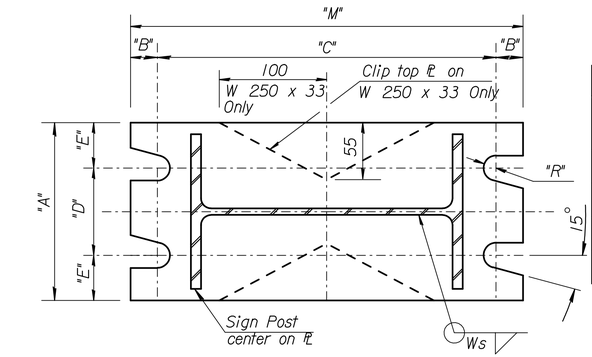
FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	54-87 K-6657-01	2002	677	1122

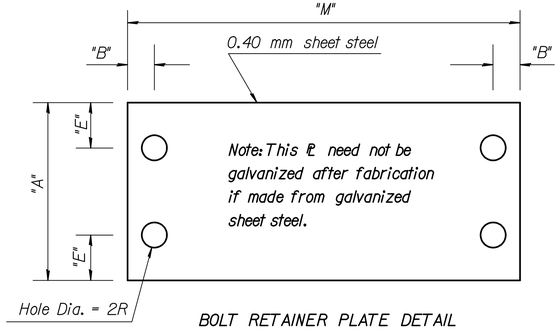
ORIG. FROM BRMD	PROJ.	CO.

	DESIGN		CHECK	
DESIGN	BFM / DCD	DATE 11/90	NLW / LES	DATE 11/90
DETAIL	BFM	DATE 1971	NLW	DATE 1971
QUANTITIES		DATE		DATE
STRUCTURE	RBA	DATE 1971	BFM	DATE 1971
RETRACED	DJE	DATE 1990	LES	DATE 1990

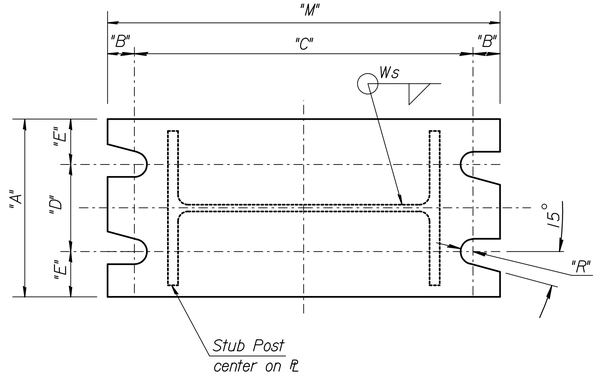
DSNR: OPER: SVB SCALE: I
I:/1991/97362/As-Builts/dgn's/Vol_4/Sh 677-KDOT_STD-TE424Si.dgn Last Rev: 9-20-07 By: gdr



SECTION A-A



BOLT RETAINER PLATE DETAIL



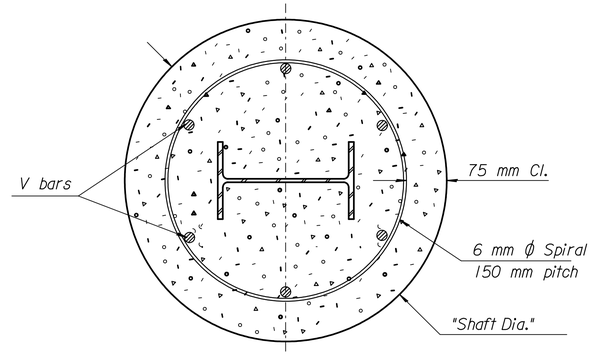
SECTION B-B

Sections shown are for installations on the right shoulder and in the gore. The plate slot bevels are opposite hand from that shown for installation on the left shoulder.

BREAKAWAY BASE CONNECTION DETAILS

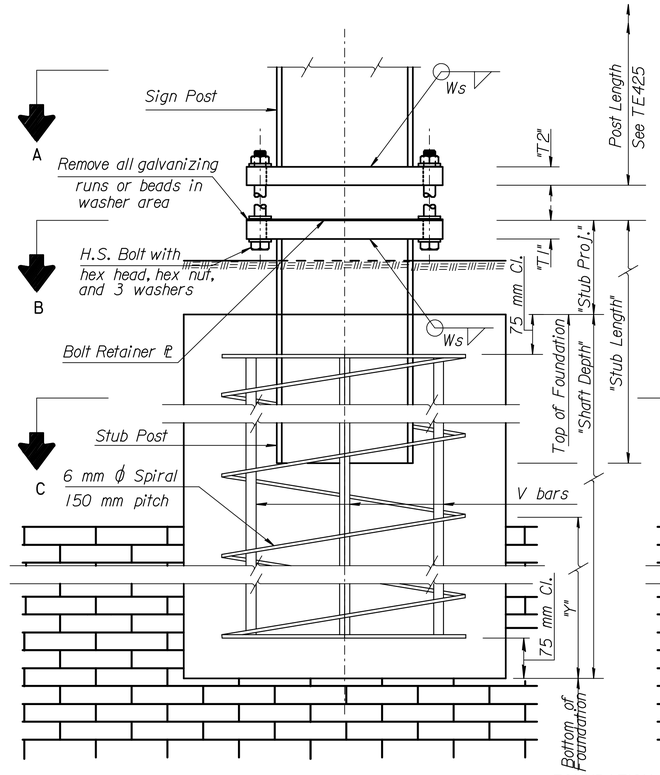
⊛ S 75 x 11 steel post may be substituted for the S 75 x 8.5 steel post

DIMENSION / POST SIZE	BASE CONNECTION DATA TABLE: BOLT SIZE & TORQUE (N•m)	Ws	T1	T2	A	B	C	D	E	M	R	FOUNDATION DATA TABLE: STUB LENGTH	STUB PROJ.	SHAFT DIA.	SHAFT DEPTH: A572M ALT.	SHAFT DEPTH: A36M	SHAFT DEPTH: Y †	V BAR: NO.	V BAR: SIZE
S 75 x 8.5 ⊛	M14 x 2 x 70 -15.8	6	20	16	75	20	125	35	20	165	8	530	150	600	1 800	1 800	750	5	15M
W 150 x 13	M16 x 2 x 75 -39.0	6	22	16	115	20	205	65	25	245	9	760	160	600	1 800	1 800	1 050	6	15M
W 250 x 18	M16 x 2 x 80 -39.0	6	25	20	115	20	305	65	25	345	9	840	160	600	2 400	2 400	1 200	5	20M
W 250 x 33	M22 x 2.5 x 100 -72.3	10	35	25	170	22	326	90	40	370	12	990	180	750	3 600	3 300	1 650	13	20M



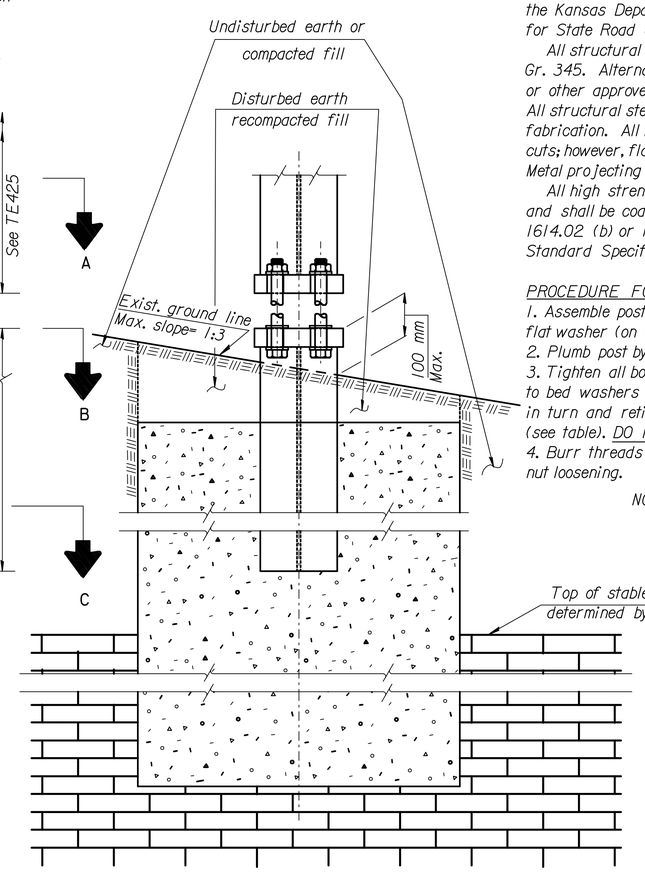
SECTION C-C

† Special Note
When rock is encountered, while drilling the shaft for the concrete foundation, extend the shaft into the rock a distance "Y". The total depth need not exceed that given for the corresponding post size and steel type.



SIDE ELEVATION

FOUNDATION DETAILS



FRONT ELEVATION

GENERAL NOTES

Design conforms with AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals 1994". Breakaway base and hinge design conforms with "Breakaway Roadside Sign Support Structures", Texas Transportation Institute, Texas A&M University, July 1967. Foundation design conforms with "Design Procedure Compared to Full-Scale Tests of Drilled Shaft Footings", Texas Transportation Institute, Feb. 1970.

Materials and fabrication shall conform to the requirments of the Kansas Department of Transportation Standard Specifications for State Road and Bridge Construction and Special Provisions.

All structural steel shall conform to ASTM A36/A36M or A572/A572M Gr. 345. Alternates using ASTM A588/A588M or A242/A242M Gr. 345 or other approved steels may be substituted for ASTM A572/A572M steel. All structural steel shall be galvanized in accordance with ASTM A123 after fabrication. All holes shall be drilled. All plate cuts shall preferably be saw cuts; however, flame cutting will be permitted provided all edges are ground. Metal projecting beyond the plane of the plate face will not be tolerated.

All high strength bolts, nuts and washers shall conform to ASTM A325M and shall be coated in accordance with the coating requirements of 1614.02 (b) or 1614.02 (e) of the Kansas Department of Transportation Standard Specifications for State Road and Bridge Construction.

PROCEDURE FOR ASSEMBLY of BASE CONNECTION:
1. Assemble post to stub with bolts; with bolt retainer plate and one flat washer (on each bolt) between base plates.
2. Plumb post by varying thickness of washers between base plates.
3. Tighten all bolts the maximum possible with a 300 to 380 mm wrench to bed washers and shim and to clean bolt threads. Then loosen each bolt in turn and retighten in a systematic order to the prescribed torque (see table). DO NOT OVER TIGHTEN.
4. Burr threads at junction with nut using a center punch to prevent nut loosening.

NOTE: Commercial Grade concrete may be substituted for Gr. 25 concrete for sign support footings.

All dimensions in millimeters unless otherwise noted.

NO.	DATE	REVISION	BY	APP'D
3				
2				
1	10-28-99	CHANGED SECTION A-A	TCP	MPM

KANSAS DEPARTMENT OF TRANSPORTATION

STANDARD STRUCTURAL SIGN SUPPORT
ROADSIDE MOUNTING
STEEL SUPPORT DETAILS

TE424SI Sheet 1 of 2

FHWA APPROVAL	1-9-99	APP'D			
DESIGNED BFM/DCD	DETAILED BFM	QUANTITIES	TRACED DJE		
DESIGN CK. NLW/LES	DETAIL CK. NLW	QUAN. CK.	TRACE CK. LES		

RECORD DRAWING