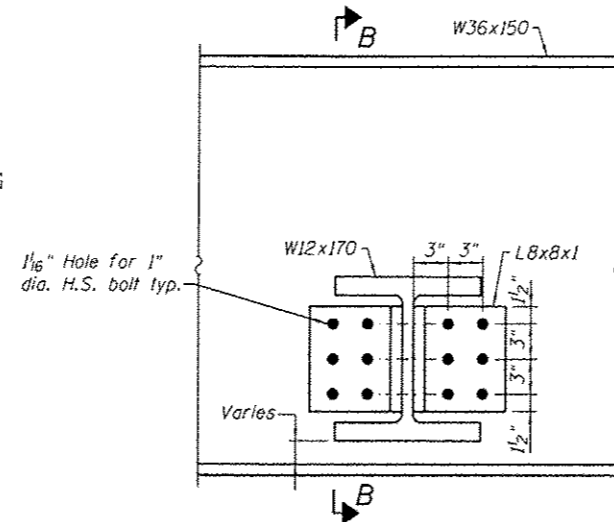
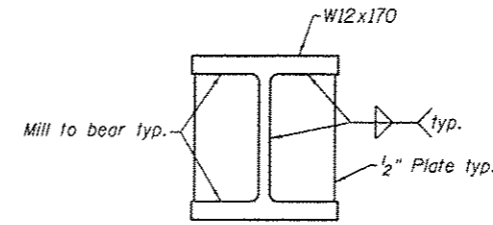


PLAN VIEW

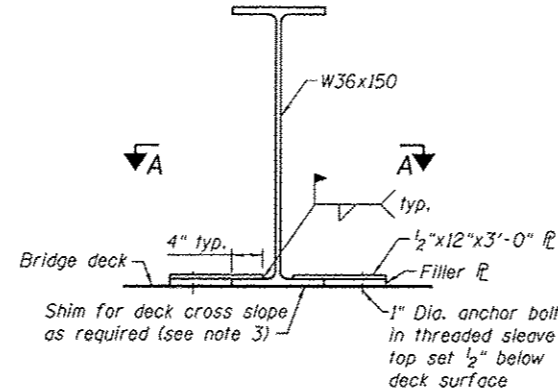


TYPICAL JACKING BEAM CONNECTION



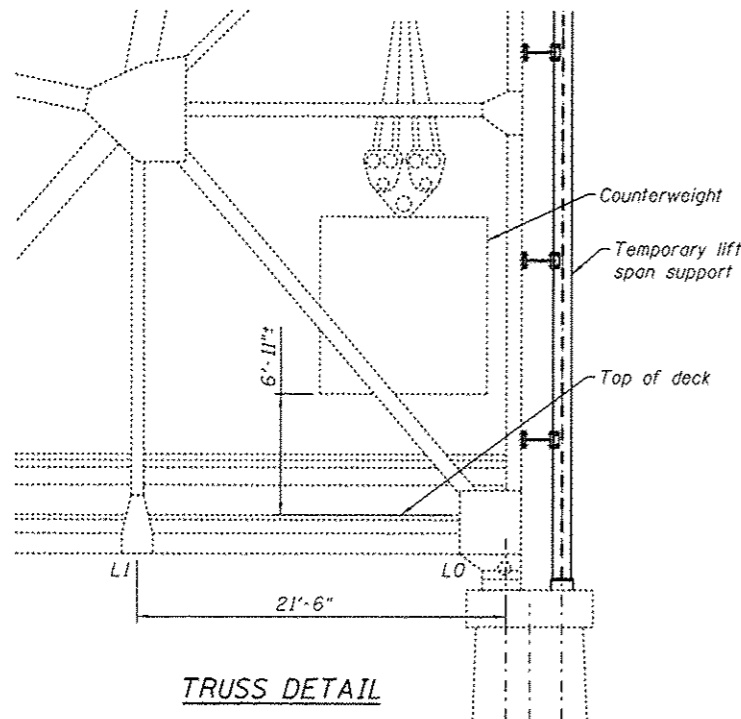
DETAIL A

Jacking stiffeners at all jacking locations (All stages)

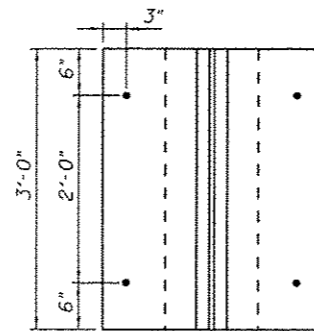


SUPPORT ATTACHMENT TO DECK

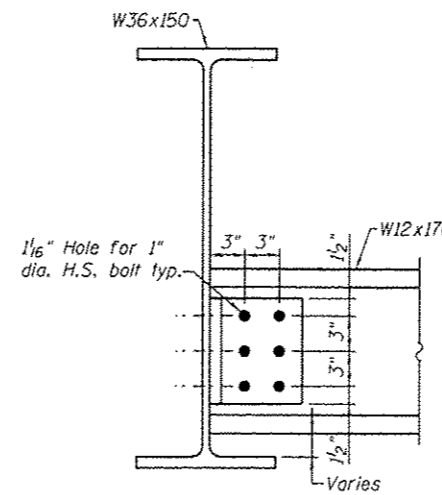
Provide 6 attachment plates per beam 3 on each side of web equally spaced



TRUSS DETAIL



SECTION A-A



SECTION B-B

SUGGESTED COUNTERWEIGHT JACKING PROCEDURE:

1. This jacking procedure is based on using four 200 ton jacks with a collapsed height of 30.13" and an 18" stroke. Jacks shall be double acting. This procedure is the same for the east and west counterweights. It may be necessary to lower span a few inches to fit jacks and support system. The weight of each counterweight is estimated to be 450 kips for design. Jacks shall be hydraulically interconnected to ensure simultaneous operation. Use a 12"x12"x1" plate against bottom of counterweight to jack against. This jacking procedure provides 40+ inches of jacking.
2. Estimated weight of structural steel for one counterweight support system = 62,500 lbs.
3. After the end floorbeam strengthening is complete, place the W36x150 beams directly over panel points LO & L1. Place shims between flange and deck as necessary to provide good bearing under the flange and to level beams. Fasten beams to deck as shown then install next level of W36x150 beams. Fasten bottom flange of beams to top flange of beams below them using 4-7/8" H.S. bolts at each intersection, see detail A on sheet 5 of 15.
4. Install W12x170 jacking beams as shown. For the first stage, the jacking beams will be placed with the bottom of the bottom flange 2" above the bottom of the W36x150. Raise jacks only until contact is made with counterweight. Release all span brakes. Continue with jacking procedure.
5. Jack the counterweight and install 3-W12x152 beams as shown. Fasten bottom flange of beams to top flange of beams below them using 4-7/8" H.S. bolts at each intersection.
6. Continue to jack and place next level of 3-W12x152 beams as shown. Fasten bottom flange of beams to top flange of beams below using 4-7/8" H.S. bolts at each intersection.
7. Remove W12x170 jacking beams and reinstall them with the top of the top flange 4 1/2" below top of top flange of W36x150.
8. Jack counterweight and install third layer of 3-W12x152 beams. Fasten bottom flange of beams to top flange of beams below them using 4-7/8" H.S. bolts at each intersection.
9. Bolt W12x170 on top of each W12x170 with 7/8" H.S. bolts on each side of web spaced longitudinally at a maximum of 8", see detail B on sheet 5 of 15.
10. Jack from top of second W12x170 and install 4th layer of W12x152 beams if necessary. Fasten bottom flange of beams to top flange of beams below them using 4-7/8" H.S. bolts at each intersection.
11. All layers may not be necessary. Stop adding layers when there is sufficient slack in the ropes to remove them from the sheaves. Anticipated relaxation of existing ropes is 10" to 14" (including 4" of immediate elastic relaxation and 6" to 10" of slow constructional stretch relaxation). New counterweight ropes are approximately 12" shorter than existing ropes.
12. When all bridge repairs are complete reverse procedure to lower counterweight and engage ropes to support counterweight and lift span. Set all span drive brakes when full weight of counterweights is supported by counterweight ropes. Monitor span movement; span may raise when loading counterweight ropes.
13. Complete removal of counterweight support should only be done after the system has been tested.
14. Remove anchor bolts in deck and patch holes per section 442 of the standard specifications.

Notes:
For general notes see sheet 2 of 15.
For additional details see sheet no. 5 of 15.

BOLT LEGEND

- Existing fastener to remain
- ◐ New bolt in existing hole
- New bolt in new hole
- New countersunk bolt on far side



USER NAME *	DESIGNED - JAK	REVISED -
PLOT SCALE *	CHECKED - DMS	REVISED -
PLOT DATE *	DRAWN - RSJ	REVISED -
	CHECKED - JAK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY COUNTERWEIGHT SUPPORT SYSTEM
AND JACKING DETAILS - 1
STRUCTURE NO. 086-0001

SHEET NO. 4 OF 15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
757	(201)	PIKE/SCOTT	17	6
CONTRACT NO. 72F75			ILLINOIS FED. AID PROJECT	