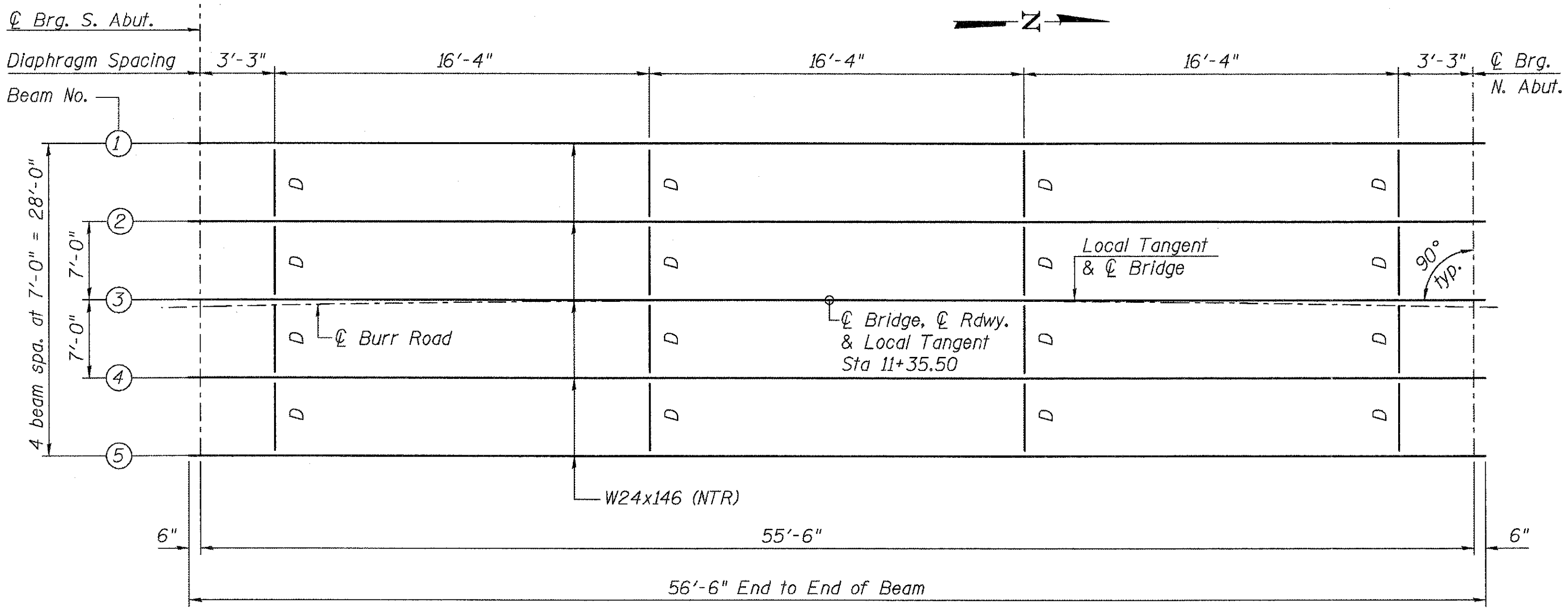
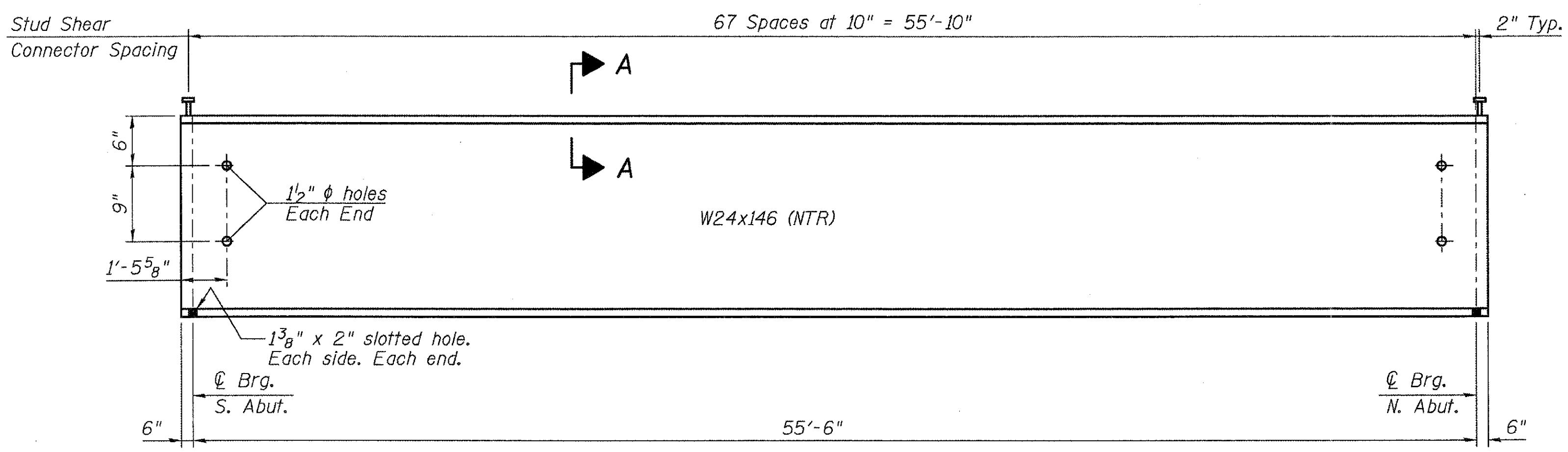
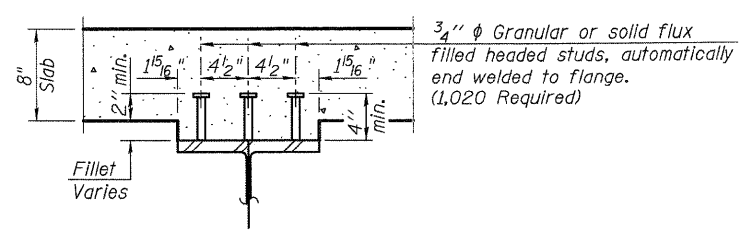


FRAMING PLAN

"D" denotes Interior Diaphragm. See Sheet 13 of 19.



ELEVATION



SECTION A-A

TOP OF BEAM ELEVATIONS

(For Fabrication Only)

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
℄ Brg. S. Abut.	765.06	764.93	764.79	764.65	764.51
℄ Brg. N. Abut.	763.96	763.82	763.68	763.54	763.40

INTERIOR GIRDER MOMENT TABLE		
		0.5 Sp. 1
I_s	(in^4)	4580
$I_c(n)$	(in^4)	12,295
$I_c(3n)$	(in^4)	8,940
$I_c(cr)$	(in^4)	
S_s	(in^3)	371
$S_c(n)$	(in^3)	540
$S_c(3n)$	(in^3)	486
$S_c(cr)$	(in^3)	
DC1	(k/')	0.875
M_{DC1}	('k)	336.9
DC2	(k/')	0.04
M_{DC2}	('k)	15.4
DW	(k/')	0.35
M_{DW}	('k)	134.8
M_{LL+IM}	('k)	765.2
M_u (Strength I)	('k)	1982
$\phi_f M_n$	('k)	2551
f_s DC1	(ksi)	10.90
f_s DC2	(ksi)	0.38
f_s DW	(ksi)	3.33
f_s (LL+IM)	(ksi)	18.89
f_s (Service II)	(ksi)	39.17
$0.95R_hF_{yf}$	(ksi)	47.5
f_s (Total)(Strength I)	(ksi)	
$\phi_f F_n$	(ksi)	
V_f	(k)	22.2

INTERIOR GIRDER REACTION TABLE		
		Abut.
R_{DC1}	(k)	24.3
R_{DC2}	(k)	1.1
R_{DW}	(k)	9.7
R_{LL+IM}	(k)	57.2
R_{Total}	(k)	92.3

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) in uncracked sections, 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) in uncracked sections, 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, 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 ($in.^4$ and $in.^3$).

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_{LL+IM}: Un-factored live load moment plus dynamic load allowance (impact) ((kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{LL+IM}$

$\phi_f M_n$: 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 (LL+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
$M_{LL+IM}\ /\ S_c(3n)$ or $M_{LL+IM}\ /\ S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(LL + IM)$

$0.95R_hF_yf$: 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).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_{sLL+IM}$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7.2 (ksi).

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

NOTES:

All beams shall be W24x146 AASHTO M270 Grade 50W (NTR). All diaphragms and connecting angles shall be AASHTO M270 Grade 50W. All bearing plates shall be AASHTO M270 Grade 50W.
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted.
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.