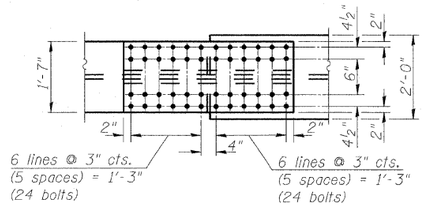
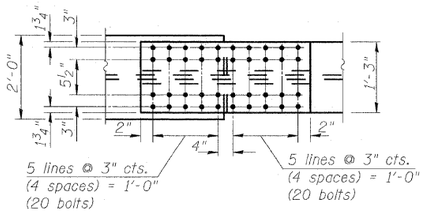
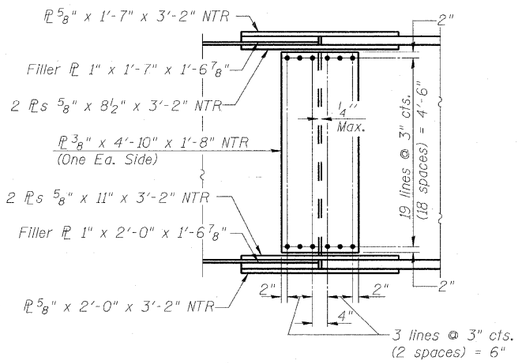
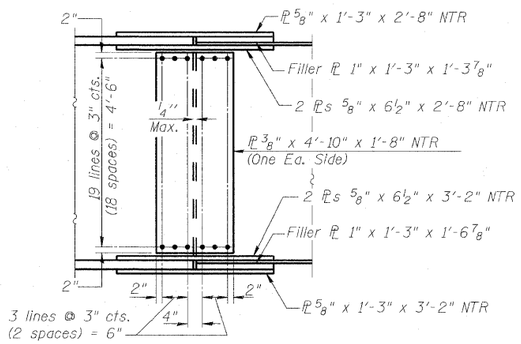
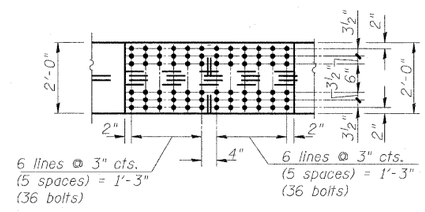
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



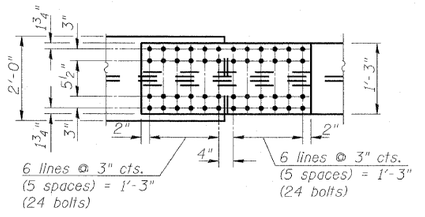








FIELD SPLICE #1 DETAIL



FIELD SPLICE #2 DETAIL

Notes:

1. *All splice steel this sheet shall be AASHTO M270 Grade 50.*
2. *Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.*

INTERIOR GIRDER MOMENT TABLE					
			0.4 Sp. 1	Pier	0.6 Sp. 2
	I_s	(in^4)	50,965	103,538	39,160
	$I_c(n)$	(in^4)	117,997	--	93,631
	$I_c(3n)$	(in^4)	87,362	--	70,125
	S_s	(in^3)	1,751	3,236	1,263
	$S_c(n)$	(in^3)	2,312	--	1,756
	$S_c(3n)$	(in^3)	2,128	--	1,603
	Z	(in^3)	--	3,538	--
	DC1	(k/')	1.28	1.47	1.24
***	M_{DC1}	('k)	2,401	4,326	896
	DC2	(k/')	0.33	0.33	0.33
***	M_{DC2}	('k)	657	956	294
	DW	(k/')	0.31	0.31	0.31
	M_{DW}	('k)	617	898	276
	M_{L+IM}	('k)	3,392	3,210	2,529
	M_u (Strength I)	('k)	10,684	13,567	6,327
*	$\phi_f M_n$, $\phi_f M_{nc}$	('k)	11,151	14,744	8,880
	f_s DC1	(ksi)	16.5	16.0	8.5
	f_s DC2	(ksi)	3.7	3.5	2.2
	f_s DW	(ksi)	3.5	3.3	2.1
	f_s 1.3(L+IM)	(ksi)	22.9	15.5	22.5
	f_s (Service II)	(ksi)	46.5	38.4	35.2
**	f_s (Total)(Strength I)	(ksi)	--	--	--
	V_f	(k)	36.0	--	36.9

* Compact sections
** Non-Compact and slender sections
*** Tabulated values neglect effects of slab pouring sequence

INTERIOR GIRDER REACTION TABLE				
		N. Abut.	Pier	S. Abut.
***	R_{DC1} (k)	80.6	258.4	51.2
***	R_{DC2} (k)	20.8	61.5	14.2
	R_{DW} (k)	19.6	57.8	13.4
	R_{L+IM} (k)	136.6	270.4	127.8
	R_{Total} (k)	257.6	648.1	206.6

TOP OF WEB ELEVATIONS****					
Girder	℄ Brg. N. Abut.	℄ Spl.1	℄ Brg. Pier	℄ Spl.2	℄ Brg. S. Abut.
1	419.50	422.69	422.51	421.89	418.59
2	419.75	422.89	422.70	422.05	418.72
3	420.00	423.09	422.88	422.22	418.86
4	420.23	423.28	423.06	422.37	418.98
5	420.08	423.08	422.84	422.14	418.72
6	419.93	422.88	422.63	421.91	418.45

****For fabrication use only.

I_s, S_s: *Non-composite moment of inertia and section modulus of the steel section used for computing fs (Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).*

$I_c(n)$, $S_c(n)$: *Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs (Total-Strength I, and Service II) due to short-term composite live loads ($in.^4$ and $in.^3$).*

$I_c(3n)$, $S_c(3n)$: *Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).*

Z: *Plastic Section Modulus of the steel section in non-composite areas ($in.^3$).*

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}

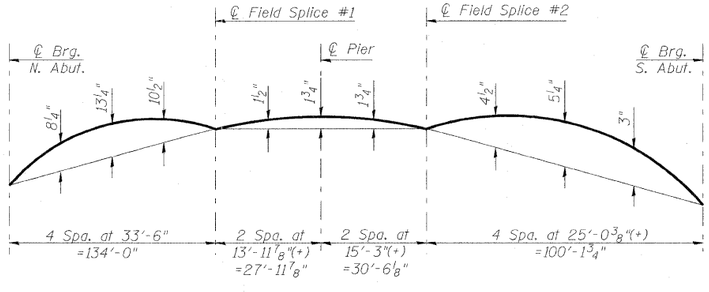
$\phi_f M_n$: *Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).*

$\phi_f M_{nc}$: *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.*



CAMBER DIAGRAM

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DESIGNED	- PJL
CHECKED	- DDB
DRAWN	- BRD
CHECKED	- DDB

03/31/2011

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3/22/2011

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 082-0326

SHEET NO. S22	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S36 SHEETS	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	224
	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		