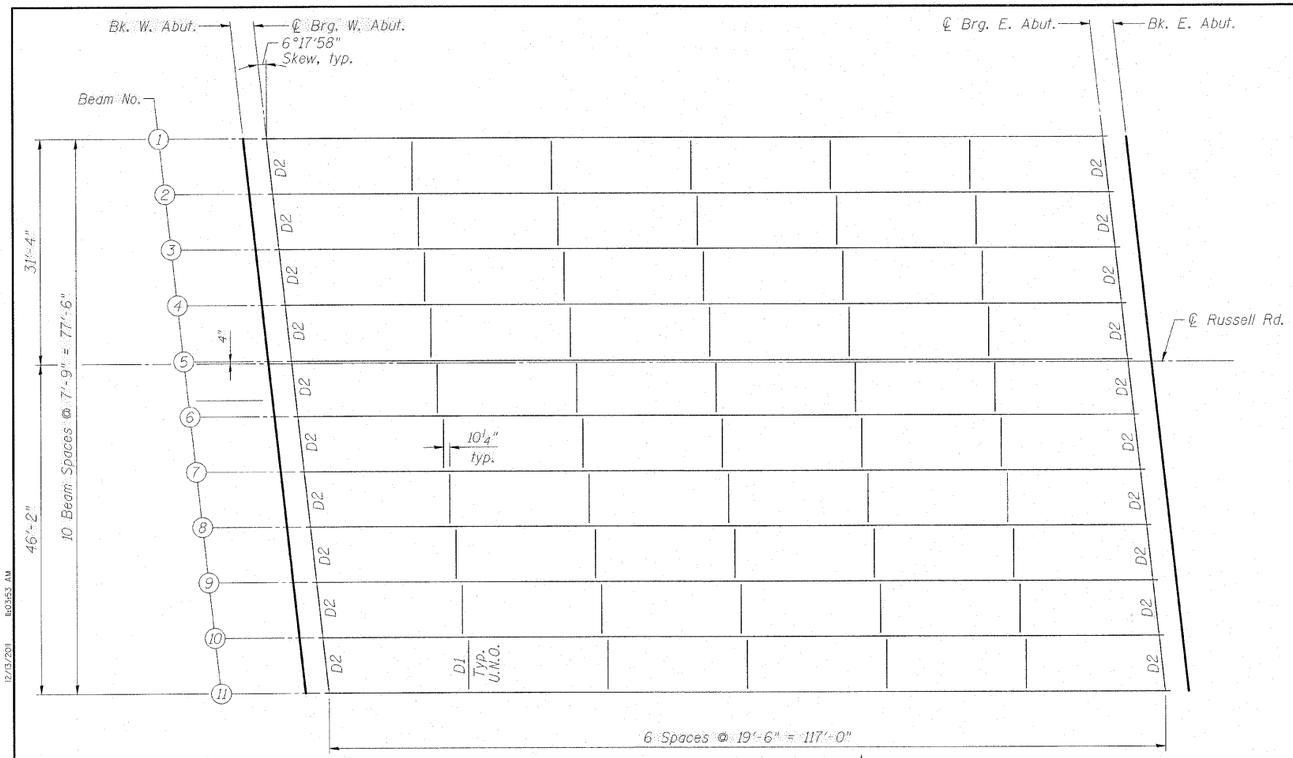
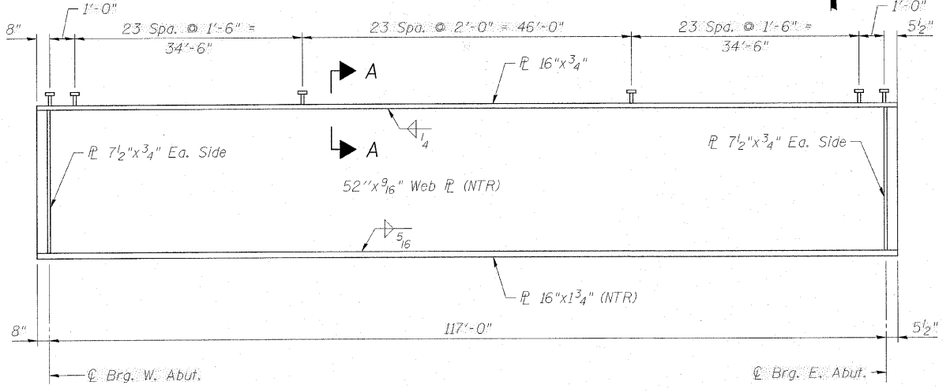


FRAMING PLAN



GIRDER ELEVATION

"NTR" denotes plates to which notch toughness requirements are applicable.

INTERIOR GIRDER MOMENT TABLE		
		0.5 Sp. 1
I_s	(in^4)	32,425
$I_c(n)$	(in^4)	88,804
$I_c(3n)$	(in^4)	62,252
$I_c(cr)$	(in^4)	-
S_s	(in^3)	1,512
$S_c(n)$	(in^3)	2,081
$S_c(3n)$	(in^3)	1,903
$S_c(cr)$	(in^3)	-
DC1	(k/')	1.08
M_{DC1}	('k)	1,876
DC2	(k/')	0.155
M_{DC2}	('k)	265
DW	(k/')	0.325
M_{DW}	('k)	556
M_{L+IM}	('k)	2,239
M_u (Strength I)	('k)	7,430
$\phi_f M_n$	('k)	9,925
f_s DC1	(ksi)	14.89
f_s DC2	(ksi)	1.67
f_s DW	(ksi)	3.51
f_s (L+IM)	(ksi)	12.91
f_s (Service II)	(ksi)	36.85
$0.95R_hF_{yf}$	(ksi)	47.5
f_s (Total)(Strength I)	(ksi)	48.56
$\phi_f F_n$	(ksi)	-
V_f	(k)	28.4

INTERIOR GIRDER REACTION TABLE			
		W. Abut.	E. Abut.
R_{DC1}	(k)	65.2	65.2
R_{DC2}	(k)	9.6	8.6
R_{DW}	(k)	18.7	19.3
R_{L+IM}	(k)	106.5	106.5
R_{Total}	(k)	199.9	199.5

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).

$I_c(cr)$, $S_c(cr)$: 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).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_{yf}$: 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).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_{sL+IM}$

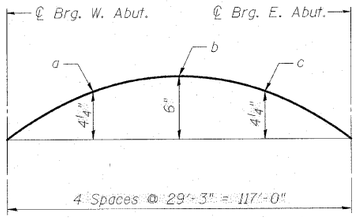
$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7.2 (ksi).

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

TOP OF WEB ELEVATIONS

(For Fabrication only)

Beam	℄ Brg. W. Abut.	a	b	c	℄ Brg. E. Abut.
1	758.40	758.61	758.61	758.33	757.83
2	758.56	758.77	758.77	758.48	757.98
3	758.72	758.93	758.93	758.64	758.14
4	758.88	759.09	759.09	758.79	758.29
5	759.04	759.25	759.24	758.95	758.44
6	758.89	759.10	759.09	758.79	758.29
7	758.73	758.93	758.93	758.63	758.12
8	758.57	758.77	758.76	758.46	757.95
9	758.41	758.60	758.59	758.29	757.78
10	758.47	758.66	758.65	758.35	757.84
11	758.63	758.82	758.81	758.51	757.99

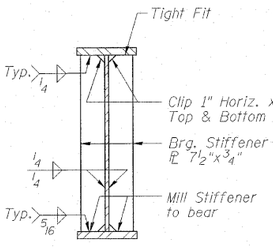


CAMBER DIAGRAM

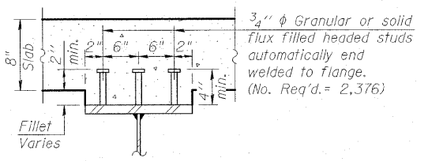
NOTES:

Webs, flanges, and bearing stiffeners to be AASHTO M270 Grade 50 steel.

Load carrying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.



SECTION AT ABUTMENT



SECTION A-A

SHEAR STUDS ARE NOT INCLUDED IN THIS CONTRACT

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbandainc.com

FILE NAME =	USER NAME =	DESIGNED - MRM	REVISED -
		CHECKED - TL	REVISED -
	PLOT SCALE = N.T.S.	DRAWN - MTR	REVISED -
	PLOT DATE = 12/13/2011	CHECKED - DF	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 049-0533
SHEET NO. OF SHEETS

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1199	2011-056-F	LAKE	19	9
		CONTRACT NO. 60P69		
	ILLINOIS FED. AID PROJECT			

B03353 AM
12/13/2011
d:\101\05_CADD\60P69 Russell Fabrication\60P69 Sheets\049089-60P69-01-FP.dgn