

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.	SHEET NO. 18
FAP 305	*	Cook	193	147	37 SHEETS
Contract No. 62878 *1313.1 B					

TOP OF WEB ELEVATIONS

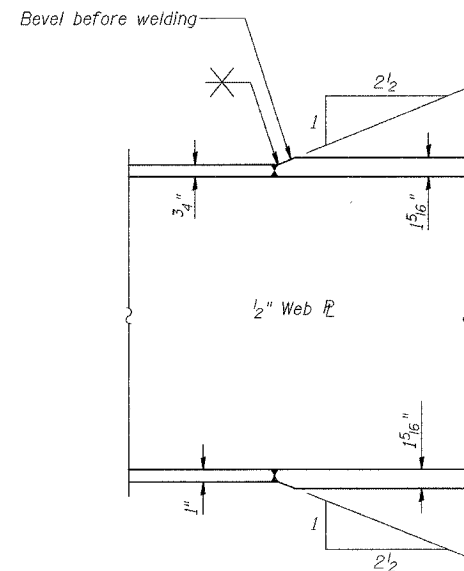
(For Fabrication Use Only)

BEAM	CL. BRG. W. ABUT.	CL. PIER 1	CL. FIELD SPLICE 1	CL. FIELD SPLICE 2	CL. PIER 2	CL. BRG. E. ABUT.
1	678.95	679.94	680.00	680.40	680.47	680.37
2	679.09	680.07	680.14	680.53	680.60	680.50
3	679.22	680.21	680.27	680.66	680.73	680.63
4	679.33	680.32	680.38	680.77	680.84	680.74
5	679.43	680.42	680.48	680.87	680.94	680.84
6	679.43	680.42	680.48	680.87	680.94	680.84
7	679.33	680.32	680.38	680.77	680.84	680.74
8	679.22	680.21	680.27	680.66	680.73	680.63
9	679.09	680.07	680.14	680.53	680.60	680.50
10	678.95	679.94	680.00	680.40	680.47	680.37

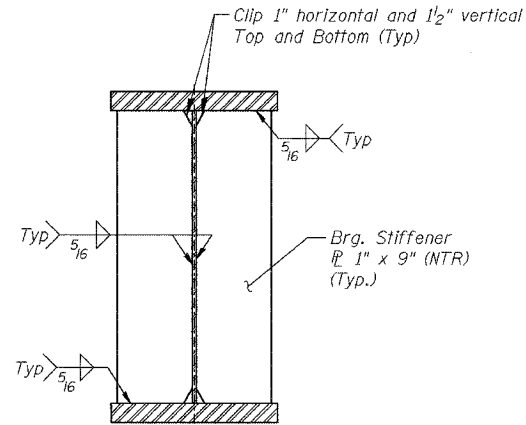
INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Span 2
Is	(in ⁴) 15342	22586	15342
Ic (n)	(in ⁴) 36233	-----	36233
Ic (3n)	(in ⁴) 26270	-----	26270
Ss	(in ³) 711	1112	711
Sc (n)	(in ³) 5089	-----	5089
Sc (3n)	(in ³) 1879	-----	1879
Z	(in ³) -----	-----	-----
Ip	(K/ft.) 0.850	0.917	0.850
Mp	(K) 764	1930	547
sp	(K/ft.) 0.464	-----	0.464
Ms	(K) 434	-----	397
Mt	(K) 857	715	856
M (Imp)	(K) 183	147	169
S ₃ (M _t +I)	(K) 1733	1437	1708
Ma	(K) 3811	4377	3448
Mu	(K) 4265	-----	4357
fs non-comp (k.s.i.)	12.9	20.8	9.2
fs (comp) (k.s.i.)	2.8	-----	2.5
fs ₃ (k.s.i.)	4.1	15.5	4.0
fs (Overload) (k.s.i.)	19.8	36.3	15.7
fs (Total) (k.s.i.)	-----	47.2	-----
VR	(K) 51.4	-----	55.6

INTERIOR GIRDER REACTION TABLE				
	W. Abut.	Pier 1	Pier 2	E. Abut.
Rp	(K) 57.6	182.0	182.0	57.6
Rt	(K) 38.7	68.0	68.0	38.7
Imp.	(K) 8.3	13.9	13.9	8.3
R (Total)	(K) 104.6	263.9	263.9	104.6

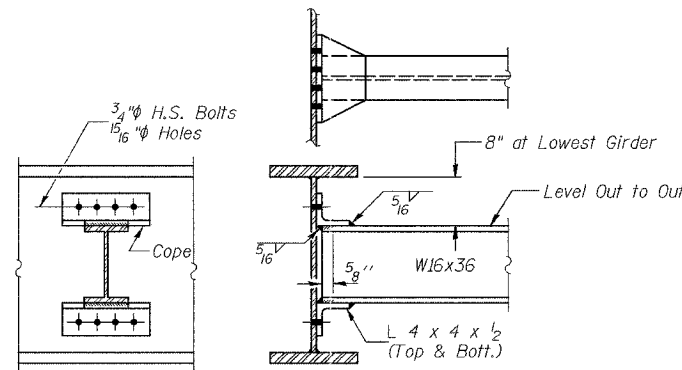
Is and Ss are the moment of inertia and section modulus of the steel section used in computing (Total & Overload).
Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads.
VR is the maximum Live Load + Impact shear range in span.
Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
Ma (Applied Moment) = 1.3[Mp + Ms + S₃(Mt + 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 Mp + Ms + S₃(Mt + M(Imp)).
fs (Total) (Non-compaction section) is the sum of the stresses due to 1.3[Mp + Ms + S₃(Mt + M(Imp))].



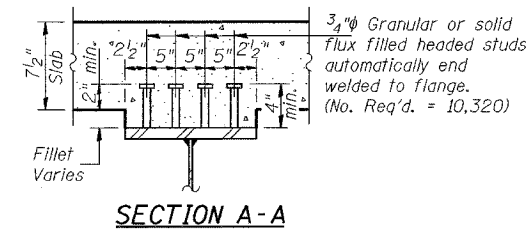
DETAIL A



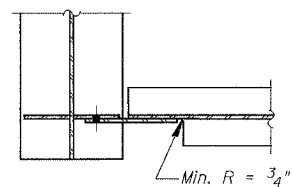
BEARING STIFFENER
(At Abutment and Piers)



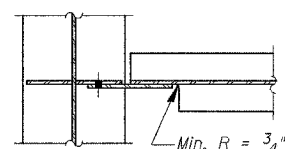
DIAPHRAGM D
117 Required



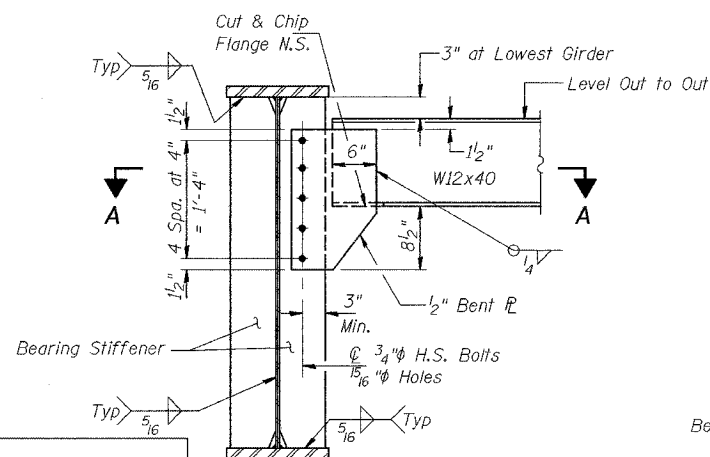
SECTION A-A



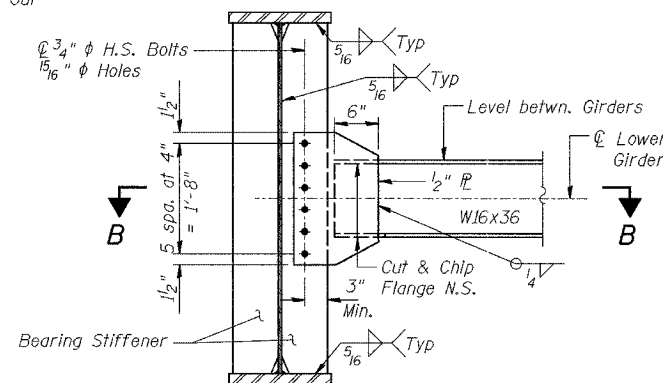
SECTION A-A



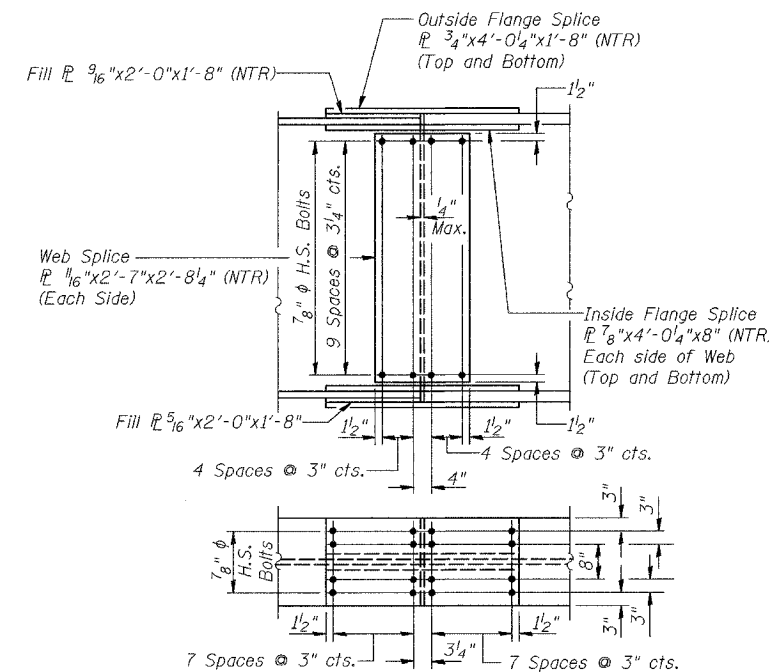
SECTION B-B



DIAPHRAGM D1
18 Required



DIAPHRAGM D2
18 Required



FIELD SPLICE DETAIL
(F.S. #1 & F.S. #2)

DESIGNED	MJW
CHECKED	GAT
DRAWN	MJW
CHECKED	GAT

Note: Two hardened washers shall be required over all oversize holes for diaphragms.

STRUCTURAL STEEL DETAILS
PALATINE ROAD OVER
IL. RT. 83 (ELMHURST ROAD)
F.A.P. RTE. 305 SECT. 1313.1 B
COOK COUNTY
STATION 363+77.17
STRUCTURE NO. 016-2812