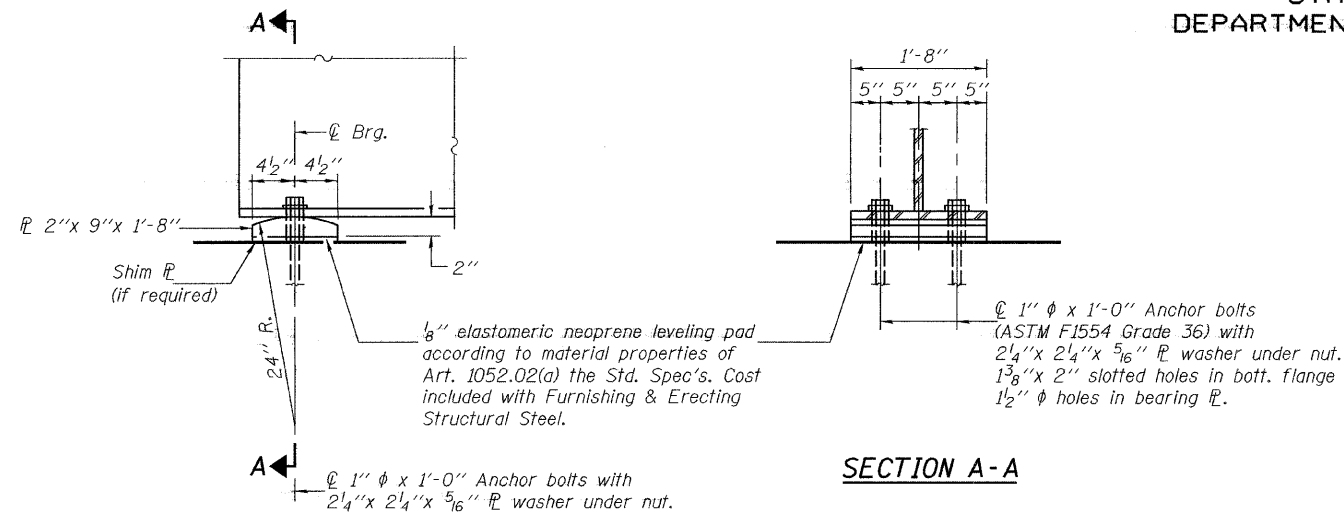


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12 18 SHEETS
FAP 782	114B-2	GALLATIN	62	30	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract No. 98887



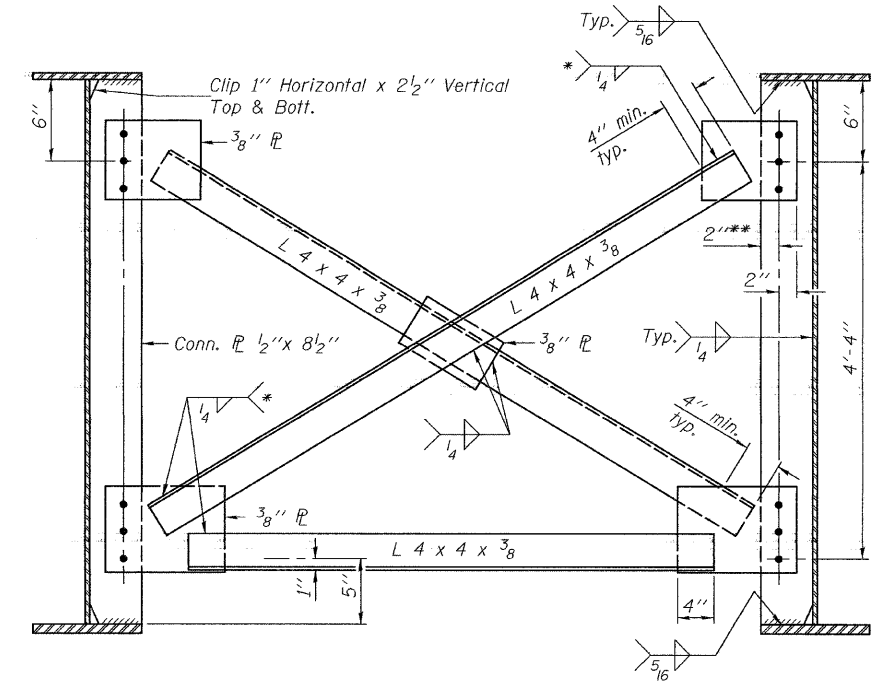
ELEVATION AT ABUTMENTS

ABUTMENT BEARING  
(12 Required)

\*TOP OF GIRDER WEB  
ELEVATIONS

Location	℄ Brg. N. Abut.	℄ Brg. S. Abut.
Girder 1	357.03	356.91
Girder 2	357.14	357.02
Girder 3	357.23	357.11
Girder 4	357.23	357.11
Girder 5	357.14	357.02
Girder 6	357.03	356.91

\*For fabrication use only.



\*Fillet weld angles along 3 sides on one face of gusset plate.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Detail 1 5/16" φ holes for all 3/4" φ bolts.

Two hardened washers required for each set of oversized holes.

INTERIOR GIRDER MOMENT TABLE	
	0.5 Sp.
$I_s$	(in <sup>4</sup> ) 65471
$I_c(n)$	(in <sup>4</sup> ) 125480
$I_c(3n)$	(in <sup>4</sup> ) 93210
$S_s$	(in <sup>3</sup> ) 2167
$S_c(n)$	(in <sup>3</sup> ) 2663
$S_c(3n)$	(in <sup>3</sup> ) 2451
DC1	(k/ft.) 0.956
M <sub>DC1</sub>	(k) 2004
DC2	(k/ft.) 0.150
M <sub>DC2</sub>	(k) 314.4
DW	(k/ft.) 0.292
M <sub>DW</sub>	(k) 612
M <sub>℄ + Imp</sub>	(k) 2083.60
M <sub>u</sub> (Strength I)	(k) 7462.3
φ <sub>r</sub> M <sub>n</sub>	(k) 12643.8
f <sub>s</sub> DC1	(ksi) 11.10
f <sub>s</sub> DC2	(ksi) 1.5
f <sub>s</sub> DW	(ksi) 3.0
f <sub>s</sub> 1.3(℄+I)	(ksi) 12.2
f <sub>s</sub> (Service II)	(ksi) 27.8
f <sub>s</sub> (Total)Strength I)	(ksi) 36.7
V <sub>r</sub>	(k) 150

- $I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M<sub>DC1</sub>: Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M<sub>DC2</sub>: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- M<sub>℄ + Imp</sub>: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- M<sub>u</sub> (Strength I): Factored design moment (kip-ft.).
- 1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75 M<sub>℄ + Imp</sub>
- φ<sub>r</sub>M<sub>n</sub>: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
- f<sub>s</sub> (Service II): Sum of stresses as computed from the moments below (ksi).
- M<sub>DC1</sub> + M<sub>DC2</sub> + M<sub>DW</sub> + 1.3 M<sub>℄ + Imp</sub>
- f<sub>s</sub> (Total)Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
- 1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75 M<sub>℄ + Imp</sub>
- V<sub>r</sub>: Factored shear range computed according to Article 6.10.10.

INTERIOR GIRDER REACTION TABLE - HL93 Loading	
	Abutments
R <sub>DC1</sub>	(k) 62.8
R <sub>DC2</sub>	(k) 9.7
R <sub>DW</sub>	(k) 18.9
R <sub>℄ + Imp</sub>	(k) 85.8
R <sub>Total</sub>	(k) 177.2

DESIGNED	C.C. Chau
CHECKED	D.H. Coultas
DRAWN	h.f. duong
CHECKED	CCC/DHC

July 21, 2008

EXAMINED *Thomas J. Demagala*  
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

BEARING DETAILS  
F.A.P. RTE. 782 - SECTION 114B-2  
GALLATIN COUNTY  
STATION 803+60.00  
STRUCTURE NO. 030-0024