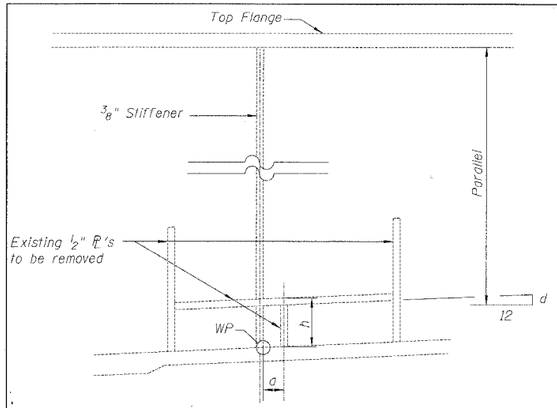
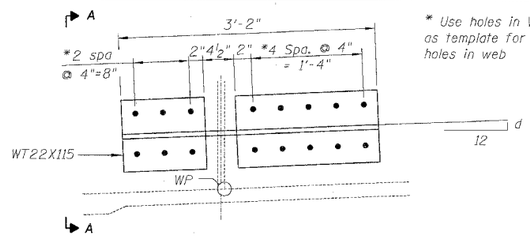
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	43
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

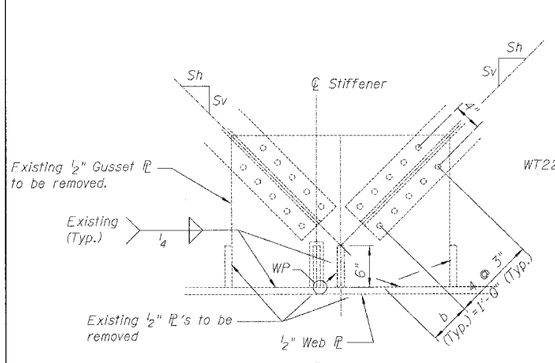


ELEVATION

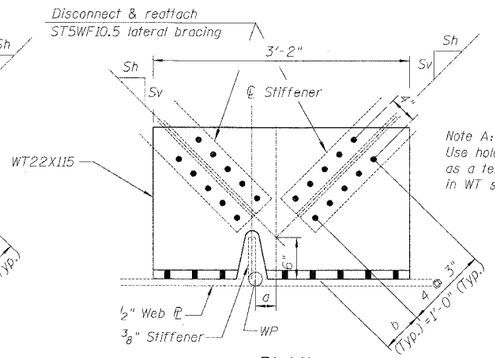


* Use holes in WT section as template for drilling holes in web

ELEVATION



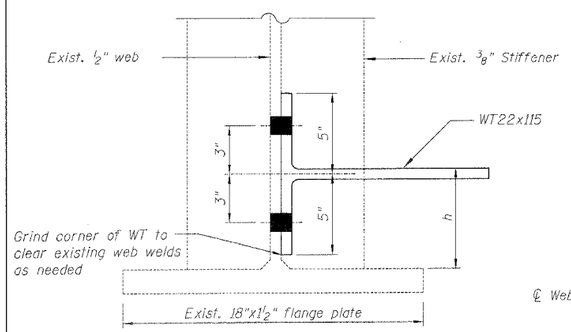
PLAN



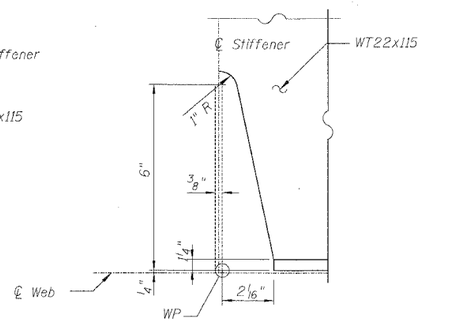
PLAN

EXISTING CONNECTION DETAIL

PROPOSED CONNECTION DETAIL



VIEW A-A



TYPICAL CONNECTION BRACKET DIMENSIONS

DETAIL E HOAN-TYPE CONNECTION REPAIR

PROCEDURE FOR REPAIR DETAIL

1. Remove existing horizontal gusset plate as shown. The minimum distance from cut to face of web shall be the larger of 1/4" or web to gusset ℄ weld size, with removal of remaining material by grinding as described below. The cut shall be made vertically through the gusset without angling the cut towards the web. Equipment and method of cutting shall be approved by the Enginner. Any method of removal to be used shall ensure that no damage is done to the existing web, vertical stiffener or welds connecting these elements. Cutting shall be done in a manner such that the paint on the opposite face of the web is not damaged. If damage occurs, the damaged area shall be repainted at the contractor's expense and procedures shall be modified to prevent damage at subsequent removal locations.

2. Remove material between cut and web by grinding and grind smooth at web suface. Web plate surfaces shall have a roughness average (Ra) of 250µ in. or less. Grinding equipment shall be approved by the Engineer. The grinding operation should not gouge the girder web ℄.

3. The web surface at the modification shall be inspected using dye penetrant or magnetic particle methods. Any cracks found shall be identified and reported to the Bureau of Bridges and Structures for further disposition.

HOAN-TYPE CONNECTION DETAIL DIMENSIONS

	Structure Number	Span	Girder No	a**	b	Sh	Sv	h	d
Northbound	016-1114	1	14	3"	6 7/16"	12	7	6 7/8"	5/8
			15	-3 1/2"	6 1/2"	12	7	9 3/16"	5/8
			16	-3 3/4"	6"	11 13/16	12	6 3/8"	11/16
			17	3 1/4"	6"	11 13/16	12	10 1/8"	11/16
			18	-3 9/16"	6"	11 13/16	12	7 1/2"	11/16
			19	3 1/4"	6"	11 13/16	12	11 9/16"	5/8
			20	-3 13/16"	6"	11 13/16	12	6 3/8"	5/8
			21	3 1/4"	6"	11 13/16	12	10 3/16"	5/8
	016-1070	1	22	-2 3/16"	6"	12	10 7/8	6 3/8"	5/8
			23	3 1/16"	5 15/16"	12	10 7/8	10 15/16"	5/8
	016-1114	3	14	3 1/16"	5 9/16"	12	7	6 1/2"	9/16
			15	-3 7/16"	5 9/16"	12	7	6 3/8"	9/16
			16	-3 11/16"	6"	11 13/16	12	6 3/8"	1/2
			17	3 5/16"	6"	11 13/16	12	6 1/2"	1/2
			18	-3 3/4"	6"	11 13/16	12	7 1/16"	9/16
			19	3 5/16"	6"	11 13/16	12	6 15/16"	9/16
			20	-3 11/16"	6"	11 13/16	12	7 1/2"	1/2
			21	3 1/4"	6"	11 13/16	12	7 3/8"	1/2
	016-1070	3	22	-4 1/8"	6"	12	10 7/8	6 3/8"	1/2
			23	3 1/4"	5 15/16"	12	10 7/8	6 11/16"	1/2
			25	3 5/16"	6"	12	6 13/16	6 7/16"	1/2
Southbound	016-1114	1	4	-2 1/16"	6"	12	10 7/8	6 3/8"	5/8
			5	3 7/16"	5 15/16"	12	8 7/8	8 3/16"	5/8
			6	-3 11/16"	6"	11 13/16	12	6 3/8"	5/8
			7	3 5/16"	6"	11 13/16	12	9 5/8"	5/8
			8	-3 11/16"	6"	11 13/16	12	6 7/8"	11/16
			9	3 5/16"	6"	11 13/16	12	10 5/16"	11/16
			10	-3 11/16"	6"	11 13/16	12	7 7/8"	11/16
			11	3 5/16"	6"	11 13/16	12	11 3/8"	11/16
			12	3 1/16"	6 7/16"	12	7	6 3/8"	5/8
			13	3 7/16"	6 1/2"	12	7	8 5/8"	5/8
	016-1066	1	1	3 3/16"	6"	12	6 13/16	6 3/8"	9/16
			2	-3 11/16"	6"	12	6 13/16	7 15/16"	9/16
	016-1114	3	4	3 3/4"	5 3/16"	12	10 7/8	6 1/4"	7/16
			5	3 11/16"	5 1/4"	12	10 7/8	6 5/8"	1/2
			6	3 11/16"	6 11/16"	11 13/16	12	6 3/8"	1/2
			7	3 5/16"	6 11/16"	11 13/16	12	6 7/8"	9/16
			8	3 11/16"	6 11/16"	11 13/16	12	7"	7/16
			9	3 5/16"	6 11/16"	11 13/16	12	7 7/16"	5/8
			10	3 11/16"	6 11/16"	11 13/16	12	7 3/4"	9/16
			11	3 5/16"	6 11/16"	11 13/16	12	7 7/8"	5/16
			12	3 1/16"	5 9/16"	12	7	6 3/8"	9/16
			13	3 7/16"	5 9/16"	12	7	6 5/16"	5/8
	016-1066	3	1	3 3/16"	5 3/16"	12	6 13/16	6 13/16"	9/16
			2	-3 11/16"	5 7/8"	12	6 13/16	6 3/8"	9/16

** "+" for north offset from WP. and "-" for south offset from WP.

BILL OF MATERIAL

Item	Unit	Quantity
Structural Steel Repair	Pound	18,440

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbandainc.com

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
DAN RYAN ELEVATED BRIDGE
BEARING REPLACEMENT & STEEL REPAIR

STEEL REPAIRS - DETAIL E

SCALE: NTS
DATE: 3/7/2008
DRAWN BY: MTR
CHECKED BY: BLU

3/21/2008 8:40:51 AM

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