STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 777	10B-1	MONTGOMERY	104	65
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
23 SHEETS

Contract #92667

INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 & 0.6 Sp. 3	Piers 1 & 2	0.5 Sp. 2
Is	(in4)	2070	2070	2070
Ic (n)	(in4)	6579	———	6579
Ic (3n)	(in4)	4759	———	4759
Ss	(in3)	192	192	192
Sc (n)	(in3)	312	———	312
Sc (3n)	(in3)	278	———	278
wℓ	(k/')	0.671	1.117	0.671
Mℓ	('k)	111	284	92
sℓ	(k/')	0.446	———	0.446
Msℓ	('k)	87	———	94
Mℓ	('k)	277	140	301
M (Imp)	('k)	80	39	82
$\frac{5}{3}$[Mℓ+M(Imp)]	('k)	596	299	639
Ma	('k)	1032	758	1073
Mu	('k)	1255	921	1300
fsℓ non-comp	(k.s.i.)	6.9	17.7	5.7
fsℓ (comp)	(k.s.i.)	3.8	———	4.1
fs $\frac{5}{3}$[Mℓ+M(Imp)]	(k.s.i.)	22.9	18.7	24.6
fs (Overload)	(k.s.i.)	33.6	36.4	34.4
fs (Total)	(k.s.i.)	———	———	———
VR	(k)	42.2	———	35.6

INTERIOR BEAM REACTION TABLE			
		Abuts.	Piers
Rℓ	(k)	21.0	65.2
Rℓ	(k)	30.3	36.1
Imp.	(k)	8.8	10.1
R (Total)	(k)	60.1	111.4

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

Ic(3n) and Sc(3n) 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)

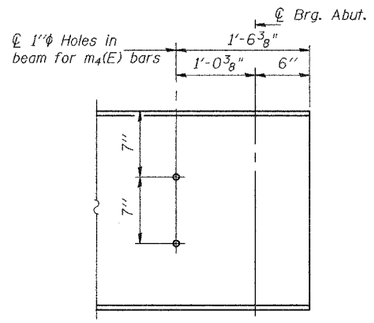
VR is the maximum Live Load + Impact shear range within the composite portion of the span.

Ma (Applied Moment)=1.3[Mℓ + Msℓ + $\frac{5}{3}$(Mℓ + M Imp)].

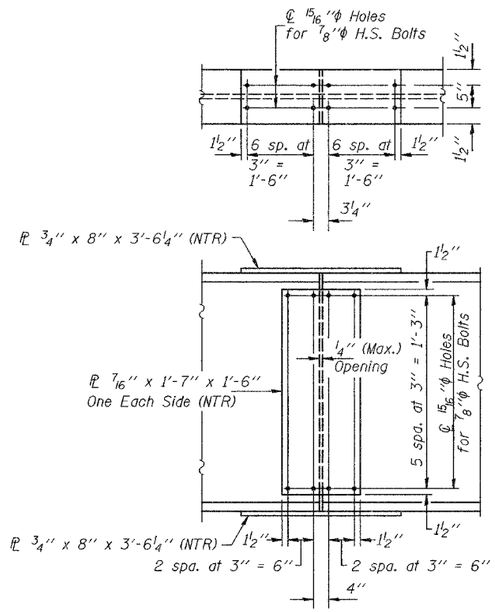
The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to Mℓ + Msℓ + $\frac{5}{3}$(Mℓ + M Imp).

fs (Total) is the sum of the stresses due to 1.3[Mℓ + Msℓ + $\frac{5}{3}$(Mℓ + M Imp)].



TYP. END OF BEAM ELEVATION



SPLICE DETAIL

12 Required

Notes: All splice plates shall be AASHTO M 270 Grade 50W. "NTR" denotes members to which Notch Toughness Requirements are applicable.

DESIGNED	Daniel F. Zerrusen
CHECKED	Stephen M. Ryan
DRAWN	R. Doty h.t. duong
CHECKED	DFZ/SMR

Feb 3, 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 777 SECTION 10B-1
MONTGOMERY COUNTY
STATION 500+44.04
STRUCTURE NO. 068-0505

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