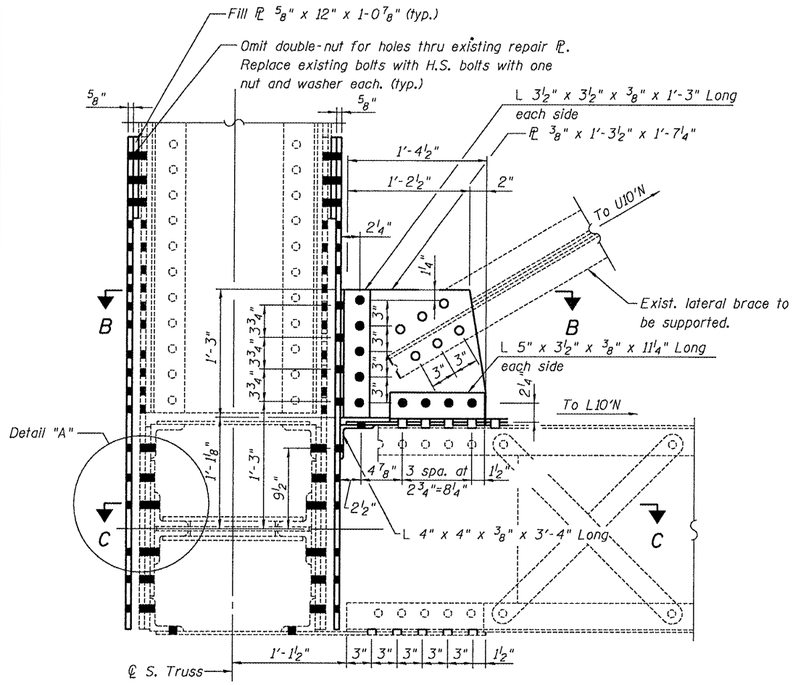
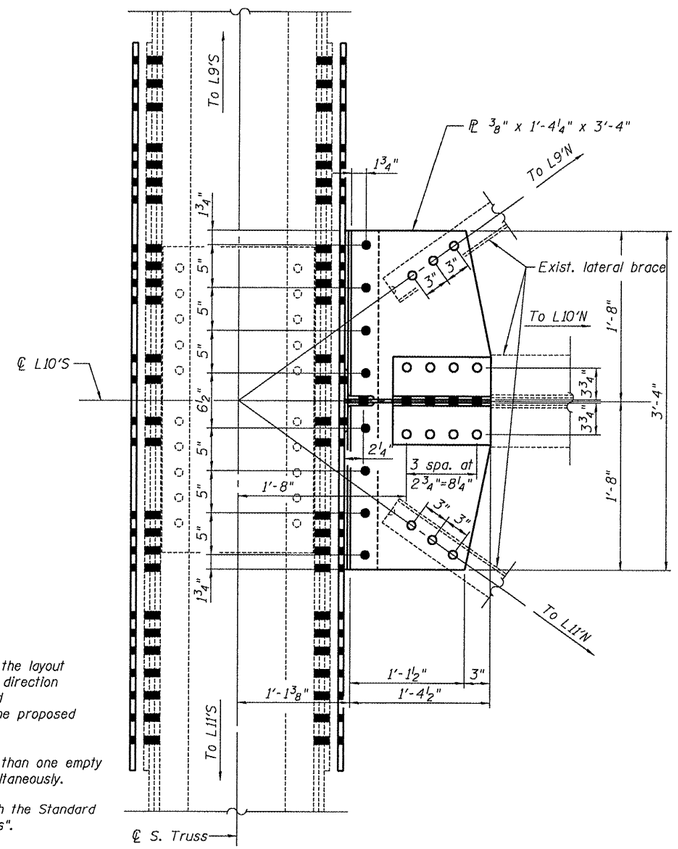
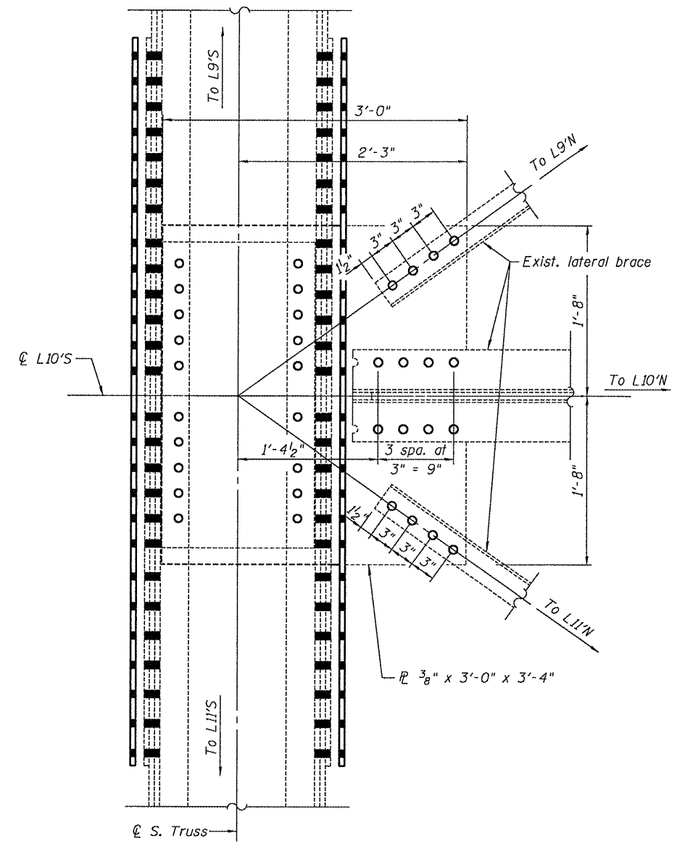
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



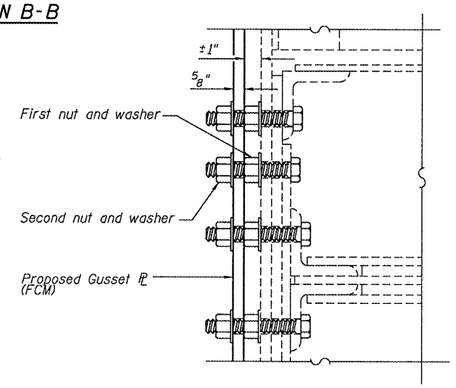
SECTION A-A



SECTION B-B



SECTION C-C



DETAIL "A"

(Outside gusset PL shown, inside gusset PL similar)

Notes:

The contractor shall field verify the dimensions of the proposed gusset plates, connection plates, connection angles and the layout of the fastener holes prior to ordering materials. The minimum distance between the centers of any of the holes in any direction shall not be less than 2 5/8". The Bureau of Bridges and Structures shall be contacted for further disposition if the field measurements indicate that the location of the existing fasteners result in a center-to-center spacing of the holes in the proposed gusset plates less than the minimum specified.

Existing gusset plate rivets are to be replaced one at a time with High Strength bolts. At no time shall there be more than one empty fastener hole, however removal and replacement of the rivets for the inside and outside gusset plates may be done simultaneously.

Contractor shall field verify the required bolt length and length of thread necessary to install all bolts in accordance with the Standard Specifications and Section 8.2.1 of the 2004 RCSC "Specification for Structural Joints Using ASTM A325 or A490 Bolts".

For tightening of the double-nut H.S. bolts for the gusset plate repair, as shown in Detail "A", using Turn-Of-The-Nut Method in accordance with Section 505.04(f)(2)d of the Standard Specifications and Section 8.2.1 of the 2004 RCSC "Specification for Structural Joints Using ASTM A325 or A490 Bolts", the bolt length used to determine the amount of nut rotation from the snug-tight condition shall be taken as the following. For tightening of the first nut, the length shall be from the underside of the head to the far side of the first nut. For tightening of the second nut, the length shall be from the inside face of the proposed gusset plate to the far side of the second nut.

Twist-off type fastener systems will not be permitted for the double-nut H.S. bolts for the gusset plate repair as shown in Detail "A".

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". The exterior surfaces of the existing gusset plates shall be cleaned per Power Tool Cleaning - Modified SSPC-SP3. The designated areas cleaned per Power Tool Cleaning - Modified SSPC-SP3 shall be painted according to the requirements of Paint System 2 - PS/EM/U. The color of the final finish coat shall be Gray, Munsell No 5B 7/1.

The Organic Zinc Rich Primer/Epoxy/Urethane paint system shall be used for painting of new structural steel except where otherwise noted. For gusset plate surfaces inaccessible after erection, the entire system shall be shop applied. The color of the final finish coat for all surfaces shall be gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures".

The Contractor shall take care to avoid exposing the threads, nuts and washers of the double-nut H.S. bolts for the gusset plate repair, as shown in Detail "A", to paint, dirt, moisture or other foreign material that may alter their as-received condition. Fastener components that accumulate rust, dirt or debris shall not be incorporated in the work unless they are requalified as specified in Section 7 of the 2004 RCSC "Specification for Structural Joints Using ASTM A325 or A490 Bolts".

- Indicates 15/16"ϕ shop drilled holes for 7/8"ϕ H.S. bolts. Contractor may elect to field drill holes.
- ○ Indicates 15/16"ϕ field drill holes for 7/8"ϕ H.S. bolts. Holes shall be field drilled using holes in the existing members as a template.

Work this sheet with sheets 9 thru 12 of 13.

SPAN 15 L10'S GUSSET PL REPAIR DETAILS
STRUCTURE NO. 090-0030

DESIGNED	SDS
CHECKED	FLL
DRAWN	DLH
CHECKED	SDS

WHKS & CO. ENGINEERING
7018 KINGSMILL CT., SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

•• PEORIA

SHEET NO. 13	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13 SHEETS	669	103B-I-5	••	18	18
			CONTRACT NO. 68987		
		ILLINOIS FED. AID PROJECT			

Filename: L:\Jobs\IDOT BBSV7199 BBS Various Various\7199.07\CADD\CADD Sheets\0900030-00000-3-25-10.dgn
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Operator: gjameson