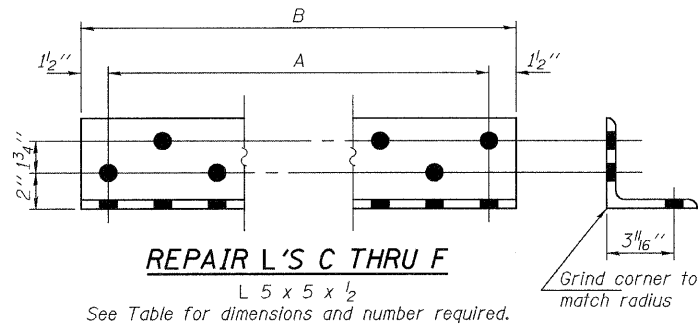
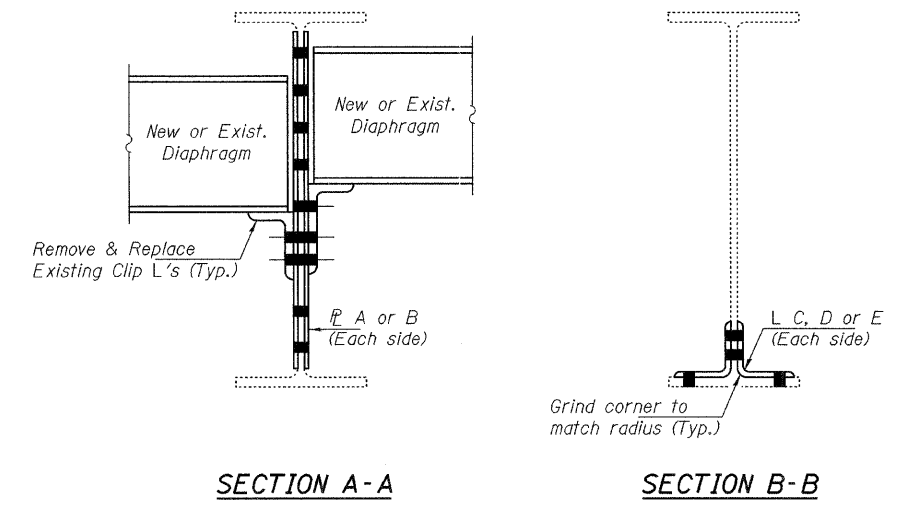
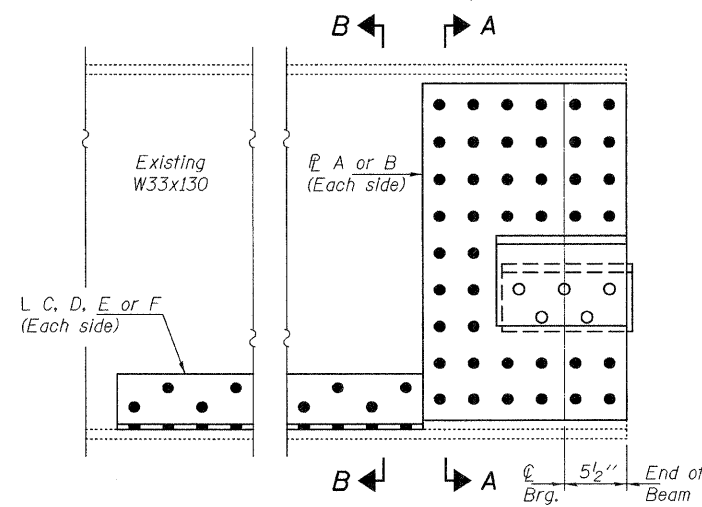
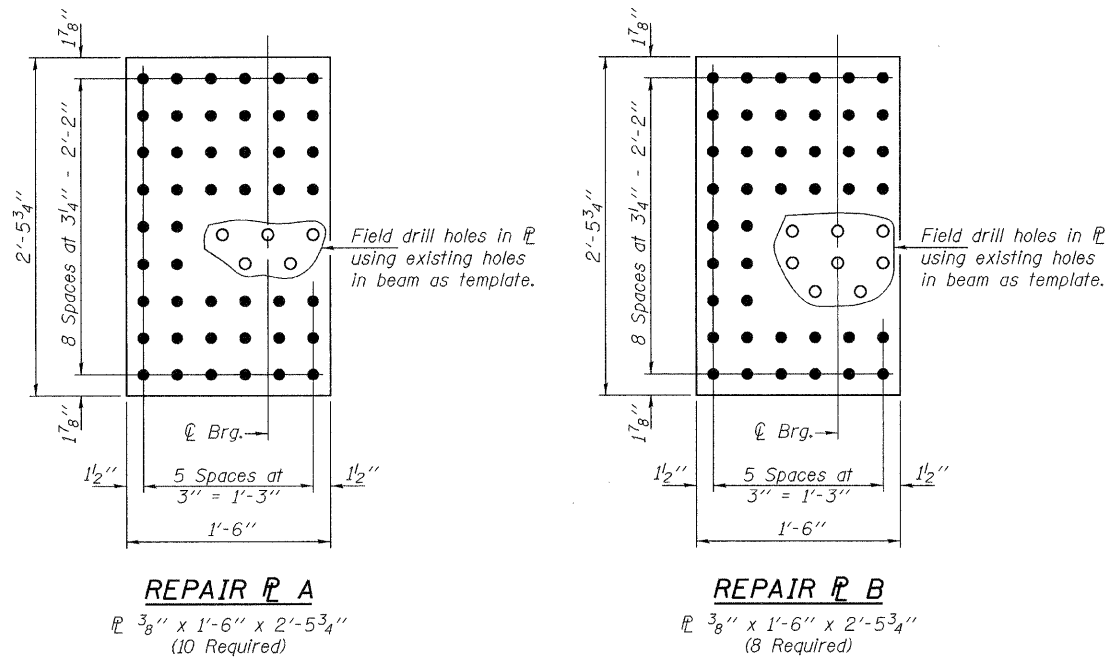
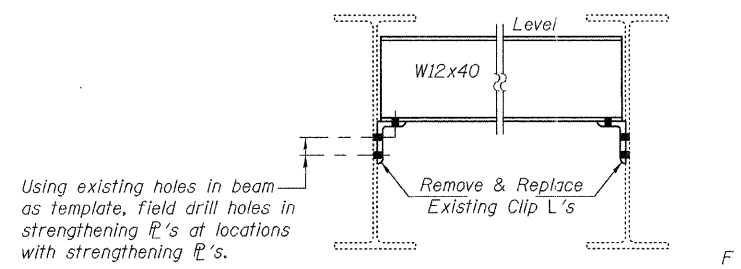


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**TYPICAL BEAM END REPAIR DETAIL**  
 New or Existing Diaphragms not shown for clarity.

Repair	Plates	Angles	Looking
(B)	A	none	West
(C)	A	C	West
(D)	A	F	East
(E)	A	C	West
(F)	B	none	West
(G)	B	E	East
(H)	B	C	East
(I)	B	D	West
(J)	A	D	East



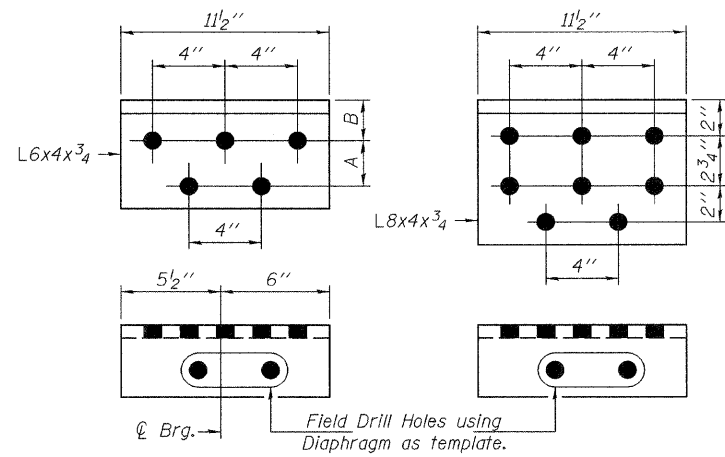
Angle	A	B	# Req'd
C	3 Spa. at 3" = 9"	1'-0"	6
D	7 Spa. at 3" = 1'-9"	2'-0"	4
E	9 Spa. at 3" = 2'-3"	2'-6"	2
F	27 Spa. at 3" = 6'-9"	7'-0"	2

**Notes:**  
 Strengthening & Repair PL's & L's not shown for clarity.  
 Natural camber of new beam shall be placed upward for fabrication.  
 Cost of furnishing and installing PL's & L's included with Structural Steel Repair.  
 New diaphragms & clip angles are included with Furnishing & Erecting Structural Steel.

**DIAPHRAGM REPLACEMENT DETAIL**

**CLIP ANGLE DIMENSIONS**

Location	A	B	# Req'd
Beam 1 at Pier 1, Pier 2 & N. Abut. Beam 2 at N. Abut. Beam 6 at Pier 1	2 1/2"	2 1/4"	6
Beam 2 at Pier 1	2"	2"	2
Beam 3 at Pier 1	2"	2 1/4"	2
Beam 4 at Pier 1	2"	2 3/8"	2
Beam 2 at Pier 2	2"	2 9/16"	1



**DIAPHRAGM DIMENSIONS**

Span	A	B	C	D	E	F	# Req'd
1	8'-0 5/16"	7'-5 7/16"	3 7/16"	1 3/4"	2 11/32"	10 7/8"	3
2	8'-0 1/4"	7'-5"	3 5/8"	2"	2 25/32"	10"	5
N. Abut.	8'-0 1/4"	7'-5 1/4"	3 1/2"	2"	2 25/32"	9 3/16"	1

DESIGNED	IJL
CHECKED	VHV
DRAWN	Kyle M. Steffen
CHECKED	IJL VHV

MARCH 11, 2010  
 EXAMINED *Carl Hoover*  
 ENGINEER OF STRUCTURAL SERVICES  
 PASSED *Ralph E. Anderson*  
 ENGINEER OF BRIDGES AND STRUCTURES

**REPAIR DETAILS**  
 SN 099-0171

SHEET NO. 2 3 SHEETS	F.A.U. RTE. 0327	SECTION 112 BR-I-1	COUNTY WILL	TOTAL SHEETS 28	SHEET NO. 13
	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60H86	