



### GIRDER ELEVATION

"NTR" denotes plates to which notch toughness requirements are applicable.

$F_b$  - Maximum allowable stress  $F_{bu}$  or  $F_{by}$  computed according to AASHTO (Guide Specifications for Horizontally Curved Highway Bridges Section 2.12(B) and 2.16J).

$I_s$  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 load (see AASHTO 10.3B).

VR is the maximum  $\pm$  impact shear range in span.

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

$(f_s + f_w)(\text{Overload})$  is the sum of the stress due to  $M \ell + M_s \ell + \frac{5}{3}(M \ell + M(\text{Imp})) + \frac{M_{bl}}{1.3}$

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

$S_{bl}$  is the section modulus for one flange plate for lateral flange bending.

$M_{bl}$  is the lateral bending moment for flange plate (factored).

$f_w$  is the calculated normal stress at the edge of flange due to lateral bending (factored).

	0.4 Sp. 6 or 0.6 Sp. 8	Pier 6 or Pier 7	0.5 Sp. 7
$I_s$ (in <sup>4</sup> )	16538	16538	16538
$I_c$ (n) (in <sup>4</sup> )	39030	---	39030
$I_c$ (3n) (in <sup>4</sup> )	27495	---	27495
$S_s$ (in <sup>3</sup> )	919	919	919
$S_c$ (n) (in <sup>3</sup> )	1298	---	1298
$S_c$ (3n) (in <sup>3</sup> )	1150	---	1150
$S_{bl}$ (in <sup>3</sup> )	64	64	64
$\ell$ (k/ft.)	0.93	0.99	0.93
$M \ell$ (k)	292.59	595.26	294.37
$s \ell$ (k/ft.)	0.06	---	0.06
$M_s \ell$ (k)	17.39	---	17.64
$M \ell$ (k)	376.05	511.77	369.34
$M$ (Imp) (k)	---	---	---
$\frac{5}{3}[M \ell + M(\text{Imp})]$ (k)	626.75	852.95	615.57
$M_o$ (k)	1217.75	1882.67	1205.85
$M_{bl}$ (k)	32.13	53.52	9.88
$f_s \ell$ non-comp (ksi)	3.82	7.77	3.84
$f_s \ell$ (comp) (ksi)	0.18	---	0.18
$f_s \frac{5}{3}[M \ell + M(\text{Imp})]$ (ksi)	5.79	11.14	5.69
$f_w$ (ksi)	6.02	10.04	1.85
$f_s + f_w$ (Overload) (ksi)	14.43	26.63	11.14
$f_s$ (Total) (ksi)	12.74	24.58	12.63
VR (k)	35.34	---	41.19
$F_b$ (ksi)	50	45.3	50

	Pier 5-N. Brg.	Pier 6	Pier 7	Pier 8-S. Brg.
R $\ell$ (k)	26.9	75.9	75.9	26.9
R $\ell$ (k)	29.3	62.5	62.5	29.3
R (Total) (k)	56.2	138.4	138.4	56.2

Girder	Q N. Bearing Pier 5	Q Bearing Pier 6	Q Field Splice 5	Q Field Splice 6	Q Bearing Pier 7	Q S. Bearing Pier 8
1	770.565	768.810	768.303	766.804	766.233	764.225
2	770.565	768.810	768.303	766.804	766.233	764.225

#### NOTES:

- For diaphragm and splice details see sheet No. S13
- For Section A-A see sheet No. S13.
- For Girder Dimension Table see sheet No. S13.

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REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

STEEL GIRDER DETAILS					
PEDESTRIAN/BICYCLE PATH BRIDGE OVER UNION PACIFIC RAILROAD					
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