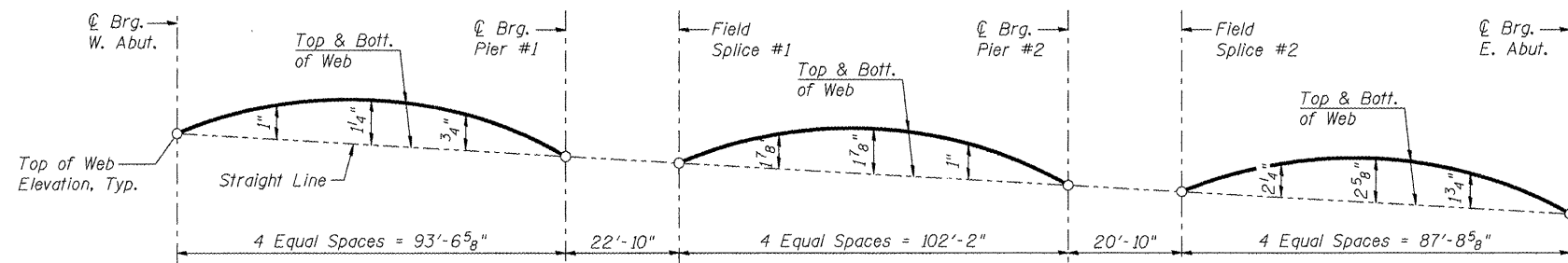


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



CAMBER DIAGRAM

Note: For Top of Web Elevations, see table this sheet.

TOP OF WEB ELEVATIONS

Girder	☉ Brg. of W. Abut.	☉ Brg. of Pier #1	Field Splice #1	☉ Brg. of Pier #2	Field Splice #2	☉ Brg. of E. Abut.
G1	514.92	512.80	512.29	510.02	509.56	507.66
G2	514.98	512.86	512.34	510.07	509.61	507.72
G3	515.03	512.91	512.40	510.13	509.66	507.77
G4	515.08	512.97	512.45	510.18	509.72	507.82
* G5	515.14	513.02	512.50	510.23	509.77	507.88
G6	514.89	512.77	512.26	509.99	509.53	507.63
G7	514.65	512.53	512.01	509.74	509.28	507.38
G8	514.40	512.28	511.76	509.50	509.03	507.14
G9	514.15	512.04	511.52	509.25	508.79	506.89

* At PGL & Centerline Roadway

	0.4 Sp. 1	Pier #1	0.5 Sp. 2	Pier #2	0.6 Sp. 3
I_s	17.141	26.530	17.141	28.940	17.141
$I_c(n)$	41.088	-	41.088	-	41.088
$I_c(3n)$	30,723	-	30,723	-	30,723
S_s	737	1,117	737	1,212	737
$S_c(n)$	1,008	-	1,008	-	1,008
$S_c(3n)$	924	-	924	-	924
DC1	0.977	1.034	0.977	1.049	0.977
M_{DC1}	523	1,197	526	1,491	753
DC2	0.150	0.150	0.150	0.150	0.150
M_{DC2}	90	169	104	208	129
DW	0.375	0.375	0.375	0.375	0.375
M_{DW}	225	423	261	521	322
$M_{\xi} + I$	1,289	1,262	1,398	1,375	1,497
M_u (Strength I)	3,360	4,551	3,626	5,312	4,205
$\phi_r M_n, \phi_r M_{nc}$	5,410	5,150	5,410	5,571	5,410
f_s DC1	8.5	12.9	8.6	14.8	12.3
f_s DC2	1.2	1.8	1.4	2.1	1.7
f_s DW	2.9	4.5	3.4	5.2	4.2
f_s 1.3($\xi + I$)	19.9	17.6	21.6	17.7	23.2
f_s (Service II)	32.6	36.8	34.9	39.7	41.3
Vr	17.7	28.9	22.1	29.8	19.9

	W. Abut.	Pier #1	Pier #2	E. Abut.
R_{DC1}	32.7	116.3	129.6	38.9
R_{DC2}	5.2	17.9	19.8	6.2
R_{DW}	13.0	44.7	49.4	15.6
$R_{\xi} + I_M$	98.3	161.8	167.5	103.1
R_{Total}	149.2	340.7	366.3	163.8

- 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.).
- $M_{\xi} + I_M$: Un-factored live load moment plus dynamic load allowance (Impact) (kip-ft.).
- M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\xi} + I_M$
- $\phi_r M_n$: 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 the moments below (ksi).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{\xi} + I_M$
- Vr: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

GIRDER DETAILS
AIRPORT ROAD OVER U.P.R.R.
AND KICKAPOO CREEK TRIBUTARY
STATION 45+42.00

STS AECOM 111 NE Jefferson Avenue Peoria, IL 61602 T 309.676.8464 Fax 309.676.5445 IL Design Firm Reg. No. 184-001518 www.stsconsultants.com	SHEET NO. 15	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	OF	6578	(1-R)RS(1-VC)BR	PEORIA	142	75
	33 SHEETS	STRUCTURE NO. 072-0201		CONTRACT NO. 68092		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT						