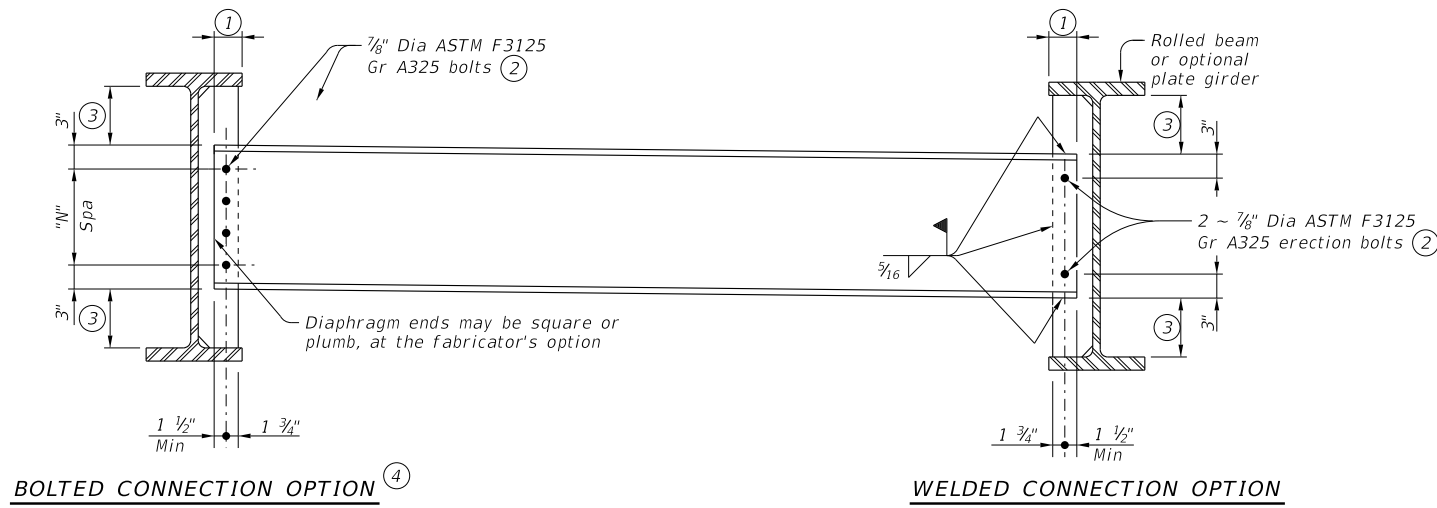
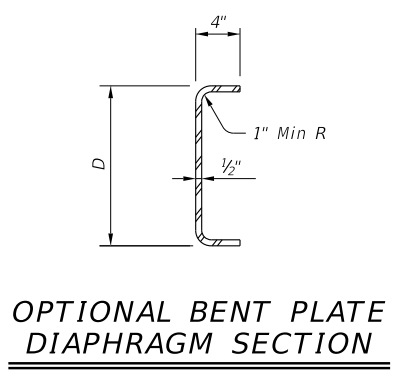


DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE: FILE:



DIAPHRAGM ELEVATION



OPTIONAL BENT PLATE DIAPHRAGM SECTION

TABLE OF BEARING STIFFENERS ⑦

Flange Width	Bearing Stiffener Size
12"	3/4" x 5 1/2"
14"	3/4" x 6 1/2"
15"	3/4" x 7"
16"	3/4" x 7 1/2"

The details shown on this sheet are applicable for use only with the Steel Beam Standard Designs shown on Standards SBSD-24, SBSD-28 and SBSD-30.

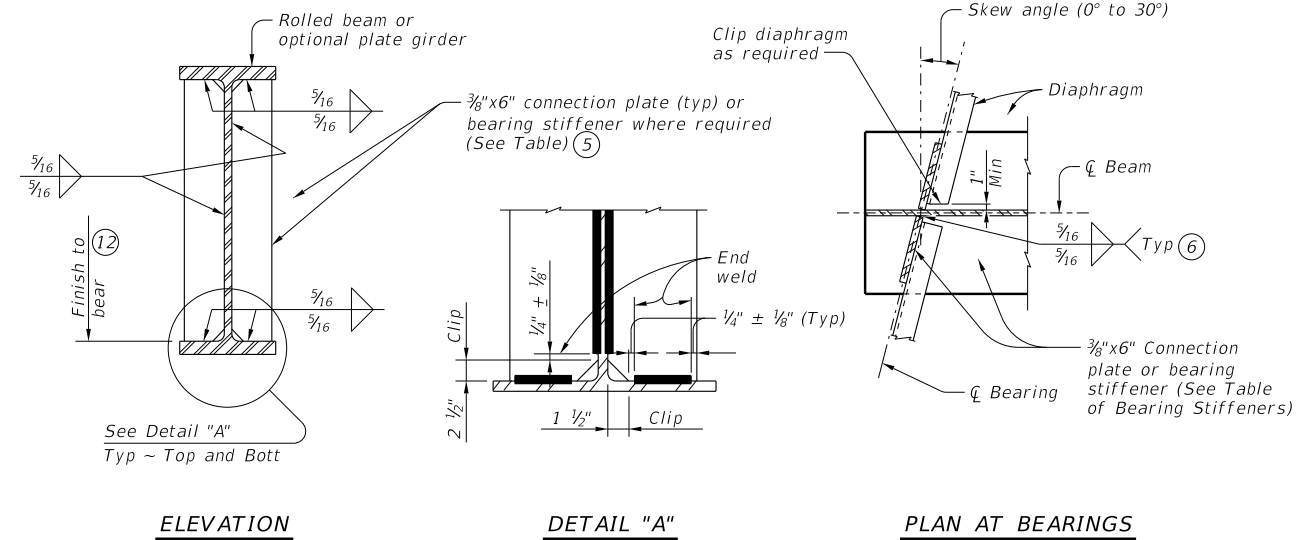
TABLE OF DIAPHRAGM DATA

Beam Size	Diaphragm Member	Optional Bent PL Diaphragm Depth, D	"N" Spaces
W18	C12 x 20.7	12"	2
W21 thru W30	C15 x 33.9	15"	3
W33 & W36	MC18 x 42.7	18"	3
W40	W21 x 44 ①	21"	3

- ① For W21x44 diaphragm members, cut and chip far side (F.S.) of diaphragm as required to clear stiffener/connection plate.
- ② Holes are 1 5/16" diameter erection bolts do not need to be tightened beyond snug tight. Fully tighten bolts for bolted connection in accordance with Item 447 "Structural Bolting".
- ③ Center diaphragm on connection plate (+/- 1/2").
- ④ For structures to be painted with System II, fraying surfaces of bolted diaphragm connections (not welded) must be painted with the specified prime coat after receiving a SSPC SP-10 blast cleaning.
- ⑤ Connection plates and bearing stiffeners must be omitted at fascia side of exterior beams.
- ⑥ Weld size must be increased by amount of gap if gap exceeds 1/16".
- ⑦ Bearing stiffeners required only for optional plate girders. Omit at fascia side of exterior girders.
- ⑧ The Fabricator is required to provide studs meeting the restrictions shown. Studs must be at least 5" in height.
- ⑨ See Steel Beam Span sheets for spacing.
- ⑩ Place drip plate 3" from low bearing or 3" from each bearing for bridges on flat grades.
- ⑪ Drip plates (ASTM A709 Gr 50W) are required for all girders in structures to remain unpainted.
- ⑫ Required only for bearings of optional plate girders.

MATERIAL NOTES:
 For unpainted weathering steel bridges, provide ASTM A709 Gr 50W steel for diaphragms, plate stiffeners, and drip plates. Provide ASTM F3125 Gr A325 erection bolts with one ASTM F436 hardened washers and one ASTM A563 Gr C3 or DH3 heavy hex nut each.
 For painted bridges, provide ASTM A709 Gr 50, 50W, or 50S steel for diaphragms, plate stiffeners, and drip plates. Provide galvanized bolts, nuts, and washers for all field connections in painted structures including erection bolts. Galvanizing must meet the requirements of Item 445, "Galvanizing".

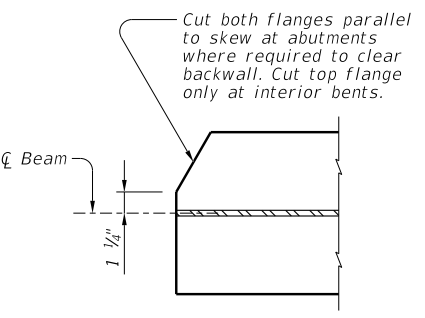
GENERAL NOTES:
 Designed according to AASHTO LRFD Bridge Design Specifications.
 See Steel Beam Span sheets for location of diaphragms and location of bearing stiffeners and/or connection plates.



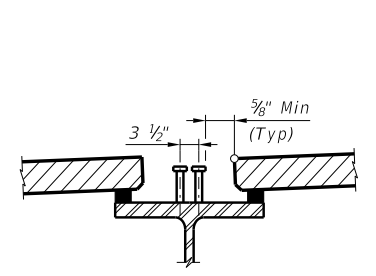
CONNECTION PLATE AND BEARING STIFFENER DETAILS



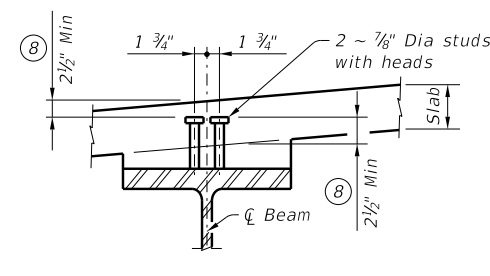
ALTERNATE STIFFENER CLIP DETAIL
 (Welds not shown for clarity)
 (Bottom shown, top similar)



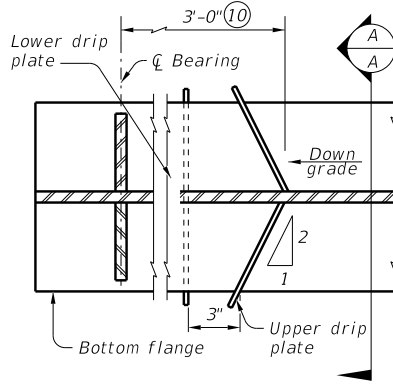
SKewed BEAM END DETAIL



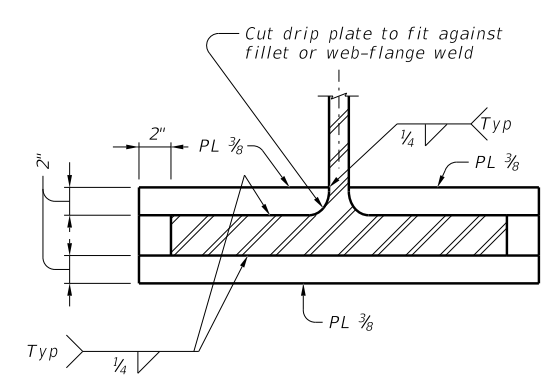
OPTION WITH PCP
 See Prestressed Concrete Panels (PCP) for details and notes not shown.



STUD CONNECTOR DETAIL ⑨
 Weld studs to the flange in accordance with AWS D1.5.



PLAN



SECTION A-A

DRIP PLATE DETAILS ⑪

HL93 LOADING



STEEL BEAM MISCELLANEOUS DETAILS

SBMD

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