INTERIOR GIRDER MOMENT TABLE		
		0.5 Sp. 1
I_s	(in^4)	13200
$I_c(n)$	(in^4)	29227
$I_c(3n)$	(in^4)	21060
$I_c(cr)$	(in^4)	-
S_s	(in^3)	719
$S_c(n)$	(in^3)	991
$S_c(3n)$	(in^3)	883
$S_c(cr)$	(in^3)	-
DC1	(k/')	0.830
M_{DC1}	('k)	948
DC2	(k/')	0.150
M_{DC2}	('k)	171
DW	(k/')	0.275
M_{DW}	('k)	314
M_{L+IM}	('k)	1297
M_u (Strength I)	('k)	4140
$\phi_f M_n$	('k)	4838
f_s DC1	(ksi)	15.82
f_s DC2	(ksi)	2.33
f_s DW	(ksi)	4.27
f_s (L+IM)	(ksi)	15.70
f_s (Service II)	(ksi)	42.83
$0.95R_hF_{yf}$	(ksi)	47.50
f_s (Total)(Strength I)	(ksi)	-
$\phi_f F_n$	(ksi)	-
V_r	(k)	48.6

INTERIOR GIRDER REACTION TABLE		
		Abutments
R_{DC1}	(k)	39.7
R_{DC2}	(k)	7.2
R_{DW}	(k)	13.1
R_{L+IM}	(k)	74.6
R_{Total}	(k)	134.6

EXTERIOR GIRDER MOMENT TABLE		
		0.5 Sp. 1
I_s	(in^4)	13200
$I_c(n)$	(in^4)	29353
$I_c(3n)$	(in^4)	21151
$I_c(cr)$	(in^4)	-
S_s	(in^3)	719
$S_c(n)$	(in^3)	993
$S_c(3n)$	(in^3)	885
$S_c(cr)$	(in^3)	-
DC1	(k/')	0.867
M_{DC1}	('k)	990
DC2	(k/')	0.224
M_{DC2}	('k)	256
DW	(k/')	0.208
M_{DW}	('k)	238
M_{L+IM}	('k)	1419
M_u (Strength I)	('k)	4396
$\phi_f M_n$	('k)	4851
f_s DC1	(ksi)	16.52
f_s DC2	(ksi)	3.47
f_s DW	(ksi)	3.22
f_s (L+IM)	(ksi)	17.14
f_s (Service II)	(ksi)	45.50
$0.95R_hF_{yf}$	(ksi)	47.50
f_s (Total)(Strength I)	(ksi)	-
$\phi_f F_n$	(ksi)	-
V_r	(k)	44.9

EXTERIOR GIRDER REACTION TABLE		
		Abutments
R_{DC1}	(k)	41.4
R_{DC2}	(k)	10.7
R_{DW}	(k)	9.9
R_{L+IM}	(k)	63.1
R_{Total}	(k)	125.1

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 $in.^3$).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite 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).
$M_{L+IM} / S_c(3n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

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

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

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_{sL+IM}$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7.2 (ksi).

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

DESIGNED	NPH
CHECKED	BAN
DRAWN	NPH/RMD
CHECKED	BAN

2987B0016

STRUCTURAL STEEL
RIVER RD. (F.A.U. 3799) OVER BLACKBERRY CREEK
SECTION 08-00036-00-BR
KENDALL COUNTY
STATION 99+98.81

SHEET NO. 16	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
23 SHEETS	FAU 3799	08-00036-00-BR	KENDALL	54	37
	SN 047-6500		CONTRACT NO. 87509		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRM-9003(883)		