FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 301	3 VBR	WINNEBAGO	78	60
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERIOR BEAM MOMENT TABLE

		0.4 Sp. 1	Piers	0.5 Sp. 2
Is	(10^6 mm^4)	3110	3110	3110
Ic (n)	(10^6 mm^4)	8442	-	8442
Ic (3n)	(10^6 mm^4)	6202	-	6202
Ss	(10^3 mm^3)	7352	7352	7352
Sc (n)	(10^3 mm^3)	10865	-	10865
Sc (3n)	(10^3 mm^3)	9830	-	9830
Z	(10^3 mm^3)	-	-	-
wℓ	(kN/m)	13.02	-	13.02
Mℓ	(kN·m)	191	495	205
sℓ	(kN/m)	4.89	-	4.89
Msℓ	(kN·m)	81	-	100
Mt	(kN·m)	477	274	552
M (Imp)	(kN·m)	137	76	148
fs[Mt+M(Imp)]	(MPa)	1023	583	1167
Md	(kN·m)	1684	1402	1914
Mu	(kN·m)	2554	-	2695
fsℓ non-comp	(MPa)	26	67	28
fsℓ (comp)	(MPa)	8	-	10
fs (t+Imp)	(MPa)	94	79	107
fs (Overload)		128	146	145
fs (Total)	(MPa)	167	190	189
VR	(kN)	240	-	254

INTERIOR BEAM REACTION TABLE

		S. Abut.	Pier 1	Pier 2	N. Abut.
Rℓ	(kN)	99	335	335	99
Rt	(kN)	212	203	203	212
Imp.	(kN)	61	56	56	61
R (Total)	(kN)	372	594	594	372

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total and 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.

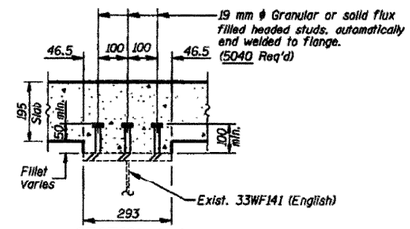
VR is the maximum t + Impact shear range in span.

M_u is the full plastic moment capacity.

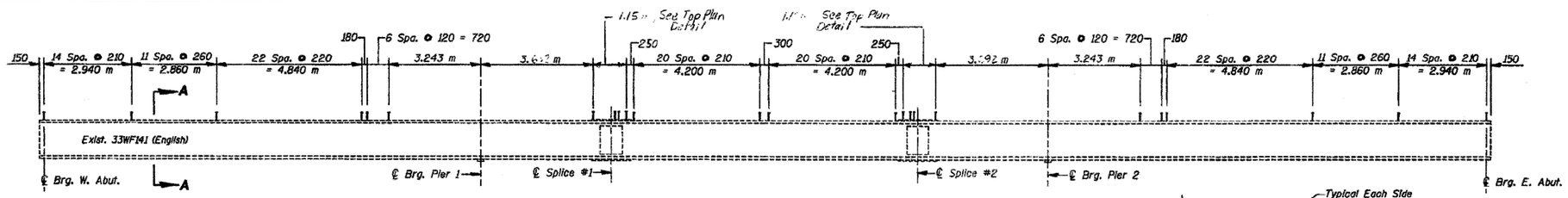
f_s (Total) is the sum of the stresses due to
$1.3\ [M\ell + M_s\ell + \frac{5}{3}(Mt + M\ (Imp))]$

f_s (Overload) is the sum of the stresses due to
$M\ell + M_s\ell + \frac{5}{3}(Mt + M\ (Imp))$

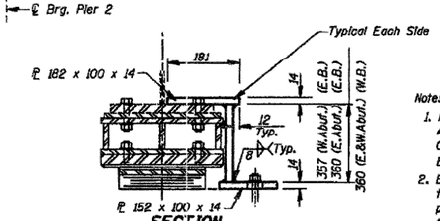
M_d (Applied Moment) = $1.3\ [M\ell + M_s\ell + \frac{5}{3}(Mt + M\ (Imp))]$



SECTION A-A
(Typ. Top Flange-Except at Splice Plates)



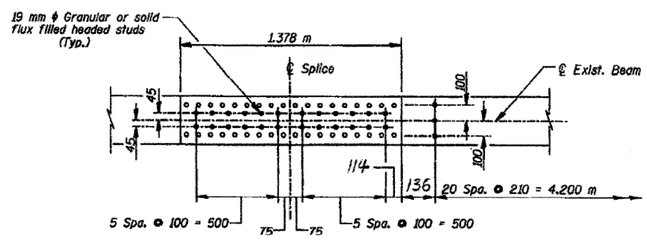
BEAM ELEVATION - EXIST. BEAMS
(Showing Shear Stud Spacing)



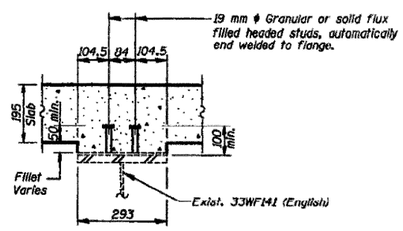
SECTION

Notes:

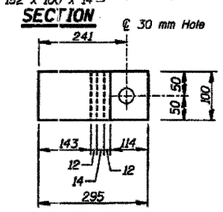
1. Provide Hold-Down Devices for all Beams at Abutment during placement of Superstructure Concrete. (Cost Included in "Furnishing and Erecting Structural Steel")
2. Beams shall be held down at the Abutment, on the opposite end of bridge from which the deck pour is commenced. After pouring is completed the hold down clamps shall be removed and side retainer installed.



TOP PLAN - SHOWING SHEAR STUD SPACING AT SPLICE #1
(Opposite hand at Splice #2)



SECTION AT SPLICE PLATES



PLAN
HOLD DOWN CLAMP DETAIL

STRUCTURAL STEEL

Date	Designed JMC	U.S. ROUTE 20 OVER BURLINGTON NORTHERN SANTA FE RAILROAD F.A.P. RTE. 301 SECTION 3 VBR WINNEBAGO COUNTY STA. 16+090.327 STRUCTURES NO. 101-0063 (EB) & 101-0064 (WB)	Sheet No. 12 of 21
Revisions	Drawn SRS		
	Checked KWB		
	Approved KWB		
Prepared by	WVP CORPORATION Engineers - Architects - Planners		WVP Job No.

LOCATION 2 STRUCTURES 101-0063 & 101-0064

• D2 Bridge Painting 2008-3

FILE NAME = P:\PAINTING\64D91\paint2008-3.dgn	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLANS	F.A.P. RTE. 301	SECTION •	COUNTY WINNEBAGO	TOTAL SHEETS 19	SHEET NO. 14
		DRAWN -	REVISED -					CONTRACT NO. 64D91		
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
	PLOT DATE = Thu Jan 24 07:59:38 2008	DATE -	REVISED -							