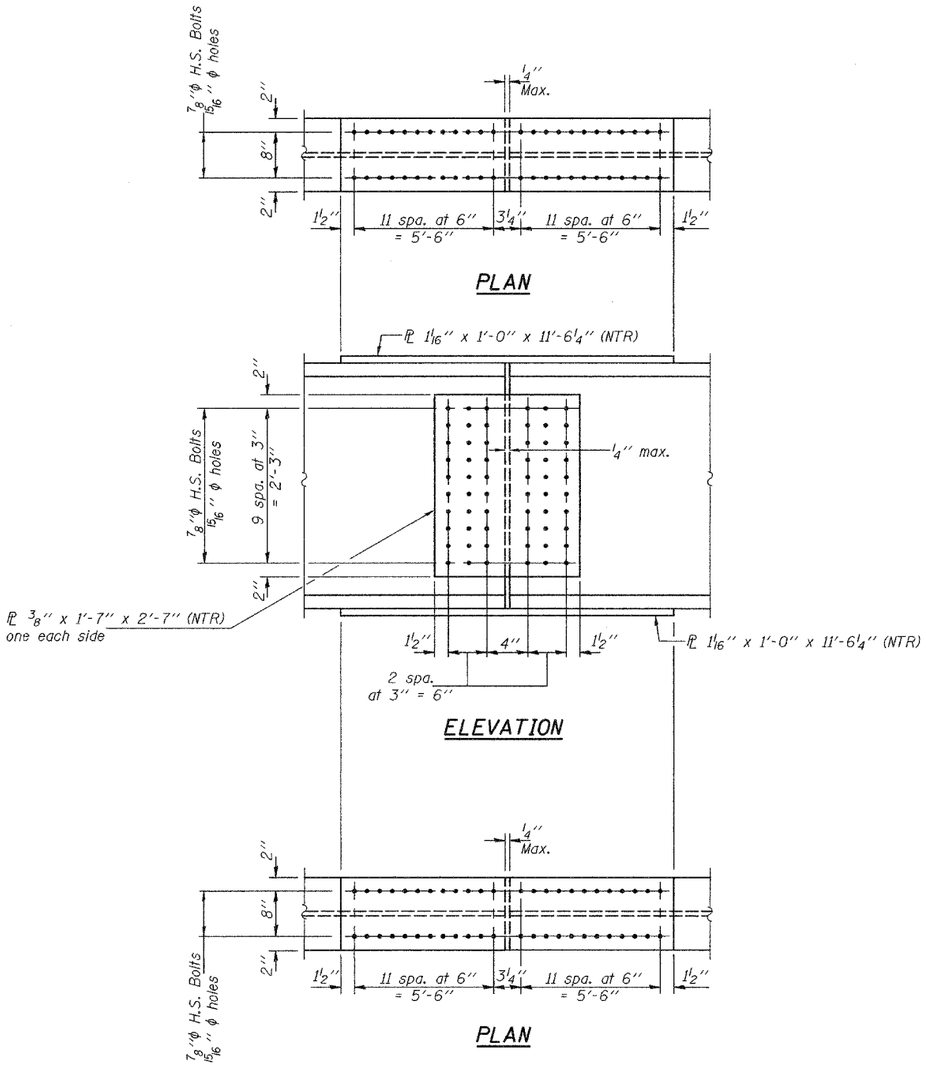
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 7968	*	SANGAMON	261	184
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14
33 SHEETS

Contract #72449 *SECTION 3R(BR, BR-1, BR-2)19RS-8



FIELD SPLICE DETAIL
(10 required)

Note:
"NTR" denotes elements to which notch toughness requirements are applicable.

INTERIOR GIRDER MOMENT TABLE						
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
Is	(in^4)	9750	9750	9750	9750	9750
Ic (n)	(in^4)	22651	-	22651	-	22651
Ic (3n)	(in^4)	16440	-	16440	-	16440
Ss	(in^3)	542	542	542	542	542
Sc (n)	(in^3)	753	-	753	-	753
Sc (3n)	(in^3)	676	-	676	-	676
Sℓ	(in^3)	24.5	24.5	24.5	24.5	24.5
D	(k/ft.)	0.71	1.2	0.71	1.2	0.71
Mℓ	('k)	140.7	818.6	363.2	867.8	185
sℓ	(k/ft.)	0.51	-	0.51	-	0.51
Msℓ	('k)	96.4	-	223.4	-	117.3
Mℒ	('k)	351.8	369.2	460.4	390.6	388.7
M (Imp)	('k)	88	73.8	115.1	78.1	97.2
5/3[Mℒ+M(Imp)]	('k)	733	738.3	959.2	781.2	809.8
Ma	('k)	1261	2024	2010	2144	1446
Mbℓ	('k)	2.9	1.4	5.2	1.7	8.3
fsℓ non-comp	(k.s.i.)	3.1	18.1	8	19.2	4.1
fsℓ (comp)	(k.s.i.)	1.7	-	4	-	2.1
fs 5/3 (ℒ+Imp)	(k.s.i.)	11.7	16.3	15.3	17.3	12.9
fℓ	(k.s.i.)	1.4	0.7	2.5	0.8	4.1
fs (Overload)	(k.s.i.)	16.5	34.4	27.3	36.5	19.1
fs (Total)	(k.s.i.)	21.5	44.7	35.5	47.5	24.8
Fcr (Overload)	(k.s.i.)	47.5	40	47.5	40	47.5
VR	(k)	23.7	-	20.1	-	27.4
Fcr	(k.s.i.)	49.5	48.3	49.2	48.2	48.6

INTERIOR GIRDER REACTION TABLE					
		W. Abut.	Pier 1	Pier 2	E. Abut.
Rℒ	(k)	22.8	115.9	117	26.1
Rℒ	(k)	40.3	70.5	67.1	45.3
Imp.	(k)	12.1	17.6	16.8	13.6
R (Total)	(k)	75.2	204	200.9	85

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total and Overload).

Ic (n) & 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).

Sℓ is the section modulus for one flange plate for lateral flange bending.

Mℒ-Moment due to dead loads on non-composite section.

Msℒ-Moment due to dead loads on composite section.

Mℒ-Moment due to live load on non-composite or composite section.

M(Imp)-Moment due to live load impact on non-composite or composite section.

Ma (Applied Moment) = 1.3 [Mℒ + Msℒ + 5/3 (Mℒ + M(Imp))].

Mbℓ is the lateral bending moment for one flange plate (factored).

fs (Overload) is the sum of the stresses due to Mℒ + Msℒ + 5/3 (Mℒ + M(Imp)).

fℓ is the calculated normal stress at the edge of the flange due to lateral bending (factored).

fs (Total) is the sum of the stresses due to 1.3[Mℒ + Msℓ + 5/3(Mℒ + M(Imp))].

Fcr (Overload) is the critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5.

VR is the maximum ℒ + impact shear range in span.

Fcr is the critical average flange stress computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Sections 5.2, 5.3 and 5.4.

Mℒ and Rℒ includes the effects of centrifugal force and superelevation.

DESIGNED	J. Mann
CHECKED	G. Ahanchi
DRAWN	BECKY M. LEACH
CHECKED	JWM/GRA

December 1, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL DETAILS
F.A.U. ROUTE 7968
SECTION 3R(BR, BR-1, BR-2)19RS-8
SANGAMON COUNTY
STATION 17+97.34
STRUCTURE NO. 084-0518