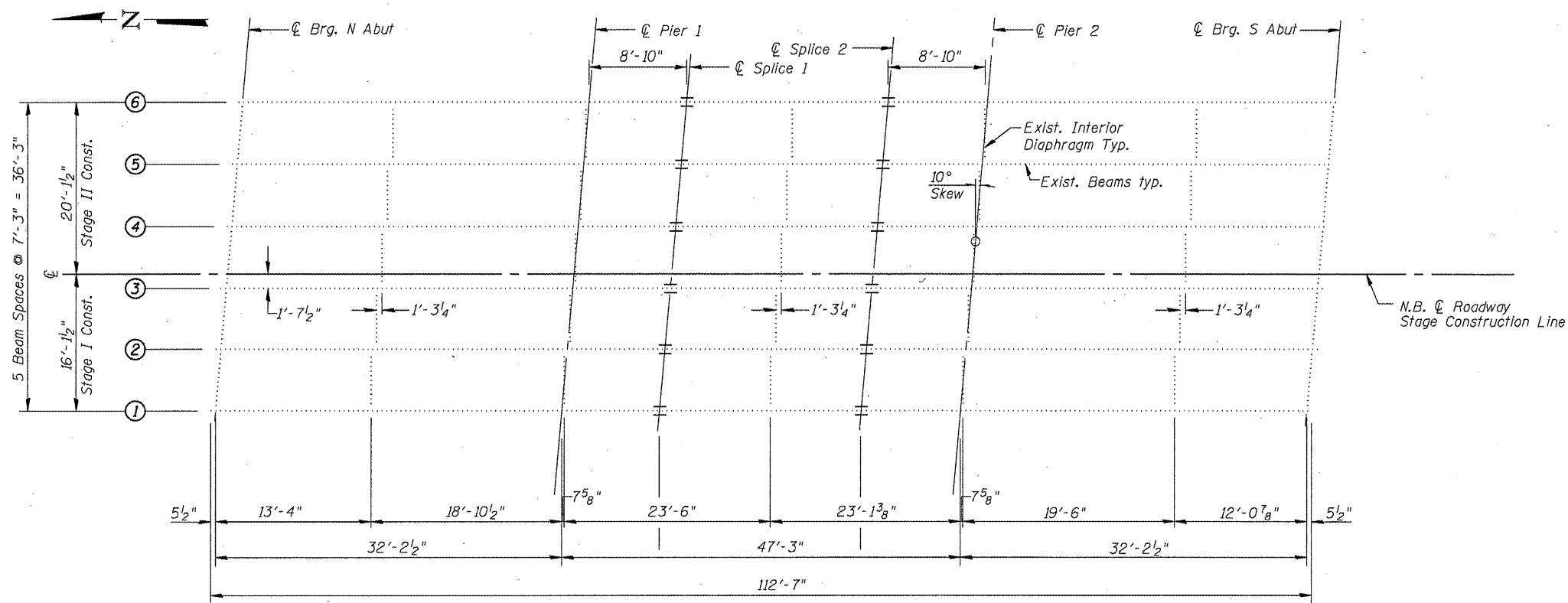


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

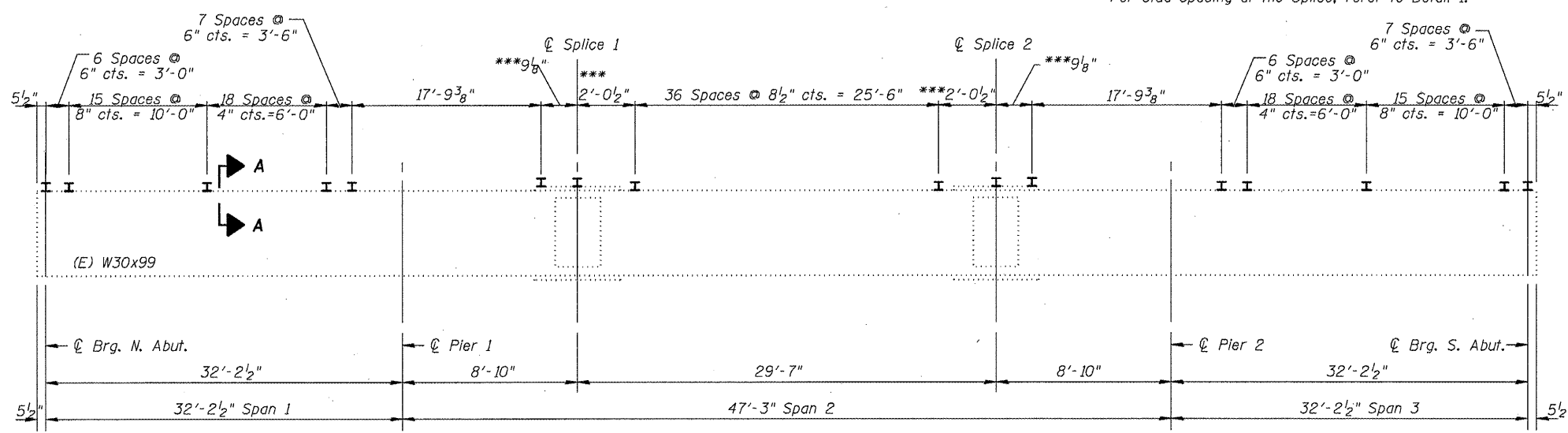


FRAMING PLAN

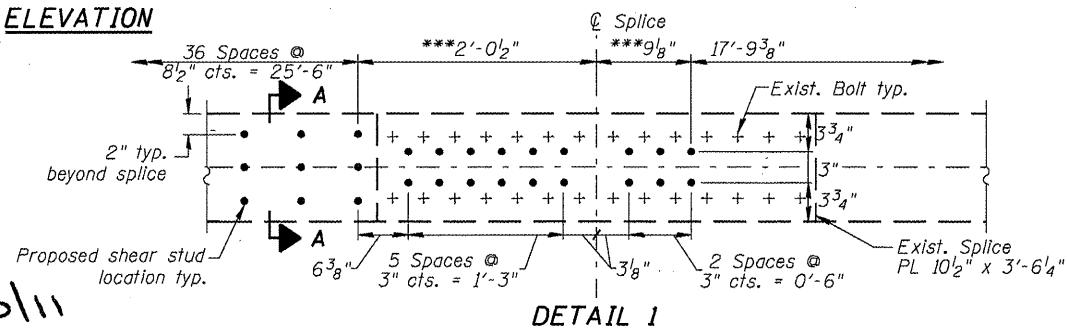
INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier 1	0.5 Sp. 2
$I_s$	(in <sup>4</sup> )	3,990	3,990	3,990
$I_c(n)$	(in <sup>4</sup> )	11,915	-	11,915
$I_c(3n)$	(in <sup>4</sup> )	8,984	-	8,984
$S_s$	(in <sup>3</sup> )	269	269	269
$S_c(n)$	(in <sup>3</sup> )	417	-	417
$S_c(3n)$	(in <sup>3</sup> )	379	-	379
$\rho$	(k'/')	0.866	1.148	0.866
$M\rho$	(k')	53	183	100
$s\rho$	(k'/')	0.283	-	0.283
$M_s\rho$	(k')	21	-	44
$M_L$	(k')	175	122	277
$M_I$	(k')	53	36	80
$M_u$	(k')	380	264	595
$M_o$	(k')	390	581	961
$M_v$	(k')	1,213	-	1,175
$f_s \rho$ non-comp	(ksi)	2.4	8.2	4.5
$f_s \rho$ (comp)	(ksi)	0.7	-	1.4
$f_s S_3 [M_L + M_I]$	(ksi)	11.0	11.8	17.2
$f_s$ (Overload)	(ksi)	14.1	20.0	23.1
$f_s$ (Total)	(ksi)	-	26.0	-
VR	(k)	45.6	-	41.3

INTERIOR GIRDER REACTION TABLE			
	Abut.	Pier	
$R\rho$	(k)	13.0	51.9
$R_L$	(k)	32.2	41.8
$R_I$	(k)	9.7	10.2
$R_{Total}$	(k)	54.9	103.9

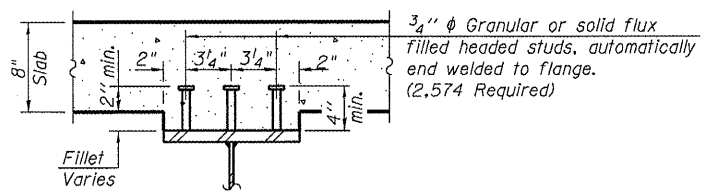
\* Compact section  
\*\* Braced non-compact and partially braced section



ELEVATION



DETAIL 1



SECTION A-A

\*\*\*For stud spacing at the Splice, refer to Detail 1.

$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total and Overload) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total and Overload) due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(3n), S_c(3n)$ : 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 and Overload) due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).

$\rho$ : Un-factored non-composite dead load (kips/ft.).

$M\rho$ : Un-factored moment due to non-composite dead load (kip-ft.).

$s\rho$ : Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s\rho$ : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M_L$ : Un-factored live load moment (kip-ft.).

$M_I$ : Un-factored moment due to impact (kip-ft.).

$M_o$ : Factored design moment (kip-ft.).

$1.3 [M\rho + M_s\rho + \frac{2}{3} (M_L + M_I)]$

$M_u$ : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

$f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).  
 $M\rho + M_s\rho + \frac{2}{3} (M_L + M_I)$

$f_s$  (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).  
 $1.3 [M\rho + M_s\rho + \frac{2}{3} (M_L + M_I)]$

VR: Maximum  $\frac{1}{4}$  + impact shear range within the composite portion of the span for stud shear connector design (kips).

FRAMING PLAN AND BEAM DETAILS  
STRUCTURE NO. 059-0041 (N.B.)

SHEET NO. 21 31 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	(59, 68)RS-3, BR	Macoupin	137	127
			CONTRACT NO. 72921		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					

REVISOR'S MARK: **REVISOR'S MARK** 4/20/11