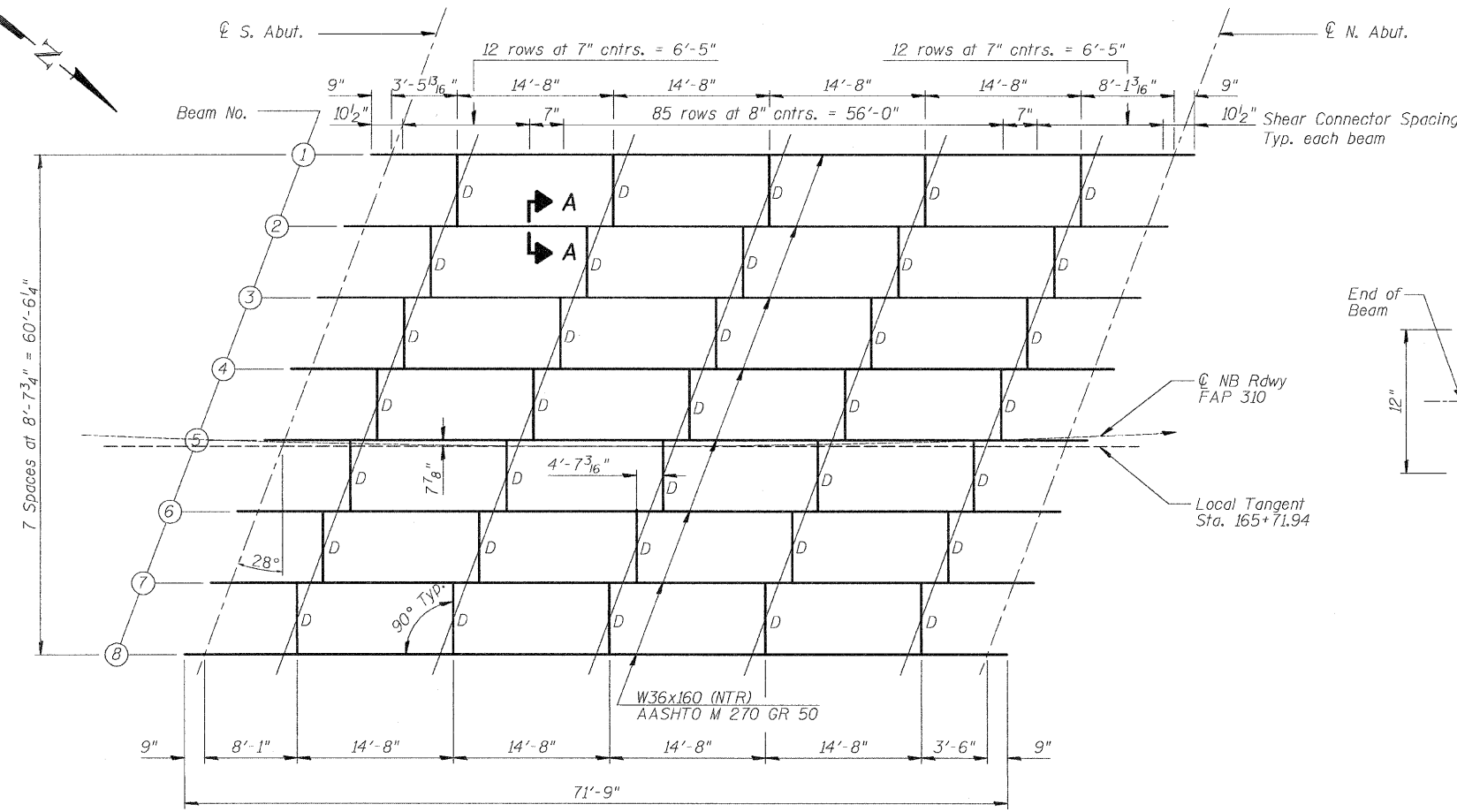
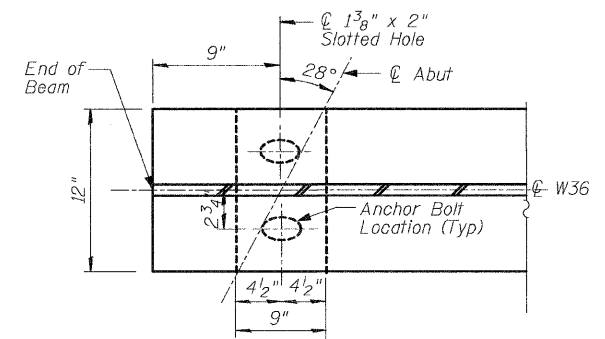


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	Sheet No. 8 13 Sheets
310	60-(16B, 16-1B)	MADISON	62	39	
STA. 165+71.94					
FED. ROAD DIST. ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 76567					



**FRAMING PLAN**



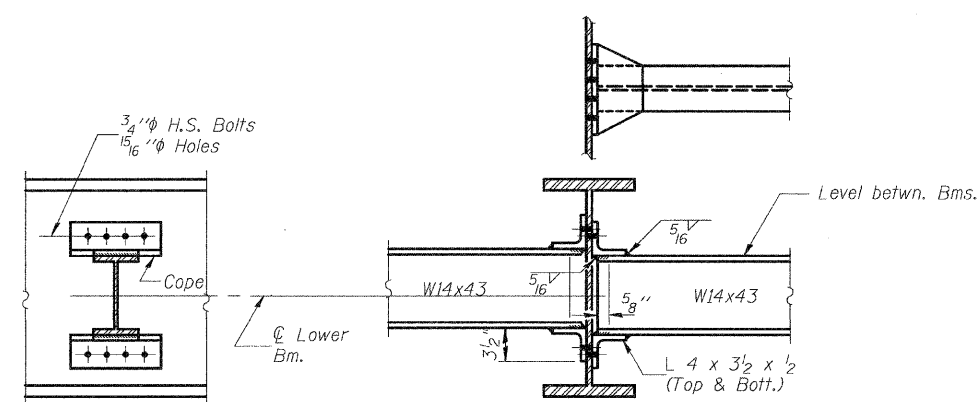
**PLAN**  
**1/8" THICK ELASTOMERIC NEOPRENE LEVELING PAD AND ROCKER PLATE (16 REQUIRED)**

INTERIOR BEAM MOMENTS		0.5 Span
$I_s$	(in <sup>4</sup> )	9750
$I_c$ (n)	(in <sup>4</sup> )	23776
$I_c$ (3n)	(in <sup>4</sup> )	17591
$S_s$ (n)	(in <sup>3</sup> )	542
$S_c$ (n)	(in <sup>3</sup> )	758
$S_c$ (3n)	(in <sup>3</sup> )	688
$\phi$	(K/ft.)	1.005
$M\phi$	(K)	620
$s\phi$	(K/ft.)	0.498
$Ms\phi$	(K)	307
$M\phi$	(K)	808
$M$ (Imp)	(K)	207
$\phi_3(M\phi + I)$	(K)	1690
$M_a$	(K)	3402
$M_u$	(K)	3790
$fs\phi$ non-comp (k.s.i.)		13.7
$fs\phi$ (comp) (k.s.i.)		5.4
$fs\phi_3(4+I)$ (k.s.i.)		26.7
$fs$ (Overload) (k.s.i.)		45.8
VR	(K)	63.9

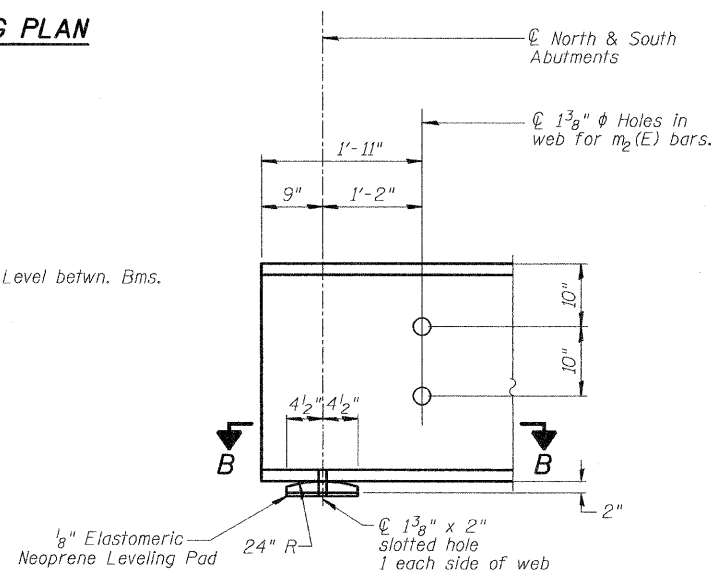
INTERIOR BEAM REACTIONS		Abut.
$R\phi$	(K)	52.8
$R\phi$	(K)	50.9
Imp.	(K)	13.0
$R$ (Total)	(K)	116.7

\* Includes centrifugal force and superelevation effects.  
 $I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $fs$  (Total & Overload).  
 $I_c$  and  $S_c$  are the moment of inertia and section modulus of the composite section used in computing  $fs$  (Total & Overload).  
 $VR$  is the maximum Live Load + Impact shear range in span.  
 $M_a$  (Applied Moment) =  $1.3[M\phi + Ms\phi + \phi_3(M\phi + I)]$ .  
 $M_u$  is the Full Plastic Moment Capacity for Compact, Braced section.  
 $fs$  (Overload) is the sum of the stresses due to  $M\phi + Ms\phi + \phi_3(M\phi + I)$ .

Notes:  
 "NTR" denotes items to which notch toughness requirements are applicable.  
 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.



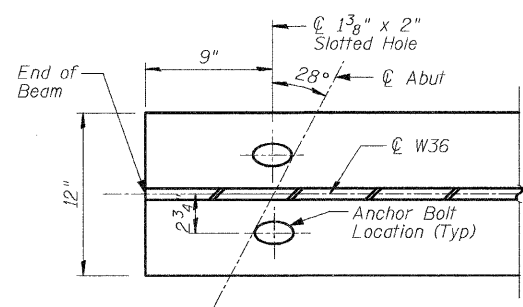
**DIAPHRAGM D**  
35 Required



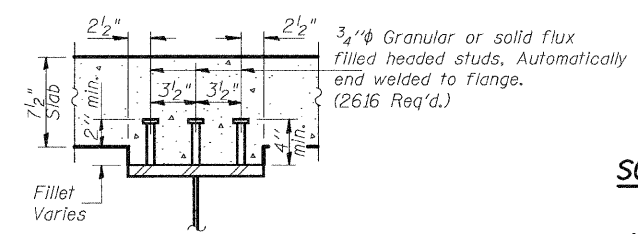
**END OF BEAM ELEVATION**

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8
☉ South Abut.	533.40	533.85	534.30	534.75	535.20	535.66	536.11	536.56
☉ North Abut.	533.42	533.87	534.31	534.76	535.20	535.65	536.10	536.55

**TOP OF BEAM ELEVATIONS**  
(For Fabrication Only)



**SECTION B-B**



**SECTION A-A**  
(Typical)

**STRUCTURAL STEEL**  
**FAP 310 (US 67) OVER**  
**SOUTH BRANCH OF PIASA CREEK**  
**SECTION 60-(16B, 16-1B)**  
**MADISON COUNTY STA 165+71.94**  
**SN 060-0329**

DESIGNED	J.L.G.
CHECKED	R.P.B.
DRAWN	J.L.G.
CHECKED	R.P.B.

I-2-D 2/14/01