

INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I_s	(in ⁴)	4,470	4,470	4,470
$I_c(n)$	(in ⁴)	12,916	—	12,916
$I_c(3n)$	(in ⁴)	9,547	—	9,547
S_s	(in ³)	299	299	299
$S_c(n)$	(in ³)	456	—	456
$S_c(3n)$	(in ³)	412	—	412
Z	(in ³)	—	346	—
$DC1$	(k/')	0.760	0.760	0.760
M_{DC1}	(k)	67	270	190
$DC2$	(k/')	0.155	0.155	0.155
M_{DC2}	(k)	18	46	50
DW	(k/')	0.290	0.290	0.290
M_{DW}	(k)	33	84	92
$M_L + IM$	(k)	433	376	735
M_u (Strength I)	(k)	914	1,172	1,716
$\phi_r M_n, \phi_r M_{nc}$	(k)	2,276	—	2,276
$f_s DC1$	(ksi)	2.7	10.8	7.6
$f_s DC2$	(ksi)	0.5	1.8	1.5
$f_s DW$	(ksi)	1.0	3.4	2.7
$f_s 1.3(L+IM)$	(ksi)	14.8	19.6	25.1
f_s (Service II)	(ksi)	19.0	35.6	36.9
f_s (Total Strength I)	(ksi)	—	47.2	—
V_r	(k)	19.8	—	18.4

* Compact sections
 ** Non-Compact and slender sections

INTERIOR BEAM REACTION TABLE			
	Abuts.	Pier 1 & 2	
R_{DC1}	(k)	10.4	48.9
R_{DC2}	(k)	2.4	10.0
R_{DW}	(k)	4.4	18.2
$R_L + IM$	(k)	58.3	91.1
R_{Total}	(k)	75.5	168.2

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

Z : Plastic Section Modulus of the steel section in non-composite areas.

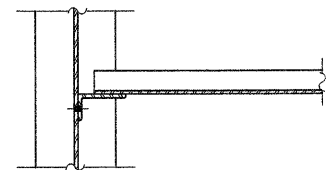
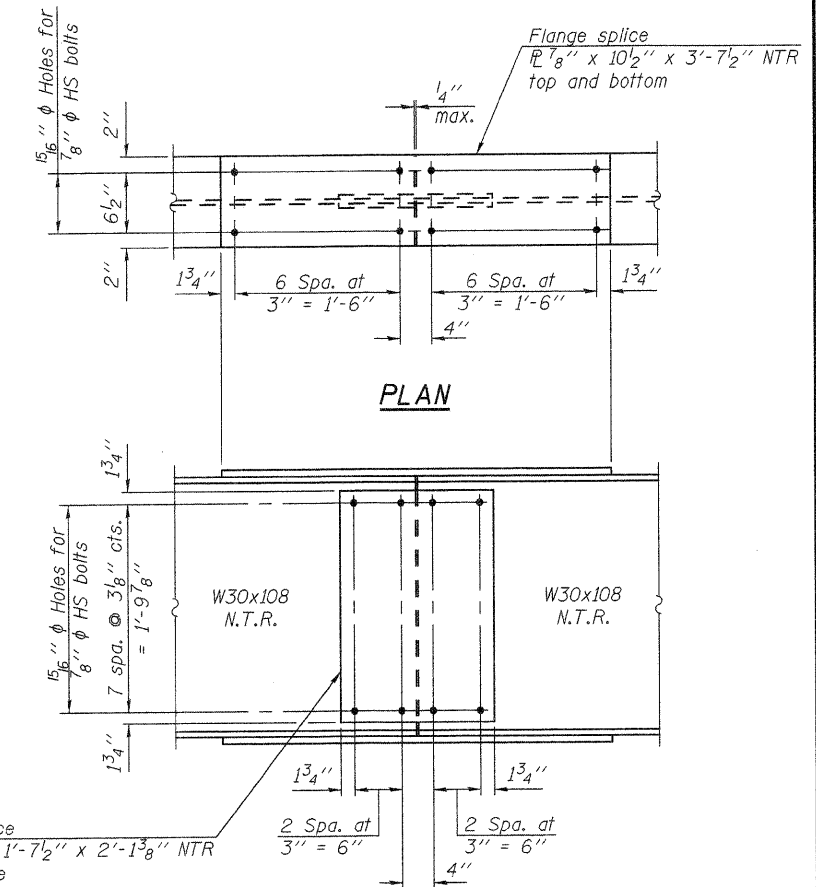
$DC1$: Un-factored non-composite dead load (kips/ft.).
 M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).
 $DC2$: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
 M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
 DW : Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
 M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
 $M_L + IM$: Un-factored live load moment plus dynamic load allowance (Impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$
 $\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
 $\phi_r M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).

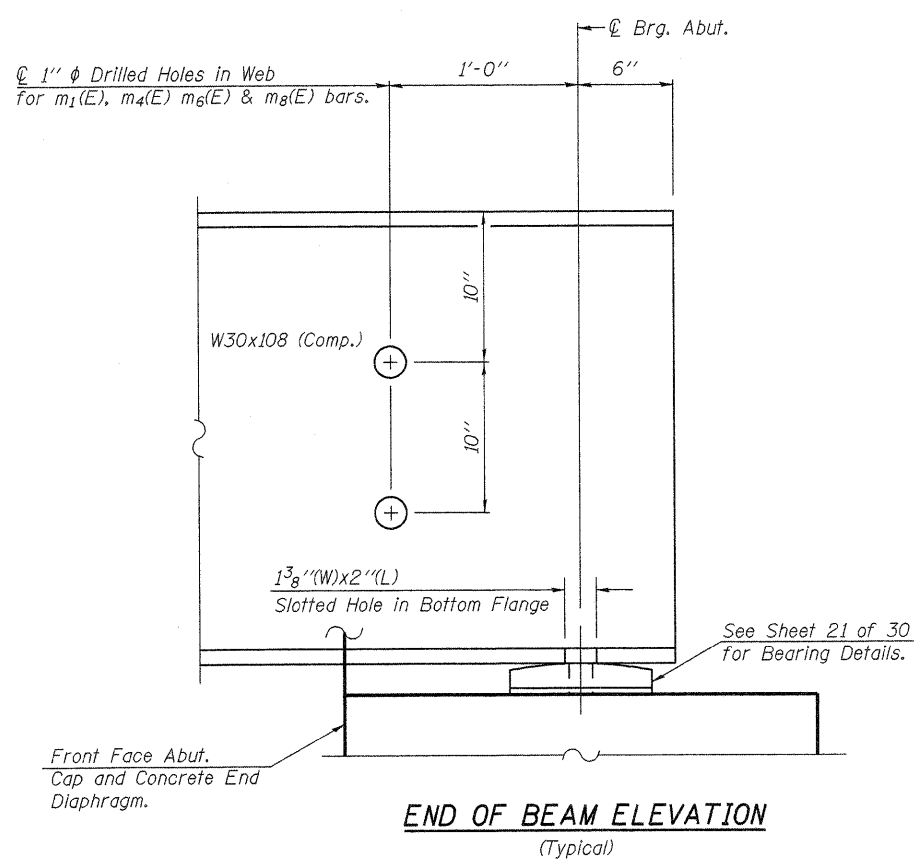
f_s (Service II): Sum of stresses as computed from the moments below (ksi).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_L + IM$

f_s (Total Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$

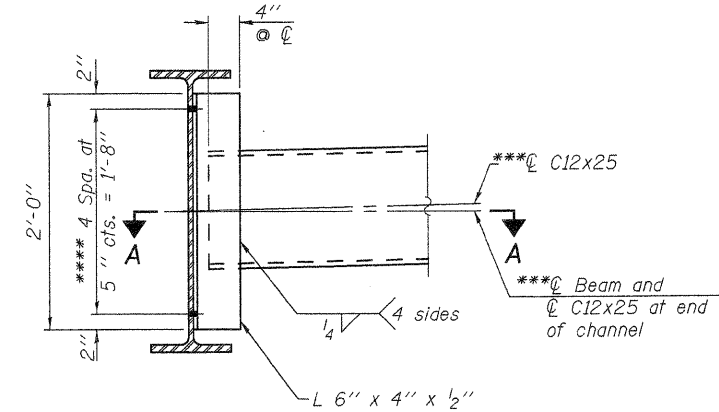
V_r : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



SECTION A-A



END OF BEAM ELEVATION
(Typical)



INTERIOR DIAPHRAGM - D
(36 Req'd.)

Note:
 Two hardened washers required for each set of oversized holes.
 ***Alternate channels C12x30 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
 ****Bolts 3/4 inch diameter, holes 15/16 inch diameter except the connection angles on Beam 4 near the Stage Construction Line shall have 13/16 inch x 1 7/8 inch vertical slotted holes. The bolts in the slotted holes shall be finger tight until the Stage II Deck pour is completed. The slotted holes in the connection angles shall be positioned to allow the bolts to move from one end of the slotted hole to the opposite end under deck load. The holes shall be positioned allowing maximum bolt displacement without laterally stressing the beams. No slotted holes are allowed on the beams.

Work this Sheet with Sheets 19 & 21 of 30.