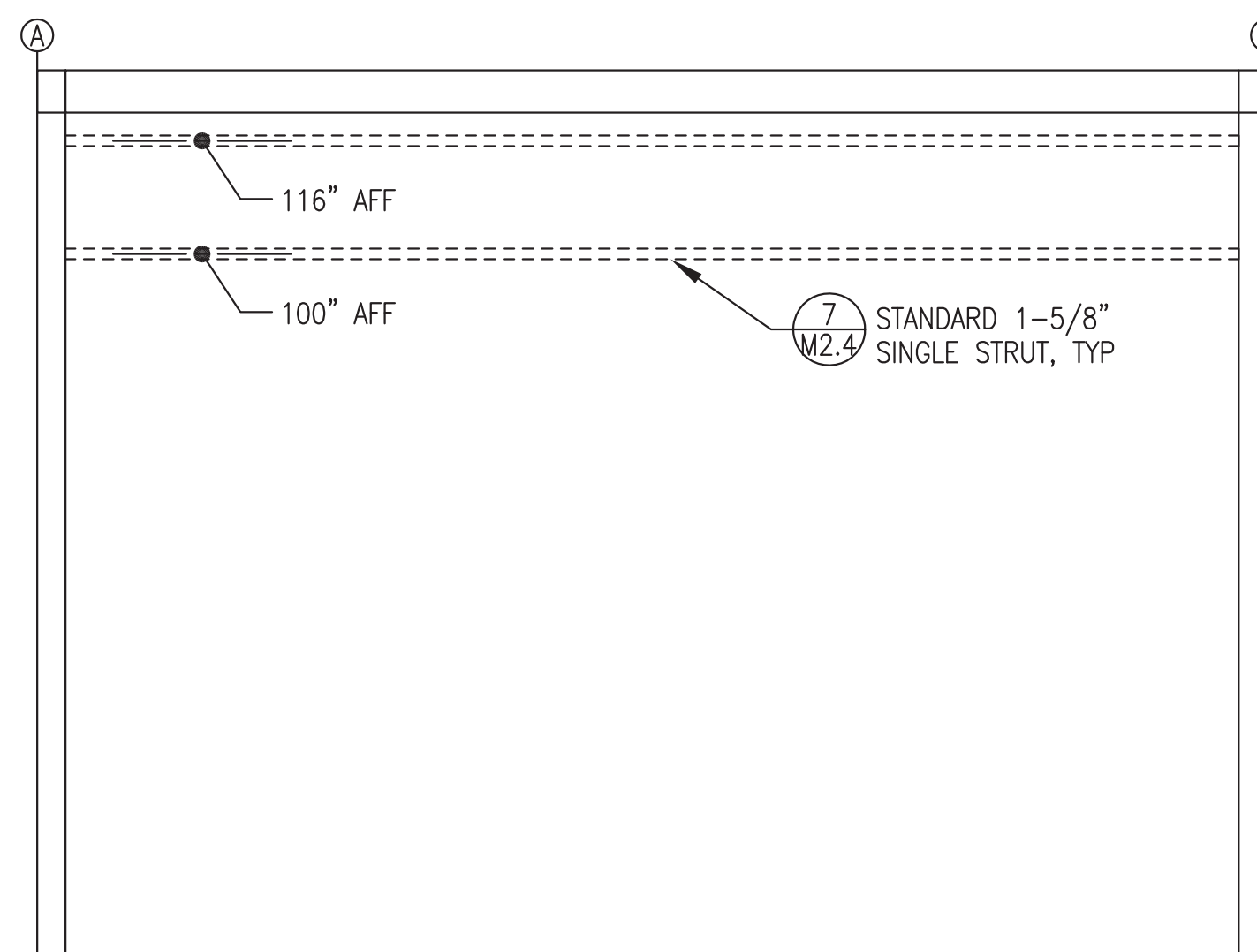




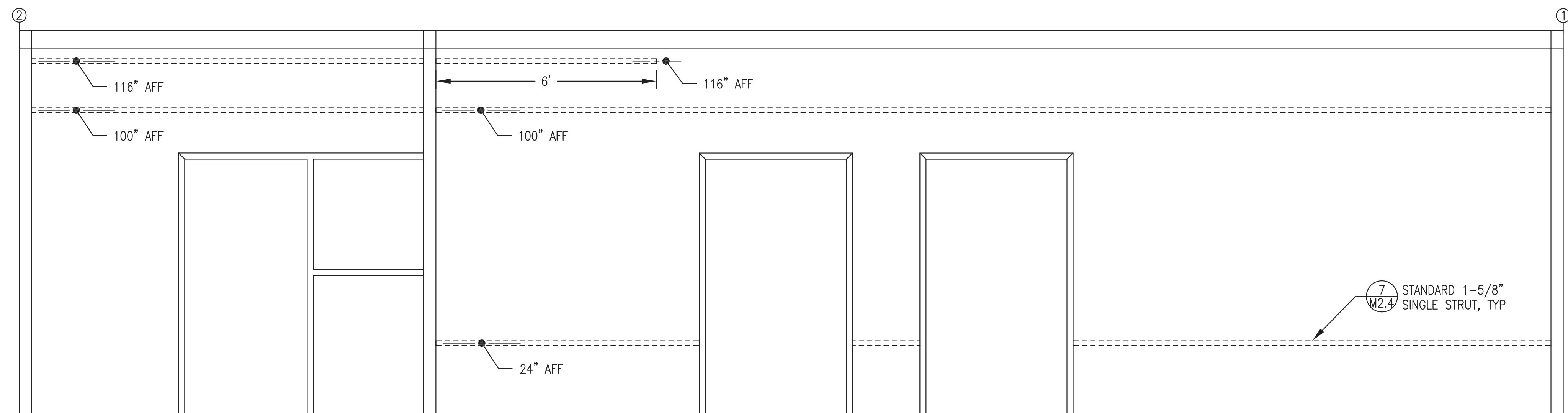
1 END WALL (GRID 1) HORIZONTAL WALL STRUT LAYOUT  
M2.4 1/2"=1'-0"



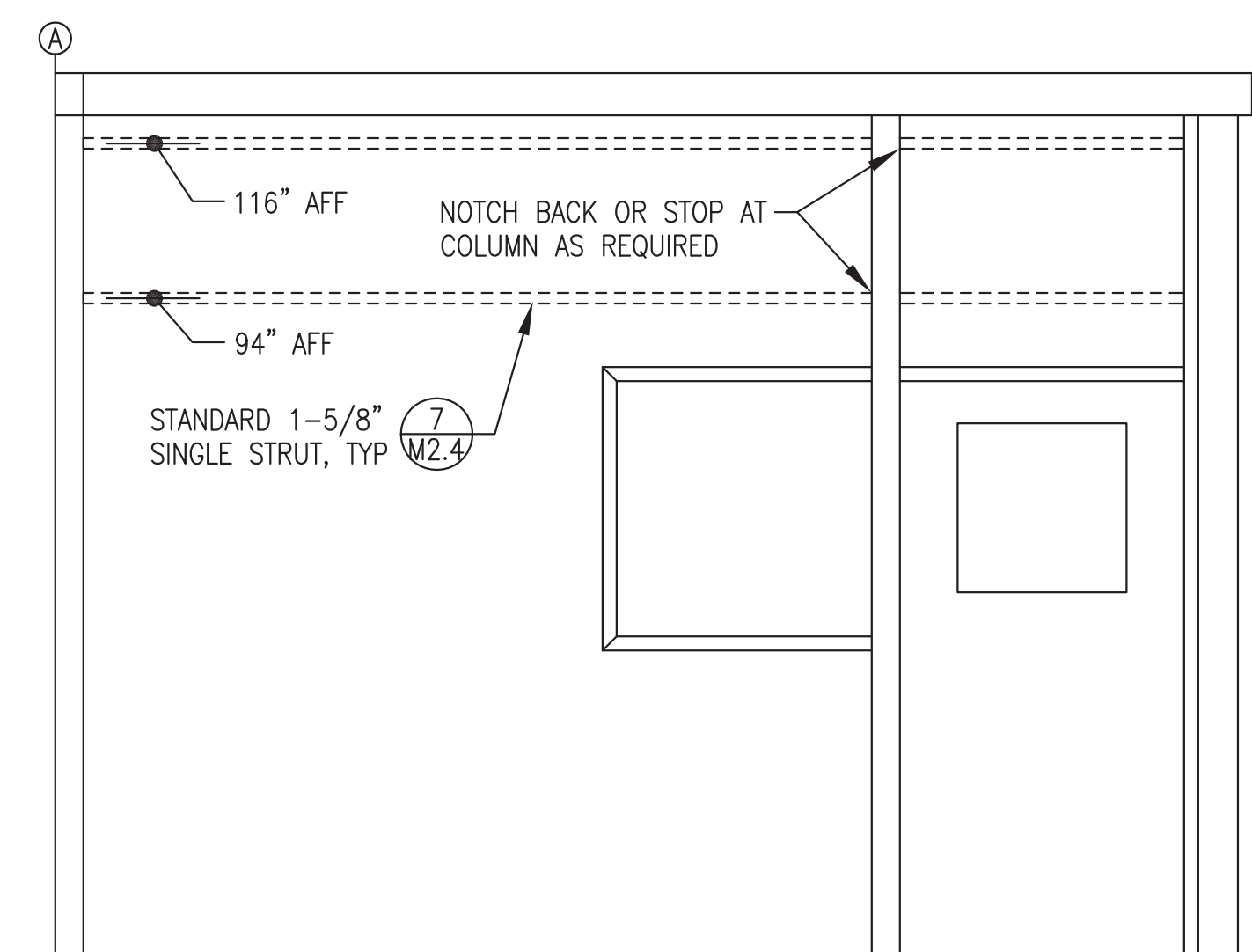
2 BACK WALL (GRID A) HORIZONTAL WALL STRUT LAYOUT  
M2.4 1/2"=1'-0"



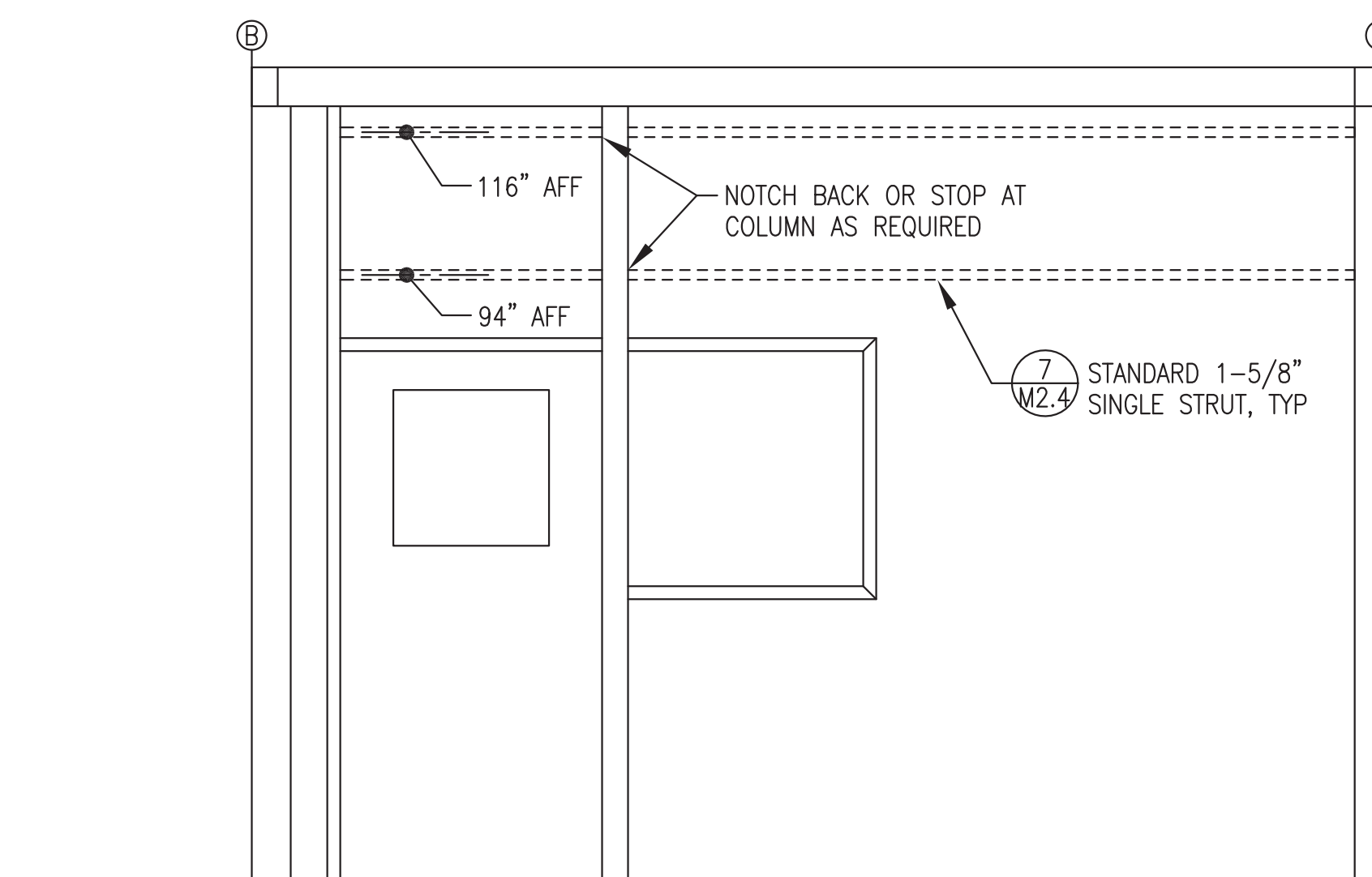
3 END WALL (GRID 2) HORIZONTAL WALL STRUT LAYOUT  
M2.4 1/2"=1'-0"



4 FRONT WALL (GRID B) HORIZONTAL WALL STRUT LAYOUT  
M2.4 1/2"=1'-0"



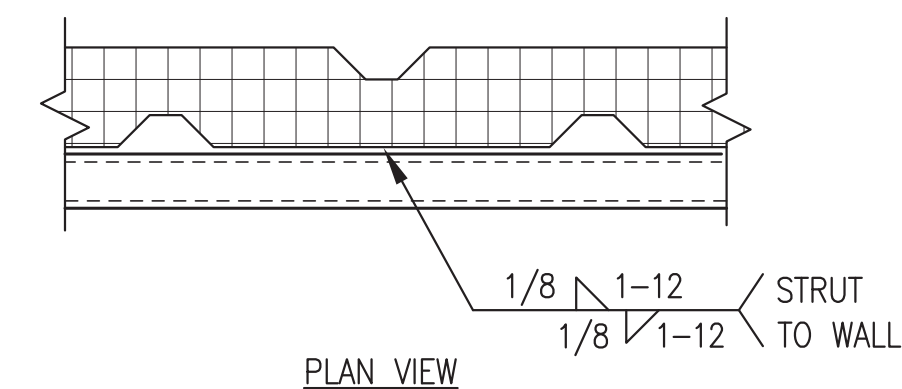
5 GEN BAY RIGHT WALL HORIZONTAL WALL STRUT LAYOUT  
M2.4 1/2"=1'-0"



6 CONTROL ROOM LEFT WALL HORIZONTAL WALL STRUT LAYOUT  
M2.4 1/2"=1'-0"

**HORIZONTAL WALL STRUT INSTALLATION NOTES:**



- 1) ALL LOCATIONS ARE CENTERLINE OF STRUT ABOVE FINISHED FLOOR (AFF).
- 2) ALL STRUT SHALL BE 12 GAUGE, 1-5/8" x 1-5/8", PLAIN (UN-FINISHED BLACK) WITH SOLID BACK, B-LINE B22-PLN OR EQUAL.
- 3) PRIOR TO PAINTING MODULE, WELD ALL HORIZONTAL STRUT SECTIONS TO WALLS AS SHOWN. SANDBLAST AND PAINT STRUT WITH MODULE INTERIOR WALLS. SEE SHEET A1 FOR PAINTING SPECIFICATIONS.



7 HORIZONTAL WALL STRUT ATTACHMENT  
M2.4 NO SCALE

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MODULE  
PROCUREMENT  
OCTOBER 2018



 ALASKA ENERGY AUTHORITY		
PROJECT: PORT HEIDEN RURAL POWER SYSTEM POWER PLANT UPGRADE		
TITLE: MECHANICAL SUPPORT HORIZONTAL WALL STRUT INSTALLATION		
 Gray Stassel Engineering, Inc. P.O. 111405, Anchorage, AK 99511 (907)349-0100	DRAWN BY: JTD DESIGNED BY: BCG FILE NAME: PTH PPU M2-7 PROJECT NUMBER:	SCALE: AS NOTED DATE: 10-19-18 SHEET: <b>M2.4</b> OF 8