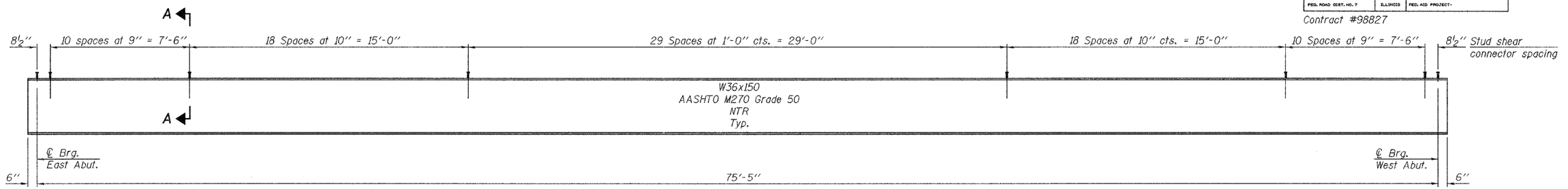
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 331	(12-1) B-1	JACKSON		244
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 19
32 SHEETS

Contract #98827

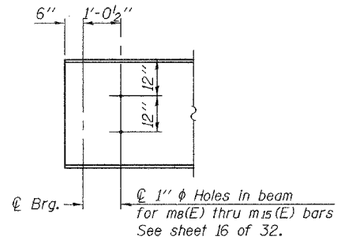


ELEVATION

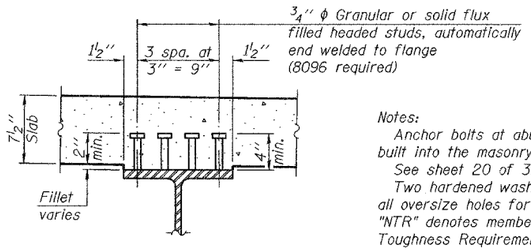
* For fabrication only.

*TOP OF BEAM ELEVATIONS

Beam	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
℄ Brg. East abutment	403.52	403.65	403.78	403.92	404.05	404.18	404.29	404.39	404.30	404.20	404.09	404.19	404.19	404.10	404.21	404.31	404.40	404.33	404.23	404.11	403.99	403.87	403.75
℄ Brg. West Abutment	403.54	403.67	403.80	403.94	404.07	404.20	404.30	404.40	404.32	404.22	404.11	404.21	404.21	404.12	404.23	404.32	404.42	404.35	404.25	404.14	404.01	403.89	403.77



END OF BEAM ELEVATION



SECTION A-A

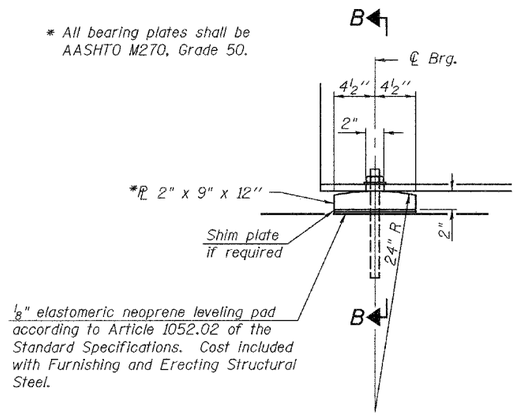
Notes:
Anchor bolts at abutment bearings may be built into the masonry.
See sheet 20 of 32 for Anchor Bolt installation.
Two hardened washers shall be required over all oversize holes for diaphragms.
"NTR" denotes members to which Notch Toughness Requirements are applicable.

INTERIOR BEAM MOMENT TABLE		0.5 Sp. 1 for 6'-4" beam spacing
Is	(in^4)	9040
Ic (n)	(in^4)	22166
Ic (3n)	(in^4)	16180
Ss	(in^3)	504
Sc (n)	(in^3)	714
Sc (3n)	(in^3)	644
DC1	(k/')	0.780
M DC1	('k)	555
DC2	(k/')	0.214
M DC2	('k)	152
DW	(k/')	0.317
M DW	('k)	225
M ℄+Imp	('k)	1027
Ma (Strength I)	('k)	3019
ϕfMn	('k)	3695
fs DC1	(ksi)	13.2
fs DC2	(ksi)	2.8
fs DW	(ksi)	4.2
fs 1.3(℄+I)	(ksi)	22.4
fs (Service II)	(ksi)	42.6
Vsr	(k)	25.9

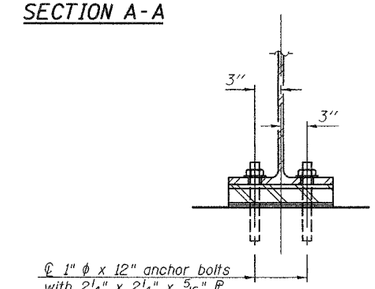
INTERIOR BEAM REACTION TABLE HL93 Loading		Abutments
R DC1	(k)	29.4
R DC2+DW	(k)	20.1
R ℄	(k)	65.2
Imp	(k)	15.6
R Total	(k)	130.3

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs due to non-composite loads.
Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing fs due to short-term composite loads.
Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing fs due to long-term composite loads.
DC1 is the dead load acting on the non-composite section.
DC2 is the dead load acting on the long-term composite section.
DW is the dead load acting on the long-term composite section due to wearing surface.
Ma (Strength I)=1.25 M(DC1+DC2)+1.5 M(DW) +1.75 M(℄+Imp)
ϕfMn is the full plastic moment capacity computed in accordance with Appendix D6.1 and 6.10.7.
fs (Service II) is the sum of the stresses due to DC1+DC2+DW+1.3(℄+Imp).
Vsr is the maximum shear range in the span 0.75(℄+Imp).
M℄, Vsr and R℄ include the effects of centrifugal force.

* All bearing plates shall be AASHTO M270, Grade 50.



ELEVATION AT ABUTMENT

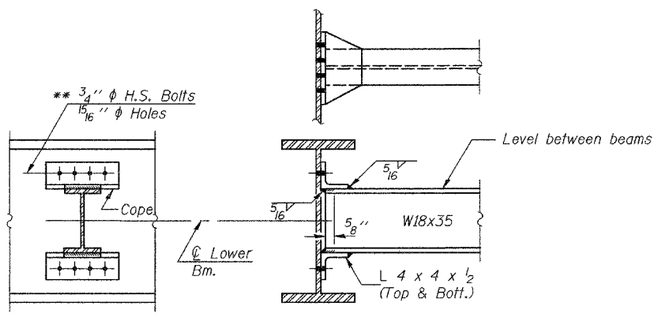


SECTION B-B

ABUTMENT BEARING

46 Required

** Use 13/16" x 1½" vertical slotted holes in top and bottom angles at beam 7 between beams 6 and 7 and at beam 18 between beams 18 and 19. Provide 15/16" plate washers for slotted holes. The bolts for slotted holes shall only be finger tightened prior to the deck pour for stage II construction. The bolts shall be fully tightened after completion of the deck pour for stage II construction.



DIAPHRAGMS D & D1

Diaphragm D: 44 required
Diaphragm D1: 40 required

DESIGNED	Curt M. Evoy
CHECKED	Rebecca L. Mitchell
DRAWN	Michael B. Mossman
CHECKED	C.M.E. / R.L.M.

March 1, 2006
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 331 - SEC. (12-1)B-1
JACKSON COUNTY
STATION 57+91.70
STRUCTURE NO. 039-0071