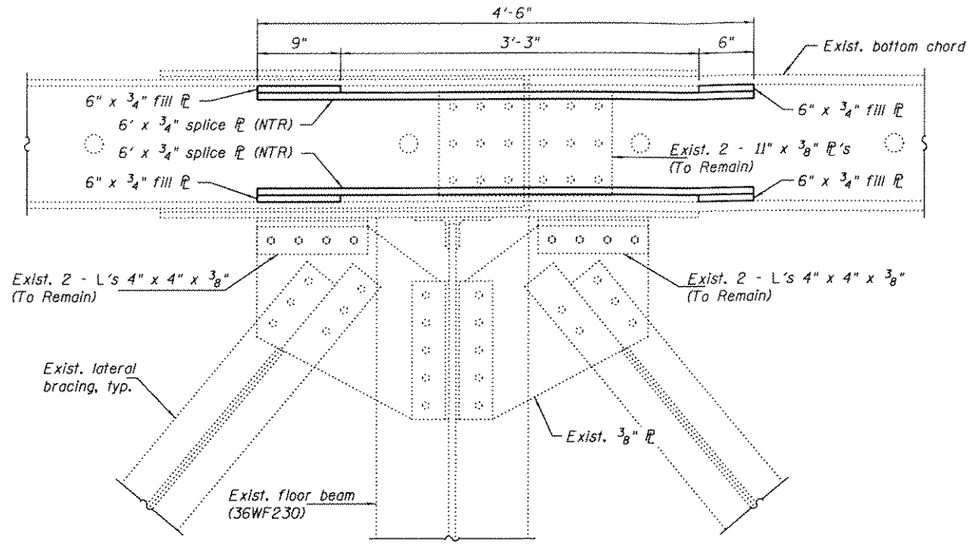
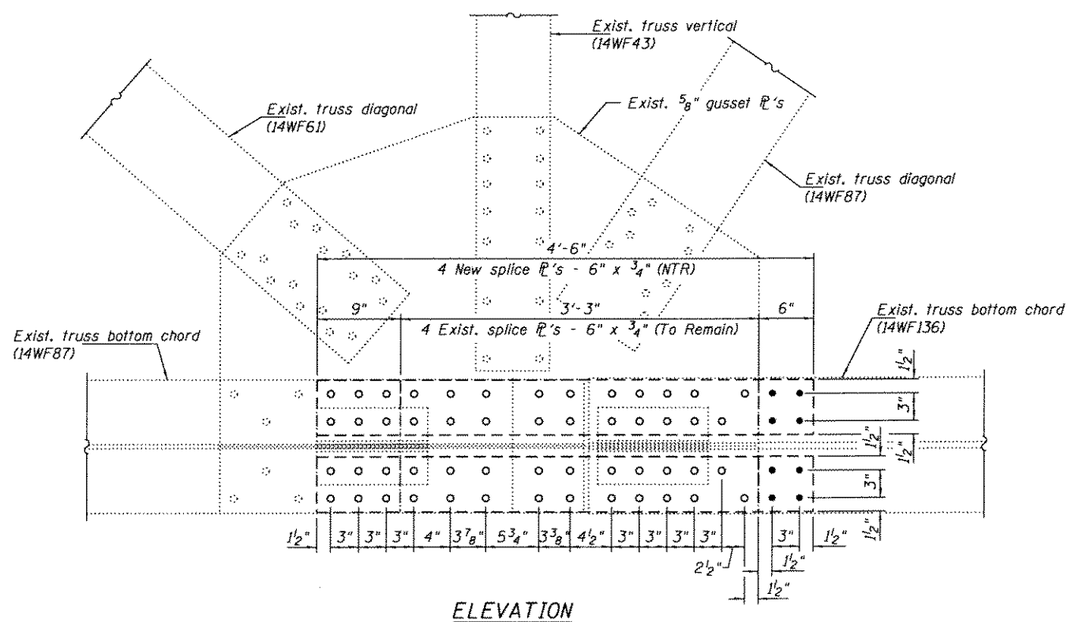


PLAN



ELEVATION

(4 Panel Points - L2 N, L2' N, L2 S, and L2' S)

BOTTOM CHORD STRENGTHENING PROCEDURE

1. Strengthen only one existing inside splice plate at a time, total of four at each repair location.
2. Field drill new 15/16" dia. holes in flange of truss bottom chord. The contractor may use new fill plate as a template.
3. Mechanically remove the heads of all designated rivets in accordance with the Special Provision for Structural Steel Repair.
4. With rivet shanks left in place, securely clamp new fill and splice plates in place. Tack welding to truss will not be permitted.
5. Install new A325 H.S. bolts in the new field drilled holes. Immediately tighten each bolt in accordance with the standard specifications before proceeding.
6. Next, drive out one rivet shank at a time and replace with an A325 H.S. bolt.
7. Immediately tighten bolt in accordance with standard specifications before proceeding.
8. Continue replacing one rivet with one bolt at a time until all rivets have been replaced.
9. Repeat steps 1 thru 8 until all four inside splices have been strengthened.
10. Proceed to the next repair location and repeat steps 1 thru 8.

LEGEND

● New 7/8" ϕ H.S. bolt thru new field drilled 15/16" ϕ hole in existing truss chord.

○ New 7/8" ϕ H.S. bolt thru new 15/16" ϕ holes in splice plate and existing 15/16" ϕ rivet hole in existing truss chord (See note 3).

◌ Existing 7/8" ϕ rivets to remain.

Notes:

1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
2. Only strengthen the bottom chord inside splices on the North side during Stage I and the South side during Stage II.
3. The existing rivet hole pattern and splice plate dimensions are shown for information only. The Contractor shall field verify existing dimensions prior to ordering materials.
4. The Contractor shall field verify the required bolt length and length of threads necessary to install all bolts in accordance with the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	2,050

design firm no. 184001036 whks engineers + planners + land surveyors

USER NAME = *OPERATOR*	DESIGNED - FLL/SBC	REVISED	
FILE NAME = 0820077-00002.dgn	CHECKED - CWC/SBC	REVISED	
PLOT SCALE = 0:2 '/ in.	DRAWN - FLL/DLH	REVISED	
PLOT DATE = 11/14/2012	CHECKED - CWC	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRUSS BOTTOM CHORD SPLICE STRENGTHENING DETAILS
STRUCTURE NO. 082-0077

SHEET NO. 15 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
817	421 BR-1	ST. CLAIR	43	30
		CONTRACT NO. 76F75		
		ILLINOIS FED. AID PROJECT		