

INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in ⁴) 23,318	44,057	23,318
$I_c(n)$	(in ⁴) 53,512		53,512
$I_c(3n)$	(in ⁴) 39,923		39,923
S_s	(in ³) 992	1,798	992
$S_c(n)$	(in ³) 1,312		1,312
$S_c(3n)$	(in ³) 1,213		1,213
Z		1,977	
DC1	(k/ft) 1.121	1.268	1.121
M_{DC1}	(k) 1.153	1.916	330
DC2	(k/ft) 0.268	0.251	0.234
M_{DC2}	(k) 314	336	95
DW	(k/ft) 0.347	0.335	0.322
M_{DW}	(k) 407	462	130
$M_L + IM$	(k) 1,856	1,582	1,296
M_u (Strength I)	(k) 5,693	6,277	2,994
$\phi_f M_n, \phi_f M_{nc}$	(k) 6,419		6,659
f_s DC1	(ksi) 13.9	12.8	4.0
f_s DC2	(ksi) 3.1	2.2	0.9
f_s DW	(ksi) 4.0	3.1	1.3
f_s 1.3(I+IM)	(ksi) 21.9	13.7	15.3
f_s (Service II)	(ksi) 42.9	31.8	21.5
f_s (Total)(Strength I)	(ksi) 41.8		
V_f	(k) 31.7		31.3

GIRDER 1A MOMENT TABLE			
	Pier	0.6 Sp. 2	
I_s	(in ⁴) 23,318	23,318	
$I_c(n)$	(in ⁴) 53,512		49,218
$I_c(3n)$	(in ⁴) 39,923		36,383
S_s	(in ³) 992	992	
$S_c(n)$	(in ³) 1,312		1,291
$S_c(3n)$	(in ³) 1,213		1,177
Z		1,113	
DC1	(k/ft) 0.722	0.865	
M_{DC1}	(k) 720	559	
DC2	(k/ft) 0.234	0.234	
M_{DC2}	(k) 151	169	
DW	(k/ft) 0.304	0.322	
M_{DW}	(k) 207	233	
$M_L + IM$	(k) 735	983	
M_u (Strength I)	(k) 2,686	2,980	
$\phi_f M_n, \phi_f M_{nc}$	(k) 6,333		6,333
f_s DC1	(ksi) 8.7	6.8	
f_s DC2	(ksi) 1.8	1.7	
f_s DW	(ksi) 2.5	2.4	
f_s 1.3(I+IM)	(ksi) 11.6	11.9	
f_s (Service II)	(ksi) 24.6	22.8	
f_s (Total)(Strength I)	(ksi) 40.0	47.5	
V_f	(k) 23.4		23.4

* Compact sections
** Non-Compact and slender sections

* Compact sections
** Non-Compact and slender sections

INTERIOR GIRDER REACTION TABLE			
	S. Abut.	Pier	N. Abut.
R_{DC1}	(k) 51.2	155.3	29.3
R_{DC2}	(k) 12.9	33.0	6.8
R_{DW}	(k) 16.8	44.2	9.5
$R_L + IM$	(k) 114.6	226.8	99.4
R_{Total}	(k) 195.5	459.3	145.0

GIRDER 1A REACTION TABLE			
	Pier	N. Abut.	
R_{DC1}	(k) 89.9	31.1	
R_{DC2}	(k) 22.7	8.9	
R_{DW}	(k) 29.5	12.3	
$R_L + IM$	(k) 128.6	79.0	
R_{Total}	(k) 270.7	131.2	

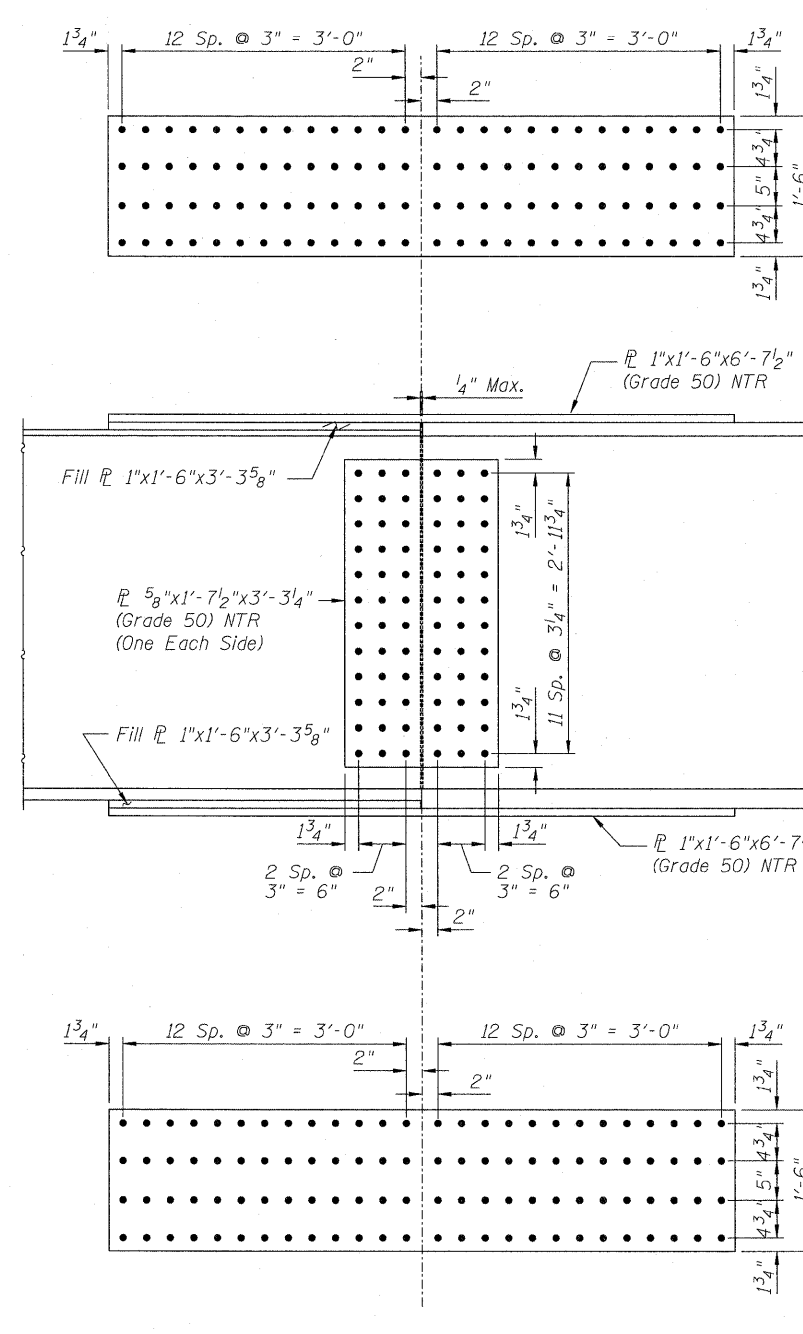
- I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).
- $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads (in⁴ and in³).
- $I_c(3n), S_c(3n)$: 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 (in⁴ and in³).
- Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations (in³).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M_{DC1} : 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_{DC2} : 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_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_L + IM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- M_u (Strength I): Factored design moment (kip-ft.).
 $1.25(M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$
- $\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
- $\phi_f M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
- f_s (Service II): Sum of stresses as computed from the moments below (ksi).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_L + IM$
- f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.25(M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$
- V_f : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

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DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

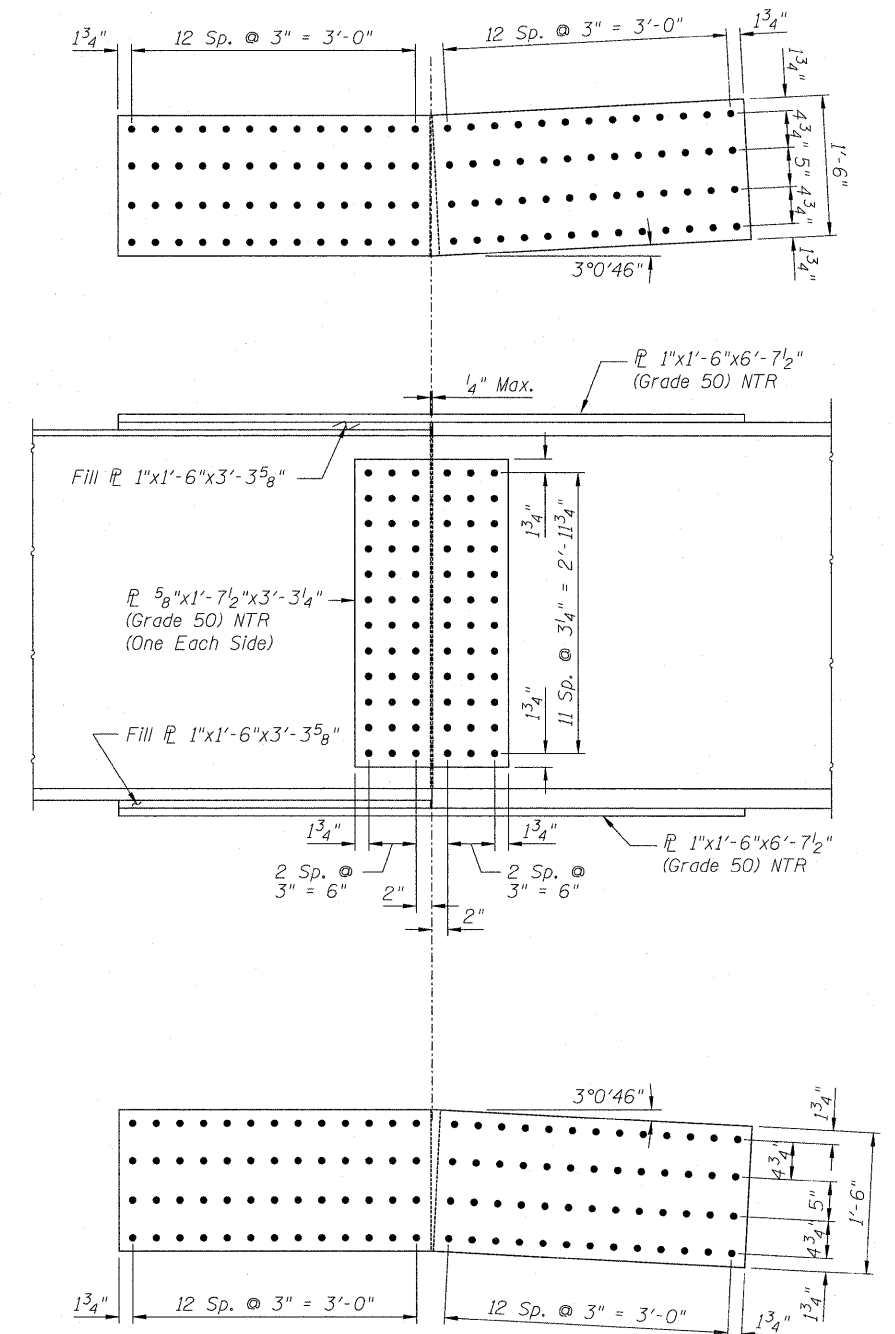
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FIELD SPLICE DETAIL
GIRDERS 2 THRU 7

Fasteners shall be AASHTO M164 Type 1 bolts.
Bolts $\frac{7}{8}$ " in diameter, holes $\frac{15}{16}$ " diameter.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



FIELD SPLICE DETAIL
GIRDER 1

Fasteners shall be AASHTO M164 Type 1 bolts.
Bolts $\frac{7}{8}$ " in diameter, holes $\frac{15}{16}$ " diameter.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

STRUCTURAL STEEL DETAILS 1
STRUCTURE NO. 082-0377

SHEET NO. 22 44 SHEETS	F.A.I. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 345	SHEET NO. 229
	CONTRACT NO. 76C49				
ILLINOIS FED. AID PROJECT					

REVISED 4/15/2010