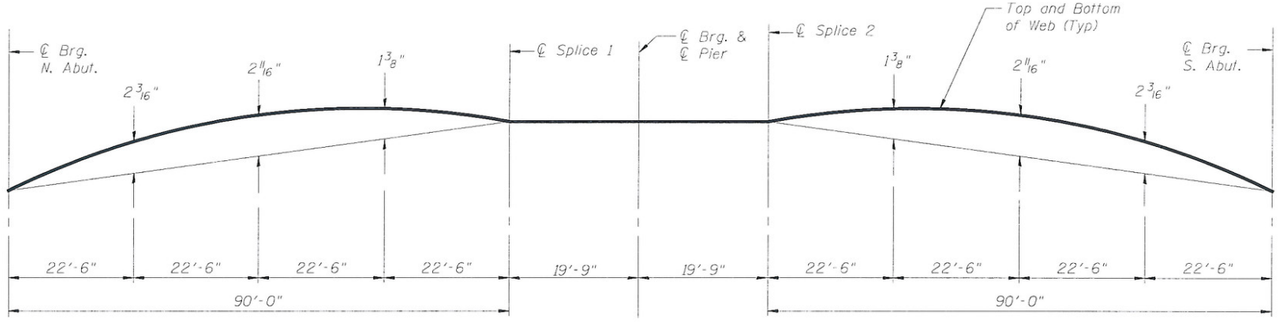
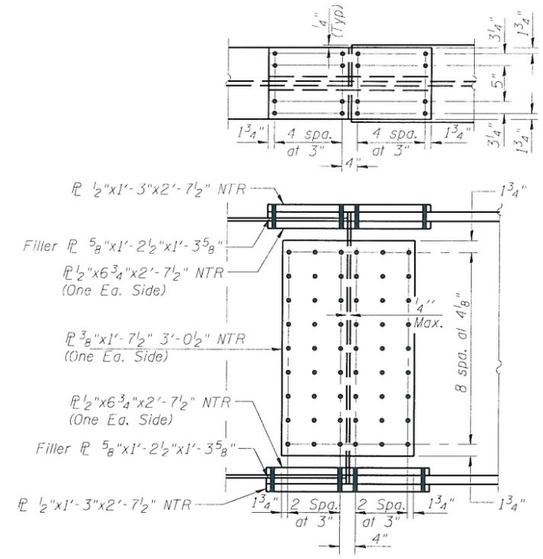
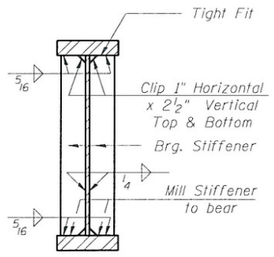


CAMBER DIAGRAM



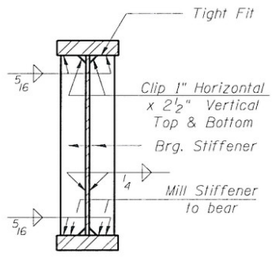
FIELD SPLICE DETAIL

All Splice plates shall be AASHTO M270 Grade 50.



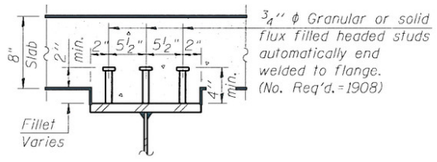
SECTION AT PIER

(Bearing Stiffener)



SECTION AT ABUT.

(Bearing Stiffener)



SECTION A-A

(See sheet 12 of 20 for location)

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 ($in.^4$ 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 f_s (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 f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

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_r: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

INTERIOR GIRDER MOMENT TABLE			
		0.4 Sp. 1 0.6 Sp. 2	Pier
I_s	(in^4)	13633	22697
$I_c(n)$	(in^4)	30928	
$I_c(3n)$	(in^4)	22762	
S_s	(in^3)	653	1056
$S_c(n)$	(in^3)	879	
$S_c(3n)$	(in^3)	799	
DC1	(k/')	.74	.81
M_{DC1}	('k)	569	1265
DC2	(k/')	.15	.15
M_{DC2}	('k)	128	223
DW	(k/')	.275	.275
M_{DW}	('k)	234	409
M_{L+IM}	('k)	1185	1097
Mu(Strength I)	('k)	3296	4394
* $\phi_f M_n$	('k)	4360	
$f_{s\,DC1}$	(ksi)	10.5	14.4
$f_{s\,DC2}$	(ksi)	1.9	2.5
$f_{s\,DW}$	(ksi)	3.5	4.6
f_s 1.3(L+IM)	(ksi)	21.0	16.2
f_s (Service II)	(ksi)	36.9	37.8
** f_s (Total)(Strength I)	(ksi)		49.9
V_r	(k)	23.2	

*Compact Sections

**Non-compact and slender sections

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
R_{DC1}	(k)	29.9	106.5
R_{DC2}	(k)	6.2	20.5
R_{DW}	(k)	11.4	37.6
R_{L+IM}	(k)	74.2	135.4
R_{Total}	(k)	121.7	300.0

TOP OF WEB ELEVATIONS

(for Fabrication use only)

Girder Number	Location				
	℄ N. Abut.	℄ Splice 1	℄ Pier	℄ Splice 2	℄ S. Abut.
1	707.55	708.11	708.11	708.11	707.55
2	707.63	708.20	708.20	708.20	707.63
3	707.72	708.29	708.29	708.29	707.72
4	707.72	708.29	708.29	708.29	707.72
5	707.63	708.20	708.20	708.20	707.63
6	707.55	708.11	708.11	708.11	707.55

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 010-0288

DESIGNED	MEB
CHECKED	JSP
DRAWN	UJ
CHECKED	MEB

HR
HURST-ROSCHE ENGINEERS, INC.
PROFESSIONAL DESIGN NUMBER 184-002598

Notes:

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

SHEET NO. 13	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	74	(10-6)HBR-5	CHAMPAIGN	63	32
	SN 010-0288		CONTRACT NO. 70750		
	FED. ROAD DIST. NO. 5 ILLINOIS FED. AID PROJECT				

D-95-007-09

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