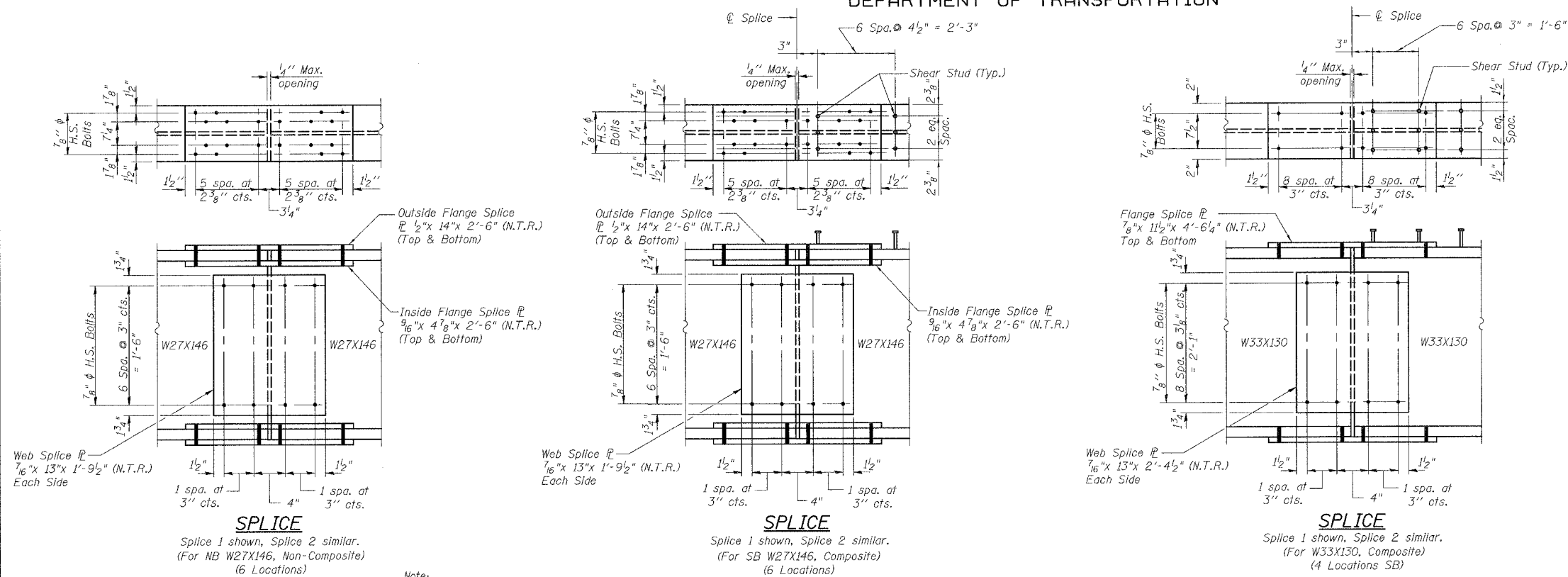


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. 9
FAI-55	**	WILL	50	31	15 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

** SECTION 2005-063 I
CONTRACT NO. 60A67



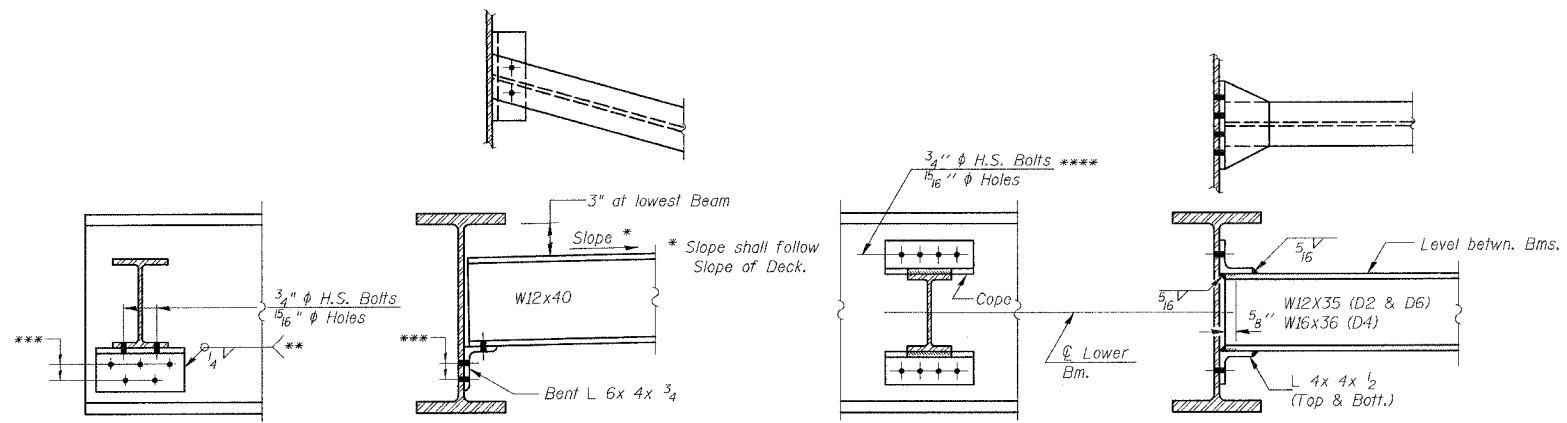
Note:
All bolts in splices are AASHTO M 164 (ASTM 325)
 $\frac{7}{8}$ " ϕ with Class A Contact Surfaces and Standard Holes.

INTERIOR GIRDER MOMENT TABLE
(NB PROPOSED BEAMS 9A & 9B, NON-COMPOSITE)

	0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
I (in) ⁴	5630	5630	5630
S (in) ³	411	411	411
D (k/ft.)	1.020	1.020	1.020
M _u (k)	183	293	137
M _t (k)	217	168	209
M (Imp) (k)	62	47	57
$\frac{1}{2}[M_u + M(Imp)]$ (k)	465	359	444
M _a (k)	842	849	757
F _s _u (k.s.i.)	5.3	8.6	4.0
F _s _u (k+Imp) (k.s.i.)	13.6	10.5	13.0
F _s (Overload) (k.s.i.)	18.9	19.1	17.0
F _s (Total) (k.s.i.)	24.6	24.8	22.1

INTERIOR GIRDER REACTION TABLE
(NB PROPOSED BEAMS 9A & 9B)

	Abut.	Pier
R _P (k)	19.4	61.0
R _L (k)	29.1	34.6
Imp. (k)	8.4	9.6
R (Total) (k)	56.8	105.2



END DIAPHRAGMS D1, D3 & D5

(6 D1 Required SB)
(4 D3 Required SB)
(6 D5 Required NB)

INTERIOR DIAPHRAGMS D2, D4 & D6

(18 D2 Required SB)
(12 D4 Required SB)
(18 D6 Required NB)

Note:
Two hardened washers shall be required
over all oversize holes for diaphragms.

** Field weld angle to existing Beam 1.

*** At existing Beams 7 and 9, remove existing bolts. Drill $\frac{15}{16}$ " ϕ holes in new seat angle L 6x4x $\frac{3}{4}$ " and reconnect with new $\frac{3}{4}$ " ϕ H.S. bolts. Support existing diaphragm as required while bolts are removed.

**** Drill $\frac{15}{16}$ " ϕ holes for $\frac{3}{4}$ " ϕ H.S. bolts in existing Beams 1, 7 and 9. Use new seat angle as template.

Notes:

- N.T.R. denotes members subject to the supplemental requirements for notch toughness (Zone 2).
- Work this Sheet with Sheet Nos. 7 & 8.

DESIGNED	J. ZUO
CHECKED	A. HAMMAD
DRAWN	J. ZUO
CHECKED	J. GRAINAWI

Date: 5/15/2006



STRUCTURAL STEEL DETAILS II
I-55 OVER E.J&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 009-0018 (NB)
STRUCTURE NO. 009-0019 (SB)