

AKHIOK POWER SYSTEM UPGRADE PROJECT MODULE STRUCTURE FABRICATION

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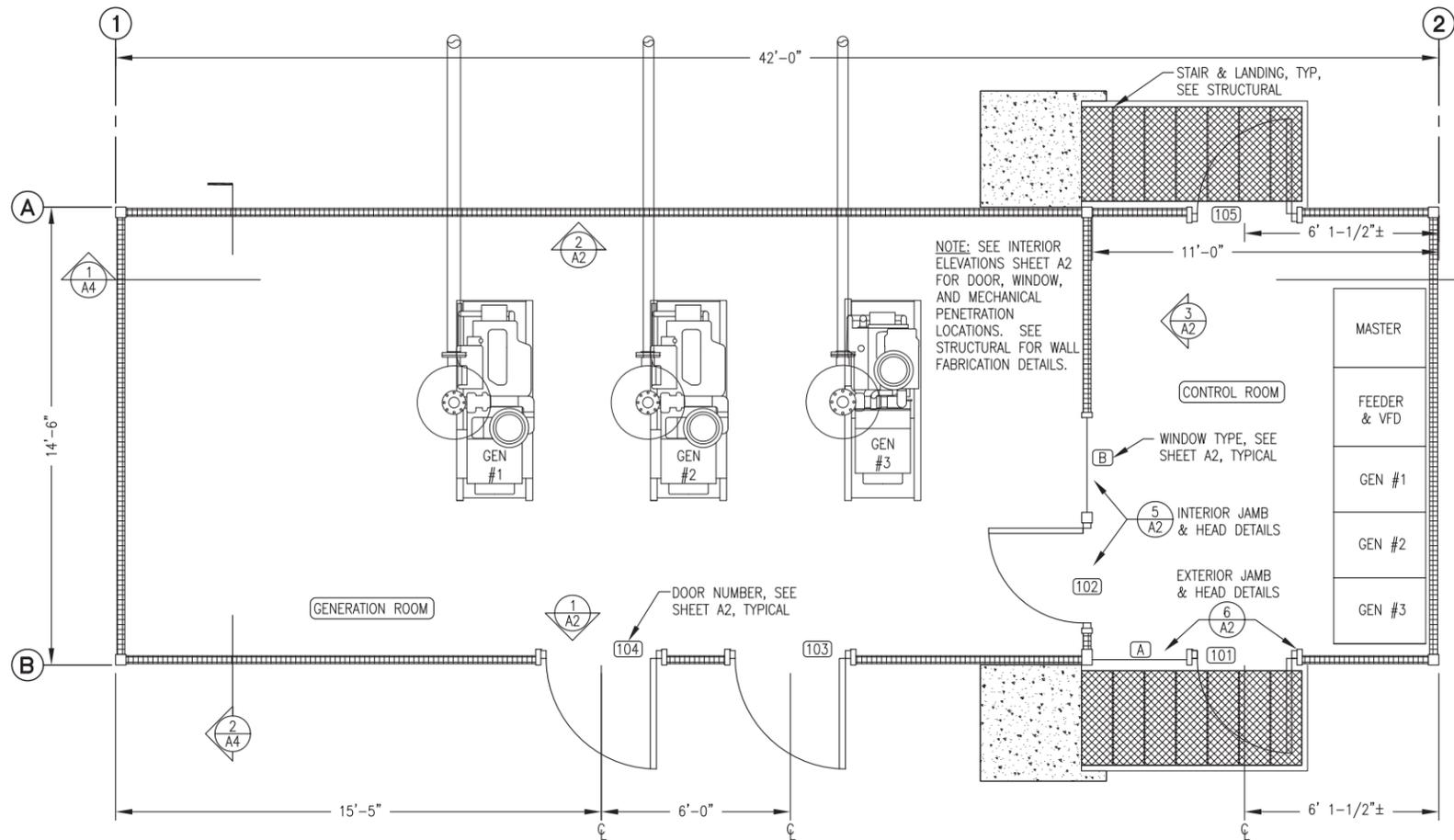


AKHIOK, ALASKA
POWER SYSTEM UPGRADE PROJECT
MODULE STRUCTURE FABRICATION
SCHEDULE OF DRAWINGS

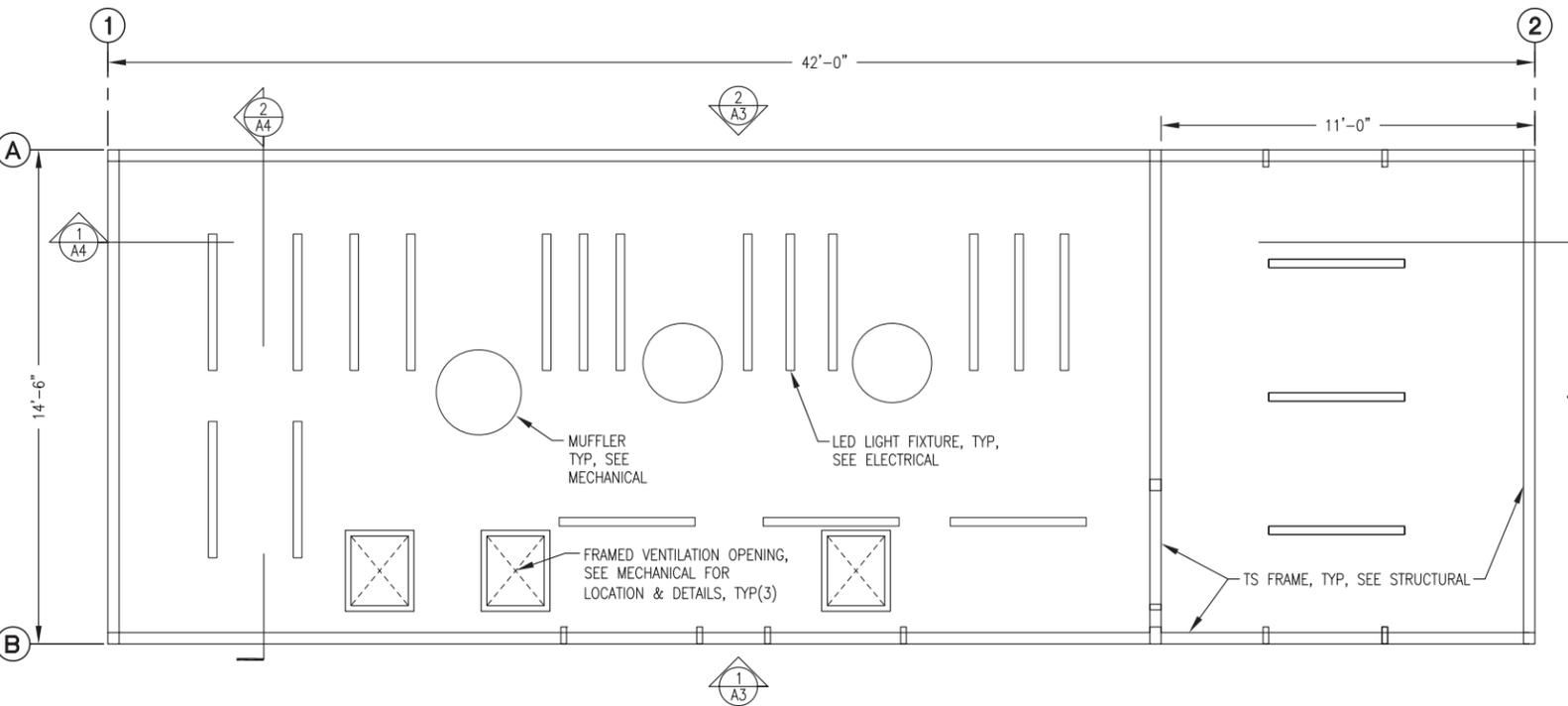
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Sheet No. **G1**



1 FLOOR PLAN
A1 3/8"=1'-0"



2 REFLECTED CEILING PLAN
A1 3/8"=1'-0"

CODE ANALYSIS – 2012 EDITION INTERNATIONAL BUILDING CODE

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

ARCHITECTURAL GENERAL NOTES:

- 1) SEE CIVIL SITE PLAN FOR LOCATION AND LAYOUT. PROVIDE SEPARATION TO PROPERTY BOUNDARIES IN ACCORDANCE WITH CODE ANALYSIS.
- 2) 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.
- 3) SEE SHEET A2 FOR DOOR AND WINDOW DETAILS AND SCHEDULE. SEE SHEETS A3 AND A4 FOR DESCRIPTION OF FIELD INSTALLED ROOF SYSTEM.
- 4) 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.
- 5) 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.
- 6) SANDBLAST EXTERIOR SURFACE TO SSPC-SP-10. PRIME WITH ONE COAT OF REINFORCED INORGANIC ZINC PRIMER, DEVCO CATHA-COAT 302 OR APPROVED EQUAL, COLOR GREEN, TO 3 MILS DRY FILM THICKNESS. COVER WITH TWO COATS OF EPOXY, DEVCO BAR-RUST 236 OR APPROVED EQUAL, TO 12 MILS DRY FILM THICKNESS. FIRST COAT COLOR GRAY, SECOND COAT COLOR WHITE.
- 7) FINISH EXTERIOR WALLS AND SKIDS (ALL EXPOSED VERTICAL EXTERIOR SURFACES) WITH ONE COAT OF ALIPHATIC URETHANE ENAMEL, DEVCO DEVTHANE 389 OR APPROVED EQUAL, COLOR WHITE, TO 3 MILS DRY FILM THICKNESS.
- 8) SANDBLAST INTERIOR SURFACE TO SSPC-SP-6. PRIME AND FINISH WITH TWO COATS OF EPOXY, SHERWIN WILLIAMS MACROPOXY 646 OR APPROVED EQUAL, 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 equipment not part of module structure fabrication scope, see exclusions.

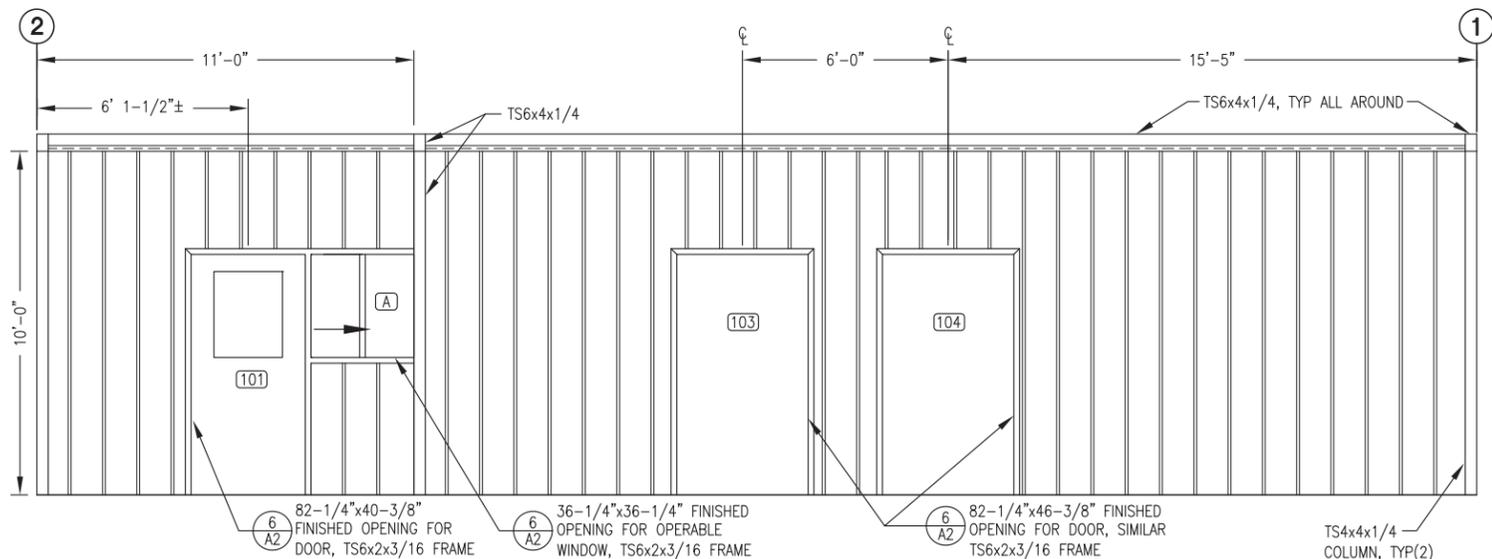


AKHIOK, ALASKA
POWER SYSTEM UPGRADE PROJECT
FLOOR PLAN, REFLECTED CEILING PLAN,
CODE ANALYSIS, & GENERAL NOTES

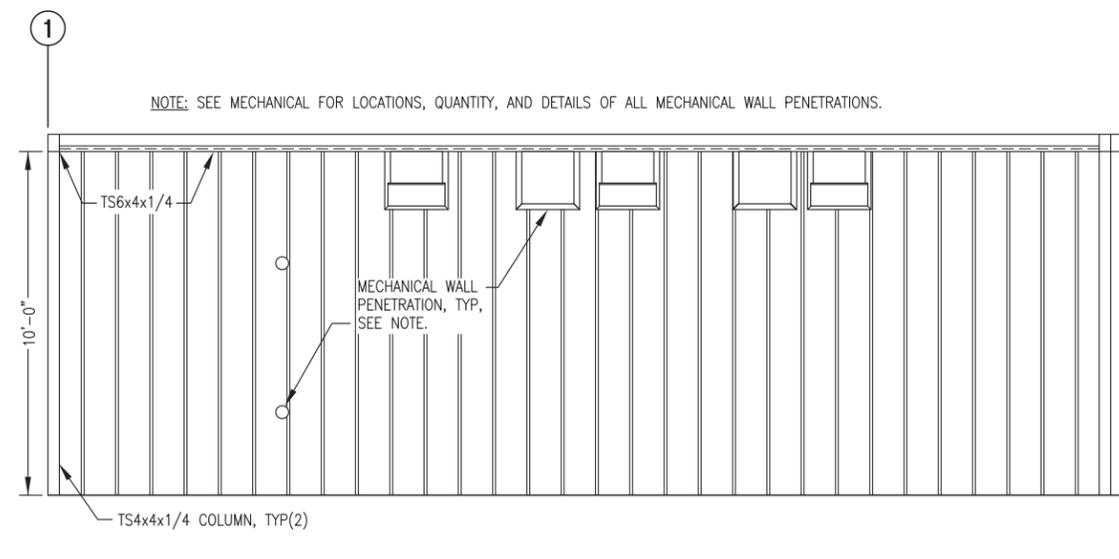
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1	REVISED PAINT SPECIFICATIONS	BCG	11/5/19

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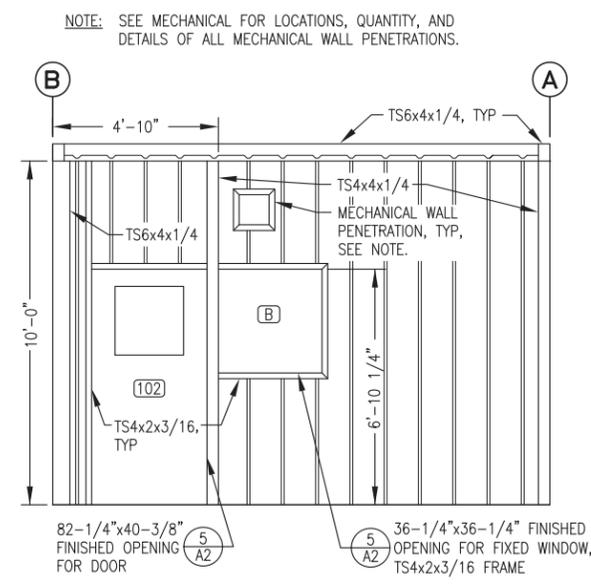
Sheet No. A1



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



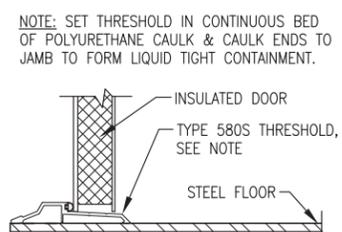
2 PARTIAL GENERATOR ROOM BACK WALL INTERIOR ELEVATION
3/8"=1'-0"



3 CONTROL ROOM WALL INTERIOR ELEVATION
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
NO SCALE

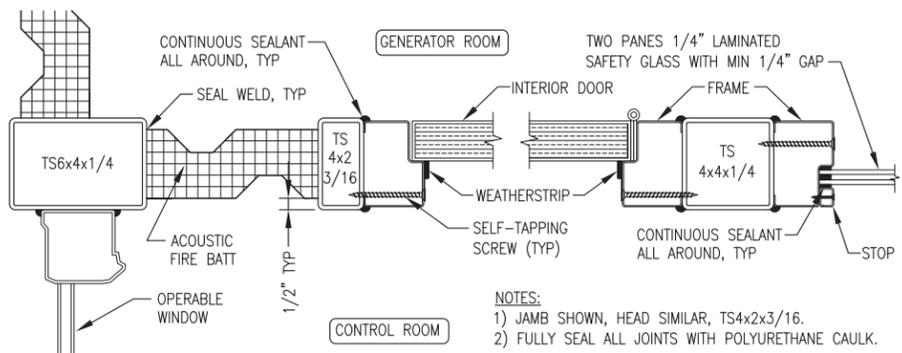
DOOR CONSTRUCTION							FRAME CONSTRUCTION						
DOOR NO.	WIDTH	HEIGHT	THICK NESS	MATERIAL	CORE	REMARKS	WALL THICK.	MATERIAL	TYPE	PROFILE	PREP.	FIRE RATING	HDWR. GROUP
101	3'-0"	6'-8"	1-3/4"	16 GA. H.M.	POLYURETHANE	24"x24" RE-LIGHT {4}	N/A	16 GA. H.M.	WELDED	SINGLE RABBETED	DIMPLE & PUNCH	NONE	HW-1
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:			
HW-1	3 EA	HINGES	HAGER BB1191 4.5 x 4.5NRP x 630				
1 EA	EXIT DEVICE	PRECISION 2108 x 4908AX3 x 630					
1 EA	CORE	BEST BROWN CONSTRUCTION CORE					
1 EA	DOOR CLOSER	LCN 4040 x CUSH x 689					
1 EA	KICK PLATE	ROCKWOOD K1050 10 x 34 x 630					
1 EA	WEATHER STRIP	PEMCO 2891AS x 36 (HEAD)					
2 EA	WEATHER STRIP	PEMCO 290AS x 80 (SIDE JAMBS)					
1 EA	THRESHOLD	HAGER 580S x 36					
HW-2	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					

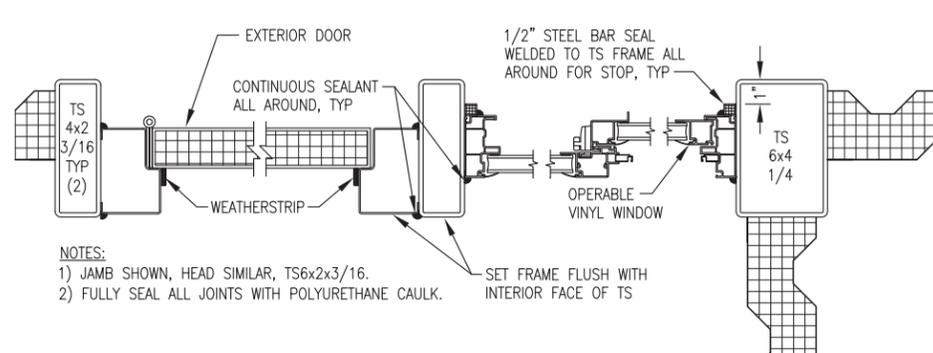
WINDOW TYPES:	
A	OPERABLE SLIDER WITH WHITE VINYL FRAME & 1" INSULATED GLAZING
B	FIXED SINGLE RABBET HOLLOW METAL FRAME WITH 2 PANES OF 1/4" LAMINATED SAFETY GLASS

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 PAINT IDENTICAL TO INTERIOR WALLS AND FLOORS AS SPECIFIED ON SHEET A1.
- 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
3/8"=1'-0"



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

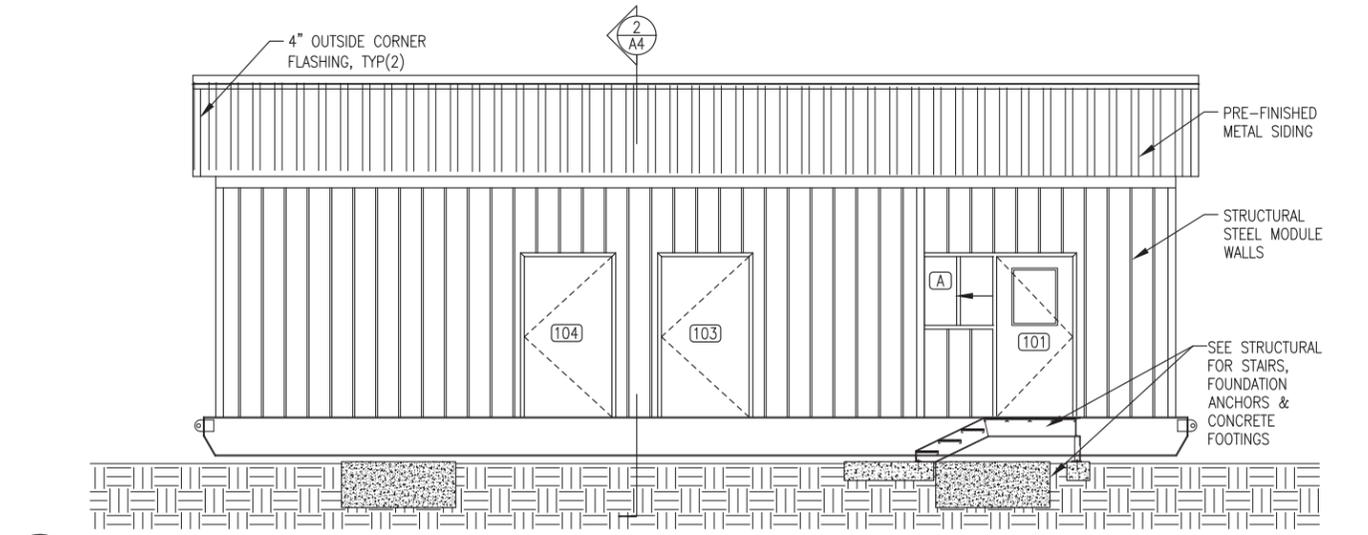
Note: Mechanical and electrical equipment not part of module structure fabrication scope, see exclusions.



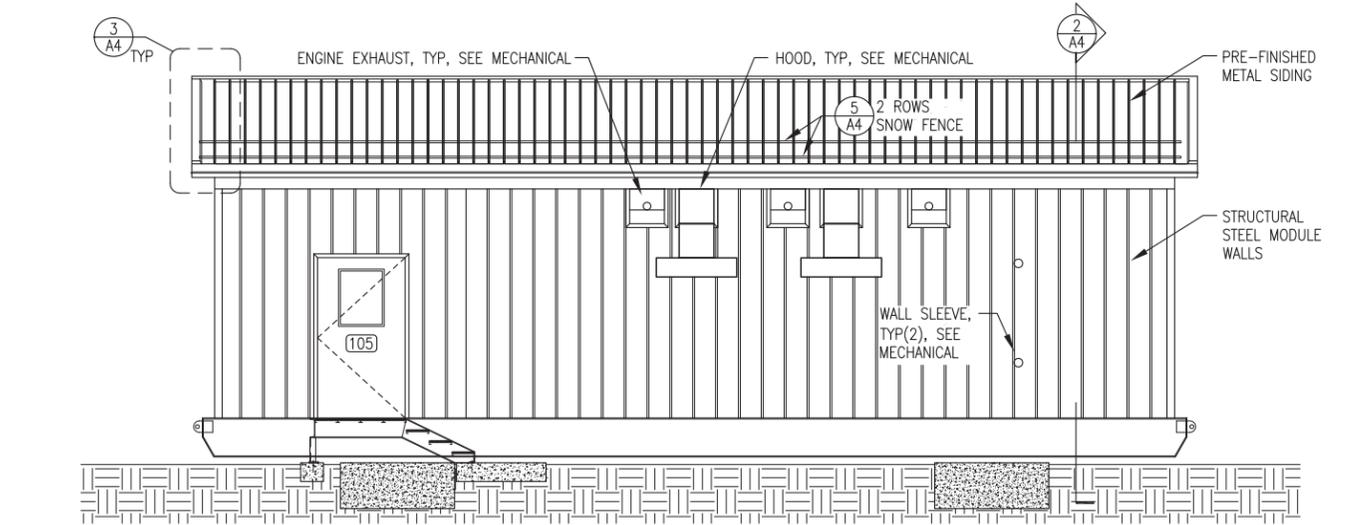
AKHIOK, ALASKA
POWER SYSTEM UPGRADE PROJECT
INTERIOR ELEVATIONS & SCHEDULE
DOOR/WINDOW DETAILS & SCHEDULE

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1	REVISED DOOR PAINT NOTE	11/5/19

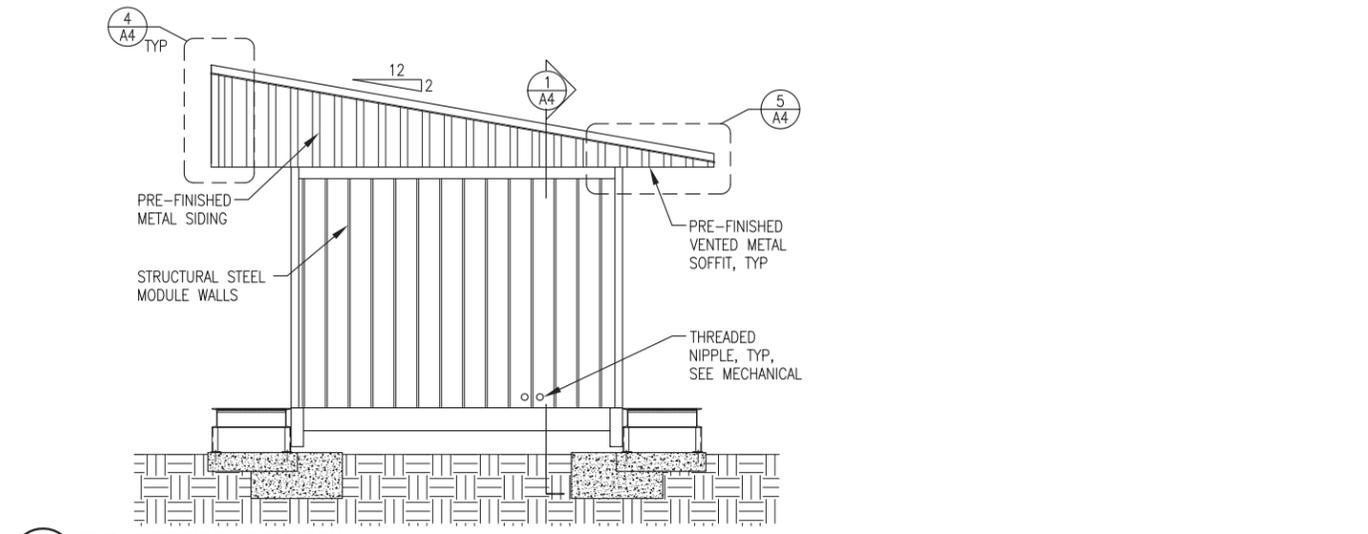
Plot Date	11/5/19	Designed	DGT/BCG	Drawn	JTD	Approved	DGT
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1 FRONT EXTERIOR ELEVATION
1/4"=1'-0"



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

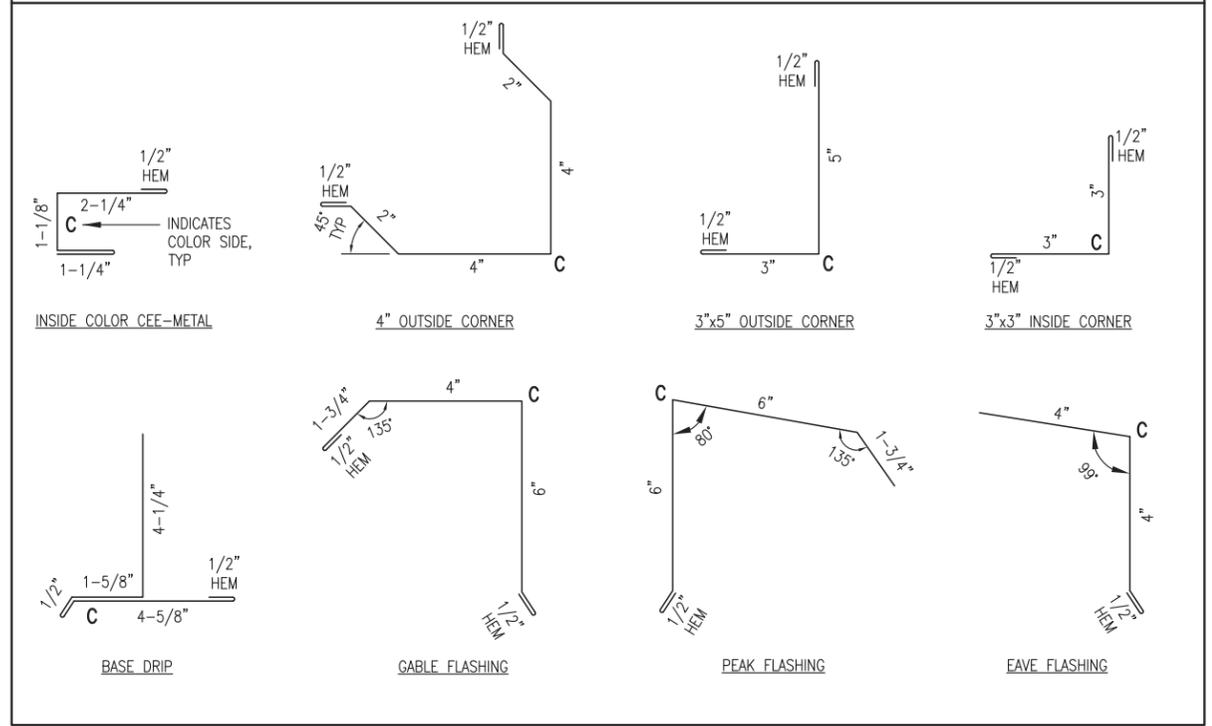


3 END EXTERIOR ELEVATION
1/4"=1'-0"

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 COATED SCREWS AND RIVETS.
- 3) ROOFING SHALL BE MECHANICAL STANDING SEAM TYPE, 24 GAUGE, 16" NET COVERAGE, 2" HIGH RIBS AT 16" O.C. WITH TWO PENCIL RIBS BETWEEN. AEP SPAN SPAN LOK HP 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.
- 6) SEE SHEET A4 FOR ROOF MOUNTED SNOW FENCE.

ROOFING SYSTEM TRIM & FLASHING:

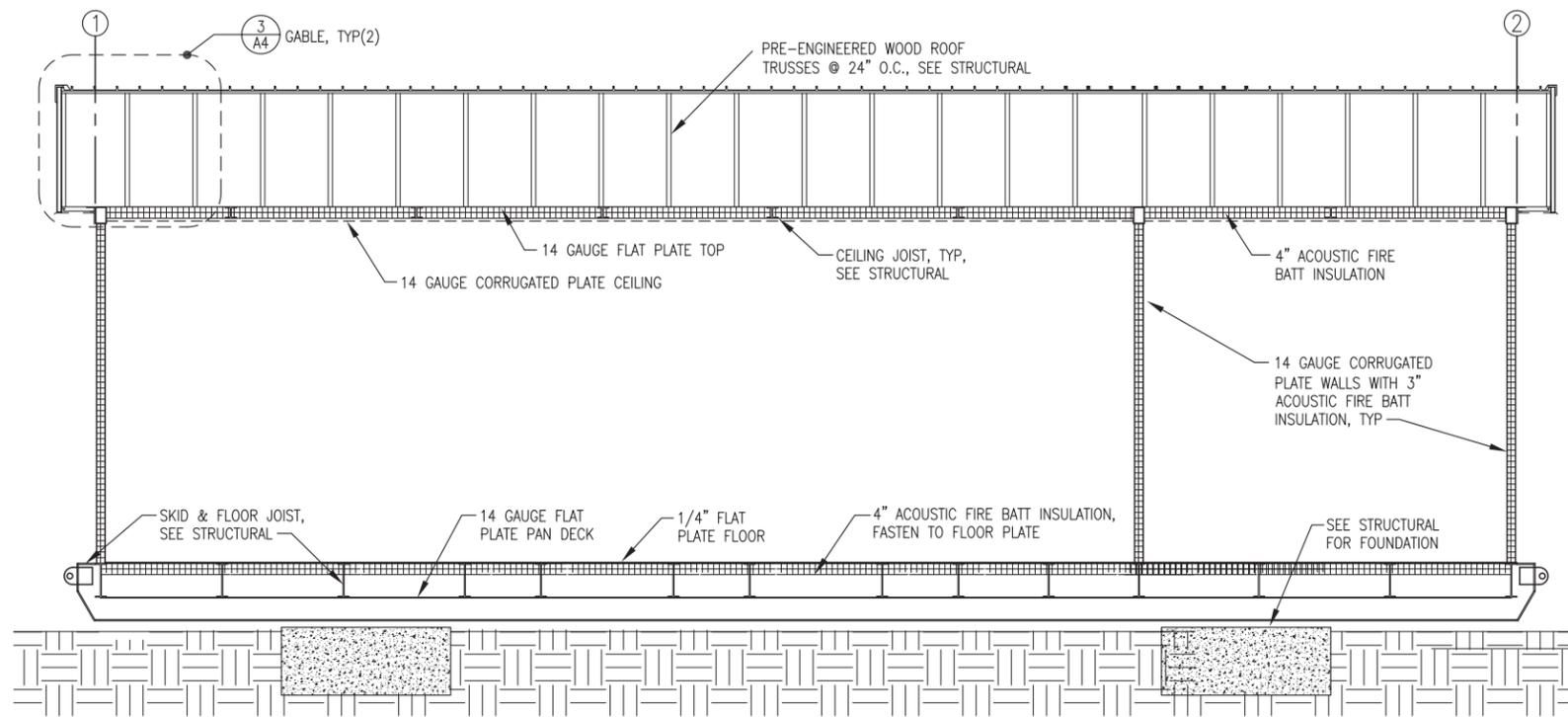


AKHIOK, ALASKA
POWER SYSTEM UPGRADE PROJECT
EXTERIOR ELEVATIONS &
TRIM DETAILS

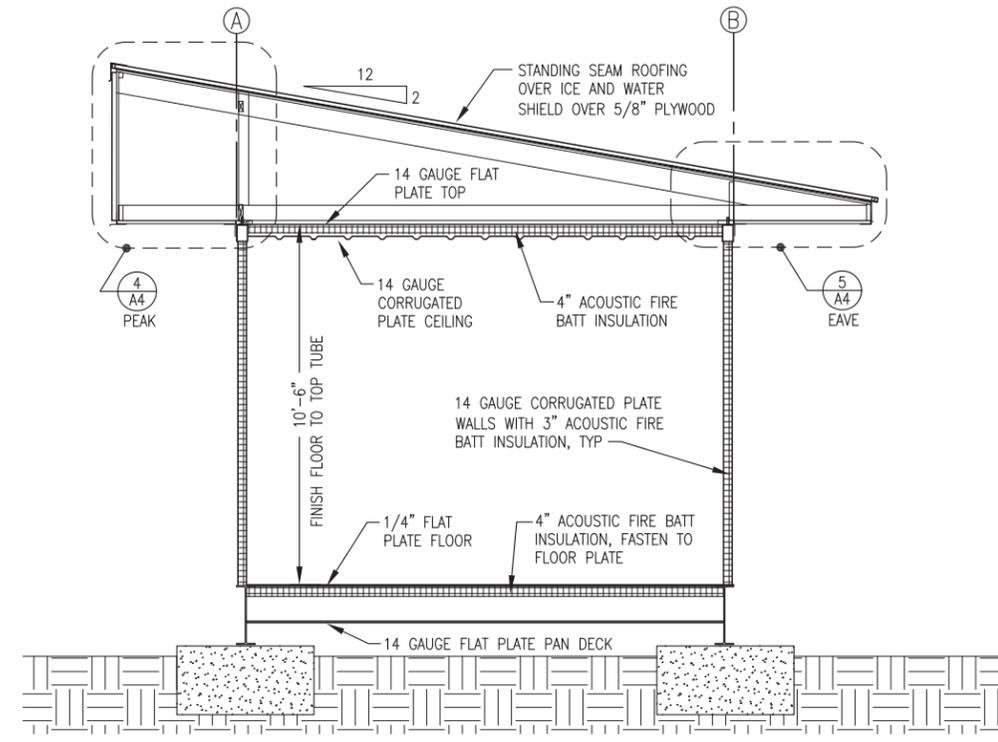
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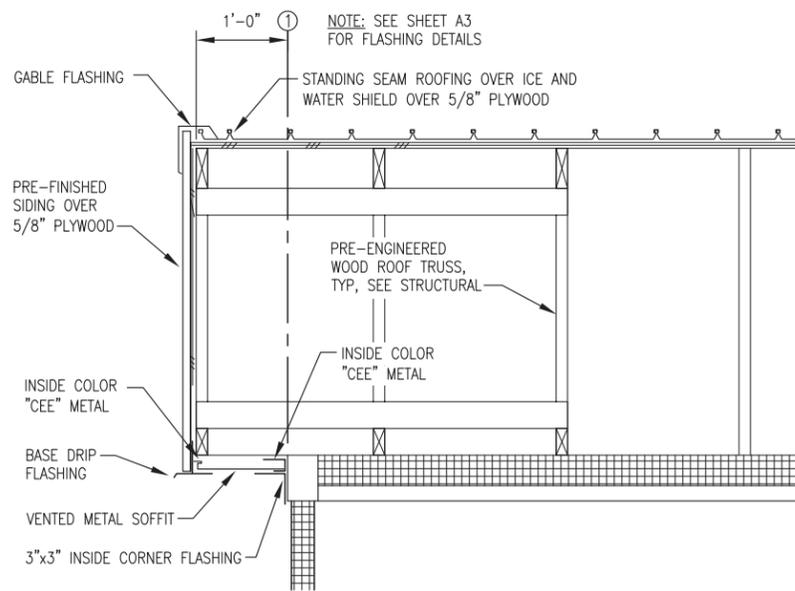
Note: Roof system not part of module structure fabrication scope, see exclusions.



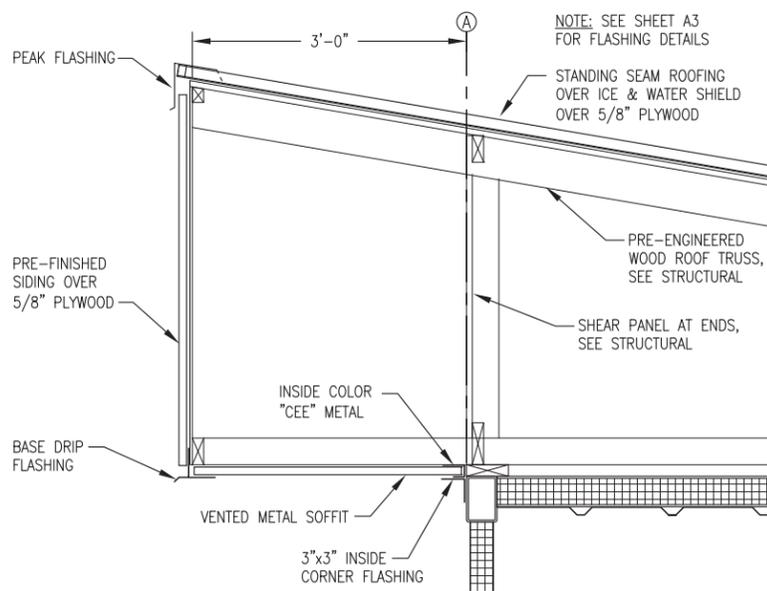
1 BUILDING SECTION
A4 3/8"=1'-0"



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



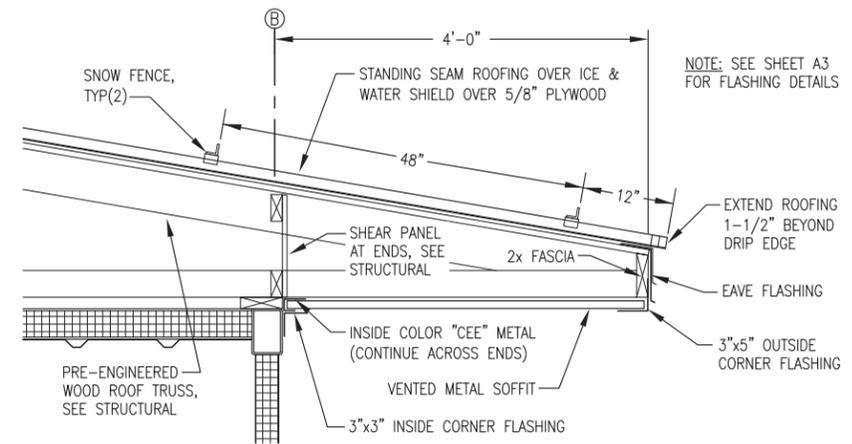
3 GABLE DETAIL
A4 1"=1'-0"



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

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-U CLAMPS, AND ALL REQUIRED FASTENERS.

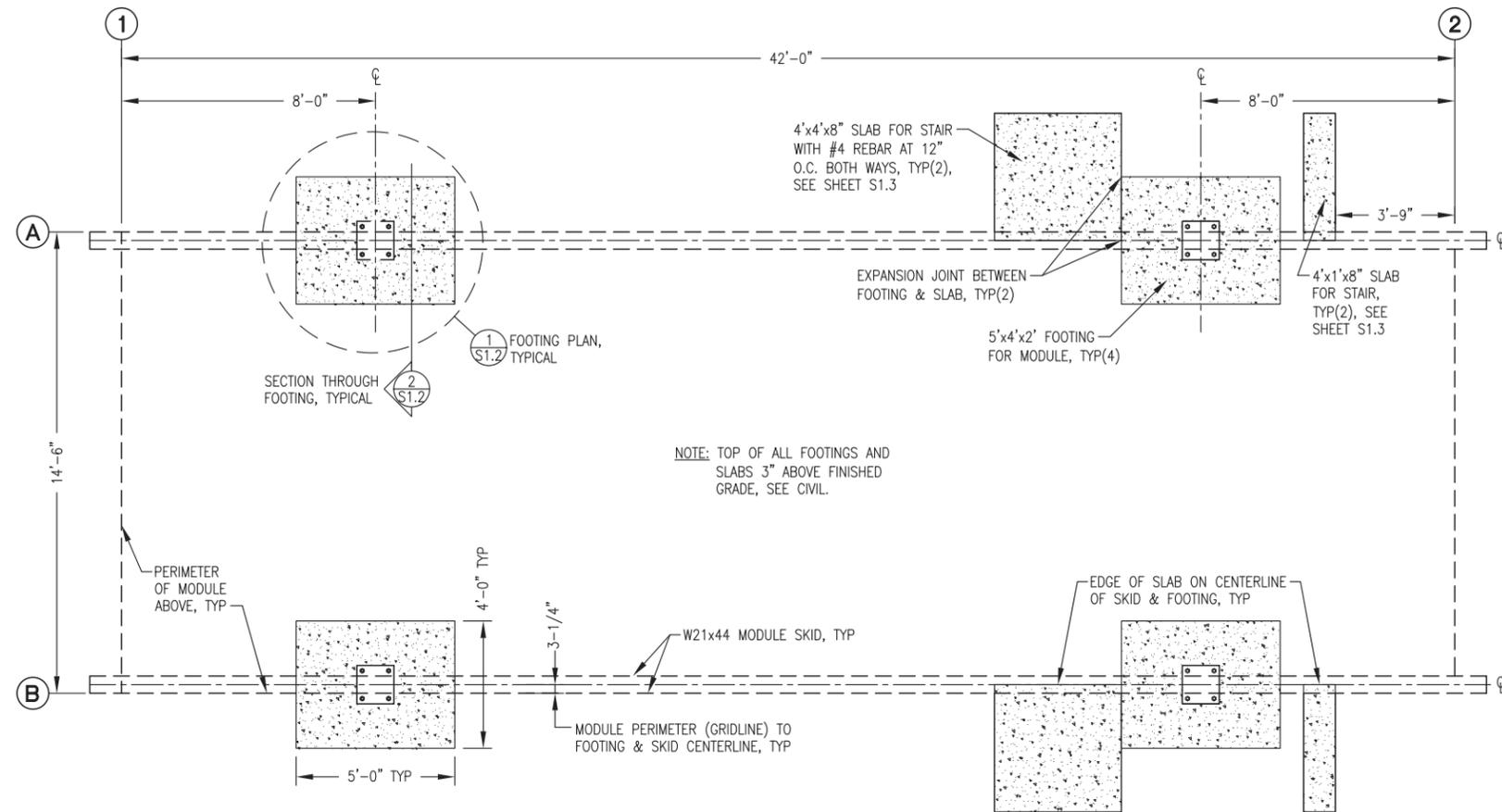


5 EAVE DETAIL
A4 1"=1'-0"

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

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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 = 165 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.

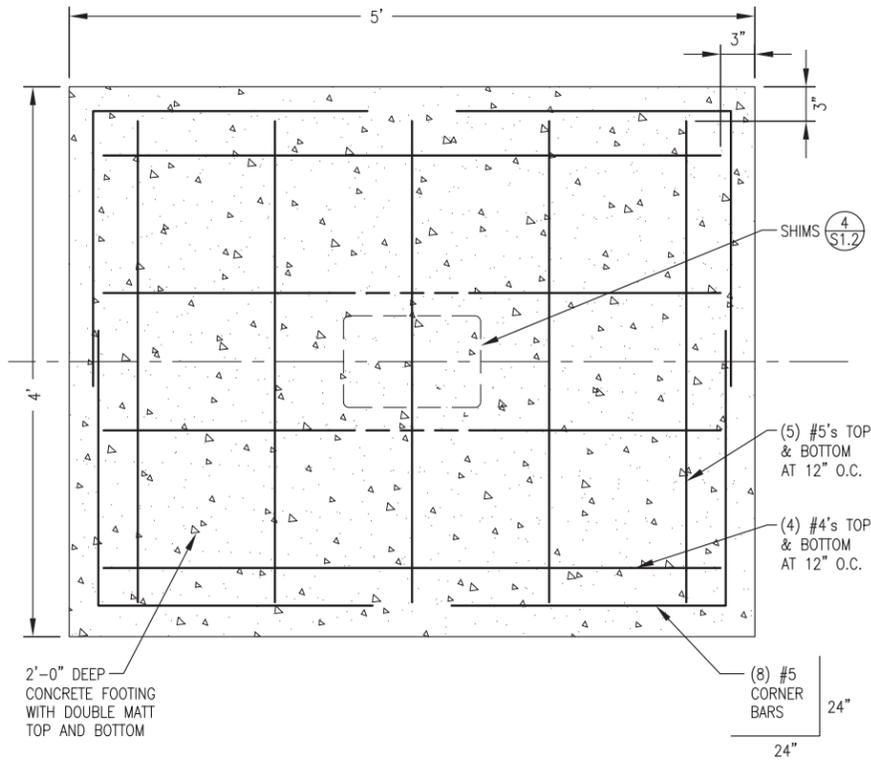


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FOUNDATION PLAN, CODE ANALYSIS,
& STRUCTURAL NOTES

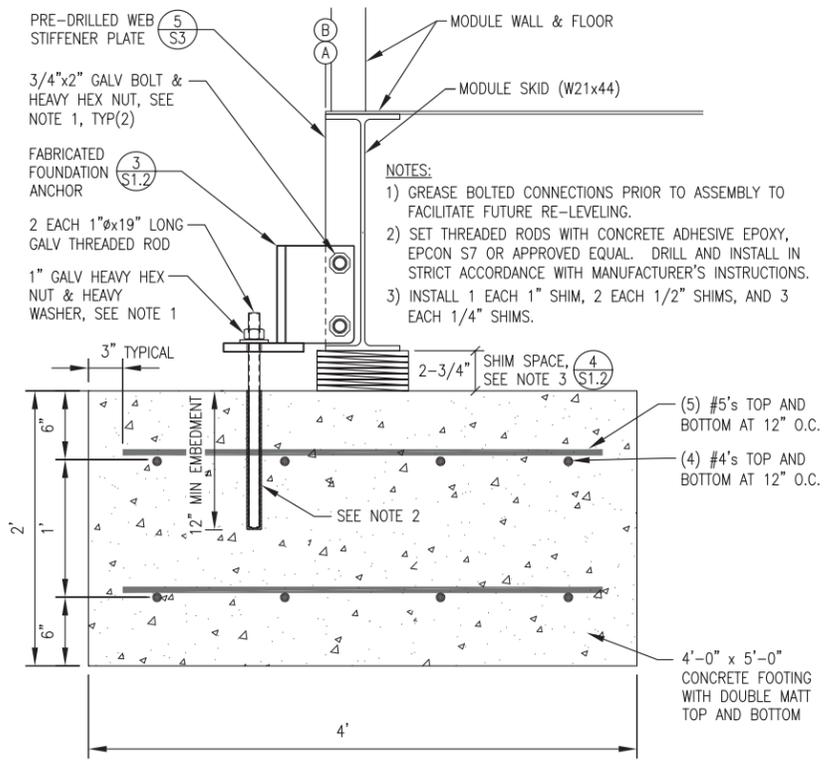
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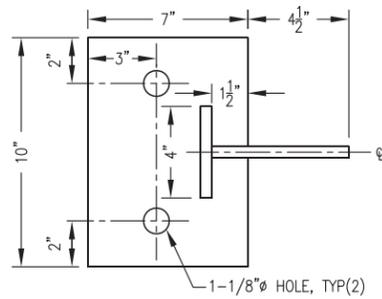
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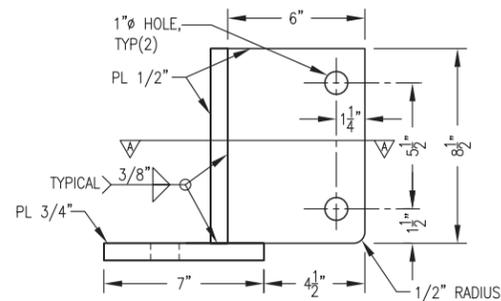
1 FOOTING PLAN
S1.2 1 1/2"=1'-0"



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



SECTION A-A

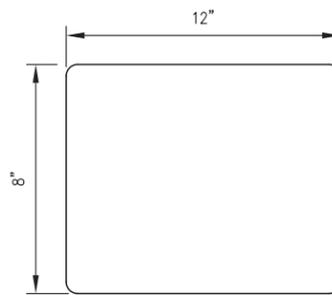


ELEVATION

ANCHOR & SHIM FABRICATION NOTES:

- 1) FABRICATE FOUR IDENTICAL ANCHOR ASSEMBLIES.
- 2) DO NOT SHEAR PLATES FOR ANCHOR. CUT WITH WATER JET, TORCH, OR SAW.
- 3) FABRICATE FROM ASTM A-36 STEEL SHAPES AND PLATE AS INDICATED.
- 4) MAKE ALL JOINTS AND CONNECTIONS WITH CONTINUOUS GROOVE OR FILLET WELDS.
- 5) FABRICATE SHIMS OF QUANTITY AND THICKNESS AS DESCRIBED IN SHIM FABRICATION TABLE.
- 6) UPON COMPLETION OF FABRICATION ROUND ALL OUTSIDE CORNERS AND GRIND ALL EDGES SMOOTH.
- 7) GALVANIZE COMPLETED FABRICATIONS AND SHIMS. PREPARE UTILIZING A CAUSTIC BATH, ACID PICKLE, AND FLUX. HOT-DIP GALVANIZE IN ACCORDANCE WITH ASTM A 123.

SHIM FABRICATION TABLE		
THICKNESS	QUANTITY	MATERIAL
1/4"	12	GALV STEEL
1/2"	8	GALV STEEL
1"	4	GALV STEEL



ROUND CORNERS R= 1/2" (TYPICAL)

3 TYPICAL FOUNDATION ANCHOR
S1.2 3"=1'-0"

4 TYPICAL SHIM
S1.2 NO SCALE

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



AKHIOK, ALASKA
POWER SYSTEM UPGRADE PROJECT

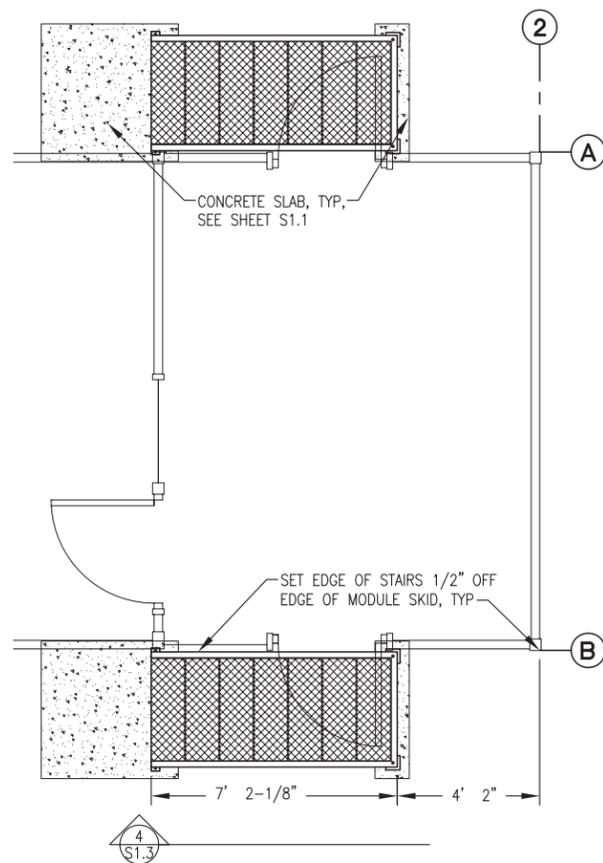
FOUNDATION DETAILS

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0	ISSUED FOR CONSTRUCTION	BCG	11/1/19

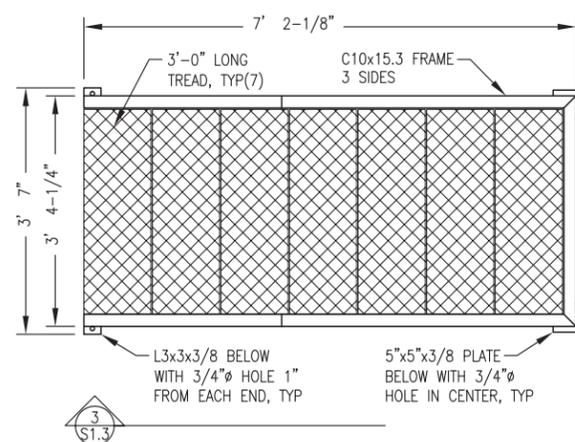
Plot Date	11/1/19	Designed	DGT/BCG
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Sheet No.

S1.2

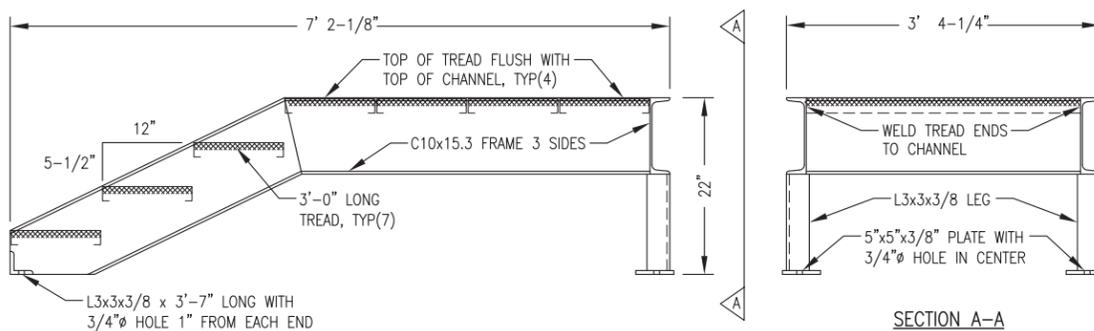


1 STAIR INSTALLATION PLAN
S1.3 3/8"=1'-0"

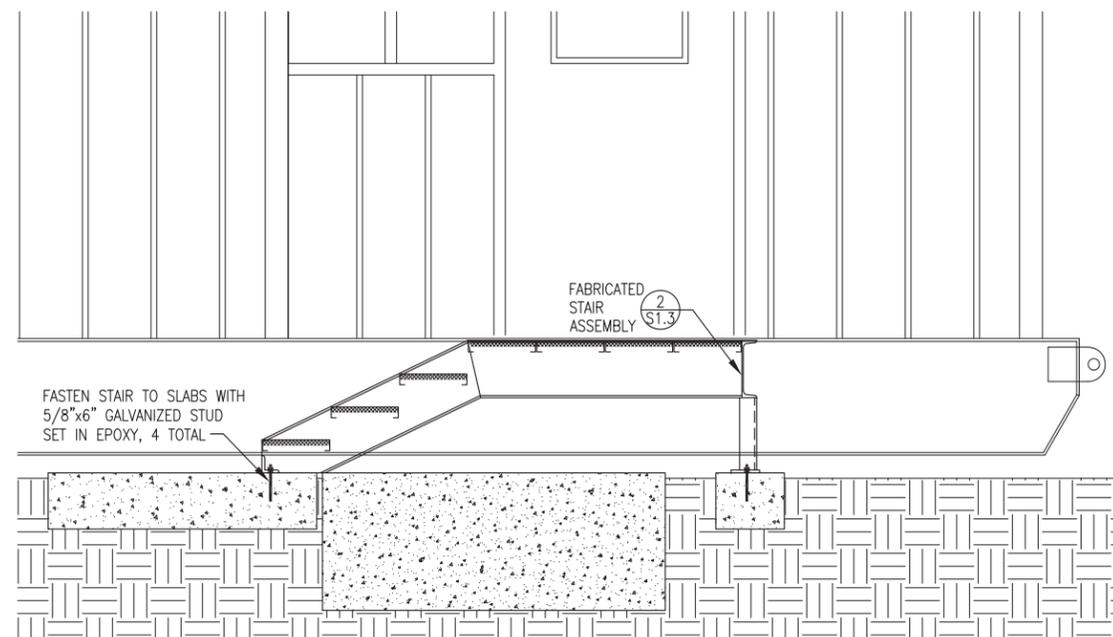


2 STAIR FABRICATION PLAN
S1.3 3/4"=1'-0"

- 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 structure fabrication scope, see exclusions.

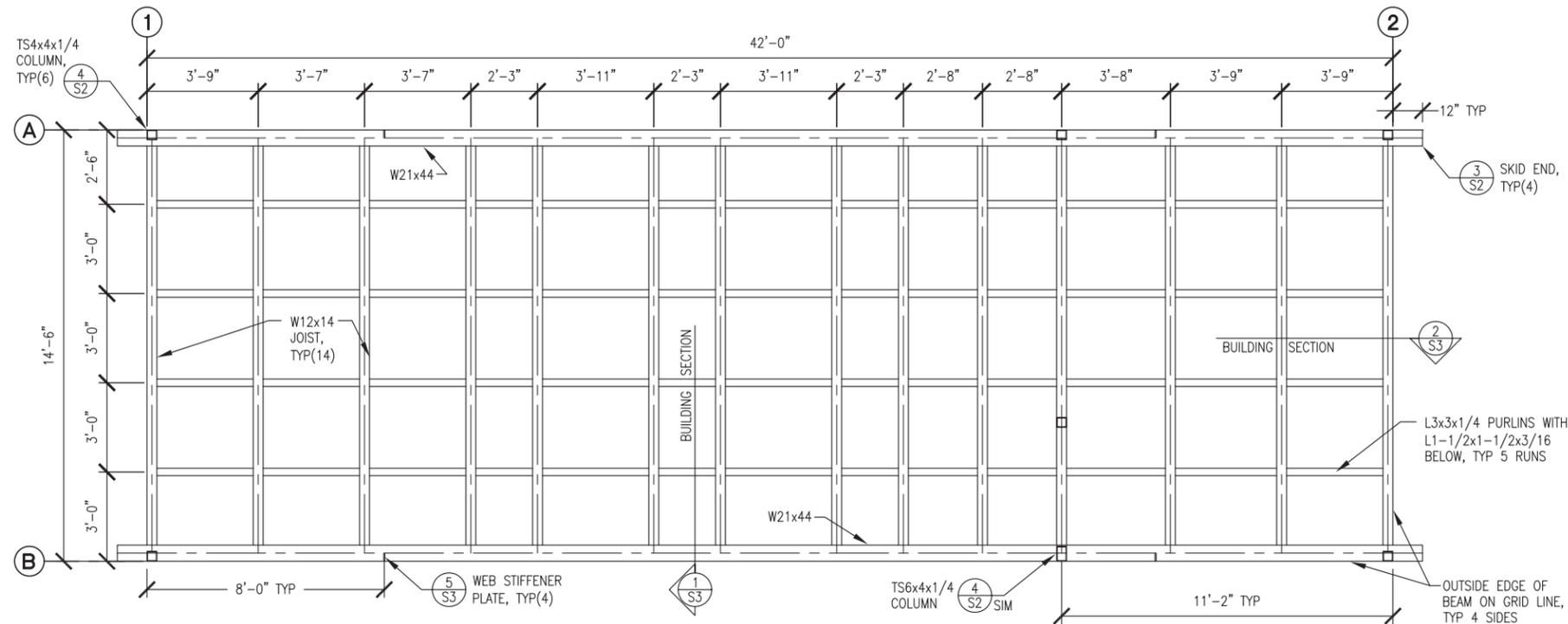


AKHIOK, ALASKA
POWER SYSTEM UPGRADE PROJECT
STAIR PLAN & DETAILS

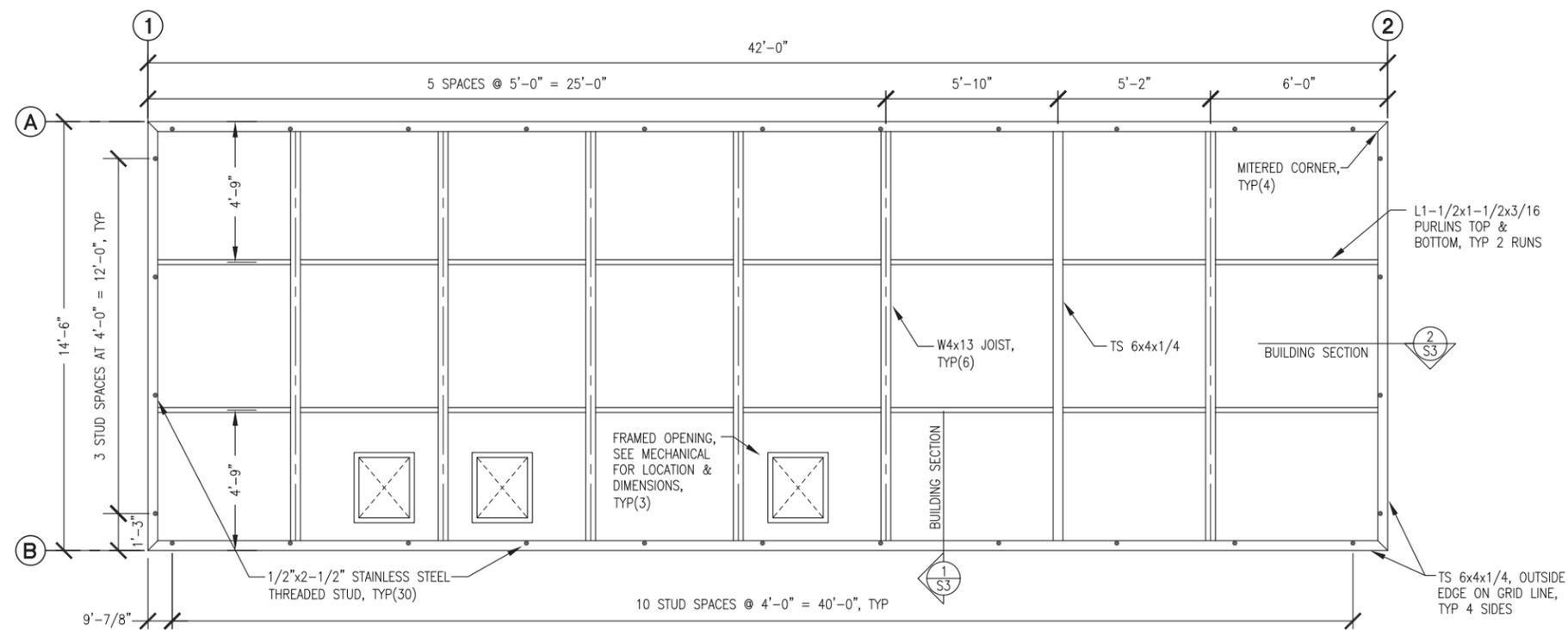
NO.	REVISION	BY	DATE
0	ISSUED FOR CONSTRUCTION	BCG	11/1/19

Plot Date	11/1/19
Designed	DGT/BCG
Drawn	JTD
Approved	DGT

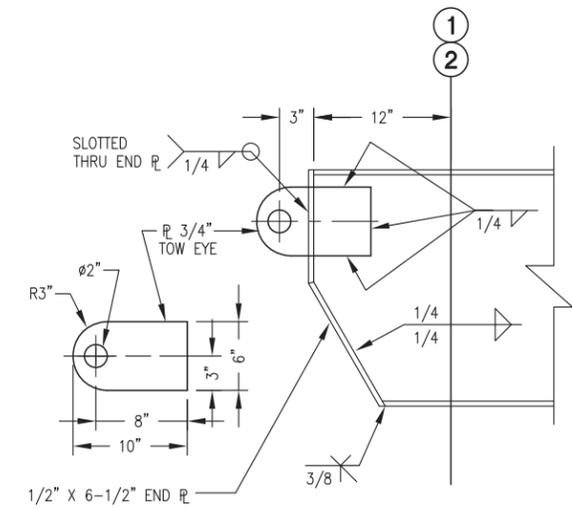
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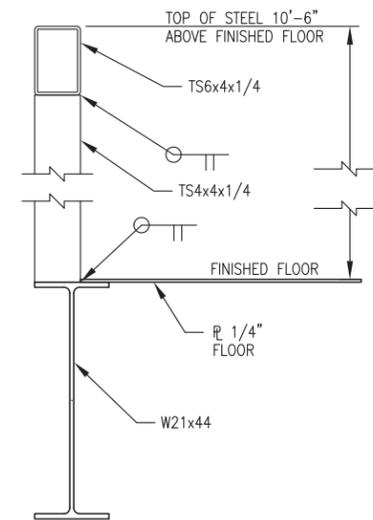
1 FLOOR FRAMING PLAN
3/8"=1'-0"



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



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



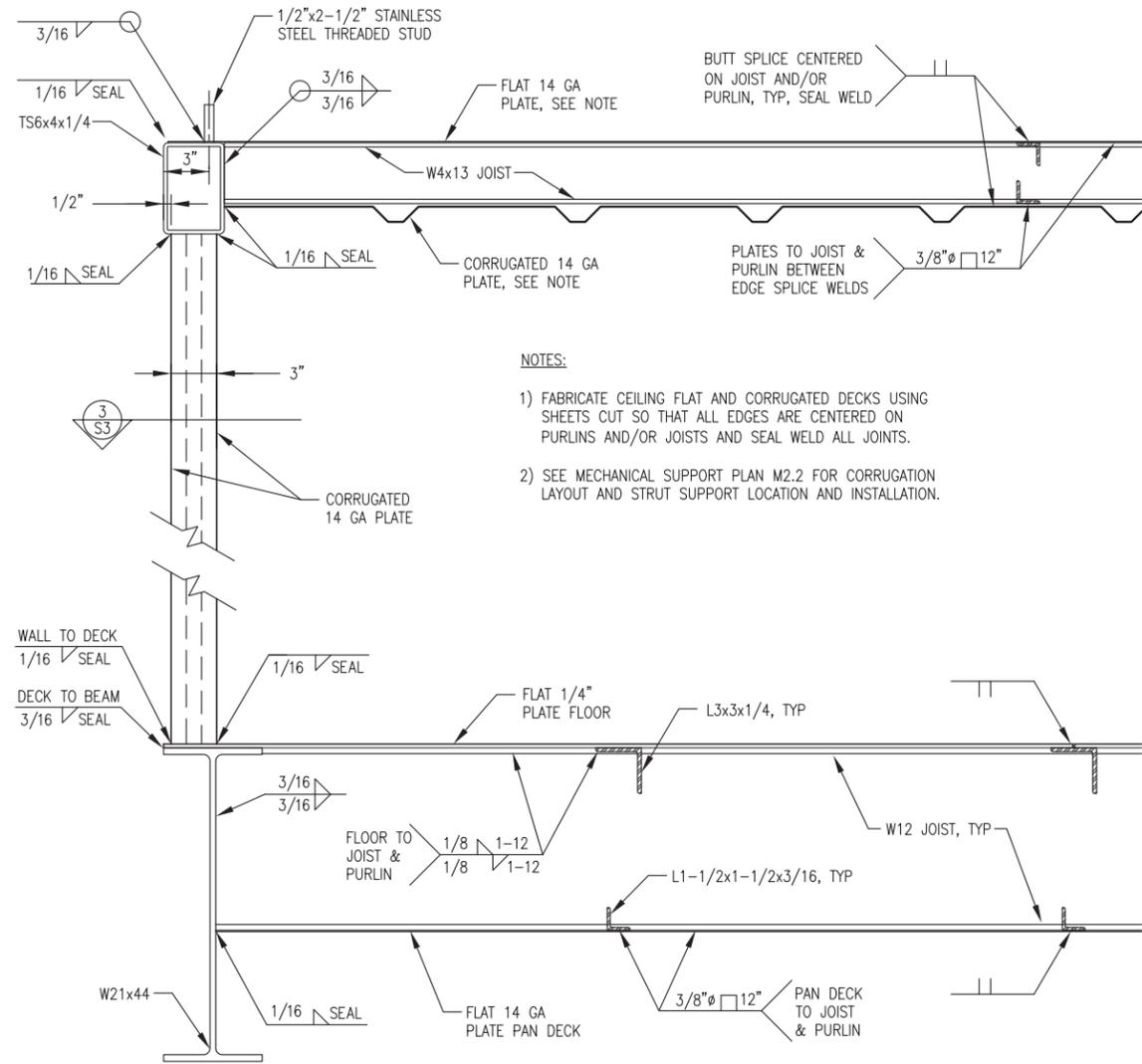
4 TYP CORNER COLUMN
1-1/2"=1'-0"



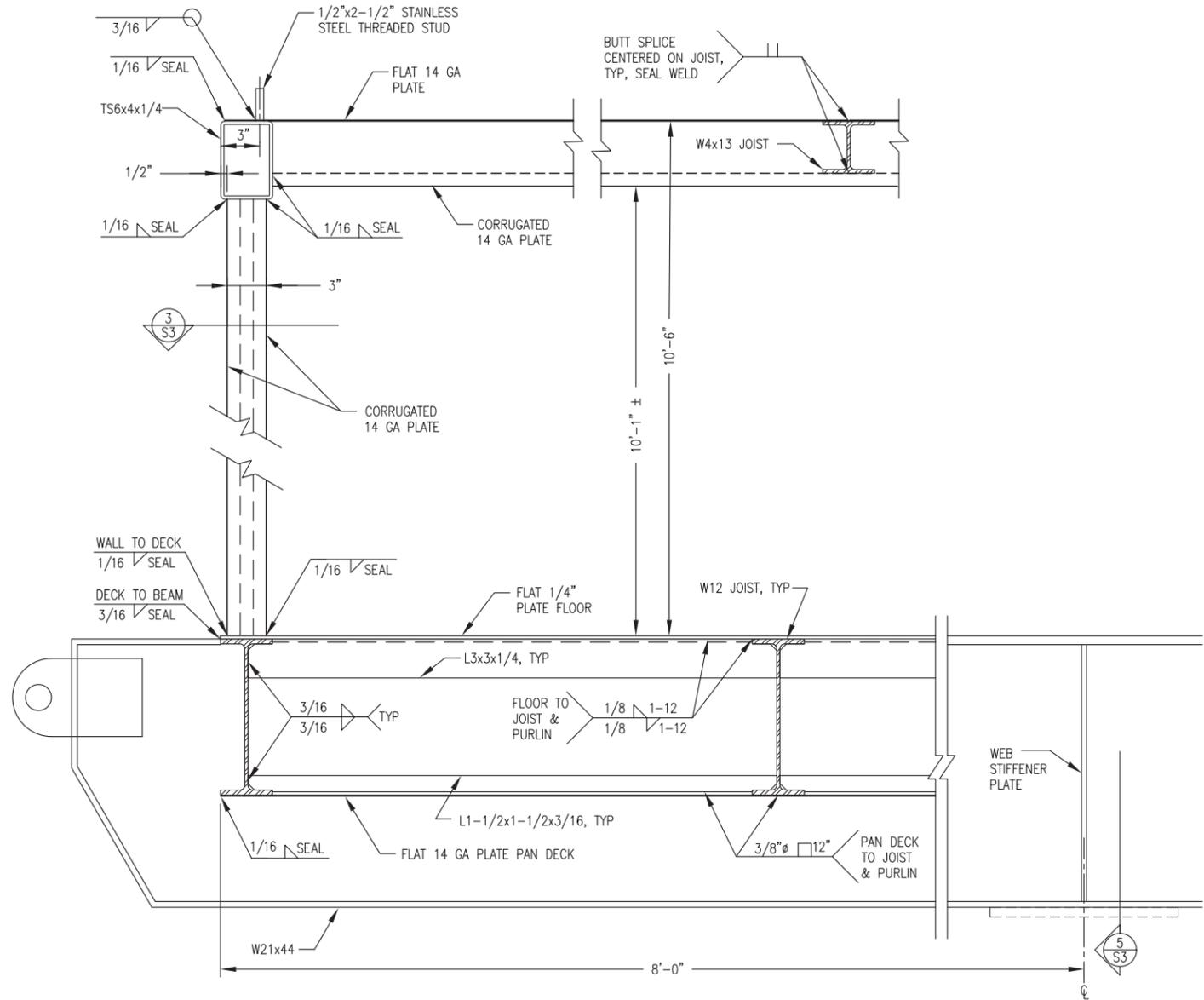
AKHIOK, ALASKA
POWER SYSTEM UPGRADE PROJECT
FRAMING PLANS & DETAILS

NO.	REVISION	ISSUED FOR CONSTRUCTION	BY	DATE
0			BCG	11/1/19

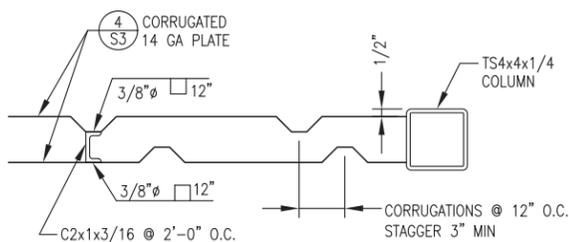
Plot Date	11/1/19	Designed	DGT/BCG
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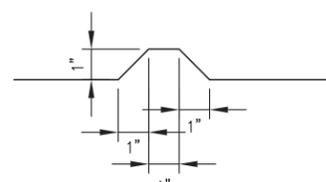
1 TYPICAL BUILDING SECTION
 S3 2'-1'-0"



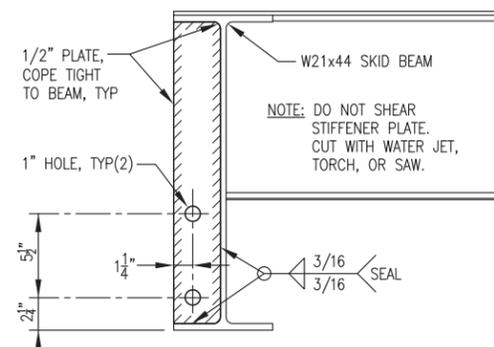
2 TYPICAL BUILDING SECTION
 S3 2'-1'-0"



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"

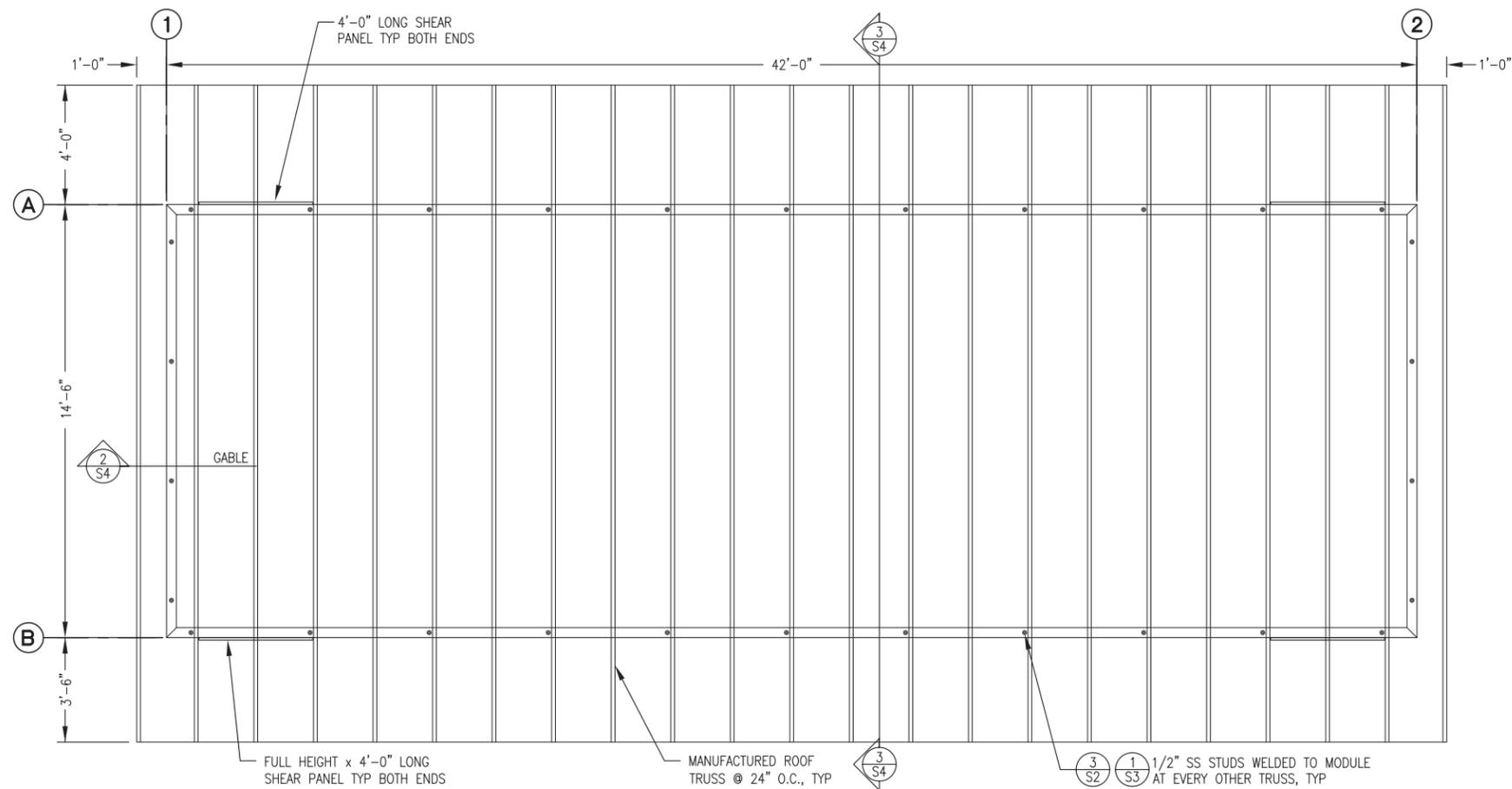


AKHIOK, ALASKA
 POWER SYSTEM UPGRADE PROJECT

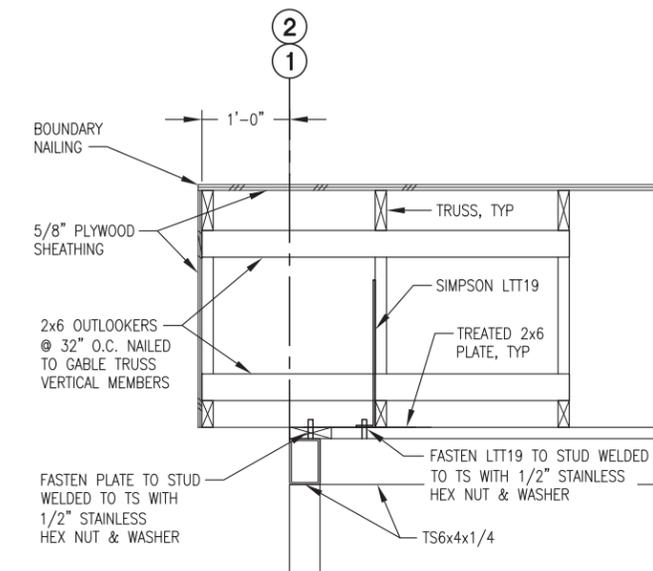
SECTIONS & DETAILS

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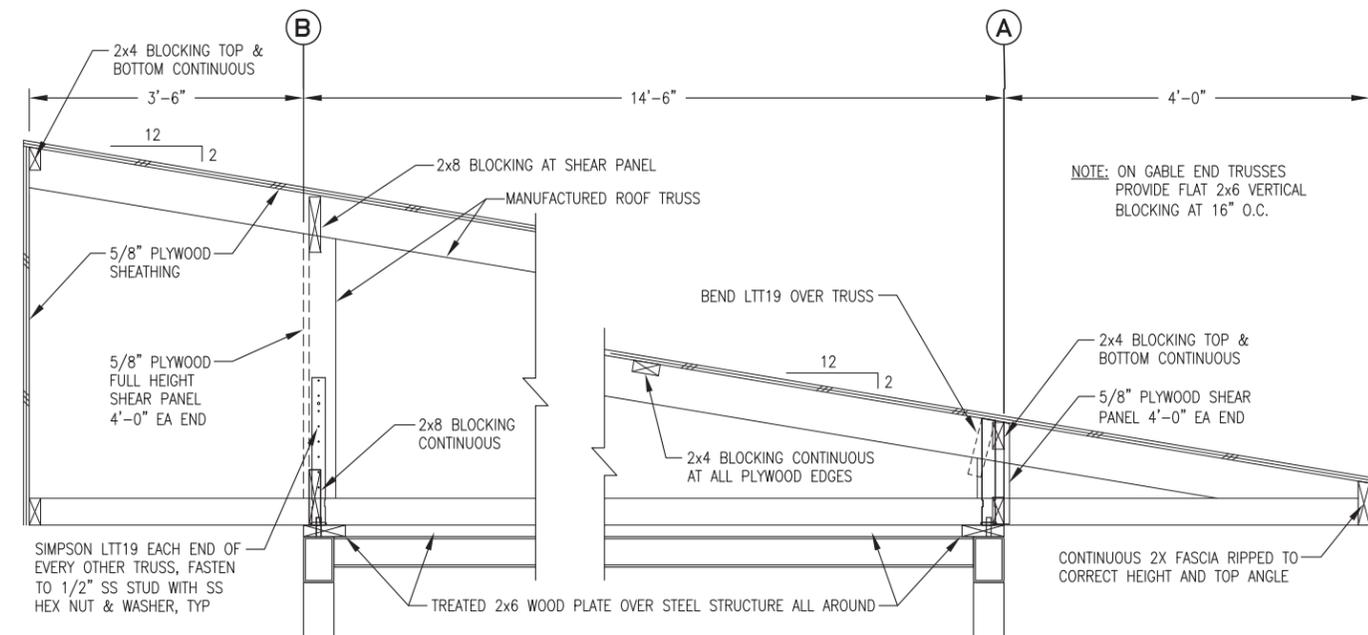
Plot Date	11/1/19
Designed	DGT/BCG
Drawn	JTD
Approved	DGT



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



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



3
S4
NO SCALE
ROOF TRUSS INSTALLATION

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



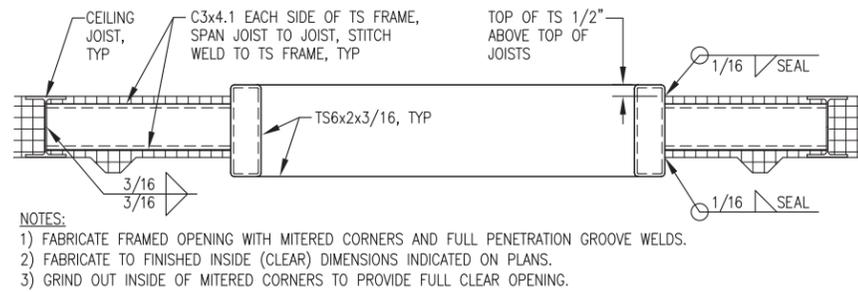
AKHIOK, ALASKA
POWER SYSTEM UPGRADE PROJECT

ROOF FRAMING PLAN & DETAILS

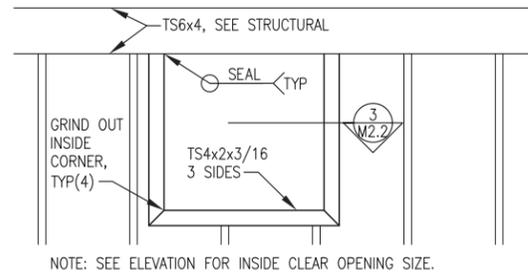
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0	ISSUED FOR CONSTRUCTION	BCG	11/1/19

Plot Date	11/1/19
Designed	DGT/BCG
Drawn	JTD
Approved	DGT

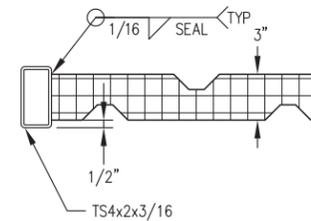
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1 TYPICAL ROOF OPENING DETAIL
M2.2 2"=1'-0"

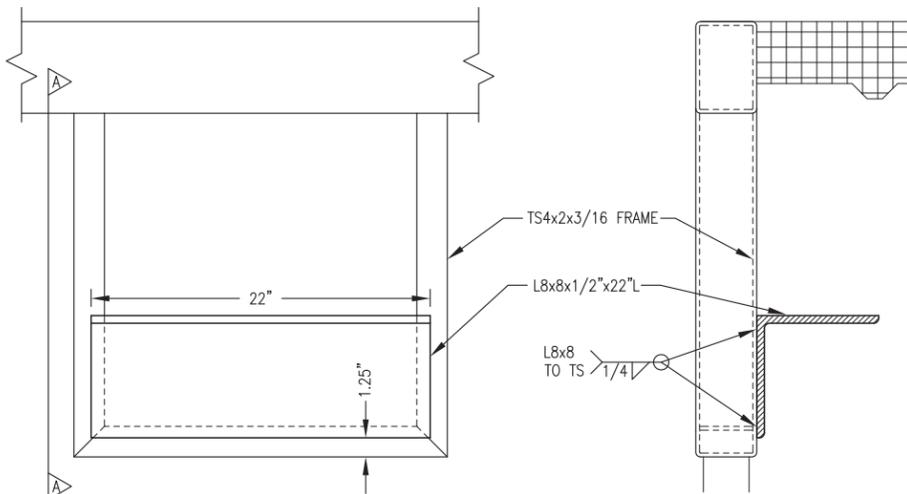


2 TYPICAL WALL OPENING - ELEVATION
M2.2 1"=1'-0"

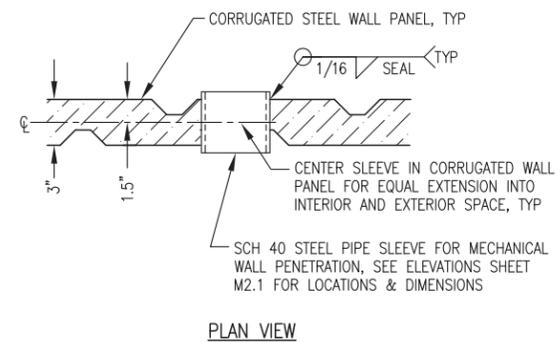


- NOTES:
- 1) FABRICATE FRAMED OPENING WITH MITERED CORNERS AND FULL PENETRATION GROOVE WELDS.
 - 2) FABRICATE TO FINISHED INSIDE (CLEAR) DIMENSIONS INDICATED ON ELEVATIONS.
 - 3) GRIND OUT INSIDE OF MITERED CORNERS TO PROVIDE FULL CLEAR OPENING.

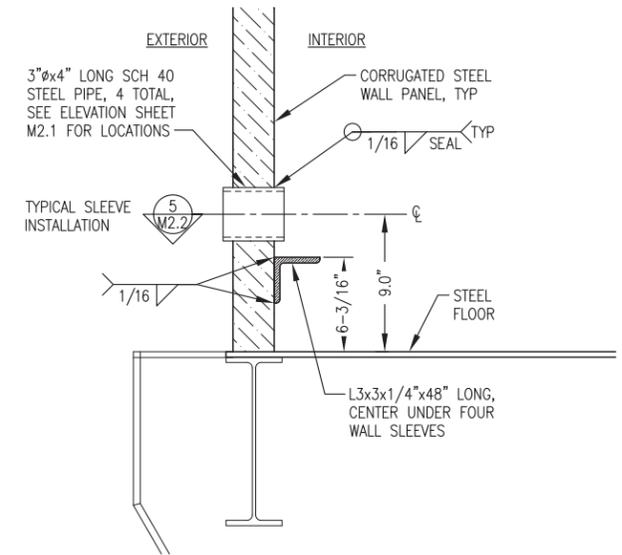
3 TYPICAL SECTION THROUGH WALL OPENING
M2.2 2"=1'-0"



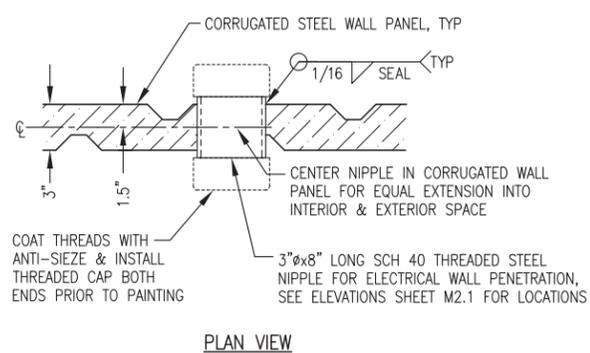
4 EXHAUST PIPE SUPPORT AT FRAMED OPENING
M2.2 2"=1'-0"



5 TYPICAL WALL PENETRATION PIPE SLEEVE
M2.2 2"=1'-0"



6 TYPICAL HEAT RECOVERY ARCTIC PIPE WALL PENETRATION
M2.2 2"=1'-0"



7 TYPICAL PIPE NIPPLE THROUGH WALL
M2.2 2"=1'-0"



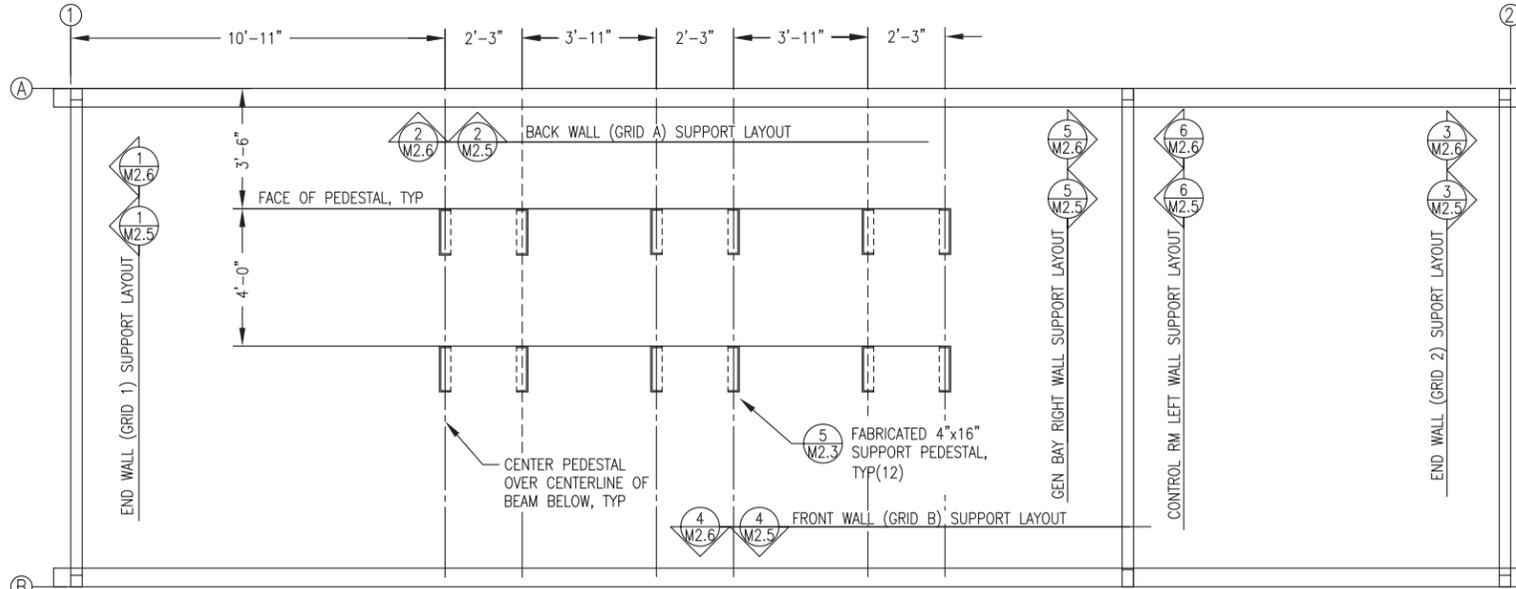
AKHIOK, ALASKA
POWER SYSTEM UPGRADE PROJECT
MECHANICAL PENETRATION DETAILS

NO.	REVISION	DATE
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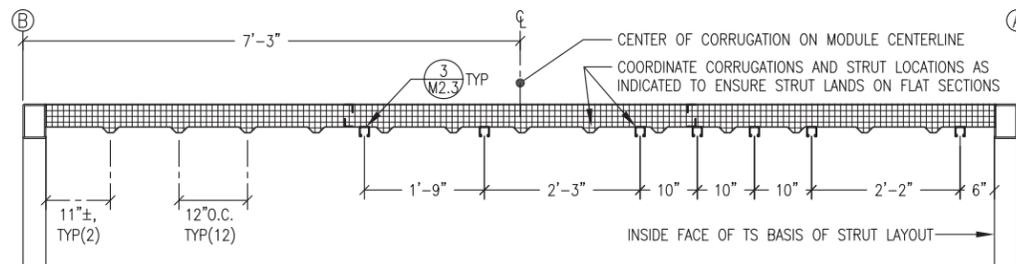
Plot Date	11/1/19
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Approved	BCG

Sheet No. **M2.2**

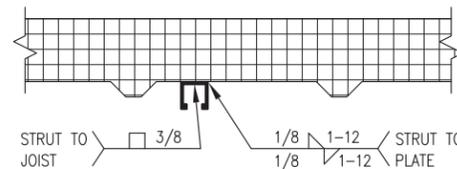
NOTE: ALL DIMENSIONS FROM GRIDLINE (OUTSIDE OF DECK)



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



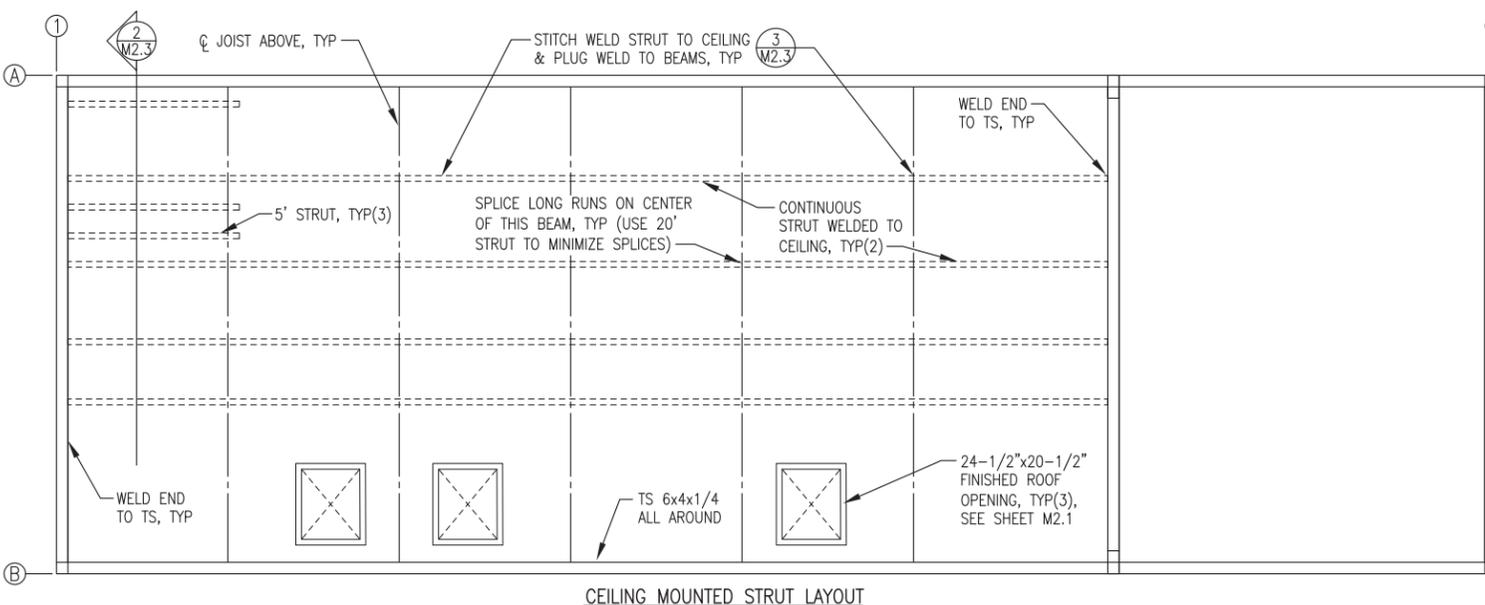
2 SECTION THROUGH CEILING - CORRUGATION & STRUT LAYOUT
M2.3 3/4"=1'-0"



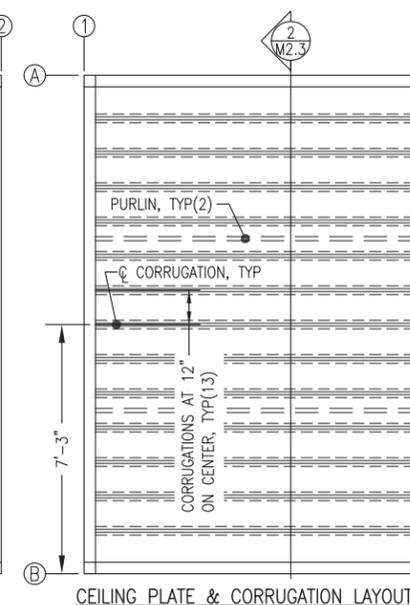
3 STRUT ATTACHMENT TO CEILING
M2.3 NO SCALE

GENERAL NOTES:

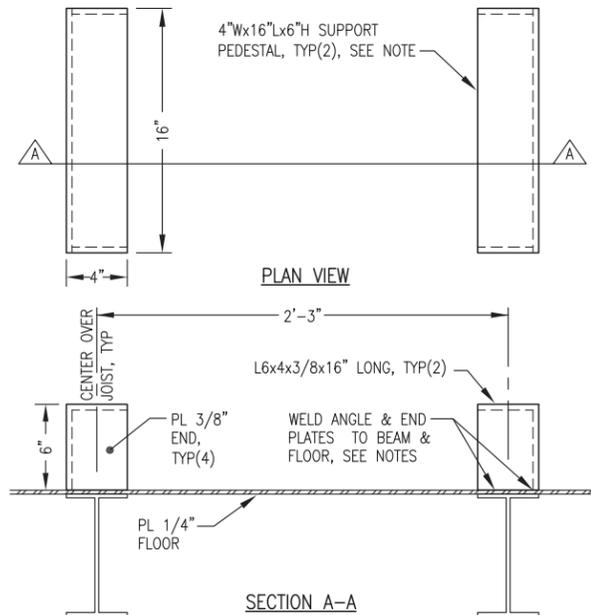
- 1) FABRICATE PEDESTALS FROM ASTM A36 ANGLE AND PLATES AS SHOWN.
- 2) ALL STRUT 12 GAUGE 1-5/8"x1-5/8" SOLID BACK PLAIN (UNFINISHED). B-LINE B22-PLN OR EQUAL. PURCHASE IN 20' LENGTHS TO MINIMIZE SPLICES.
- 3) INSTALL ALL SUPPORTS INDICATED AND GRIND SMOOTH PRIOR TO SANDBLASTING MODULE. SANDBLAST AND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



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



5 SUPPORT PEDESTAL FABRICATION
M2.3 2"=1'-0"



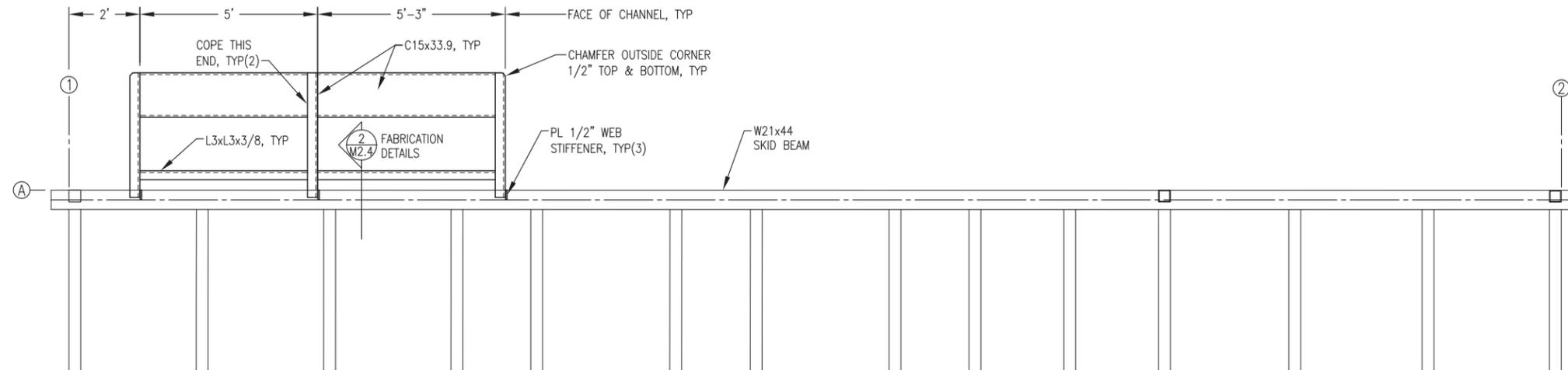
NOTES: 1) MAKE ALL JOINTS WITH CONTINUOUS GROOVE OR FILLET WELDS.
2) SLOT FLOOR PLATE 3 SIDES, WELD PEDESTAL TO TOP OF BEAM, THEN SEAL WELD TO FLOOR PLATE ALL AROUND.



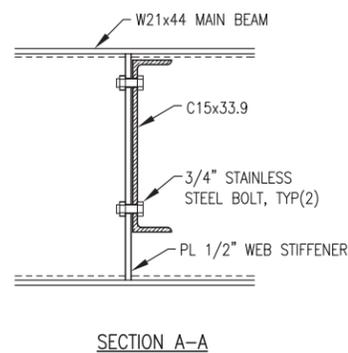
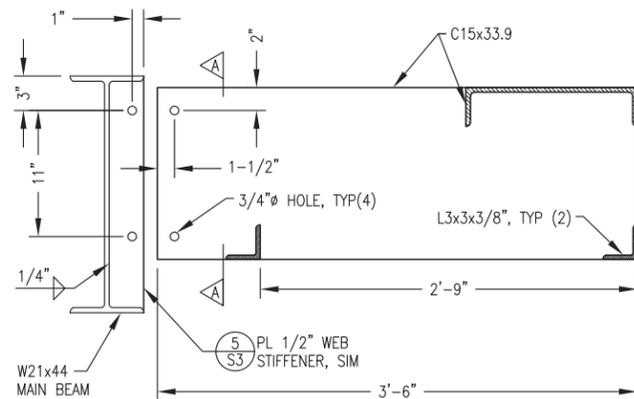
AKHIOK, ALASKA
POWER SYSTEM UPGRADE PROJECT
MECHANICAL SUPPORT PLANS & DETAILS

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0	ISSUED FOR CONSTRUCTION	BCG	11/1/19

Plot Date	11/1/19	Designed	BCG	Drawn	JTD	Approved	BCG
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1 RADIATOR SUPPORT PLAN
 M2.4 1/2\"=1'-0\"

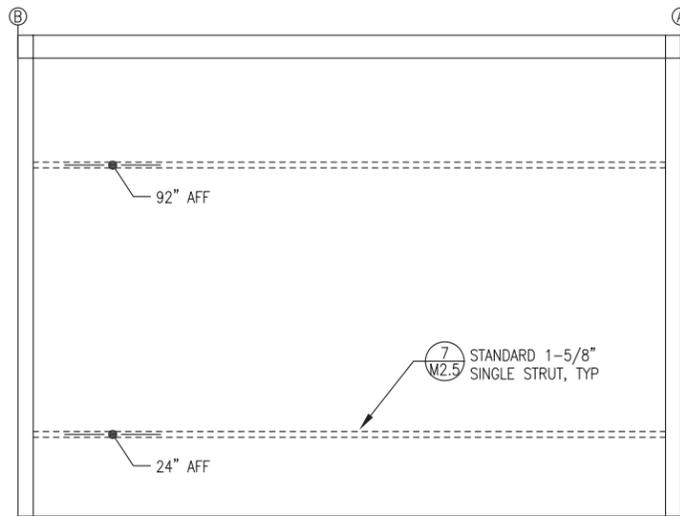


- SUPPORT FABRICATION NOTES:**
- 1) FABRICATE SUPPORT FROM ASTM A36 ANGLE & CHANNEL AS SHOWN.
 - 2) RACK ALL SUPPORT BRACKETS LEVEL & PERPENDICULAR TO SKID WITH CONNECTIONS BOLTED TIGHT PRIOR TO WELDING.
 - 3) UPON COMPLETION OF WELDING ROUND CORNERS AND GRIND EDGES SMOOTH.
 - 4) PRIOR TO SANDBLASTING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

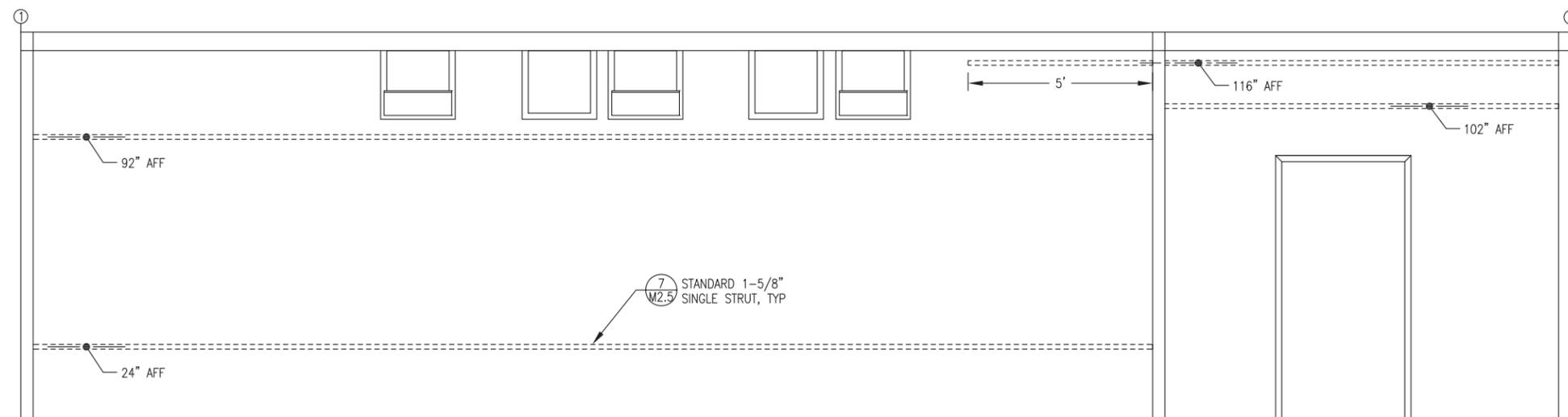
2 RADIATOR SUPPORT FABRICATION
 M2.4 1-1/2\"=1'-0\"

NO.	REVISION	BY	DATE
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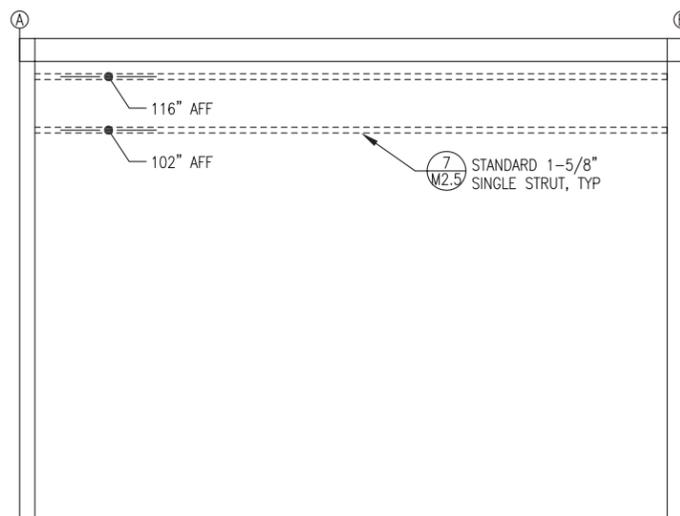
Plot Date	11/1/19
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Approved	BCG



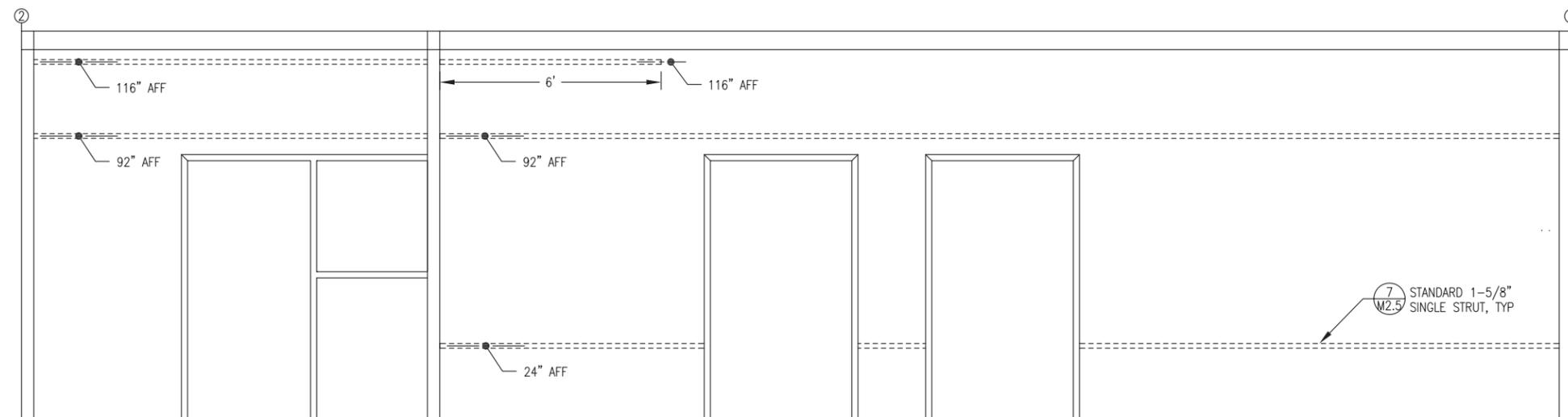
1 END WALL (GRID 1) HORIZONTAL WALL STRUT LAYOUT
M2.5 1/2"=1'-0"



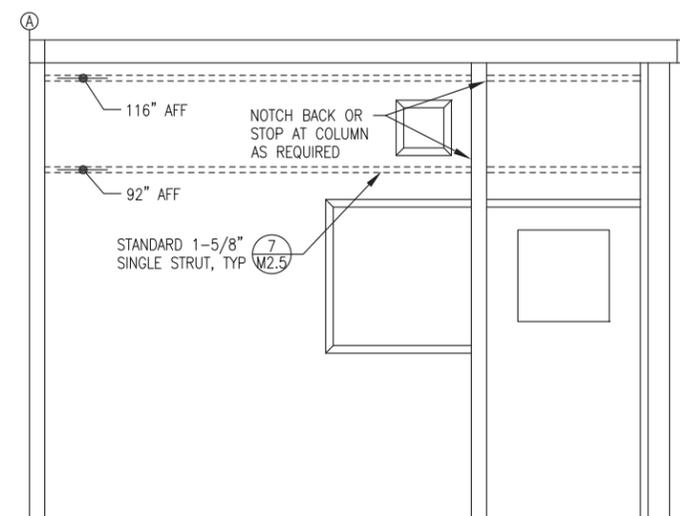
2 BACK WALL (GRID A) HORIZONTAL WALL STRUT LAYOUT
M2.5 1/2"=1'-0"



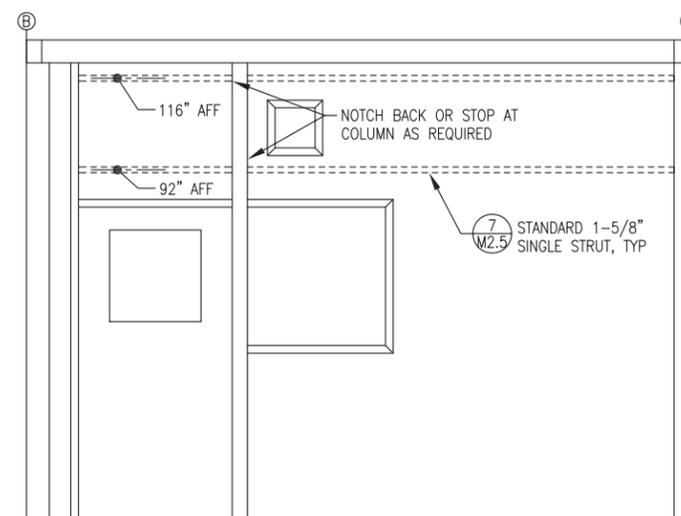
3 END WALL (GRID 2) HORIZONTAL WALL STRUT LAYOUT
M2.5 1/2"=1'-0"



4 FRONT WALL (GRID B) HORIZONTAL WALL STRUT LAYOUT
M2.5 1/2"=1'-0"



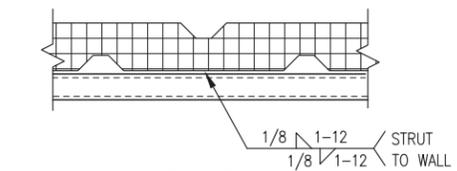
5 GEN BAY RIGHT WALL HORIZONTAL WALL STRUT LAYOUT
M2.5 1/2"=1'-0"



6 CONTROL ROOM LEFT WALL HORIZONTAL WALL STRUT LAYOUT
M2.5 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
M2.5 NO SCALE



AKHIOK, ALASKA
POWER SYSTEM UPGRADE PROJECT
 MECHANICAL SUPPORT
 HORIZONTAL WALL STRUT INSTALLATION

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Drawn	JTD	Approved	BCG