

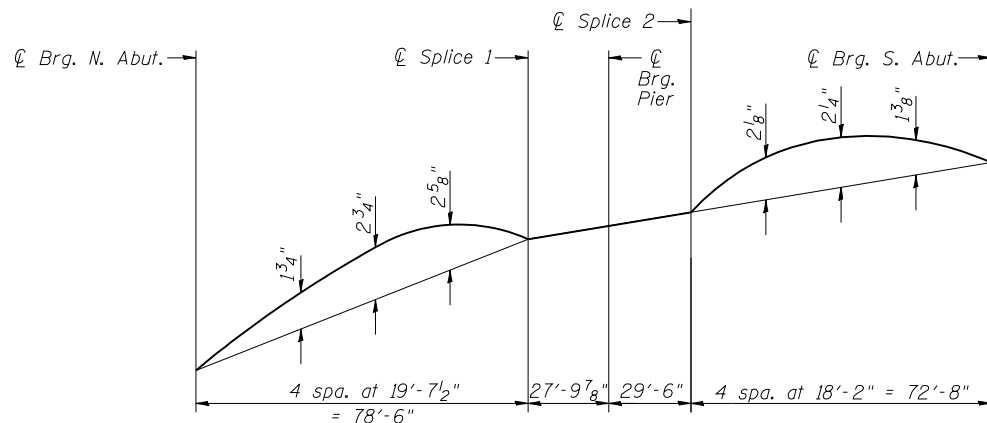
TOP OF WEB ELEVATIONS
(for fabrication only)

Location	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7	Girder 8
⊕ Brg. N. Abut.	736.90	737.22	737.35	737.47	737.47	737.33	737.19	736.85
⊕ Splice 1	737.08	737.41	737.54	737.67	737.67	737.53	737.40	737.07
⊕ Pier	737.08	737.41	737.55	737.68	737.68	737.54	737.41	737.08
⊕ Splice 2	737.09	737.42	737.55	737.69	737.69	737.55	737.42	737.09
⊕ Brg. S. Abut.	737.00	737.34	737.47	737.61	737.62	737.49	737.36	737.04

FRAMING PLAN

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in ⁴)	19,592	45,205	19,592
$I_c(n)$	(in ⁴)	47,923	87,370	47,923
$I_c(3n)$	(in ⁴)	36,106	66,387	36,106
$I_c(cr)$	(in ⁴)	-	52,533	-
S_s	(in ³)	784	1739	784
$S_c(n)$	(in ³)	1094	2118	1094
$S_c(3n)$	(in ³)	1001	1970	1001
$S_c(cr)$	(in ³)	-	1830	-
DC1	(k/')	1.147	1.268	1.147
M _{DC1}	(k)	769	1969	649
DC2	(k/')	0.168	0.168	0.168
M _{DC2}	(k)	120	270	102
DW	(k/')	0.441	0.44	0.441
M _{DW}	(k)	314	710	268
M _{⊕ + IM}	(k)	1548	1965	1497
M _u (Strength I)	(k)	4291	7303	3961
ϕ _r M _n	(k)	5348	-	5446
f _s DC1	(ksi)	11.8	13.6	9.9
f _s DC2	(ksi)	1.4	1.8	1.2
f _s DW	(ksi)	3.8	4.7	3.2
f _s (⊕ + IM)	(ksi)	17.0	12.9	16.4
f _s (Service II)	(ksi)	39.0	36.8	35.7
0.95R _n F _{yf}	(ksi)	47.5	47.5	47.5
f _s (Total)(Strength I)	(ksi)	51.9	48.7	47.5
V _r	(k)	32.7	32.7	32.7

* Compact sections
** Non-Compact sections



CAMBER DIAGRAM

NOTES

All girders are AASHTO M270 Grade 50.
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.
See Sheet 15 of 37 for splice and diaphragm details.

INTERIOR GIRDER REACTION TABLE				
	N. Abut.	Pier	S. Abut.	
R _{DC1}	(k)	43	157	39
R _{DC2}	(k)	6	22	6
R _{DW}	(k)	17	60	16
R _{⊕ + IM}	(k)	99	200	98
R _{Total}	(k)	165	440	159

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 (in⁴ and in³).
 $I_c(n), S_c(n)$: 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 (in⁴ and in³).
 $I_c(3n), S_c(3n)$: 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 (in⁴ and in³).
 $I_c(cr), S_c(cr)$: 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 (superimposed) dead loads (in⁴ and in³).
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_{⊕ + 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_{⊕ + IM}
ϕ_rM_n: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (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 (⊕ + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
M_{⊕ + IM} / S_{c(n)} or M_{DW} / 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 (⊕ + IM)
0.95R_nF_{yf}: 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_s (⊕ + IM)
V_r: Maximum factored shear range in span computed according to Article 6.10.10.

FILE NAME = E:\09-014-Framing.dgn
CB PROJECT NO. 04065

Coombe-Bloxdorf P.C.
CIVIL ENGINEERS-
STRUCTURAL ENGINEERS-
LAND SURVEYORS
Design Firm License No. 184-002703

USER NAME = .MML.	DESIGNED - RKM	REVISED -
PLOT SCALE = 21:4,000 '1' / IN.	CHECKED -	REVISED -
PLOT DATE = 10/16/2012	DRAWN - MML	REVISED -
	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 036-0065

SHEET NO. 14 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	512
CONTRACT NO. 68409				
ILLINOIS FED. AID PROJECT				