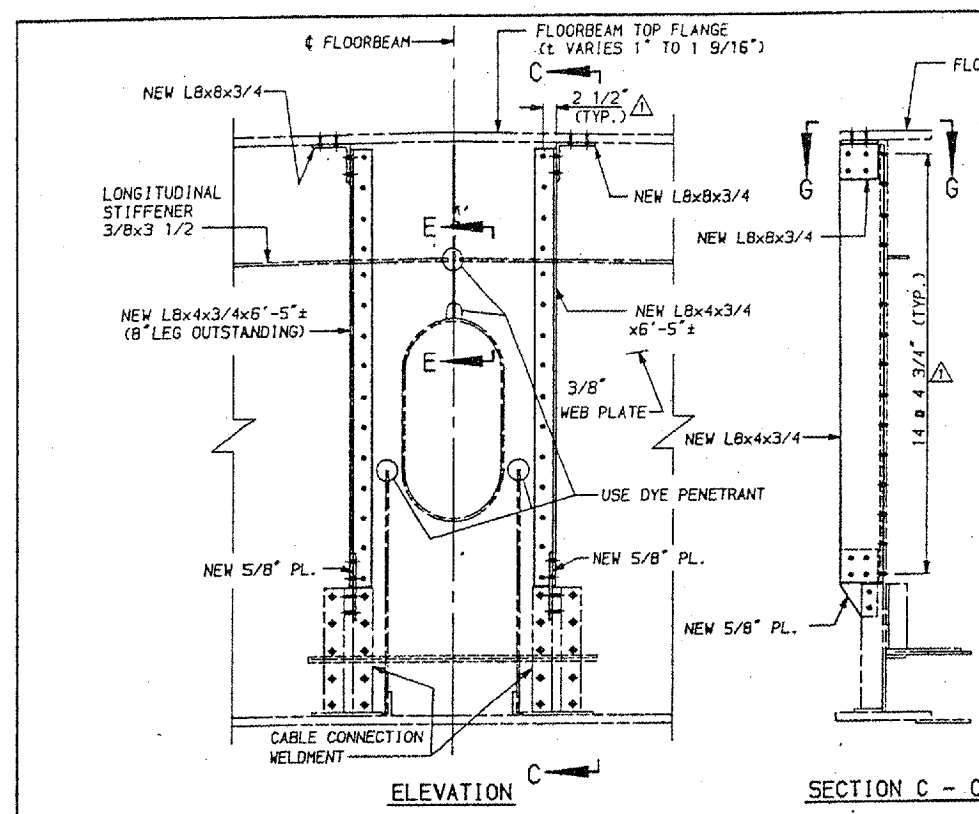
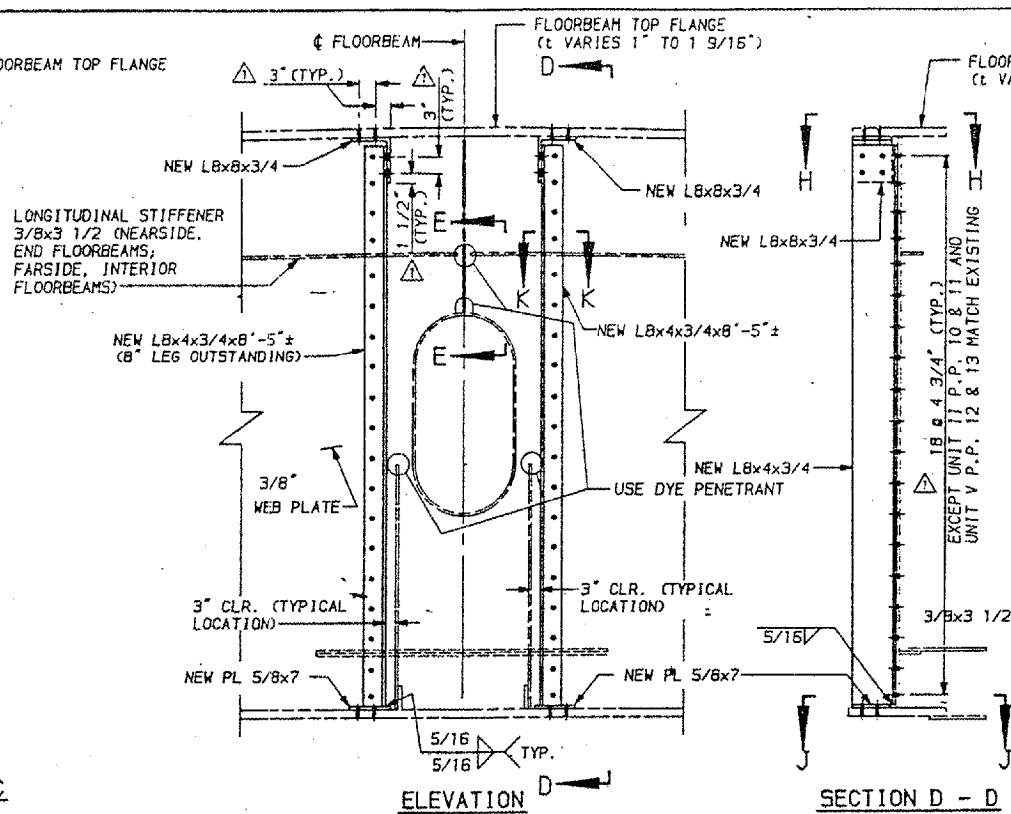


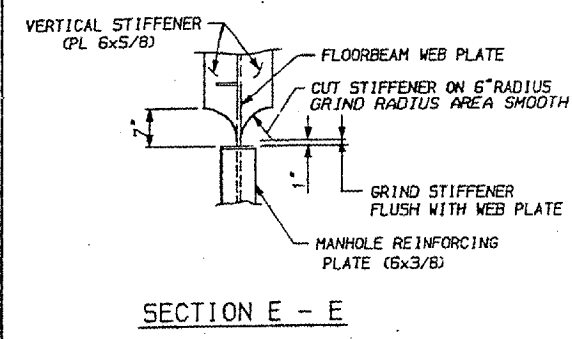
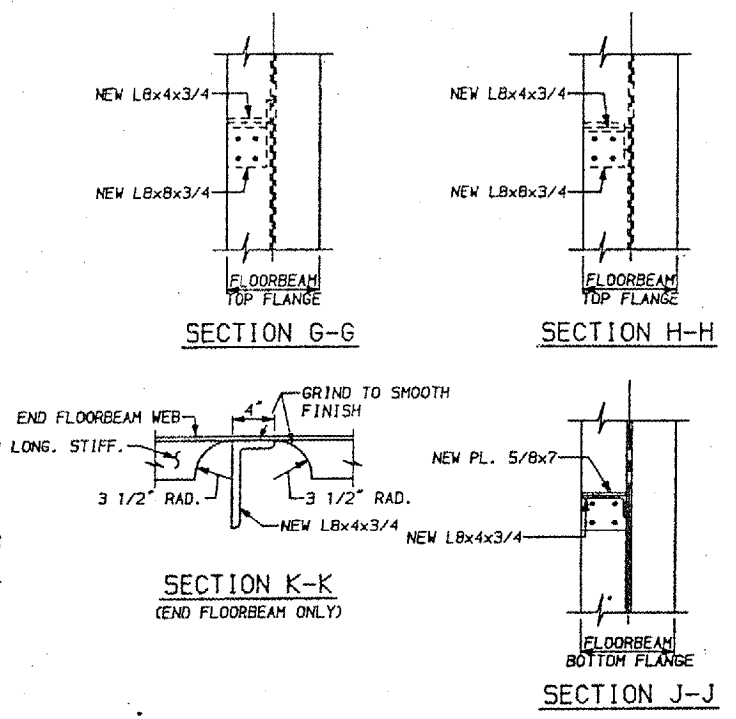
24	64-3B-I-3	#	32	22
F.A.I. PROJ. NO.		ILLINOIS PROJECT		
MASSAC, IL. & McCRACKEN, KY.				



RETROFIT TYPE F6



RETROFIT TYPE F7



SECTION E - E

RETROFIT TYPE F6 AND TYPE F7

GENERAL PROCEDURE:

1. CUT VERTICAL STIFFENER ON BOTH SIDES OF THE FLOORBEAM AS SHOWN IN SECTION E - E. GRIND CUT SURFACE TO A SMOOTH FINISH.
2. SANDBLAST TO REMOVE PAINT FROM THE FLOORBEAM WEB AND TOP OF MANHOLE STIFFENER WITHIN 6" OF EACH SIDE OF CENTER LINE OF FLOORBEAM.
3. USE DYE PENETRANT TO CHECK THE FLOORBEAM WEB FOR CRACKS AT THE LOCATIONS SHOWN ON THE SHORT TRANSVERSE STIFFENER ABOVE THE ACCESS HOLE. IF THE WEB IS CRACKED, DRILL A 15/16" DIAMETER HOLE AT THE CRACK TIP AND DEBURR HOLE. USE DYE PENETRANT ON THE NEWLY EXPOSED (DRILLED) SURFACE OF THE FLOORBEAM WEB TO ENSURE THAT THE CRACK DOES NOT EXTEND PAST THE HOLE. IF THE CRACK EXTENDS PAST THE HOLE, GRIND TO REMOVE CRACK OR DRILL ANOTHER HOLE. REPEAT DYE PENETRANT CHECK. SOLVENT CLEAN TO REMOVE CUTTING OIL AND GREASE.
4. BLAST CLEAN TO REMOVE PAINT FROM FLOORBEAM WEB WITHIN AN AREA 6" IN DIAMETER AND CENTERED AT THE TOP OF THE EXISTING CUT SHORT TRANSVERSE STIFFENERS ON BOTH SIDES OF THE MANHOLE.
5. USE DYE PENETRANT TO CHECK THE FLOORBEAM WEB FOR CRACKS AT THE TOP OF THE EXISTING CUT SHORT TRANSVERSE STIFFENERS ON BOTH SIDES OF THE MANHOLE. IF THE WEB IS CRACKED, DRILL A 15/16" DIAMETER HOLE AT THE CRACK TIP AND DEBURR HOLE. USE DYE PENETRANT ON THE NEWLY EXPOSED (DRILLED) SURFACE OF THE FLOORBEAM WEB TO ENSURE THAT THE CRACK DOES NOT EXTEND PAST THE HOLE. IF THE CRACK EXTENDS PAST THE HOLE, GRIND TO REMOVE CRACK OR DRILL ANOTHER HOLE. REPEAT DYE PENETRANT CHECK. SOLVENT CLEAN TO REMOVE CUTTING OIL AND GREASE.
6. REPEAT STEPS 2, 3, 4 AND 5 FOR THE OPPOSITE SIDE OF THE FLOORBEAM WEB.
7. AT END FLOORBEAMS ONLY, CUT LONGITUDINAL STIFFENER AS SHOWN IN SECTION K-K. GRIND CUT SURFACE TO A SMOOTH FINISH.
- 8A. SECURE NEW VERTICAL STIFFENER ANGLES IN PLACE ON THE FLOORBEAM WEB SO THAT THE NEW ANGLE IS TIGHT AGAINST THE EXISTING WELDMENT (TYPE F6) OR SECURE NEW VERTICAL STIFFENER ANGLE AND PLATE SO THAT THE NEW PLATE IS TIGHT AGAINST THE BOTTOM FLANGE (TYPE F7). USING THE NEW ANGLE AND PLATE AS A TEMPLATE, DRILL HOLES IN FLOORBEAM WEB (TYPE F6 AND F7) AND IN THE BOTTOM FLANGE (TYPE F7 ONLY).

RETROFIT TYPE F6 AND TYPE F7

GENERAL PROCEDURE: (CONTINUED)

- 8B. REMOVE EXISTING VERTICAL STIFFENER ANGLES, SIMILAR TO EXISTING ANGLES SHOWN ON RETROFIT TYPE B, SHEET 21. SECURE NEW VERTICAL STIFFENER ANGLE AND PLATE SO THAT THE NEW PLATE FITS TIGHT AGAINST THE BOTTOM FLANGE (TYPE F7). USE EXISTING HOLES IN FLOORBEAM WEB AS A TEMPLATE TO DRILL HOLES IN NEW VERTICAL STIFFENER ANGLE. USE NEW PLATE AS A TEMPLATE TO DRILL HOLES IN THE BOTTOM FLANGE (TYPE F7).
9. REMOVE NEW ANGLES AND PLATES AND SOLVENT CLEAN FAYING SURFACES ON FLOORBEAM WEB AND BOTTOM FLANGE TO CLEAN AND REMOVE CUTTING OIL. ALSO SOLVENT CLEAN AND REMOVE CUTTING OIL FROM FAYING SURFACES ON NEW ANGLES AND PLATES. SANDBLAST FAYING SURFACES ON FLOORBEAM WEB AND FLANGES TO REMOVE PAINT.
10. PLACE ANGLES ON FLOORBEAM WEB AND INSTALL BOLTS (TYPE F6) OR PLACE ANGLES ON FLOORBEAM WEB AND PLATE ON BOTTOM FLANGE AND INSTALL BOLTS (TYPE F7).
11. SECURE NEW ANGLES AGAINST OUTSTANDING LEG OF NEW VERTICAL STIFFENER ANGLES AND TOP FLANGE. DRILL HOLES IN THE OUTSTANDING LEG OF NEW STIFFENER ANGLE AND TOP FLANGE USING NEW ANGLE AS A TEMPLATE.
12. REMOVE NEW ANGLES AND SOLVENT CLEAN FAYING SURFACES ON OUTSTANDING LEG OF NEW VERTICAL STIFFENER AND TOP FLANGE TO CLEAN AND REMOVE CUTTING OIL. ALSO SOLVENT CLEAN AND REMOVE CUTTING OIL FROM SURFACES OF NEW ANGLE.
13. POSITION NEW ANGLE ON FLOORBEAM AND INSTALL BOLTS.

RETROFIT TYPE F6 ONLY

14. SECURE NEW PLATE TO BOTTOM OF OUTSTANDING LEG OF NEW VERTICAL STIFFENER ANGLE AND TO OUTSTANDING LEG OF EXISTING CABLE CONNECTION WELDMENT. DRILL HOLES IN OUTSTANDING LEG OF NEW VERTICAL STIFFENER ANGLE AND OUTSTANDING LEG OF EXISTING CABLE CONNECTION WELDMENT USING THE NEW PLATE AS A TEMPLATE.

RETROFIT TYPE F6 AND TYPE F7

GENERAL PROCEDURE: (CONTINUED)

15. REMOVE NEW PLATE AND SOLVENT CLEAN FAYING SURFACES ON OUTSTANDING LEGS OF NEW VERTICAL STIFFENER ANGLE AND EXISTING CABLE CONNECTION WELDMENT TO CLEAN AND REMOVE CUTTING OIL. ALSO SOLVENT CLEAN AND REMOVE CUTTING OIL FROM FAYING SURFACE ON NEW PLATE. SANDBLAST FAYING SURFACE ON LEG OF EXISTING VERTICAL TO REMOVE PAINT.
16. PLACE NEW PLATE IN FINAL POSITION AND INSTALL NEW BOLTS.
17. 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" H.S. BOLT IN EXISTING HOLE.
- DENOTES NEW 7/8" H.S. BOLT IN NEW HOLE, EXCEPT AS NOTED.

QUANTITIES				
RETROFIT	ITEM	UNIT	UNIT II	UNIT V
TYPE F6	STRUCTURAL STEEL	LBS.	900	900
TYPE F7	STRUCTURAL STEEL	LBS.	3,900	5,000

PREPARED BY
MODJESKI AND MASTERS
 CONSULTING ENGINEERS

DRAWN: CMH
 CHKD: TBM
 APPD: JEP
 DATE: 10/11/88

REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE

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