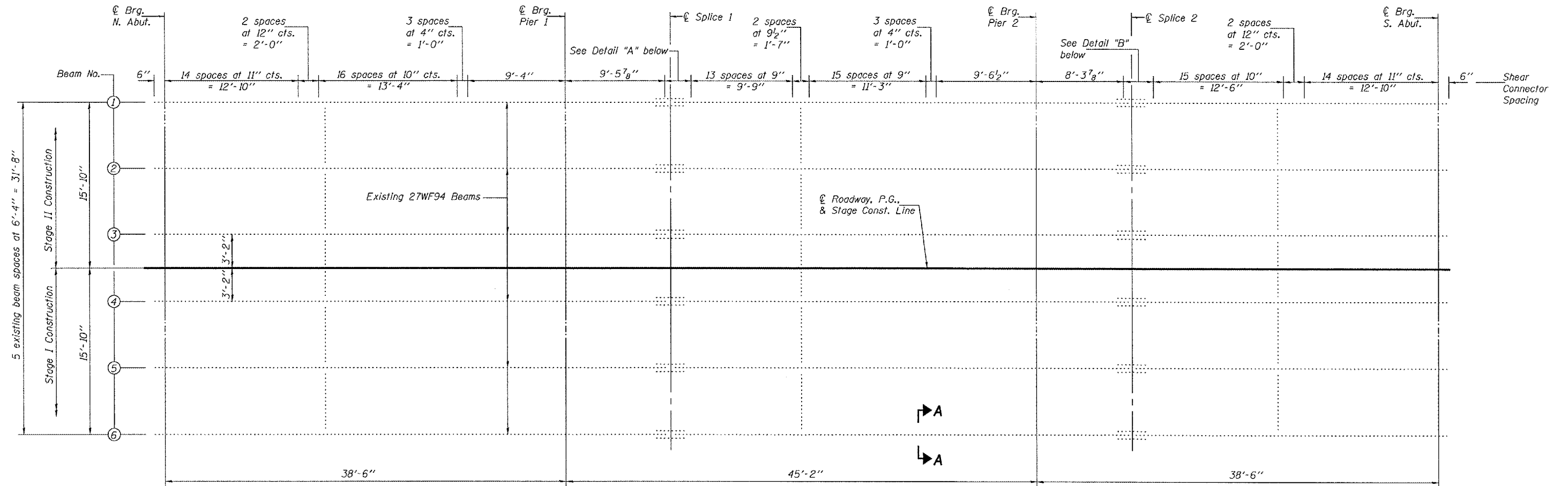


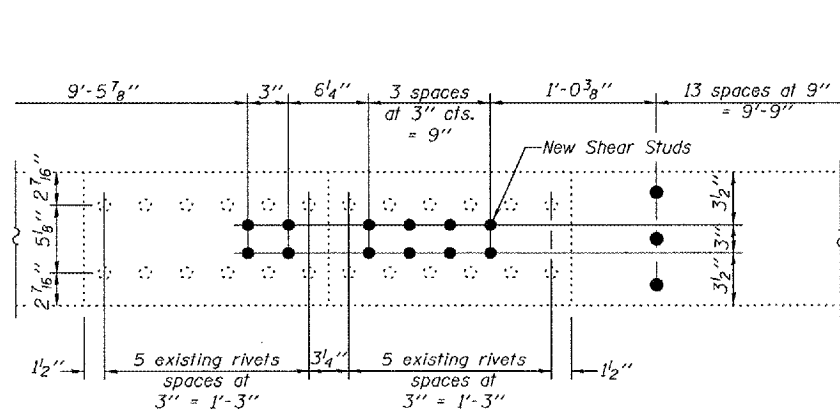
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 310	28BR-1	WARREN	97	58
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

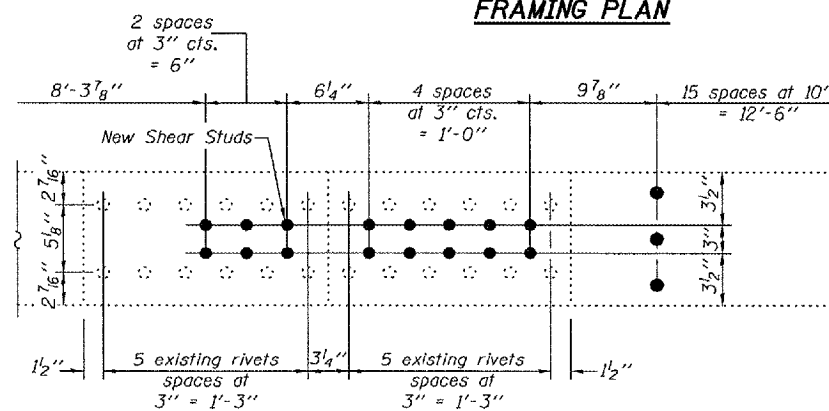
Contract #88798



FRAMING PLAN



DETAIL "A"



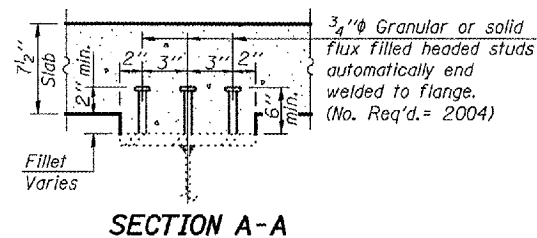
DETAIL "B"

	INTERIOR GIRDER MOMENT TABLE		
	0.4 Sp. 1 & 0.6 Sp. 3	Pier	0.5 Sp. 2
$I_s$	(in <sup>4</sup> ) 3270	3270	3270
$I_c$ (n)	(in <sup>4</sup> ) 9604	9604	9604
$I_c$ (sn)	(in <sup>4</sup> ) 7122	7122	7122
$S_s$	(in <sup>3</sup> ) 243	243	243
$S_c$ (n)	(in <sup>3</sup> ) 373	373	373
$S_c$ (sn)	(in <sup>3</sup> ) 337	337	337
$I_p$	(k/ft.) 0.712	1.179	0.712
$M_p$	(k) 76.6	187.1	56.6
$s_p$	(k/ft.) 0.467		0.467
$M_{s_p}$	(k) 58.2		57.0
$M_k$	(k) 209.3	107.8	218.2
$M$ (Imp)	(k) 62.8	32.4	64.1
$M_3[M_k + M(Imp)]$	(k) 453.5	233.7	470.5
$M_a$	(k) 764.8	547	759.3
$M_u$	(k) 1012.8		1085.4
$f_s \phi$ non-comp (k.s.i.)	3.8	9.2	2.8
$f_s \phi$ (comp) (k.s.i.)	2.1		2.0
$f_s \phi_3 (\phi + Imp)$ (k.s.i.)	14.6	11.5	15.1
$f_s$ (Overload) (k.s.i.)	20.5	20.7	19.9
$f_s$ (Total) (k.s.i.)		26.9	
VR	(k) 42.7		35.4

$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $f_s$  (Total & Overload).  
 $I_c(n)$  and  $S_c(n)$  are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.  
 $I_c(sn)$  and  $S_c(sn)$  are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)  
 VR is the maximum Live Load + Impact shear range in span.  
 $M_a$  (Applied Moment) =  $1.3[M_p + M_{s_p} + \phi_3(M_k + M(Imp))]$ .  
 The Plastic Moment capacity ( $M_u$ ) is computed according to AASHTO 10.48.1 and 10.50.1.1.  
 $f_s$  (Overload) is the sum of the stresses due to  $M_p + M_{s_p} + \phi_3(M_k + M(Imp))$ .  
 $f_s$  (Total) (Non-compact section) is the sum of the stresses due to  $1.3[M_p + M_{s_p} + \phi_3(M_k + M(Imp))]$ .

	INTERIOR GIRDER REACTION TABLE	
	Abut.	Pier
$R_p$	(k) 17.9	54.1
$R_k$	(k) 30.2	37.3
Imp.	(k) 9.1	11.2
$R$ (Total)	(k) 57.2	102.6

**STRUCTURAL STEEL**  
**F.A.P. ROUTE 310 - SECTION 28BR-1**  
**WARREN COUNTY**  
**STATION 829+24.00**  
**STRUCTURE NO. 094-0002**



SECTION A-A

DESIGNED Tom L. Kurtenbach  
 CHECKED Alan M. Johnson  
 DRAWN BECKY M. CURRY  
 CHECKED TLK/AMJ

September 4, 2007  
 EXAMINED Thomas J. Domagala  
 PASSED Ralph E. Anderson