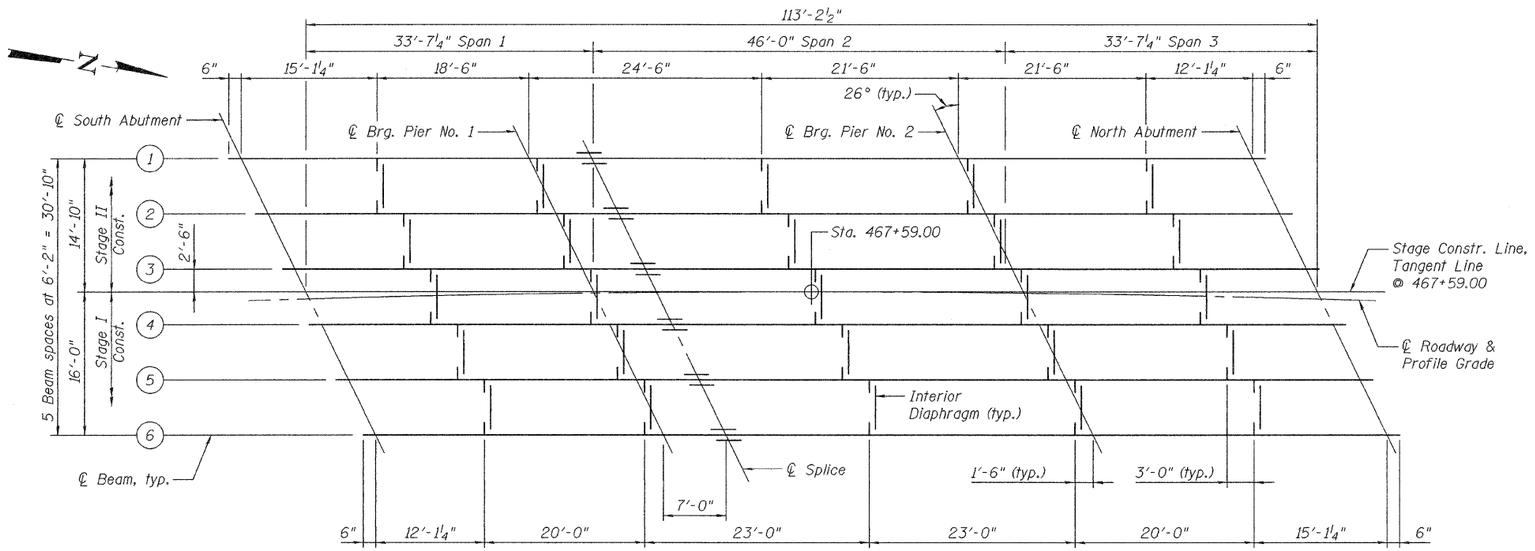
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 304	5BR-2	CALHOUN	68	39
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
28 SHEETS

Contract #76948



FRAMING PLAN

Note:
For Beam Elevation, Field Splice and Interior Diaphragm Details, See Sheet No. 16 of 28.
For Details of Diaphragms at the Abutments, see Sheet No. 14 of 28.

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
I_s	(in^4)	2,850	2,850	2,850
$I_c(n)$	(in^4)	8,549	-	8,625
$I_c(3n)$	(in^4)	6,390	-	6,472
S_s	(in^3)	213	213	213
$S_c(n)$	(in^3)	331	-	332
$S_c(3n)$	(in^3)	300	-	301
Z	(in^3)	-	-	-
DC1	(k/')	0.728	0.728	0.728
M_{DC1}	('k)	51	120	73
DC2	(k/')	0.149	0.149	0.149
M_{DC2}	('k)	11	24	15
DW	(k/')	0.308	0.308	0.308
M_{DW}	('k)	22	50	31
M_{L+Imp}	('k)	310	272	327
M_u (Strength I)	('k)	653	731	729
$\phi_f M_n, \phi_f M_{nc}$	('k)	1,741	820	1,723
f_s DC1	(ksi)	2.873	6.761	4.113
f_s DC2	(ksi)	0.620	1.352	0.845
f_s DW	(ksi)	0.880	2.817	1.236
f_s 1.3(L+I)	(ksi)	14.610	19.921	15.365
f_s (Service II)	(ksi)	18.983	30.851	21.559
f_s (Total)(Strength I)	(ksi)	25.354	41.183	28.735
Vr	(k)	16.2	20.0	16.8

INTERIOR GIRDER REACTION TABLE HL93 Loading			
		S. Abut. or N. Abut.	Pier 1 or Pier 2
R_{DC1}	(k)	8.7	32.5
R_{DC2}	(k)	1.8	6.7
R_{DW}	(k)	3.7	13.8
R_{L+Imp}	(k)	56.3	80.0
R_{Total}	(k)	117.2	209.7

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing fs (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 fs (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 fs (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+Imp}: Un-factored live load moment plus dynamic load allowance (impact)(kip-ft.).
M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+Imp}$
$\phi_f M_n$: Compact composite positive moment capacity computed according to Arcticle 6.10.7.1 (kip-ft.)
$\phi_f M_{nc}$: Non-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).
$M_{DC1} + M_{DC2} + M_{DW} + 1.3\ M_{L+Imp}$
f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+Imp}$
Vr: Factored shear range computed according to Article 6.10.10.

Notes:
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

DESIGNED	YSS
CHECKED	RLM
DRAWN	PRC
CHECKED	RLM

02/27/08

MODJESKI and MASTERS
Consulting Engineers
SINCE 1893

FRAMING PLAN AND DESIGN DATA
IL. ROUTE 100 OVER
CRAWFORD CREEK
F.A.P. ROUTE 304 - SECTION 5BR-2
CALHOUN COUNTY
STATION 467+59.00
STRUCTURE NO. 007-0027