

Note: Bridge rail must be attached to a metal beam guard fence transition section (nested W-beam) which then attaches to a metal beam guard fence and extends along the embankment unless shown otherwise on the plans. See plan sheet for details and length for payment. The splice joining the approach guard fence transition to the bridge rail shall be a regular splice.

Note: Do not provide a tube splice in first section unless it crosses an expansion joint.

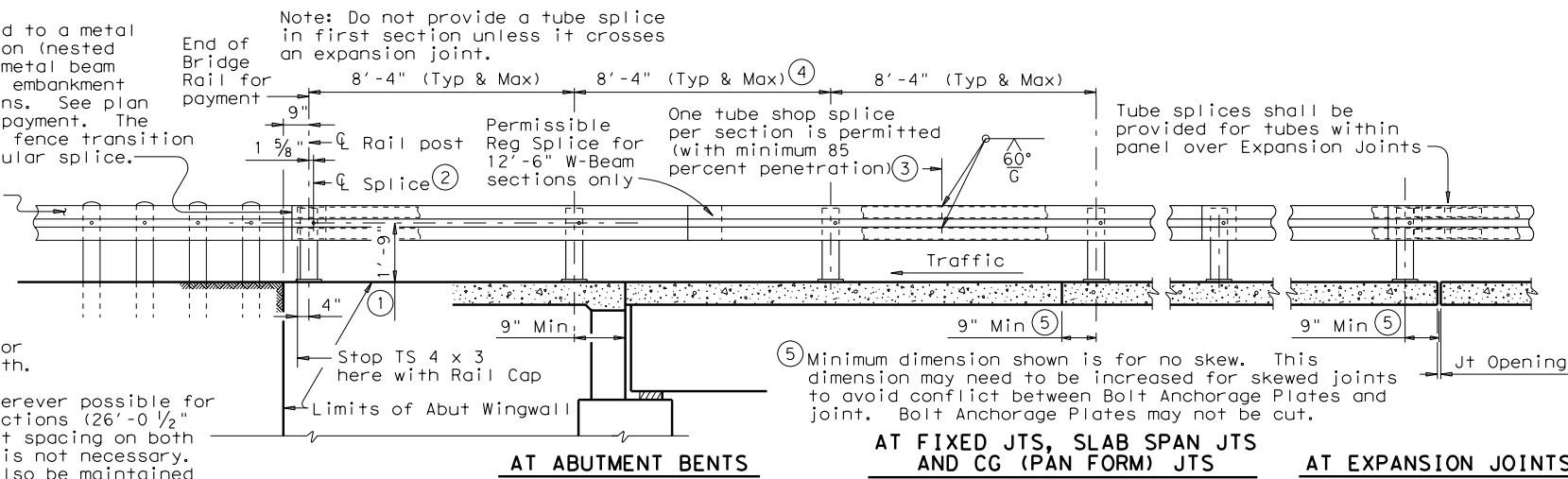
MBGF Transition ~ MBGF (T101)

1 Increase 2" for structures with overlay.

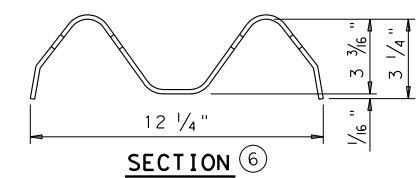
2 Splice may be on either side of bridge rail post web.

3 The weld may be square groove or single vee groove. Grind smooth.

4 Maintain 8'-4" post spacing wherever possible for use with nominal 25' W-Beam sections (26'-0 1/2" overall). Symmetry of the post spacing on both sides and along the structure is not necessary. The nominal 25' sections may also be maintained by introducing four post spaces at 6'-3" at areas of conflict. Two adjacent spaces of 8'-8" and 8'-0" each are also permissible.

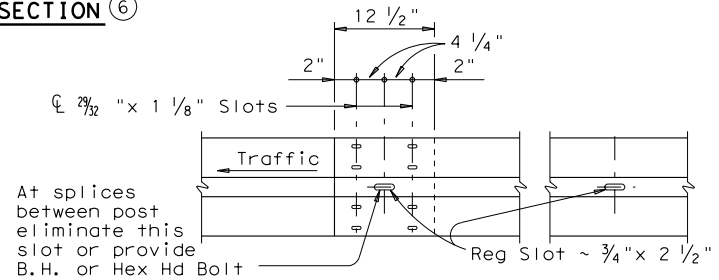


ROADWAY ELEVATION OF RAIL



6 Member shall be 12 Gage Steel Nom thickness = 0.1046" exclusive of protective coating. Actual section may vary slightly with the manufacturer and conforms to AASHTO M-180.

SECTION 6



At splices between post eliminate this slot or provide B.H. or Hex Hd Bolt

Note: Provide 5/8" Dia Button Head Shoulder Bolts or Hex Head Bolts with Hex Nuts at all splice slots

SPLICE POST CONN

W-BEAM DETAILS

GENERAL NOTES:

This rail was evaluated based on the results of previous crash tests and approved for a NCHRP Report 350 TL-3 rating. The Metal Beam Guard Fence (T101) transition standard must be used regardless of the design speeds.

This rail is not recommended for use with more than 3 posts mounted on any of the following structures: cast-in-place retaining walls, Traffic Railing Foundations (TRF), or bridge abutment wingwalls.

Rail anchorage details shown on this standard may require modification for select structure types. See appropriate details elsewhere in plans for these modifications.

This standard, used in conjunction with the Rail Anchorage Curb (RAC) standard or the Rail Anchorage Curb Retrofit (RAC-R) standard, allows this rail to be mounted on box culverts.

Section lengths of TS 4 x 3 members shall be attached continuously to a minimum of three posts (except at abutments with expansion joints).

Face of rail and posts shall be vertical transversely unless otherwise approved by the Engineer. Posts shall be perpendicular to adjacent roadway grade. Grout may be used under base plates if necessary.

All steel components shall be galvanized unless otherwise shown in plans.

At expansion slots in W-beam rail, tighten bolts snugly. Anchor bolts shall be 3/4" Dia ASTM A325 bolts (or A321 threaded rods with one tack welded hex nut each) with one hex nut and one 2" O.D. washer (0.153" Min thick) plus one 1 1/2" O.D. hardened washer (0.122" Min thick) at each bolt. Optionally use rectangular 3/8 x 2 x 0'-3" A36 plate with 1/16" Dia hole. Threaded rods may be 0.670" minimum diameter with rolled threads. Nuts shall conform to A563 requirements. The untapped blanks shall be galvanized prior to cutting the threads. Threads for bolts and nuts shall have Class 2A and 2B fit tolerances in accordance with ASME B1.1.

For curved railing applications, fabricate the tubes and pipes when the radius is 600' or less and fabricate the W-beam to the radius when the radius is less than 150'. Submit shop drawings for approval when tubes are required to be fabricated to a radius. Shop drawings shall be submitted to the Engineer for approval and may be submitted as 11"x17" prints, provided they are clearly legible.

For all rails, erection drawings showing section lengths, splice locations, rail post spacing and anchor bolt setting shall be submitted to the Engineer for approval.

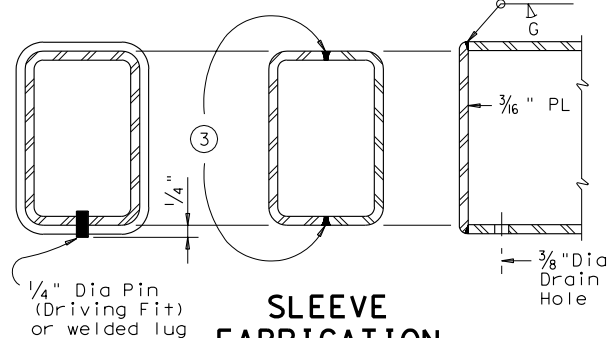
This rail requires a Min slab thickness of 8" and is not recommended for use with Box Beam or Double-T Structures with asphalt overlay.

Average weight of railing with no overlay and with 0.25" tubes is 39 plf.

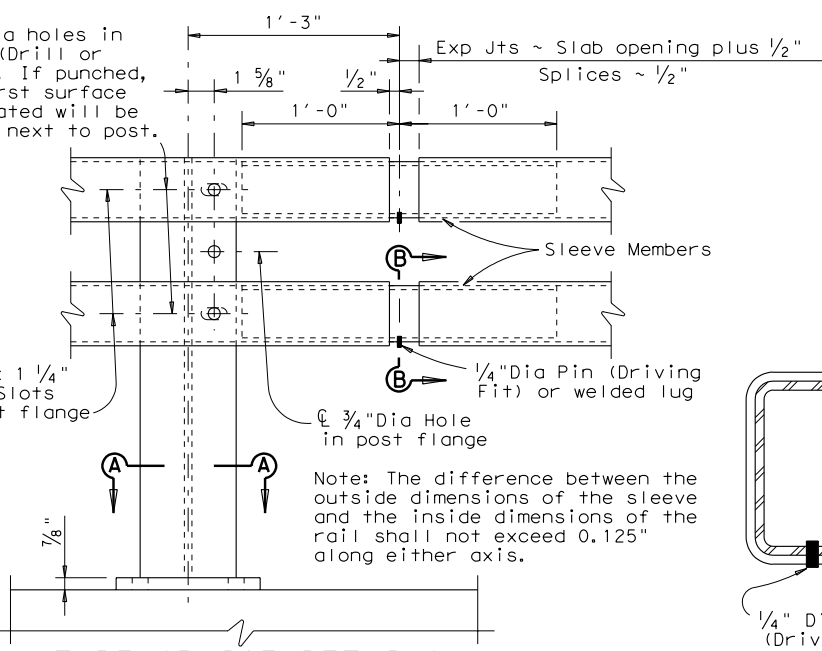
TUBE & SLEEVE MEMBERS

Rail Member	Sleeve Thickness
Material Thickness	Material ~ A36
A 500 Grade C 0.188"	0.188"
A 500 Grade B 0.250"	0.250"
A 500 Grade A or A 501 0.313"	0.250"

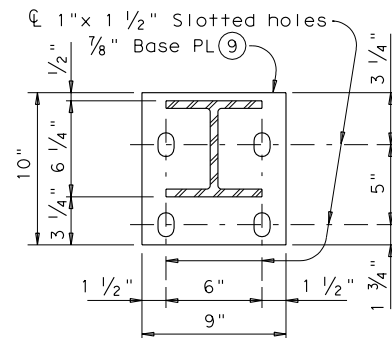
Note: Other sections of equal or greater strength are acceptable for sleeves.



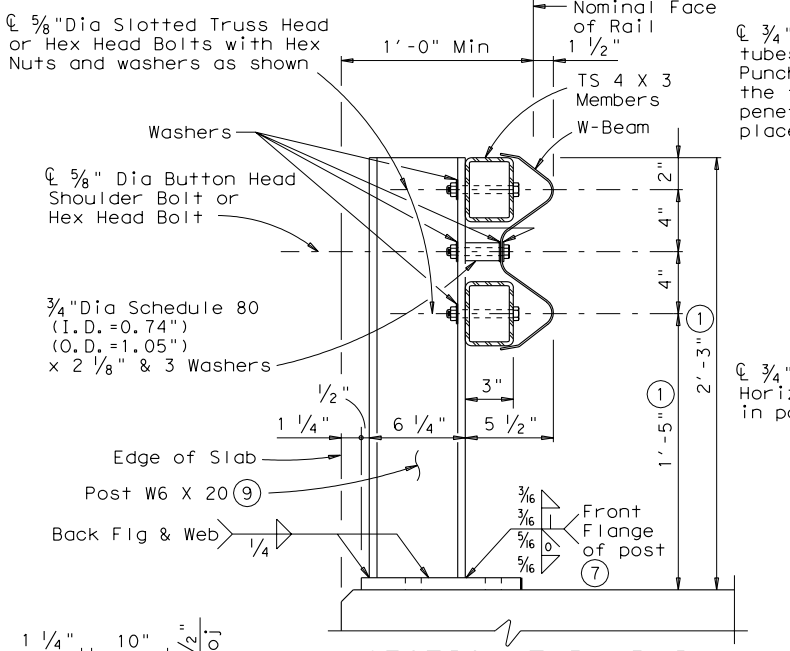
SECTION B-B SLEEVE FABRICATION OPTION RAIL CAP



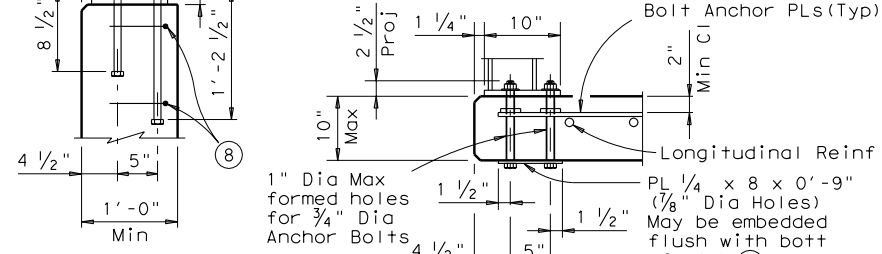
TUBE SPLICE DETAILS



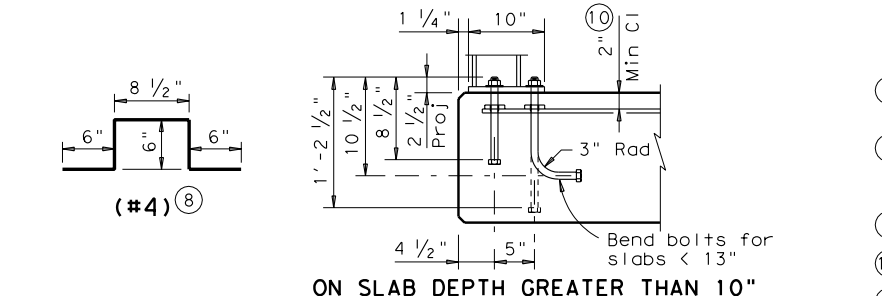
SECTION A-A



SECTION THRU RAIL



ON ABUT WINGWALL OR CIP RETAINING WALL ON 10" MAX SLAB DEPTH



ON SLAB DEPTH GREATER THAN 10"

POST MOUNTING DETAILS

- 7 In lieu of front Flg weld shown, a 3/8" fillet weld all around including edges of flange may be used.
- 8 Adjust horizontal reinforcing as necessary and place two #4 bars around anchor bolts. These bars are to be considered subsidiary to Rail.
- 9 All steel posts and plates shall be ASTM A36.
- 10 Set plates under longitudinal reinforcing if necessary.
- 11 Install one anchorage plate assembly in slab at each rail post. Do not galvanize or oil this assembly. Bolt Anchorage Plates may not be cut.

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

LEVELS DISPLAYED

ACC:	
1	

Texas Department of Transportation
Bridge Division

TRAFFIC RAIL

TYPE T101

FILE: r1std03.dgn	DN: TxDOT	CK: TxDOT	DW: JTR	CR: TxDOT
© TxDOT February 2003	DISTRICT	FEDERAL AID PROJECT	SHEET	
REVISIONS				
4-05: W-Beam Splice & Notes.	COUNTY	CONTROL	SECT	JOB HIGHWAY