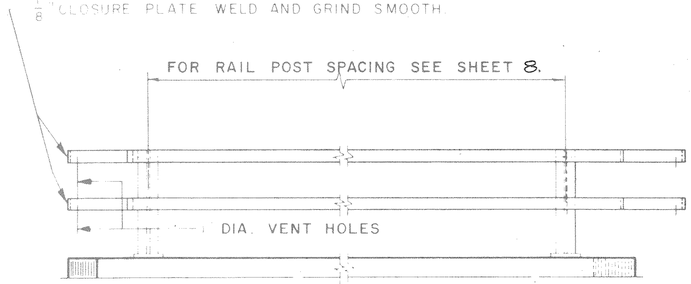
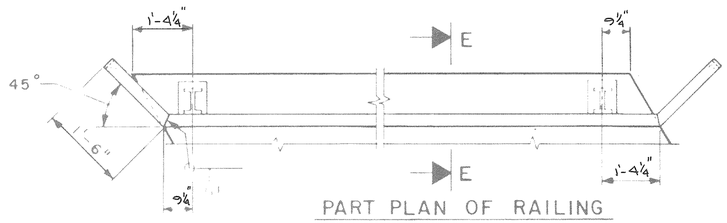
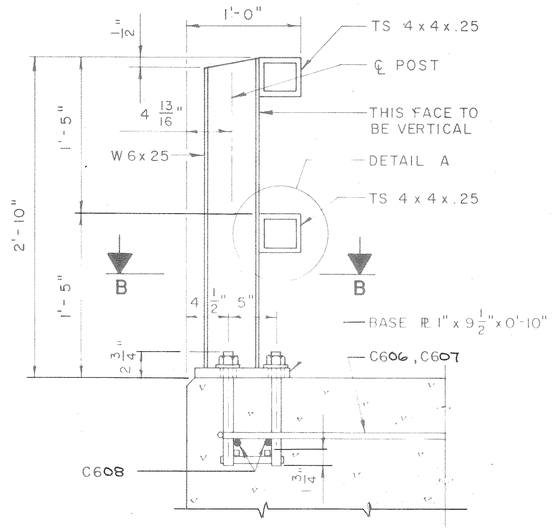
STATE PROJECT NUMBER	SHEET NO.
9860-3-70	



PART ELEVATION OF RAILING



PART PLAN OF RAILING



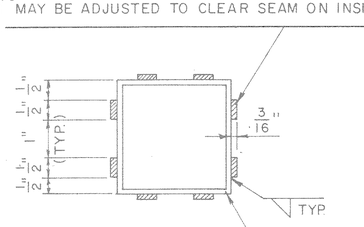
SECTION E

GENERAL NOTES

1. BID ITEM SHALL BE "TUBULAR RAILING, TYPE F".
2. POST BASE PLATES 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 CUTS.
3. RAILING SHALL BE 4x4x.25 STRUCTURAL TUBING CONFORMING TO A.S.T.M. DESIGNATION A36.
4. ANCHOR BOLTS SHALL BE 7/8" DIA. NOMINAL CONFORMING TO A.S.T.M. A449 ⚠ WITH 3" THREAD AND A325 HIGH STRENGTH NUTS AND WASHERS.
5. CAULK EXPOSED OPENINGS BETWEEN SHIMS.
6. POSTS, BASE PLATES AND SHIMS SHALL BE MADE FROM MATERIAL CONFORMING TO A.S.T.M. DESIGNATION A36. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST NORMAL TO GRADE LINE.
7. PLACE ANCHOR BOLTS NORMAL TO BASE PLATE.
8. ALL MEMBERS, INCLUDING UPPER 4" OF ANCHOR BOLTS, SHALL BE GALVANIZED AFTER FABRICATION.
9. RAILS MAY BE WELDED TO POSTS.
10. FILL POST ANCHOR BOLT HOLES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
11. RAILING SHALL BE FABRICATED IN 2 OR 3 PANEL LENGTHS.
12. STEEL SHIMS SHALL BE USED UNDER POSTS WHERE REQUIRED FOR ALIGNMENT.
13. FIELD ERECTION JOINTS SHALL BE ALTERNATIVE 1 OR ALTERNATIVE 2.
14. PRIOR TO GALVANIZING ALL STEEL RAILING SHALL BE GIVEN A NO. 6 COMMERCIAL BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.

⚠ OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION. (MIN. YIELD OF 92 K.S.I. AND ELONGATION OF 14 %)

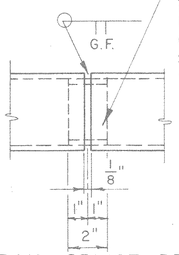
BAR 1/2" x 3/16" x 0'-6". GRIND AS REQUIRED FOR SLIDING FIT. SPACING OF BARS MAY BE ADJUSTED TO CLEAR SEAM ON INSIDE OF RAIL MEMBER.



SECTION THRU SLEEVE

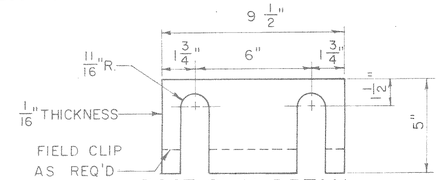
SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT" WITH A MINIMUM OUT TO OUT DIMENSION OF 3 13/32".

5/8" MINIMUM FLAT SURFACE DIAMETER STEEL PUNCHINGS OR STUDS MAY BE SUBSTITUTED FOR EACH WELD.



SHOP RAIL SPLICE DETAIL

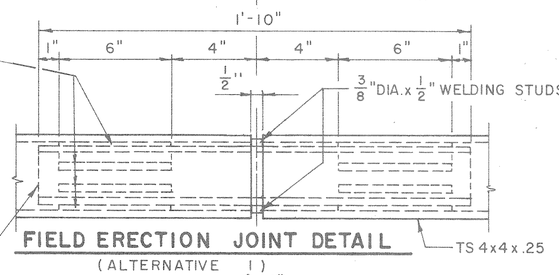
LOCATION MUST BE SHOWN ON THE SHOP DRAWINGS



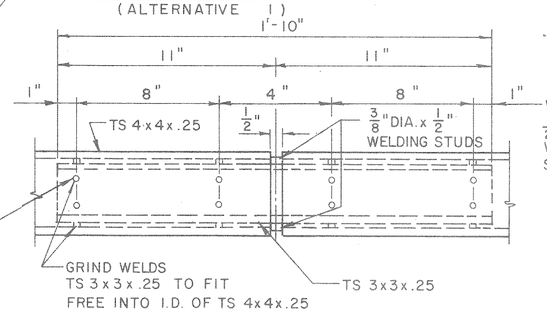
POST SHIM DETAIL
(4 PER POST)

1/6 PANEL LENGTH ± 4" TO NEAREST POST

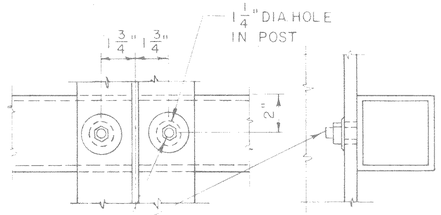
SYM. ABOUT ℄



FIELD ERECTION JOINT DETAIL
(ALTERNATIVE 1)

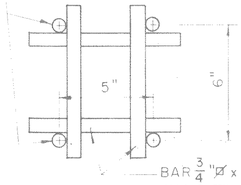


FIELD ERECTION JOINT DETAIL
(ALTERNATIVE 2)



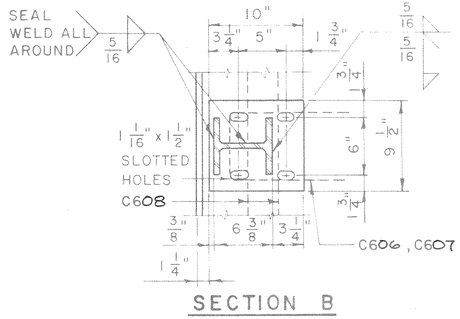
DETAIL A

ANCHOR BOLTS 7/8" DIA. x ◔ WITH WASHER AND HEX. NUT. (4 BOLTS PER POST) CHAMFER TOP OF BOLTS BEFORE THREADING.



ANCHOR BOLT DETAIL

◔ 10" LONG AT MIDDLE POST
1'-3" LONG AT END POST



SECTION B

No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-35-92

Const. Spec. WIS. 1981	Drawn By LEN/TJA	Plans Checked JRL

TUBULAR RAILING, TYPE F

SHEET 10 OF 10

X78814

DA13997.500

Form E-B-12-69