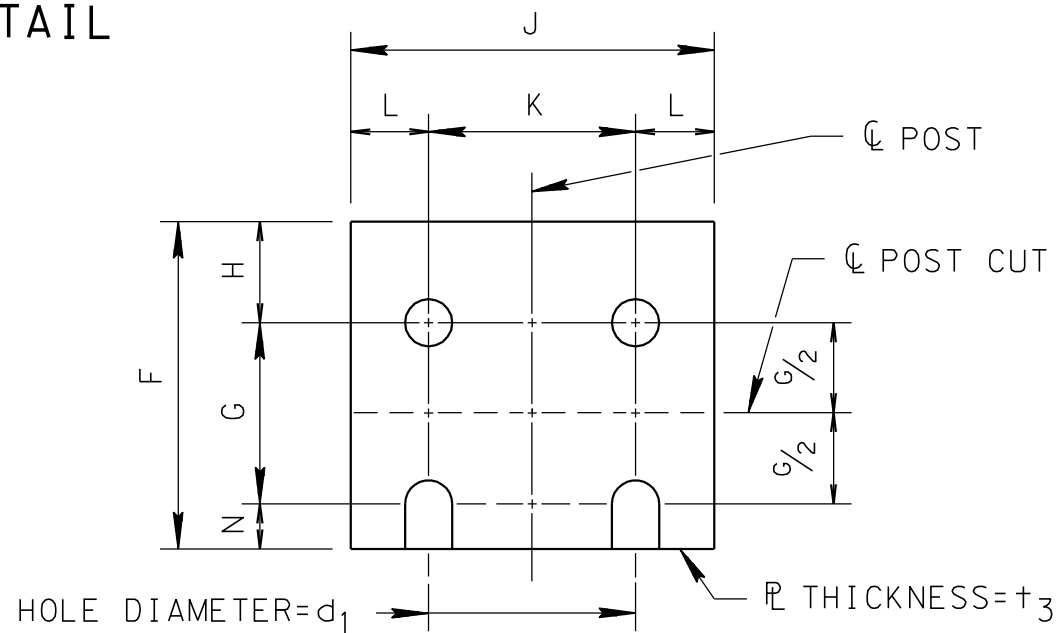
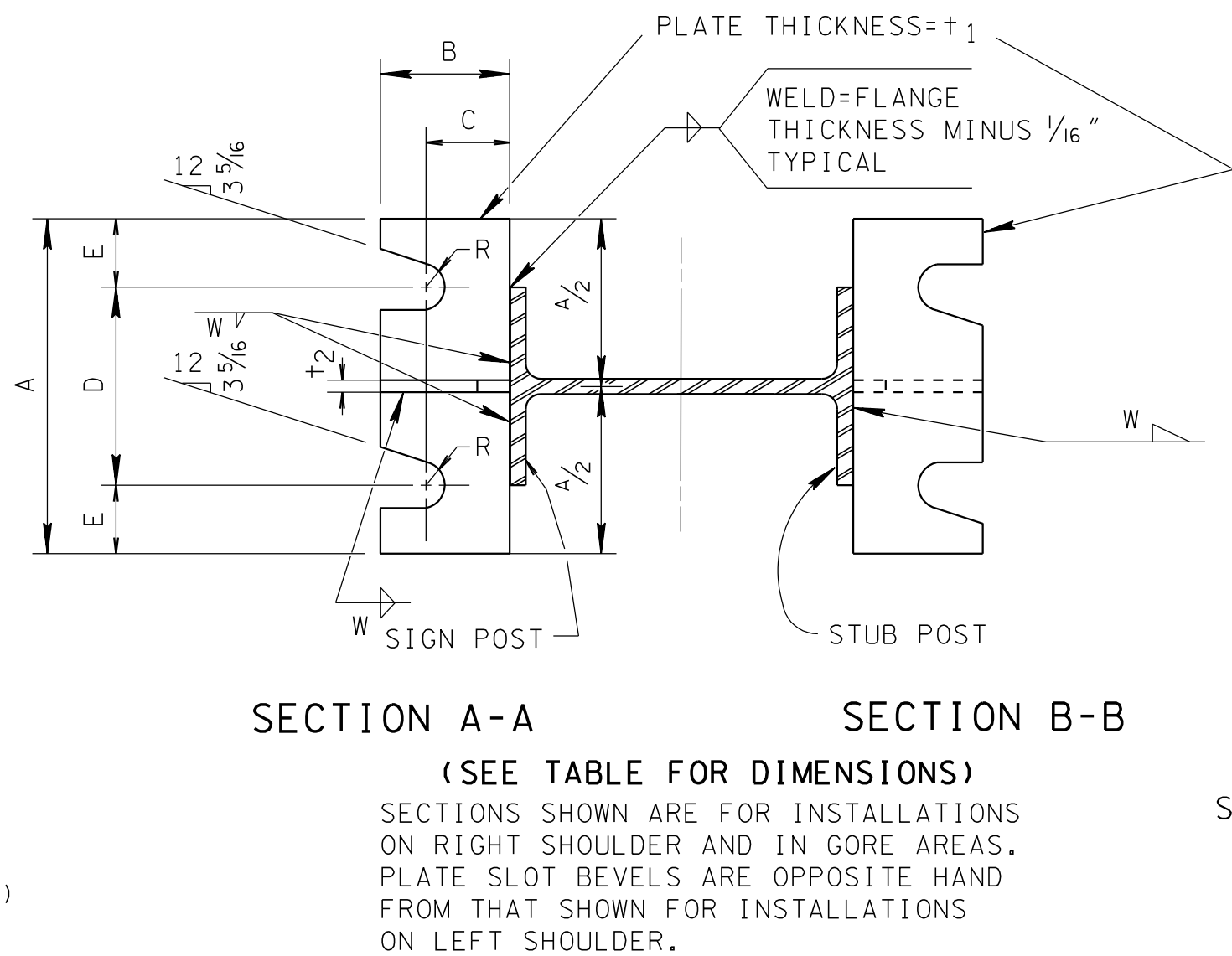
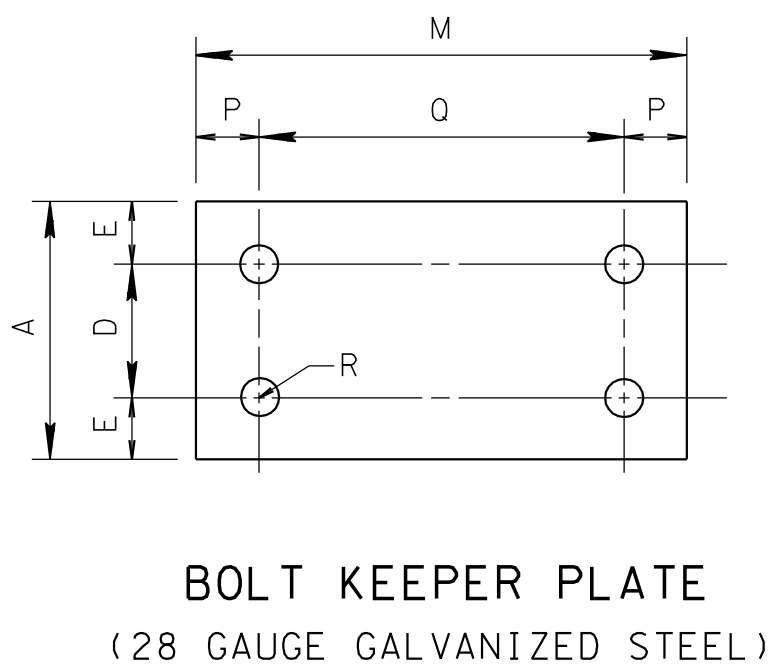
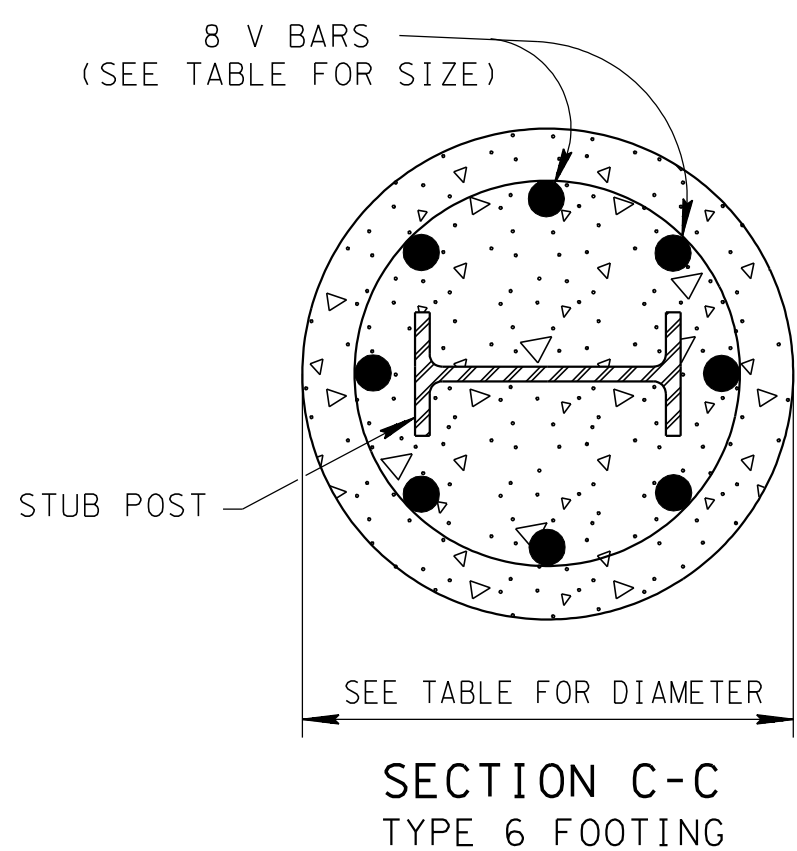
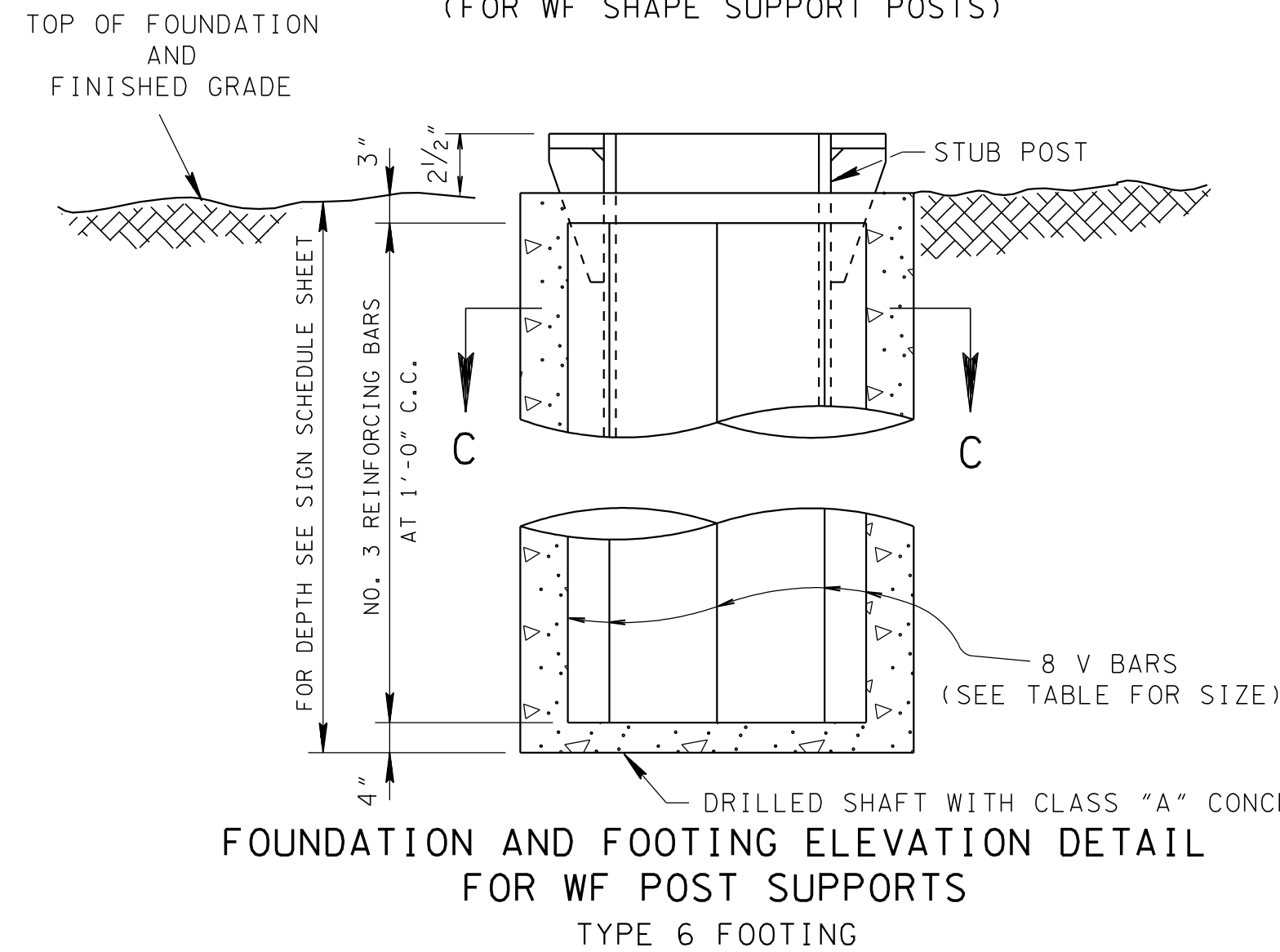
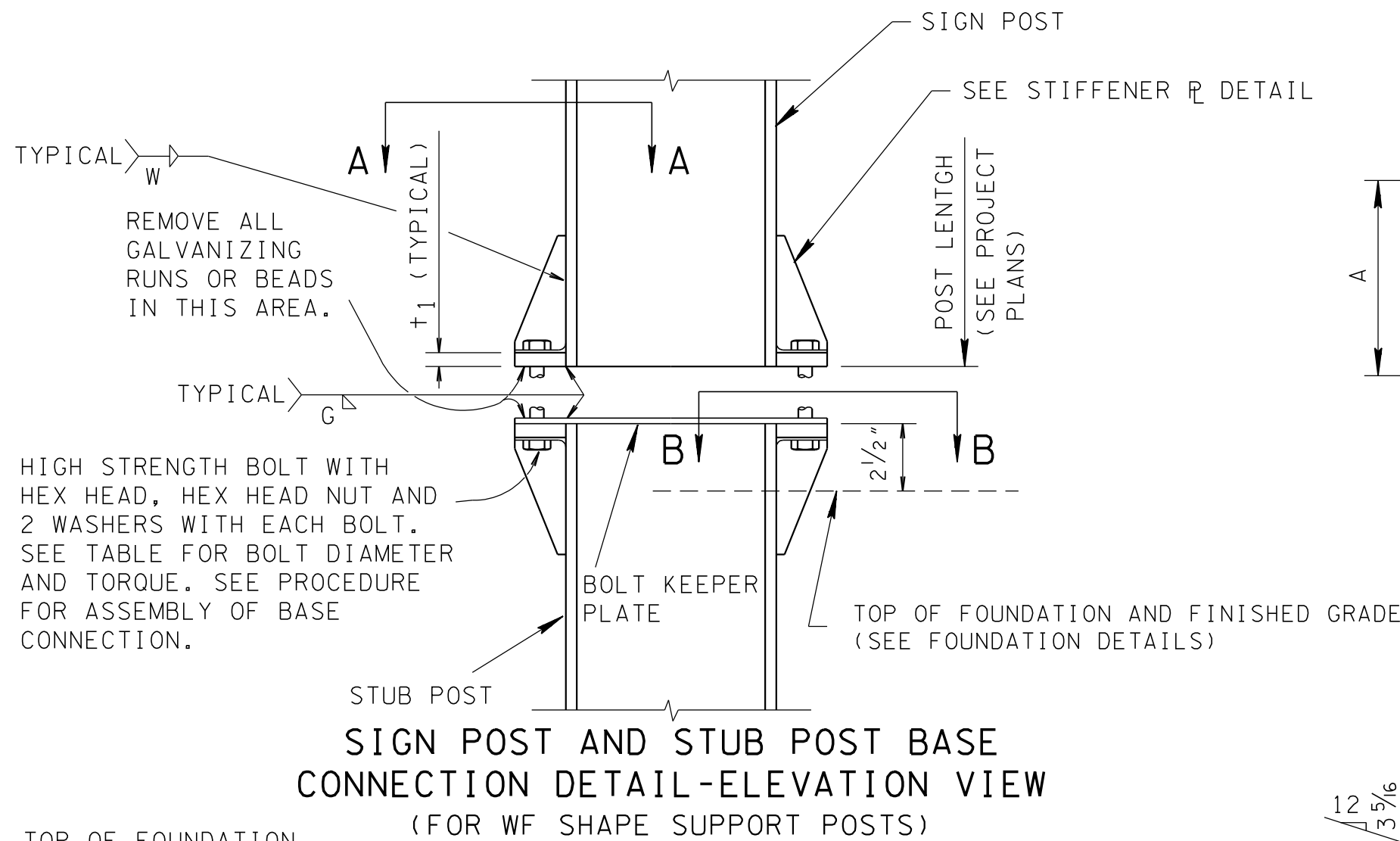
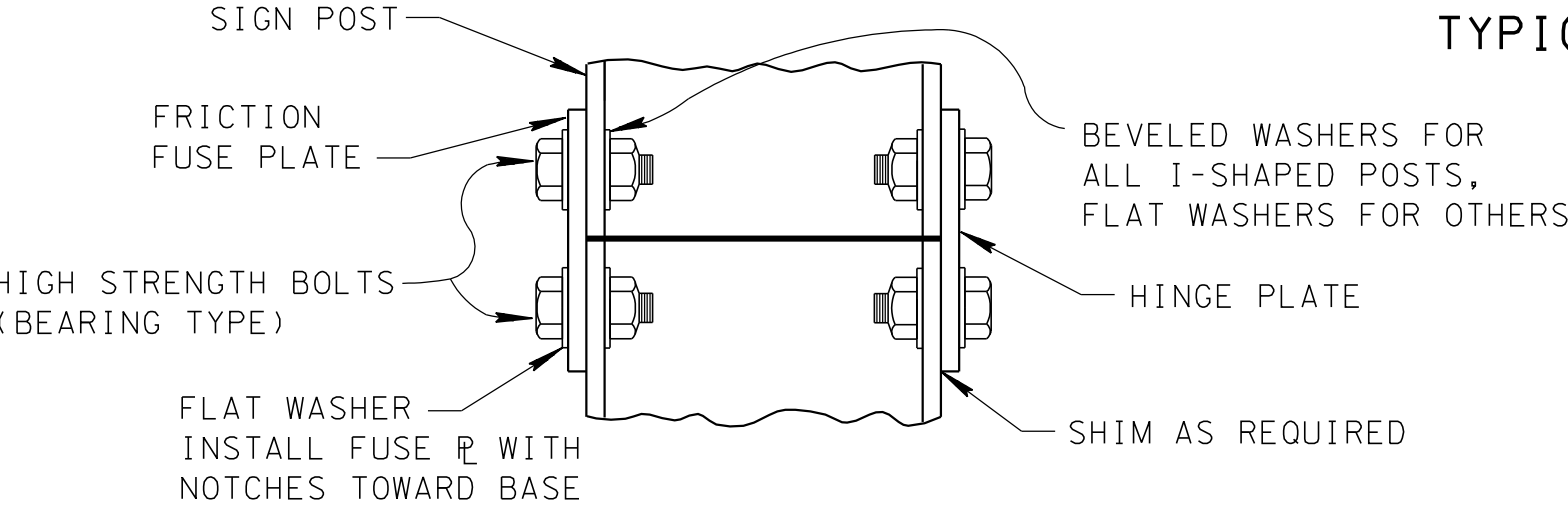
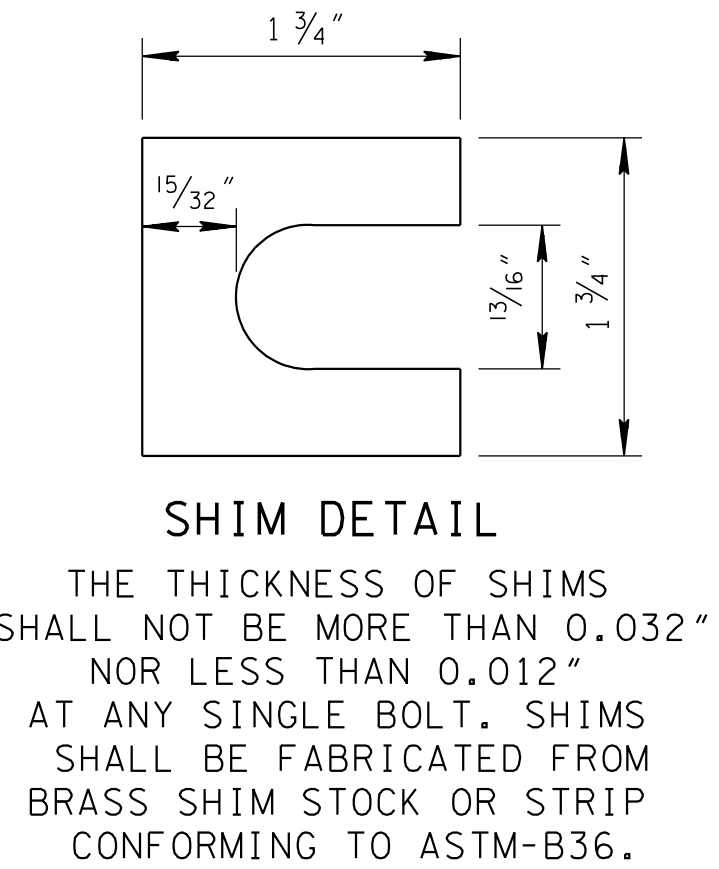
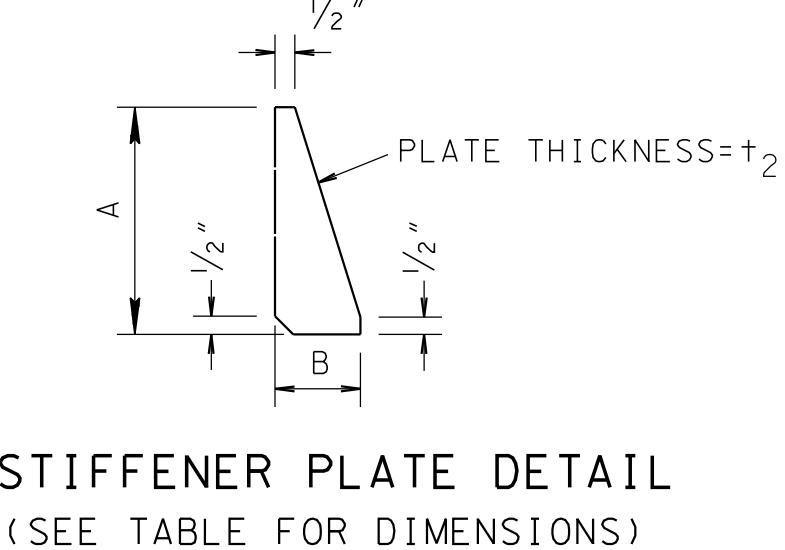
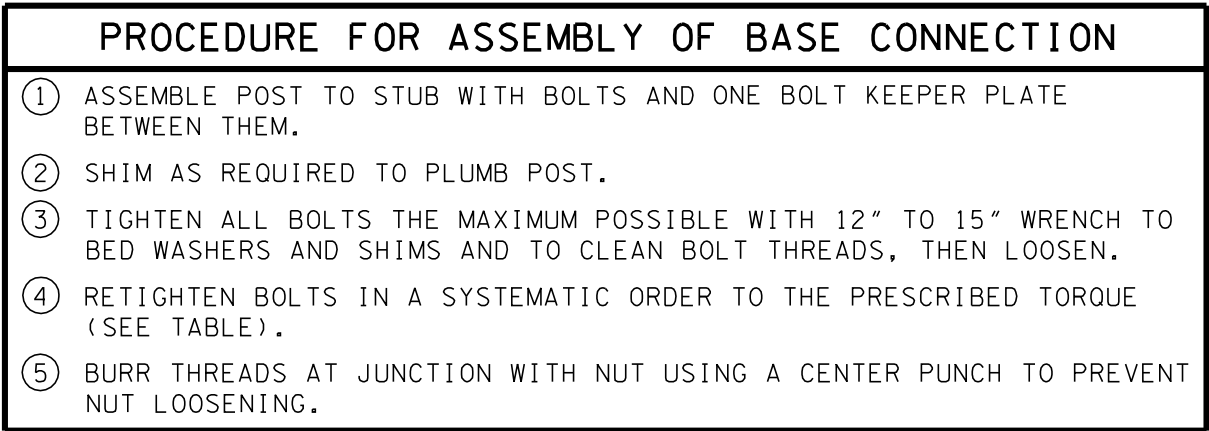


POST SIZE	BASE CONNECTION DIMENSIONS										FUSE PLATE DIMENSIONS										HINGE PLATE DIMENSIONS										FOUNDATION			BOLT KEEPER PLATE		
	BOLT SIZE & TORQUE	A	B	C	D	E	t ₁	t ₂	W	R	F	G	H	J	K	L	N	d ₁	t ₃	BOLT DIA.	S	U	V	X	Y	Z	d ₂	t ₅	BOLT DIA.	DIAMETER OF TYPE 6	STUB LENGTH	V BAR SIZE	M	P	Q	
W6 X 15	5/8"Ø x 2 3/4" TORQUE=226 in. lbs. TO 345 in. lbs.	6 1/2"	2"	1 1/4"	4 1/4"	1 1/8"	3/4"	1/2"	1/4"	1 1/32"	4 1/2"	2 1/2"	1 1/4"	6"	3 1/2"	1 1/4"	3/4"	1 3/16"	1/2"	3/4"Ø	5"	6"	1 1/4"	2 1/2"	3 1/2"	1 1/4"	1 3/16"	5/16"	3/4"Ø	1'-3"	2'-6"	*6	10"	3/4"	8 1/2"	
W6 X 20		6 1/2"	2"	1 1/4"	4 1/4"	1 1/8"	3/4"	1/2"	1/4"	1 1/32"	4 1/2"	2 1/2"	1 1/4"	6"	3 1/2"	1 1/4"	3/4"	1 3/16"	1/2"	3/4"Ø	5"	6"	1 1/4"	2 1/2"	3 1/2"	1 1/4"	1 3/16"	5/16"	3/4"Ø	1'-3"	2'-6"	*6	10 1/4"	3/4"	8 3/4"	
W8 X 24	3/4"Ø x 3 1/2" TORQUE=369 in. lbs. TO 554 in. lbs.	7"	2 1/4"	1 3/8"	4 1/2"	1 1/4"	1"	3/4"	5/16"	1 3/32"	5 3/8"	3"	1 1/2"	6 1/2"	3 1/2"	1 1/2"	7/8"	1 5/16"	3/16"	7/8"Ø	6"	6 1/2"	1 1/2"	3"	3 1/2"	1 1/2"	1 5/16"	3/8"	7/8"Ø	1'-6"	3'-0"	*7	1'-0 1/2"	7/8"	10 3/4"	
W8 X 35		8 1/2"	2 1/4"	1 3/8"	6"	1 1/4"	1"	3/4"	5/16"	1 3/32"	5 3/8"	3"	1 1/2"	8"	5"	1 1/2"	7/8"	1 5/16"	3/16"	7/8"Ø	6"	8"	1 1/2"	3"	5"	1 1/2"	1 5/16"	1/2"	7/8"Ø	1'-6"	3'-0"	*7	1'-0 5/8"	7/8"	10 7/8"	
W10 X 30		6 1/4"	2 1/4"	1 3/8"	3 3/4"	1 1/4"	1"	3/4"	5/16"	1 3/32"	6"	3 5/8"	1 1/2"	5 3/4"	2 3/4"	1 1/2"	7/8"	1 5/16"	3/16"	7/8"Ø	6 5/8"	5 3/4"	1 1/2"	3 5/8"	2 3/4"	1 1/2"	1 5/16"	1/2"	7/8"Ø	1'-9"	3'-0"	*9	1'-2 3/4"	7/8"	1'-1"	
W10 X 33		8 1/2"	2 1/4"	1 3/8"	6"	1 1/4"	1"	3/4"	5/16"	1 3/32"	6"	3 5/8"	1 1/2"	8"	5"	1 1/2"	7/8"	1 5/16"	3/16"	7/8"Ø	6 5/8"	8"	1 1/2"	3 5/8"	5"	1 1/2"	1 5/16"	1/2"	7/8"Ø	1'-9"	3'-0"	*9	1'-2 1/4"	7/8"	1'-0 1/2"	
W12 X 31	1"Ø x 3 1/2" TORQUE=460 in. lbs. TO 735 in. lbs.	7"	2 1/4"	1 3/8"	4 1/2"	1 1/4"	1"	3/4"	5/16"	1 3/32"	6"	3 5/8"	1 1/2"	6 1/2"	3 1/2"	1 1/2"	7/8"	1 5/16"	3/16"	7/8"Ø	6 5/8"	6 1/2"	1 1/2"	3 5/8"	3 1/2"	1 1/2"	1 5/16"	1/2"	7/8"Ø	2'-0"	3'-0"	*11	1'-4 5/8"	7/8"	1'-2 7/8"	

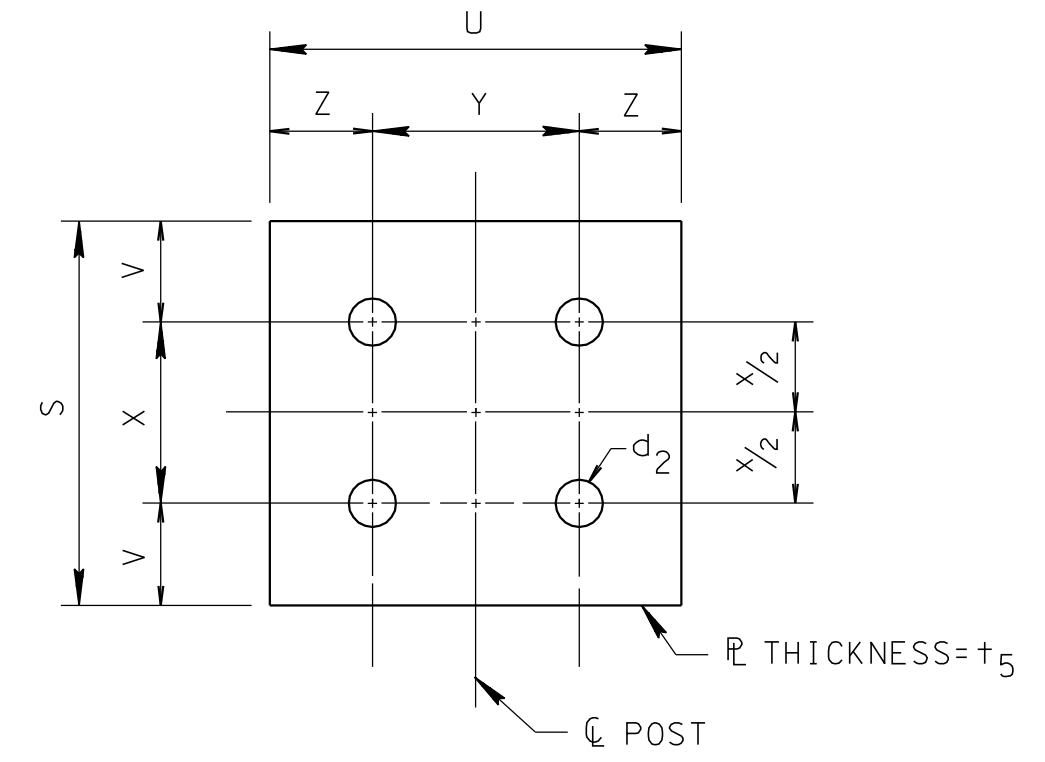
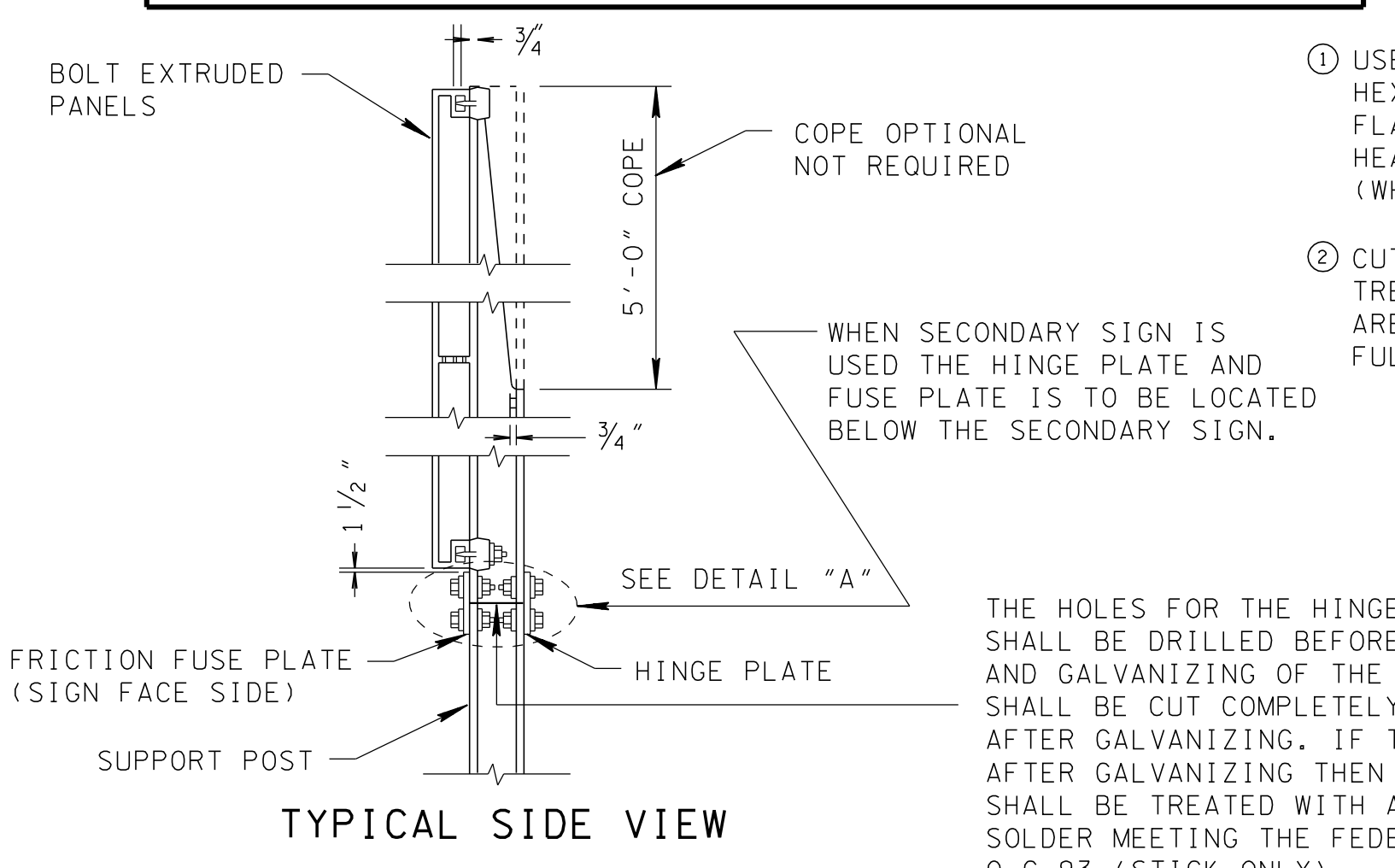


USE HIGH STRENGTH BOLTS WITH HEX HEAD, HEX HEAD NUT AND ONE FLAT WASHER UNDER EACH BOLT HEAD AND BEVEL OR FLAT WASHER (WHERE REQUIRED) UNDER NUT.



FABRICATOR NOTE: IMPORTANT- ALL FRICTION FUSE AND HINGE BOLTS SHALL BE TIGHTENED IN THE SHOP FOLLOWING A METHOD APPROVED BY THE ENGINEER. TIGHTENING SHALL BE TO SUCH A DEGREE AS TO OBTAIN THE FOLLOWING MINIMUM RESIDUAL TENSION IN EACH BOLT:

BOLT SIZE	MIN. RESIDUAL BOLT TENSION
1/2" Ø	12,050 LBS.
5/8" Ø	19,200 LBS.
3/4" Ø	28,400 LBS.
7/8" Ø	39,250 LBS.



GENERAL NOTES		
(A)	THE DESIGN CONFORMS WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS (CURRENT EDITION).	
(B)	THE MATERIALS AND FABRICATION SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION.	
(C)	ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH STANDARD SPECIFICATION ASTM-A123 FOR SIGN SUPPORTS.	
(D)	ALL HIGH STRENGTH BOLTS AND WASHERS SHALL CONFORM TO STANDARD SPECIFICATION ASTM-A325 OR SAE GRADE 5.	
(E)	ALL HIGH STRENGTH NUTS SHALL BE OF SUCH CAPACITY AS TO DEVELOP THE BOLT STRENGTH.	
(F)	TIGHTEN THE HIGH STRENGTH BOLTS IN THE BASE CONNECTION ONLY TO THE TORQUE SHOWN. CAUTION - DO NOT OVERTIGHTEN.	
(G)	ALL BOLT, NUTS AND WASHERS OTHER THAN LABELED HIGH STRENGTH SHALL CONFORM TO STANDARD SPECIFICATION ASTM-A307, CLASS A.	
(H)	THE WELDING SHALL BE DONE IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS (CURRENT EDITION).	
(I)	ALL BOLTS AND NUTS SHALL BE COATED WITH A SUITABLE LUBRICANT.	
(J)	THE MATERIAL USED FOR STRUCTURAL SHAPES AND PLATES SHALL BE ASTM-A36 GRADE STEEL.	
(K)	ALL HIGH STRENGTH BOLTS, NUTS AND WASHERS MAY BE CADMIUM PLATED IN ACCORDANCE WITH STANDARD SPECIFICATION ASTM-A165 OR GALVANIZED IN ACCORDANCE WITH STANDARD SPECIFICATION ASTM-A153.	
(L)	FLANGE HOLES FOR HINGE AND FUSE PLATES SHALL BE DRILLED OR SUB-PUNCHED AND REAMED.	
(M)	CLASS "A" CONCRETE CONSTRUCTION AND MATERIALS SHALL MEET THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION, SECTION 604".	
(N)	CLASS "A" CONCRETE AND REINFORCING STEEL USED IN CONJUNCTION WITH INSTALLATION OF THE SIGN SUPPORT POSTS IS TO BE PAID FOR UNDER ITEM NO. 713-01.01, CLASS "A" CONCRETE (FOUNDATION FOR SIGN SUPPORTS) PER CUBIC YARD, AND 713-01.02, STEEL BAR REINFORCEMENT (FOUNDATION FOR SIGN SUPPORTS) PER POUND.	
(O)	CLASS "A" CONCRETE FOOTING SHALL BE PLACED ONLY ON UNDISTURBED MATERIAL OR IN FILL MATERIAL PLACED BY CONTROLLED COMPACTION AT DEPTHS UNAFFECTED BY FROST.	
(P)	MATERIALS SURROUNDING FOOTING SHALL BE CAPABLE OF CARRYING A MINIMUM BEARING OF 2,500 POUNDS PER SQUARE FOOT. WHERE SOLID ROCK IS ENCOUNTERED, FOOTING SHALL BE LENGTH SHOWN ON THE SIGN SCHEDULE SHEET OR EXTEND A MINIMUM OF TWO FEET INTO THE ROCK.	

- NOTES-**
- USE HIGH STRENGTH BOLT WITH HEX HEAD AND HEX HEAD NUT. ONE FLAT WASHER UNDER EACH BOLT HEAD AND BEVEL OR FLAT WASHER (WHERE REQUIRED) UNDER NUT.
 - CUT SURFACES WILL NOT BE TREATED UNTIL BOTH PLATES ARE INSTALLED AND ALL BOLTS FULLY TIGHTENED.

THE HOLES FOR THE HINGE AND FUSE PLATE SHALL BE DRILLED BEFORE THE SAW CUTTING AND GALVANIZING OF THE POST. THE POST SHALL BE CUT COMPLETELY THRU BEFORE OR AFTER GALVANIZING. IF THE POST IS CUT AFTER GALVANIZING THEN THE CUT SURFACE SHALL BE TREATED WITH AN APPROVED ZINC SOLDER MEETING THE FEDERAL SPECIFICATION 0-G-93 (STICK ONLY).

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD STEEL
GROUND MOUNTED
SIGNS, BREAK-AWAY
TYPE POST FOOTING
DETAILS, WF-BEAMS