

### NOTES

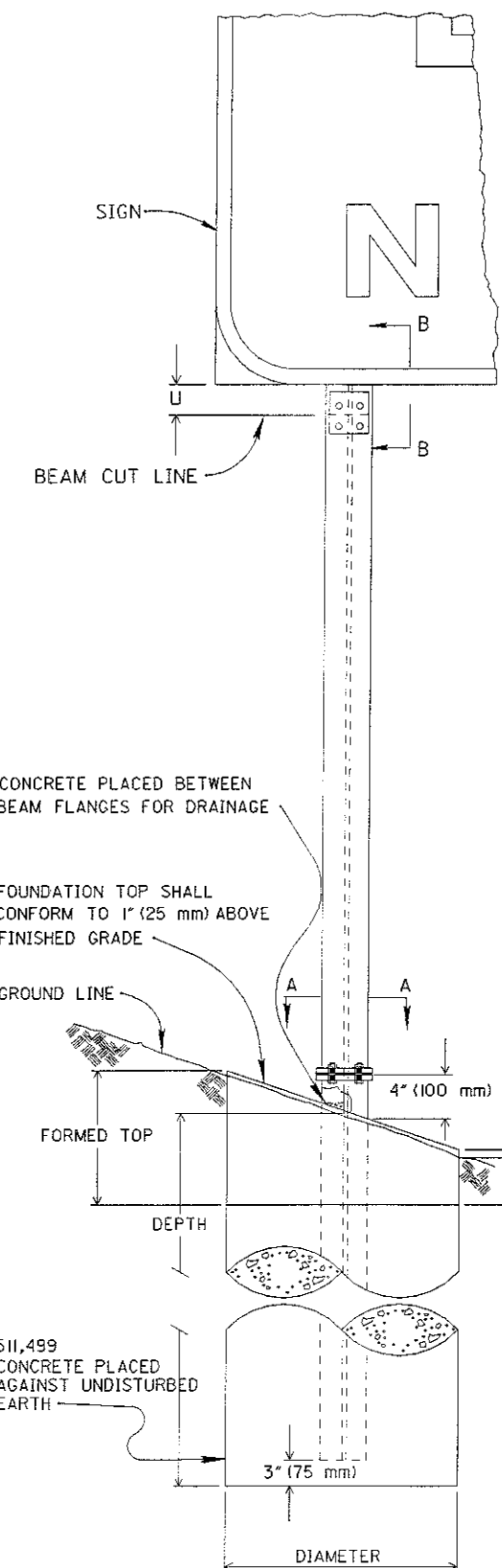
- Base plate weld size shall be equal to the beam flange and web thickness respectively, but no less than 1/4" (6.4 mm) in either instance.
- With the S4X7.7 (S100x11.5) beam, use malleable iron beveled washers conforming with ASTM A47 grade 35018.
- Tighten fuse and hinge plate connections in the shop following a method approved by the Engineer to produce the minimum bolt preload specified.
- Use the following procedure in assembling the breakaway base plate:  
 After all bolts, washers, standard nuts and bolt retainer plates are in place. Tighten all standard nuts snugly with a 12" (305 mm) wrench. Loosen each bolt in turn and retighten in a systematic manner to the specified maximum torque. Calibrate wrenches at least once each working day for each bolt diameter being Torqued. Burr threads at junction with nut using a center punch.
- In lieu of the standard nuts and procedures outlined in 3 and 4 above, the supports may be assembled using Torque limiting nuts. Tighten each nut with sufficient torque applied until the upper wrenching surface has sheared away from the structural body of the nut. Shop assemble fuse and hinge plates following this procedure. Use nuts as manufactured by HI-Shear Corp. Torrance, California; VOI SHAN Industries - Culver City, California; Standard Pressed Steel - Jenkintown, Pennsylvania or approved equal. Use the torque limiting nut part number CHL-14 for the base plate, and CHL-11 for the fuse and hinge plates.
- For beams subject to impact from opposite directions (such as in freeway medians) provide fuse plates on both sides.
- Notches shown for installation to the right of traffic. For installations to the left of traffic, fabricate with skewed edge of notches reversed from that shown.
- Dimensions shown for alternate designs are approximate. Specified dimensions for alternate designs require prequalification. An approved list of suppliers can be provided by O.D.O.T. Payment for alternate designs will be based on the plan quantities for embedded beams.

01-19-01

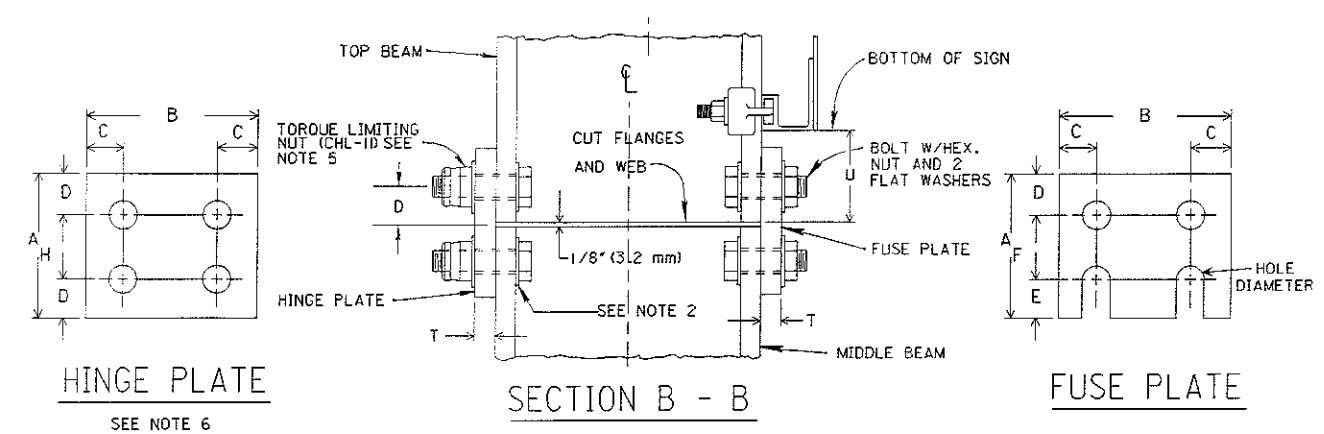
STRUCTURAL BEAM SIGN SUPPORTS

OFFICE OF TRAFFIC ENGINEERING

TC-41.10

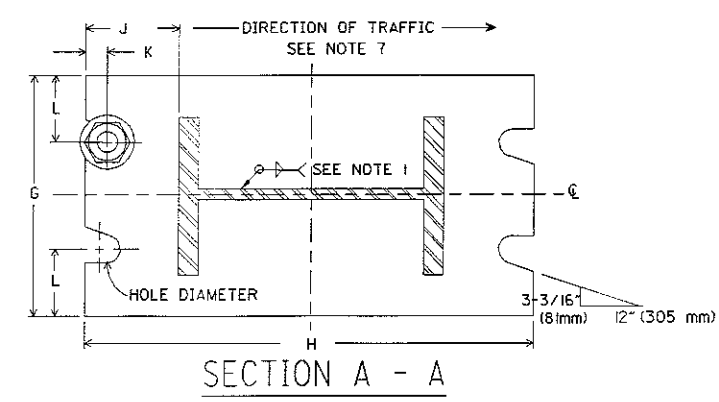
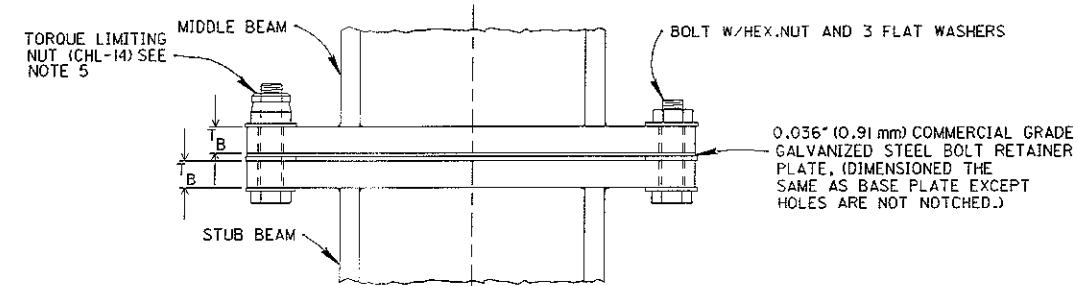


SLIP BASE DESIGN



HINGE PLATE  
SEE NOTE 6

FUSE PLATE



SECTION A - A

ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED

BEAM TYPE	BEAM SIZE	HINGE AND FUSE PLATE DIMENSIONS										FOUNDATIONS			BASE PLATE DIMENSIONS									
		A <sub>H</sub>	A <sub>F</sub>	B	C	D	E	T	U	HOLE DIA.	BOLT SIZE	MIN. PRELOAD (lb)	DIA. (feet)	DEPTH (feet)	CONCRETE cu yd/ea	G	H	J	K	L	T <sub>B</sub>	HOLE DIA.	BOLT SIZE	MAX. TORQUE in./lbs.
S4 X 7.7	4 x 2-5/8	4-1/8	3-5/8	2-5/8	9/16	1	1/2	3/16	2-1/2	9/16	1/2	10,000	1.5	4	0.27	4	8	2	1/2	1	3/4	9/16	1/2	200
W6 X 9	5-7/8 x 4	4-1/8	3-5/8	4	7/8	1	1/2	3/16	2-1/2	9/16	1/2	10,000	1.5	5	0.33	5-1/2	10	2-1/16	1/2	1	3/4	9/16	1/2	200
W10 X 12	9-7/8 x 4	6-1/8	5-3/8	4	7/8	1-1/2	3/4	3/16	3-1/2	13/16	3/4	25,000	2.5	6	1.10	8	14-1/2	2-5/16	3/4	1-1/2	3/4	13/16	3/4	750
W8 X 18	8-1/8 x 5-1/4	7-1/8	6-1/4	5-1/4	1-1/4	1-3/4	7/8	1/4	4	15/16	7/8	35,000	2.5	6	1.10	8	14-1/2	3-1/4	3/4	1-1/2	1	13/16	3/4	750
W10 X 22	10-1/8 x 5-3/4	8-1/8	7-1/8	5-3/4	1-1/2	2	1	5/16	4-1/2	1-1/16	1	46,000	2.5	6.75	1.23	8	14-1/2	2-5/16	5/16	2	1	1-1/16	1	1325
W12 X 30	12-3/8 x 6-1/2	8-1/8	7-1/8	6-1/2	1-1/2	2	1	5/16	4-1/2	1-1/16	1	46,000	2.5	8.25	1.50	10	17	2-7/16	5/16	2	1-1/4	1-1/16	1	1325

ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED

BEAM TYPE	BEAM SIZE	HINGE AND FUSE PLATE DIMENSIONS										FOUNDATIONS			BASE PLATE DIMENSIONS									
		A <sub>H</sub>	A <sub>F</sub>	B	C	D	E	T	U	HOLE DIA.	BOLT SIZE	MIN. PRELOAD (kg)	DIA. (METER)	DEPTH (METER)	CONCRETE m <sup>3</sup> /EA	G	H	J	K	L	T <sub>B</sub>	HOLE DIA.	BOLT SIZE	MAX. TORQUE N·m
S100x11.5	102 x 67	105	92	67	14	25	13	4.8	64	14	13	4535	0.5	1.2	0.24	102	203	51	13	25	19	14	13	22.6
W150x13.5	149 x 102	105	92	102	22	25	13	4.8	64	14	13	4535	0.5	1.5	0.30	140	254	52	13	25	19	14	13	22.6
W250x17.9	244 x 102	156	137	102	22	38	19	4.8	90	21	19	11339	0.8	1.8	0.91	203	368	59	19	38	19	21	19	85
W200x26.6	206 x 133	181	159	133	32	45	22	6.4	102	24	22	15875	0.8	1.8	0.91	203	368	83	19	38	25	21	19	85
W250x32.7	257 x 146	206	181	146	38	51	25	8	114	27	25	20865	0.8	2.1	1.06	203	368	59	24	51	25	27	25	150
W310x44.5	314 x 165	206	181	165	38	51	25	8	114	27	25	20865	0.8	2.5	1.26	254	432	62	24	51	32	27	25	150