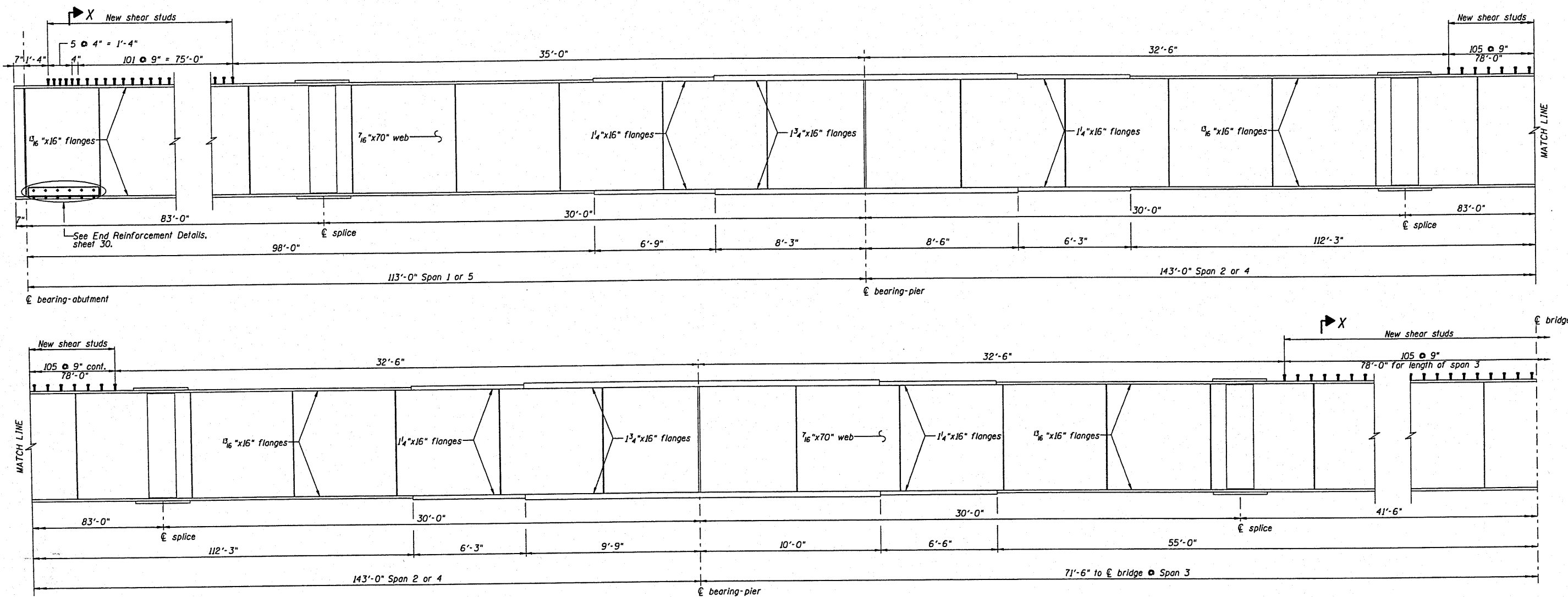
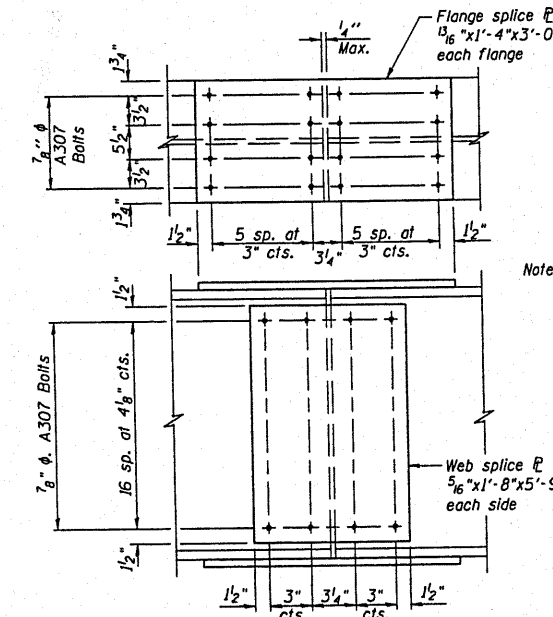


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 447		Fulton	43	29
FED. ROAD DIST. NO. 7	FILE NO.	FED. AID PROJECT		

*08-00121-01-BR



GIRDER ELEVATION SHOWING NEW SHEAR STUDS
Structure is symmetrical about the C of the bridge



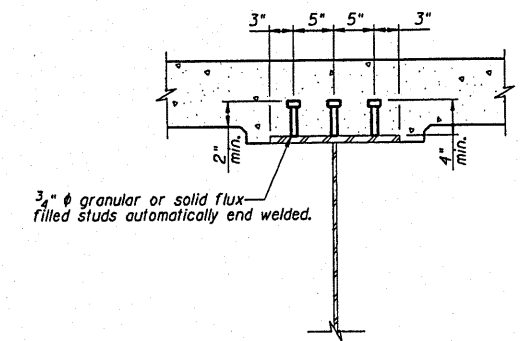
Note: All bolts of the top flange shall be inspected in the field. Those bolts that have broken heads or nuts, are cracked or loose, or have corrosion of the head or nuts shall be replaced with A325 bolts of the same diameter and length. The cost shall be included in the cost of Furnishing & Erecting Structural Steel.

DETAIL OF EXISTING SPLICES

	0.4 span 1 or 5	Pier 1 or 4	0.5 span 2 or 4	Pier 1 or 4	0.5 span 3
Is (in ⁴)	45107	84612	45107	87313	45107
Ic (3n) (in ⁴)	73031		73031		73031
Ic (1n) (in ⁴)	97248		97248		97248
Ss (in ³)	1259	2302	1259	2371	1259
Sc (3n) (in ³)	1519		1519		1519
Sc (1n) (in ³)	1658		1658		1658
Q (K/ft.)	0.845	0.845	0.845	0.845	0.845
M _l (girder only) (K)	168	-374	151	-383	148
M _l (w/o girder) (K)	863	-2309	775	-2356	758
s _l (K/ft.)	0.230	0.230	0.230	0.230	0.230
M _s (K)	189		170		166
M (K)	955	-1273	955	-1405	958
M (Imp) (K)	201	-252	179	-263	179
s ₃ (M _l + I) (K)	1927	-2542	1890	-2780	1895
M _o (K)	3872	-6306	3686	-6677	3665
f _s (non-comp) (k.s.i.)	8.23	-12.04	7.39	-11.92	7.22
f _s (comp) (k.s.i.)	1.49		1.34		1.31
f _s (l + I) (k.s.i.)	13.95	-13.25	13.68	-14.07	13.72
f _s (Overload) (k.s.i.)	23.67	-25.29	22.41	-25.99	22.25
f _s (Total) (k.s.i.)	30.77	-32.88	29.13	-33.79	28.93
VR (K)	67		70		73

	E. or W. Abutment	Pier 1 or 4	Pier 2 or 3
R _D (K)	52	186	186
R _L (K)	46	81	81
Imp. (K)	14	25	25
R (Total) (K)	112	292	292

Is and Ss are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing f_s (Total & Overload).
s_l is the load per foot for composite dead loads on the girder.
VR is the maximum live Load + Impact shear range in span.
M_o (Applied Moment) = 1.3[M_l + M_s + s₃(M_l + I)].
f_s (Overload) is the sum of the stresses due to M_D + M_s + s₃(M_l + I).
f_s (Total) is the sum of the stresses due to 1.3[M_l + M_s + s₃(M_l + I)].



GIRDER SECTION X

Item	Unit	Quantity
Stud Shear Connectors	Each	7,905

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J.A. Fraenhoffer				
APVD	J.A. Fraenhoffer	NO.	DATE	REVISION	BY

FRAUENHÖFFER
Frauenhoffer and Associates, P.C. Consulting Engineers
3002 Crossing Court Champaign, IL 61822 217-351-6268

STEEL FRAMING DETAILS-SHEET 2 OF 2
FAS 447 (C.H. 17) OVER SPOON RIVER
SECTION 08-00121-01-BR
FULTON COUNTY

SHEET 29
DWG NO. STL.dgn
DATE JAN 2010
PROJ NO. 8015