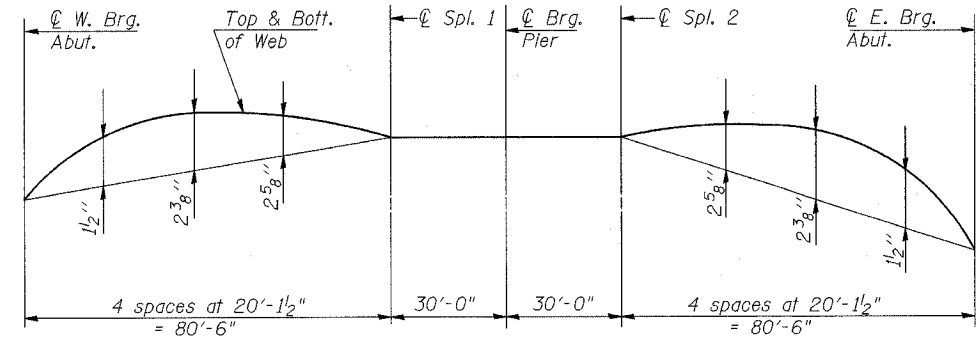
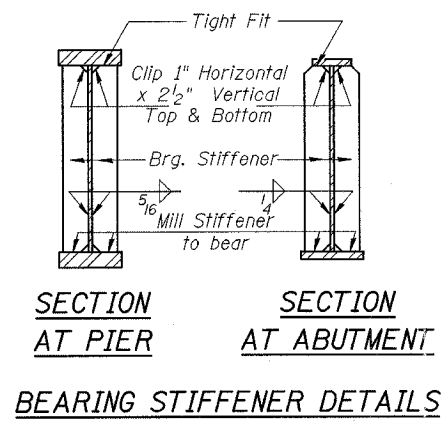


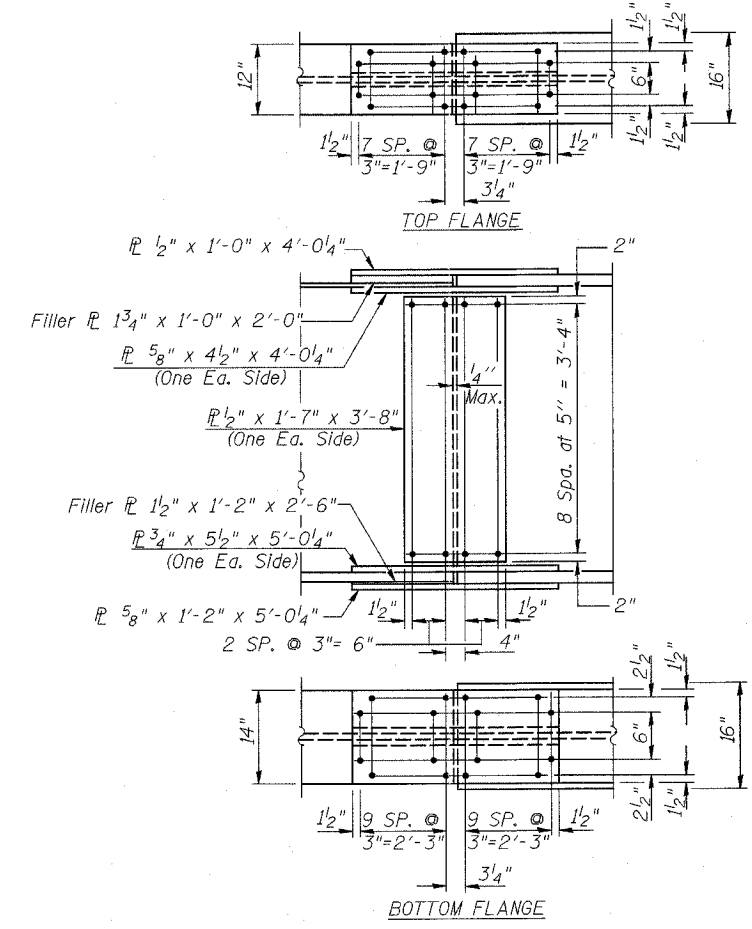
TOP OF WEB ELEVATIONS

	Girder 1A	Girder 2A	Girder 3A	Girder 4A
⊙ Brg. W. Abut.	541.646	541.515	540.622	540.486
⊙ Splice 1	541.488	541.356	540.464	540.328
⊙ Pier	541.488	541.356	540.464	540.328
⊙ Splice 2	541.488	541.356	540.464	540.328
⊙ Brg. E. Abut.	541.640	541.508	540.615	540.479

For Fabrication Only



CAMBER DIAGRAM



FIELD SPLICE DETAIL
All splice plates excluding filler \mathbb{R} 's shall be subject to Notch Toughness Requirements

PROP. INTERIOR GIRDER MOMENT TABLE

	0.4 Sp. 1 or 0.6 Sp. 2	Pier
I_s	(in ⁴) 22670	61900
$I_c(n)$	(in ⁴) 54340	—
$I_c(3n)$	(in ⁴) 39630	—
S_s	(in ³) 993	2314
$S_c(n)$	(in ³) 1338	—
$S_c(3n)$	(in ³) 1224	—
Z	(in ³) —	2557
ρ	(k/ft.) 1.12	1.73
$M\mathbb{R}$	(k) 741	3107
$s\mathbb{R}$	(k/ft.) 0.53	—
$M_s\mathbb{R}$	(k) 433	—
$M\mathbb{L}$	(k) 1090	1158
M (Imp)	(k) 229	243
$S_3[M\mathbb{L} + M(\text{Imp})]$	(k) 2198	2335
M_a	(k) 4384	7075
M_u	(k) 6285	7671
$f_s\mathbb{R}(\text{non-comp})$ (k.s.i.)	8.9	16.1
$f_s\mathbb{R}(\text{comp})$ (k.s.i.)	4.2	—
$f_s^{5_3}(\mathbb{L} + \text{Imp})$ (k.s.i.)	19.7	12.1
f_s (Overload) (k.s.i.)	32.8	28.2
VR	(k) 68.8	—

INTERIOR GIRDER REACTION TABLE

	Abuts.	Pier
$R\mathbb{R}$	(k) 107	238.6
$R\mathbb{L}$	(k) 51.2	91.8
Imp.	(k) 10.8	19.3
R (Total)	(k) 169	349.7

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing $f_s\mathbb{R}$ (non-comp.) and live load stresses at pier.

$I_c(n)$ and $S_c(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$I_c(3n)$ and $S_c(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

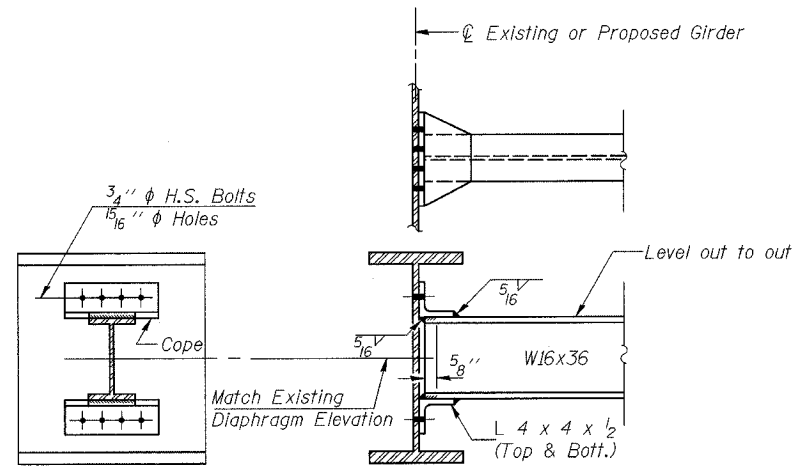
Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

M_a (Applied Moment) = $1.3[M\mathbb{R} + M_s\mathbb{R} + S_3(M\mathbb{L} + M(\text{Imp}))]$.

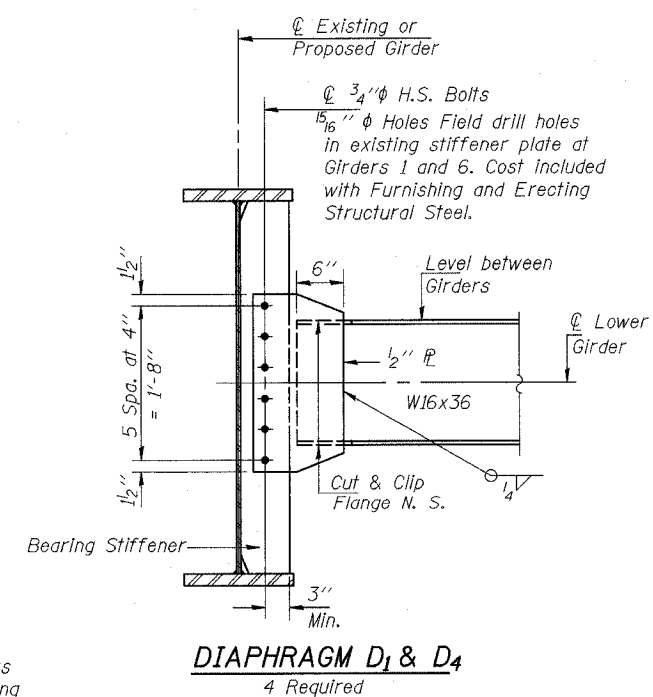
The Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 and 10.50.1.1.

f_s (Overload) is the sum of the stresses due to $M\mathbb{R} + M_s\mathbb{R} + S_3(M\mathbb{L} + M(\text{Imp}))$.

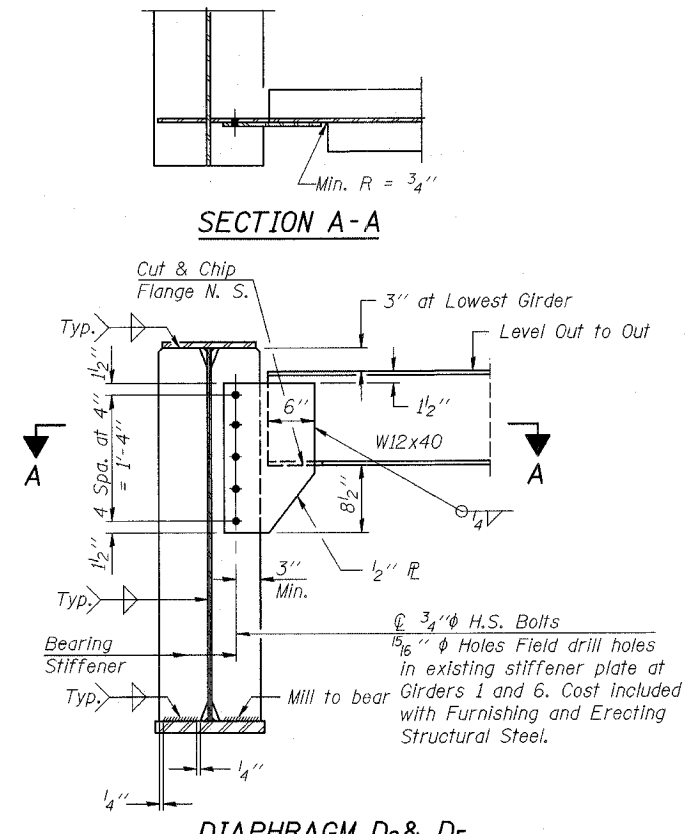
$R\mathbb{R}$ includes the weight of the concrete diaphragm and the dead load reaction from the approach pavement.



DIAPHRAGM D & D₃
32 Required



DIAPHRAGM D₁ & D₄
4 Required



DIAPHRAGM D₂ & D₅
8 Required

Note: Two hardened washers shall be required over all oversized holes.

NOTES

Two hardened washers shall be required over all oversized holes for diaphragms.

Remove and replace existing bolts at diaphragms connected to existing Girders 1 and 6. Cost included with Furnishing and Erecting Structural Steel.

Work this Sheet with Sheet 12 of 26.

SHEET TITLE		STRUCTURAL STEEL	
PROJECT	IL RTE. 32/33 OVER LITTLE WABASH RIVER OVERFLOW F.A.P. RTE. 774 SECTION 107BY-1 EFFINGHAM COUNTY STATION 1018+86.92 STRUCTURE NO. 025-0077	PROJECT NO.	02017
DRAWN BY	TFC	SCALE	
CHECKED BY	KPS/CME/MCB	DATE	
DRAWING NO.			
COOMBE-BLOXDORF P.C. Engineers/Land Surveyors Springfield, Illinois Design Firm License No. 184-002708			13
			OF 26 SHTS