

Symbol	Units	Value
I_s	(in ⁴)	165.10
$I_c(n)$	(in ⁴)	39246
$I_c(3n)$	(in ⁴)	29261
S_s	(in ³)	667
$S_c(n)$	(in ³)	916
$S_c(3n)$	(in ³)	837
DC1	(k/')	0.811
M _{DC1}	(k)	811
DC2	(k/')	0.150
M _{DC2}	(k)	150
DW	(k/')	0.300
M _{DW}	(k)	300
M _{ℓ + Imp}	(k)	1364
M _u (Strength I)	(k)	4038
$\phi_r M_n$	(k)	4859
f_s DC1	(ksi)	14.59
f_s DC2	(ksi)	2.15
f_s DW	(ksi)	4.30
f_s 1.3(ℓ+I)	(ksi)	23.23
f_s (Service II)	(ksi)	44.27
V _r	(k)	31.5

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 (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) 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) 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_{ℓ + Imp}: Un-factored live load moment plus dynamic load allowance (Impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).

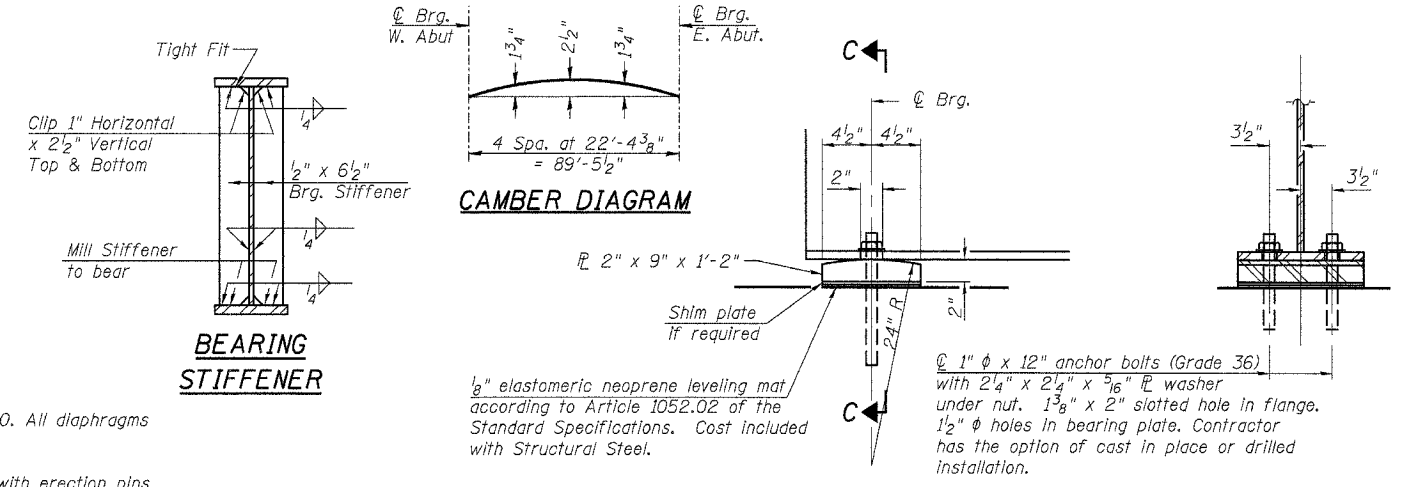
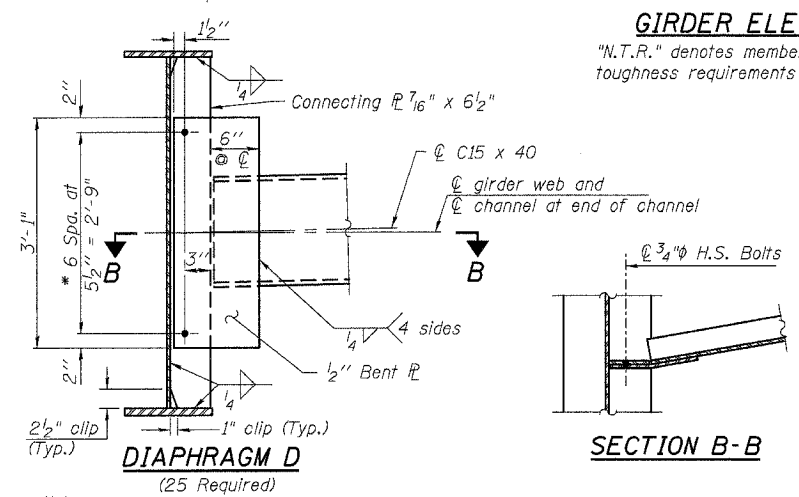
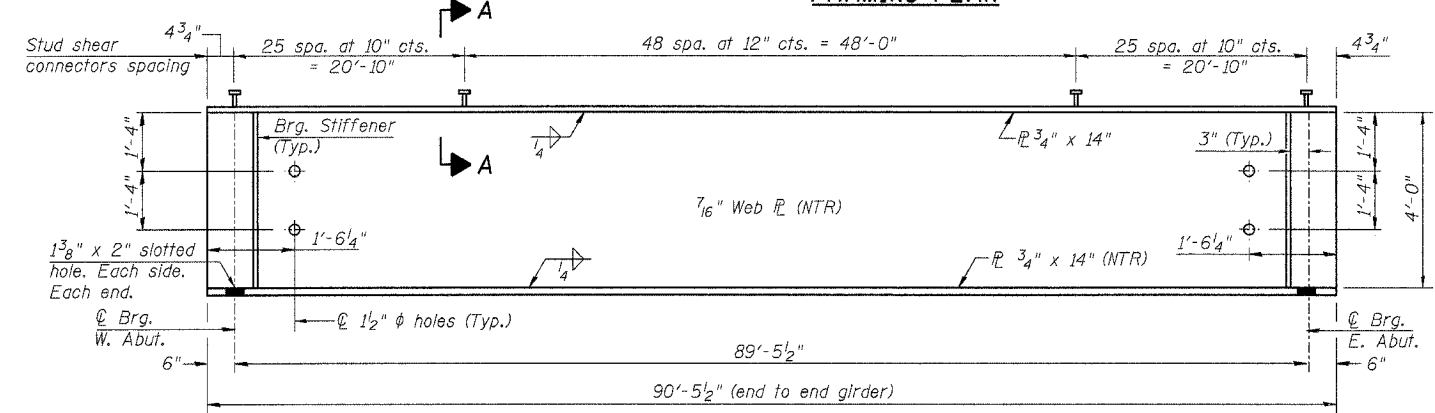
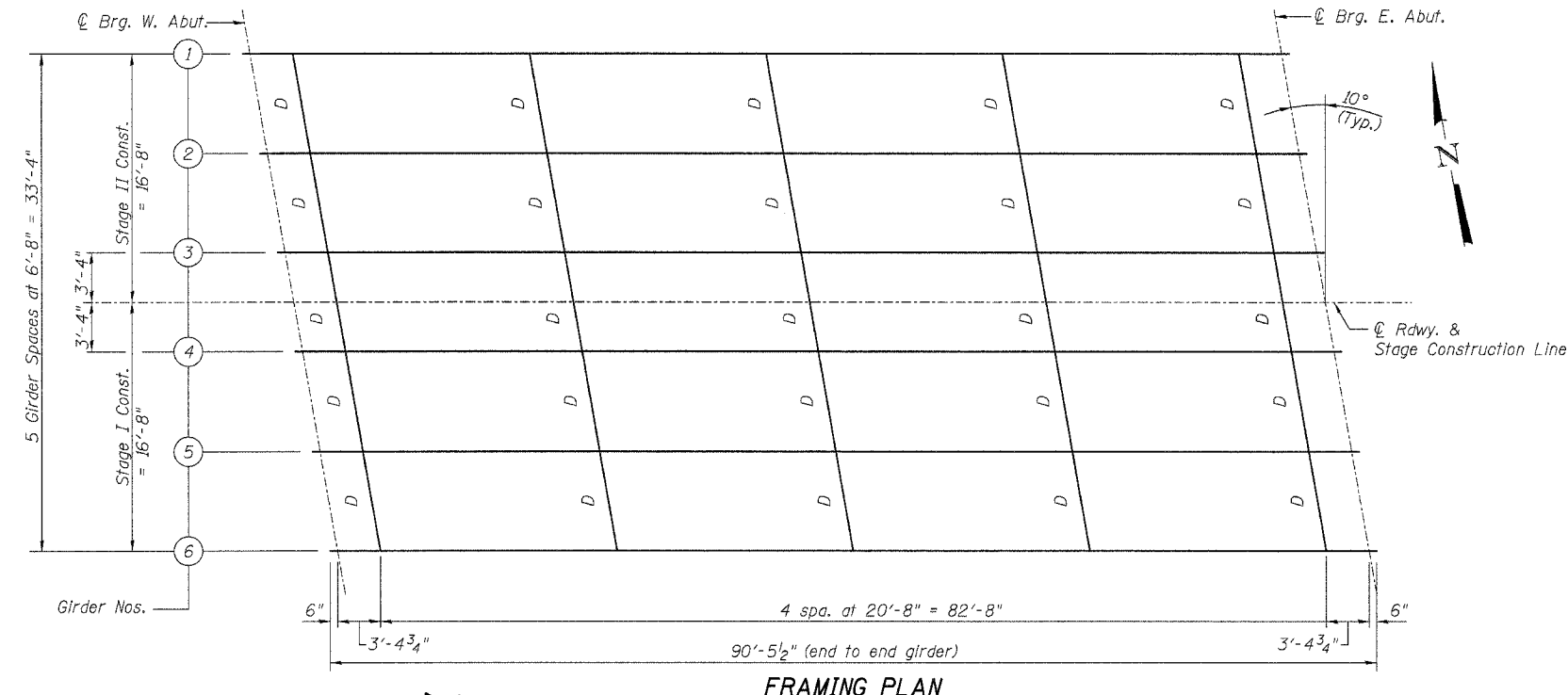
$\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

f_s (Service II): Sum of stresses as computed from the moments below (ksi).

M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{ℓ + Imp}

V_r: Factored shear range computed according to Article 6.10.10.

Symbol	Units	Value
R _{DC1}	(k)	36.3
R _{DC2}	(k)	6.7
R _{DW}	(k)	13.4
R _{ℓ + Imp}	(k)	85.2
R _{Total}	(k)	141.6



- NOTES:**
- All girders and bearing stiffeners shall be AASHTO M270 Grade 50. All diaphragms and connecting plates shall be AASHTO M270 Grade 36.
 - All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted.
 - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 - Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 - Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Location	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6
℄ Brg. W. Abut.	386.42	386.55	386.66	386.66	386.56	386.44
℄ Brg. E. Abut.	386.65	386.78	386.88	386.89	386.79	386.66

REVISIONS

NO.	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FRAMING PLAN & STEEL DETAILS
 ILLINOIS ROUTE 146 OVER
 BUCK RUN CREEK
 F.A.P. ROUTE 885 - SEC. (107A)B-1
 JOHNSON COUNTY
 STA. 628+25.00
 STRUCTURE NO. 044-0059

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