

INTERIOR GIRDER MOMENT TABLE

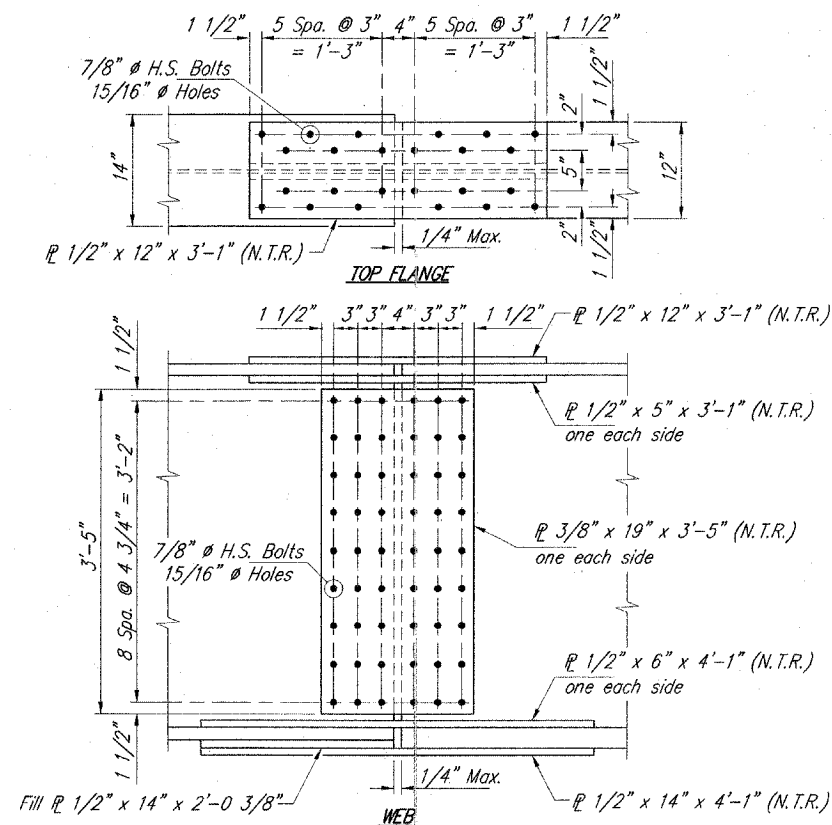
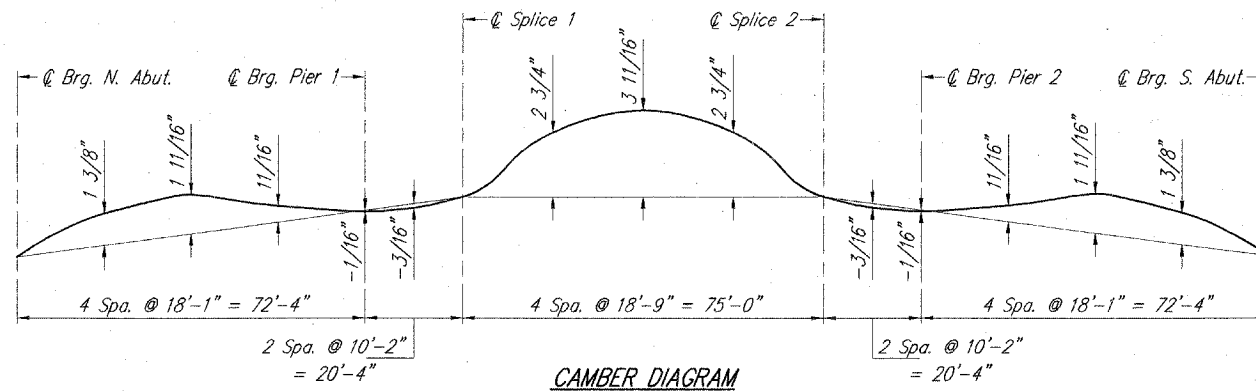
	0.4 Span 1	Pier No.1	0.5 Span 2
I_s (in. ⁴)	12297	22578	13635
I_c (n=27) (in. ⁴)	23628	-	28650
I_c (n=9) (in. ⁴)	30972	-	38893
S_s (in. ³)	565	1004	729
S_c (n=27) (in. ³)	723	-	941
S_c (n=9) (in. ³)	783	-	1016
Q (K/')	1.134	1.572	1.149
M_Q (K)	238	1512	732
S_Q (K/')	0.357	-	0.357
$M_S Q$ (K)	98	-	282
M_L (K)	739	719	1127
M (Imp) (K)	188	166	234
$5/3(M_L + M$ (Imp)) (K)	1543	1474	2269
M_u (K)	2443	3882	4268
M_u (K)	3346	-	4471
f_s @ non-comp (ksi)	5.0	18.1	12.0
f_s @ comp (ksi)	1.6	-	3.6
f_s $5/3(M_L + M$ (Imp)) (ksi)	23.7	17.6	26.8
f_s (Overload) (ksi)	30.3	35.7	42.4
f_s (Total) (ksi)	-	46.4	-
VR (K)	79	-	65

TOP OF WEB ELEVATIONS

	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7
@ Brg. N. Abut.	458.623	458.365	458.182	457.957	457.730	457.501	457.269
@ Brg. Pier 1	459.496	459.289	459.141	458.960	458.777	458.592	458.404
@ Splice 1	459.749	459.554	459.416	459.247	459.075	458.902	458.726
@ Splice 2	459.637	459.488	459.382	459.252	459.121	458.988	458.853
@ Brg. Pier 2	459.324	459.186	459.088	458.968	458.847	458.724	458.600
@ Brg. S. Abut.	458.235	458.135	458.064	457.976	457.888	457.798	457.708

INTERIOR GIRDER REACTION TABLE

	N. Abut.	Pier 1	Pier 2	S. Abut.
R @ (K)	33	162	162	33
R L (K)	56	84	84	56
IMP (K)	14	19	19	14
R TOTAL (K)	103	265	265	103



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.

$I_c(3n)$ and $S_c(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads.

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

The Plastic Moment capacity (M_u) is computed according to AASHTO 10.4.8 & 10.50.1.1. (Not applicable)

f_s (Total) is the sum of the stresses due to

$$1.3 [M_Q + M_S Q + 5/3(M_L + M(imp))]$$

f_s (Overload) is the sum of the stresses due to

$$M_Q + M_S Q + 5/3(M_L + M(imp)).$$

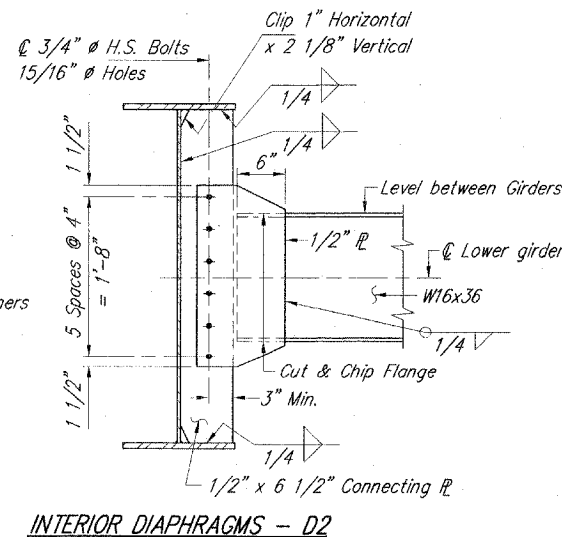
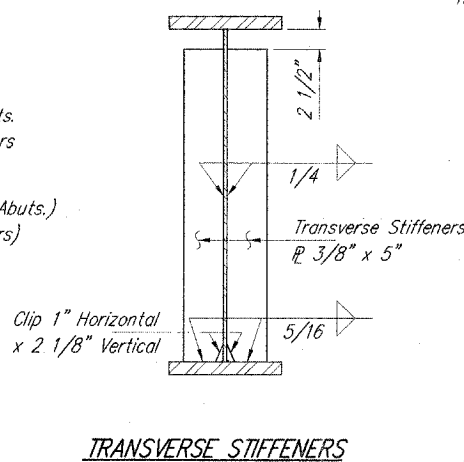
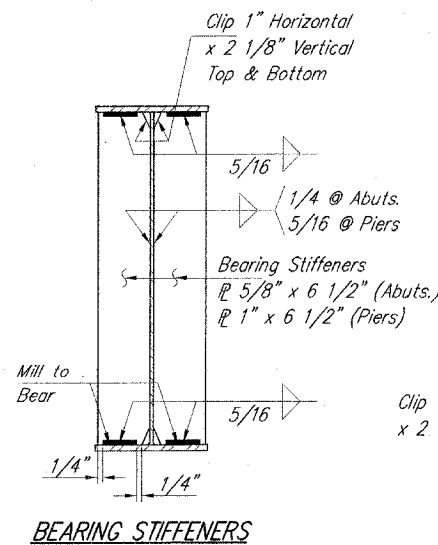
M_Q - Moment due to dead loads on non-composite section.

$M_S Q$ - Moment due to dead loads on composite section.

M_L - Moment due to live load on non-composite or composite section.

M (Imp) = Moment due to Live Load Impact on non-composite or composite section.

$$M_u$$
 (Applied Moment) = $1.3 [M_Q + M_S Q + 5/3(M_L + M(imp))]$



Note:
Two hardened washer shall be required over all oversized holes.

Corporate License Number 184-001-084

STRUCTURAL STEEL DETAILS
INDIANA AVENUE over NORFOLK SOUTHERN RAILWAY
SEC. 97-00208-01-GS
STATION 125+20.00
ALTON, ILLINOIS
STR. NO. 060-6110



JOB NO.
9551008
DATE
05/12/03

11/14/97
 3/31/03
 05-12-05(1)-STUDET.DWG, MAY 13, 2005 7:36AM DAB
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