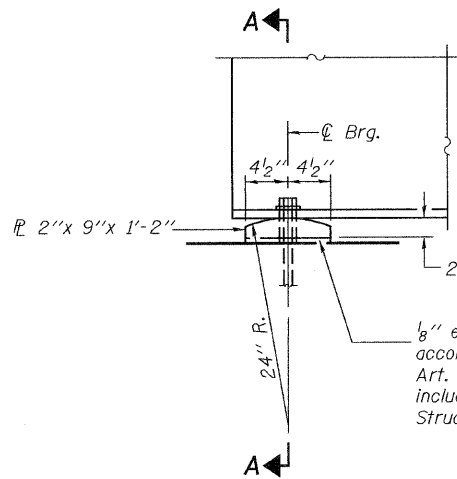
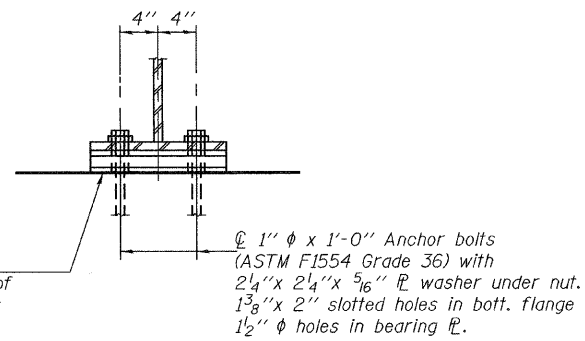


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DEPARTMENT OF TRANSPORTATION

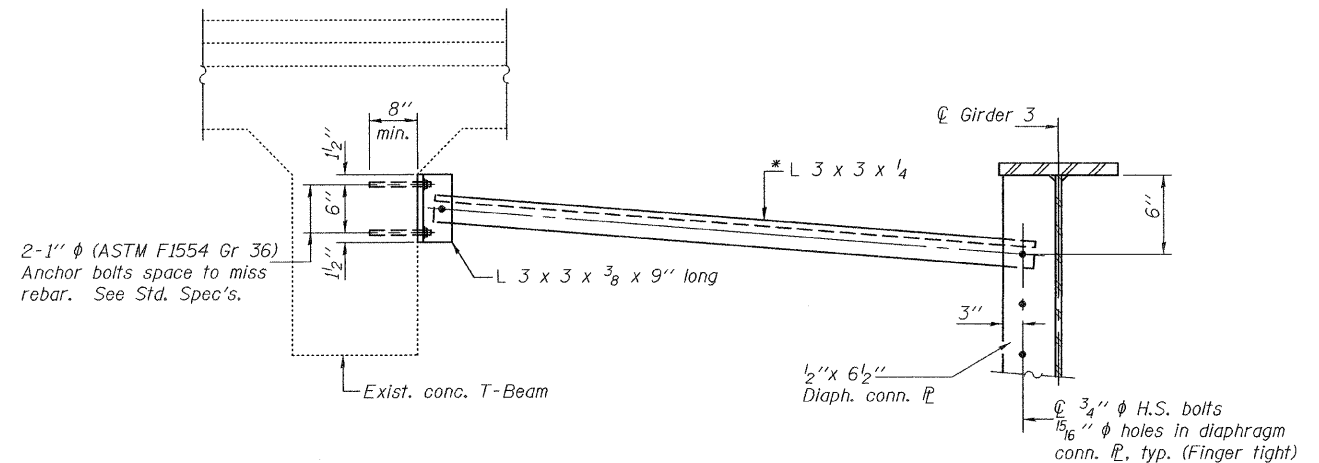


ELEVATION AT ABUTMENTS



SECTION A-A

ABUTMENT BEARING
(12 Required)



TEMPORARY BRACING FOR STAGE I CONSTRUCTION
(3 Required)

The horizontal dimension between the holes in the diaphragm connection plate and the L 4 x 4 shall be measured in the field. The holes in the L 4 x 4 shall be field drilled at this dimension. Cost included with Furnishing & Erecting Structural Steel.

INTERIOR GIRDER MOMENT TABLE	
0.5 Sp.	
Is	(in ⁴) 18611
Ic (n)	(in ⁴) 42463
Ic (3n)	(in ⁴) 31723
Ss	(in ³) 792
Sc (n)	(in ³) 1058
Sc (3n)	(in ³) 970
φ	(k/ft.) 0.905
Mφ	(k) 989
sφ	(k/ft.) 0.517
Msφ	(k) 565
M ₁	(k) 936
M (Imp)	(k) 214
S ₃ [M ₁ +M(Imp)]	(k) 1917
Ma	(k) 4512
Mu	(k) 5440
fsφ non-comp (k.s.i.)	15.0
fsφ (comp) (k.s.i.)	7.0
fs ₃ (₁ +Imp) (k.s.i.)	21.7
fs (Overload) (k.s.i.)	43.7
VR	(k) 53.1

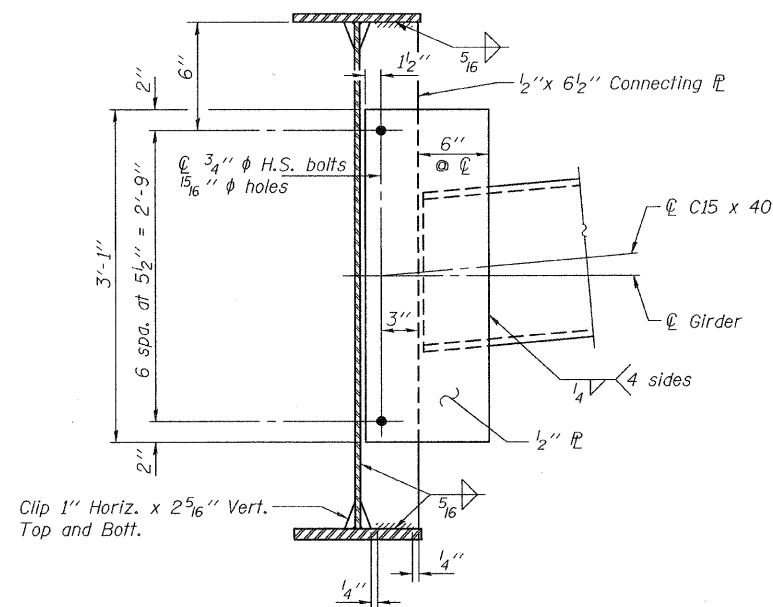
Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)
VR is the maximum Live Load + Impact shear range in span.
Ma (Applied Moment) = 1.3[Mφ + Msφ + S₃(M₁ + M(Imp))].
The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.
fs (Overload) is the sum of the stresses due to Mφ + Msφ + S₃(M₁ + M(Imp)).
fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[Mφ + Msφ + S₃(M₁ + M(Imp))].

*TOP OF WEB ELEVATIONS

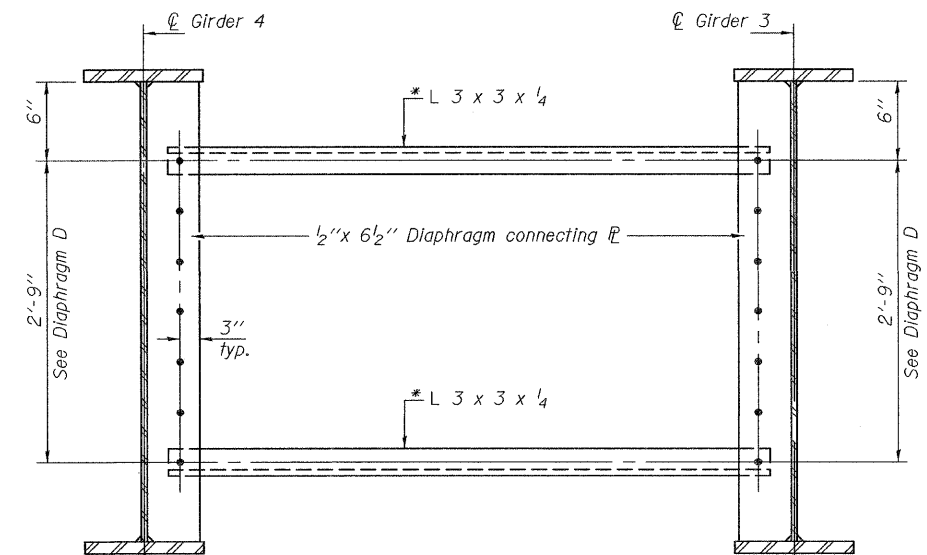
	φ Brg. S. Abut.	φ Brg. N. Abut.
Beam 1	456.472	456.549
Beam 2	456.620	456.696
Beam 3	456.734	456.811
Beam 4	456.734	456.811
Beam 5	456.620	456.696
Beam 6	456.472	456.549

*For fabrication use only.

INTERIOR GIRDER REACTION TABLE	
Abut.	
Rφ	(k) 66.5
R ₁	(k) 43.2
Imp.	(k) 9.9
R (Total)	(k) 119.6



DIAPHRAGM D
(25 Required)



TEMPORARY BRACING FOR STAGE II CONSTRUCTION
(3 Required)

* L 3 x 3 x 1/4 to be used as temporary bracing during Stage I and Stage II deck pour. Remove and replace with diaphragm D after Stage II deck pour is completed. Use between girder 3 and 4 only. Cost included with Furnishing & Erecting Structural Steel.

DESIGNED J.E. KRAMER
CHECKED P.E. COPPERNOLL
DRAWN AMBER SEIBER
CHECKED GRA

EXAMINED Thomas J. Domagalala
PASSED Ralph E. Anderson
March 2, 2010
ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 079-0050

SHEET NO. 13	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
21 SHEETS	682	21BR, 21-I-1	RANDOLPH	77	52
CONTRACT NO. 76126					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					