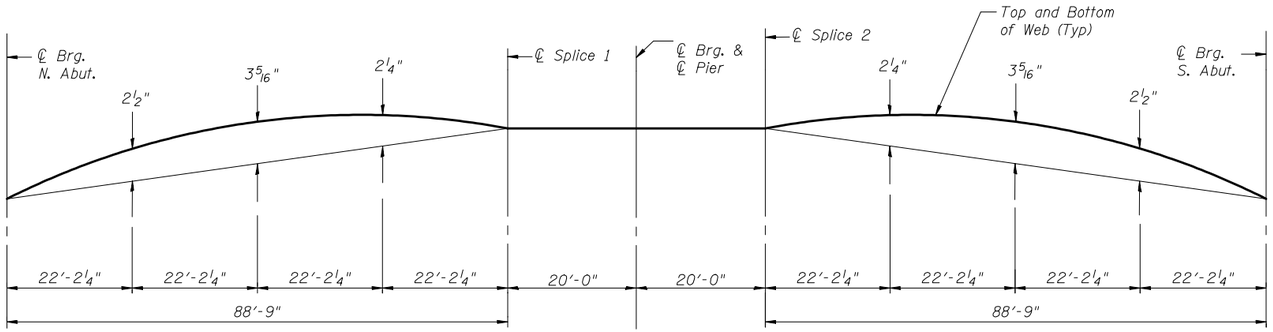
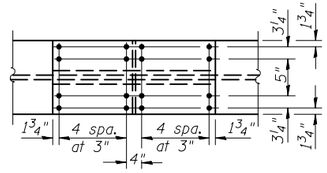
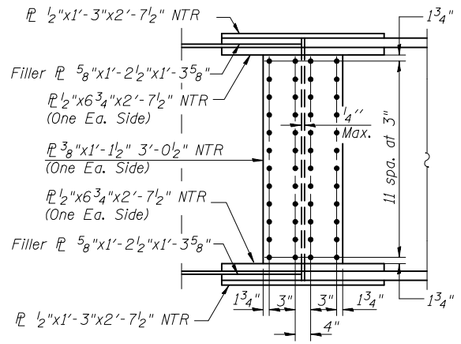


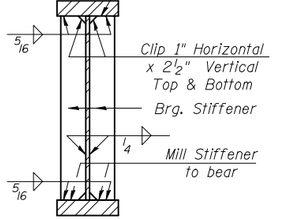
CAMBER DIAGRAM





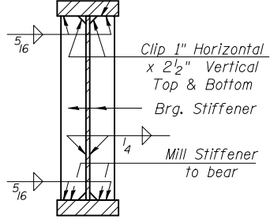
FIELD SPLICE DETAIL

All Splice plates shall be AASHTO M270 Grade 50.



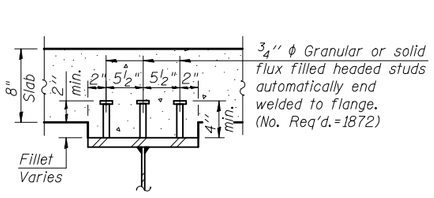
SECTION AT PIER

(Bearing Stiffener)



SECTION AT ABUT.

(Bearing Stiffener)



SECTION A-A

(See sheet 12 of 20 for location)

TOP OF WEB ELEVATIONS

(for Fabrication use only)

Girder Number	Location				
	℄ N. Abut.	℄ Splice 1	℄ Pier	℄ Splice 2	℄ S. Abut.
1	704.15	704.79	704.79	704.79	704.15
2	704.25	704.88	704.88	704.88	704.25
3	704.33	704.97	704.97	704.97	704.33
4	704.33	704.97	704.97	704.97	704.33
5	704.25	704.88	704.88	704.88	704.25
6	704.15	704.79	704.79	704.79	704.15

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).

Z: Plastic section modulus of the steel section in non-composite areas. Omit line in moment table if not used in design calculations (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 1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{L+IM} (kip-ft.).

$\phi r M_n$: Compact composite positive moment capacity computed according to article 6.10.7.1 (kip-ft.).

$\phi r M_{nc}$: 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 M_{DC1} - M_{DC2} + M_{DW} + 1.3 M_{L+IM} (ksi).

Vr: 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	22050
$I_c(n)$	(in^4)	30928	
$I_c(3n)$	(in^4)	22762	
S_s	(in^3)	653	1026
$S_c(n)$	(in^3)	879	
$S_c(3n)$	(in^3)	799	
Z	(in^3)		1134
DC1	(k/')	.74	.81
M_{DC1}	('k)	580	1248
DC2	(k/')	.15	.15
M_{DC2}	('k)	130	220
DW	(k/')	.275	.275
M_{DW}	(k/')	238	403
M_{L+IM}	(k/')	1193	1079
Mu(Strength I)	(k/')	3166	4111
* $\phi r M_n$	(k/')	4298	
$f_{s\,DC1}$	(ksi)	10.7	14.6
$f_{s\,DC2}$	(ksi)	2.0	2.6
$f_{s\,DW}$	(ksi)	3.6	4.7
f_s 1.3(L+IM)	(ksi)	21.2	16.4
f_s (Service II)	(ksi)	37.3	38.3
** f_s (Total)(Strength I)	(ksi)		48.1
Vr	(k)	26.3	

*Compact Sections

**Non-compact and slender sections

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
R_{DC1}	(k)	30.2	106.2
R_{DC2}	(k)	6.3	20.5
R_{DW}	(k)	11.5	37.6
R_{L+IM}	(k)	74.4	135.1
R_{Total}	(k)	122.3	299.3

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 010-0285

DESIGNED	MEB
CHECKED	JSP
DRAWN	UJ
CHECKED	MEB

HURST-ROSCHE ENGINEERS, INC.
PROFESSIONAL DESIGN NUMBER:184-009279

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	(10-6HB-5)BR	CHAMPAIGN	63	25
		SN 010-0285	CONTRACT NO. 90875		
		FED. ROAD DIST. NO. 5 ILLINOIS FED. AID PROJECT			