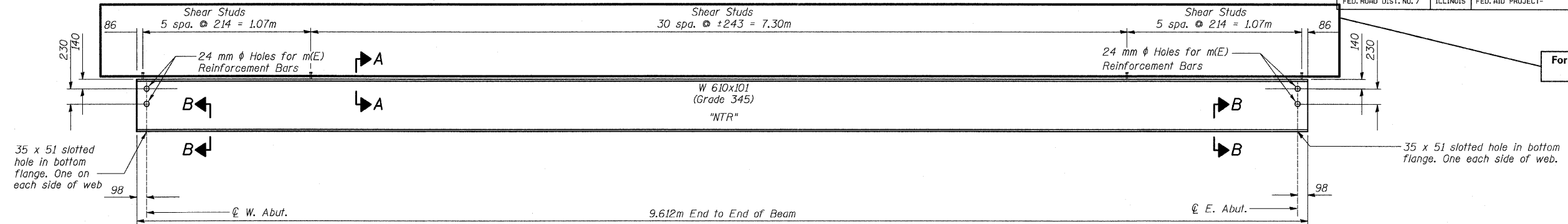


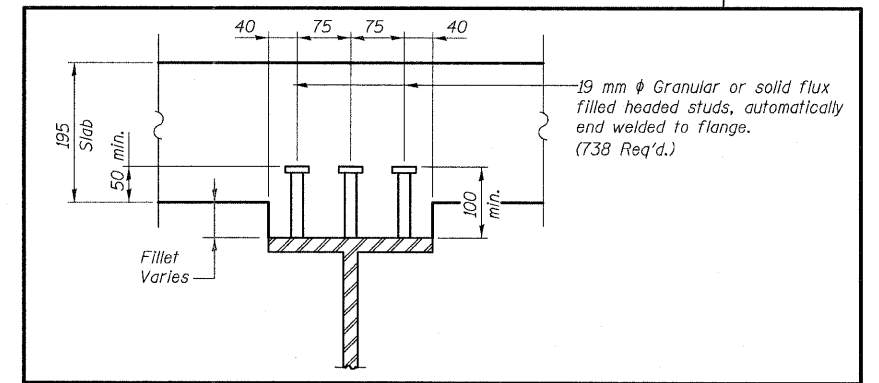
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12 17 SHEETS
FAP 303 IL 173	2010-086-F	LAKE	29	12	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



GIRDER ELEVATION
(Looking North)

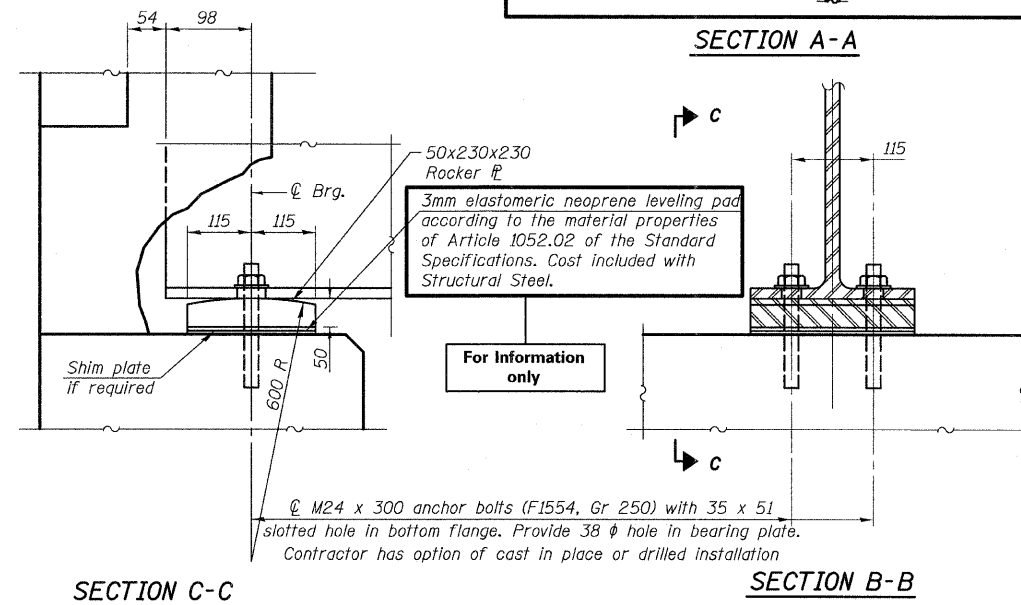
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



		0.5 Sp. 1
I_s	(10^6 mm^4)	764
$I_c (n)$	(10^6 mm^4)	2876
$I_c (sn)$	(10^6 mm^4)	2205
S_s	(10^3 mm^3)	2534
$S_c (n)$	(10^3 mm^3)	4487
$S_c (sn)$	(10^3 mm^3)	4029
\bar{Q}	(m^2)	12.4
$M\bar{Q}$	($\text{kN}\cdot\text{m}$)	134
$s\bar{Q}$	($\text{kN}\cdot\text{m}$)	7.23
$M_s\bar{Q}$	($\text{kN}\cdot\text{m}$)	86
$M\bar{t}$	($\text{kN}\cdot\text{m}$)	365
$M (Imp)$	($\text{kN}\cdot\text{m}$)	110
$S_3[M\bar{t} + M(Imp)]$	($\text{kN}\cdot\text{m}$)	837
M_a	($\text{kN}\cdot\text{m}$)	1374
M_u	($\text{kN}\cdot\text{m}$)	1821
$f_s\bar{Q} (non-comp)$	(MPa)	57.6
$f_s\bar{Q} (comp)$	(MPa)	21.3
$f_s S_3 (\bar{t} + Imp)$	(MPa)	188
$f_s (Overload)$	(MPa)	263
VR	(kN)	235

	Abuts.	
$R\bar{Q}$	(kN)	95.6
$R\bar{t}$	(kN)	180.8
$Imp.$	(kN)	54.2
$R (Total)$	(kN)	330.6

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.
 $I_c(sn)$ and $S_c(sn)$ 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.
 M_a (Applied Moment) = $1.3[M\bar{Q} + M_s\bar{Q} + S_3(M\bar{t} + M(Imp))]$.
 The Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 and 10.50.1.1.
 f_s (Overload) is the sum of the stresses due to $M\bar{Q} + M_s\bar{Q} + S_3(M\bar{t} + M(Imp))$.



TOP OF GIRDER ELEVATIONS
(FOR FABRICATION ONLY)

Location	W. Abut.	E. Abut.
Girder 1	227.772	227.697
Girder 2	227.969	227.895
Girder 3	228.166	228.092
Girder 4	228.363	228.289
Girder 5	228.560	228.486
Girder 6	228.757	228.683

NOTES

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 250 ($F_y=250\text{MPa}$). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

For Information only

FIXED BEARING

* Mass of fixed bearings included with "Furnishing Structural Steel"

FRAMING DETAILS AND DESIGN DATA TABLES
FAP 303 IL. ROUTE 173
OVER WEST BOAT CHANNEL
SECTION 2010-086-F
LAKE COUNTY
STATION 25+098.390
STRUCTURE NO. 049-0055

DESIGNED	PAT2
CHECKED	RCJ/JRF
DRAWN	RDS
CHECKED	PAT2

