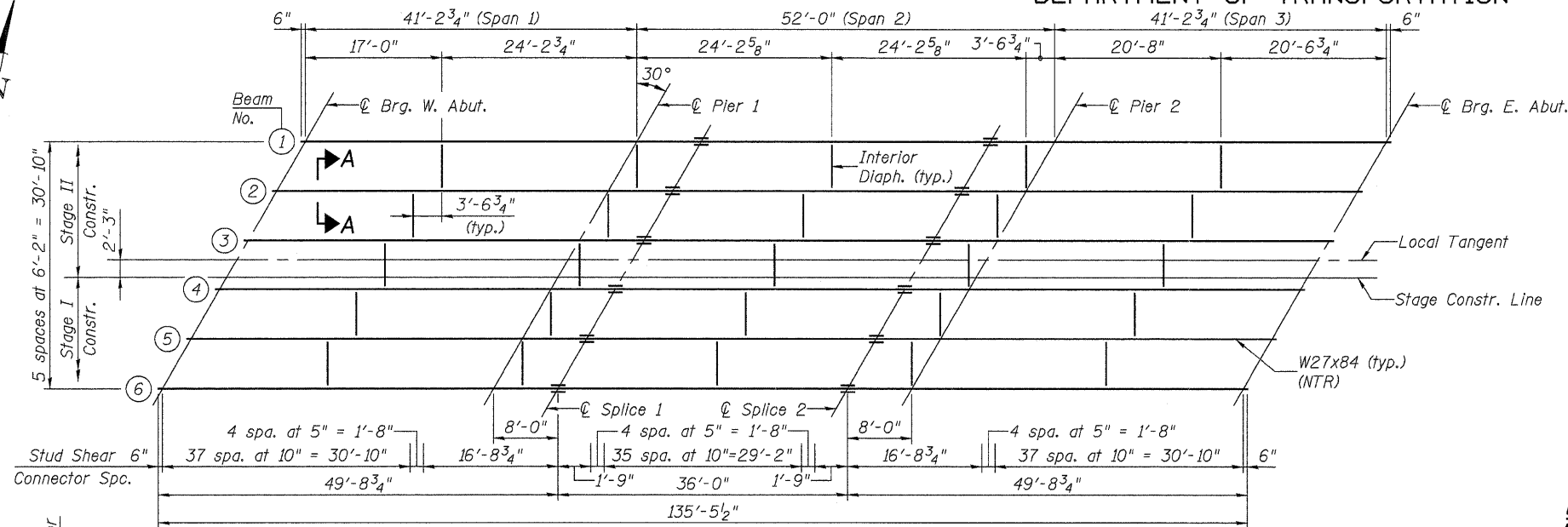


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

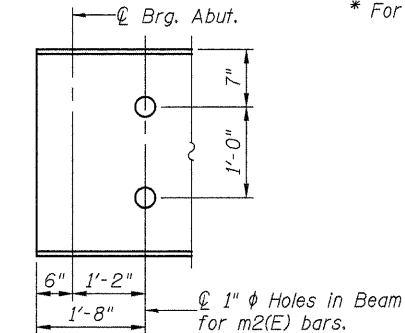


FRAMING PLAN

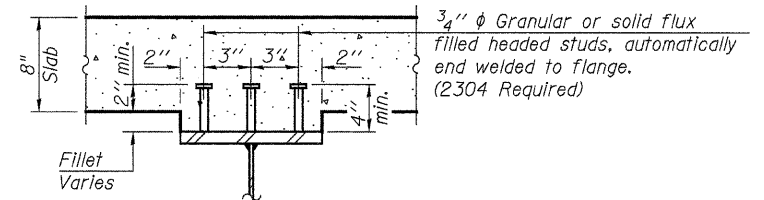
**TOP OF BEAM ELEVATIONS\***

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
℄ Brg. W. Abut.	511.02	510.80	510.57	510.34	510.12	509.89
℄ Pier 1	511.29	511.06	510.84	510.61	510.38	510.15
℄ Splice 1	511.34	511.11	510.89	510.66	510.43	510.20
℄ Splice 2	511.64	511.41	511.18	510.95	510.72	510.49
℄ Pier 2	511.72	511.49	511.26	511.03	510.80	510.57
℄ Brg. E. Abut.	512.13	511.90	511.67	511.44	511.21	510.98

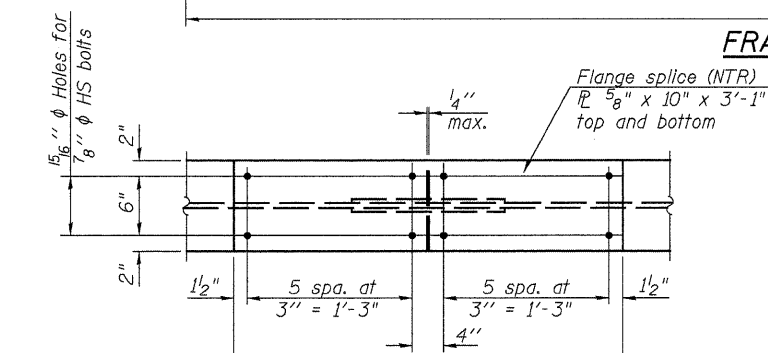
\* For Fabrication only. (Theoretical elevations before dead load deflection.)



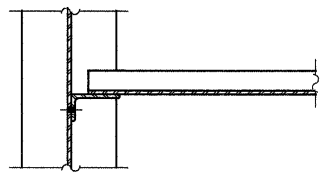
END OF BEAM AT ABUTMENTS



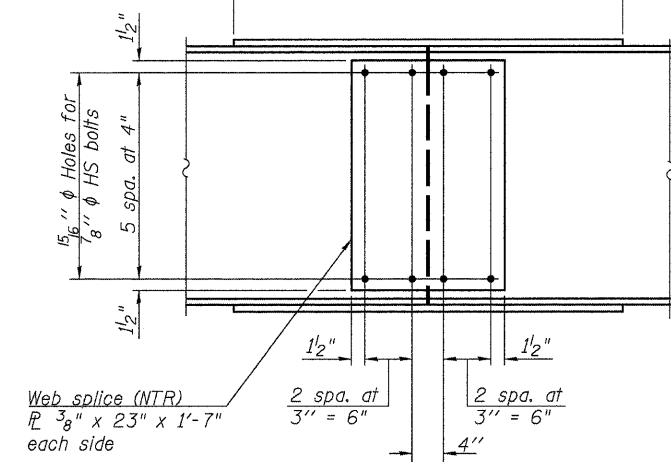
SECTION A-A



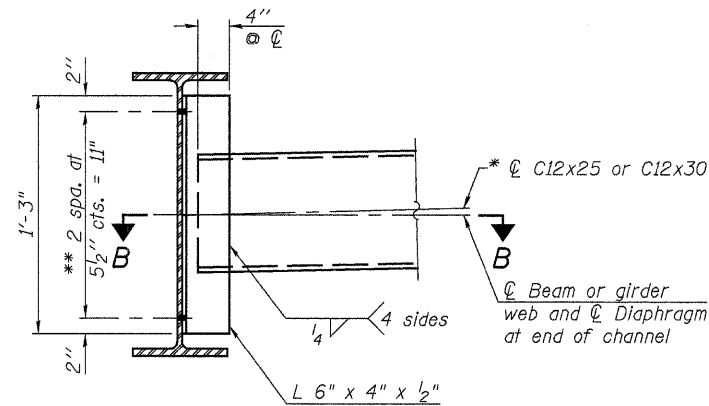
PLAN



SECTION B-B



ELEVATION



INTERIOR DIAPHRAGM

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.  
\*\* 3/4 inch HS bolts, 15/16 inch holes

**INTERIOR GIRDER MOMENT TABLE**

	0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or 2	0.5 Span 2
$I_s$	2850	2850	2850
$I_c(n)$	8510	2850	8510
$I_c(3n)$	6391	2850	6391
$S_s$	213	213	213
$S_c(n)$	327	213	327
$S_c(3n)$	296	213	296
Z	---	---	---
DC1	0.724	0.724	0.724
MDC1	84	160	85
DC2	0.150	0.150	0.150
MDC2	21	25	26
DW	0.278	0.278	0.278
MDW	38	46	48
$M\ell + IM$	408	234	452
$M_u$ (Strength I)	902	710	1002
$\phi_r M_n, \phi_r M_{nc}$	1773	796	1773
$f_s$ DC1	4.7	9.0	4.8
$f_s$ DC2	0.9	1.4	1.1
$f_s$ DW	1.5	2.6	1.9
$f_s$ 1.3( $\ell + IM$ )	19.5	17.1	21.6
$f_s$ (Service II)	26.6	30.1	29.4
$f_s$ (Total)(Strength I)	---	---	---
$V_f$	21.3	---	20.3

\* Compact sections  
\*\* Non-Compact and slender sections

**INTERIOR GIRDER REACTION TABLE**

	Abut.	Pier
$R_{DC1}$	11.0	37.6
$R_{DC2}$	2.5	7.6
$R_{DW}$	4.6	14.1
$R\ell + IM$	64.3	82.6
$R_{Total}$	82.4	141.9

Notes:  
All structural steel shall be AASHTO M270 Gr. 50W.  
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.  
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.

**STRUCTURAL STEEL & FRAMING PLAN**  
ILLINOIS 96 OVER  
FOX CREEK  
STRUCTURE NO. 007-0028

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
12 OF 22	304	5A-BR	CALHOUN	60	35
STA. 475+19.62			CONTRACT NO. 76886		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

**Johnson, Depp & Quisenberry**  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED: JDQ	DRAWN: SJS
CHECKED: DCD	CHECKED: DCD

SPLICE DETAIL  
(12 Required)

(25 Required)

$I_s, S_s$ : 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) 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) due to long-term composite (superimposed) dead loads ( $I_n$  and  $I_n^3$ ).  
Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations ( $I_n^3$ ).  
DC1: Un-factored non-composite dead load (kips/ft.).  
MDC1: 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.).  
MDC2: 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.).  
MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).  
 $M\ell + IM$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).  
 $M_u$  (Strength I): Factored design moment (kip-ft.).  
 $1.25(M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M\ell + IM$   
 $\phi_r M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).  
 $\phi_r M_{nc}$ : 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).  
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M\ell + IM$   
 $f_s$  (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).  
 $1.25(M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M\ell + IM$   
 $V_f$ : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.