

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**PROPOSED
 HIGHWAY PLANS**

FAU ROUTE 9105 (SALISBURY STREET)
 SECTION 119BR-I

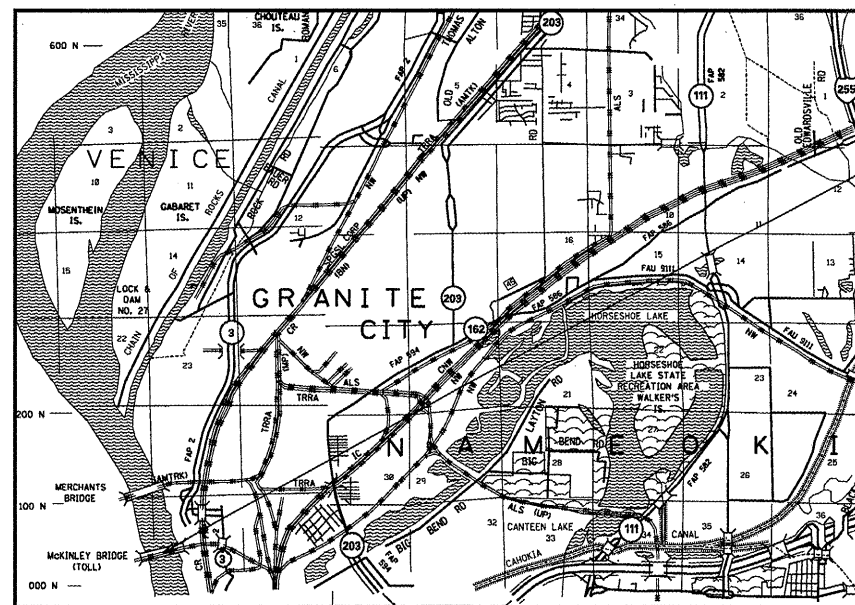
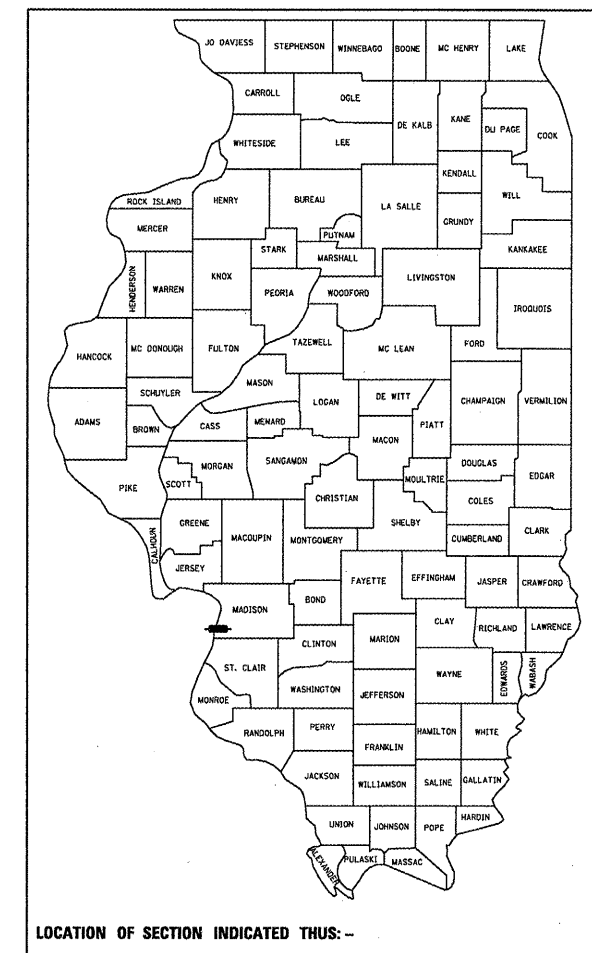
REPLACEMENT OF EYEBAR RESTRAINTS &
 PIN COLLARS & BEAM SHELF ASSEMBLY
 MADISON COUNTY

C-98-112-10

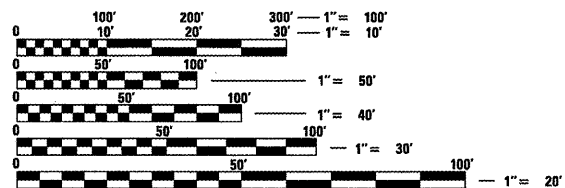
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9105	119BR-I	MADISON	6	1
		ILLINOIS	CONTRACT NO. 76E19	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

D-98-088-10



PROJECT LOCATION



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

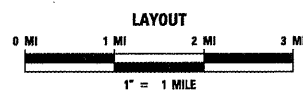
J.U.L.I.E.
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
 1-800-892-0123
 OR 811

PROJECT ENGINEER: PATTI LEBEAU (618) 346-3179
 PROJECT MANAGER: ART MUEHLFELD (618) 346-3209

CONTRACT NO. 76E19

T 3 N
 N
 S

R 10 W



LATITUDE = 38.917167
 LONGITUDE = 90.957278

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED *February 16 20 11*
May C. Jamel
 DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER
March 05 20 11
Scott E. Stitt, P.E.
 ENGINEER OF DESIGN AND ENVIRONMENT
March 05 20 11
Christine M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS

INDEX OF SHEETS

- 1 COVER PAGE
- 2 INDEX OF SHEETS/HIGHWAY STAND./GEN. NOTES/SOO
- 3-6 BRIDGE PLANS

GENERAL NOTES

1. THE STANDARDS AND REVISION NUMBERS STATED IN THE PLANS SHALL APPLY TO THIS CONTRACT.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
3. UTILITY INTERFERENCE'S ARE NOT ANTICIPATED ON THIS CONTRACT. IF UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, THIS WILL NOT BE CAUSE FOR ADDITIONAL COSTS TO BE ADDED TO THE CONTRACT. THE JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS (J.U.L.I.E.) SYSTEM NUMBER IS (800) 892-0123
4. "ROAD CONSTRUCTION AHEAD" SIGNS SHALL BE PLACED AT EACH END OF THE PROJECT AND ALL INTERSECTING SIDE ROADS AND WILL BE INCLUDED IN THE TRAFFIC CONTROL PAY ITEM. ALL CONSTRUCTION SIGNS SHALL BE FLORESCENT ORANGE IN COLOR, SKID MOUNTED, AND 48". NO ADDITIONAL COMPENSATION FOR THIS WILL BE ALLOWED.
5. THE RESIDENT ENGINEER SHALL VERIFY THE EXISTENCE OF HIGHWAY LIGHTING AND/OR I.T.S. UTILITIES WITHIN THE PROJECT LIMITS. IF HIGHWAY LIGHTING AND/OR I.T.S. EXISTS WITHIN THE PROJECT LIMITS, AND IF THESE ITEMS REQUIRE LOCATING, THE CONTRACTOR SHALL BE DIRECTED TO DO SO ACCORDING TO SECTION 803 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE PAID FOR ACCORDING TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.
6. NO LANE CLOSURES OF THE MAINLINE IN THE TRUSS AREA WILL BE ALLOWED.

HIGHWAY STANDARDS

000001-06
001006
701501-06
701901-01

NO COMMITMENTS

PERTINENT INFORMATION

1. CONTACT INFORMATION FOR GREAT RIVERS GREENWAY:
MS. SUSAN TRAUTMAN
GREAT RIVERS GREENWAY
1000 ST. LOUIS UNION STATION
SUITE 102
ST. LOUIS, MO 63103
PHONE NO.: (314)-436-7009
2. CONTACT INFORMATION FOR METRO EAST PARKS AND RECREATION DISTRICT:
MR. MIKE BUEHLHORN
METRO EAST PARKS AND RECREATION DISTRICT
104 UNITED DRIVE
COLLINSVILLE, IL 62234
PHONE NO.: (618)-346-4905

SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES			URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		100% STATE QUANTITIES	0014	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	2034	2034		
67100100	MOBILIZATION	L SUM	1	1		
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1		
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	10	10		
20001905	STRUCTURAL STEEL REPAIR	POUND	1209	1209		
X6350010	DELINEATOR FOR MEDIAN BARRIER SEPARATOR	EACH	79	79		

TRAFFIC CONTROL PLAN NOTES

1. TRAFFIC CONTROL AND PROTECTION STANDARD 701501 WILL BE USED TO REMOVE THE FLEXIBLE DELINEATORS ON THE MEDIAN BARRIER SEPARATOR. ONCE ALL DELINEATORS ARE REMOVED, DRUMS AND TYPE III BARRICADES WITH FLASHING LIGHTS WILL BE USED TO CLOSE THE CANTILEVER LANE UNTIL THE WORK ON THE BRIDGE IS COMPLETE. ONCE THE WORK ON THE BRIDGE IS COMPLETE, TRAFFIC CONTROL AND PROTECTION STANDARD 701501 WILL BE USED TO MAINTAIN TRAFFIC UNTIL ALL DELINEATORS FOR THE MEDIAN BARRIER SEPARATOR ARE REPLACED. SEE THE SPECIAL PROVISION "CLOSING THE CANTILEVER LANE" FOR MORE DETAILS REGARDING THE CANTILEVER LANE CLOSURE.
2. THE CONTRACTOR WILL NOT BE ALLOWED TO CLOSE ANY LANES ON THE MAINLINE IN THE TRUSS AREA DURING THE EXECUTION OF THIS CONTRACT.
3. THE CONTRACTOR SHALL REMOVE THE DELINEATORS IN SUCH A MANNER AS TO LIMIT THE DAMAGE TO THE DELINEATORS. ALL UNDAMAGED DELINEATORS SHALL REMAIN THE PROPERTY OF IDOT AND SHALL BE STORED AT A SECURE LOCATION UNTIL SUCH TIME AS THEY CAN BE DELIVERED TO THE FOLLOWING ADDRESS:

ILLINOIS DEPARTMENT OF TRANSPORTATION
12540 SPORTSMAN ROAD
HIGHLAND, IL 62249
CONTACT: TERRY GROSS - 618/654-5110

FILE NAME *	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX/STANDARDS/SOO/GEN. NOTES	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN -	REVISED -			9105	119BR-1	MADISON	6	2	
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -			CONTRACT NO. 76E19					
	PLOT DATE = #DATE#	DATE -	REVISED -			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT

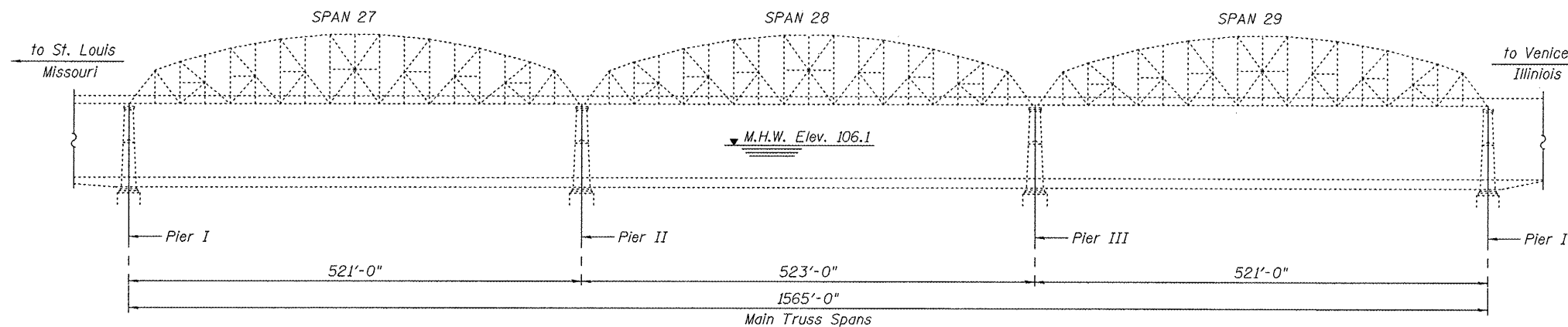
Bench Mark: Provided by District upon request.

Existing Structure: Built in 1910 and rehabilitated in 2007. The bridge consists of three through-truss main river spans with approach spans made of plate girders and rolled beams.

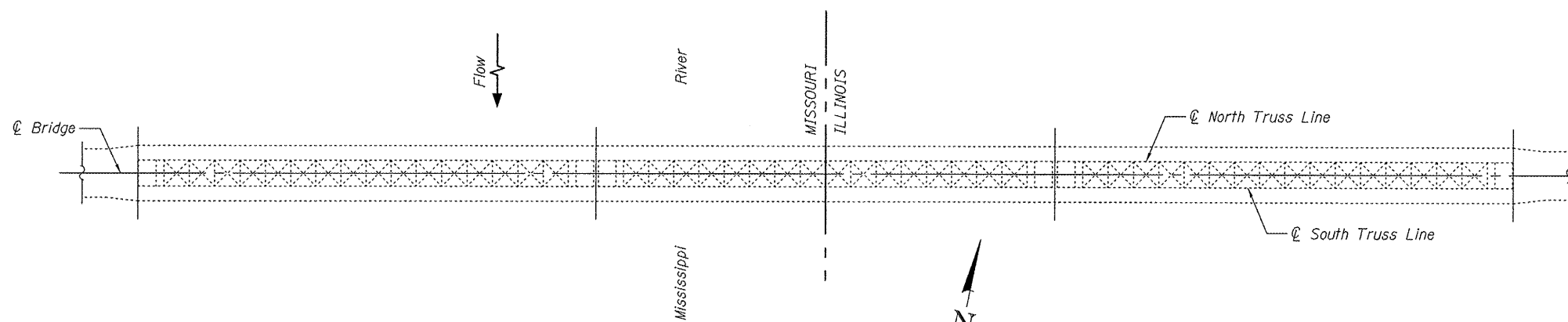
Proposed Repairs: Installation of eyebar restraint on Through-Truss Span 27 at Joint L14, North Truss. In addition, a beam shelf assembly shall be required at this location. Other work includes replacement of 34 pin collars at 21 locations.

No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



PLAN

GENERAL NOTES

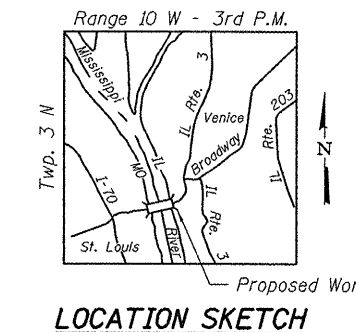
Fasteners shall be ASTM A307, mechanically galvanized bolts. Bolts 1/2-in. ϕ , holes 9/16-in. ϕ , unless otherwise noted.
 All structural steel shall be AASHTO M 270 Grade 50, unless noted otherwise.
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
 The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all steel surfaces shall be Munsell Brown, color code V255. See Special Provision for "Cleaning and Painting New Metal Structures".
 Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision, "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
 Existing structural steel (pins) shall be coated as required by the Special Provision, "Cleaning and Painting Existing Steel Structures".
 The fabricator shall provide 2 gallons of finish coat for final touch-up after erection.

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 Main Span Truss Elevation and Table of Repair Locations
- 3 Eyebar Restraint Details
- 4 Existing Pin Collar Removal and Replacement Details

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing and Erecting Structural Steel	Pound	2034
Structural Steel Repair	Pound	1209



LOCATION SKETCH



DESIGNED - M.E.L.	200
CHECKED - D.W.P.	ENGINEER OF STRUCTURAL SERVICES
DRAWN - P.R.C.	PASSED
CHECKED - M.E.L.	ENGINEER OF BRIDGES AND STRUCTURES

11/23/2009



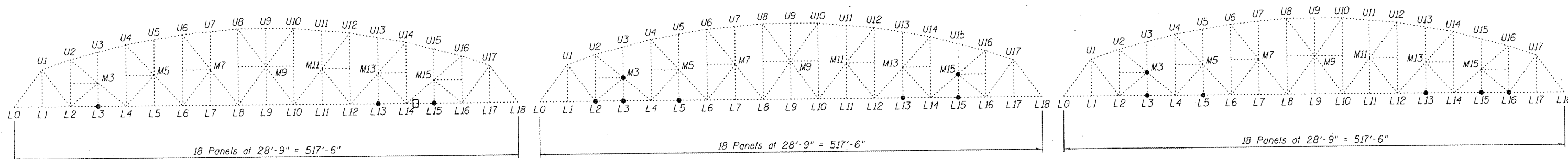
David W. Petermeier, 3/14/11

DAVID W. PETERMEIER
EDWARDSVILLE, ILLINOIS
ILLINOIS LICENSED STRUCTURAL
ENGINEER NO. 081-005642
EXPIRES 11/30/2012

GENERAL PLAN AND ELEVATION
McKINLEY BRIDGE OVER MISSISSIPPI RIVER
BETWEEN VENICE, ILLINOIS AND ST. LOUIS, MISSOURI
MADISON COUNTY
STRUCTURE NO. 060-6002

SHEET NO. 1	F.A.U. RTE. 9105	SECTION 119 BR-I	COUNTY MADISON	TOTAL SHEETS 6	SHEET NO. 3
4 SHEETS	SN 060-6002		CONTRACT NO. 76E19		
FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SPAN 27

SPAN 28

SPAN 29

MAIN SPAN TRUSS ELEVATION

(Looking North)

TABLE OF REPAIR LOCATIONS

SPAN	JOINT	TRUSS	COLLAR WIDTH (INCHES)	LOCATION			REPAIR
				INSIDE	MIDDLE	OUTSIDE	
27	L3	North	7 $\frac{1}{4}$	1		1	Pin Collar Replacement
27	L3	North	2 $\frac{1}{2}$			1	Pin Collar Replacement
27	L13	North	4			1	Pin Collar Replacement
27	L14	North	---	---	---	---	Eyebar Restraint & Beam Shelf Installation
27	L15	North	7 $\frac{1}{4}$			1	Pin Collar Replacement
27	L15	North	2 $\frac{1}{2}$			1	Pin Collar Replacement
27	L3	South	7 $\frac{1}{4}$	1		1	Pin Collar Replacement
28	L2	North	2 $\frac{1}{4}$	1		1	Pin Collar Replacement
28	L15	North	7 $\frac{1}{4}$	1		1	Pin Collar Replacement
28	L15	North	2 $\frac{1}{2}$	1			Pin Collar Replacement
28	M3	North	7 $\frac{1}{4}$		1		Pin Collar Replacement
28	M15	North	7 $\frac{1}{4}$		1		Pin Collar Replacement
28	L3	South	7 $\frac{1}{4}$	1		1	Pin Collar Replacement
28	L5	South	4			1	Pin Collar Replacement
28	L13	South	7 $\frac{1}{4}$			1	Pin Collar Replacement
28	M3	South	7 $\frac{1}{4}$		1		Pin Collar Replacement
28	M15	South	7 $\frac{1}{4}$		1		Pin Collar Replacement
29	L5	North	4	1		1	Pin Collar Replacement
29	L13	North	4			1	Pin Collar Replacement
29	L15	North	7 $\frac{1}{4}$	1		1	Pin Collar Replacement
29	L15	North	2 $\frac{1}{2}$			1	Pin Collar Replacement
29	L16	North	2 $\frac{1}{4}$	1		1	Pin Collar Replacement
29	M3	North	7 $\frac{1}{4}$		1		Pin Collar Replacement
29	L3	South	7 $\frac{1}{4}$	1		1	Pin Collar Replacement
29	L16	South	2 $\frac{1}{4}$			1	Pin Collar Replacement
29	M3	South	7 $\frac{1}{4}$		1		Pin Collar Replacement

REPAIR LEGEND

- Pin Collar Replacement
- Eyebar Restraint and Beam Shelf Installation

**MAIN SPAN TRUSS ELEVATION AND
TABLE OF REPAIR LOCATIONS
McKINLEY BRIDGE OVER MISSISSIPPI RIVER
BETWEEN VENICE, ILLINOIS AND ST. LOUIS, MISSOURI
MADISON COUNTY
STRUCTURE NO. 060-6002**



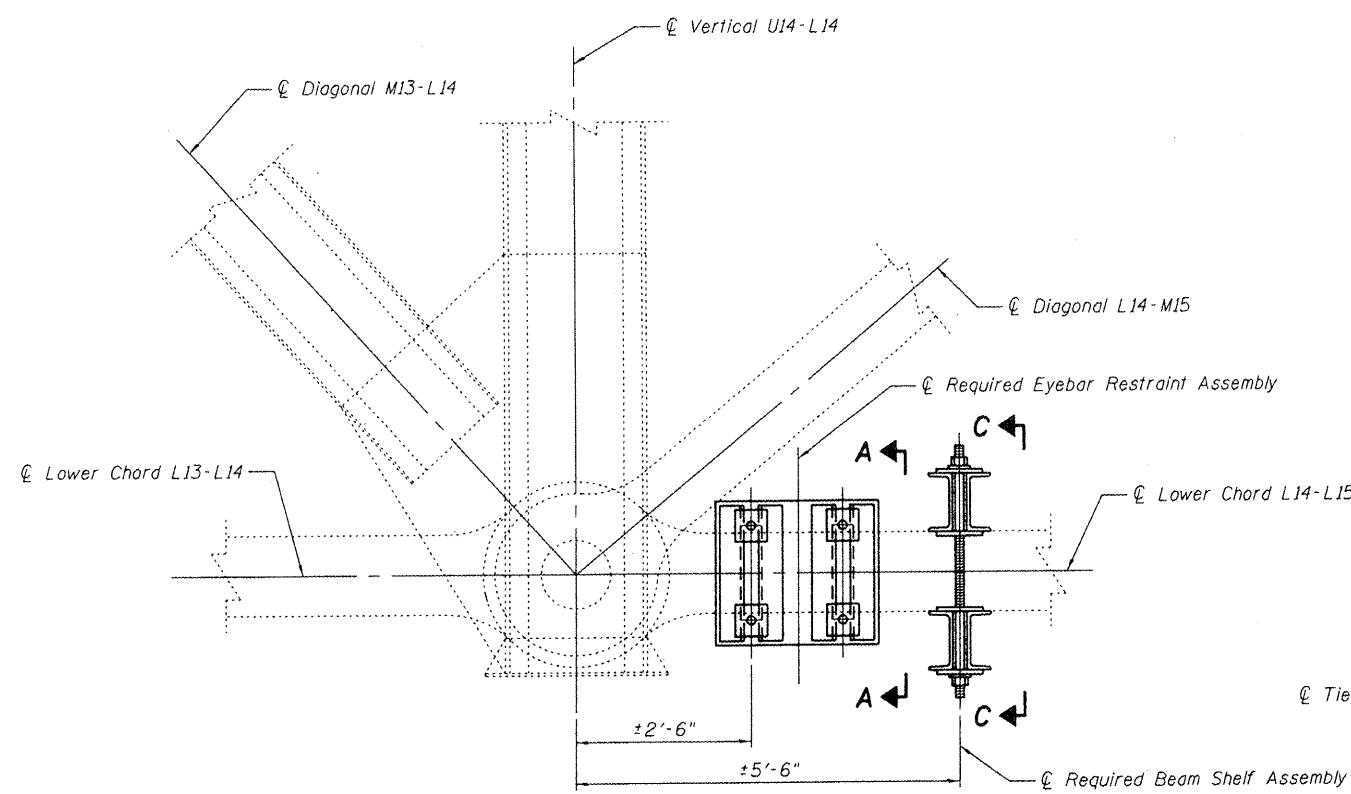
DESIGNED - M.E.L.
CHECKED - C.D.B.
DRAWN - P.R.C.
CHECKED - M.E.L.

11/23/2009

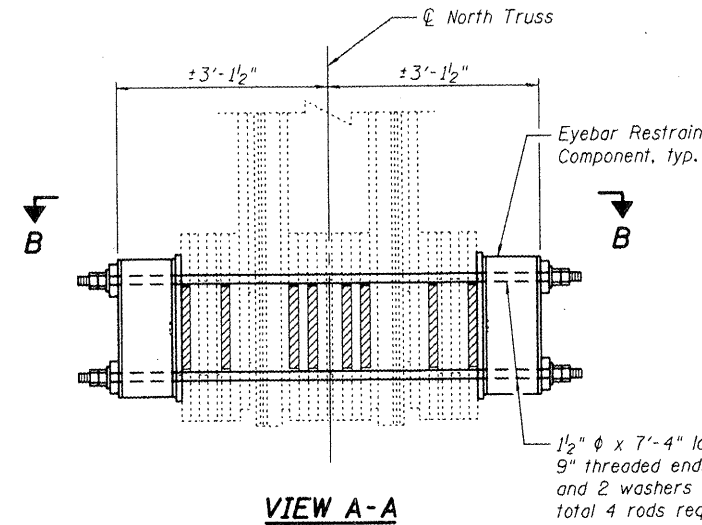
200
EXAMINED
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

SHEET NO. 2 4 SHEETS	F.A.U. RTE. 9105	SECTION 119 BR-I	COUNTY MADISON	TOTAL SHEETS 6	SHEET NO. 4
	SN 060-6002		CONTRACT NO. 76E19		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

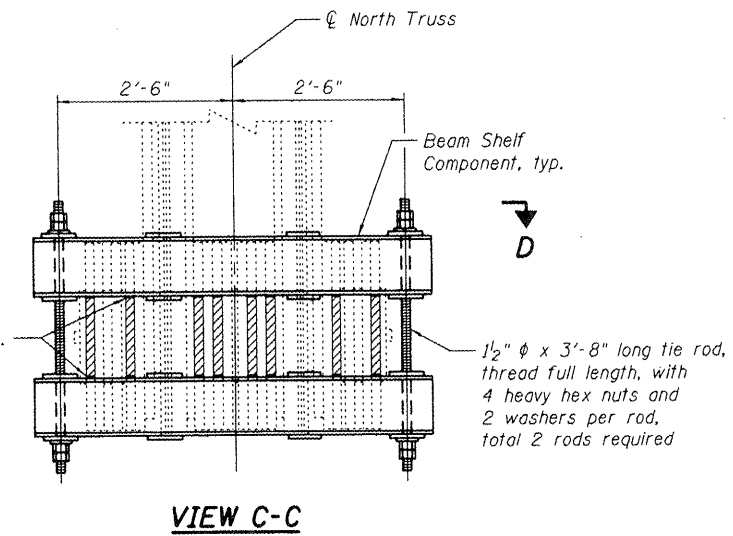


**EXISTING LOWER CHORD ELEVATION
SPAN 27 AT JOINT L14 OF NORTH TRUSS**

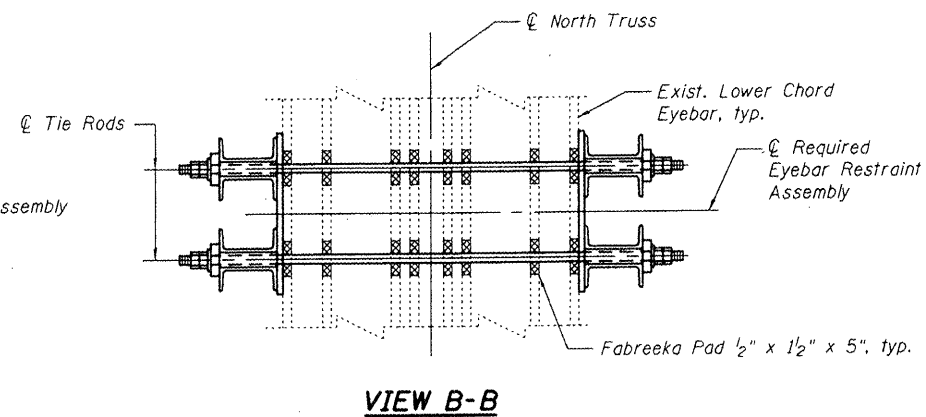


VIEW A-A

* Fabreeka Pad 1/2" x 1 1/2" x 5", typ.

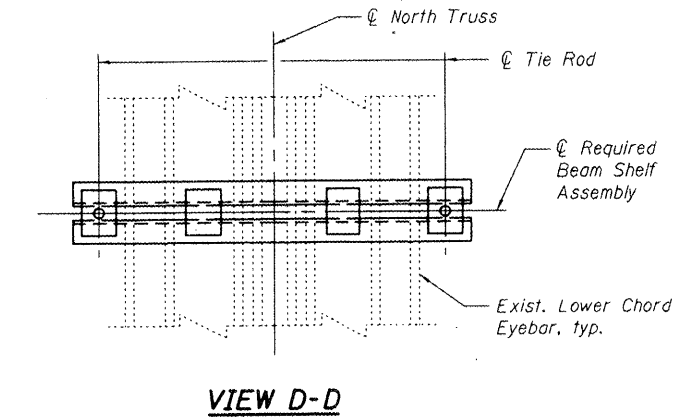


VIEW C-C



VIEW B-B

* Adhere Fabreeka Pad to existing lower chord eyebars as shown with an approved epoxy adhesive. Cost shall be included with Furnishing and Erecting Structural Steel.



VIEW D-D

Notes:
Tie rods shall be ASTM F1554 Grade 105 of the diameter and length specified. Cost shall be included with Furnishing and Erecting Structural Steel.
Washers shall be flat circular F436 and nuts shall be heavy hex A563.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing and Erecting Structural Steel	Pound	2034

**EYEBAR RESTRAINT DETAILS
McKINLEY BRIDGE OVER MISSISSIPPI RIVER
BETWEEN VENICE, ILLINOIS AND ST. LOUIS, MISSOURI
MADISON COUNTY
STRUCTURE NO. 060-6002**

SHEET NO. 3	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
4 SHEETS	9105	119 BR-I	MADISON	6	5
SN 060-6002			CONTRACT NO. 76E19		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					



DESIGNED - M.E.L.
CHECKED - D.W.P.
DRAWN - P.R.C.
CHECKED - M.E.L.

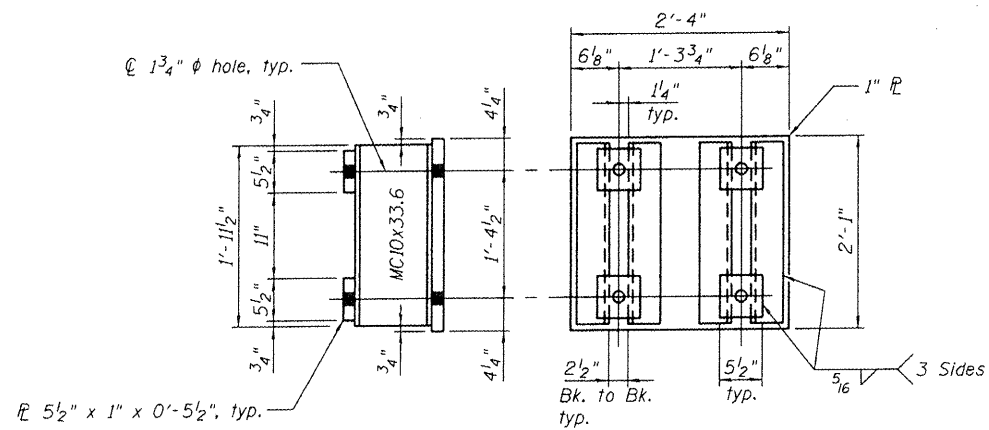
EXAMINED
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

200

11/23/2009

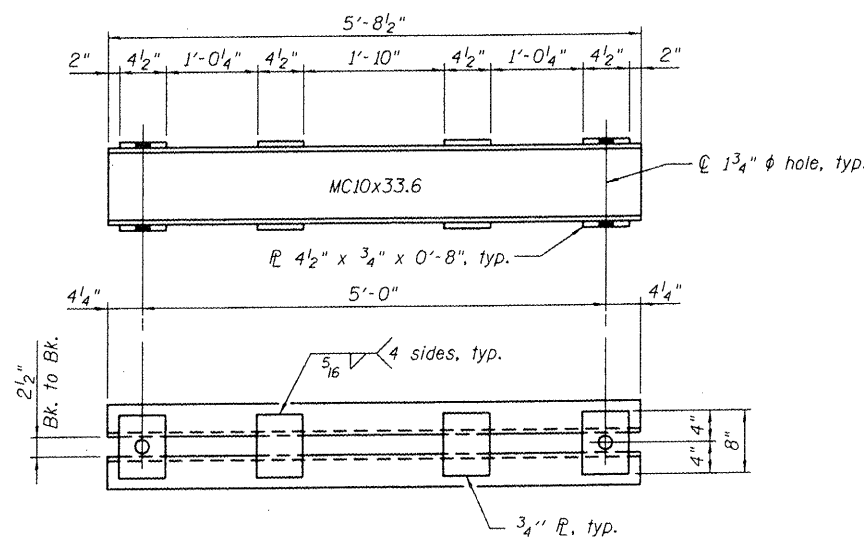
EYEBAR RESTRAINT COMPONENT

2 Required

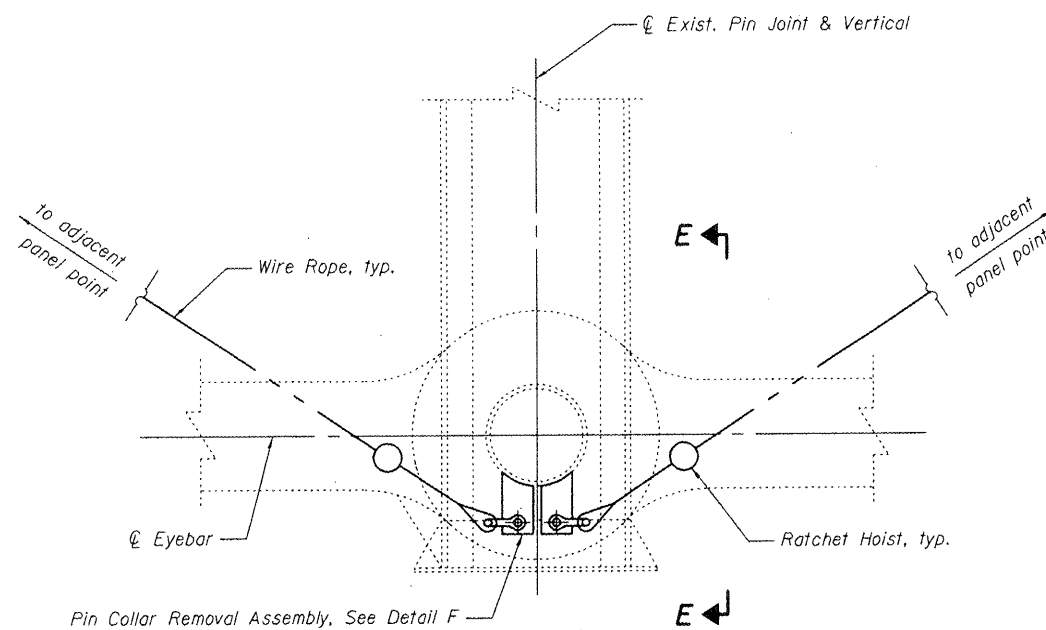


BEAM SHELF COMPONENT

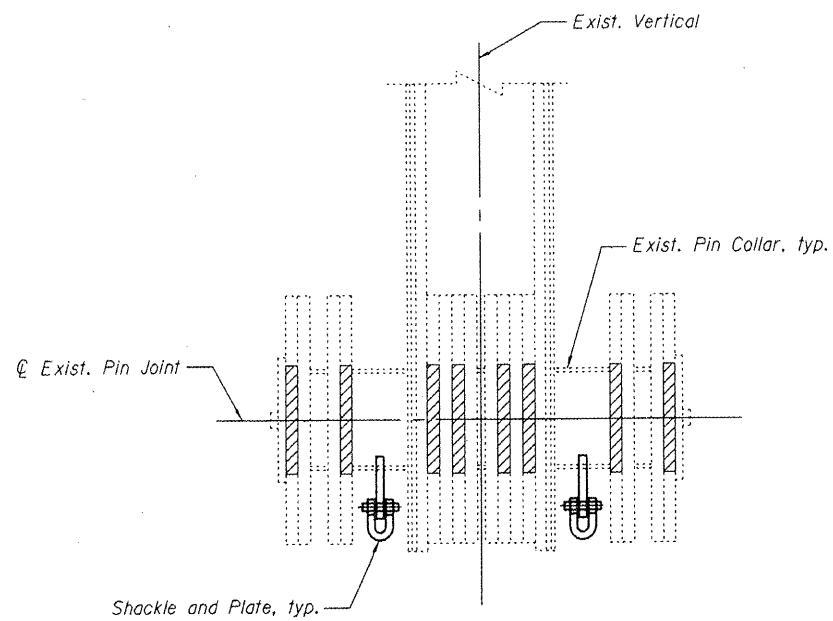
2 Required



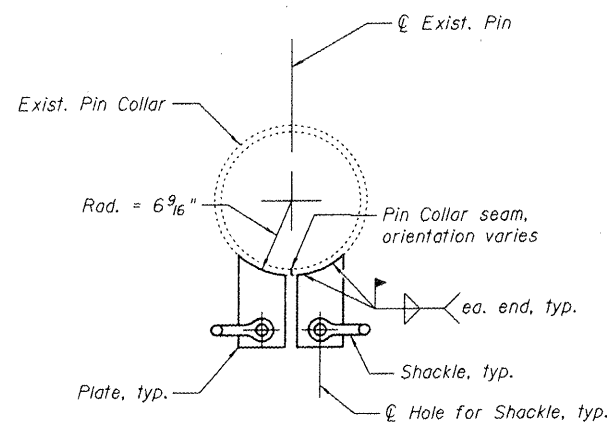
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



EXISTING PIN COLLAR REMOVAL DETAIL
Lower Joint shown, Middle Joint similar



VIEW E-E
Wire Rope not shown

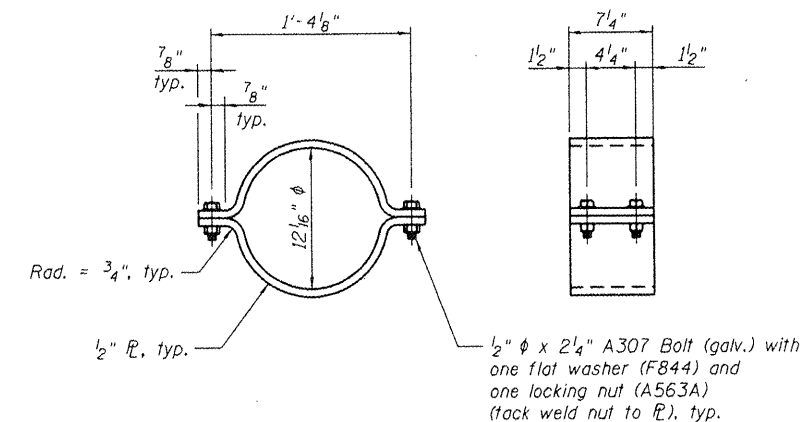


DETAIL F
Pin Collar Removal Assembly

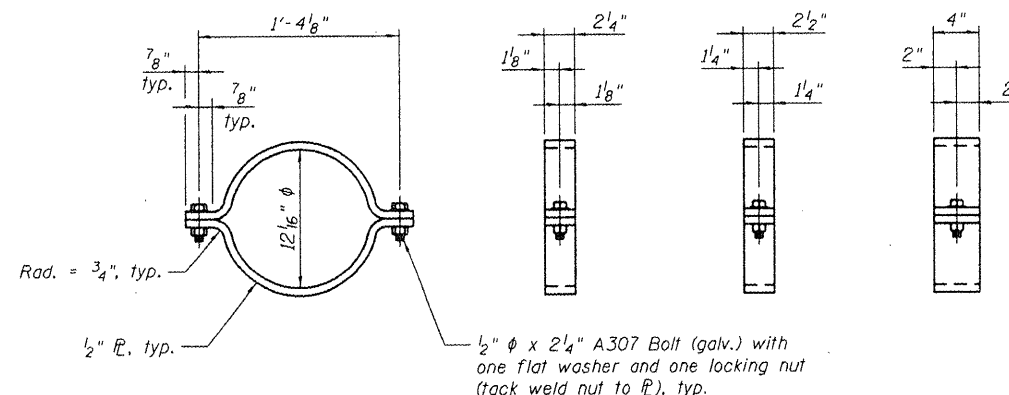
SUGGESTED PROCEDURE FOR PIN COLLAR REMOVAL

The suggested procedure is included for information only and may be used as a guide for the Contractor's required procedures, which shall be submitted to IDOT for review and approval. At some locations, rivet heads on adjacent pin plates may interfere with removal of the existing collar and the installation of the new split collar. Nevertheless, it is the Contractor's responsibility to account for this in his submitted procedure.

1. Clean the pin collars to remove existing paint in the anticipated area of field welding.
2. Shield the adjacent eyebar heads with a material with sufficient heat resistant properties to protect the heads from the induced heat from welding and from arc strikes.
3. Weld two plates to the pin collar with fillet welds; one on each side of seam. The plates shall be cut with an approximate 6 9/16" radius to fit up tight against the pin collar.
4. Attach shackles (appropriately sized) to the holes in the plates as shown on the detail.
5. Affix wire rope and additional shackles to attach to the adjacent panel points for prying the pin collars apart. Install a ratchet hoist as shown in the Existing Pin Collar Removal Detail.
6. Tighten the rigging and ratchet as needed to spread packing ring wide enough to remove from the pin.
7. Just prior to removing the pin collar from between the two adjacent eyebars, install two pieces of wood blocking on opposite sides of the pin. The blocking shall be a strong, good quality hardwood. It shall be cut to length at each location and it shall be fit tight enough against the eyebar such that it has to be driven into place.
8. Wrap tie wire tightly around both wood blocks and the pin to prevent them from becoming dislodged from traffic or wind induced vibration.
9. Blocking shall not be removed until the new split pin collars are installed.



7 1/4" PIN COLLAR DETAIL
A709 Grade 36



2 1/4", 2 1/2" AND 4" PIN COLLAR DETAIL
A709 Grade 36

TABLE OF REQUIRED PIN COLLAR REPLACEMENTS

ITEM	UNIT	TOTAL
2 1/4" Pin Collar	Each	5
2 1/2" Pin Collar	Each	4
4" Pin Collar	Each	5
7 1/4" Pin Collar	Each	20

Note:
Cost for pin collar removals included with Structural Steel Repair.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structural Steel Repair	Pound	1209

EXISTING PIN COLLAR REMOVAL AND REPLACEMENT DETAILS
McKINLEY BRIDGE OVER MISSISSIPPI RIVER
BETWEEN VENICE, ILLINOIS AND ST. LOUIS, MISSOURI
MADISON COUNTY
STRUCTURE NO. 060-6002

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DESIGNED - M.E.L.	200
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DRAWN - P.R.C.	ENGINEER OF STRUCTURAL SERVICES
CHECKED - M.E.L.	PASSED
	ENGINEER OF BRIDGES AND STRUCTURES

11/23/2009