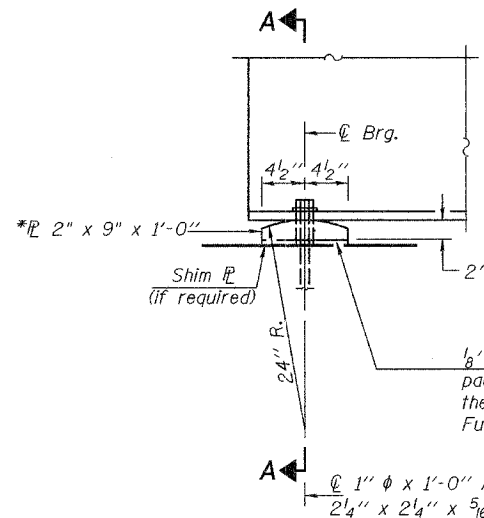


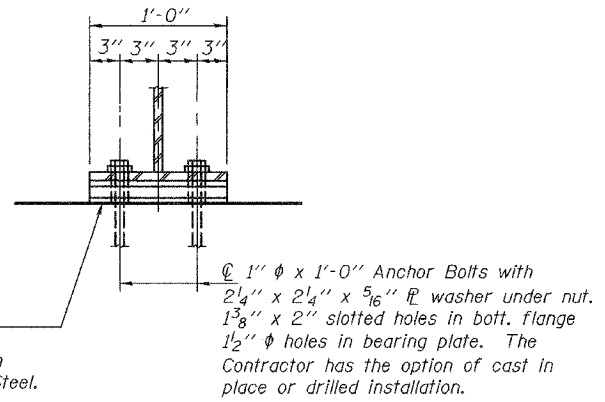
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 10 17 SHEETS
FAP 327	13B-1 & 13B-2	MARION	78	44	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract No. 94964

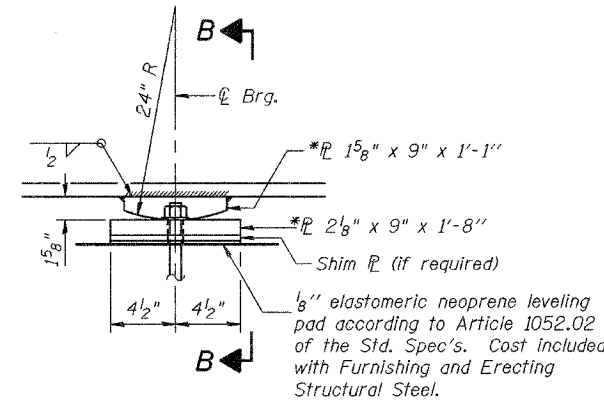


ELEVATION AT ABUTMENTS

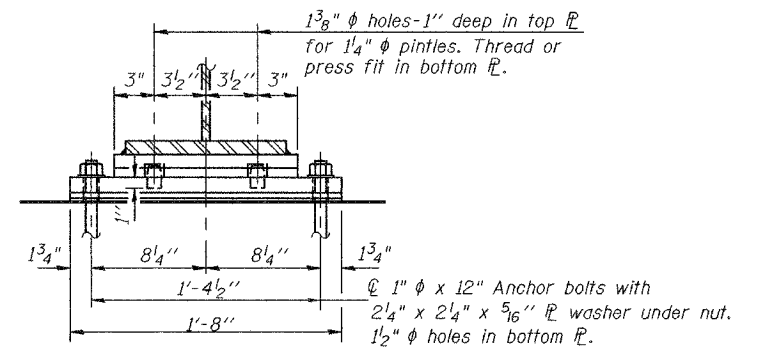


SECTION A-A

*AASHTO M270, Grade 50.



ELEVATION AT PIER



SECTION B-B

FIXED BEARING
(6 Required)

ABUTMENT BEARING
(12 Required)

	0.4 Sp. 1 & 0.6 Sp. 2	Pier
I_s	(in ⁴) 16495	26756
I_c (n)	(in ⁴) 39091	
I_c (3n)	(in ⁴) 29143	
S_s	(in ³) 702	1103
S_c (n)	(in ³) 962	
S_c (3n)	(in ³) 879	
DC1	(k/ft.) 0.879	0.952
M DC1	(k) 536	1248
DC2	(k/ft.) 0.150	0.150
M DC2	(k) 110	163
DW	(k/ft.) 0.363	0.363
M DW	(k) 267	394
M+Imp	(k) 1321	1177
M_a (Strength I)	(k) 3520	4415
ϕF_m	(k) 4822	
f_s DC1	(k.s.i.) 9.2	13.6
f_s DC2	(k.s.i.) 1.5	1.8
f_s DW	(k.s.i.) 3.6	4.3
f_s 1.3 (L+I)	(k.s.i.) 21.4	16.6
f_s (Service II)	(k.s.i.) 35.7	36.3
f_s (Total)(Strength I)	(k.s.i.)	48.0
ϕF_{nc}	(k)	
Vsr	(k)	28.8

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s due to non-composite loads.
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s due to short-term composite loads.
 $I_{c(3n)}$ and $S_{c(3n)}$ are the moment of inertia and section modulus of the composite section used in computing f_s due to long-term composite loads.
 DC1 is the dead load acting on the non-composite section.
 DC2 is the dead load acting on the long-term composite section.
 DW is the dead load acting on the long-term composite section due to wearing surface.
 M_a (Strength I) = 1.25 (MDC1+DC2) + 1.5M (DW) + 1.75 (M(L+Imp)).
 ϕF_m is the full plastic moment capacity computed in accordance with Appendix D6.1 and 6.10.7.
 f_s (Service II) is the sum of the stresses due to DC1+DC2+DW+1.3(L+Imp).
 f_s (Total) (Strength I) (Non-compact section) is the sum of the stresses due to 1.25(DC1+DC2)+1.5DW+1.75(L+Imp).
 V_{sr} is the maximum shear range in the span (0.75 (L+Imp)).
 ϕF_{nc} is the allowable flexural resistance stress of the compression flange computed in accordance with Article 6.5.4.2 and 6.10.8.2.

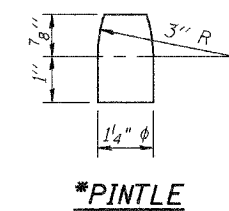
	Abut.	Pier
R DC1	(k) 30.9	114.9
R DC2+DW	(k) 19.7	61.9
R L	(k) 69.9	128.8
R Imp.	(k) 16.1	25.0
R (Total)	(k) 136.6	330.6

**TOP OF WEB ELEVATIONS

Location	⊕ Brg. W. Abut.	⊕ Splice	⊕ Brg. Pier	⊕ Brg. E. Abut.
Girder 1	469.918	470.260	470.309	470.530
Girder 2	470.064	470.405	470.455	470.675
Girder 3	470.177	470.519	470.568	470.789
Girder 4	470.177	470.519	470.568	470.789
Girder 5	470.064	470.405	470.455	470.675
Girder 6	469.918	470.260	470.309	470.530

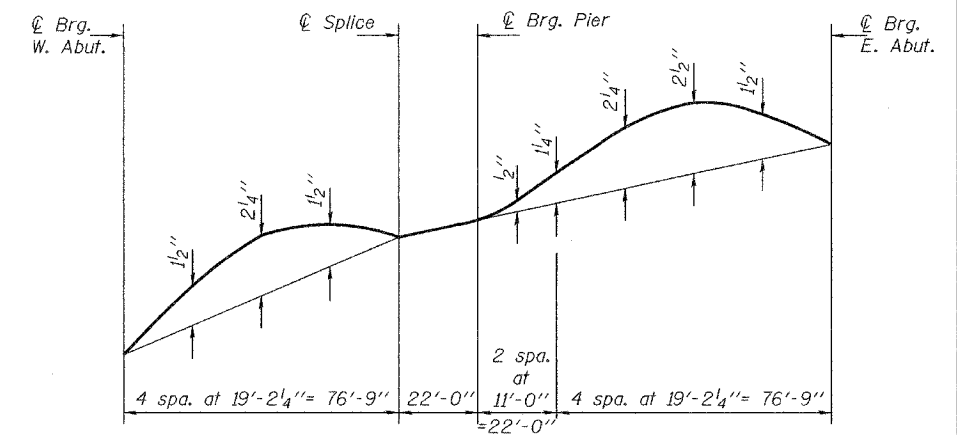
**For fabrication use only.

Notes: Two hardened washers shall be required for all 1 1/2 inch holes in diaphragms.

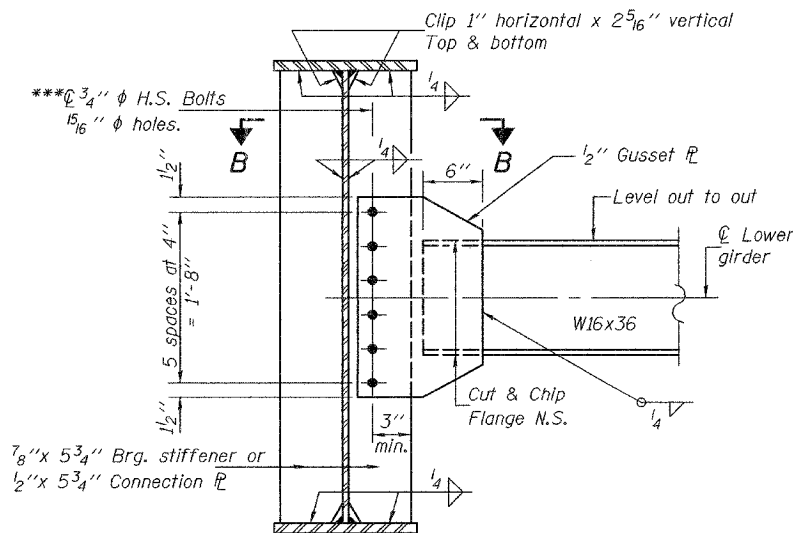


*PINTLE

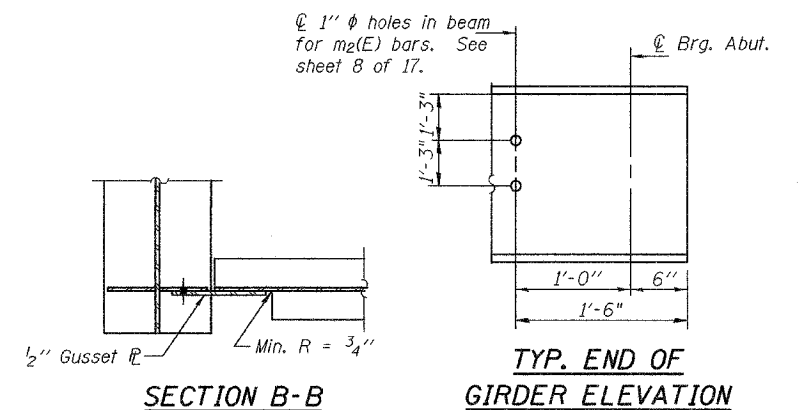
*** Use 1 3/16 x 1 1/2 vertical slotted holes in 1/2 gusset plate at south side of Girder 3 only. Provide 1/16 plate washers for slotted holes. Bolts for slotted holes shall be finger-tightened prior to the deck pour for Stage II Construction, and then be fully tightened after completion of the deck pour for Stage II Construction.



CAMBER DIAGRAM



DIAPHRAGM D
(55 Required)



TYP. END OF GIRDER ELEVATION

SECTION B-B

DESIGNED	R.L.M.
CHECKED	G.R.A.
DRAWN	h.f. duong
CHECKED	R.L.M./G.R.A.

Feb 2, 2006
 EXAMINED *Thomas J. Damagala*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL DETAILS
 F.A.P. RTE. 327 - SEC. 13B-1 & 13B-2
 MARION COUNTY
 STATION 375+53.00
 STRUCTURE NO. 061-0091