



- Notes:
- All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
 - Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, 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 (I_n and I_n^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 (I_n and I_n^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 (I_n and I_n^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.).
- $M_k + IM$: Un-factored live load moment plus dynamic load allowance (Impact) (kip-ft.).
- M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_k + IM$
- $\phi_r M_n$: 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_n
- 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 ($k + IM$): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
 $M_k + IM / S_c(n)$.
- f_s (Service II): Sum of stresses as computed below (ksi).
 $f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s (k + IM)$
- $0.95 R_n F_y f$: 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).
 $1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_s (k + IM)$
- $\phi_r F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).
- V_r : Maximum factored shear range in span computed according to Article 6.10.10.

FRAMING PLAN

All beams are W33x130 AASHTO M270, Grade 50 (NTR)

INTERIOR GIRDER MOMENT TABLE		0.5 Sp.
I_s	(in ⁴)	6710
$I_c(n)$	(in ⁴)	18,011
$I_c(3n)$	(in ⁴)	13,219
S_s	(in ³)	406
$S_c(n)$	(in ³)	598
$S_c(3n)$	(in ³)	540
DC1	(k/ft)	0.77
M_{DC1}	(k)	409
DC2	(k/ft)	0.47
M_{DC2}	(k)	249
DW	(k/ft)	0.33
M_{DW}	(k)	172
$M_k + IM$	(k)	813
M_u (Strength I)	(k)	2,505
$\phi_r M_n$	(k)	3,019
f_s DC1	(ksi)	12.1
f_s DC2	(ksi)	5.5
f_s DW	(ksi)	3.8
f_s ($k + IM$)	(ksi)	16.3
f_s (Service II)	(ksi)	42.6
$0.95 R_n F_y f$	(ksi)	47.5
f_s (Total)(Strength I)	(ksi)	56.2
$\phi_r F_n$	(ksi)	60.6
V_r	(k)	14.8

TOP OF BEAM ELEVATIONS For Fabrication only		
Beam No.	© Brg. W. Abut.	© Brg. E. Abut.
1	728.60	728.50
2	728.69	728.62
3	728.77	728.74
4	728.77	728.74
5	728.65	728.67
6	728.53	728.58

INTERIOR GIRDER REACTION TABLE		Abut.
R_{DC1}	(k)	25.2
R_{DC2}	(k)	15.3
R_{DW}	(k)	10.6
$R_k + IM$	(k)	75.6
R_{Total}	(k)	127

COMPANY NAME: Kevin M. Acft
 PROJECT CONTACT: City of Rockford
 CLIENT: 2/18/2014 10:08 PM
 DATE PLOTTED: 8/15/2014 11:00 AM
 FILE NAME: 8010004-Framing
 PLOT DATE: 8/15/2014
 PLOT SCALE: 1/8"=1'-0"

	USER NAME = vhead PLOT SCALE = PLOT DATE = 2/18/2014	DESIGNED - KMA CHECKED - RGD DRAWN - WJH CHECKED - 2/18/14	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STEEL BEAM FRAMING PLAN STRUCTURE NO. 101-6148	F.A. RTE. = 3259	SECTION = 11-00590-00-BR	COUNTY = WINNEBAGO	TOTAL SHEETS = 32	SHEET NO. = 23
	SHEET NO. S-13 OF S-19 SHEETS						CONTRACT NO. 85607 ILLINOIS FED. AID PROJECT			