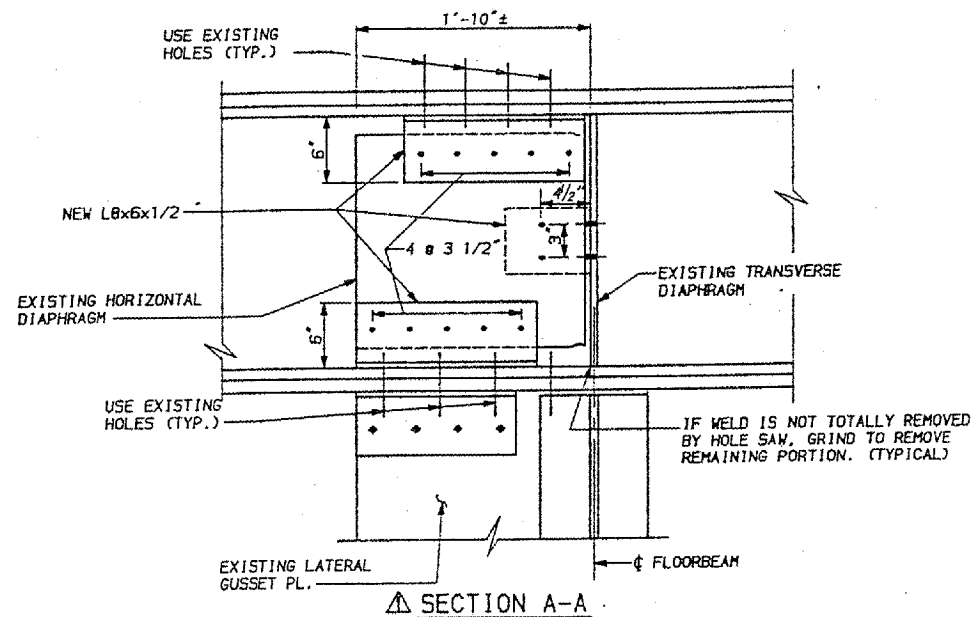
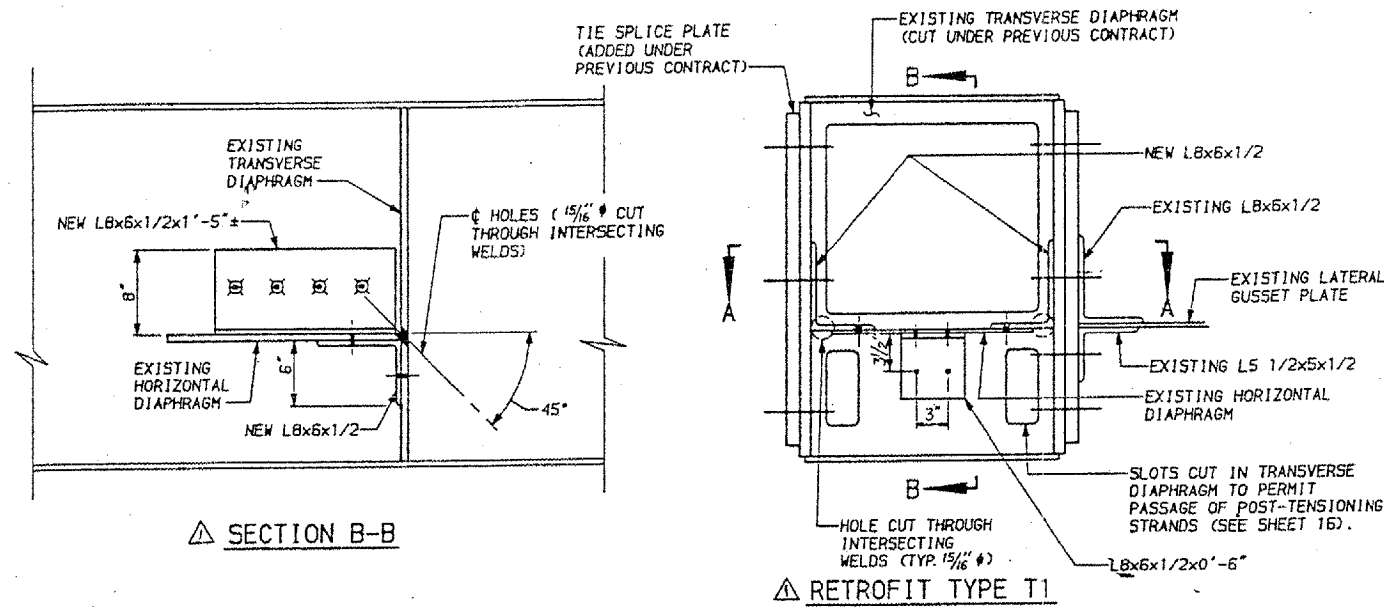


24	64-3B-1-3	*	32	29
ILLINOIS PROJECT		KENTUCKY PROJECT		
MASSAC, IL. & McCRACKEN, KY.				



**RETROFIT TYPE T1**

**GENERAL PROCEDURE**

1. REMOVE EXISTING BOLTS FROM TIE WEB PLATES AT LOCATIONS SHOWN ON DETAIL TO PERMIT PLACEMENT OF NEW ANGLES.
2. SECURE NEW ANGLES TO TIE WEB AND TRANSVERSE DIAPHRAGM SO THAT THE HORIZONTAL LEG IS TIGHT AGAINST THE HORIZONTAL DIAPHRAGM. USE EXISTING HOLES IN WEB AS A TEMPLATE TO DRILL HOLES IN NEW ANGLE. USE NEW ANGLE AS A TEMPLATE TO DRILL NEW HOLES IN THE HORIZONTAL AND TRANSVERSE DIAPHRAGMS.
3. CUT 1 5/16" Ø HOLES AS CLOSE AS POSSIBLE TO THE INTERSECTION OF THE HORIZONTAL DIAPHRAGM PLATE AND TRANSVERSE DIAPHRAGM PLATE ADJACENT TO THE TIE WEB PLATE. GRIND EDGES OF HOLES AS REQUIRED TO REMOVE THE INTERSECTIONS OF THE HORIZONTAL DIAPHRAGM-TO-WEB WELD, THE TRANSVERSE DIAPHRAGM-TO-WEB WELD, AND HORIZONTAL DIAPHRAGM-TO-TRANSVERSE DIAPHRAGM WELD. GRINDING SHALL NOT NICK OR GOUGE TIE WEB PLATES.
4. REMOVE THE HORIZONTAL DIAPHRAGM PLATE BY CUTTING THE PLATE AS CLOSE TO THE WEB AND TRANSVERSE DIAPHRAGM PLATES AS POSSIBLE WITHOUT NICKING, GOUGING, OR OVERHEATING THE WEB PLATES.
5. GRIND TO REMOVE THE WELD MATERIAL REMAINING ON THE WEB PLATES. WEB PLATES SHOULD BE GRIND TO A SMOOTH FINISH AND BE FULL-THICKNESS (ANSI 125 MIN.)
6. USE A POWER TOOL TO REMOVE PAINT FROM THE TOP FACE OF THE HORIZONTAL DIAPHRAGM PLATE AND FROM THE INSIDE FACE OF THE TIE WEB PLATES. PAINT SHOULD BE REMOVED FROM THE WEB PLATES FROM THE LOCATION OF THE HORIZONTAL DIAPHRAGM PLATE TO APPROXIMATELY 10 INCHES ABOVE THE DIAPHRAGM BY THE ENTIRE LENGTH OF THE HORIZONTAL DIAPHRAGM. PAINT SHOULD ALSO BE REMOVED FROM THE TOP OF THE HORIZONTAL DIAPHRAGM PLATE APPROXIMATELY 10 INCHES FROM THE WEB BY THE ENTIRE LENGTH OF THE HORIZONTAL DIAPHRAGM PLATE. REMOVE PAINT FROM THE BOTTOM FACE OF THE HORIZONTAL DIAPHRAGM PLATE APPROXIMATELY 4 INCHES LEFT AND RIGHT OF CENTERLINE TIE AND 10 INCHES OUT FROM THE TRANSVERSE DIAPHRAGM. REMOVE PAINT FROM TRANSVERSE DIAPHRAGM APPROXIMATELY 8 INCHES FROM THE BOTTOM OF THE HORIZONTAL DIAPHRAGM AND 4 INCHES LEFT AND RIGHT OF CENTERLINE.
7. USE DYE PENETRANT TO CHECK THE TIE WEB PLATES FOR CRACKS IN THE AREA WHERE THE HORIZONTAL DIAPHRAGM PLATE HAD BEEN WELDED TO THE WEB. IF A CRACK EXISTS, REMOVE CRACK BY GRINDING. ALL CRACKS IDENTIFIED SHOULD BE REPORTED TO THE ENGINEER.
8. USE A CHEMICAL CLEANING AGENT TO REMOVE DYE PENETRANT, CUTTING OIL AND OTHER DEBRIS FROM THE FAYING SURFACES ON THE WEB PLATES, THE TRANSVERSE DIAPHRAGM, THE HORIZONTAL DIAPHRAGM AND THE NEW ANGLES.
9. RE-INSTALL HORIZONTAL DIAPHRAGM WITH THREE NEW ANGLES AS SHOWN IN THE DETAIL.
10. PAINT ENTIRE RETROFIT AREA.

**NOTES:**

- FOR GENERAL NOTES, SEE SHEET 3.  
 FOR RETROFIT LOCATIONS, SEE SHEET 18.  
 ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- ♦ DENOTES EXISTING 7/8" Ø H.S. BOLT IN EXISTING HOLE.
  - DENOTES NEW 7/8" Ø H.S. BOLT IN NEW HOLES.
  - ⊠ DENOTES NEW 1 1/4" Ø H.S. BOLT (AASHTO M 253) IN EXISTING HOLE.

REV. NO.	DATE	BY	CHKD.	APPD.	DESCRIPTION	DATE
1	10/24/88	SLH	REM	JEP	MISCELLANEOUS	10/24/88

**F A I ROUTE 24 (INTERSTATE 24)  
 OVER OHIO RIVER  
 MASSAC COUNTY ILLINOIS**

**ARCH TIE RETROFIT**

PREPARED BY  
**MODJESKI AND MASTERS**  
 CONSULTING ENGINEERS

DRAWN: DTP  
 CHD: TBM  
 APPD: JEP  
 DATE: 10/11/88

QUANTITIES				
RETROFIT	ITEM	UNIT	UNIT II	UNIT V
TYPE T1	STRUCTURAL STEEL	LBS.	2,500	3,100