STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Piers	0.5 Sp. 2
I_s	(in^4)	3270	3270	3270
$I_c(n)$	(in^4)	10185	3270	10185
$I_c(3n)$	(in^4)	7518	3270	7518
S_s	(in^3)	243	243	243
$S_c(n)$	(in^3)	383	243	383
$S_c(3n)$	(in^3)	345	243	345
Z	(in^3)	278	278	278
DC1	(k/')	0.778	0.778	0.778
M_{DC1}	('k)	61.3	138.1	84.4
DC2	(k/')	0.15	0.15	0.15
M_{DC2}	('k)	14.6	19.4	23.4
DW	(k/')	0.145	0.145	0.145
M_{DW}	('k)	14.1	18.8	22.6
M_{L+IM}	('k)	344.7	191.8	416.9
M_u (Strength I)	('k)	719.3	560.7	898.2
* $\phi_f M_n$, $\phi_f M_{nc}$	('k)	1977.0	997.3	1977.0
f_s DC1	(ksi)	3.0	6.8	4.2
f_s DC2	(ksi)	0.5	1.0	0.8
f_s DW	(ksi)	0.5	0.9	0.8
f_s 1.3(L+IM)	(ksi)	14.0	12.3	17.0
f_s (Service II)	(ksi)	18.0	21.0	22.8
** f_s (Total)(Strength I)	(ksi)	-	-	-
V_f	(k)	13.3	-	12.8

* Compact sections
** Non-Compact and slender sections

INTERIOR GIRDER REACTION TABLE			
		Abutments	Piers
R_{DC1}	(k)	9.8	36.2
R_{DC2}	(k)	2.1	6.8
R_{DW}	(k)	2.0	6.5
R_{L+IM}	(k)	55.9	102.5
R_{Total}	(k)	69.8	152.0

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) 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) 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+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.).

$\phi_f M_{nc}$: 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).
$M_{DC1} + M_{DC2} + M_{DW} + 1.3\ M_{L+IM}$

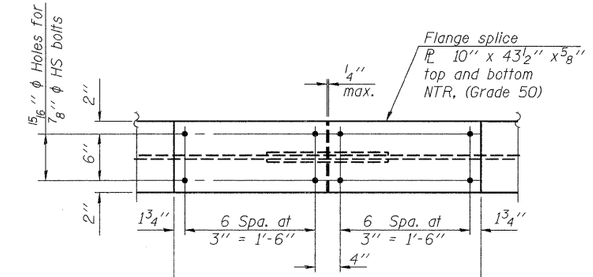
f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

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

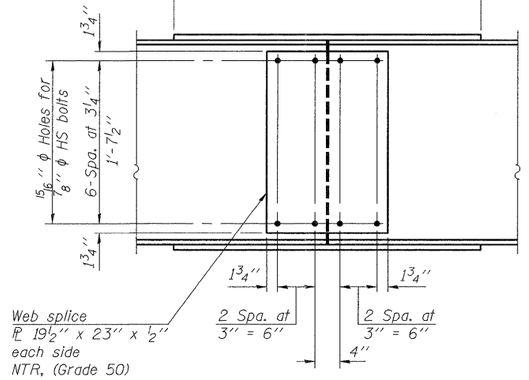
TOP OF BEAM ELEVATIONS

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
℄ Brg. South Abutment	724.58	724.68	724.77	724.87	724.97	725.07
℄ Brg. Pier 2	724.68	724.78	724.88	724.97	725.07	725.17
℄ Splice	724.80	724.90	725.00	725.09	725.19	725.29
℄ Brg. Pier 1	724.83	724.93	725.02	725.12	725.22	725.32
℄ Brg. North Abutment	725.00	725.09	725.19	725.29	725.39	725.48

Note: Top of Beam Elevations shown are for fabrication use only.

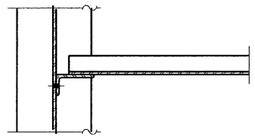


PLAN

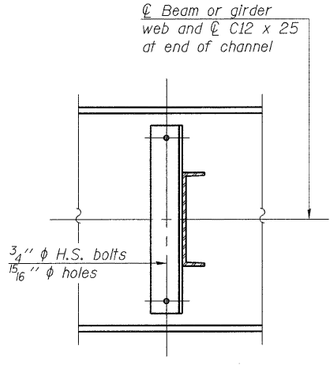


ELEVATION

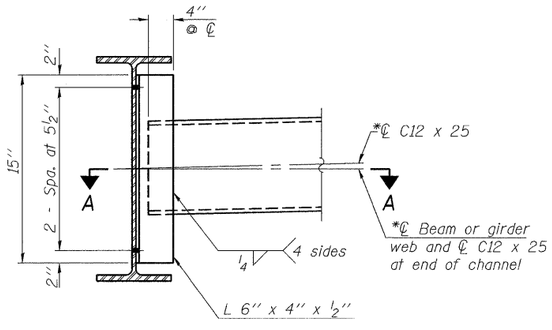
SPLICE DETAIL
(12 Required)



SECTION A-A



ELEVATION



INTERIOR DIAPHRAGM
(35 Required)

Note:
Two hardened washers required for each set of oversized holes.
*Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

DESIGNED	SK/GMK/LCM
CHECKED	GBC/GMK/SMK
DRAWN	RR/LCM/SK
CHECKED	GBC/GMK/SMK

STRUCTURAL STEEL DETAILS
NORTHBOUND ILLINOIS ROUTE 394 OVER PLUM CREEK
STATION 20+07.55

Delta Engineering, Inc.
CONSULTING ENGINEERS, CONSTRUCTION MANAGERS, SURVEYORS
111 W. Jackson Blvd. Suite 810 Chicago, IL 60604-3500

SHEET NO. 14
26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2002-113R	WILL	242	159
	SN-099-0147	CONTRACT NO.	62542	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		