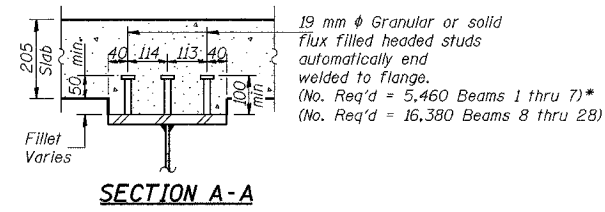
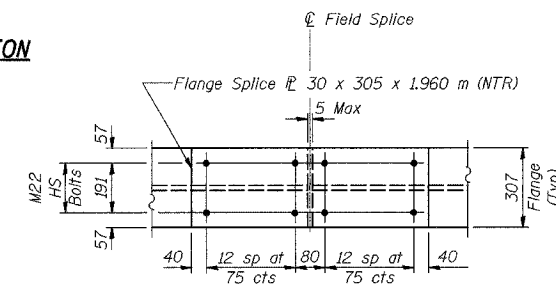


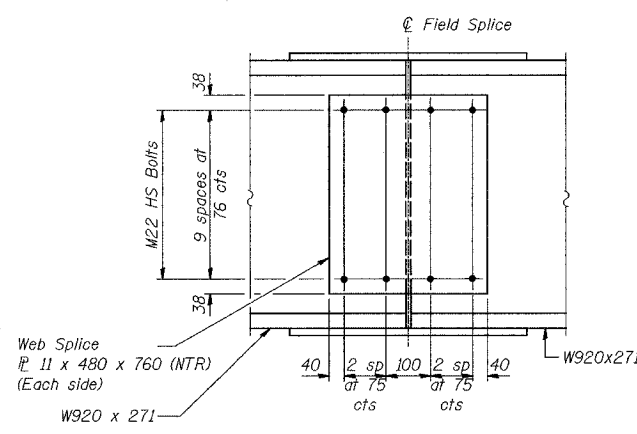
BEAM ELEVATION



SECTION A-A



**PLAN VIEW
TOP AND BOTTOM**



**ELEVATION
FIELD SPLICE 3, 4 & 5**

	0.4 Span 4	Pier 4	0.5 Span 5	Pier 5	0.6 Span 6
I_s (10^6 mm^4)	4703	4703	4703	4703	4703
I_c (n) (10^6 mm^4)	9902	—	9902	—	9902
I_c (3n) (10^6 mm^4)	7291	—	7291	—	7291
S_s (10^3 mm^3)	10209	10209	10209	10209	10209
S_c (n) (10^3 mm^3)	13498	—	13498	—	13498
S_c (3n) (10^3 mm^3)	12201	—	12201	—	12201
Z (10^3 mm^3)	—	—	—	—	—
M ($\text{kN}\cdot\text{m}$)	12.92	22.57	12.92	22.57	12.92
M ($\text{kN}\cdot\text{m}$)	512	1446	446	1209	327
s ($\text{kN}\cdot\text{m}$)	9.65	—	9.65	—	9.65
Ms ($\text{kN}\cdot\text{m}$)	430	—	439	—	278
M ($\text{kN}\cdot\text{m}$)	883	503	899	487	709
M (Imp) ($\text{kN}\cdot\text{m}$)	218	124	207	128	186
$S_s[M + M(\text{Imp})]$ ($\text{kN}\cdot\text{m}$)	1835	1045	1845	1024	1492
Ma ($\text{kN}\cdot\text{m}$)	3610	3238	3549	2903	2727
Mu ($\text{kN}\cdot\text{m}$)	5562	—	5562	—	5562
f_s non-comp (MPa)	50	142	44	118	32
f_s (comp) (MPa)	35	—	36	—	23
f_s ($L + \text{Imp}$) (MPa)	136	102	137	100	111
f_s (Overload) (MPa)	221	244	216	219	165
f_s (Total) (MPa)	—	317	—	284	—
VR (kN)	129	—	139	—	121

	Pier 3	Pier 4	Pier 5	E Abut
R (kN)	206	653	594	165
R (Imp) (kN)	45	65	68	46
R (Total) (kN)	433	983	922	386

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 and S_c are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 $I_c(n)$ and $S_c(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)
 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) = $1.3[M + Ms + S_s(M + M_{imp})]$.
The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.
 f_s (Overload) is the sum of the stresses due to $M + Ms + S_s(M + M_{imp})$.
 f_s (Total) (Non-compact section) is the sum of the stresses due to $1.3[M + Ms + S_s(M + M_{imp})]$.

NOTES:

All structural steel on this sheet shall be AASHTO M 270M, Grade 345W.

See Sheet No. S-41 for diaphragm details.

NTR denotes notch toughness requirements.

All dimensions are in millimeters (mm) except as noted.

***FOR INFORMATION ONLY**

DESIGNED	BHS
CHECKED	KFA
DRAWN	BHS
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER LITTLE CALUMET RIVER & N.I.C.T.D. R.O.W.
FRAMING DETAILS - UNIT 2 (1 OF 2)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+470.000
STRUCTURE NO. I-80-1-8460 (EB & WB)
DATE 07/05 (016-1003 & 016-1004)
AMERICAN
CONSULTING ENGINEERS