S.N. 055-0080

INTERIOR GIRDER MOMENT TABLE		
		0.5 Sp. 1
I_s	(in^4)	25,563
$I_c(n)$	(in^4)	66,184
$I_c(3n)$	(in^4)	47,084
S_s	(in^3)	1,185
$S_c(n)$	(in^3)	1,642
$S_c(3n)$	(in^3)	1,493
DC1	(k/')	1.048
M_{DC1}	('k)	1,732
DC2	(k/')	0.129
M_{DC2}	('k)	213
DW	(k/')	0.357
M_{DW}	('k)	590
M_{L+IM}	('k)	2,053
M_u (Strength I)	('k)	6,909
* $\phi_f M_n$	('k)	8,261
f_s DC1	(ksi)	17.5
f_s DC2	(ksi)	1.7
f_s DW	(ksi)	4.7
f_s (L+IM)	(ksi)	15.0
f_s (Service II)	(ksi)	43.4
$0.95R_hF_{yf}$	(ksi)	47.5
V_f	(k)	66.5

*Compact Sections

INTERIOR GIRDER REACTION TABLE		
		Abut.
R_{DC1}	(k)	61.2
R_{DC2}	(k)	7.4
R_{DW}	(k)	20.5
R_{L+IM}	(k)	118.4
R_{Total}	(k)	207.5

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) in uncracked sections, 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) in uncracked sections, 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.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

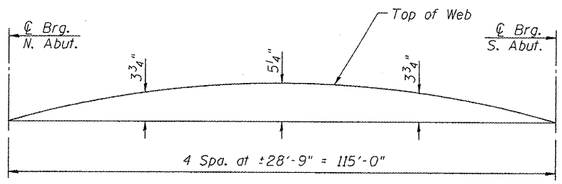
f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

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



CAMBER DIAGRAM

℄ TOP OF WEB ELEVATIONS		
Girder No.	℄ Brg. N. Abut.	℄ Brg. S. Abut.
1	683.368	683.718
2	683.548	683.908
3	683.698	684.048
4	683.748	684.098
5	683.648	683.998
6	683.558	683.908
7	683.448	683.798
8	683.668	684.018
9	683.818	684.178
10	683.958	684.308
11	683.918	684.268
12	683.818	684.168
13	683.688	684.048

℄ For fabrication only.

S.N. 055-0081

INTERIOR GIRDER MOMENT TABLE		
		0.5 Sp. 1
I_s	(in^4)	25,563
$I_c(n)$	(in^4)	65,169
$I_c(3n)$	(in^4)	46,247
S_s	(in^3)	1,185
$S_c(n)$	(in^3)	1,636
$S_c(3n)$	(in^3)	1,485
DC1	(k/')	1.005
M_{DC1}	('k)	1,661
DC2	(k/')	0.150
M_{DC2}	('k)	248
DW	(k/')	0.333
M_{DW}	('k)	551
M_{L+IM}	('k)	1,974
M_u (Strength I)	('k)	6,667
* $\phi_f M_n$	('k)	8,118
f_s DC1	(ksi)	16.8
f_s DC2	(ksi)	2.0
f_s DW	(ksi)	4.4
f_s (L+IM)	(ksi)	14.5
f_s (Service II)	(ksi)	42.1
$0.95R_hF_{yf}$	(ksi)	47.5
V_f	(k)	64.8

*Compact Sections

INTERIOR GIRDER REACTION TABLE		
		Abut.
R_{DC1}	(k)	58.7
R_{DC2}	(k)	8.6
R_{DW}	(k)	19.2
R_{L+IM}	(k)	114.1
R_{Total}	(k)	200.6

FILE NAME = P:\07files\070286\Phase2\Bridge Plans\24_GIRDER DETAILS.dgn	USER NAME = seb	DESIGNED - KTH	REVISED -
		CHECKED - ADL	REVISED -
	PLOT SCALE = 0:2.0000 '' / IN.	DRAWN - BGJ	REVISED -
	PLOT DATE = 12/7/2011	CHECKED - RJP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER DETAILS
S.N. 055-0080 (NB) & S.N. 055-0081 (SB)
SHEET NO. 24 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(38B-2)BR	MCDONOUGH	130	81
		CONTRACT NO. 68691		
	ILLINOIS FED. AID PROJECT			

Klingner & Associates P.C.