

NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE PROVISIONS OF SECTION 525, "METAL RAILINGS" OF THE STANDARD SPECIFICATION FOR CONSTRUCTION.
2. TUBING SHALL MEET THE REQUIREMENTS OF SECTION 732, "RAILING MATERIALS" OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, EXCEPT THAT THE DROP-WEIGHT TEAR TEST IN SECTION 732 SHALL NOT APPLY TO THE STRUCTURAL CUTTING ON THIS PROJECT.
3. ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 2mm RADIUS AND BE FREE OF BURRS.
4. RAIL POSTS SHALL BE SET NORMAL TO GRADE.
5. SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO (2) RAIL POSTS AND PREFERABLY TO AT LEAST FOUR (4) POSTS.
6. RAIL TUBE EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING A SUPERSTRUCTURE EXPANSION JOINT. EXPANSION JOINT WIDTH SHALL BE "X" AT 7°C AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
7. ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111, EXCEPT THAT HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M232M.
8. RAIL POSTS ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
9. RAIL TUBES SHALL BE ATTACHED USING M20 FULL DIAMETER BODY AASHTO M164 (TYPE 1) ROUND HEAD BOLTS INSERTED THROUGH THE FACE OF THE TUBE. HOLES IN POSTS SHALL BE 2mm LARGER THAN THE BOLT SIZE.
10. HOLES IN RAILS FOR RAIL TUBE ATTACHMENT MAY BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO ERECTION.
11. IF THERE IS A CONFLICT BETWEEN THESE STANDARD DETAILS AND THE DESIGN, THE REQUIREMENTS OF THE DESIGN DRAWINGS SHALL BE FOLLOWED.
12. ANY BENDING OF RAIL SHALL BE BY SHOP PROCEDURE ONLY.
13. THE FABRICATOR SHALL SUBMIT SHOP DRAWINGS INCLUDING WELDING PROCEDURES TO THE STRUCTURES SECTION FOR APPROVAL IN ACCORDANCE WITH SUBSECTION 506.04 "DRAWINGS AND PROCEDURES." ALL WELDING SHALL CONFORM WITH SUBSECTION 506.10 "WELDING".
14. RAIL POST AND BASE PLATES SHALL BE TESTED FOR IMPACT PROPERTIES IN ACCORDANCE WITH ASTM A370 CHARPY IMPACT TESTING USING TYPE A SPECIMENS.

MATERIALS

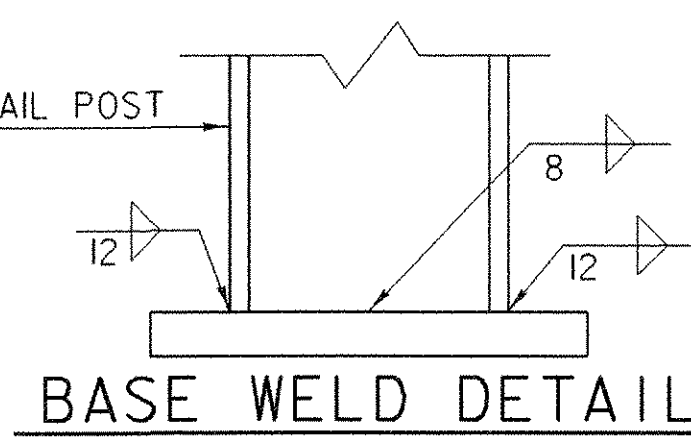
RAIL TUBES.....ASTM A500, GRADE B
 RAIL POSTS AND BASE PLATE.....AASHTO M 270/M 270, GRADE 345
 ALL OTHER SHAPES AND PLATES.....AASHTO M 270/M 270, GRADE 250
 ANCHOR STUDS.....ASTM F568M CLASS 8.8
 ALL OTHER BOLTSAASHTO M164M, TYPE 1

NUTS FOR AASHTO M164M (ASTM A325M) BOLTS AND ANCHOR STUDS SHALL COMPLY WITH AASHTO M291M (ASTM A563M).

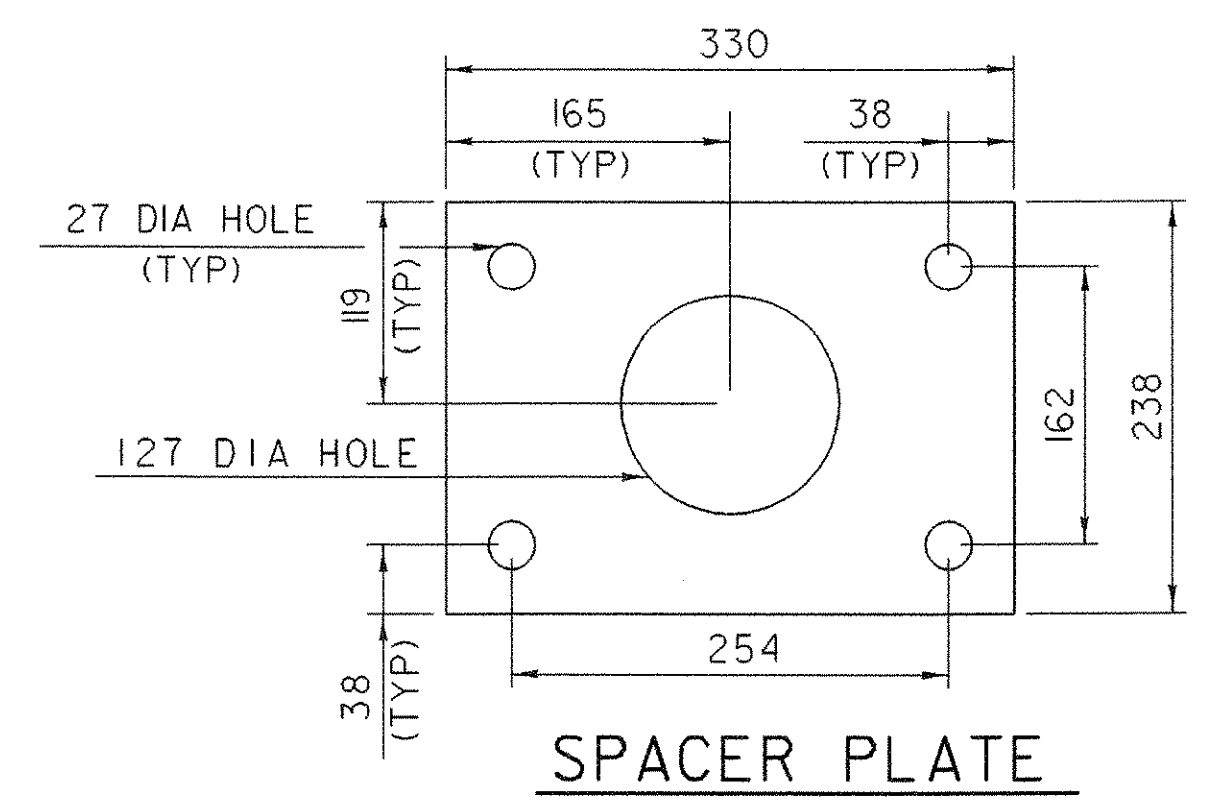
WASHERS SHALL COMPLY WITH AASHTO M293M (ASTM F436M) SPECIFICATIONS.
 3mm PAD SHALL COMPLY WITH STANDARD SPECIFICATION SUBSECTION 731.02.

SPLICE TABLE					
T	A	B	C	L	X
NA	100	50	--	510	20
EXPANSION JOINT TABLE					
<100	100	50	65	510	65

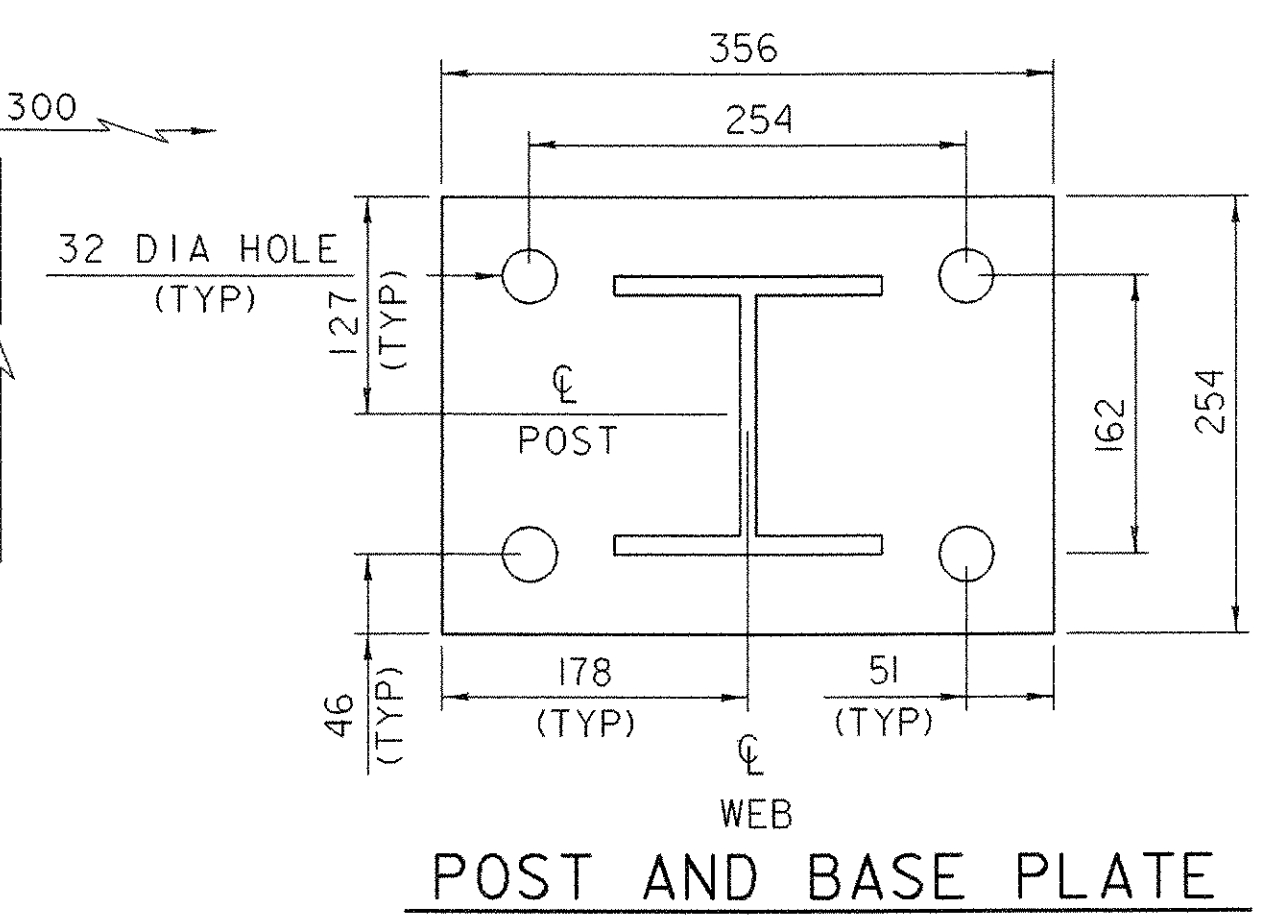
T = TOTAL MOVEMENT BETWEEN BRIDGE EXPANSION JOINTS. SEE NOTE 6
 * = SINGLE SLOT



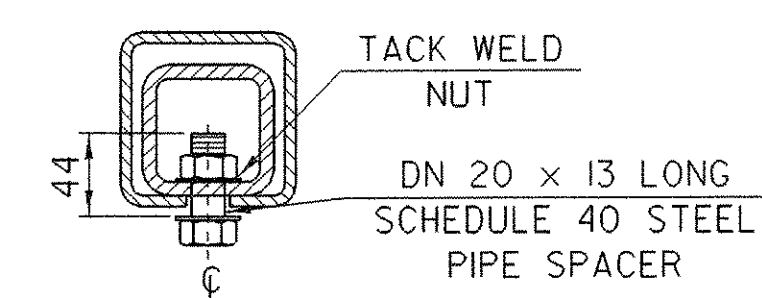
BASE WELD DETAIL



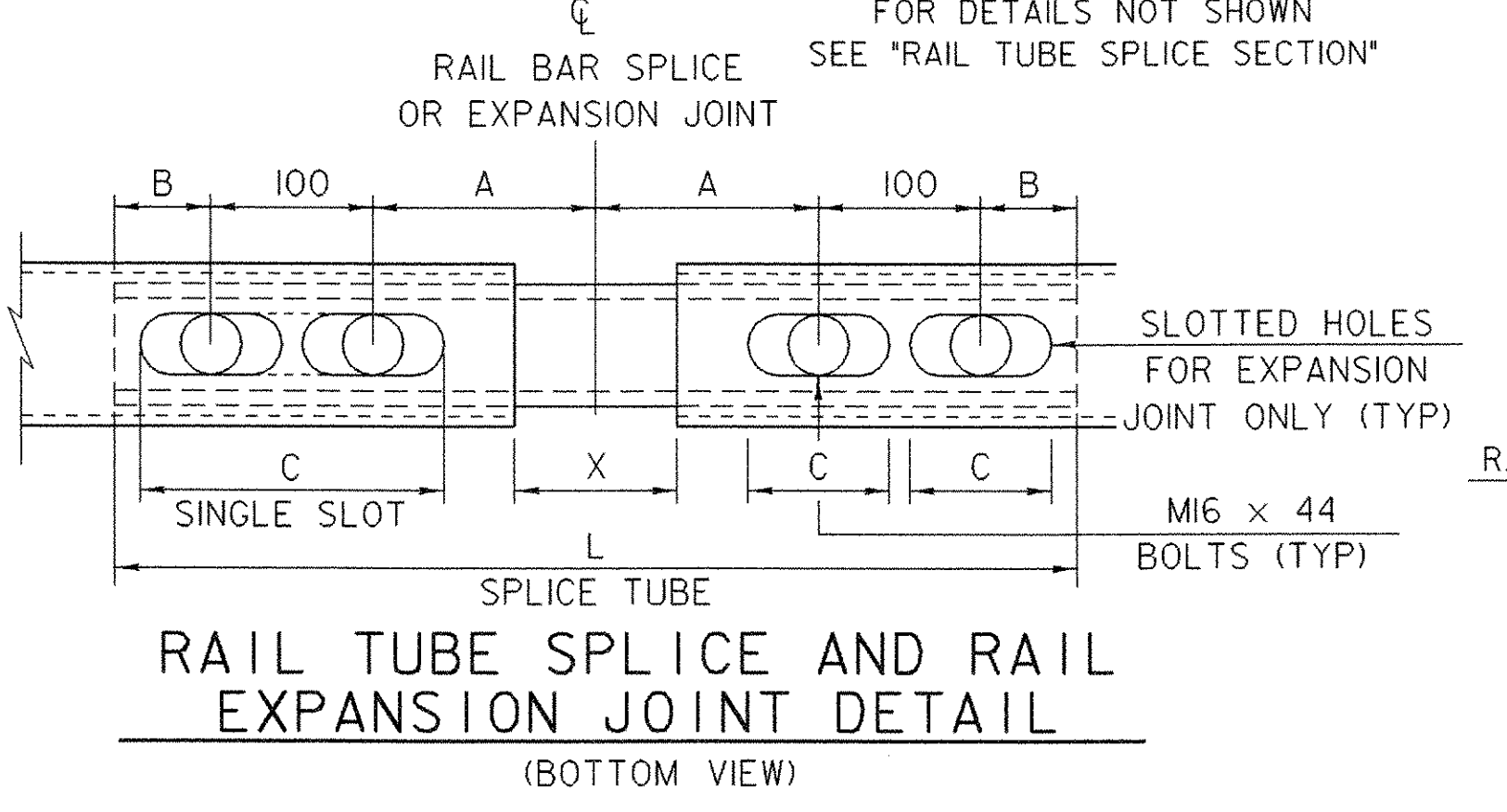
SPACER PLATE



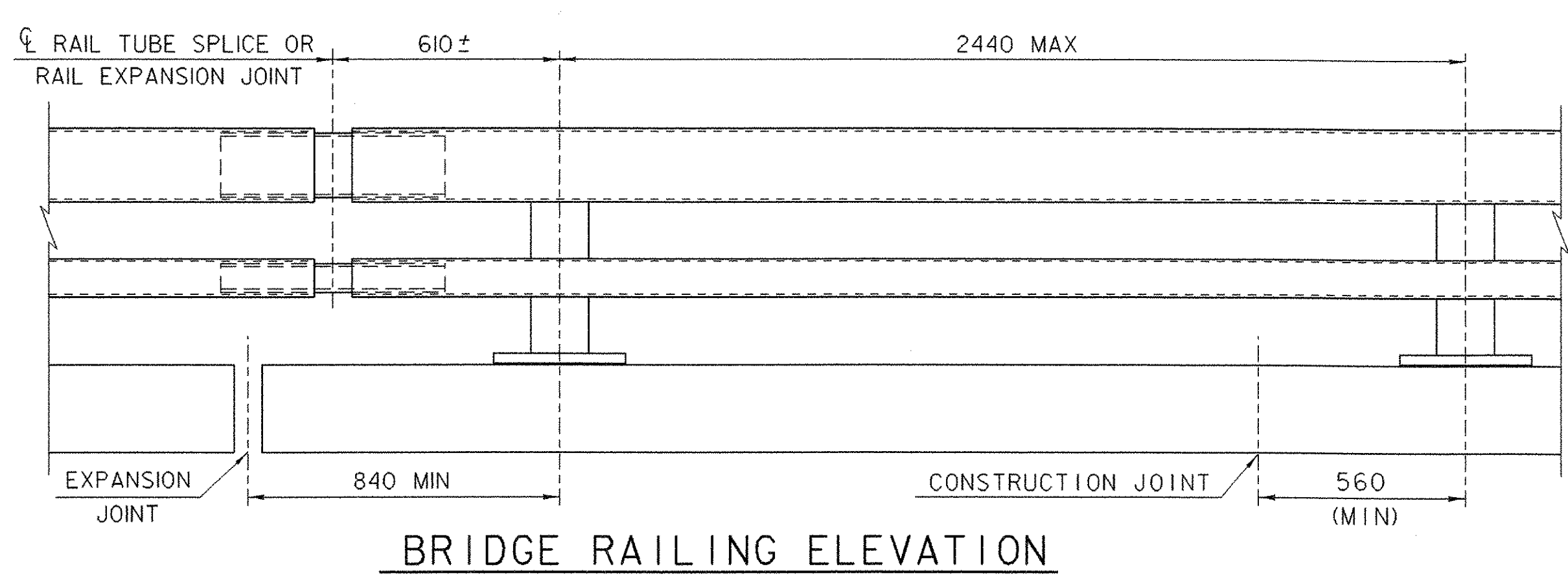
POST AND BASE PLATE



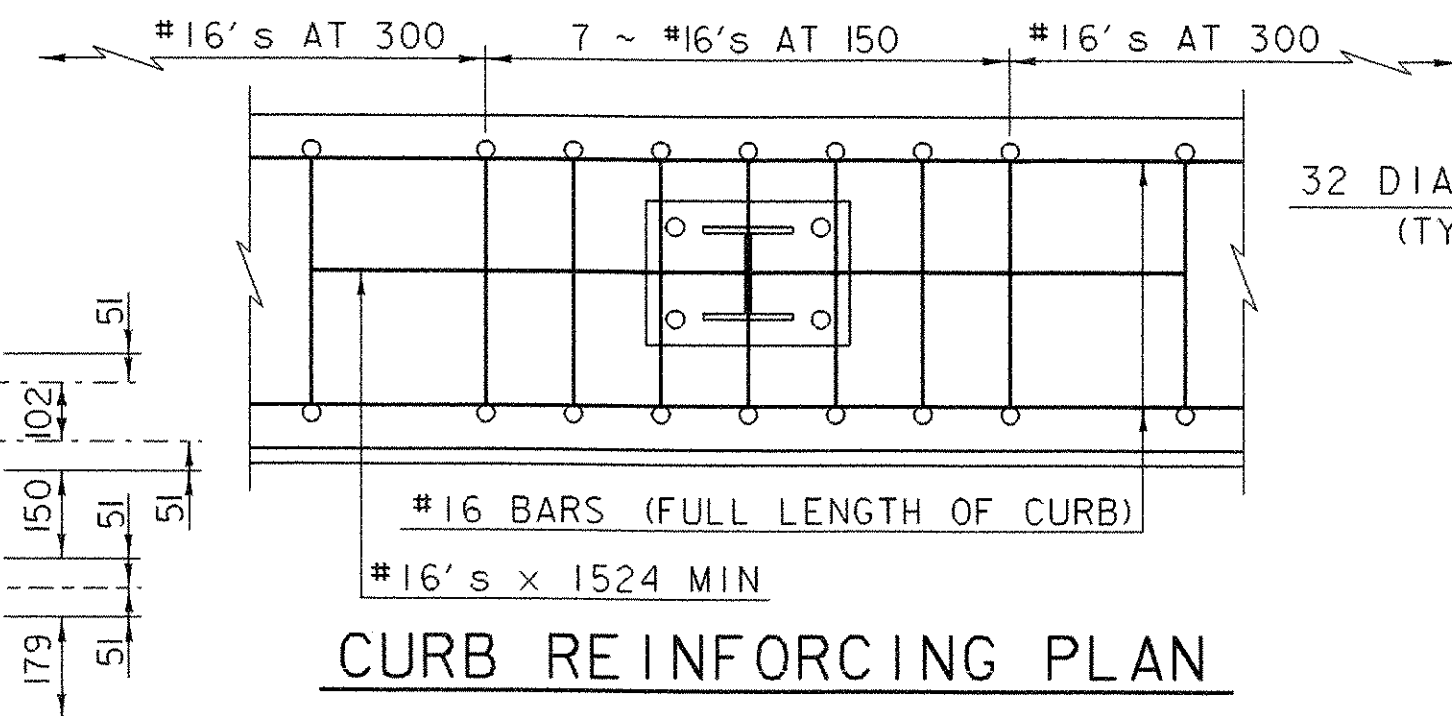
EXPANSION JOINT SECTION



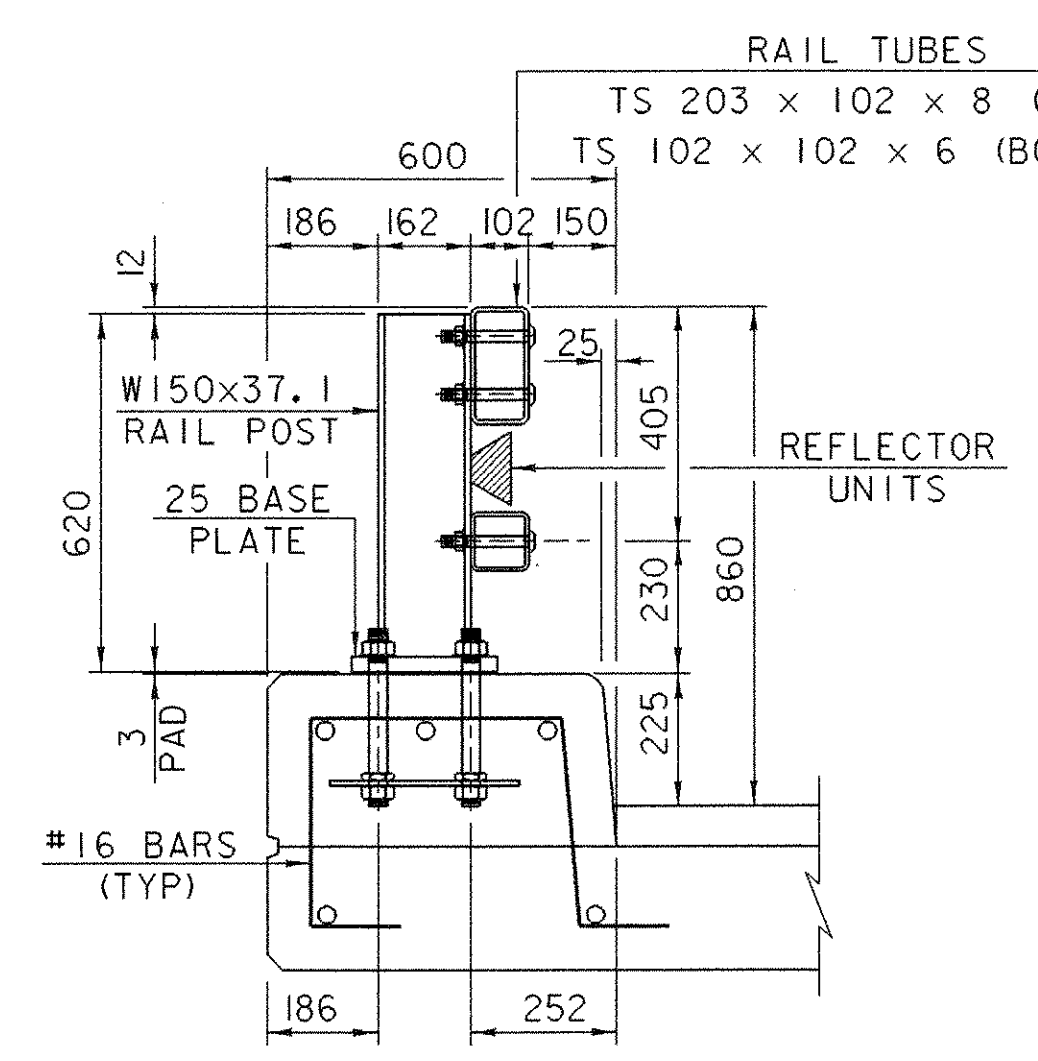
RAIL TUBE SPLICE AND RAIL EXPANSION JOINT DETAIL (BOTTOM VIEW)



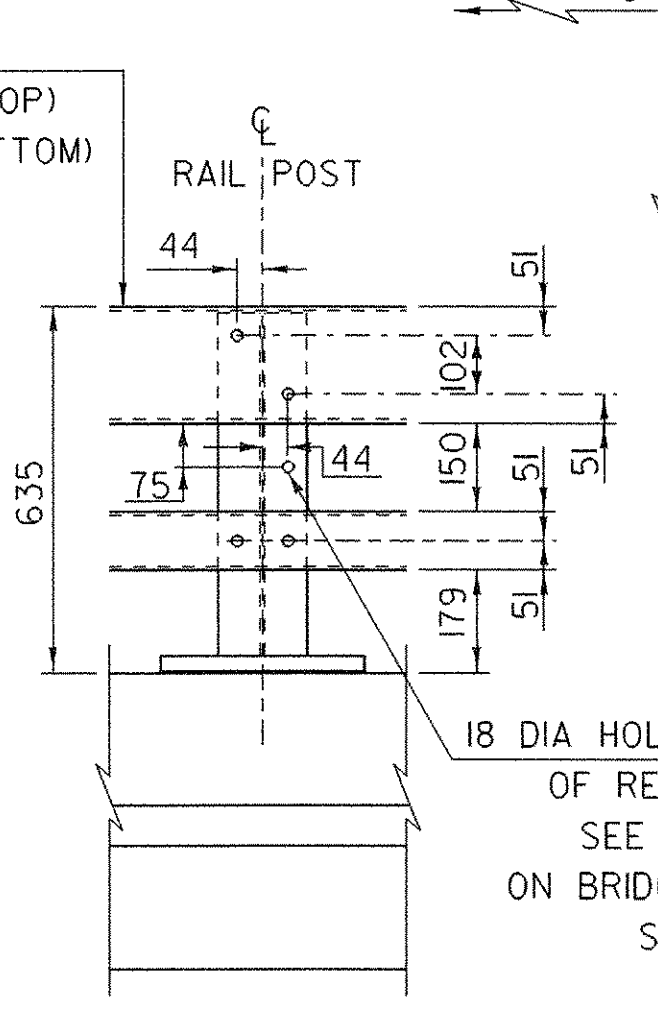
BRIDGE RAILING ELEVATION



CURB REINFORCING PLAN

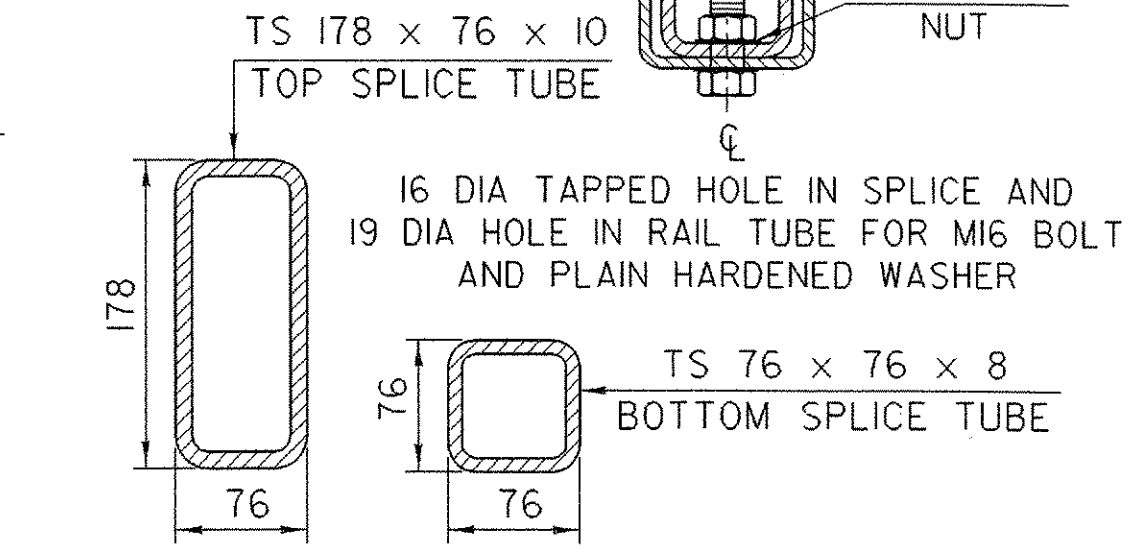
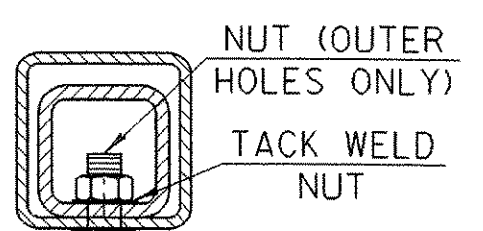


TYPICAL SECTION

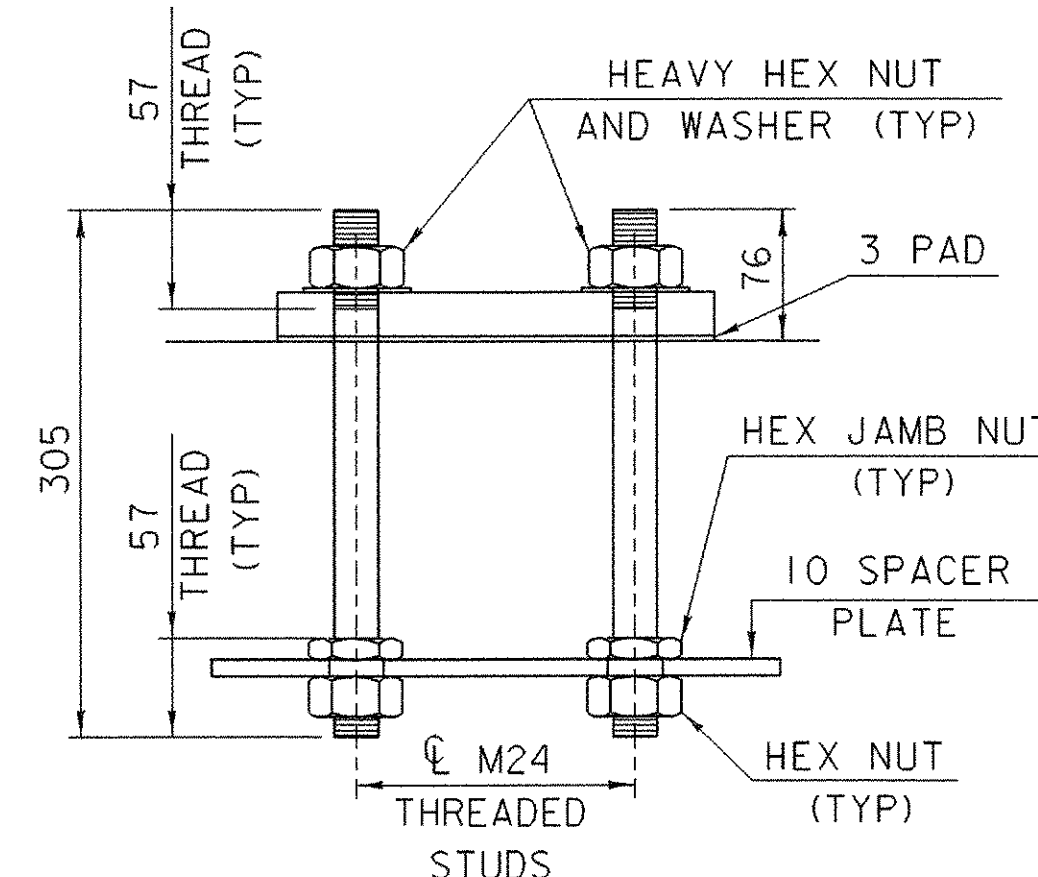


ELEVATION

M20 DIA M164M (TYPE 1) ROUND HEAD BOLT
 (WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT)
 (SEE NOTE #9)
 ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.



RAIL TUBE SPLICE SECTION



RAIL POST ANCHORAGE

BRIM
BRIDGE RAILING, GALVANIZED N.E.T.C.2 RAIL

BRIDGE RAILING
DETAIL SHEET BRIM

PROJECT NAME:	RUTLAND TOWN
PROJECT NUMBER:	BRF 019-3(48)
FILE NAME:	sbi72br.lj
PROJECT LEADER:	R. Whitcomb
DESIGNED BY:	VTRANS
95bi72/str/sbi72br.dgn	
PLOT DATE:	11-MAR-2008
DRAWN BY:	VTRANS
CHECKED BY:	T. Lackey
SHEET	58 OF 75