

FOUNDATION DESIGN CRITERIA SCHEDULE			
CRITERIA	DESCRIPTION	VALUE	NOTES
FOUNDATION	ALLOWABLE SOIL BEARING PRESSURE	3000 PSF	NON FROST SUSCEPTIBLE GRAVEL

SPECIAL INSPECTIONS			
THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO INSPECT THE CONSTRUCTION FOR THE FOLLOWING WORK ITEMS:			
CATEGORY	DESCRIPTION	INSPECTION/REFERENCE	FREQUENCY OF INSPECTION
SOIL	SITE PREPARATION	IBC 1704.7	PERIODIC
	FILL PLACEMENT	IBC 1704.7	PERIODIC
	EVALUATION OF IN-PLACE DENSITY	IBC 1704.7	PERIODIC
CONCRETE	REINFORCING STEEL	IBC TABLE 1704.4, ITEM 1	PERIODIC
	ANCHOR RODS AND BOLTS	IBC TABLE 1704.4, ITEM 3	CONTINUOUS
	VERIFY DESIGN MIX	IBC TABLE 1704.4, ITEM 4	PERIODIC
	CONCRETE TESTING	IBC TABLE 1704.4, ITEM 5	CYLINDER, SLUMP, AIR & TEMP
	APPLICATION TECHNIQUES	IBC TABLE 1704.4, ITEM 6	CONTINUOUS
	CURING TEMPERATURE AND TECHNIQUES	IBC TABLE 1704.4, ITEM 7	PERIODIC
	FORMWORK SHAPE AND LOCATION	IBC TABLE 1704.4, ITEM 11	PERIODIC
	POST INSTALLED ANCHORS	INSPECTION OF DRILLED HOLES FOR SIZE & CLEANLINESS, EDGE DISTANCE, ADHESIVE INJECTION AND ANCHOR ROD PLACEMENT IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS.	CONTINUOUS

SCHEDULE OF CONSTRUCTION MATERIALS			
CONCRETE	28-DAY STRENGTH	MAXIMUM WATER/CEMENT RATIO	AIR ENTRAINMENT
	4,000 P.S.I.	0.45	6% +/- 1%
REINFORCING STEEL	ASTM A615, GRADE 60		
PRE INSTALLED ANCHOR BOLTS	ASTM F1554, GRADE 36 ANCHOR BOLTS EXCEPT AT OVERHEAD DOOR THRESHOLD. AT O/H DOOR THRESHOLD, USE 306 STAINLESS STEEL THREADED ROD 3/4" DIAMETER, 12" LONG, WITH MATCHING NUTS AND WASHERS.		
POST INSTALLED ANCHOR BOLTS	UNLESS OTHERWISE STATED IN PLANS, PRE INSTALLED ANCHORS ARE REQUIRED. ASTM F1554, ZINC-PLATED, 3/8" DIAMETER, 8" LONG, THREADED ANCHOR RODS (WITH NUTS AND WASHERS). ANCHOR ROD HAVING 6 INCHES EMBEDMENT AND EDGE DISTANCE AS SHOWN. DRILLED HOLE DIAMETER: 7/16". ITW REDHEAD A7+ OR HILTI HIT-HY 200 ADHESIVE		
FOOTING INSULATION	TYPE IX EXPANDED POLYSTYRENE RIGID FOAM BOARD MATCHING DIMENSIONS SHOWN IN DRAWINGS		

PERSONAL PROTECTIVE EQUIPMENT, MINIMUM	HIGH VISIBILITY VEST, HARDHAT, SAFETY GLASSES, SAFETY TOE WORK BOOTS
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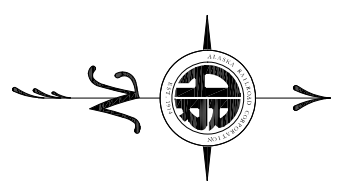
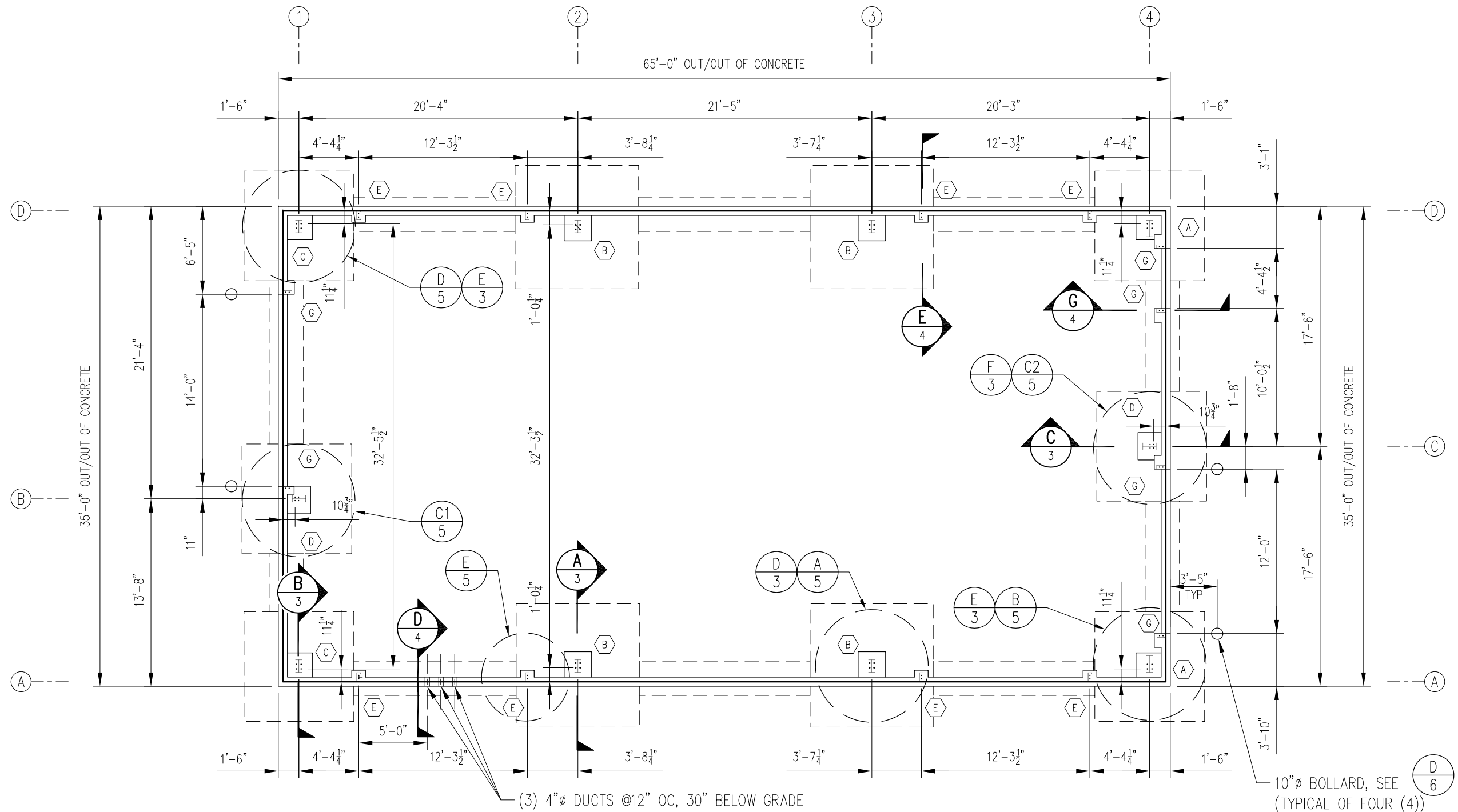
LAP SPLICES IN WALLS AND FOOTINGS							
BAR SIZE	#3	#4	#5	#6	#7	#8	
SPLICE LENGTH	25"	33"	41"	49"	71"	81"	
REINFORCING COVER							
CONCRETE CONDITION		MINIMUM COVER		TOLERANCE *			
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH		3"		- 1/2", +1"			
EXPOSED TO WEATHER OR EARTH #5 AND SMALLER BARS: #6 AND LARGER BARS:		1 1/2" 2"		- 3/8", + 1/2" - 3/8", + 1/2"			
NOT EXPOSED TO WEATHER ON IN CONTACT WITH GROUND		1 1/2"		- 3/8", + 1/2"			
NOTE: "-" INDICATES TOLERANCE DECREASE TOWARDS FACE. "+" INDICATED AWAY FROM FACE.							

NOTES:

- SUBMIT REINFORCING STEEL SHOP DRAWINGS WITH DETAILS PER ACI 315 MANUAL OF STANDARD PRACTICE.
- CONCRETE SHALL BE FORMED, BATCHED, PLACED AND CURED PER ASTM C-94, ACI 306R.
- WATER REDUCING AGENT MAY BE ADDED TO CONCRETE TO INCREASE WORKABILITY. MAXIMUM SLUMP OF 6".
- PRECAST CONCRETE BLOCKS (DOBIES) ARE NOT PERMITTED FOR SUPPORTING REINFORCING WITHIN FORMS AGAINST EARTH; USE ALL-PLASTIC SHAPES (CHAIRS) FOR SUPPORTING REINFORCEMENTS.
- AIR USED TO CLEAN HOLES FOR POST INSTALLED ANCHORS MUST BE FREE FROM OIL. COMPRESSOR, IF USED, MUST BE EQUIPPED WITH FUNCTIONING AIR DRYER.
- PROVIDE 3/4" CHAMFER TO ALL EXPOSED OUTSIDE CORNERS.
- TOP OF STEM WALL FOUNDATION ELEVATION TO BE WITHIN 1/4" OF LEVEL AND 1/4" OF SQUARE UNLESS STRICTER TOLERANCES ARE REQUIRED BY STAR BUILDING SYSTEMS.
- ENGINEER OF RECORD TO PERFORM STRUCTURAL OBSERVATIONS AS DEFINED IN SECTION 1702 OF IBC AT SIGNIFICANT STAGES OF CONSTRUCTION AND UPON COMPLETION.
- REMOVE SNAP-TIE CONES AND DRYPACK VOIDS WITH MORTAR. PRIOR TO PLACING MORTAR, COAT VOIDS WITH A THIN LAYER OF CEMENT GROUT BONDING AGENT. THE MIX FOR THE BONDING GROUT IS CEMENT AND FINE SAND IN A RATIO OF 1 TO 1 WITH A CONSISTENCY LIKE THICK CREAM. THE DRY PACK MORTAR IS PUT IN PLACE BEFORE THE BONDING GROUT HAS DRIED UP. DRY PACK MORTAR CONTAINS (BY DRY VOLUME OR WEIGHT) ONE PART CEMENT, 2 1/2 PARTS SAND, AND ENOUGH WATER TO PRODUCE A MORTAR THAT WILL JUST STICK TOGETHER WHILE BEING MOLDED INTO A BALL WITH THE HANDS. THE BALL SHOULD NEITHER SLUMP WHEN PLACED ON A FLAT SURFACE, NOR CRUMBLE DUE TO LACK OF MOISTURE. PLACE DRY PACK MORTAR IMMEDIATELY AFTER MIXING. COMPACT MORTAR IN THE VOID HOLE WITH BY STRIKING A HARDWOOD DOWEL WITH A HAMMER. PLACE AND PACK THE MORTAR IN LAYERS. DIRECT THE TAMPING AT A SLIGHT ANGLE TOWARD THE SIDES OF THE HOLE TO ENSURE MAXIMUM COMPACTION. OVERFILL THE HOLE SLIGHTLY, THEN PLACE A PIECE OF HARDWOOD AGAINST THE MORTAR AND STRIKE THE WOOD SEVERAL TIMES WITH A HAMMER.
- SLOPE GROUND AWAY FROM EXTERIOR STEM WALL; 6 INCHES IN 10 FEET.
- BACKFILL WITH NON FROST SUSCEPTIBLE GRAVEL.
- ON-SITE WATER IS NOT POTABLE.
- ALASKA RAILROAD SHALL SET REFERENCE ELEVATION AND BUILDING ALIGNMENT HUBS.




ALASKA RAILROAD CORPORATION ENGINEERING SERVICES P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500		
PROJECT :	MAINTENANCE OF WAY PORTAGE SECTION	
TITLE:	EQUIPMENT BUILDING FOUNDATION SPECIFICATIONS	
DESIGNED BY: CDR	SCALE : AS NOTED	AFE NO.:
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CHECKED BY: PEF		DWG NO. 1 OF 8
APPROVED BY: CDR		

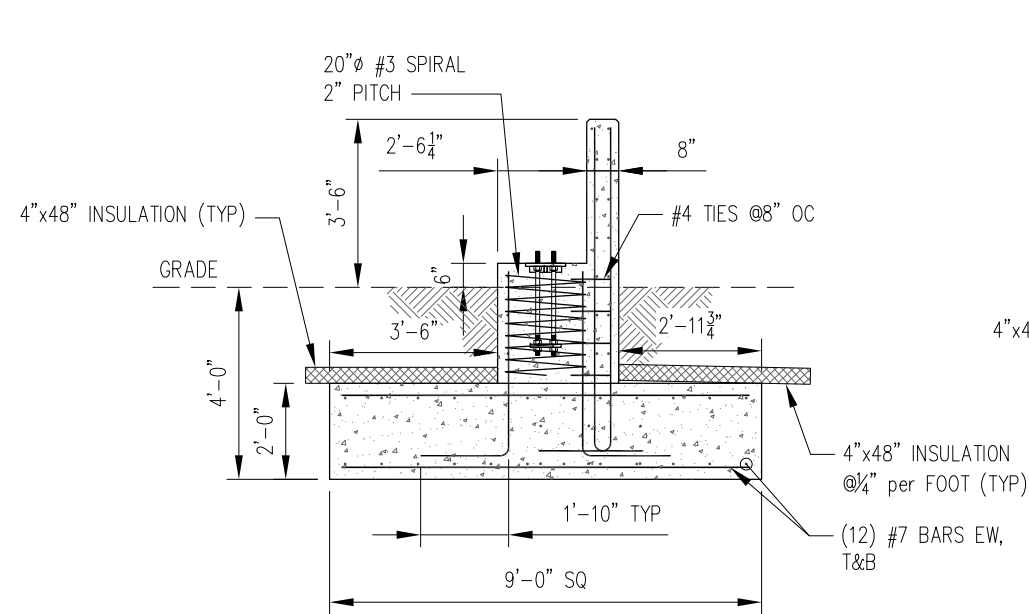


NOTE:
1. REFERENCE STAR BUILDING SYSTEMS.

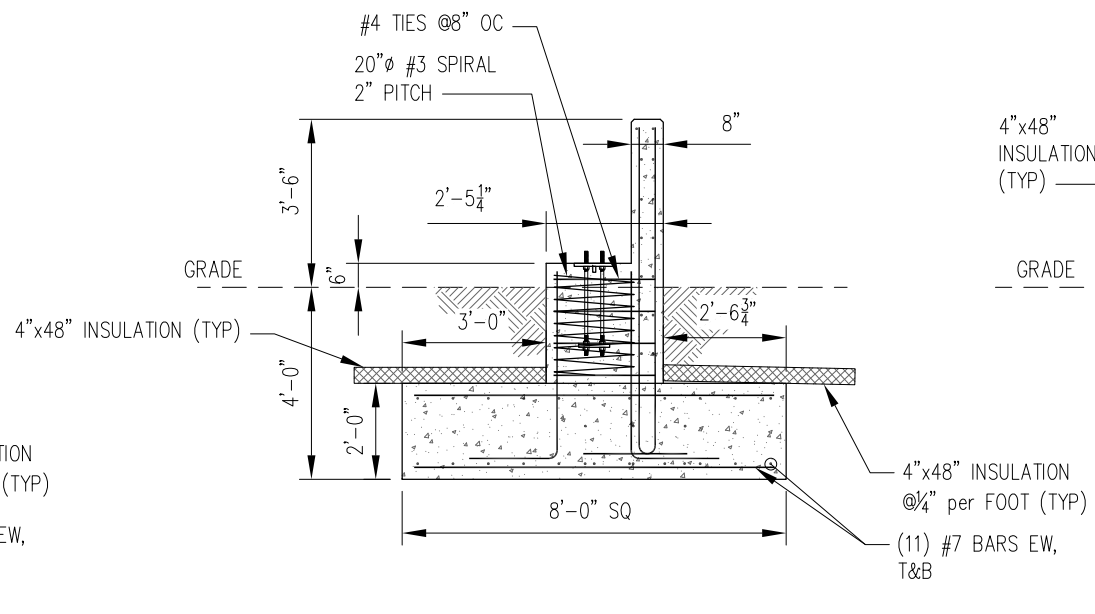
FOUNDATION PLAN
SCALE 1/8" = 1'-0"



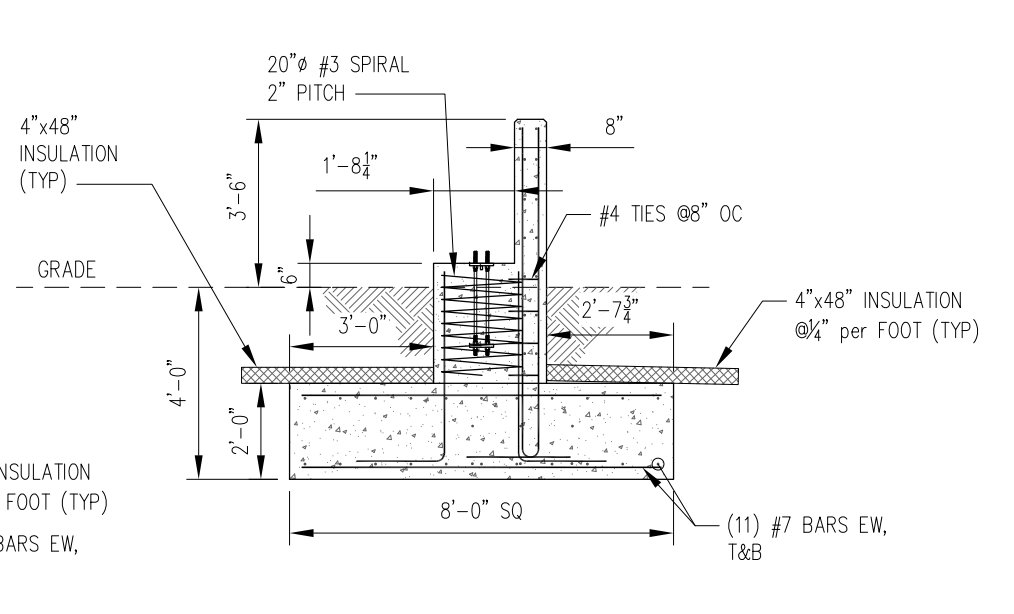
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PROJECT : MAINTENANCE OF WAY PORTAGE SECTION		
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DESIGNED BY: CDR	SCALE : AS NOTED	AFE NO.:
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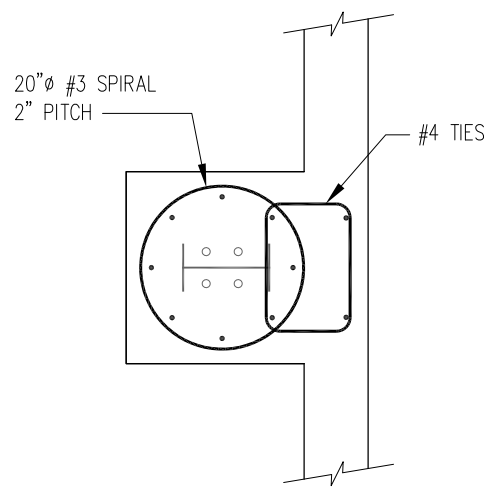
A TYPE B PIER
3 SCALE: 1/4" = 1'-0"



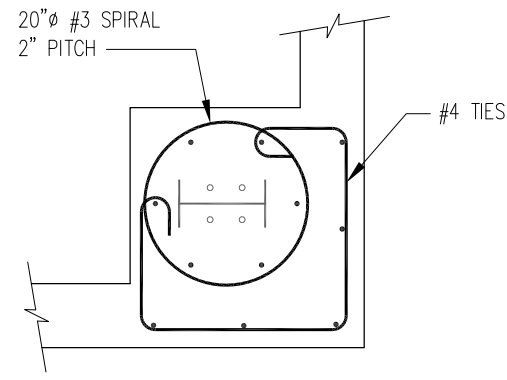
B TYPE A & C PIER
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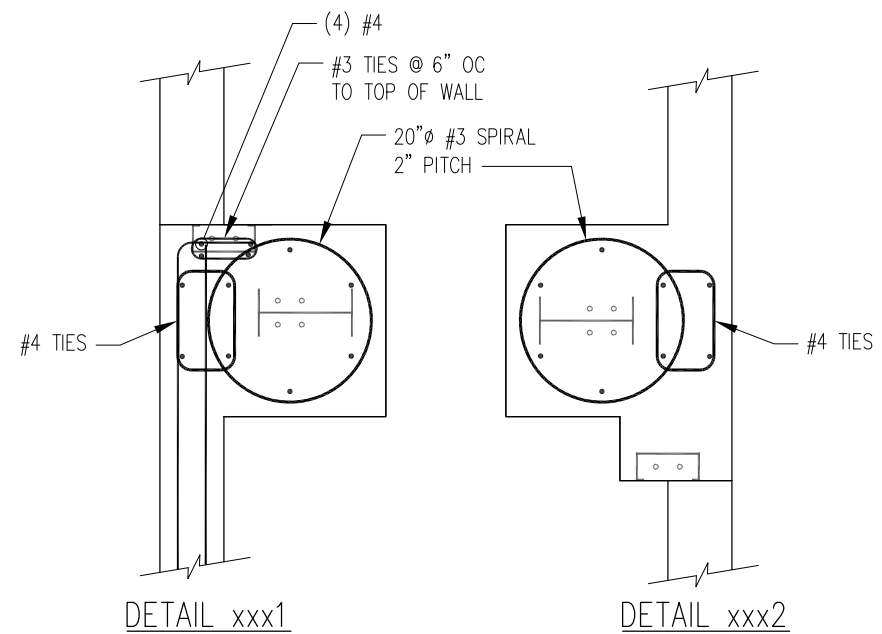
C TYPE D PIER
3 SCALE: 1/4" = 1'-0"



D TYPE B PIER
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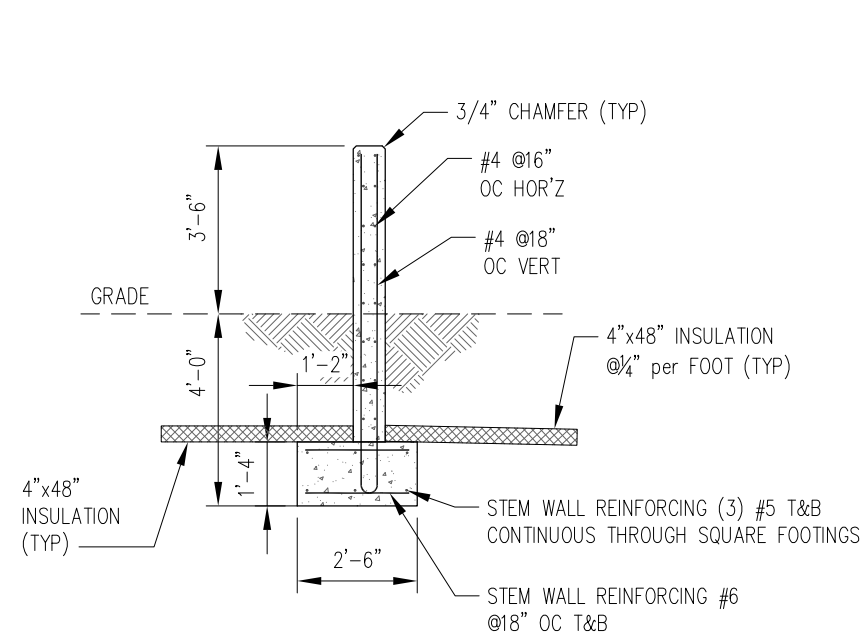
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3 SCALE: 1/2" = 1'-0"



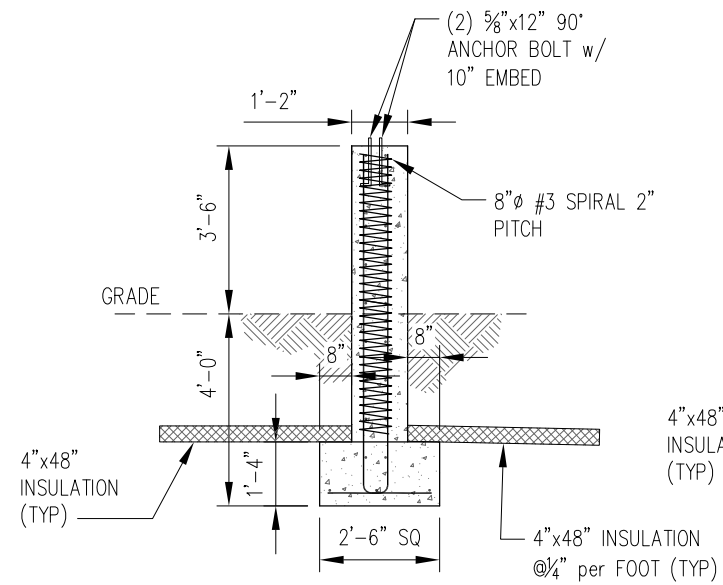
F TYPE D PIER
3 SCALE: 1/2" = 1'-0"



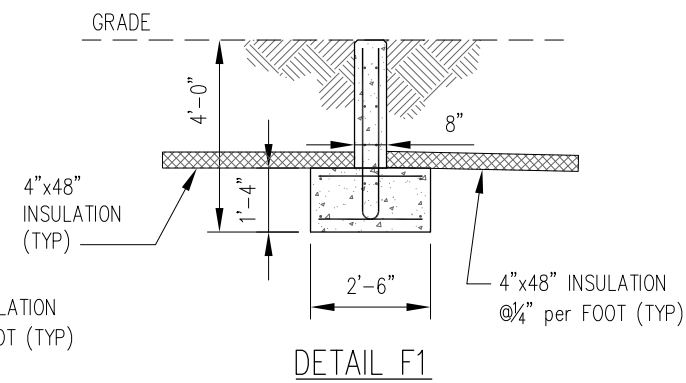
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D WALL SECTION
4 SCALE: 1/4" = 1'-0"

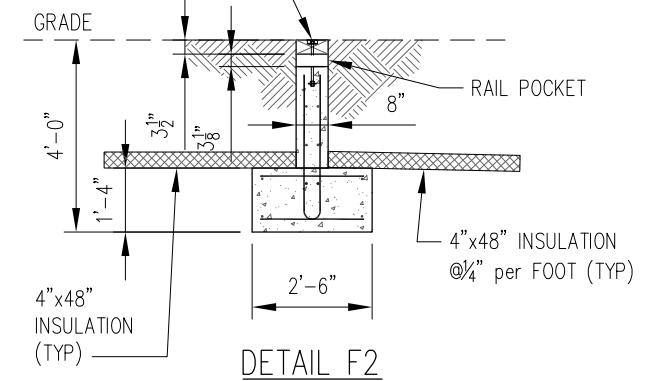


E TYPE E PILASTER
4 SCALE: 1/4" = 1'-0"



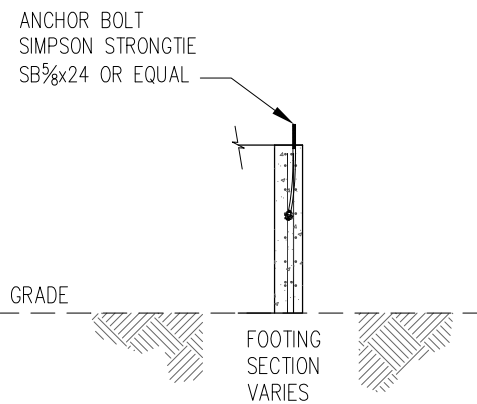
DETAIL F1

4x8 GROUND CONTACT TIMBER SECURED WITH COUNTER BORED 3/4" DIAMETER, STAINLESS STEEL ANCHORS EVENLY SPACED WITH A MINIMUM OF THREE ANCHORS PER SECTION.



DETAIL F2

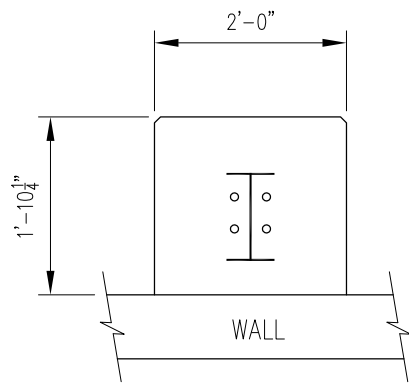
F WALL SECTION
4 SCALE: 1/4" = 1'-0"



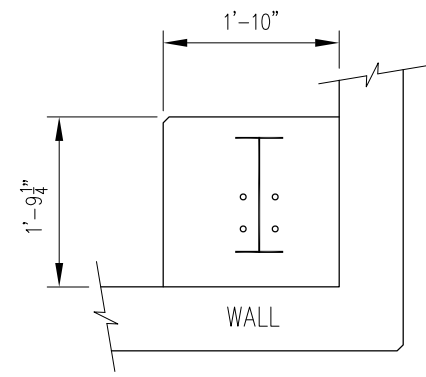
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4 SCALE: 1/4" = 1'-0"



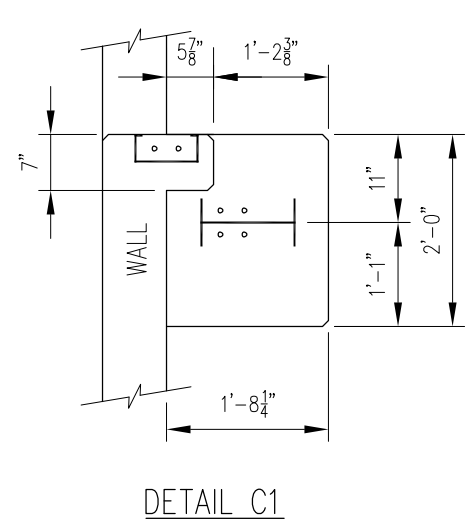
P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500		
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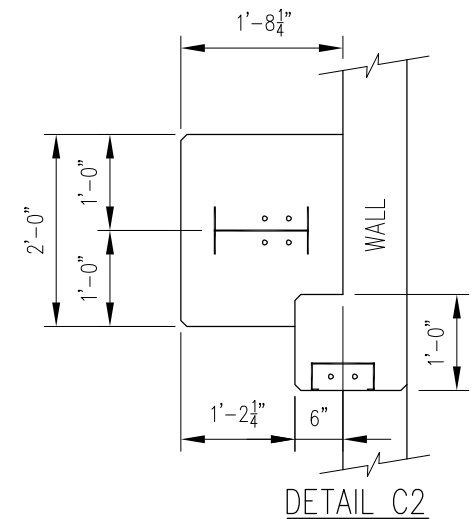
A PIER A DETAIL
5 SCALE: 1/2" = 1'-0"



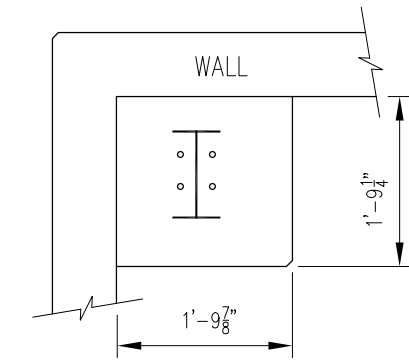
B PIER B DETAIL
5 SCALE: 1/2" = 1'-0"



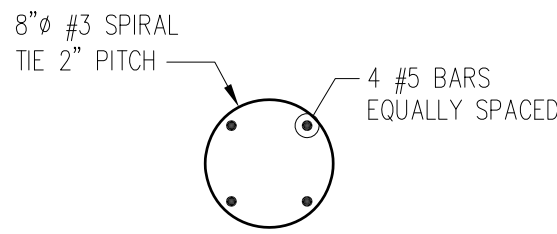
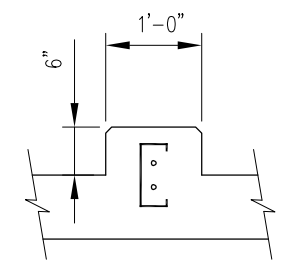
C PIER / PILASTER C DETAILS
5 SCALE: 1/2" = 1'-0"



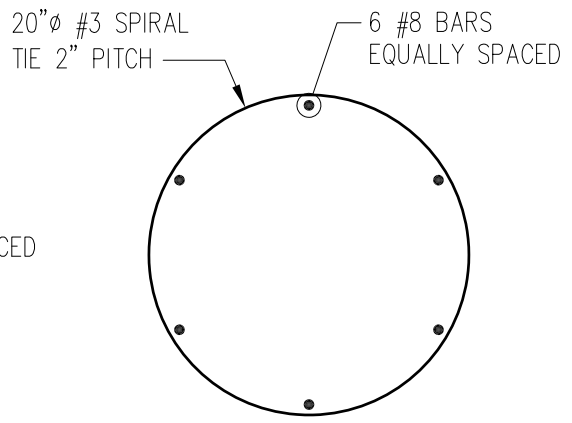
D PIER D DETAIL
5 SCALE: 1/2" = 1'-0"



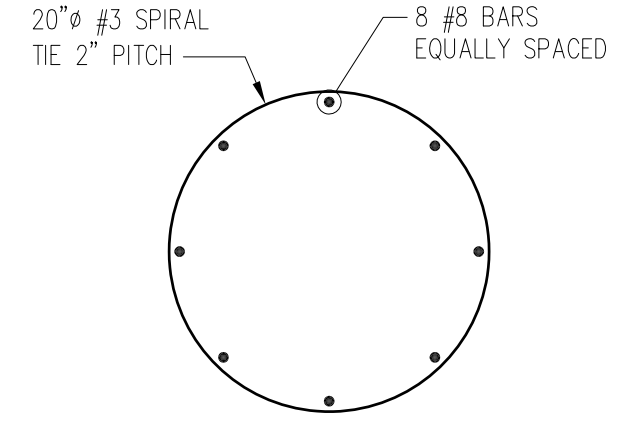
E PILASTER E DETAIL
5 SCALE: 1/2" = 1'-0"



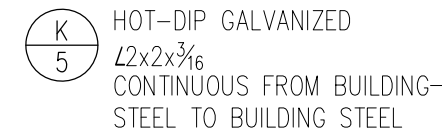
F REINFORCEMENT PLAN PILASTER
5 SCALE: 1" = 1'-0"



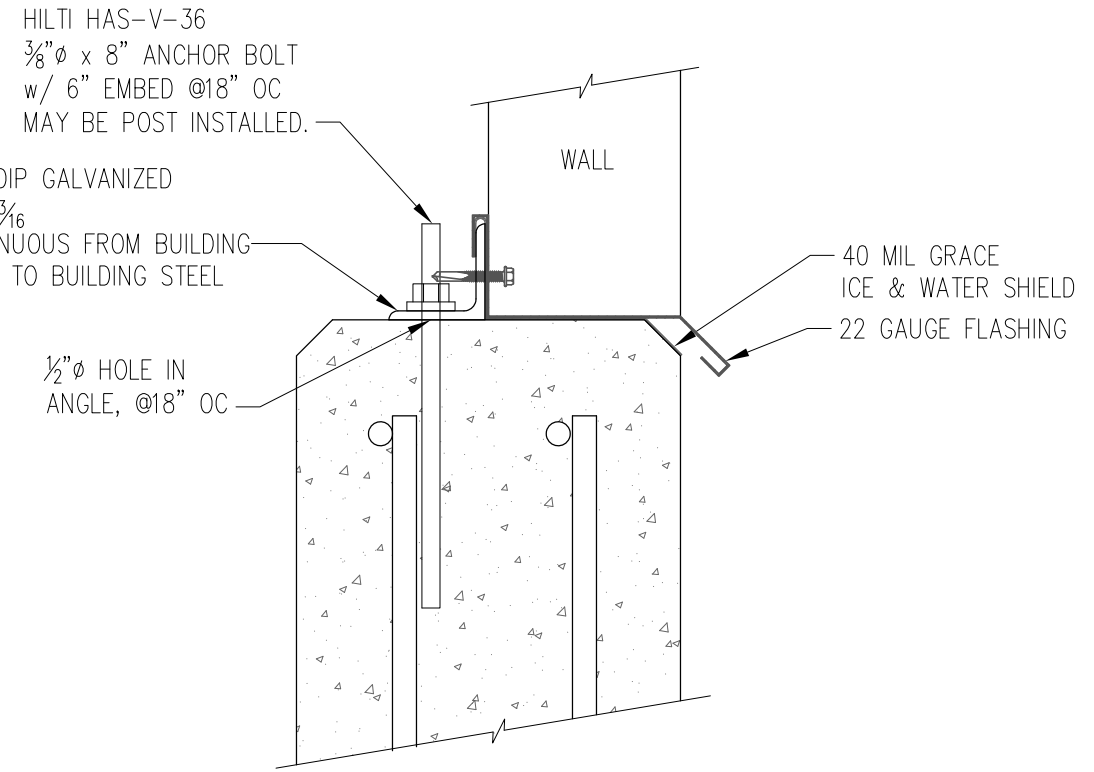
G REINFORCEMENT PLAN 8' FOOTING
5 SCALE: 1" = 1'-0"



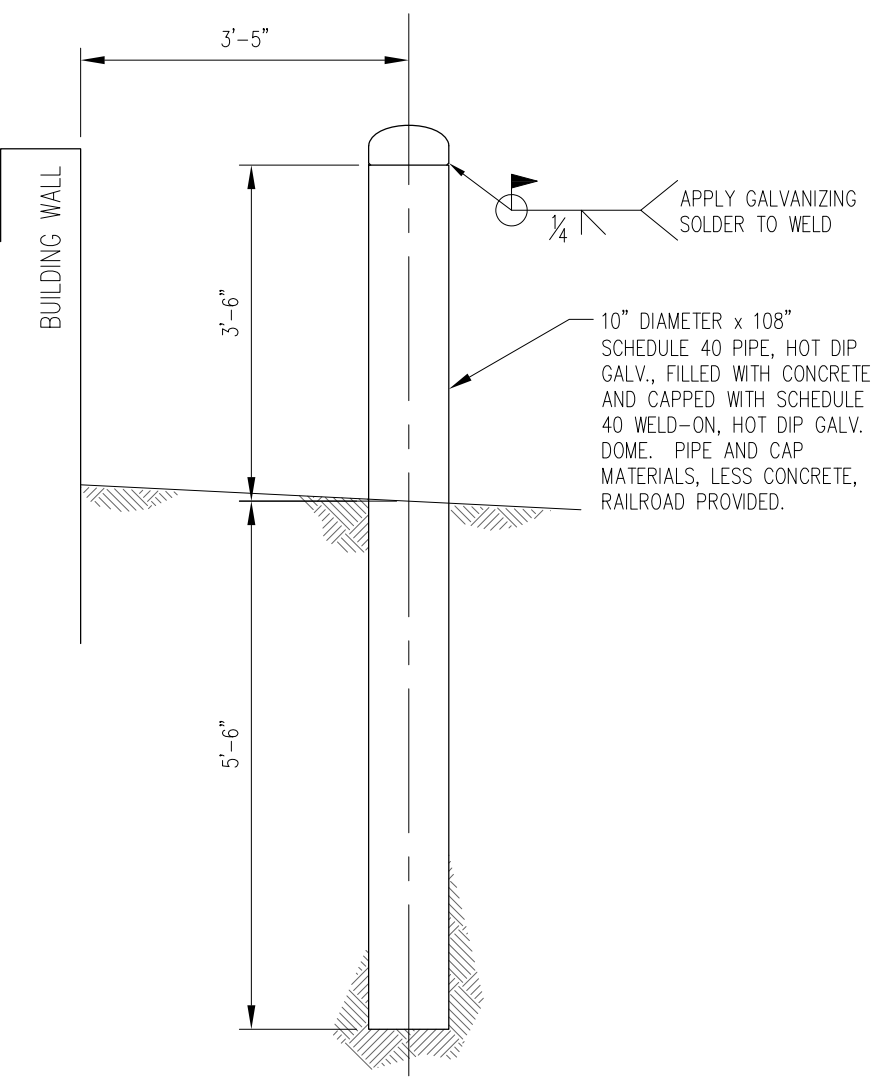
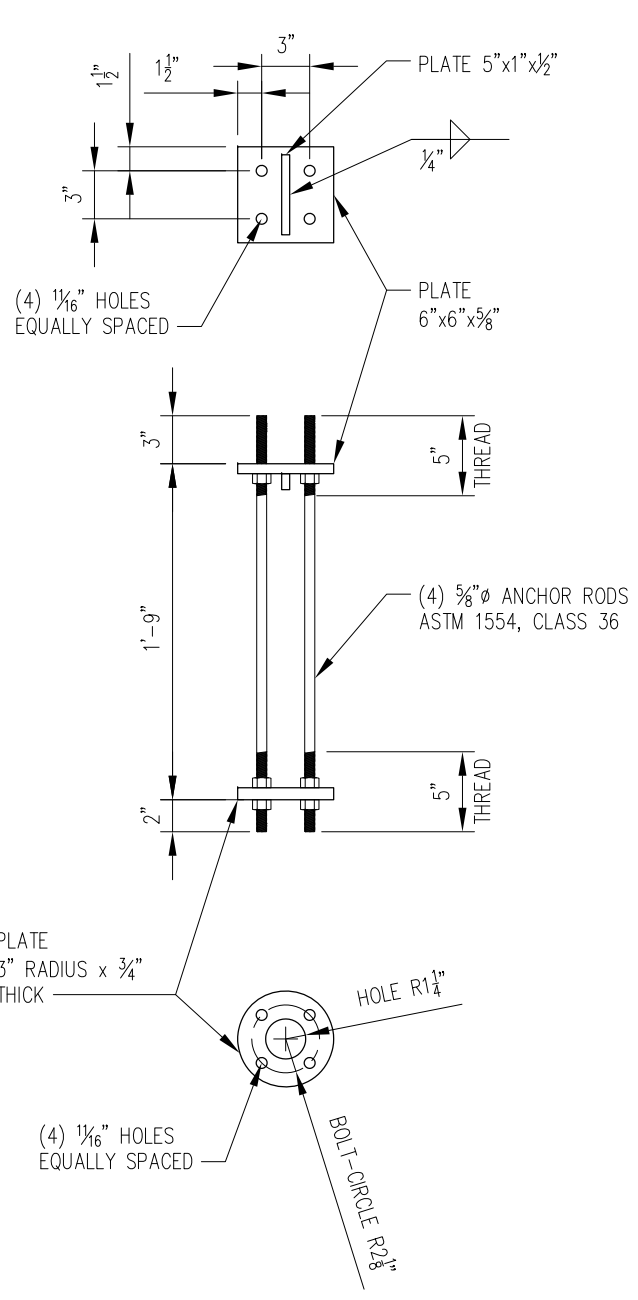
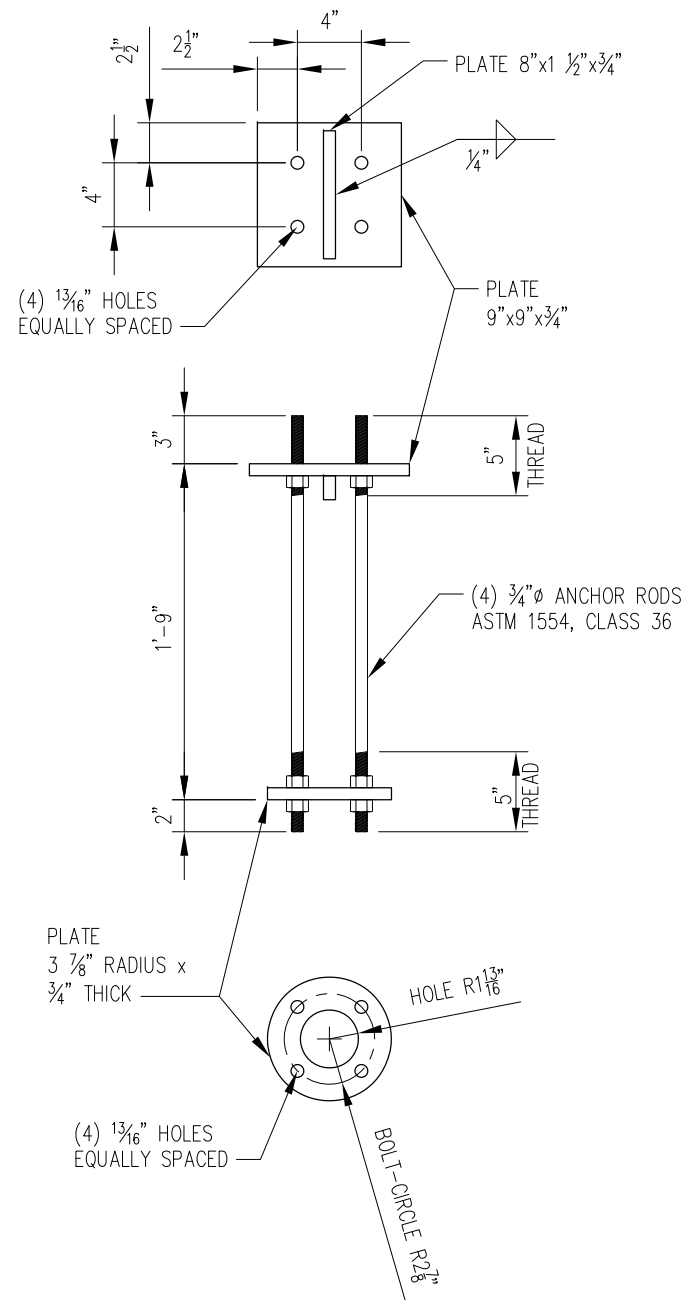
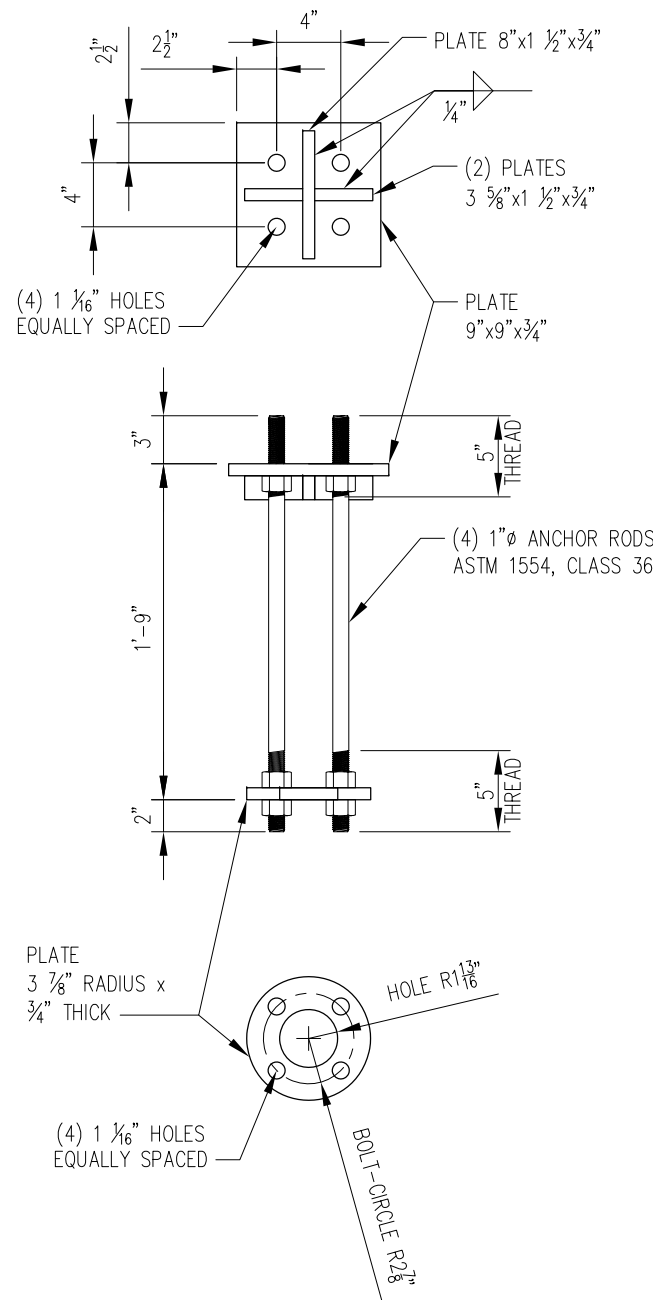
H REINFORCEMENT PLAN 9' FOOTING
5 SCALE: 1" = 1'-0"



J WALL ATTACHMENT SECTION
5 SCALE: 3" = 1'-0"



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TITLE:		
EQUIPMENT BUILDING DETAILS		
DESIGNED BY: CDR	SCALE : AS NOTED	AFE NO.:
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D BOLLARD DETAIL
6 SCALE: 1/2" = 1'-0"

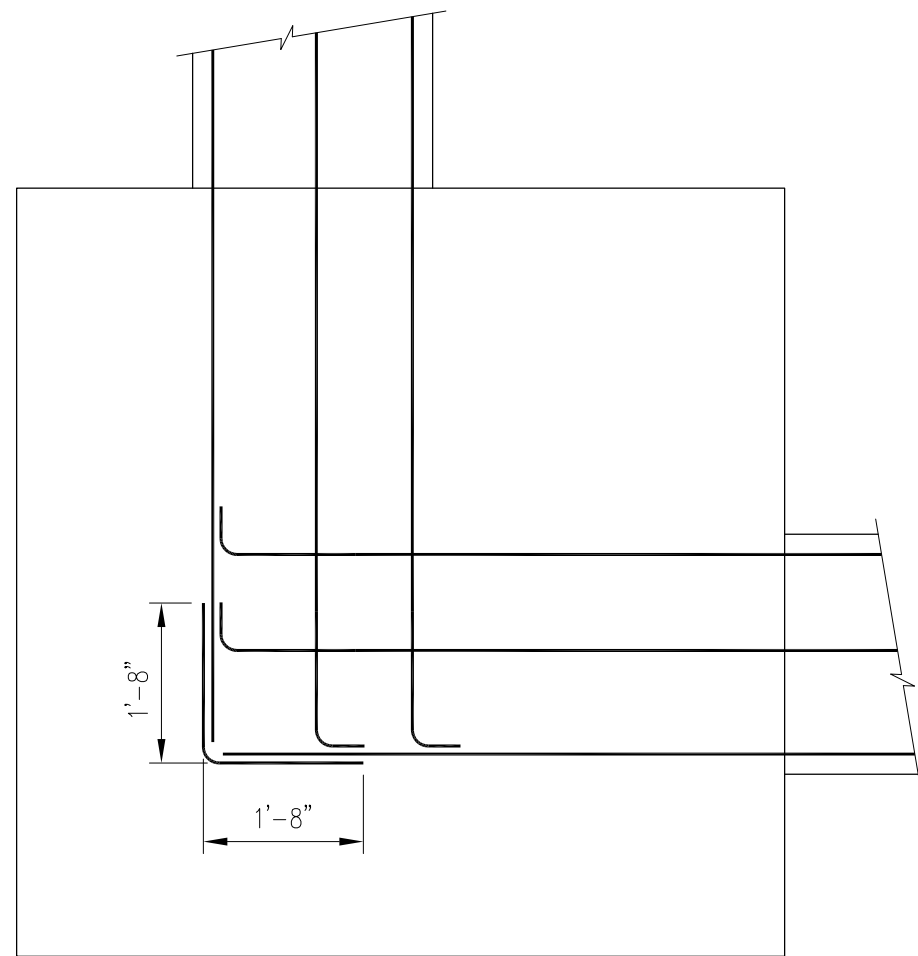
A ANCHOR ROD ASSEMBLY A
6 SCALE: 1" = 1'-0"

B ANCHOR ROD ASSEMBLY B
6 SCALE: 1" = 1'-0"

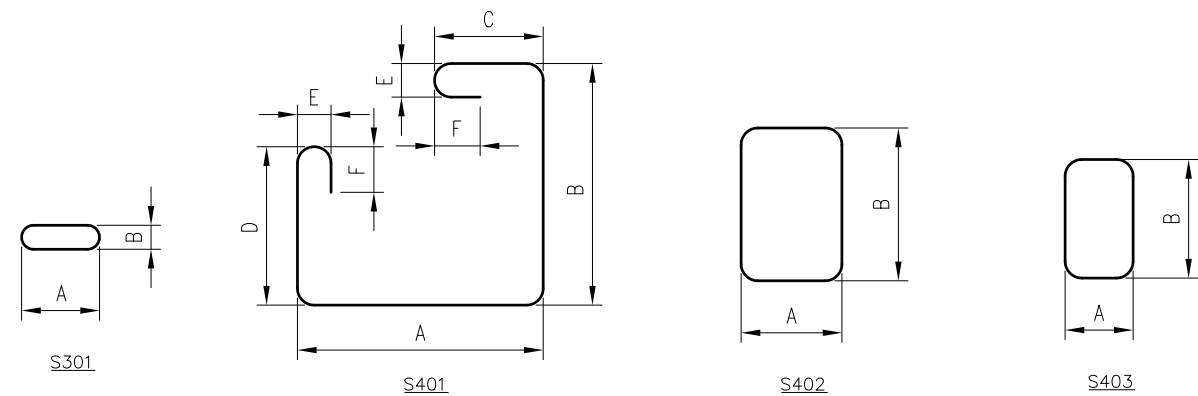
C ANCHOR ROD ASSEMBLY C
6 SCALE: 1" = 1'-0"



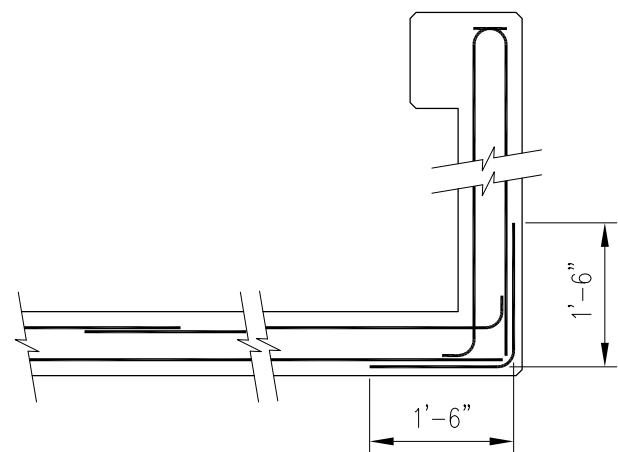
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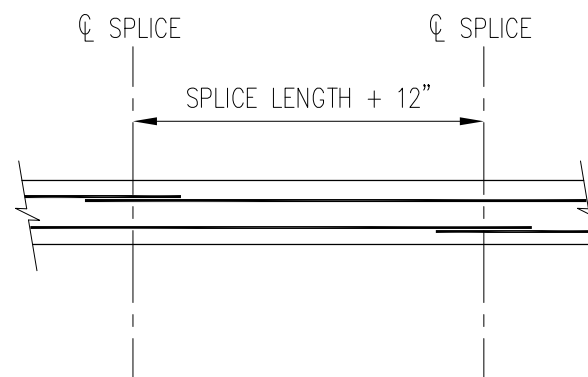
REINFORCEMENT SCHEDULE										
QUANTITY	MARK	SIZE	BEND TYPE	BEND DIMENSIONS						NOTES
				A	B	C	D	E	F	
4	S301	#3		0-8.25	0-2.5					BEND DIAMETER 2.5"
16	S401	#4		2-2.5	2-2.5	0-11.5	1-4.5	0-3.5	0-4.75	BEND DIAMETER 3.5"
16	S402	#4		0-10.5	1-4					BEND DIAMETER 3.5"
8	S403	#4		0-7	1-0.5					BEND DIAMETER 3.5"



A
STEM WALL FOOTING CORNER
REINFORCING DETAIL
SCALE: 1/2" = 1'-0"



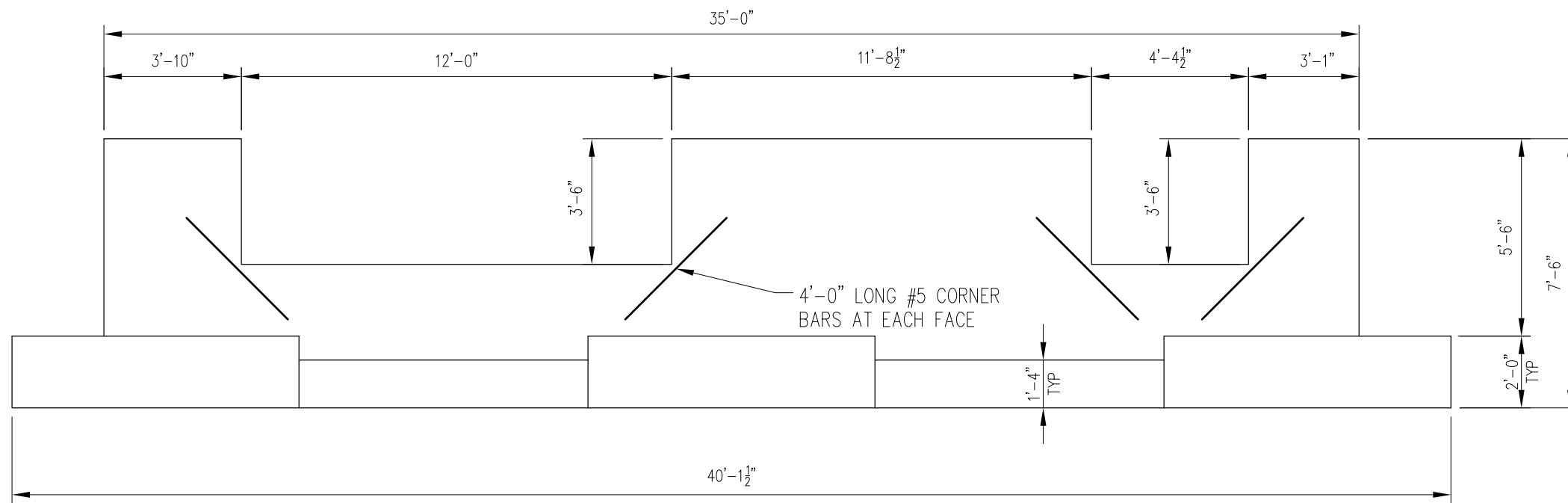
B
WALL HORIZONTAL REINFORCING DETAIL
SCALE: 1/2" = 1'-0"



C
TYPICAL HORIZONTAL SPLICE DETAIL
SCALE: N.T.S.

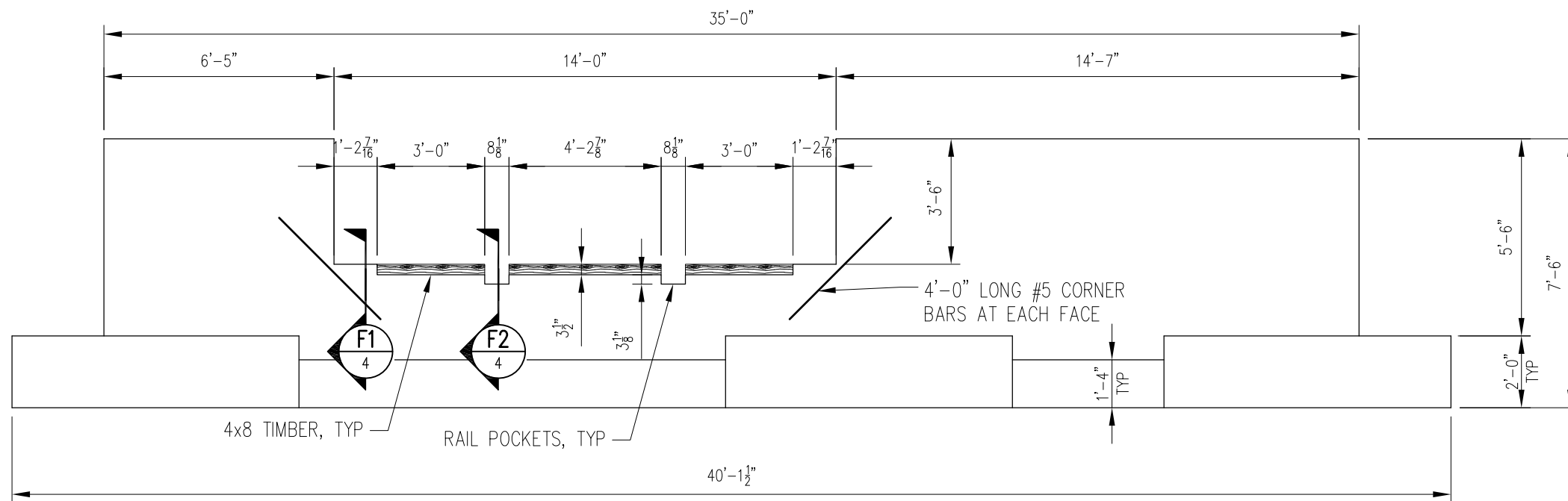


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NORTH ELEVATION


SCALE 1/4" = 1'-0"



SOUTH ELEVATION

SCALE 1/4" = 1'-0"



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EQUIPMENT BUILDING FOUNDATION ELEVATIONS		
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