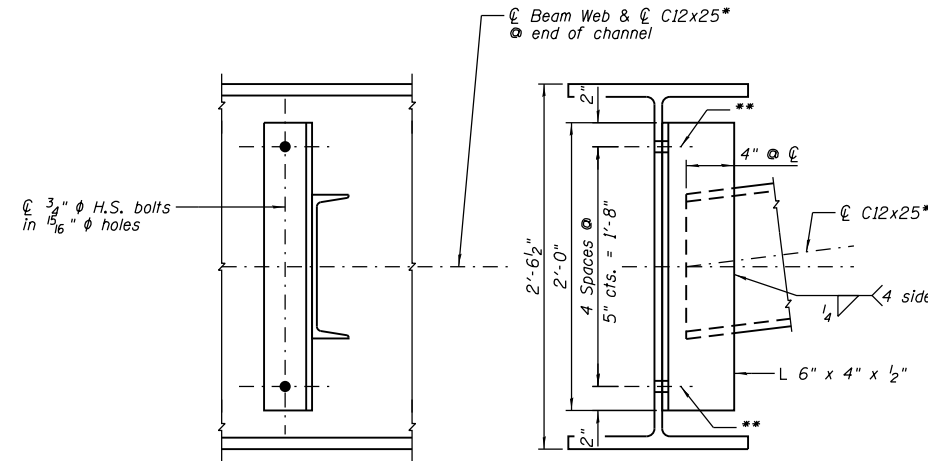
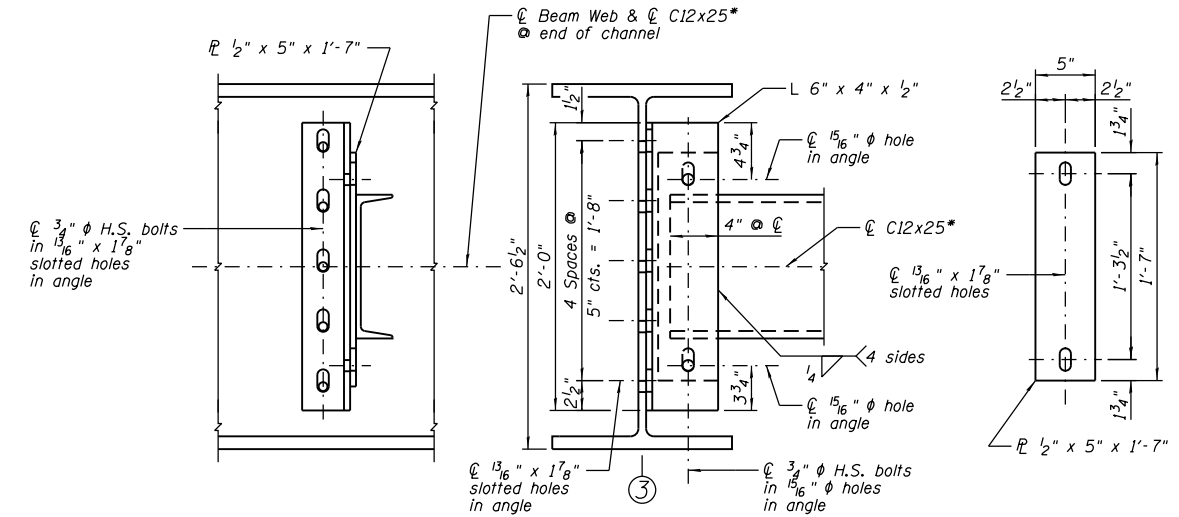


INTERIOR BEAM MOMENT TABLE		0.5 Sp. 1
I_s	(in ⁴)	8230
$I_c(n)$	(in ⁴)	19513
$I_c(3n)$	(in ⁴)	14122
$I_c(cr)$	(in ⁴)	
S_s	(in ³)	541
$S_c(n)$	(in ³)	748
$S_c(3n)$	(in ³)	674
$S_c(cr)$	(in ³)	
DC1	(k/')	0.798
M _{DC1}	(k)	517
DC2	(k/')	0.150
M _{DC2}	(k)	97
DW	(k/')	0.267
M _{DW}	(k)	173
M _{Σ · IM}	(k)	945
M _u (Strength I)	(k)	2681
φ _r M _n	(k)	3464
f _s DC1	(ksi)	11.5
f _s DC2	(ksi)	1.7
f _s DW	(ksi)	3.1
f _s (Σ · IM)	(ksi)	15.2
f _s (Service II)	(ksi)	36.0
0.95R _n F _y	(ksi)	47.5
f _s (Total Strength I)	(ksi)	47.6
φ _r F _n	(ksi)	
V _r	(k)	29.2

INTERIOR BEAM REACTION TABLE		Abut.
R _{DC1}	(k)	29.5
R _{DC2}	(k)	5.4
R _{DW}	(k)	9.6
R _{Σ · IM}	(k)	70.0
R _{Total}	(k)	114.5



DIAPHRAGM CONNECTION "A"



DIAPHRAGM CONNECTION "B1" AND "B2"

(Final Erection Position after Stage II deck pour)

NOTE: 1 5/16" φ holes in web shall match Diaphragm Connection "A".

DIAPHRAGM D

(25 - Required)

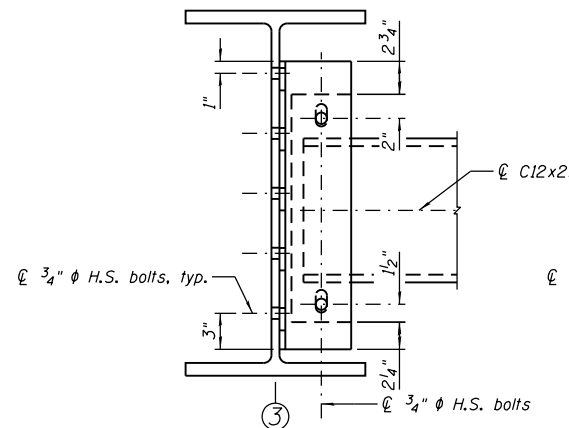
NOTES:

Two hardened washers required for each set of oversized holes.

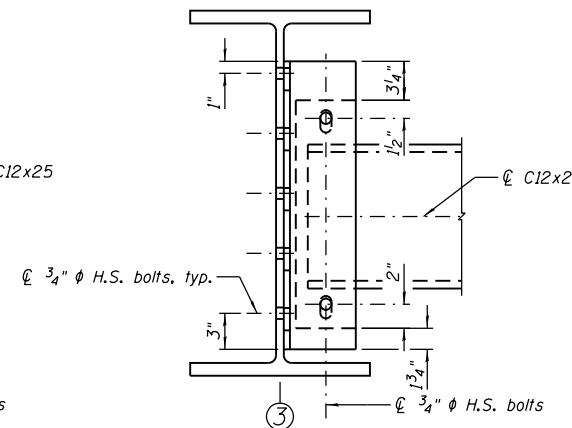
*Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on C12x25 section. The C12x30, if utilized, shall be provided at no extra cost to the department.

**The connection angles on Beam 3 near the Stage Construction Line shall have 1 5/16" x 1 7/8" 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.

- 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 (in⁴ and in³).
- $I_c(n)$, $S_c(n)$: 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) in uncracked sections, due to short-term composite live loads (in⁴ and in³).
- $I_c(3n)$, $S_c(3n)$: 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) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).
- $I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite dead loads (in⁴ and in³).
- 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_{Σ · 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_{Σ · IM}
- φ_rM_n: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.) or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).
- f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}
- f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
M_{DC2} / S_{c(3n)} or M_{DC2} / S_{c(cr)} as applicable.
- f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
M_{DW} / S_{c(3n)} or M_{DW} / S_{c(cr)} as applicable.
- f_s (Σ · IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
M_{Σ · IM} / S_{c(n)} or M_{Σ · IM} / S_{c(cr)} as applicable.
- f_s (Service II): Sum of stresses as computed below (ksi).
f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_{s(Σ · IM)}
- 0.95R_nF_y: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
- f_s (Total Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_{s(Σ · IM)}
- φ_rF_n: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7.2 (ksi).
- V_r: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



DIAPHRAGM CONNECTION "B1"



DIAPHRAGM CONNECTION "B2"

INITIAL BOLT ERECTION POSITION

(Diaphragm Connection "B")

NOTE: The bolts in the slotted holes shall be finger tight until the Stage II deck pour is completed. The slotted holes in the connection angle and plate shall be positioned as shown to allow the bolts to move to the final erection position under deck load. The holes have been positioned to allow maximum bolt displacement without laterally stressing the beam.

NOTES:

- See Sheet B13 for Diaphragm Locations.
- Load carrying components designated N.T.R. shall conform to the Impact Testing Requirements, Zone 2.
- All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.