ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 731	*	GREENE	30	14
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
FEDERAL AID PROJECT				

* 01-00071-00-BR

CONTRACT NO. 97289 Sheet No. 10 of 23 Sheets

INTERIOR BEAM MOMENT TABLE

		0.4 Span 1 or 0.6 Span 5	Pier #1 or Pier #4	0.5 Span 2 or 0.5 Span 4	Pier #2 or Pier #3	0.5 Span 3
Is	(In4)	7800	13200	9040	16100	9040
Ic (n)	(In4)	18590	-	20523	-	20523
Ic (3n)	(In4)	13811	-	15259	-	15259
Ss	(In3)	439	720	504	892	504
Sc (n)	(In3)	610	-	682	-	682
Sc (3n)	(In3)	554	-	621	-	621
D	(K/Ft)	0.77	1.18	0.79	1.22	0.79
M D	(Ft-k)	237.5	1092.4	399.5	1358.2	322.7
S D	(K/Ft)	0.32	-	0.32	-	0.32
Ms D	(Ft-k)	113.4	-	190.4	-	154.5
M L	(Ft-k)	530.4	522.4	680.4	660.6	674.6
M (Imp)	(Ft-k)	131.6	119.6	143.6	139.4	142.4
5/3[M L+M(Imp)]	(Ft-k)	1103.3	1070.0	1373.3	1333.3	1361.7
Ma	(Ft-k)	1890.5	2811.1	2552.2	3499.0	2390.6
fs D non-comp	k.s.i.	6.49	18.21	9.50	18.26	7.68
fs D (comp)	k.s.i.	2.46	-	3.68	-	2.99
fs 5/3(L+Imp)	k.s.i.	21.73	17.83	24.17	17.93	23.97
fs (Overload)	k.s.i.	30.68	36.04	37.35	36.19	34.64
fs (Total)	k.s.i.	39.88	46.85	48.56	47.05	45.03
VR	(k)	56	-	58	-	57

EXTERIOR BEAM MOMENT TABLE

		0.4 Span 1 or 0.6 Span 5	Pier #1 or Pier #4	0.5 Span 2 or 0.5 Span 4	Pier #2 or Pier #3	0.5 Span 3
Is	(In4)	7800	13200	9040	16100	9040
Ic (n)	(In4)	17885	-	19728	-	19728
Ic (3n)	(In4)	13191	-	14595	-	14595
Ss	(In3)	439	720	504	892	504
Sc (n)	(In3)	602	-	674	-	674
Sc (3n)	(In3)	545	-	611	-	611
D	(K/Ft)	0.86	1.273	0.88	1.32	0.88
M D	(Ft-k)	265.1	1185.2	443.1	1469.2	357.2
S D	(K/Ft)	0.32	-	0.32	-	0.32
Ms D	(Ft-k)	112.2	-	187.5	-	151.7
M L	(Ft-k)	520.4	531.3	664.7	672.2	659.8
M (Imp)	(Ft-k)	129.6	121.7	140.3	141.8	139.2
5/3[M L+M(Imp)]	(Ft-k)	1083.3	1088.3	1341.7	1356.7	1331.7
Ma	(Ft-k)	1898.8	2955.6	2564.0	3673.7	2392.8
fs D non-comp	k.s.i.	7.25	19.72	10.54	19.76	8.50
fs D (comp)	k.s.i.	2.47	-	3.68	-	2.98
fs 5/3(L+Imp)	k.s.i.	21.58	18.15	23.88	18.23	23.70
fs (Overload)	k.s.i.	31.30	37.87	38.10	37.99	35.20
fs (Total)	k.s.i.	40.69	49.23	49.50	49.40	45.76
VR	(k)	49	-	51	-	51

INTERIOR BEAM REACTION TABLE

		Abuts.	Piers 1 & 4	Piers 2 & 3
R D	(k)	28.7	119.5	132.4
R L	(k)	40.0	56.8	62.3
Imp.	(k)	10.0	13.0	13.1
R (Total)	(k)	78.7	189.3	207.8

Note: Reactions are not factored

EXTERIOR BEAM REACTION TABLE

		Abuts.	Piers 1 & 4	Piers 2 & 3
R D	(k)	30.9	129.1	142.7
R L	(k)	35.1	57.3	62.8
Imp.	(k)	8.7	13.1	13.3
R (Total)	(k)	74.7	199.5	218.7

Note: Reactions are not factored

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.

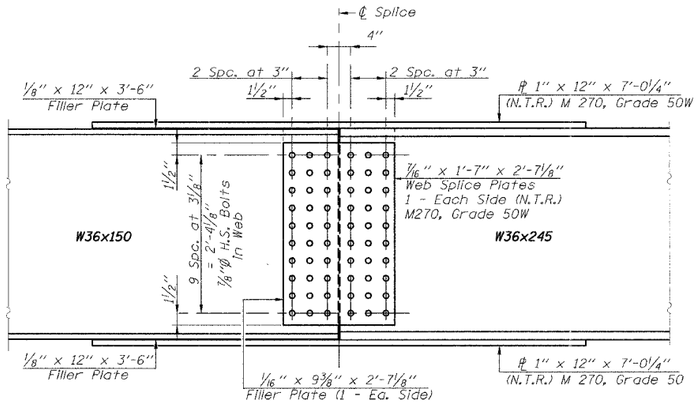
Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (See AASHTO 10.38).

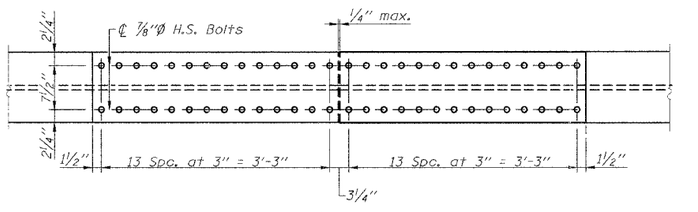
VR is the maximum Live Load + Impact shear range in span.

Ma (Applied Moment) = 1.3 [M D+Ms D + 5/3(M L + M Imp)].

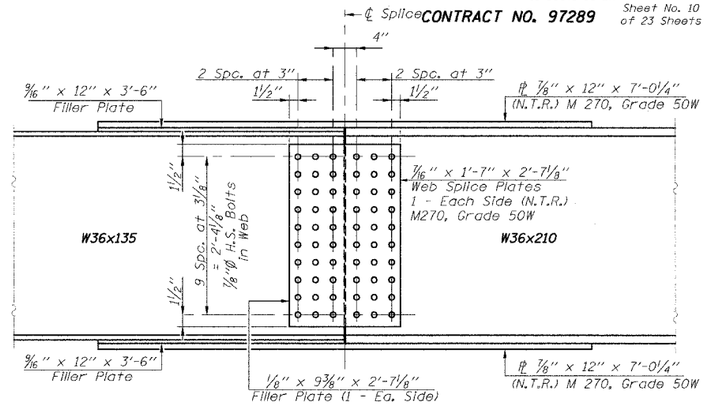
fs (Overload) is the sum of the stresses due to M D + Ms D + 5/3(M L + M Imp).

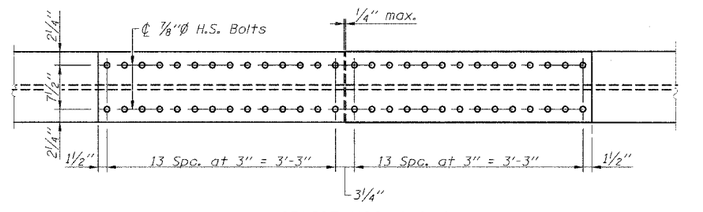
fs(Total) (Non-compact section) is the sum of the stresses due to 1.3[M D + Ms D + 5/3(M L + M Imp)].



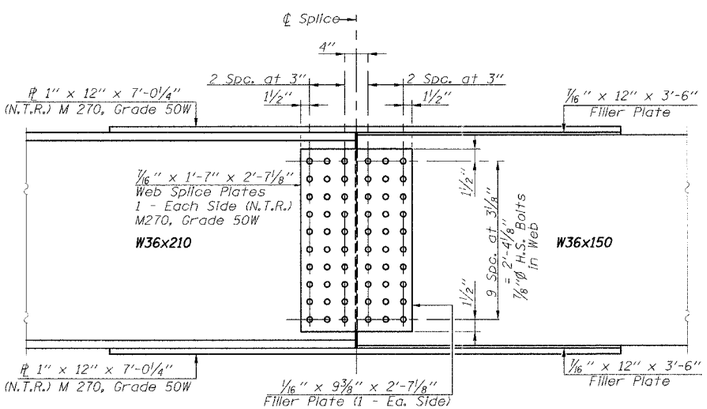


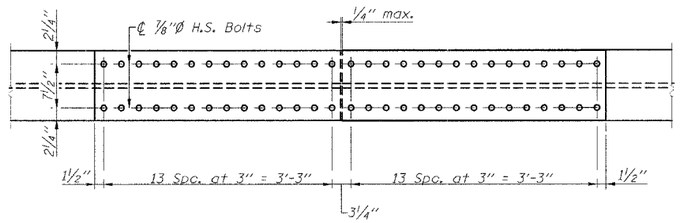
SPLICE NOS. 3, 4, 5 & 6



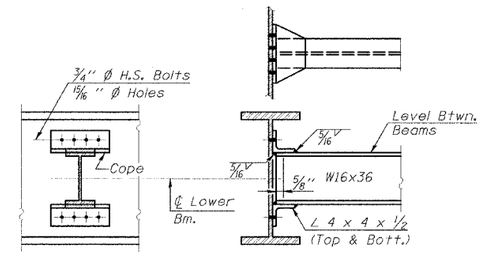


SPLICE NOS. 1 & 8

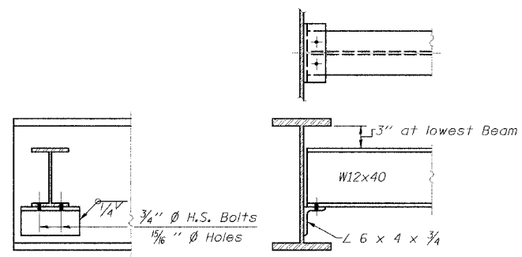




SPLICE NOS. 2 & 7



DIAPHRAGM D
(100 Required)



DIAPHRAGM D1
(8 Required)

STRUCTURAL STEEL DETAILS
F.A.S. 731 - C.H. 2
OVER APPLE CREEK
SECTION 01-00071-00-BR
GREENE COUNTY

FILE NAME: STRUCTURE PLANS (REV. 10-18-06)