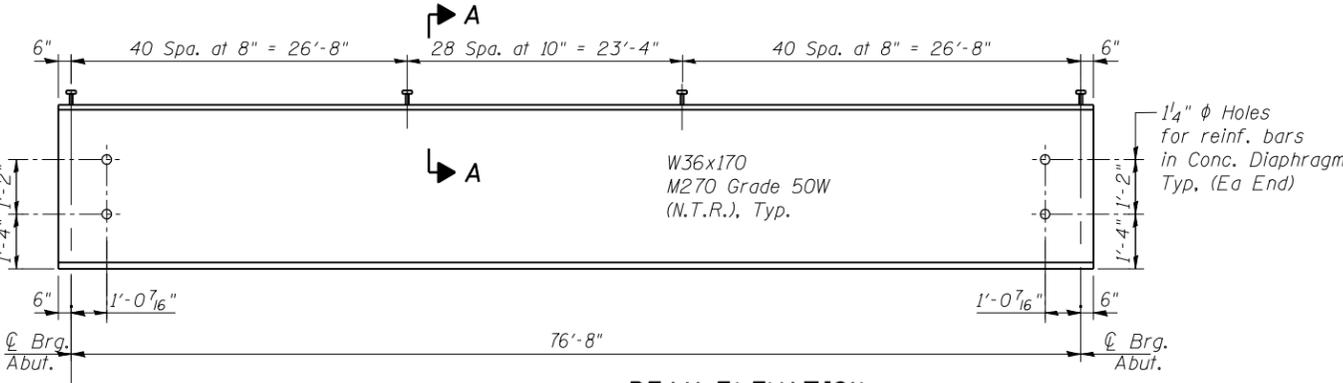


PLAN



BEAM ELEVATION

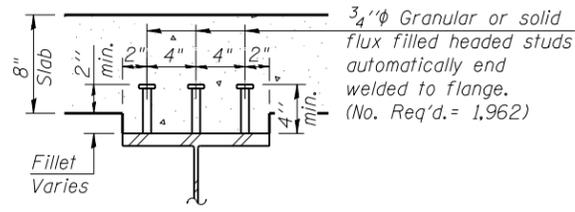
*** TOP OF BEAM ELEVATIONS**

Beam Number	☐ Brg. E. Abut.	☐ Brg. W. Abut.
1	461.12	461.35
2	461.24	461.48
3	461.34	461.58
4	461.33	461.58
5	461.22	461.47
6	461.08	461.34

* For Fabrication only

General Notes:

1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
2. All diaphragms and connecting plates shall be AASHTO M270 Grade 50W.
3. All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



SECTION A-A

INTERIOR BEAM MOMENT TABLE		
		0.5 Sp.
I_s	(in ⁴)	10,500
$I_c(n)$	(in ⁴)	26,306
$I_c(3n)$	(in ⁴)	19,033
S_s	(in ³)	572.9
$S_c(n)$	(in ³)	830.1
$S_c(3n)$	(in ³)	744.8
DC1	(k/ft)	0.898
MDC1	(k)	659.8
DC2	(k/ft)	0.15
MDC2	(k)	110.2
DW	(k/ft)	0.3
MDW	(k)	220.6
$M_L + IM$	(k)	1,123.0
M_u (Strength I)	(k)	3,258.6
$\phi_f M_n$	(k)	4,161.1
f_s DC1	(ksi)	13.8
f_s DC2	(ksi)	1.78
f_s DW	(ksi)	3.55
f_s ($L + IM$)	(ksi)	16.2
f_s (Service II)	(ksi)	40.2
$0.95R_h F_y f$	(ksi)	47.5
Vf	(k)	24.7

INTERIOR BEAM REACTION TABLE		
		Abut.
RDC1	(k)	34.4
RDC2	(k)	5.75
RDW	(k)	11.5
$R_L + IM$	(k)	78.0
RTotal	(k)	129.6

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).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: 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.).

MDC2: 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.).

MDW: 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.).

$1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (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 ($L + IM$): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).

$M_L + IM / S_c(n)$ or $M_L + IM / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).

$f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (L + IM)$

$0.95R_h F_y f$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

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

Note

Two hardened washers required for each set of oversized holes.

** C15x50 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 extra cost to the department.