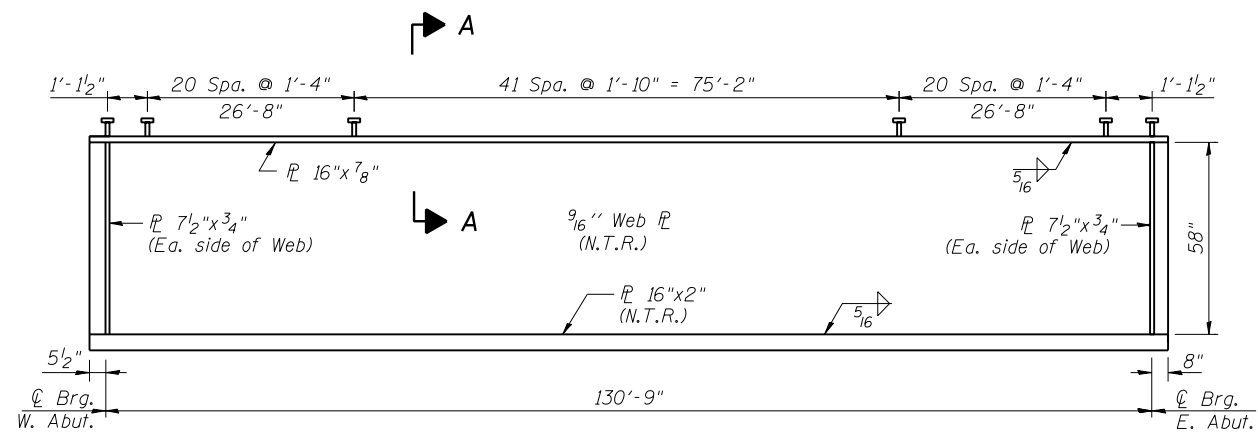


FRAMING PLAN

	Abut.
R_{DC1} (k)	72.3
R_{DC2} (k)	7.7
R_{DW} (k)	24.5
$R_{\frac{1}{2} + IM}$ (k)	104.2
R_{Total} (k)	208.7

	0.5 Sp.
I_s (in ⁴)	46,272
$I_c(n)$ (in ⁴)	117,268
$I_c(3n)$ (in ⁴)	82,144
S_s (in ³)	1925.4
$S_c(n)$ (in ³)	2578.6
$S_c(3n)$ (in ³)	2354.3
$DC1$ (k/')	1.093
M_{DC1} (k)	2336.3
$DC2$ (k/')	0.116
M_{DC2} (k)	248.7
DW (k/')	0.367
M_{DW} (k)	785.3
$M_{\frac{1}{2} + IM}$ (k)	2425.9
M_u (Strength I) (k)	8654
$\phi_f M_n$ (k)	11,745
f_s DC1 (ksi)	14.56
f_s DC2 (ksi)	1.30
f_s DW (ksi)	4.0
f_s ($\frac{1}{2} + IM$) (ksi)	14.7
f_s (Service II) (ksi)	34.60
$0.95R_n F_y f$ (ksi)	47.5
f_s (Total)(Strength I) (ksi)	50
$\phi_f F_n$ (ksi)	29.8
V_f (k)	



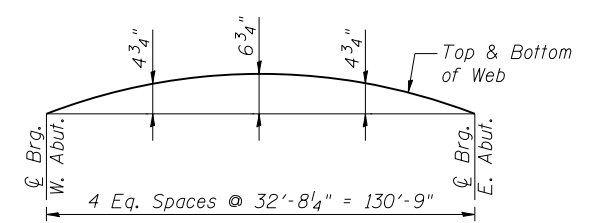
GIRDER ELEVATION

"N.T.R." denotes plates to which notch toughness requirements are applicable. All plate Girders including Webs, Top and Bottom flanges and stiffeners are to be AASHTO M270 Grade 50.

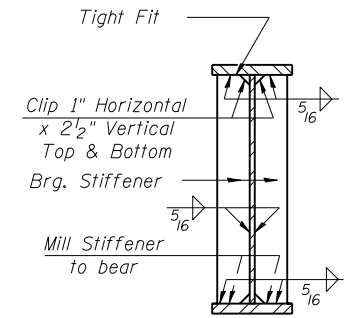
TOP OF WEB ELEVATIONS

(For Fabrication Only)

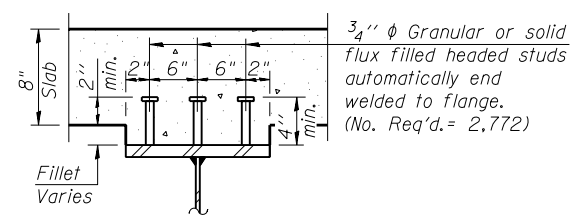
Beam Number	☐ Brg. W. Abut.	☐ Brg. E. Abut.
1	756.97	754.70
2	757.11	754.83
3	757.25	754.96
4	757.39	755.08
5	757.53	755.21
6	757.36	755.03
7	757.17	754.83
8	756.99	754.64
9	756.81	754.44
10	756.85	754.47
11	756.99	754.59



CAMBER DIAGRAM



SECTION AT ABUTMENT



SECTION A-A

NOTES:

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

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).

$DC1$: 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.).

$M_{\frac{1}{2} + IM}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\frac{1}{2} + IM}$

$\phi_f M_n$: 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 ($\frac{1}{2} + IM$): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
 $M_{\frac{1}{2} + IM} / S_c(3n)$ or $M_{\frac{1}{2} + IM} / S_c(cr)$ as applicable.

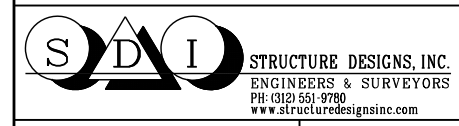
f_s (Service II): Sum of stresses as computed below (ksi).
 $f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (\frac{1}{2} + IM)$

$0.95R_n F_y f$: 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).
 $1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s (\frac{1}{2} + IM)$

$\phi_f F_n$: 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.



FILE NAME =	USER NAME =	DESIGNED - LRT / AG	REVISOR -
		CHECKED - OAO / LRT	REVISION -
		DRAWN - TCS / AG	REVISION -
		CHECKED - AG	REVISION -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN & BEAM DETAILS
STRUCTURE NO. 049-0534

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1199	49-1(HB & HB-1R)	LAKE	225	164
CONTRACT NO. 60L76				

ILLINOIS FED. AID PROJECT