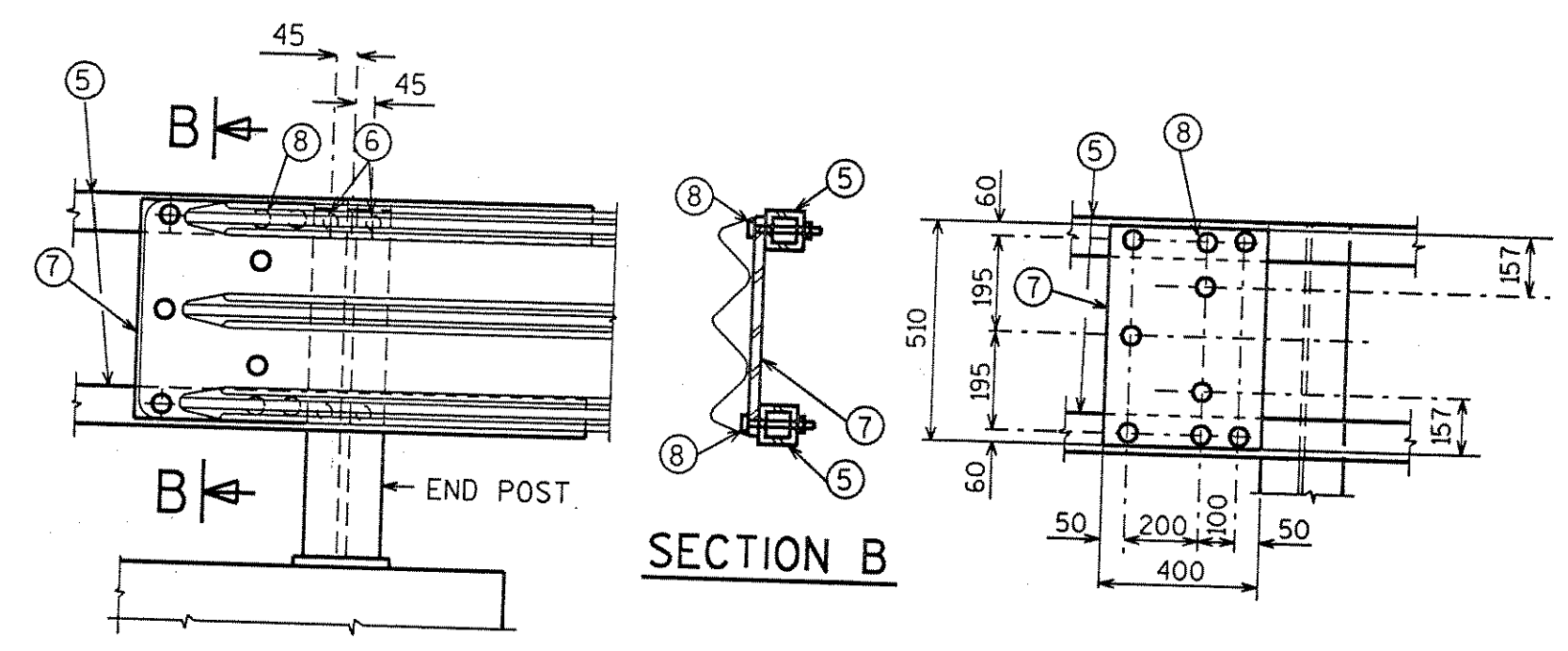
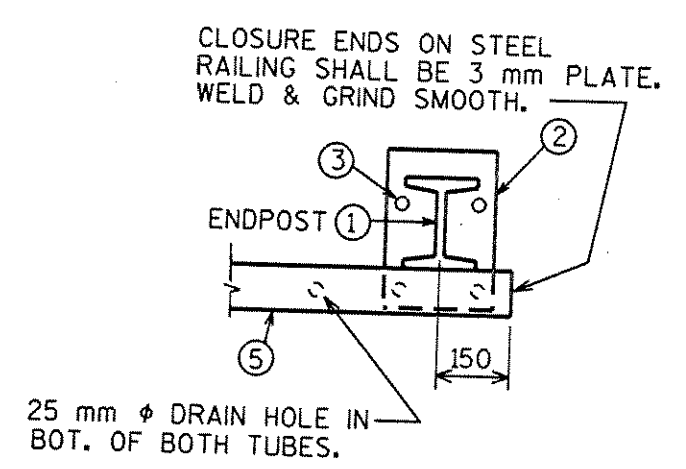


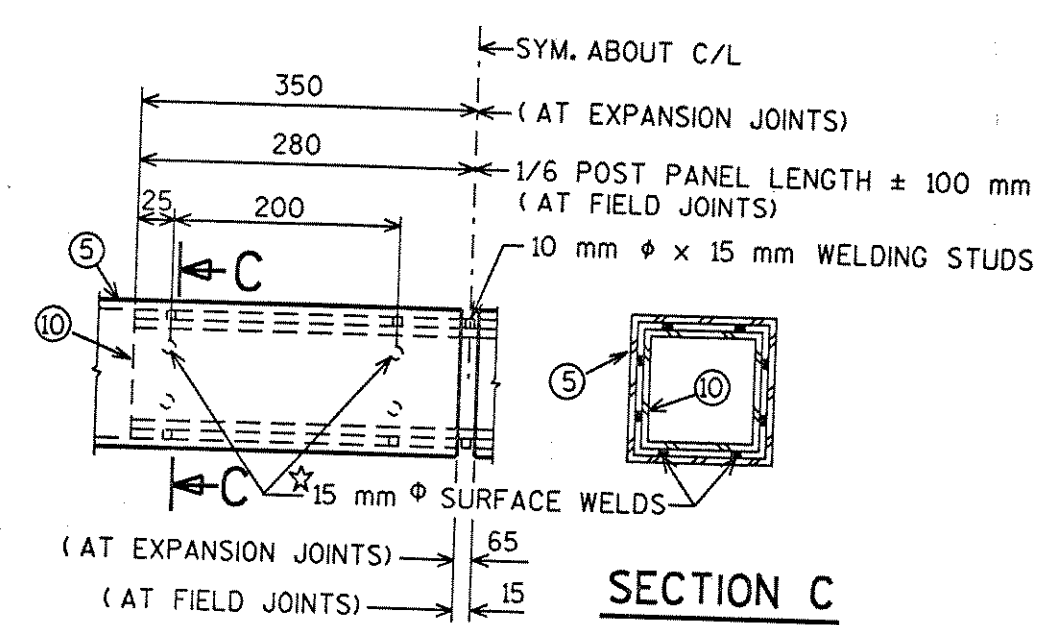
SECTION THRU RAILING ON DECK



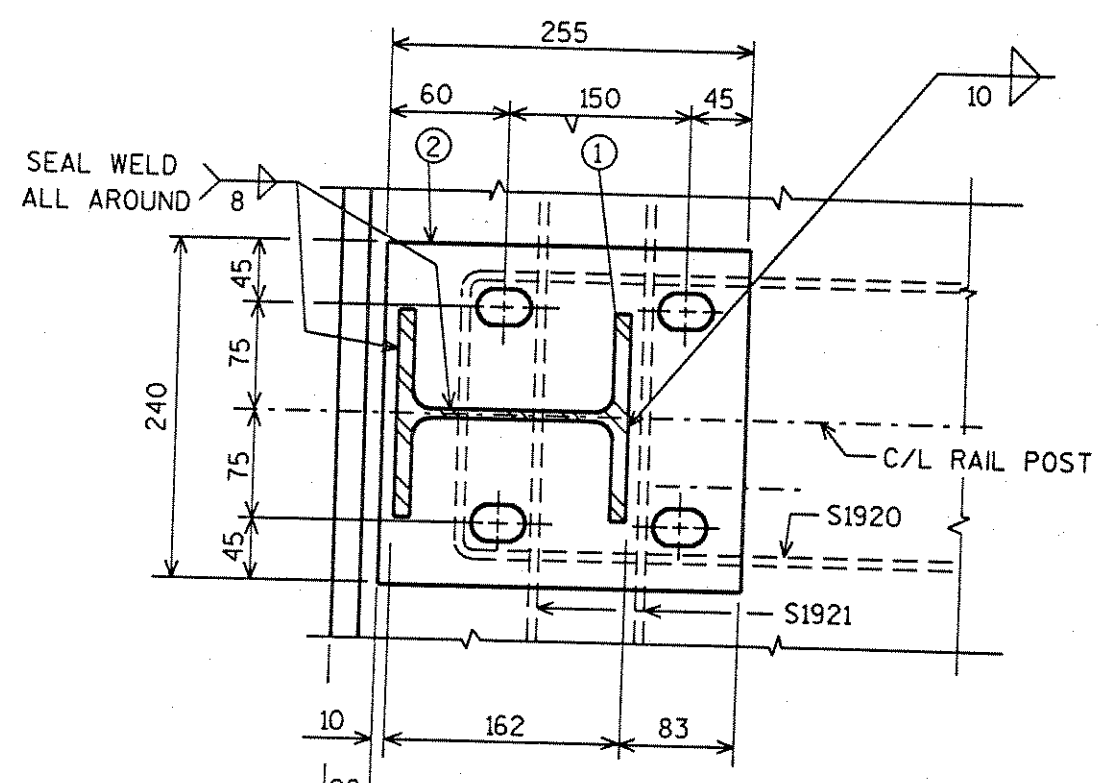
DETAIL AT END POST  
(THRIE BEAM RAIL ATTACHMENT)



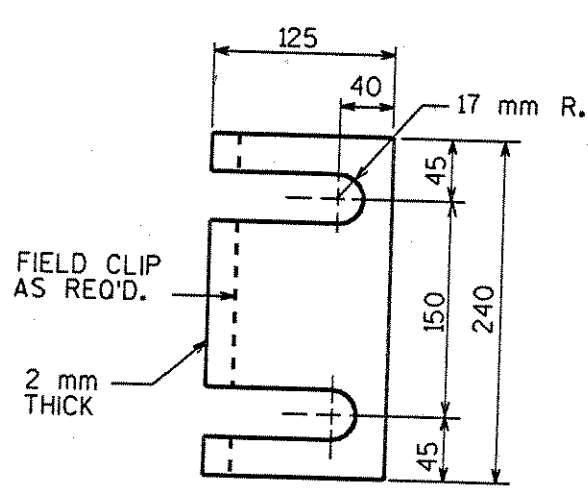
DETAIL FOR END POSTS



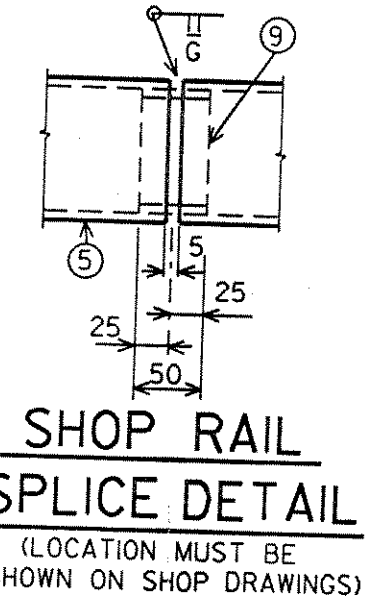
FIELD ERECTION JOINT DETAIL



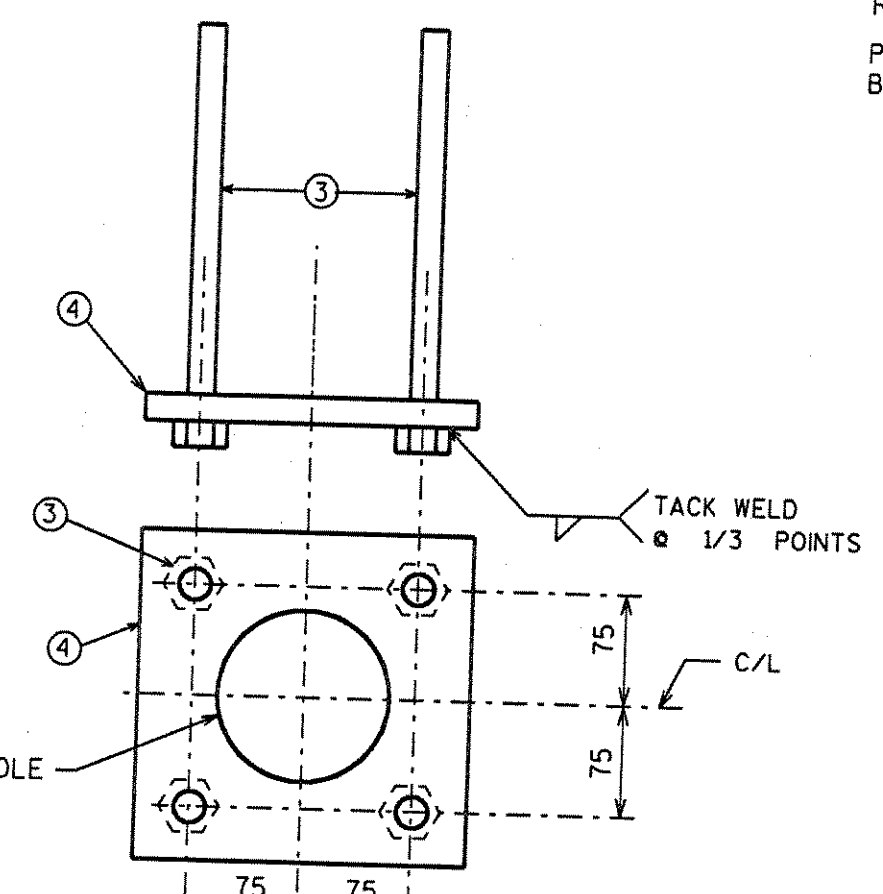
SECTION A



POST SHIM DETAIL  
(4 PER POST)



SHOP RAIL SPLICE DETAIL  
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



ANCHORAGE DETAIL

**LEGEND**

- ① W150X37 WITH 35 mm DIA. HOLES ON EACH SIDE OF POST FOR STUD NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 25 mm X 240 mm X 255 mm WITH 27 mm X 40 mm SLOTTED HOLES FOR ANCHOR BARS NO. 3. WELD TO NO. 1 AS SHOWN.
- ③ A325M- M22 X 200 mm LONG HEX BOLTS (GALVANIZED) WITH A325M NUT & WASHER. 4 REQ'D PER POST. THREAD 75 mm AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 360 mm LONG AT END POST.
- ④ 6 mm X 200 mm X 200 mm FLAT BAR, WITH 24 mm DIA. HOLES FOR ANCHOR BOLTS NO. 3.
- ⑤ TS 102 X 102 X 6.4 STRUCTURAL TUBING, CONFORMING TO A.S.T.M. DESIGNATION A501 OR A500 GRADE B ATTACH TO NO. 1 WITH STUDS NO. 6.
- ⑥ 16 mm DIA. X 40 mm LG. SHOP WELDED STUDS WITH HEX. NUT AND 50 mm WASHERS. (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- ⑦ PLATE 10 mm X 400 mm (475 mm ON SDWK.) X 510 mm. BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5.
- ⑧ 25 mm DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5 FOR M22 A325M BOLTS W/HEX NUTS AND WASHERS.
- ⑨ SQUARE SLEEVE FABRICATED FROM 6 mm PLATE. PROVIDE "SLIDING FIT" WITH A MINIMUM OUT TO OUT DIMENSION OF 87 mm.
- ⑩ TS 76 X 76 X 6.4 X (710 mm AT EXPANSION JOINTS) & (560 mm AT FIELD JOINTS) LONG. PROVIDE 13 mm DIA. SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 5. PROVIDE 10 mm DIA. X 13 mm WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.

**GENERAL NOTES**

BID ITEM SHALL BE "TUBULAR RAILING TYPE 'F'", WHICH INCLUDES ALL ITEMS SHOWN.  
 RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.  
 POSTS BASE PLATES, NO. 2, SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.  
 ALL MATERIAL, EXCEPT (NO. 4) SHALL BE GALVANIZED AFTER FABRICATION.  
 FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.  
 ALL MATERIALS USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO A.S.T.M. DESIGNATION A709M GRADE M250 UNLESS NOTED OTHERWISE.  
 STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.  
 PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-35-103			
CONST. SPEC.	1996	DRAWN BY	B.W. PLANS CKD.
TUBULAR RAILING TYPE "F"			SHEET 11

FILE- BR B35103103RAIL.F.DGN