INTERIOR GIRDER MOMENT TABLE

		0.4 Sp. 1 or 0.6 Sp. 3	Pier	0.5 Sp. 2
I_s	(in^4)	984	984	984
$I_c(n)$	(in^4)	3638	-	3638
$I_c(3n)$	(in^4)	2636	-	2636
$I_c(cr)$	(in^4)	-	1139	-
S_s	(in^3)	108	108	108
$S_c(n)$	(in^3)	190	-	190
$S_c(3n)$	(in^3)	168	-	168
$S_c(cr)$	(in^3)	-	117	-
Z	(in^3)	-	-	-
ϱ	$(k/')$	0.532	0.532	0.532
$M\varrho$	$('k)$	35.2	66.3	34.8
$s\varrho$	$(k/')$	0.144	0.144	0.144
$Ms\varrho$	$('k)$	9.5	18.0	9.4
$M\ell$	$('k)$	111.8	90.8	112.7
M_{IM}	$('k)$	33.6	27.2	33.8
$\frac{5}{3}[M\ell + I]$	$('k)$	242.3	196.7	244.2
M_a	$('k)$	373.1	365.3	374.9
** M_u	$('k)$	775.8	-	512.5
$f_s \varrho$ non-comp	(ksi)	3.9	7.4	3.9
$f_s \varrho$ (comp)	(ksi)	0.7	2.0	0.7
$f_s \frac{5}{3}[M\ell + M_I]$	(ksi)	15.3	21.8	15.4
f_s (Overload)	(ksi)	19.9	31.2	19.9
f_s (Total)	(ksi)	-	40.5	-
VR	(k)	11.7	36.0	11.4

** Compact section

INTERIOR GIRDER REACTION TABLE

		Abutments	Piers
$R\varrho$	(k)	26.2 ***	26.4
$R\ell$	(k)	29.6	30.0
R_I	(k)	8.9	9.0
R_{Total}	(k)	64.6	65.4

*** Dead load reaction includes concrete diaphragm and approach slab.

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) 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 and Overload) 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 and Overload) due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement.

Z: Plastic Section Modulus of the steel section in non-composite areas (in.^{3}).

ϱ: Un-factored non-composite dead load (kips/ft.).

$M\varrho$: Un-factored moment due to non-composite dead load (kip-ft.).

$s\varrho$: Un-factored long-term composite (superimposed) dead load (kips/ft.)

$Ms\varrho$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M\ell$: Un-factored live load moment (kip-ft.).

M_I: Un-factored moment due to impact (kip-ft.).

M_a: Factored design moment (kip-ft.). $1.3 [M\varrho + Ms\varrho + \frac{5}{3} (M\ell + M_I)]$

M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi). $M\varrho + Ms\varrho + \frac{5}{3} (M\ell + M_I)$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi). $1.3 [M\varrho + Ms\varrho + \frac{5}{3} (M\ell + M_I)]$

VR: Maximum ℓ + impact shear range within the composite portion of the span for stud shear connector design (kips).
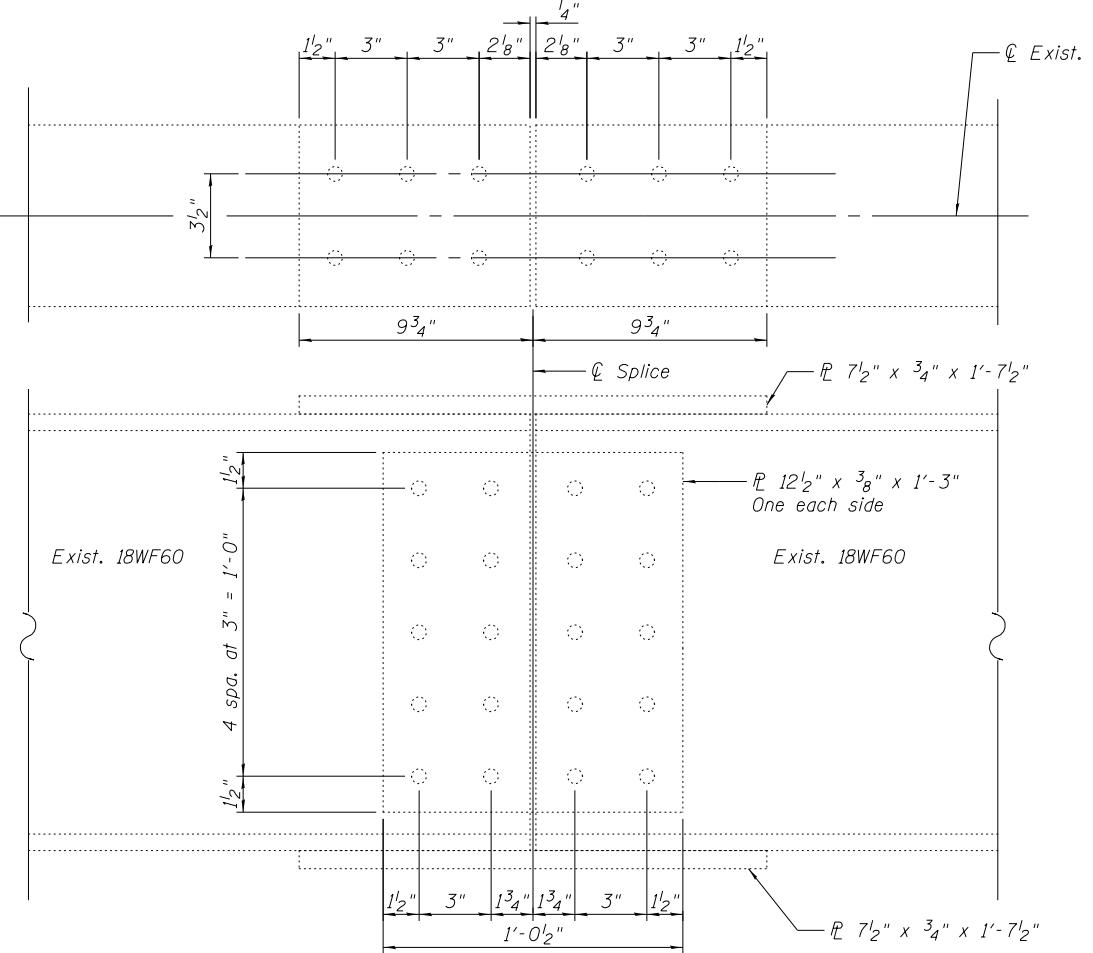
SPLICE DETAIL
(For information only)

ℂ Exist. 18WF60

ℂ Splice

PL 7½" x ¾" x 1'-7½"

PL 12½" x ⅜" x 1'-3"
One each side

Exist. 18WF60

PL 7½" x ¾" x 1'-7½"
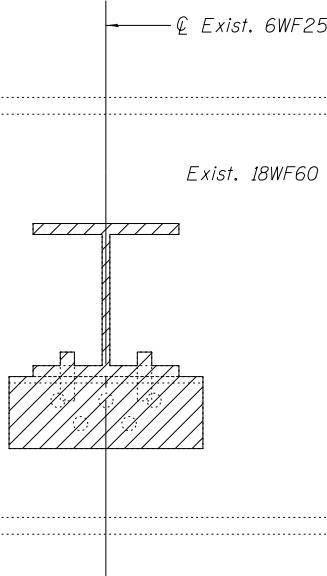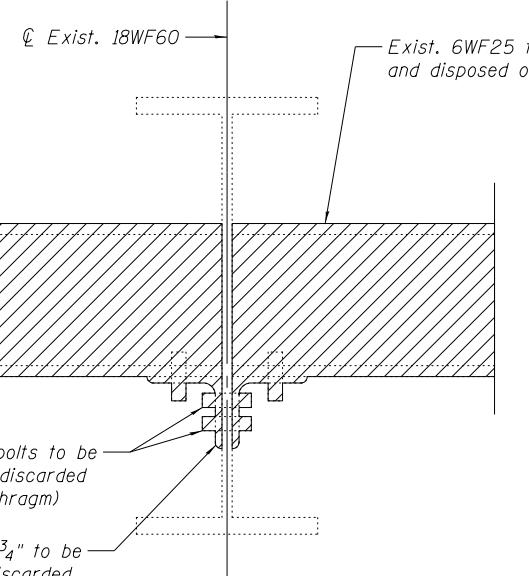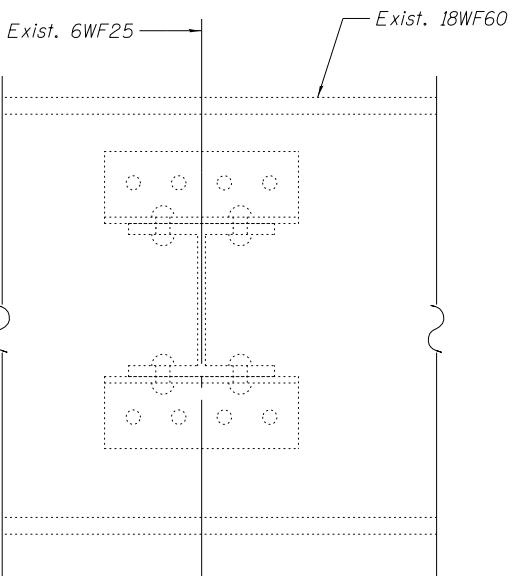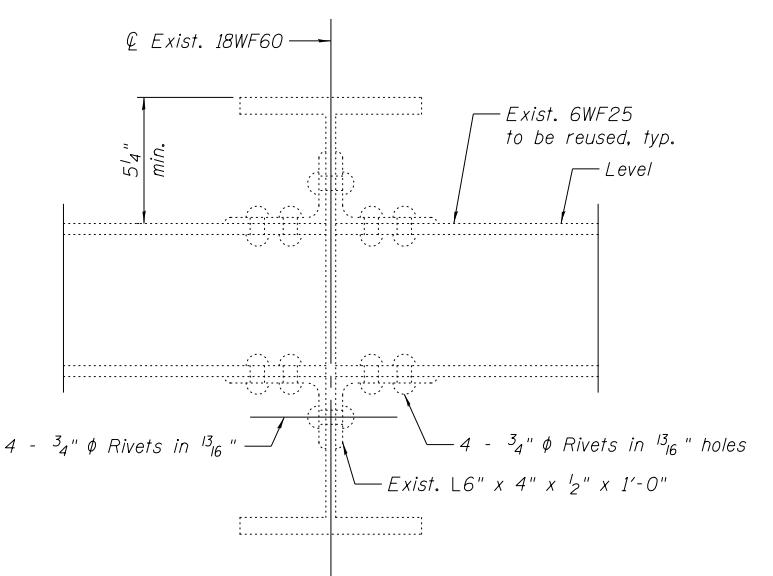
DIAPHRAGM "D2" DETAIL
(Total 30 Diaphragms to remain in place)

ℂ Exist. 18WF60

Exist. 6WF25 to be reused, typ.

Level

4 - ¾" φ Rivets in ¹³⁄₁₆"

4 - ¾" φ Rivets in ¹³⁄₁₆" holes

Exist. L6" x 4" x ½" x 1'-0"

ℂ Exist. 6WF25

Exist. 18WF60

LEGEND

- Structural Steel Removal

END DIAPHRAGM "D1" REMOVAL DETAIL
(Total 12 Diaphragms to be removed)

ℂ Exist. 18WF60

Exist. 6WF25 to be removed and disposed of

Exist. ¾" φ bolts to be removed and discarded (14 each diaphragm)

Exist. L6"x4"x¾" to be removed and discarded (2 each diaphragm)

ℂ Exist. 6WF25

Exist. 18WF60