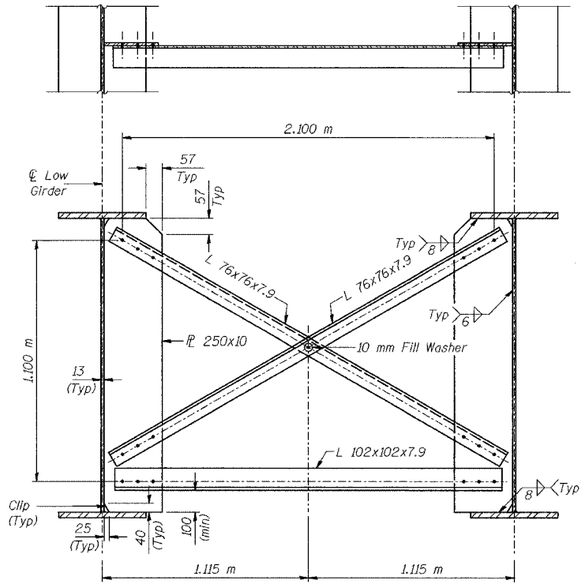
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94	2004-133F	LAKE COUNTY, INDIANA	90	88
	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-16
28 SHEETS

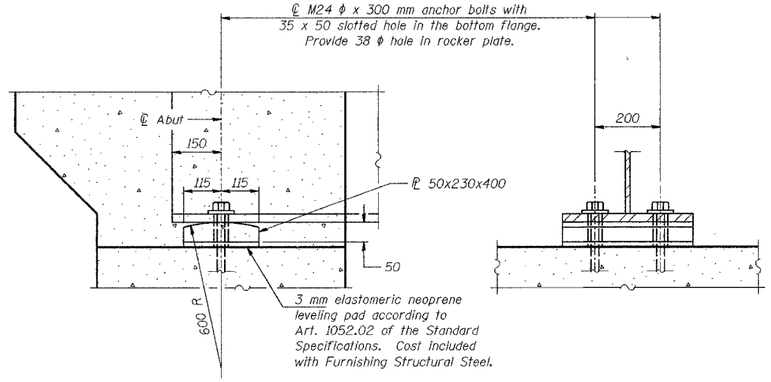
CONTRACT NO. 62898 INDOT DES. NO. 9910630



INTERIOR CROSS FRAME CF

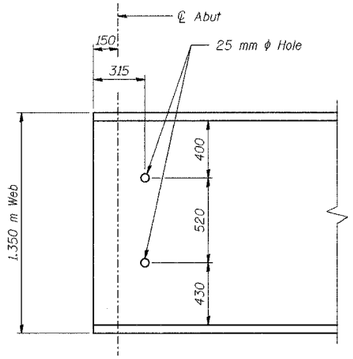
132 Required

Note: Assemble Cross Frame at Stage Construction Line after closure pour. Field drill holes in Girder 18 stiffeners on the side of Stage Construction Joint only.



INTEGRAL ABUTMENT ROCKER PLATE

48 Required



END OF GIRDER ELEVATION

INTERIOR BEAM MOMENT TABLE

		0.5 Span
Is	(10^6 mm^4)	16510
Ic (n)	(10^6 mm^4)	31120
Ic (3n)	(10^6 mm^4)	23385
Ss	(10^3 mm^3)	24988
Sc (n)	(10^3 mm^3)	30161
Sc (3n)	(10^3 mm^3)	27985
Z	(10^3 mm^3)	———
M℄	(kN·m)	15.06
MS℄	(kN·m)	2440
sS℄	(kN·m)	11.42
MsS℄	(kN·m)	1851
M℄	(kN·m)	2128
M (Imp)	(kN·m)	438
5_3[M℄+M(Imp)]	(kN·m)	4276
Ma	(kN·m)	11137
Mu	(kN·m)	12258
fs℄ non-comp	(MPa)	98
fs℄ (comp)	(MPa)	66
fs5_3(℄+Imp)	(MPa)	142
fs (Overload)	(MPa)	306
fs (Total)	(MPa)	———
VR	(kN)	216

INTERIOR BEAM REACTION TABLE

		W Abut	E Abut
R℄	(kN)	477	477
R℄	(kN)	241	241
Imp.	(kN)	50	50
R (Total)	(kN)	767	767

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.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=1.3[M℄ + MsS℄ + 5_3(M℄ + 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 M℄ + MsS℄ + 5_3(M℄ + M_{Imp}).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M℄ + MsS℄ + 5_3(M℄ + M_{Imp})].

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

All open holes shall be 28 mm ϕ for M22 HS bolts

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)
OVER HARRISON AVENUE

FRAMING DETAILS
SECTION 2004-133F
LAKE COUNTY, INDIANA
STATION 8+754.874
STRUCTURE NO. I-80-1-8461 (EB & WB)
DATE 05/05 **(016-1005 & 016-1006)**

AMERICAN CONSULTING ENGINEERS