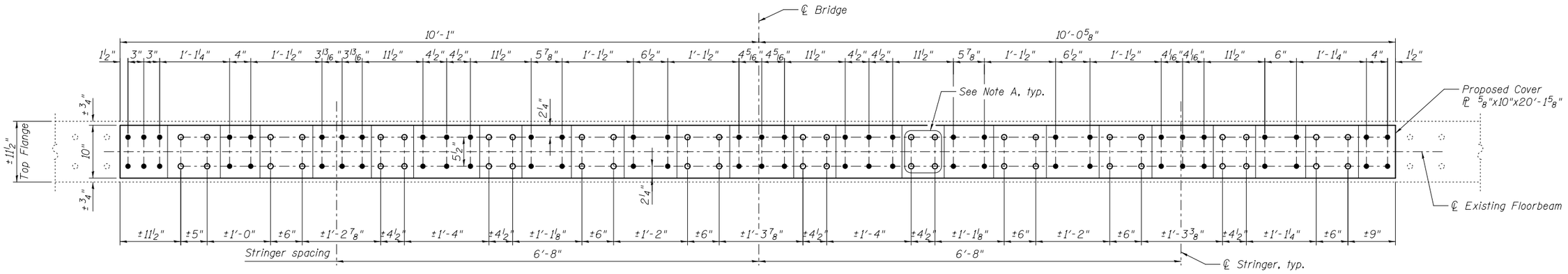
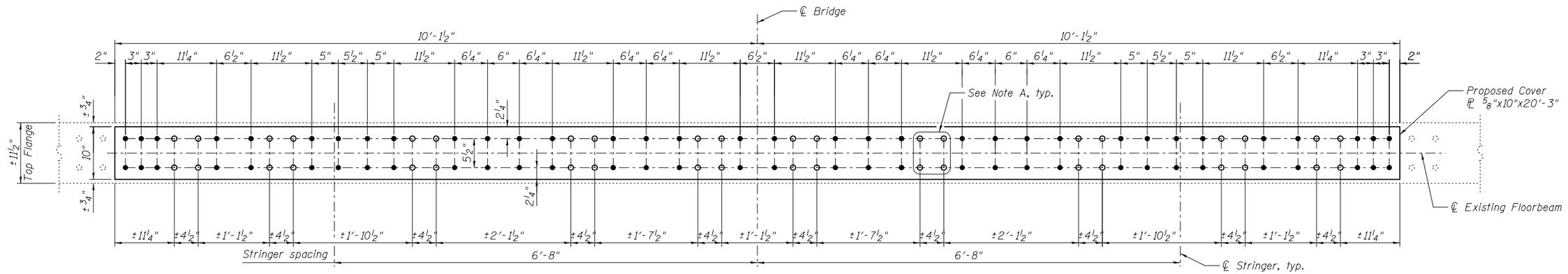


TOP FLANGE STRENGTHENING AT END FLOORBEAM

(1 Location - Pier 11 Span 12)

Note A:
Field drill holes using existing holes as template.
Remainder of holes may be shop or field drilled.



TOP FLANGE STRENGTHENING AT END FLOORBEAM

(1 Location - Pier 13 Span 13)

Note:
For Bill of Material see sheet S82.

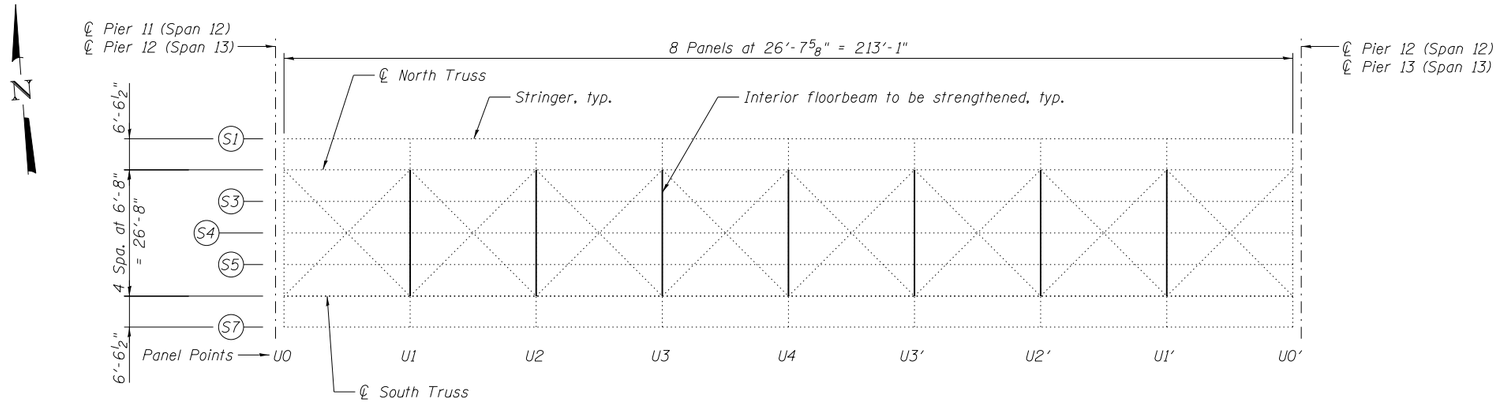
MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - MEL	REVISED
		CHECKED - CDB	REVISED
	PLOT SCALE =	DRAWN - PRC	REVISED
	PLOT DATE = 03/20/2014	CHECKED - MEL	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL APPROACH END FLOORBEAM STRENGTHENING – 2
SPANS 12 AND 13
S.N. 082–6001 MLK BRIDGE OVER MISSISSIPPI RIVER

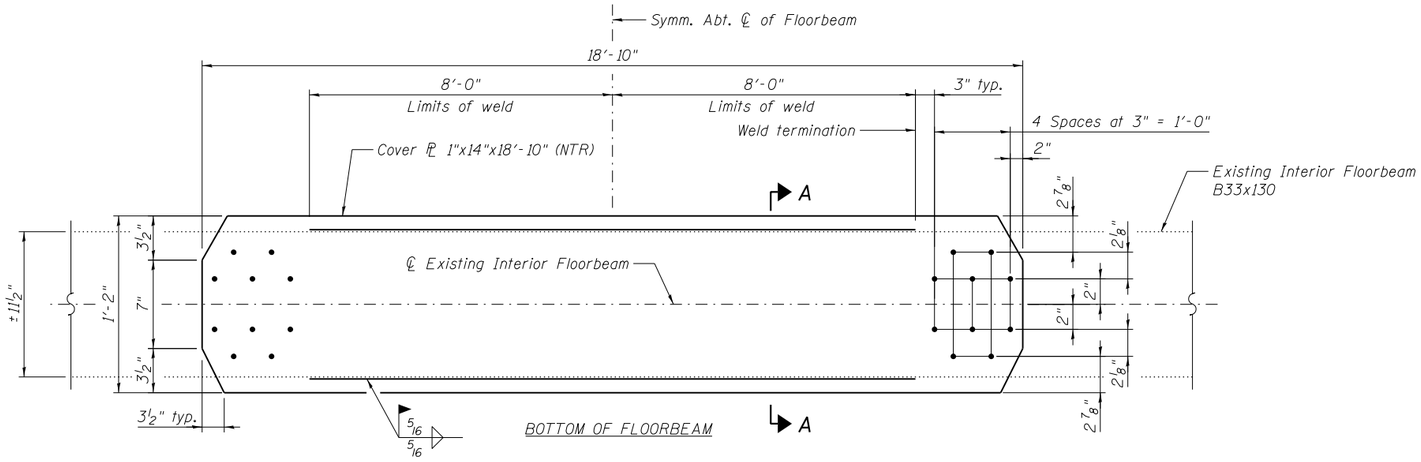
SHEET NO. S83 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	101
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		



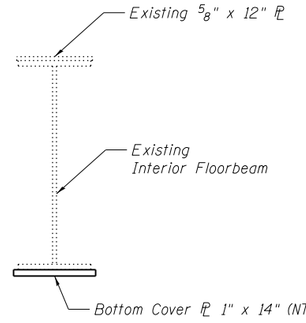
DECK TRUSS
PARTIAL FRAMING PLAN
INTERIOR FLOORBEAM STRENGTHENING

Spans 12 and 13



INTERIOR FLOORBEAM STRENGTHENING

(14 Locations)



SECTION A-A

(Deck and Stringers not shown for clarity.)

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	13,010

Note:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

MODJESKI and MASTERS
Experience great bridges.

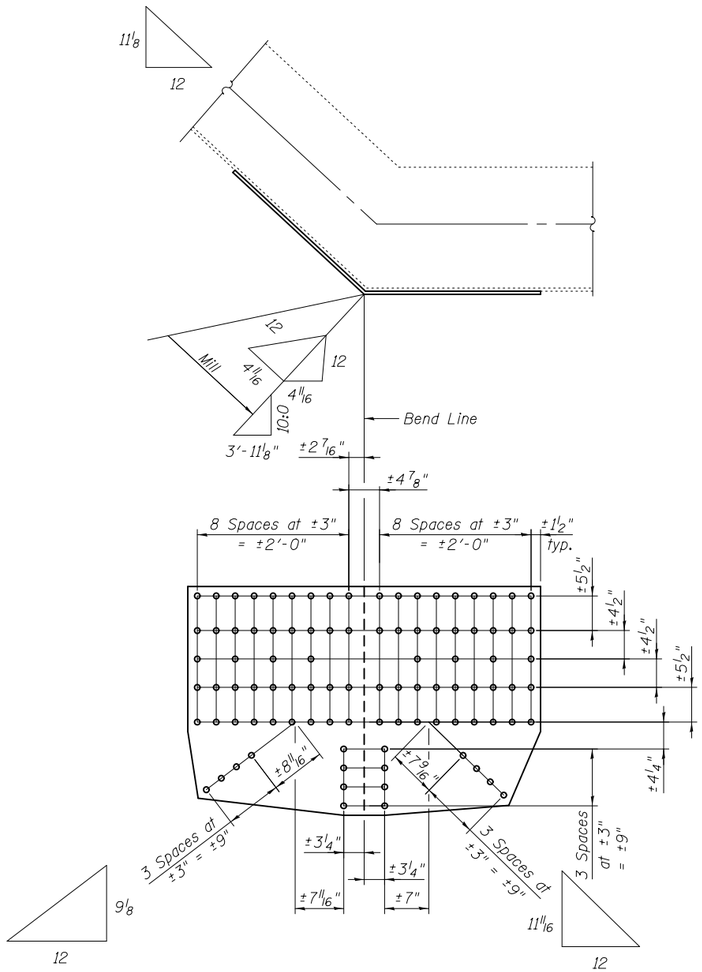
USER NAME =	DESIGNED - MEL	REVISED
	CHECKED - CDB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - MEL	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS APPROACH INTERIOR FLOORBEAM STRENGTHENING
SPANS 12 AND 13
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER

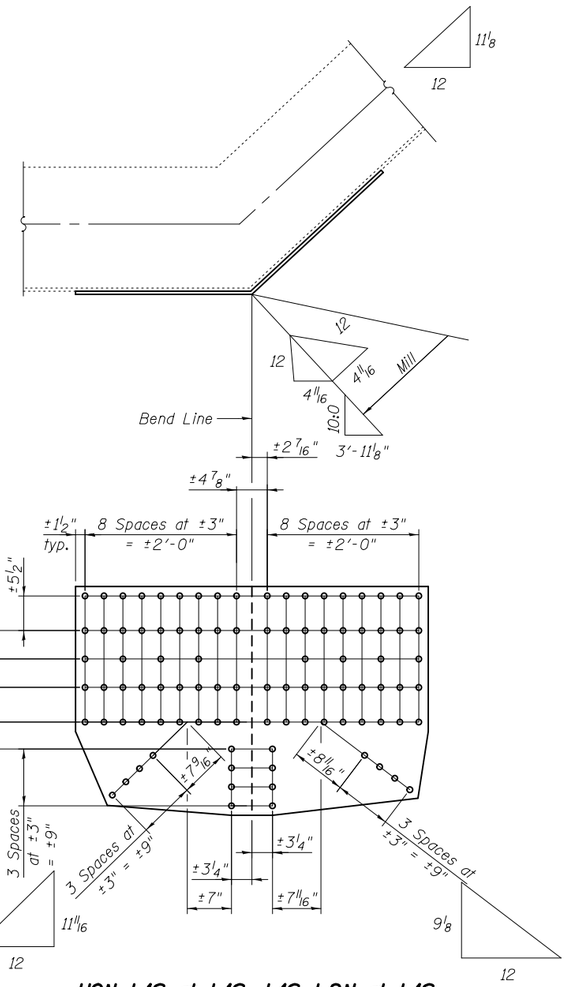
SHEET NO. S84 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	102
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



UOS-L1N at L1N; L1N-L2S at L1N

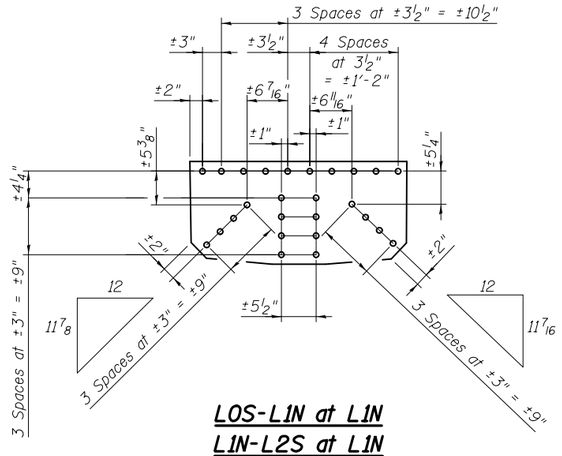
PL 1/2" x 36 3/4" x 4'-7 7/8"



UON-L1S at L1S; L1S-L2N at L1S

PL 1/2" x 36 3/4" x 4'-7 7/8"

SPAN 12



LOS-L1N at L1N
L1N-L2S at L1N

PL 3/8" x 16'4" x 2'-10'2"

SPAN 13

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	1590

Note:
Field drill holes using existing holes as template.

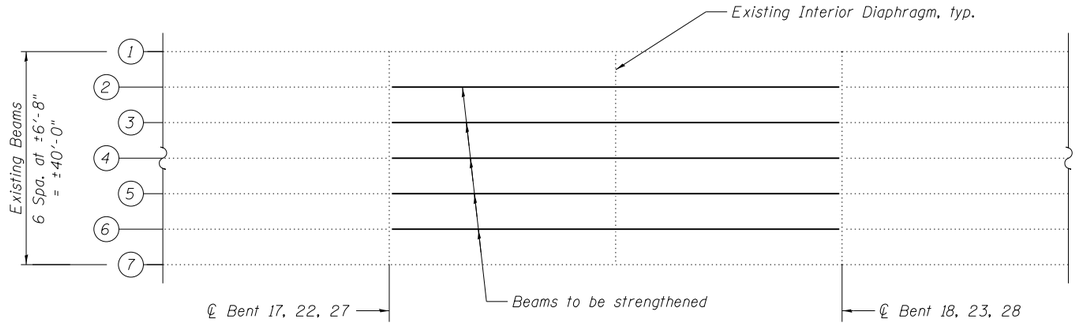
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - CDB	REVISED
	CHECKED - AEC	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 03/20/2014	CHECKED - CDB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

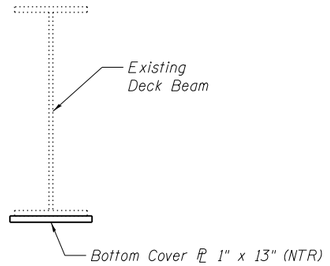
ILLINOIS APPROACH BOTTOM LATERAL CONNECTION PLATE REPLACEMENTS SPANS 12 AND 13
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S85 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	103
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



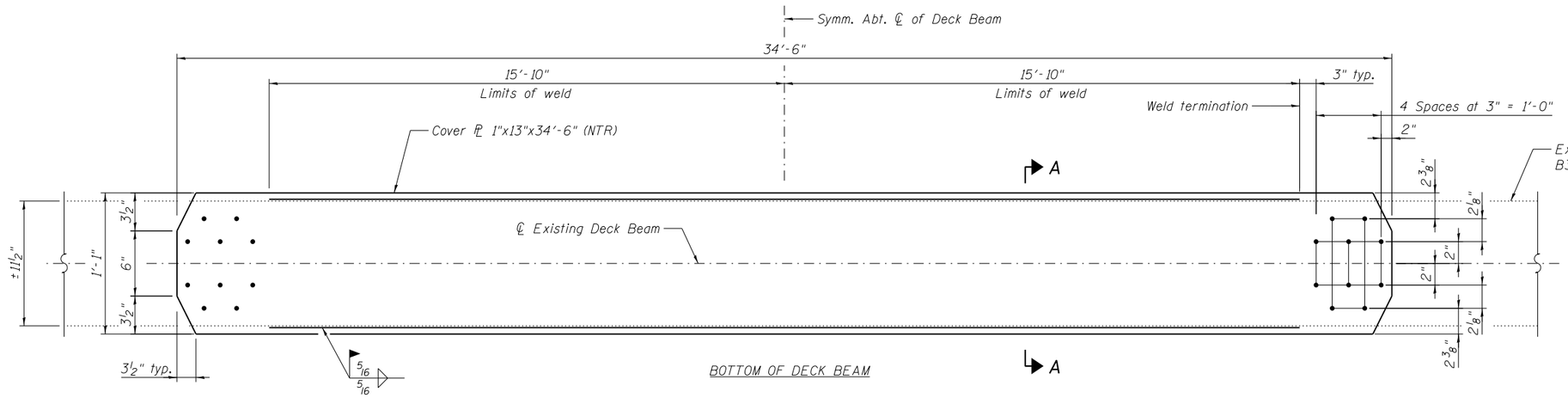
PARTIAL FRAMING PLAN
BEAM STRENGTHENING

Spans 18, 23 and 28



SECTION A-A

(Deck not shown for clarity.)



SPANS 18, 23 AND 28 BEAM STRENGTHENING

(15 Locations)

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	23,540

Note:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

USER NAME =	DESIGNED - MEL	REVISED	
	CHECKED - CDB	REVISED	
PLOT SCALE =	DRAWN - AEC	REVISED	
PLOT DATE = 05/02/2014	CHECKED - MEL	REVISED	

MODJESKI and MASTERS
Experience great bridges.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS APPROACH BEAM STRENGTHENING SPANS 18, 23 AND 28
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER

SHEET NO. S86 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	104
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		

REPLACE DEFECTIVE OR MISSING FASTENERS

09/16/13 NBIS Inspection Deficiency Item No.	Location	No. of Bolts
103	Span X, between Stringer 1 and Stringer 2 at Midspan	1
104	Span X, between Stringer 3 and Stringer 4 at Midspan	1
106	Bent 1 at Stringer 6	2
107	Bent 1 at Stringer 4	1
108	Span 2, Stringer 7, 5' from Bent 1, 5' from Bent 2, and at Bent 2	5
109	Span 2, Stringer 1 at Bent 2	3
119	Bent 7 at Stringer 4	2
371	Bent 7 at South Column Long. Bracing	1
311	Span 9, Stringer 7, 6' East of Floorbeam 0	2
125	Span 9, Floorbeam 1 at Stringer 3	1
48	Span 10, Floorbeam 18 between Stringer 1 and Stringer 2	5
177	Span 10, Floorbeam 24' at Stringer 2	1
181	Span 10, Floorbeam 23' at Stringer 3	1
182	Span 10, Floorbeam 23' at Stringer 4	1
183	Span 10, Floorbeam 23' at Stringer 4	1
187	Span 10, Floorbeam 21' at Stringer 2	1
190	Span 10, Lower Lateral Connection at L15'N	2
192	Span 10/11, L14'N, outside Gusset Plate	3
361	Span 11, L11'N inside Gusset Plate	2
362	Span 11, L11'S inside Gusset Plate	2
200	Span 11, Stringer 2 at L11'	1
207	Span 11, Floorbeam 8' at L8'N	1
60	Span 11, Floorbeam 5', North end	-
214	Span 11, L4'N - U4'N, at L4'N	2
220	Span 11, Floorbeam 4' at Stringer 7	1
221	Span 11, L4'S - U4'S, at L4'S	2
62	Span 11, Floorbeam 3' at North end	-
247	Span 12, U0'S - U1'S at U0'S	1
339	Span 13, U3N - L4N at 5' from U3N	2
341	Span 13, Floorbeam 2' at South end	1
32	Span 21, Stringer 1 at West Splice	1
33	Bent 22 Tower Bracing	1
284	Bent 22 at Stringer 2	1
289	Bent 23 Cap at South end	1
367	Span 23, Stringer 1 at Bent 23	1
346	Span 23, Stringer 7 at Midspan	2
348	Span 30, Stringer 6 at Bent 30	2

Notes:
Replace defective fasteners and fill empty holes with H.S. bolts of appropriate diameter as noted in table. Additional defective or missing fasteners encountered during construction shall be replaced with H.S. bolts of appropriate diameter as directed by the Engineer.
Cost of replacement is included with Structural Steel Repair.

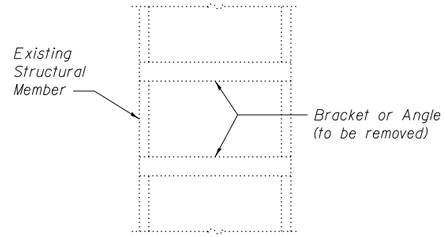
REPLACE DEFECTIVE OR MISSING TIE RODS TO CONCRETE MEDIAN BARRIER

09/16/13 NBIS Inspection Deficiency Item No.	Location	No. of Tie Rods
349	Span X, 12' East of Bent W	-
-	Span Y, 12' West of Bent Y	1
-	Span 7, at Bent 7	1
-	Span 8, 24' West of Pier 8	4
-	Span 10, at Panel 22	1

Notes:
Replace defective tie rods and fill empty holes with $\frac{7}{8}$" dia. tie rods (per detail) as noted in table. Additional defective or missing tie rods encountered during construction shall be replaced with $\frac{7}{8}$" dia. tie rods (per detail) as directed by the Engineer.
Cost of replacement is included with Concrete Barrier Repair.

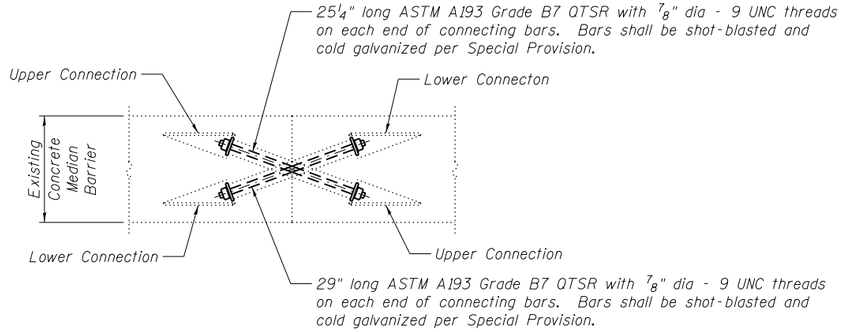
REMOVE MISCELLANEOUS STEEL WELDED TO STRUCTURAL MEMBERS

09/16/13 NBIS Inspection Deficiency Item No.	Location	Welded Pieces
-	Bent W, 6' above base of North Column	1
-	Bent 1, 4' above base of North Column	2
-	Bent 1, 4' above base of South Column	1
-	Bent 3, South Column	5
66	Bent 3, North Column	4
-	Bent 4, North Column	6
-	Bent 6, North Column	6
-	Bent 6, South Column	4
41	Span 9, L4N - U4N, 4' and 20' above Deck	2
-	Span 9, L4S - U4S, 4' above Deck	2
-	Span 9, L10S - U10S, 4' above Deck	2
75	Span 9/10, M14N - M14S, 20' above Deck	1
-	Span 10, L18S - U18S, 4' and 30' above Deck	4
50	Span 10, L23N - U23N, 4' above Deck	2
51	Span 10, L23N - U23N, 25' above Deck	1
21	Span 10, L23'S - U23'S, 30' above Deck	2
-	Span 10, L21'N - M21'N, 12' above Deck	1
-	Span 10, M19'N, outside Gusset Plate	1
-	Span 10, L18'N - U18'N, 4' and 25' above Deck	4
-	Span 11, L13'S - M13'S, 4' above Deck	2
54	Span 11, L13'S - M13'S, 40' above Deck	2
-	Span 11, L10'N - U10'N, 4' and 30' above Deck	4
-	Span 11, L4'S - U4'S, 4' above Deck	2
61	Span 11, L4'S - U4'S, 30' above Deck	1



MISCELLANEOUS STEEL REMOVAL DETAIL

Notes:
Remove existing brackets or angles welded to the structure and grind smooth to an ANSI 250 finish.
Cost of removal is included with Structural Steel Repair.
See table for specific repair locations.



TOP VIEW OF CONCRETE MEDIAN BARRIER SHOWING SIDE LEAVE OUTS FOR TIE RODS

Tie Rod Installation:
Torque the hardened ASTM A563 Grade D or DH heavy hex nuts, galvanized to ASTM B695 Class 55, to 50-70 Ft-Lbs. Round hardened steel washers meeting ASTM F436, galvanized to ASTM B695 Class 55, shall be placed between the cold galvanized 3"x3"x$\frac{3}{8}$" plate washer ($\frac{15}{16}$" dia. hole) and the nut. Field clean threads by stiff brush. Field apply two coats by swab of cold galvanizing compound meeting MIL-P-46105 or DOD-P-21035 to the exposed threads after nuts are torqued. Allow galvanizing to cure. Field apply an IDOT approved non-shrink grout and cure. Field apply linseed oil emulsion over grout, typ. Cost included with Concrete Barrier Repair.

BILL OF MATERIAL

Item	Unit	Total
Concrete Barrier Repair	Lump Sum	1

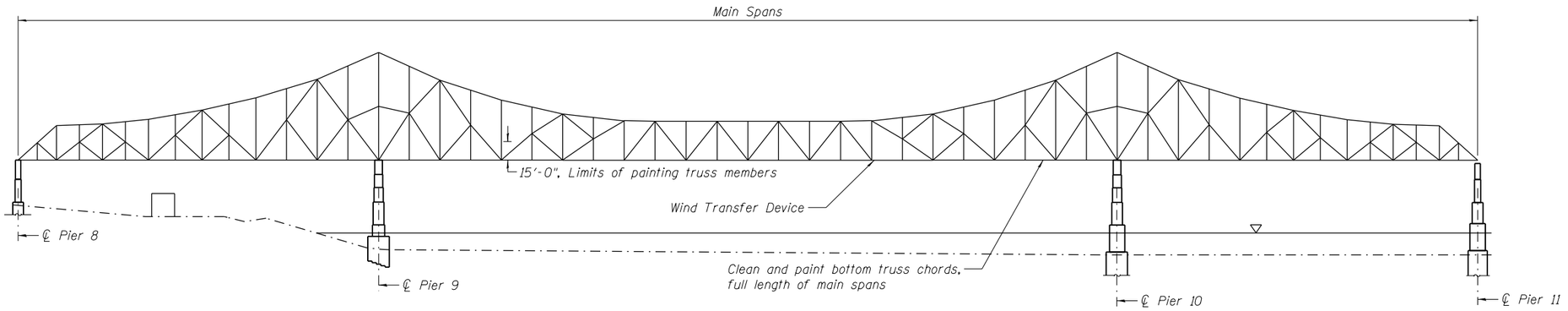
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - CDB	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 05/02/2014	CHECKED - JMH	REVISED

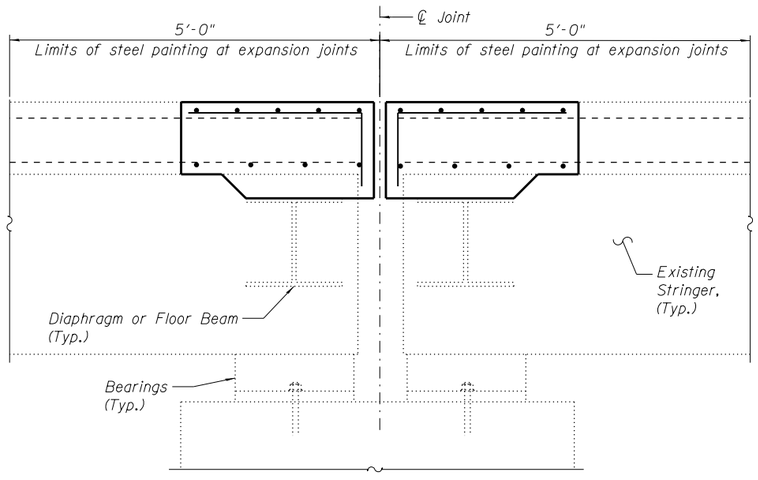
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S87 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	105
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			

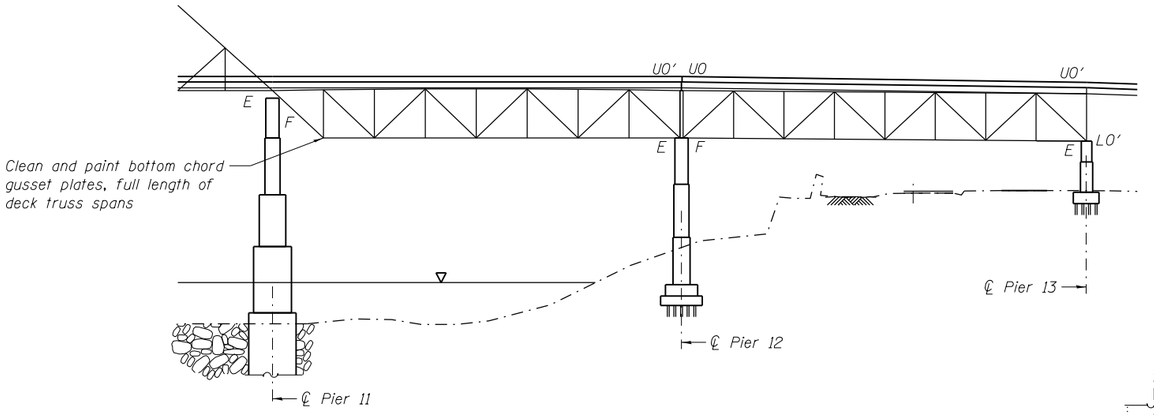


MAIN SPAN ELEVATION

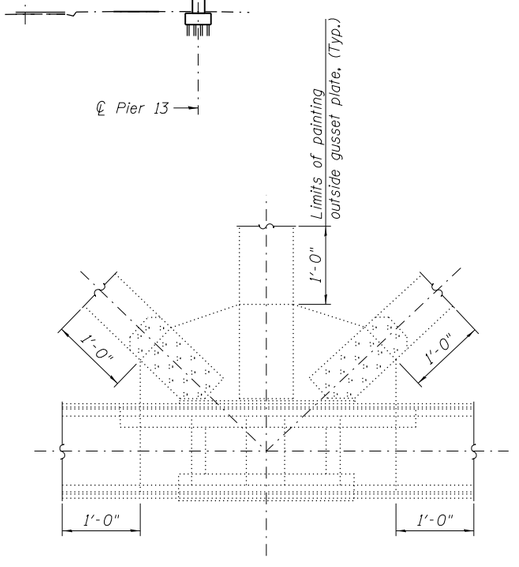


CROSS SECTION AT TYPICAL EXPANSION JOINT

(Joint at diaphragm shown, Joint at floorbeam similar)



DECK TRUSS ELEVATION



TYPICAL DECK TRUSS GUSSET PLATE

Notes:

All steel members underneath the deck that are to remain shall be cleaned and painted within 5 ft from any deck joint (including deck relief joints throughout the main spans).

The entire wind transfer device between PP 21' and PP 23', shall be cleaned and painted including all attachments to other members. See existing 1987 rehabilitation plans for details.

Clean and paint the bottom truss chord and splash zone on each side of the main spans. This shall include all surfaces of each member including inside the bottom chord. All truss members shall be painted up to the height of 15 ft from the bottom of the bottom truss chord on each side of the deck. The floor beam end connections to the bottom chord, the end of 5 ft of each floor beam, the exterior stringer connections to the floor beams, and the end of 5 ft of each exterior stringer shall also be cleaned and painted.

Clean and paint all bottom chord gusset plates, including members within the joint to a distance 1 ft beyond the limits of the gusset plates, throughout the limits of the deck truss spans.

Clean and paint the end 8 ft of Stringer 1 on span 19 at Bent 18.

The Contractor shall match the color of the final finish coat for all steel surfaces to the existing paint color on the structure.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project as specified in the special provision for Containment and Disposal of Lead Paint Cleaning Residues.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for Cleaning and Painting Existing Steel Structures.

Complete cost of painting the locations described on this sheet shall be considered included with the pay item Cleaning and Painting Steel Bridge No. 1.

Cleaning of existing structural steel in the areas of structural repairs or new structural installations shall be as specified in the special provision for Cleaning and Painting Contact Surface Areas of Existing Steel Structures.

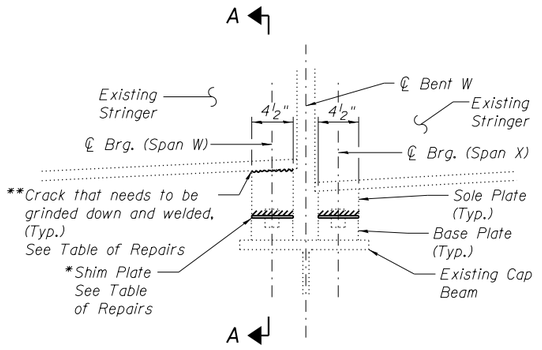
Calendar date painting restrictions will be waived for this project. See special provisions.

Complete cost of painting repair areas shown throughout the plans shall be considered included with the pay item Structural Steel Repair.

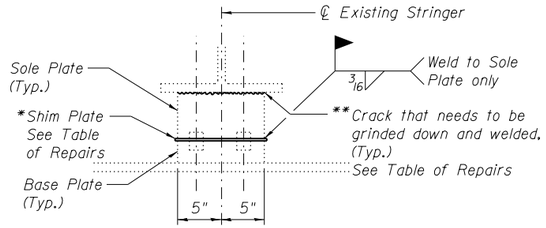
The removal and disposal of the existing lead paint shall be considered included with the pay item Containment and Disposal of Lead Paint Cleaning Residues No. 1.

BILL OF MATERIAL

Item	Unit	Total
Cleaning and Painting Steel Bridge No. 1	L Sum	1
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L Sum	1

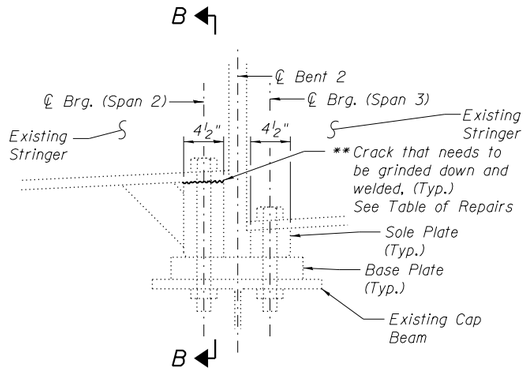


ELEVATION

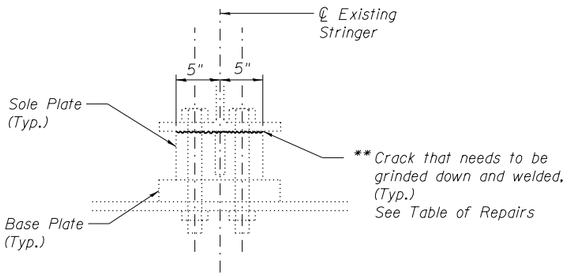


SECTION A-A

BEARINGS FOR S2, S3, S4, S5, S6, AND S7 AT BENT W

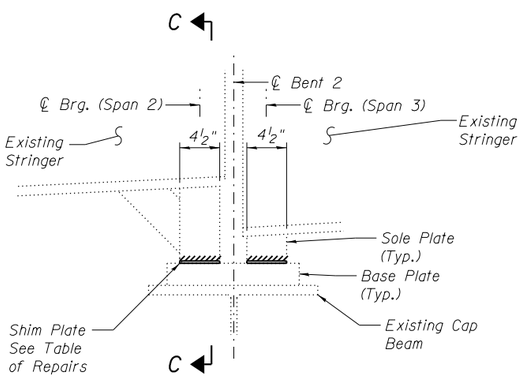


ELEVATION

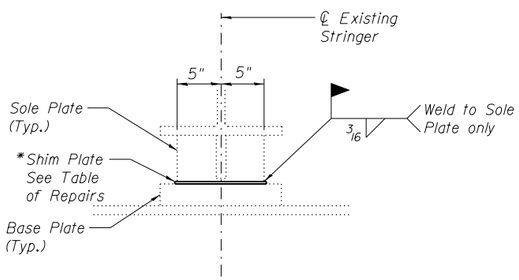


SECTION B-B

BEARINGS FOR S3 AT BENT 2

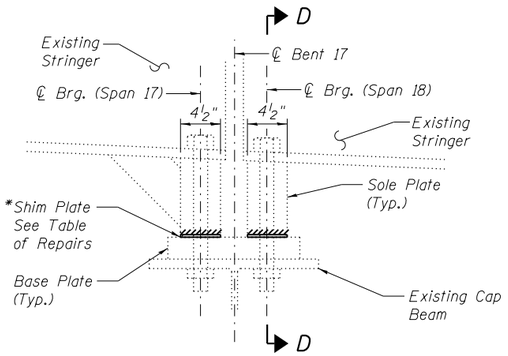


ELEVATION

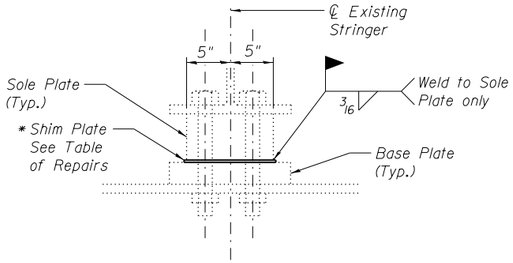


SECTION C-C

BEARINGS FOR S4 AT BENT 2

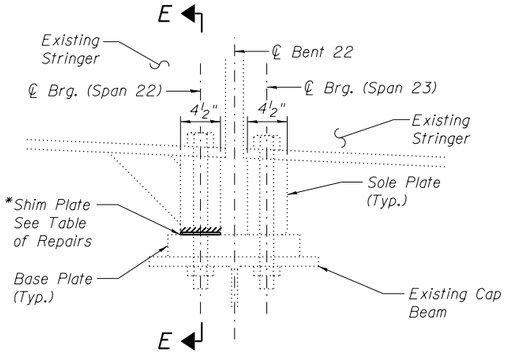


ELEVATION



SECTION D-D

BEARINGS FOR S2, S3, AND S6 AT BENT 17



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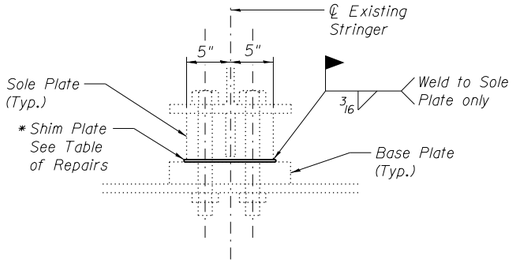
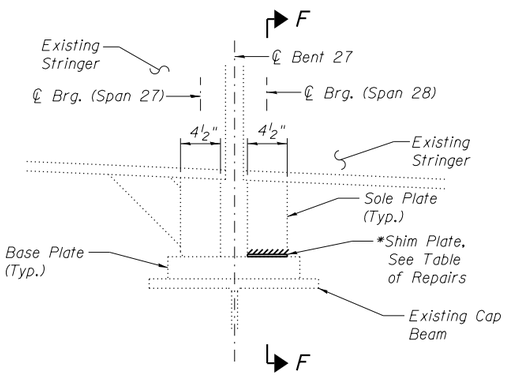
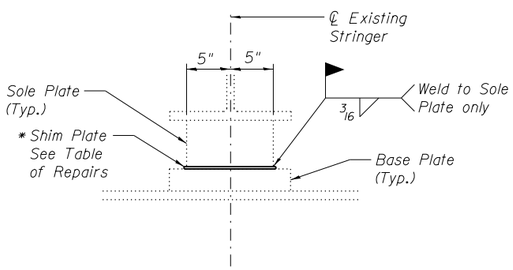


SECTION E-E

BEARINGS FOR S2 AT BENT 22



ELEVATION



SECTION F-F

BEARINGS FOR S4 AT BENT 27

Notes:
See Sheet S090 of S138 for Bearing locations, other details, Table of Repairs and notes.
See Illinois Approach bent repair sheets for details of existing ¾" H.S. bolt repairs at Stringer 3 on Bent 17.

(Sheet 1 of 2)

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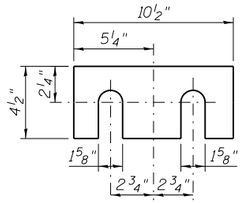
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S089 OF S138 SHEETS

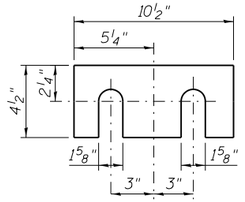
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	107
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			

TABLE OF REPAIRS

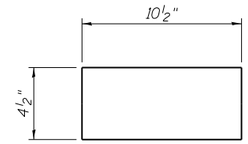
NBIS Item #	Location	Stringer No.	Span	Problem	Shim Plate Thickness	Crack Length
10	Bent W	S2	X	Gap	1/2"	-
7	Bent W	S3	W	Gap	1/4"	-
9	Bent W	S4	X	Gap	1/4"	-
6	Bent W	S5	W	Gap, Weld Crack	1/4"	29"
8	Bent W	S6	X	Gap	1/16"	-
101	Bent W	S7	W	Weld Crack	-	29"
110	Bent 2	S3	2	Weld Crack	-	7"
11	Bent 2	S4	2	Gap	1/2"	-
115	Bent 2	S4	3	Gap	3/16"	-
363	Bent 17	S2	17	Gap	3/4"	-
366	Bent 17	S3	18	Gap	1/4"	-
31	Bent 17	S6	17	Gap	3/4"	-
34	Bent 22	S2	22	Gap	1/4"	-
300	Bent 27	S4	28	Gap	1/8"	-



SHIM PLATES AT BENT W
(5 Req'd)



SHIM PLATES AT BENT 17 AND 22
(4 Req'd)



SHIM PLATES AT BENT 2 AND 27
(3 Req'd)

* Typical procedure for shim placement.
1.) Jack stringer 1/8" from bearing and sand blast gap between sole plate
2.) Measure opening (Thickness, Width, Length, Slope)
3.) Place shim plate
4.) Lower stringers and weld

** Typical Crack Repair
Existing crack shall be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange. After removal of the weld, the base metal shall be checked for cracks using dye penetrant (PT), magnetic particle (MT), or other approved testing method performed by the qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included with Adjust and Reposition Bearings. The cost of crack repair in the base metal if necessary will be paid with Adjust and Reposition Bearings. If no cracks are present then the removed weld of the same size and type shall be replaced.

Clean and paint bearing repair areas in accordance with the special provision for Cleaning and Painting Contact Surface Areas of Existing Steel Structures. Cost included with Adjust and Reposition Bearings.

CLEANING AND PACK RUST REMOVAL

NBIS Item #	Location	Problem
120	Bent 7 North and South Column	Clean Bearing Surfaces at Column Bases
363	Bent 17 at Stringers 2 on Span 17	Remove Pack Rust (Prior to Shimming)
31	Bent 17 at Stringers 6 on Span 17	Remove Pack Rust (Prior to Shimming)
280	Bent 18 North Column Base	Clean Bearing Surfaces at Column Bases
280	Bent 18 North Column Base	Remove Pack Rust
290	Bent 23, North Column at Footing	Clean Bearing Surfaces at Column Bases
290	Bent 23, North Column at Footing	Remove Pack Rust
302	Bent 28, North Column at Footing	Clean Bearing Surfaces at Column Bases
302	Bent 28, North Column at Footing	Remove Pack Rust

Notes:

The Contractor is to verify the existing dimensions and submit a report of the measured opening sizes prior to fabricating the shim plates. It is intended to keep the existing beams at their current elevation.

Cost of shim plates, anchor bolts, welding, sand blasting and grinding of existing welds shall be included in the pay item Adjust and Reposition Bearings.

Clean and paint areas requiring pack rust removal in accordance with the special provision for Cleaning and Painting Existing Steel Structures. Cost included with Cleaning and Painting Steel Bridge No. 1.

BILL OF MATERIAL

Item	Unit	Total
Adjust and Reposition Bearings	Each	14

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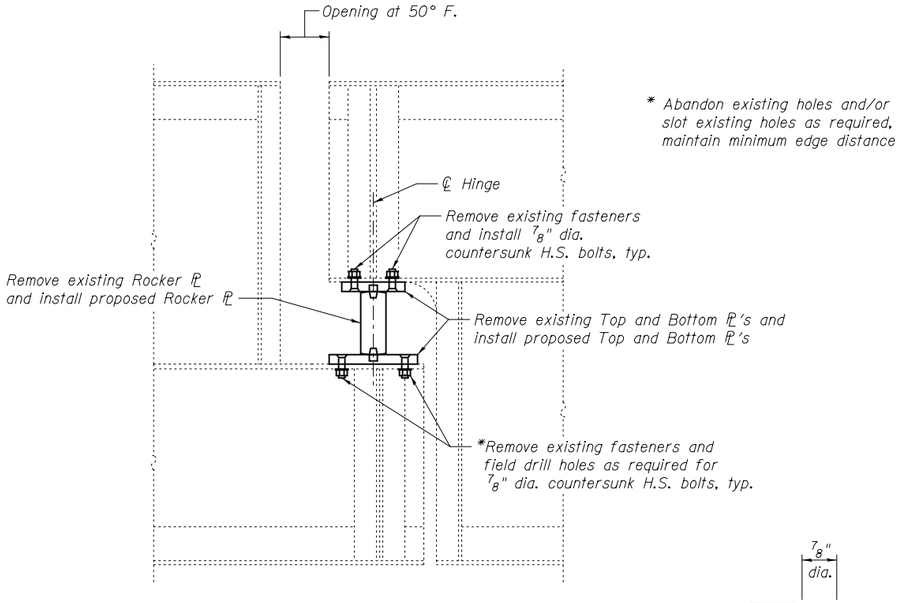
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S090 OF S138 SHEETS

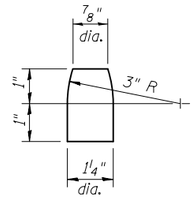
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	108
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		



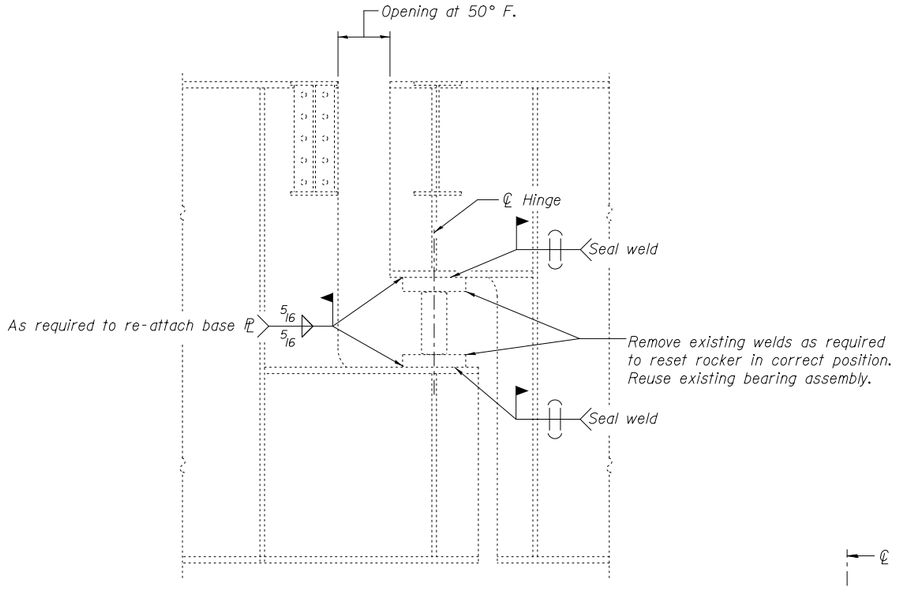
* Abandon existing holes and/or slot existing holes as required, maintain minimum edge distance

BEARING REPAIR AT SPAN 6 HINGE INTERIOR GIRDERS 3 AND 5

Near Bent 4

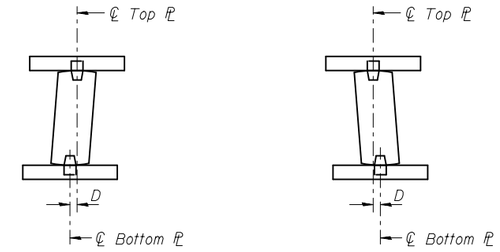


PINTLE DETAIL



BEARING REPAIR AT SPAN 6 HINGE EXTERIOR GIRDERS 1 AND 7

Near Bent 4

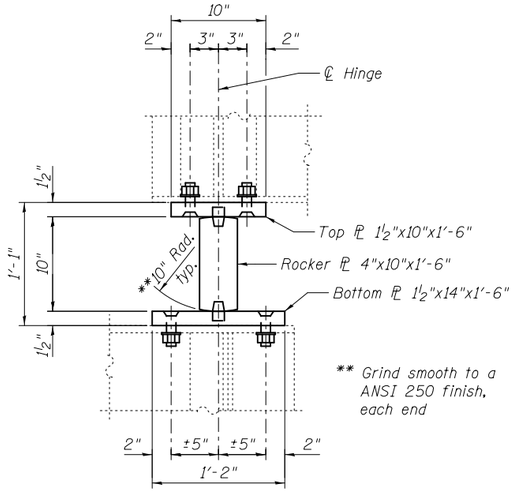


BELOW 50° F.
(Move bottom brg. away from fixed brg. at Bent 6)

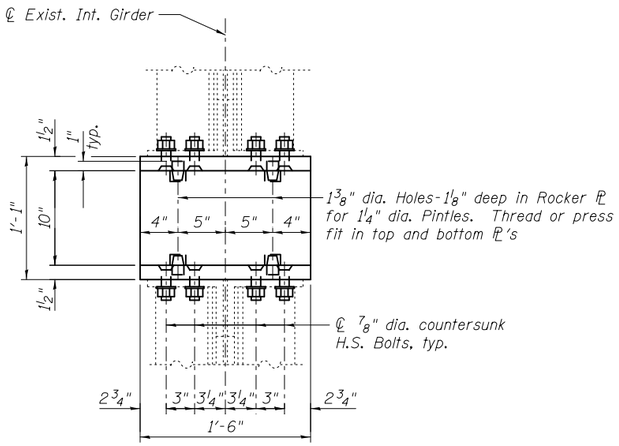
ABOVE 50° F.
(Move bottom brg. toward fixed brg. at Bent 6)

SETTING ROCKER PLATE AT HINGE BEARING

D = 1/8" per each 100° of expansion for every 15° temp. change from the normal temp. of 50° F.



LONGITUDINAL ELEVATION



TRANSVERSE ELEVATION

HINGE BEARING DETAILS

Note:
Remove existing plates using the air-arc method and grind smooth all weld material remaining on the plates and flanges. After removal of the weld, the base metal shall be checked for cracks using dye penetrant (PT), magnetic particle (MT), or other approved testing method performed by the qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included in Structural Steel Repair. The cost of crack repair in the base metal if necessary will be paid for according to Article 109.04 of the Std. Spec. If no cracks are present then a weld of the same size and type shall be replaced.

Procedure

Contractor shall field verify existing position of rockers and determine misalignment. Contractor shall jack existing superstructure, remove, replace and reset rocker assemblies as required to correct the position. Cost of jacking will be paid for as Jacking Existing Superstructure. Cost of repair shall be paid for as Structural Steel Repair.

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	820
Jacking Existing Superstructure	L. Sum	1

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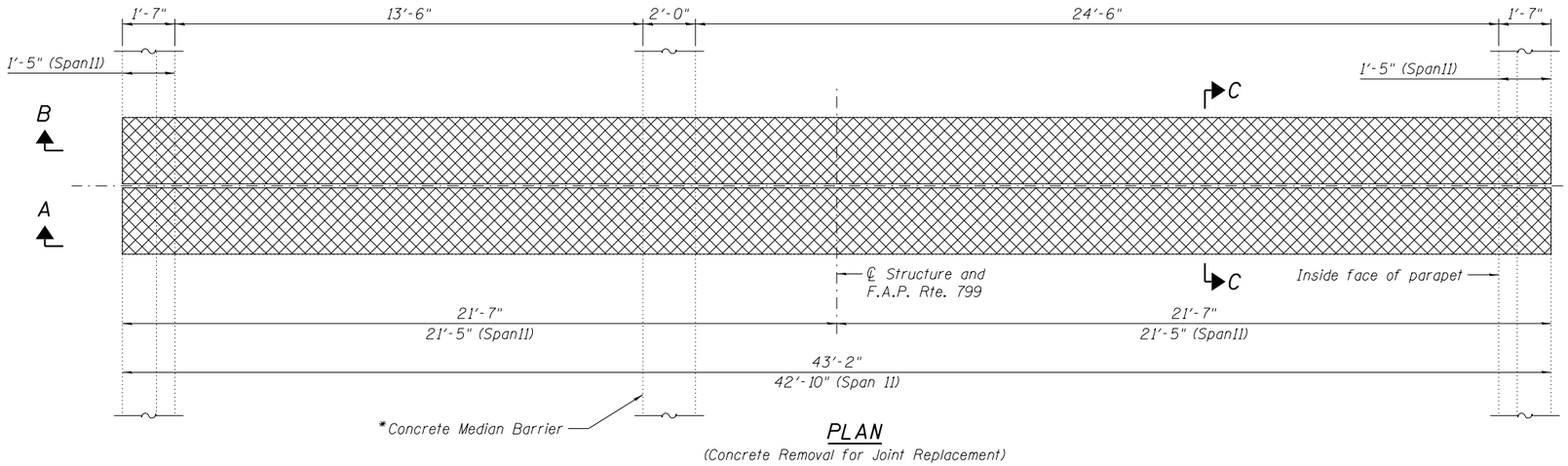
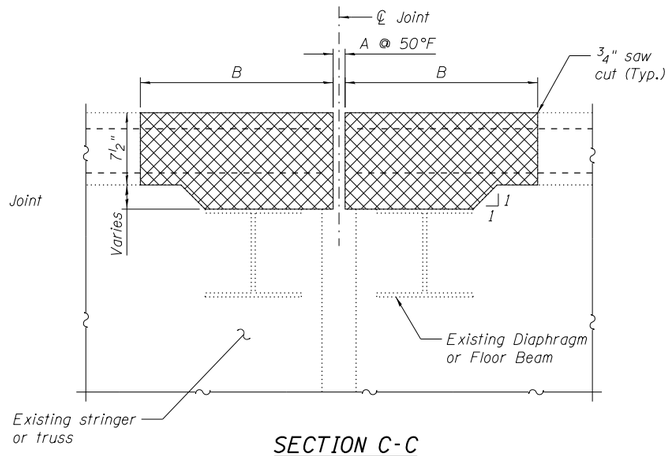
BEARING REPAIRS - 3
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S91 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	109
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		

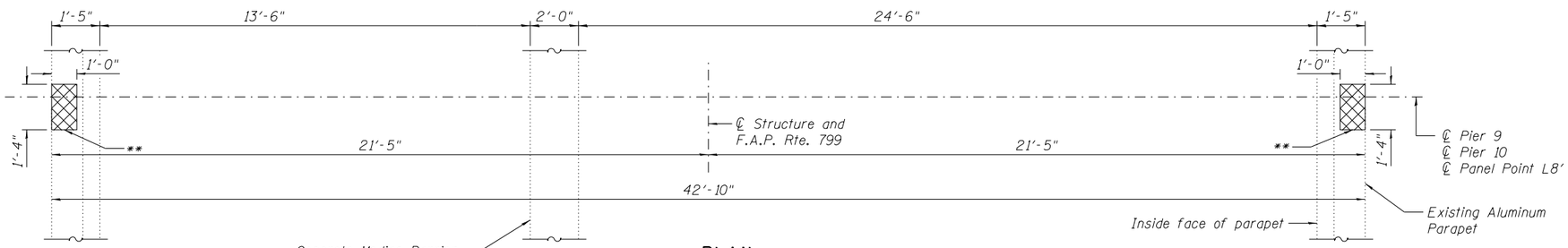


PLAN
(Concrete Removal for Joint Replacement)



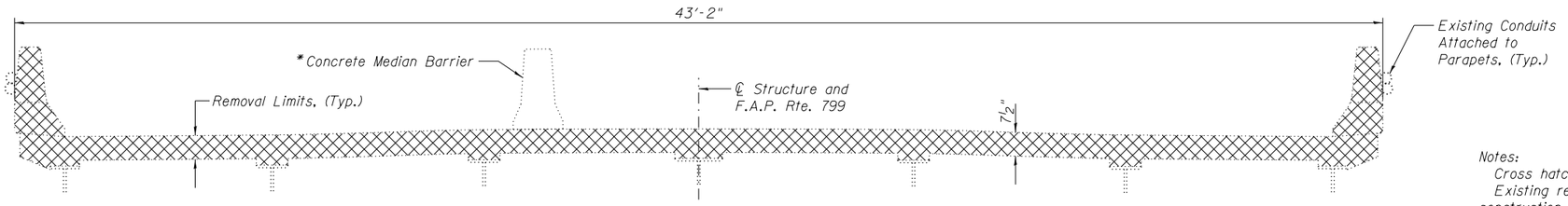
SECTION C-C
(Joint at diaphragm shown, Joint at floorbeam similar)

Z



PLAN
(Concrete Removal for Floor Beam Repair)

Location	Existing Joint Type	A	B
Bent W	Preformed Joint Seal	3/4"	2'-6 5/8"
Bent 2	Preformed Joint Seal	3/4"	2'-6 5/8"
Bent 3	Preformed Joint Seal	3/4"	2'-6 5/8"
Hinge on Span 6	Neoprene Expansion Joint	2 1/2"	2'-5 3/4"
Bent 6	Preformed Joint Seal	3/4"	2'-6 5/8"
Pier 12	Neoprene Expansion Joint	2 1/2"	2'-5 3/4"
Bent 17	Preformed Joint Seal	3/4"	2'-6 5/8"
Bent 18	Neoprene Expansion Joint	2 1/2"	2'-5 3/4"
Bent 22	Preformed Joint Seal	3/4"	2'-6 5/8"
Bent 23	Neoprene Expansion Joint	2 1/2"	2'-5 3/4"
Bent 27	Preformed Joint Seal	3/4"	2'-6 5/8"
Bent 28	Neoprene Expansion Joint	2 1/2"	2'-5 3/4"
Pier 11	Finger Plate Joint	6"	3'-3"
Pier 13	Finger Plate Joint	5 3/4"	3'-3"



SECTION A-A AT BENTS 2, 3 & 11-WEST SPAN
SECTION B-B AT BENT W-EAST SPAN

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	105.8

*Median barrier over the expansion joint replacement locations shall be temporarily removed and reinstalled once the construction is complete. Cost shall be included with the pay item Concrete Removal.

**Concrete Removal using 3/4" saw cut. Remove aluminum parapets and saw cut through slab at locations specified. Existing reinforcement shall be cleaned and reused. Cost included with Concrete Removal.

Notes:
Cross hatched area indicates concrete removal.
Existing reinforcement bars in the concrete removal area extending in new construction shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system, in accordance with IDOT Standard Specifications Article 501.03. Cost included with Concrete Removal.
See Sheet S093 of S138 for additional Sections A-A and B-B.
Concrete removal at joint at panel point L22' included with pay item Removal of Existing Filled Grid Deck.
Existing Conduit attached to parapets shall remain in place and functional throughout construction. Provide temporary support during construction. Cost included with Concrete Removal.

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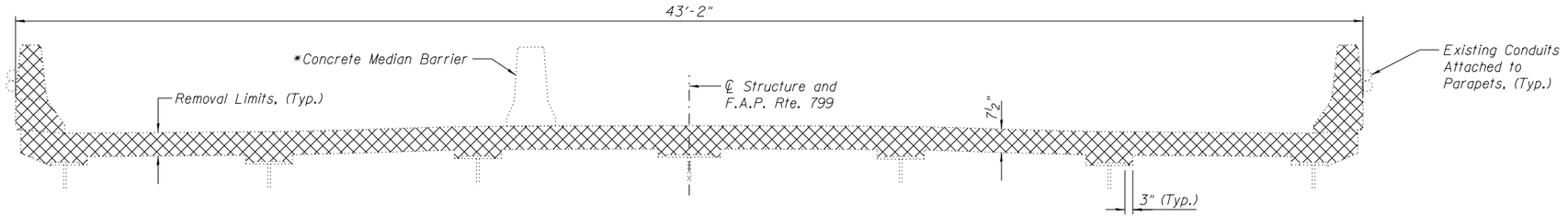
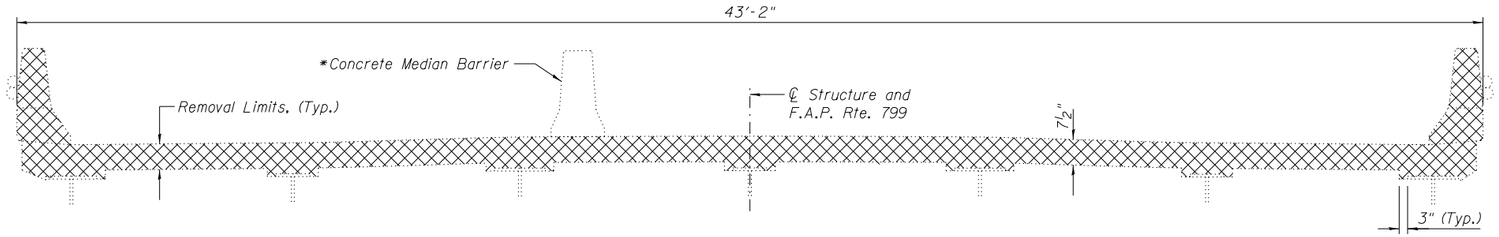
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE REMOVAL
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S092 OF S138 SHEETS

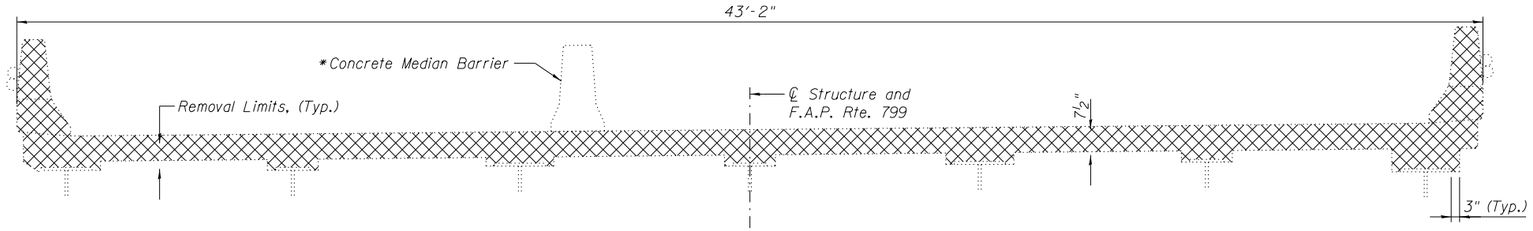
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	110
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



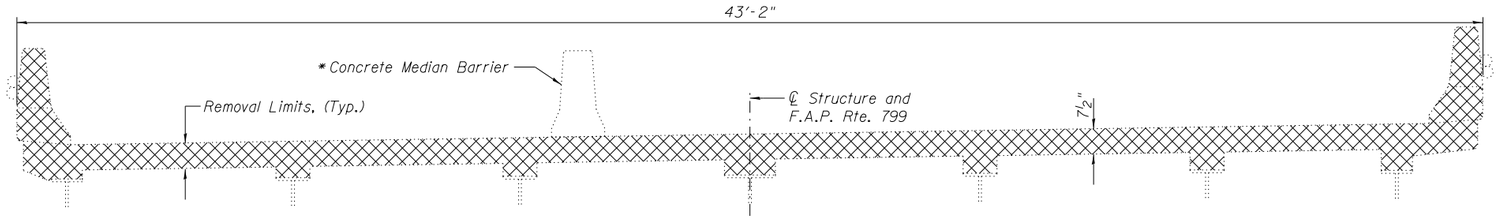
SECTION A-A AT BENTS W-WEST SPAN, 17, 18, 22, 23, 27, AND 28
SECTION B-B AT PIER 13-EAST SPAN



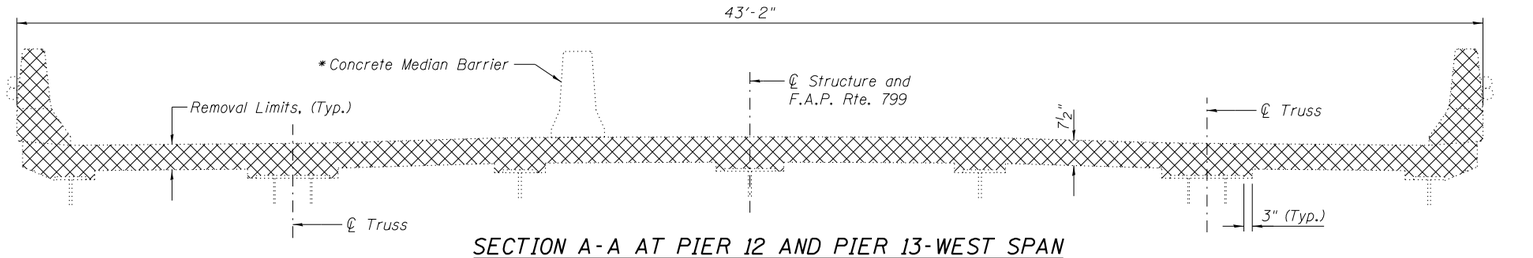
SECTION A-A AT HINGE ON SPAN 6



SECTION A-A AT BENT 6-WEST SPAN



SECTION B-B AT BENT 6-EAST SPAN



SECTION A-A AT PIER 12 AND PIER 13-WEST SPAN
SECTION B-B AT PIER 11-EAST SPAN

*Median barrier over the expansion joint replacement locations shall be temporarily removed and reinstalled once the construction is complete. Cost shall be included with the pay item Concrete Removal.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE REMOVAL
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S093 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	111
		CONTRACT NO. 76B03		
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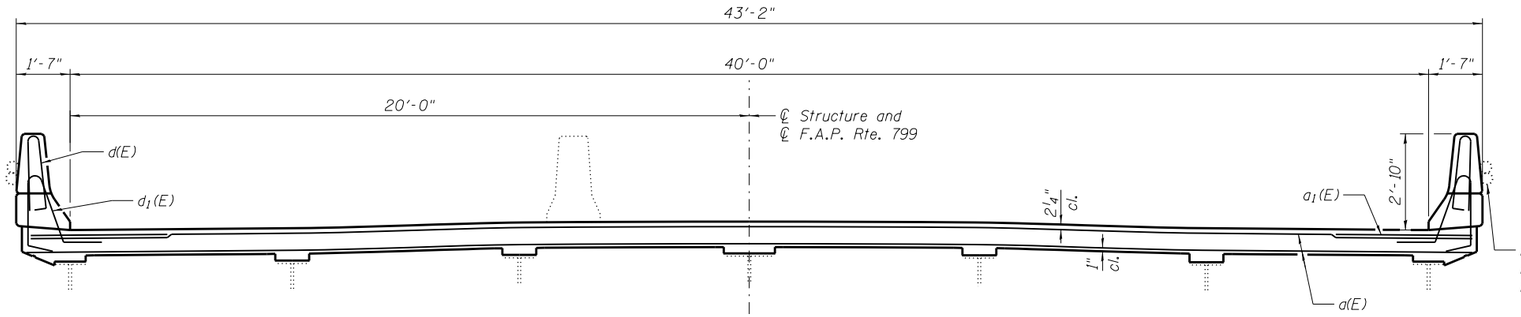
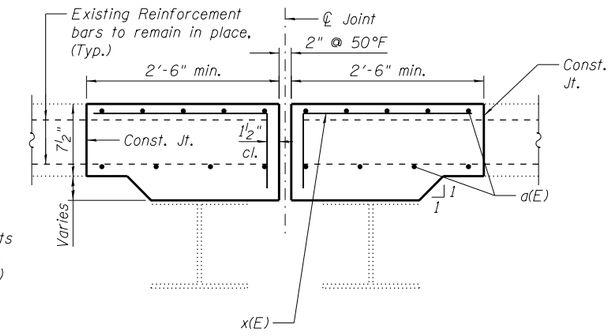
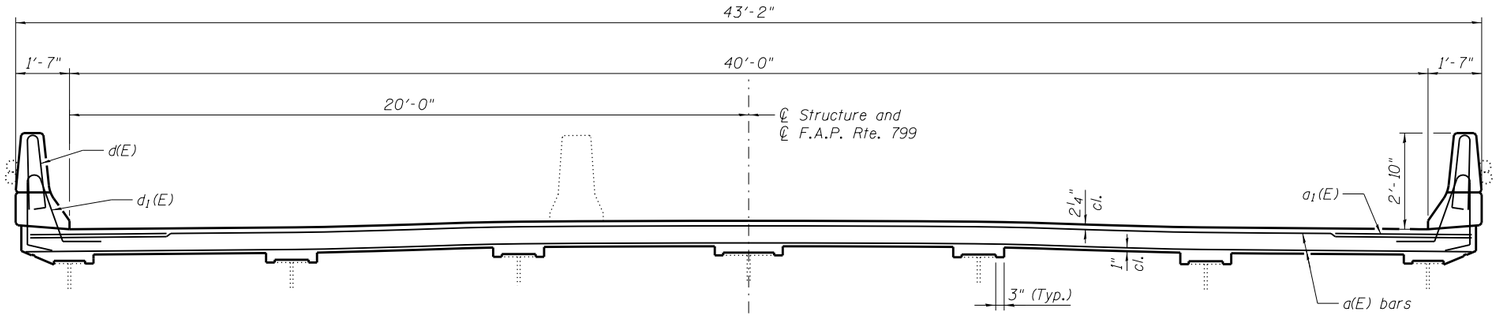


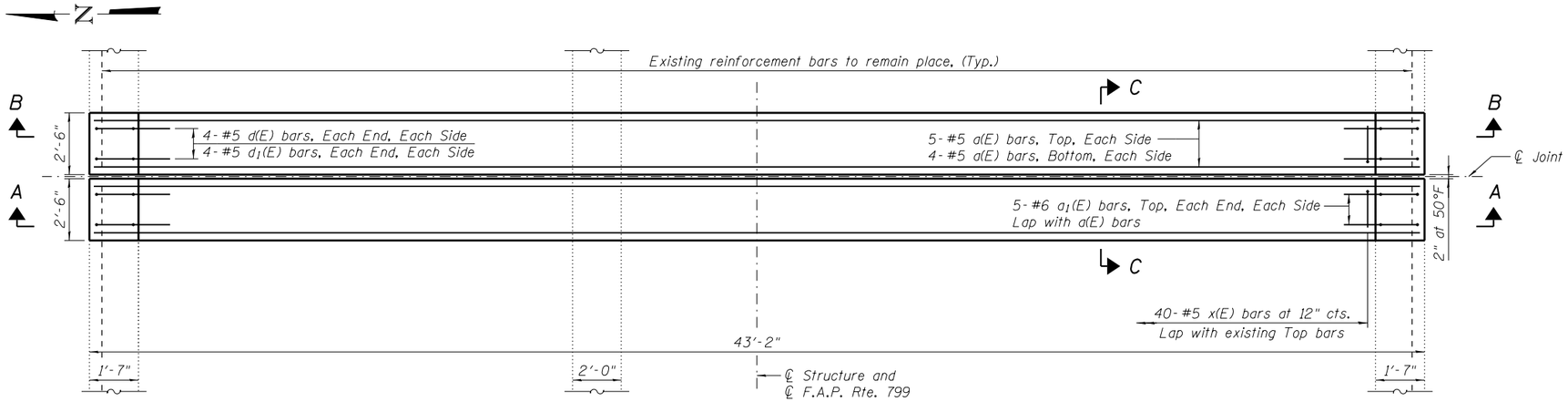
SECTION A-A AT BENTS 2 AND 3-WEST SPAN
SECTION B-B AT BENT W-EAST SPAN



SECTION C-C



SECTION A-A AT BENTS W-WEST SPAN, 17, 18, 22, 23, 27, AND 28



PLAN AT BENT W, 2, 3-WEST SPAN, 17, 18, 22, 23, 27, AND 28

Notes:

For notes, bar details and bill of material for joint replacement, see sheet S097 of S138.

Re-attach existing conduit to parapets. Cost included with Concrete Superstructure.

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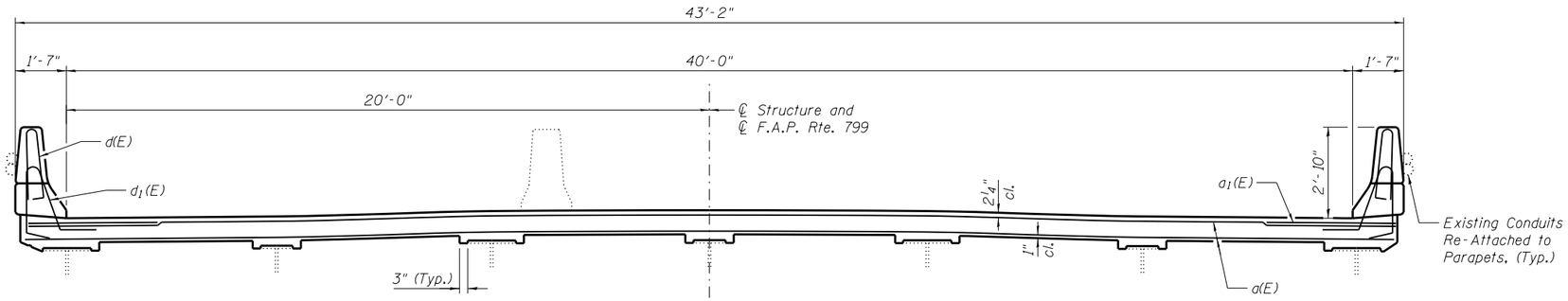
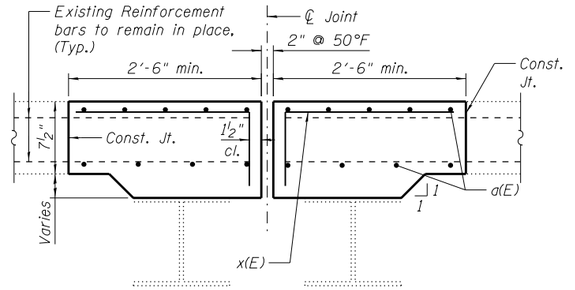
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REPLACEMENT DETAILS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S094 OF S138 SHEETS

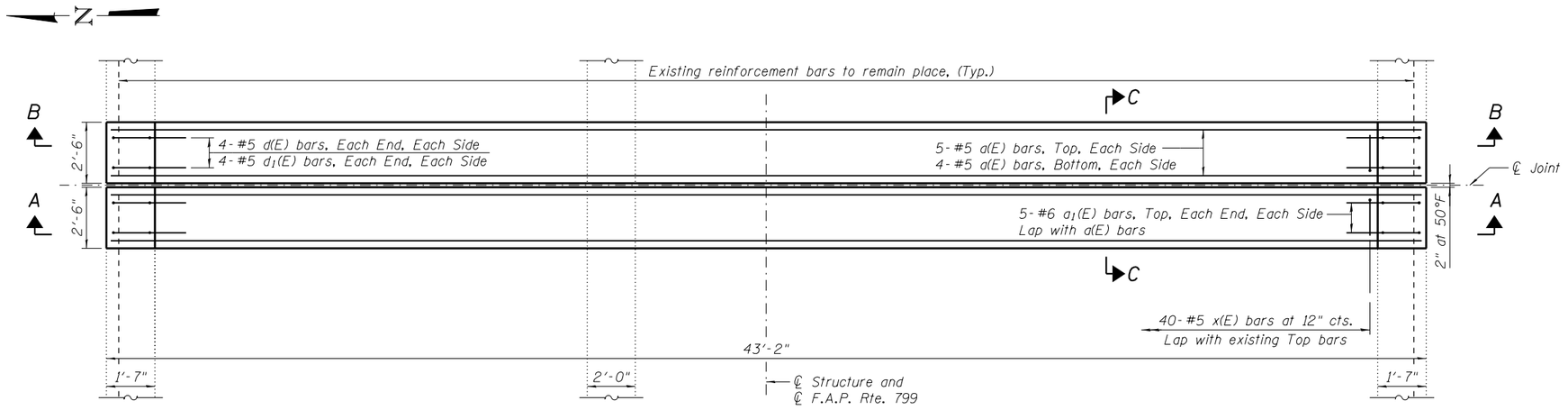
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	112
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		



SECTION A-A AT HINGE ON SPAN 6
AND SECTION B-B AT BENT 3-EAST SPAN



SECTION C-C



PLAN AT BENT 3-EAST SPAN AND HINGE ON SPAN 6

Notes:
For notes, bar details and bill of material for joint replacement, see sheet S097 of S138.
Re-attach existing conduit to parapets. Cost included with Concrete Superstructure.

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	PLOT SCALE =	DRAWN - AJF	REVISED -		
	PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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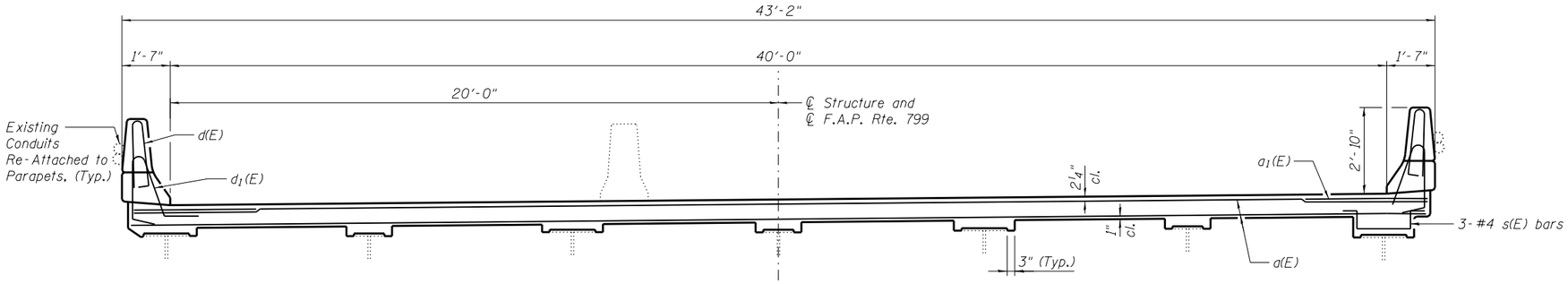
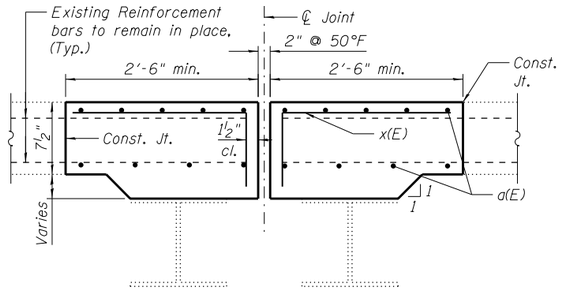
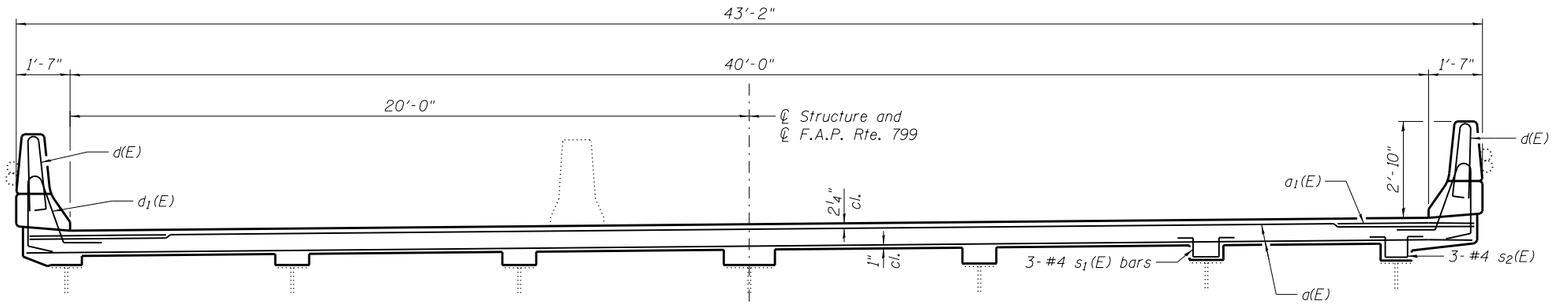
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



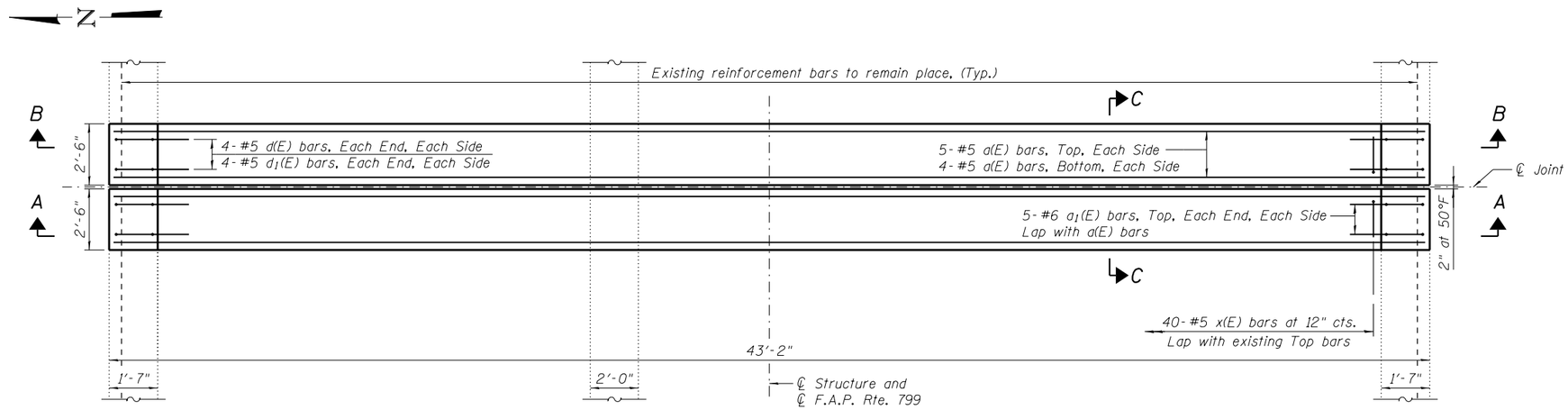
SECTION A-A AT BENT 6-WEST SPAN



SECTION C-C



SECTION B-B BENT 6-EAST SPAN



PLAN AT BENT 6

Notes:
For notes, bar details and bill of material for joint replacement, see sheet S097 of S138.
Re-attach existing conduit to parapets. Cost included with Concrete Superstructure.

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - JJA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXPANSION JOINT REPLACEMENT DETAILS S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
	FILE NAME =	CHECKED - TBP	REVISED -		
	PLOT SCALE =	DRAWN - AJF	REVISED -		
	PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -		SHEET NO. S096 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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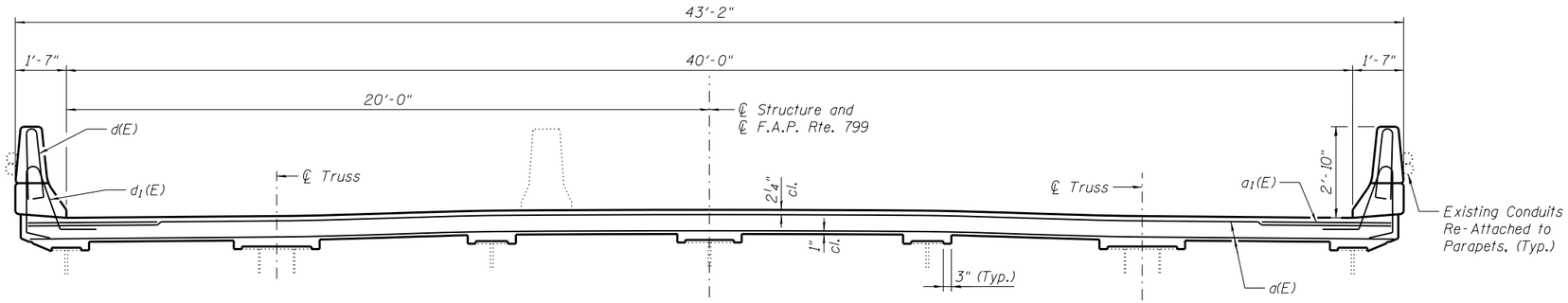
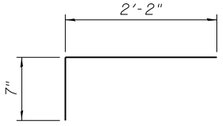
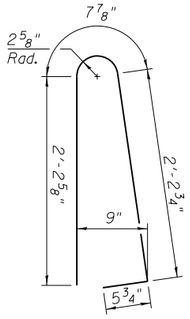
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		



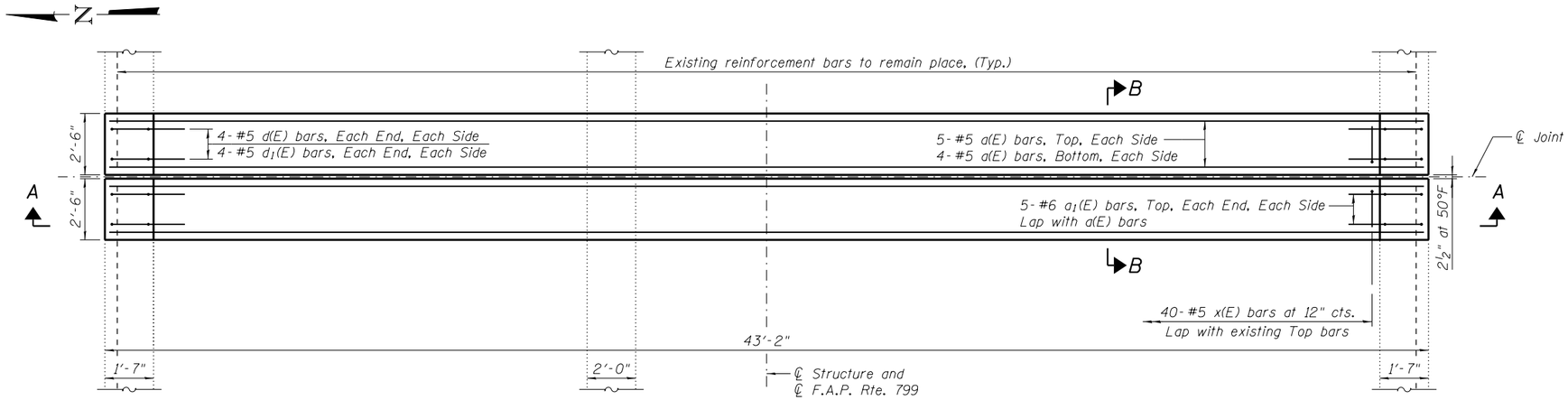
SECTION A-A AT PIER 12



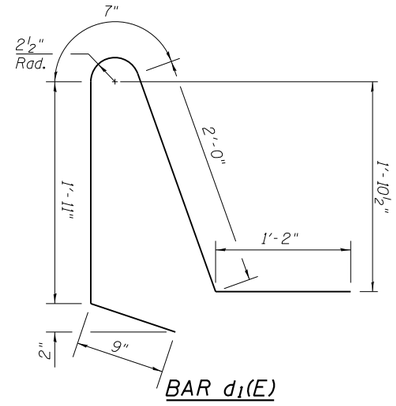
BAR x(E)



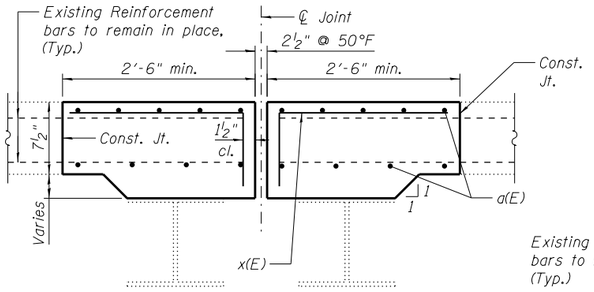
BAR d(E)



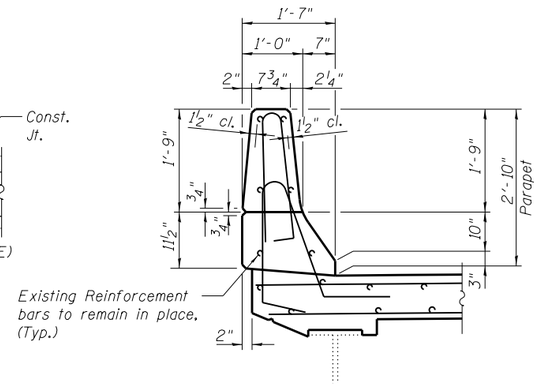
PLAN AT PIER 12



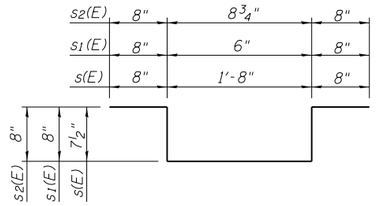
BAR d1(E)



SECTION B-B



SECTION AT PARAPET



BARS s(E), s1(E), AND s2(E)

BILL OF MATERIAL

(All Strip Seal Joints)

Bar	No.	Size	Length	Shape
a(E)	216	#5	42'-7"	
a1(E)	240	#6	6'-6"	
d(E)	192	#5	5'-7"	
d1(E)	192	#5	6'-5"	
s(E)	3	#4	4'-3"	
s1(E)	3	#4	3'-2"	
s2(E)	3	#4	3'-5"	
x(E)	960	#5	2'-9"	
Reinforcement Bars, Epoxy Coated			Pound	17,120
Concrete Superstructure			Cu. Yd.	87.6

Notes:

Existing reinforcement shall be cleaned, straightened (if required) and incorporated into the new construction. Cost included with Concrete Superstructure.

Re-attach existing conduit to parapets. Cost included with Concrete Superstructure.

Quantity of Concrete Superstructure also includes the quantity of concrete removed at Piers 9 and 10 and PP8'. See sheet S092 of S138 for location and other details.

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Consulting Engineers
Springfield, Illinois

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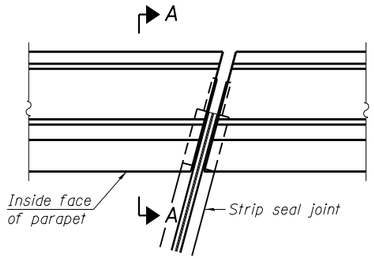
PLOT DATE =	05/02/2014	CHECKED - VPT	REVISED -

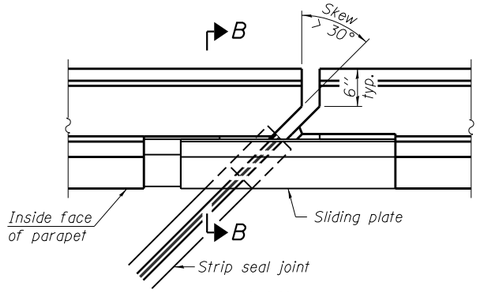
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REPLACEMENT DETAILS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S097 OF S138 SHEETS

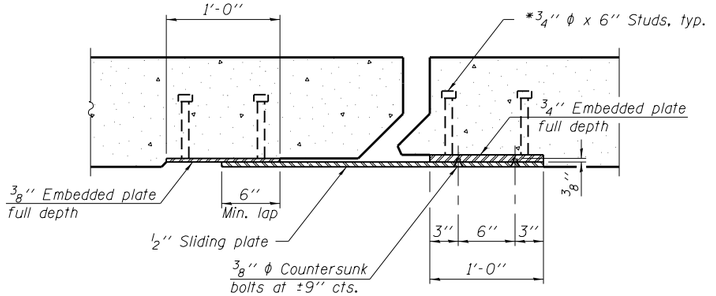
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	115
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		



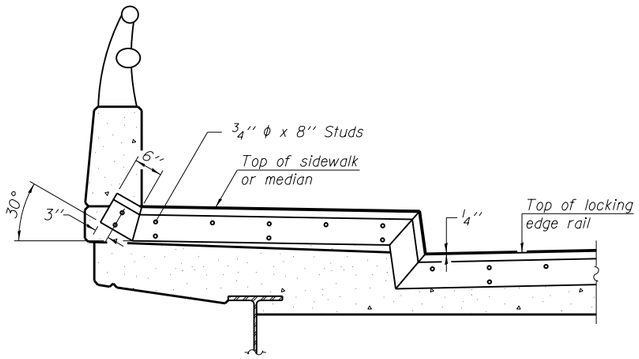
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

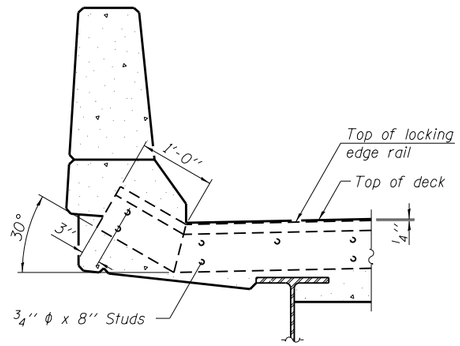


SECTION C-C

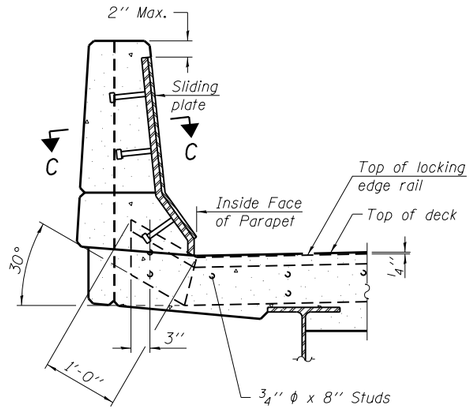


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

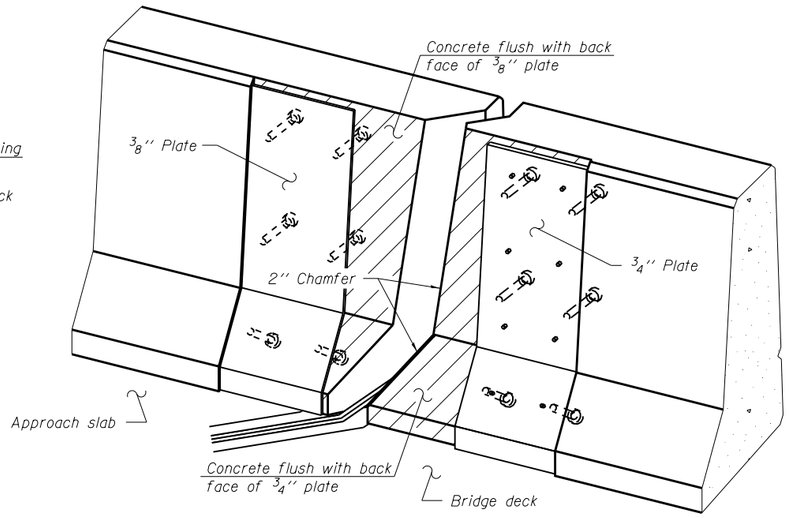
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



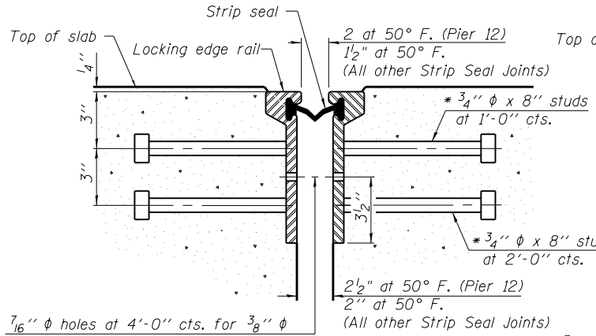
SECTION A-A



SECTION B-B

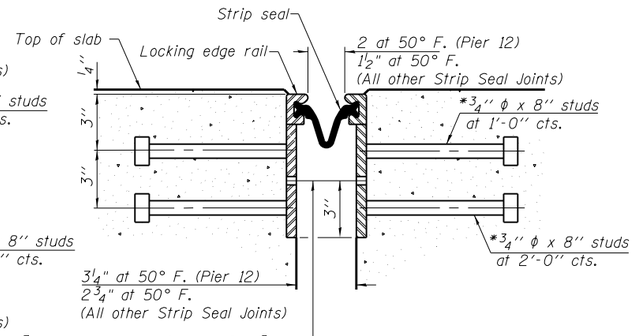


TRIMETRIC VIEW
(Showing back plates only)



7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

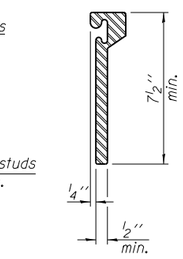
SECTION THRU ROLLED RAIL JOINT



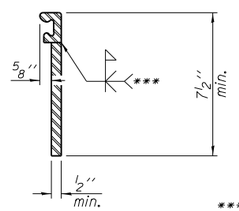
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

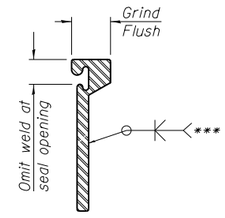
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL



WELDED RAIL



*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.

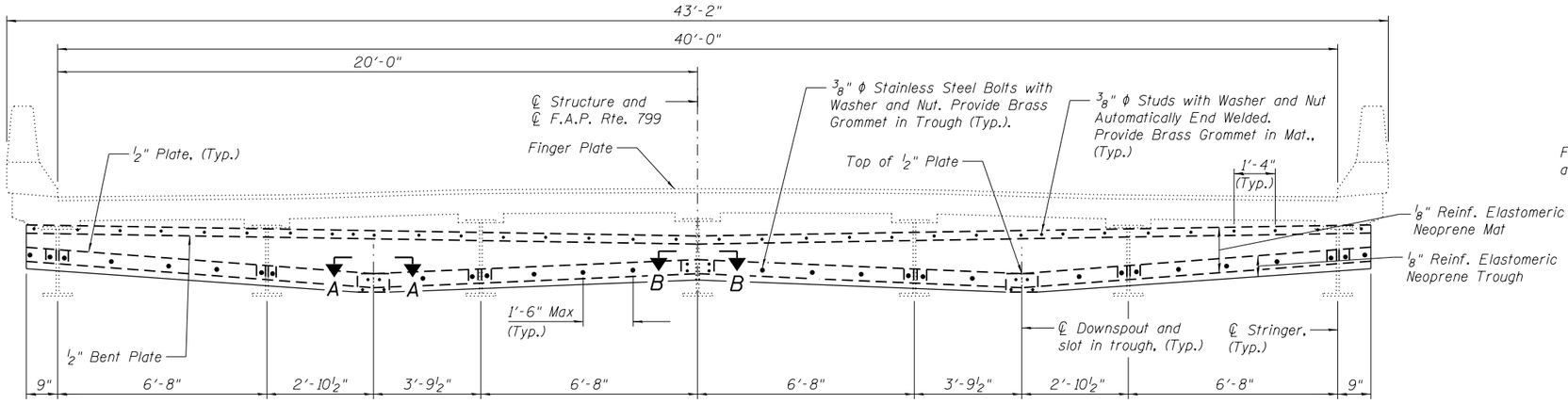
BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	504

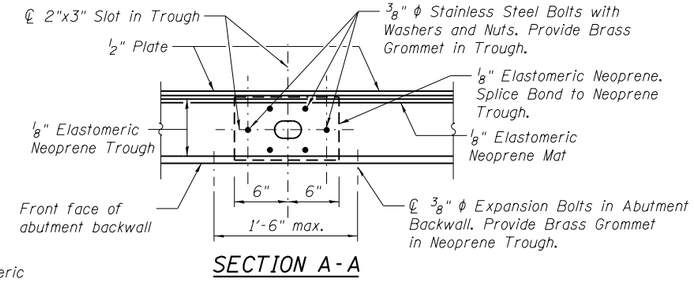
EJ-SSJ 1-27-12

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - JJA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PREFORMED JOINT STRIP SEAL S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
	FILE NAME =	CHECKED - TBP	REVISED -		
	PLOT SCALE =	DRAWN - AJF	REVISED -		
	PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -		SHEET NO. S098 OF S138 SHEETS

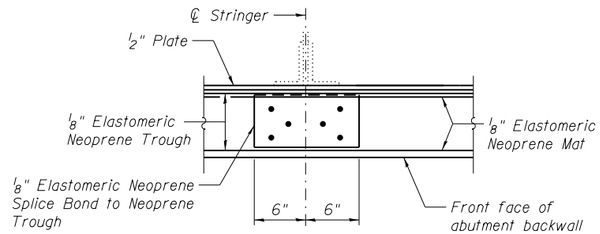
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	116
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



ABUTMENT A TROUGH SECTION

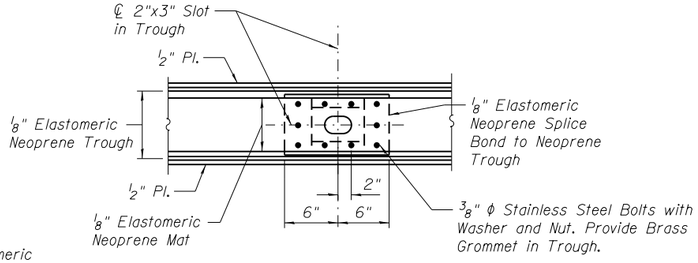


SECTION A-A

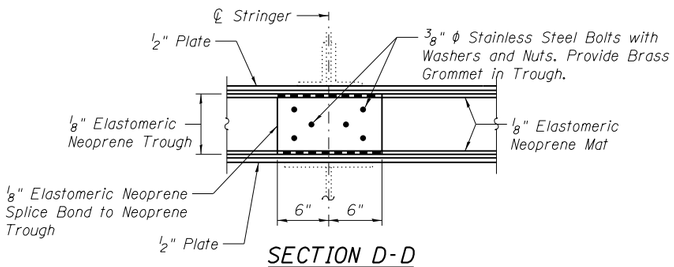


SECTION B-B

PIER 8 TROUGH SECTION



SECTION C-C



SECTION D-D

Notes:
See sheet S100 of S138 for cross sections thru finger plate joints, trough details, additional notes and quantity for Fabric Reinforced Elastomeric Trough.

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - JJA	REVISED -
	FILE NAME =	CHECKED - TBP	REVISED -
	PLOT SCALE =	DRAWN - AJF	REVISED -
	PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TROUGH REPLACEMENT DETAILS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S099 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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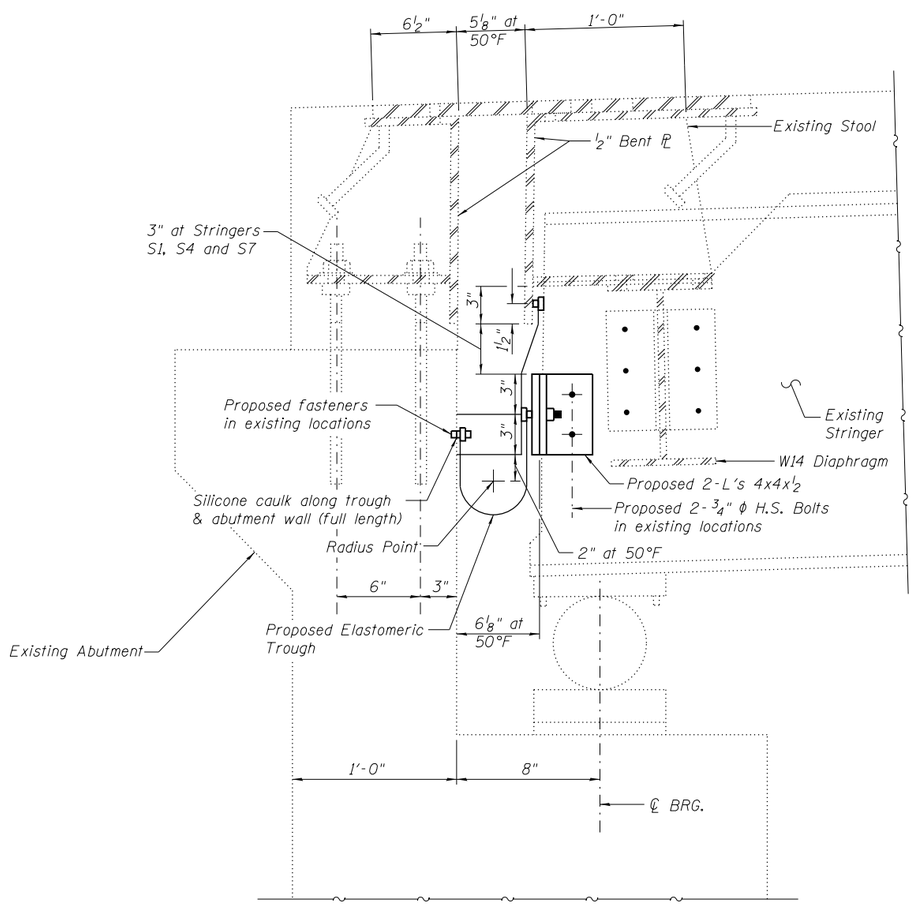
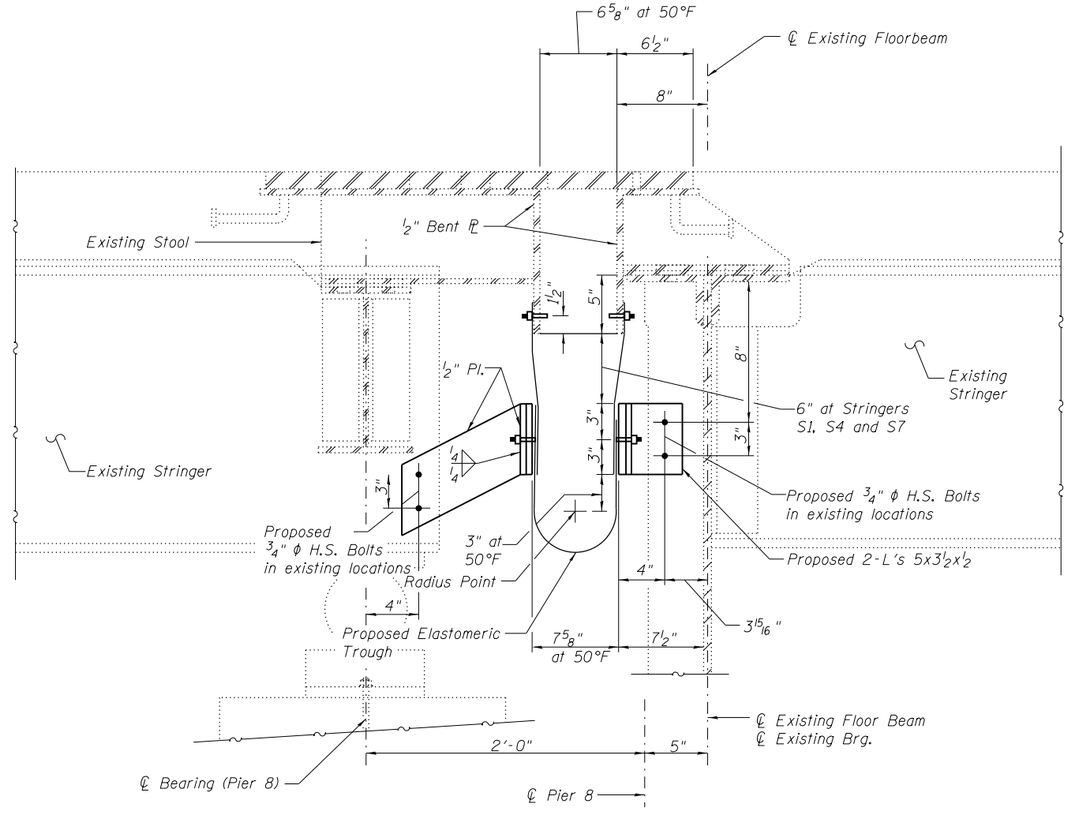
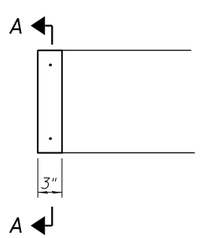
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



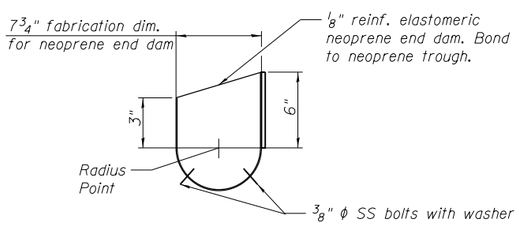
SECTION THRU EXPANSION JOINT AT ABUTMENT A



SECTION THRU EXPANSION JOINT AT PIER 8

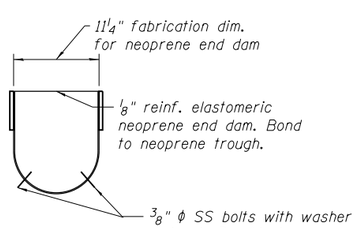


SECTION AT END OF TROUGH



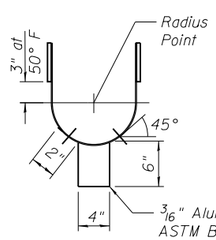
SECTION A-A

(Abutment A)



SECTION A-A

(Pier 8)



SECTION AT DOWN SPOUT

(Pier 8)

Notes:

All connections and fasteners required to complete the work shall be included with the pay item Fabric Reinforced Elastomeric Trough.

Removal of existing trough shall be included with the pay item, Fabric Reinforced Elastomeric Trough.

Extreme care shall be taken while replacing existing trough as not to damage any part of the existing joint assembly. Any damaged parts shall be replaced at Contractor's expense.

All the bolts required to connect the elastomeric trough shall be located in existing holes.

For elevation view of the trough, see sheet S099 of S138.

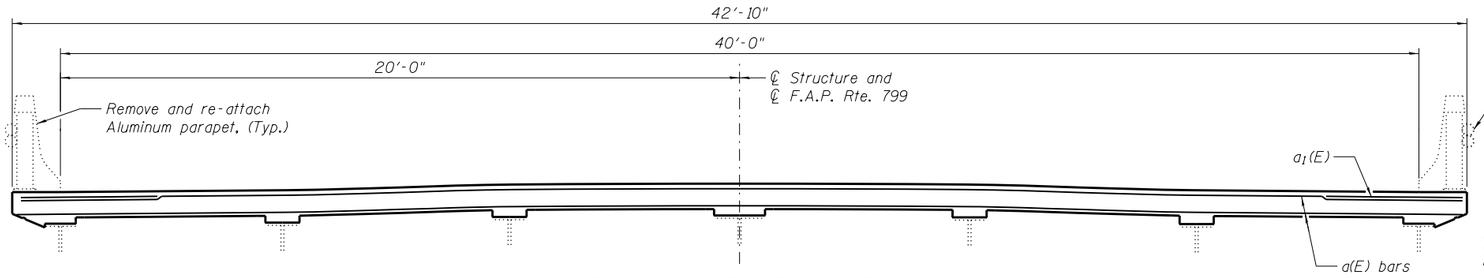
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Fabric Reinforced Elastomeric Trough	Foot	85

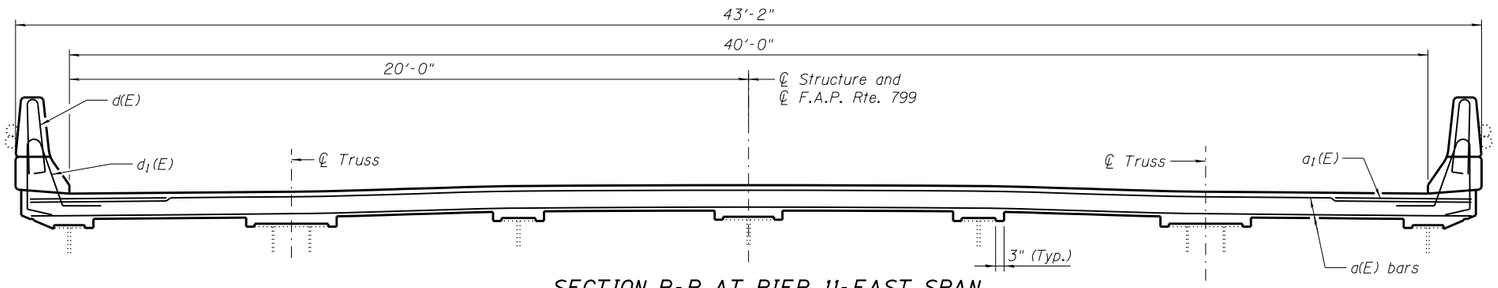
(Sheet 2 of 2)

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - JJA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TROUGH REPLACEMENT DETAILS S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
	FILE NAME =	CHECKED - TBP	REVISED -		
	PLOT SCALE =	DRAWN - AJF	REVISED -		
	PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -		SHEET NO. S100 OF S138 SHEETS

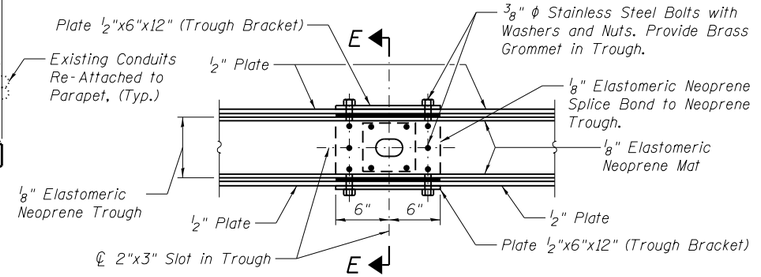
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	118
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		



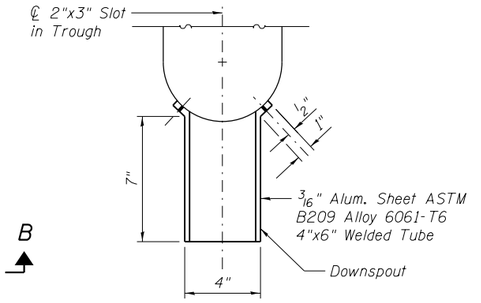
SECTION A-A AT PIER 11-WEST SPAN



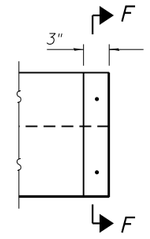
SECTION B-B AT PIER 11-EAST SPAN



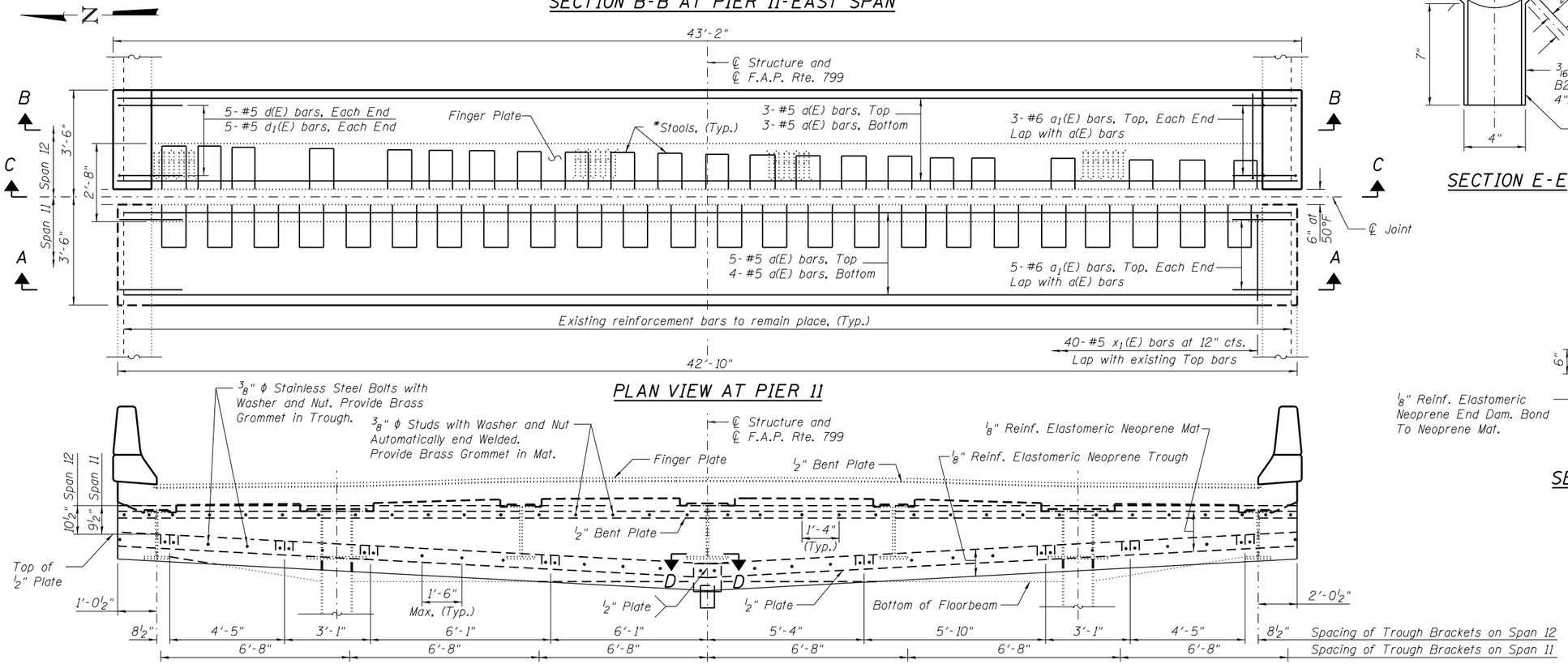
SECTION D-D



SECTION E-E

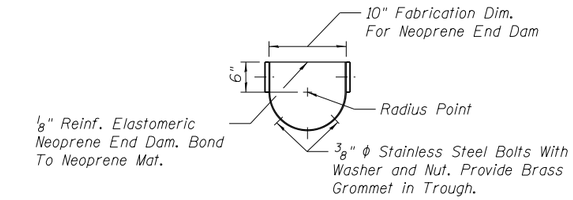


SECTION AT END OF TROUGH



PLAN VIEW AT PIER 11

SECTION C-C



SECTION F-F

Notes:

See sheet S105 of S138 for Bill of Material and elevation view of parapet sliding plate.

See sheet S103 of S138 for cross section thru expansion joint and additional notes.

See Main Spans Aluminum Parapet Details for parapet removal and re-attachment.

Re-attach existing conduit to parapets. Cost included with Concrete Superstructure.

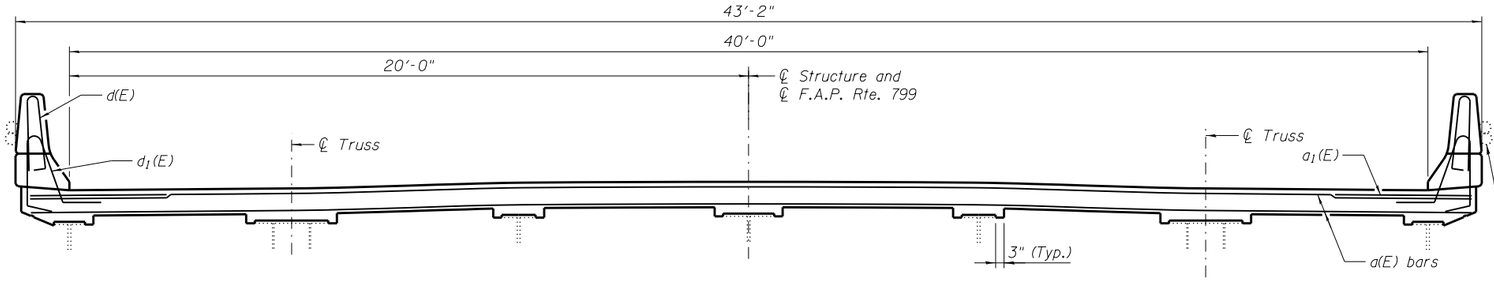
*Stools at the locations where cover plates are provided over floor beams shall be replaced. Use existing stools at all other locations.

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - JJA	REVISED -
	FILE NAME =	CHECKED - TBP	REVISED -
	PLOT SCALE =	DRAWN - AJF	REVISED -
	PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -

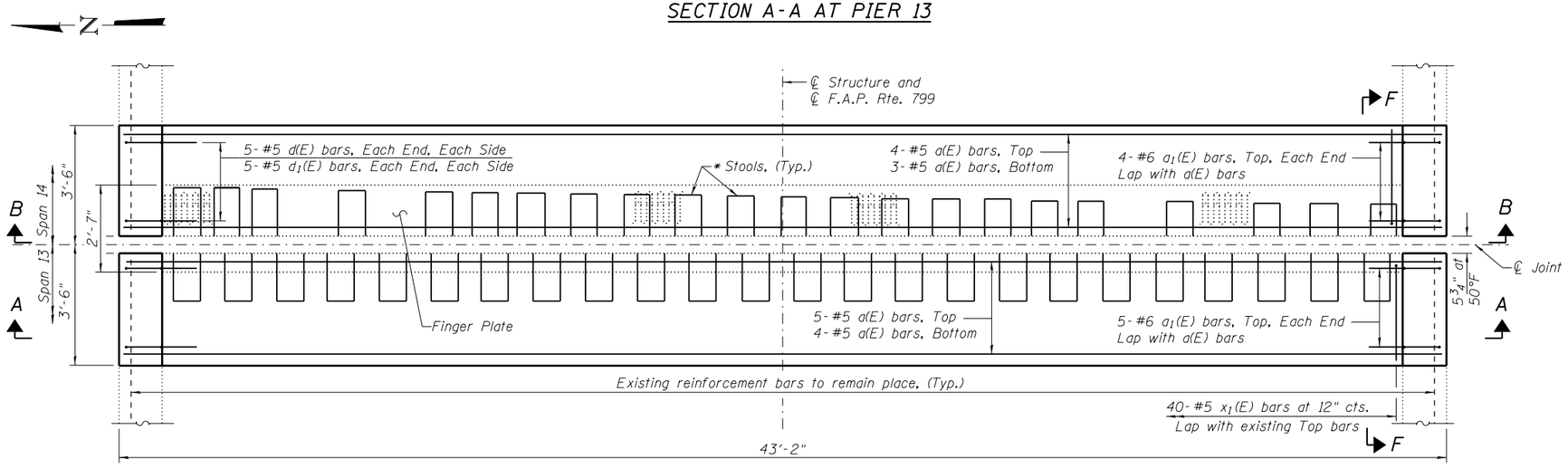
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FINGER PLATE JOINT REPAIR
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S101 OF S138 SHEETS

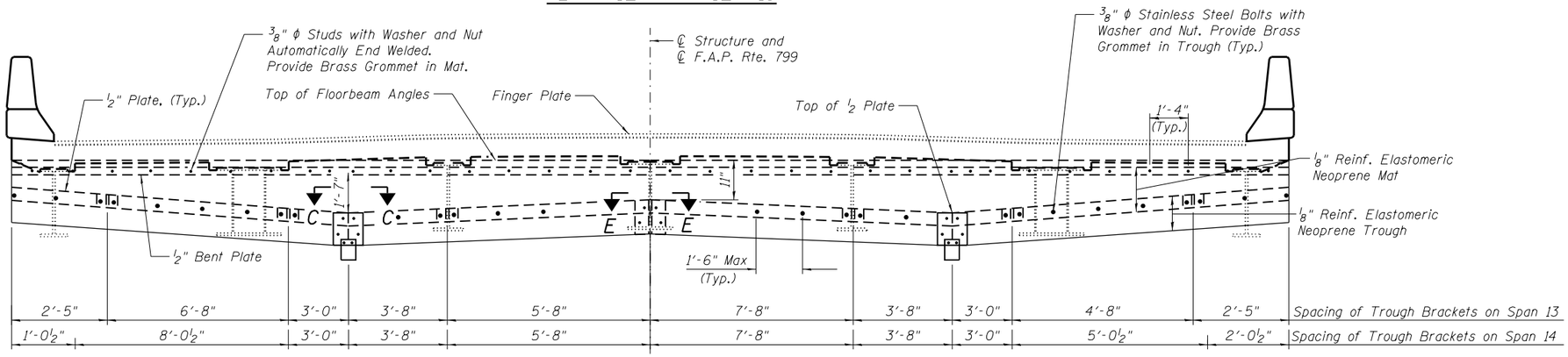
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	119
		CONTRACT NO. 76B03		
		ILLINOIS FED. AID PROJECT		



SECTION A-A AT PIER 13



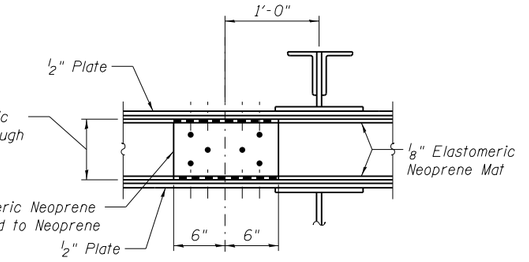
PLAN VIEW AT PIER 13



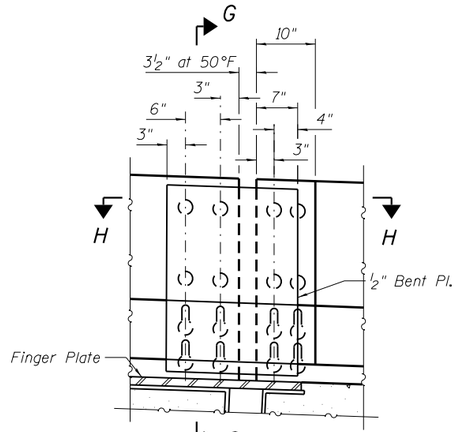
SECTION B-B

Note:
See Sheet S104 of S138 for Section C-C and Section at End of Trough.
See Sheet S105 of S138 for Bill of Material.
For cross-section thru expansion joint and additional notes, see sheet S103 of S138.
Re-attach existing conduit to parapets. Cost included with Concrete Superstructure.
See Sheet S129 of S138 for Proposed Drainage System at Pier 13.

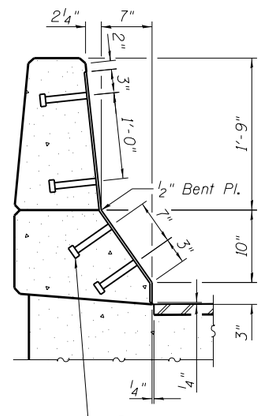
* Stools at the locations where cover plates are provided over floor beams shall be replaced. Use existing stools at all other locations.



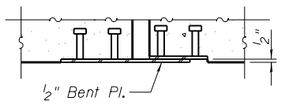
SECTION E-E



SECTION F-F



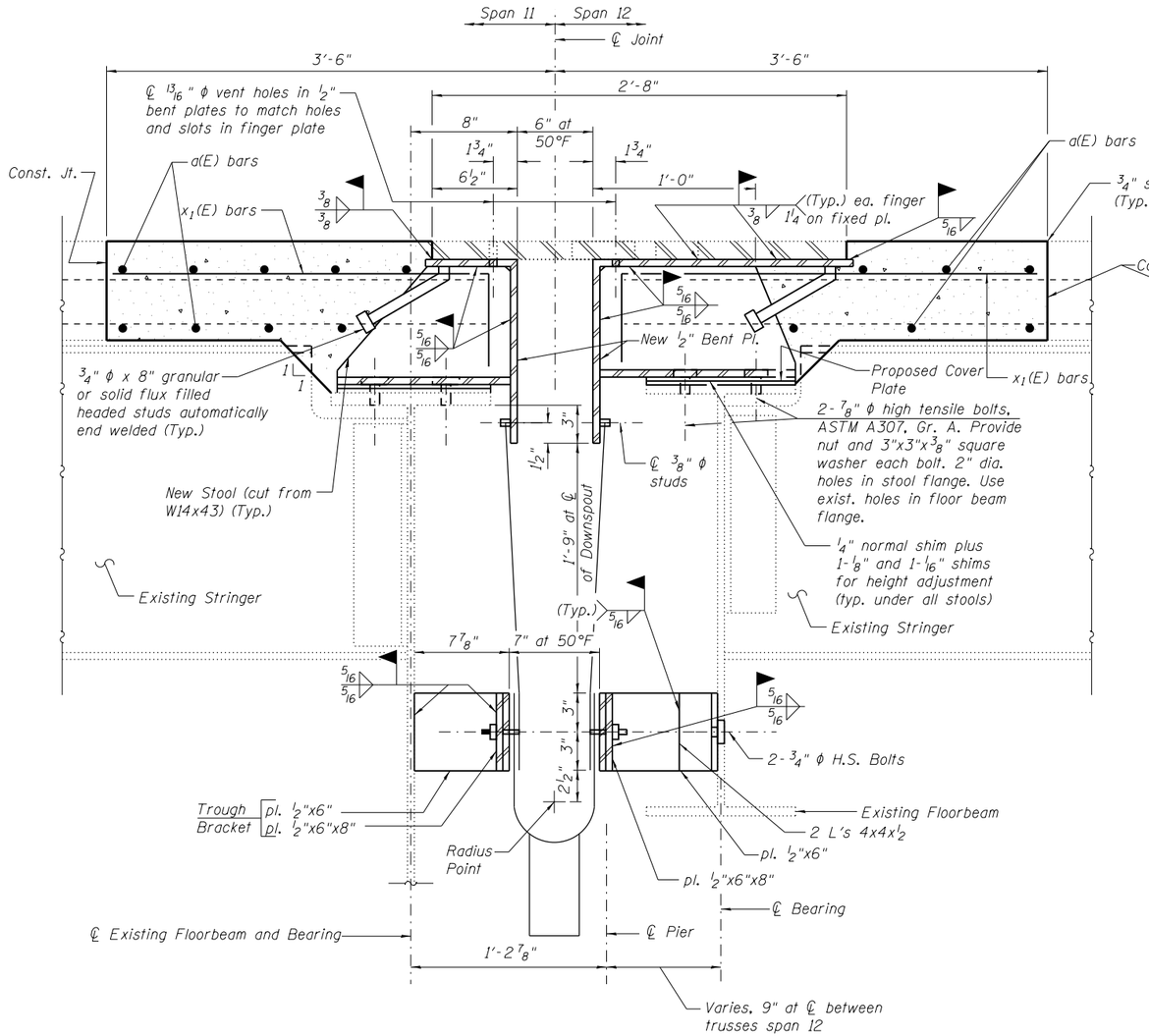
SECTION G-G



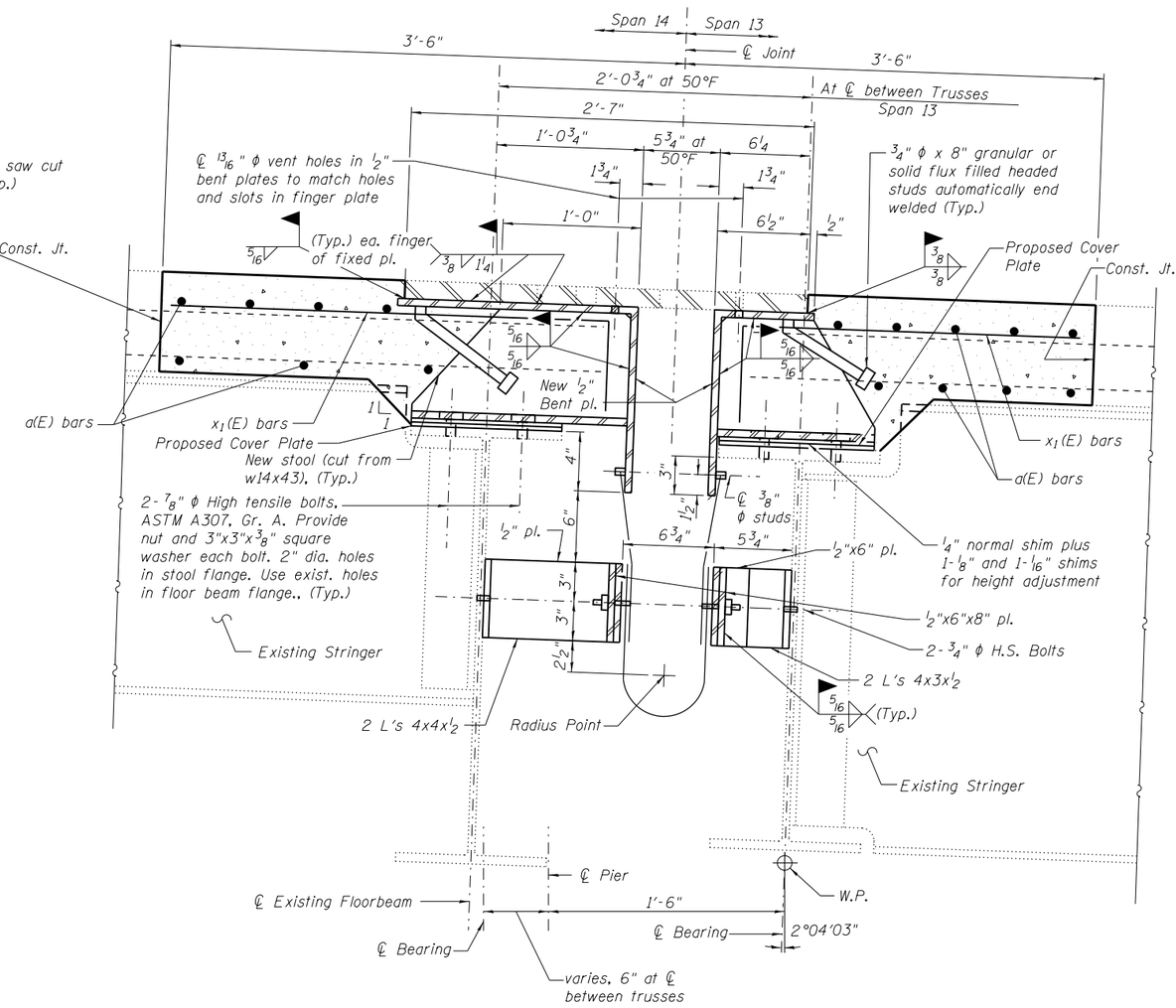
SECTION H-H

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - JJA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FINGER PLATE JOINT REPAIR S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
	FILE NAME =	CHECKED - TBP	REVISED -		
	PLOT SCALE =	DRAWN - AJF	REVISED -		
	PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -		SHEET NO. S102 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	120
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



SECTION THRU EXPANSION JOINT AT PIER 11



SECTION THRU EXPANSION JOINT AT PIER 13

Notes:

Existing finger and sliding plates shall be removed, stored and reused. The finger plate shall be separated from stools by removing weld using air-arc method and grind smooth all weld material remaining on finger plate.

The Contractor shall provide new stools with revised heights at the locations where cover plates are provided over floor beam. The Contractor will keep log of stools and shall provide same number of stools except the height of the new stools shall be less. Holes for the fasteners shall be field drilled for proposed stools.

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

See Sheet S105 of S138 for Bill of Material.

For proposed floorbeam top flange cover plates see Illinois Approach End Floorbeam Strengthening.

Cost of proposed stools, bent plates and all the fasteners required shall be included with the pay item Remove and Reinstall Finger Plate Joint.

Cost of proposed elastomeric trough shall be included with the pay item Fabric Reinforced Elastomeric Trough.

LIN ENGINEERING,LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - JJA	REVISED -
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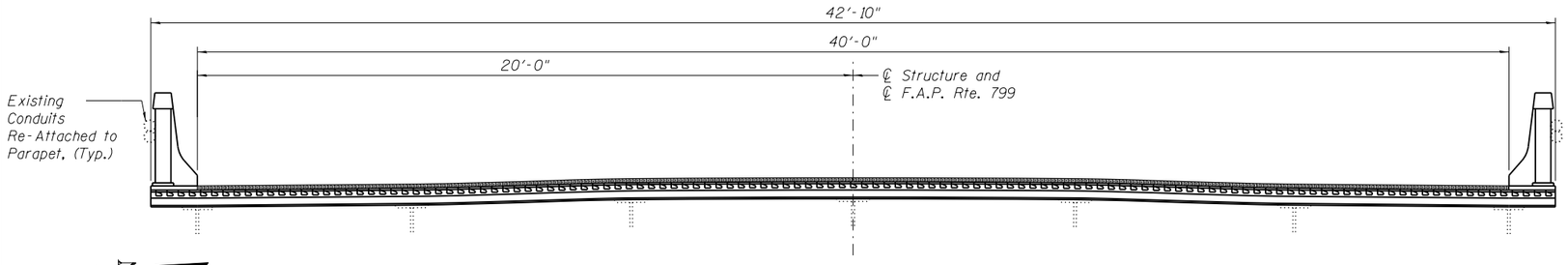
	PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -

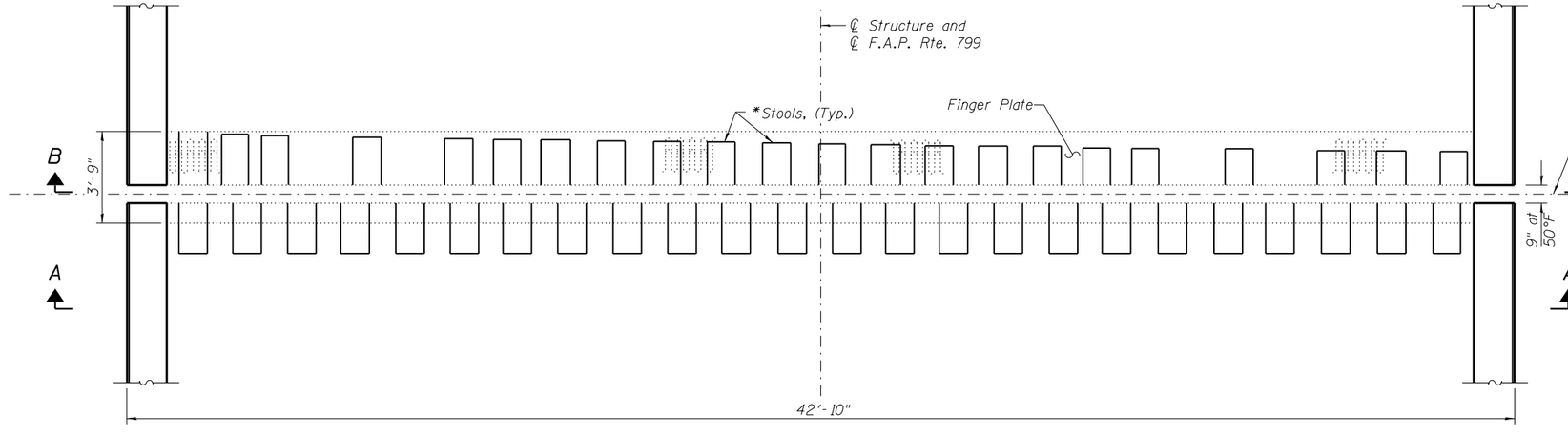
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FINGER PLATE JOINT REPAIR
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S103 OF S138 SHEETS

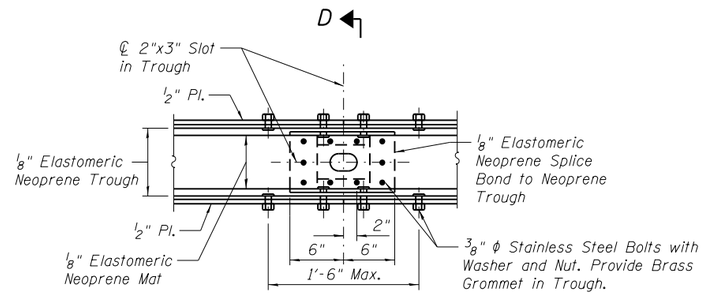
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	121
		CONTRACT NO. 76803		
	ILLINOIS	FED. AID PROJECT		



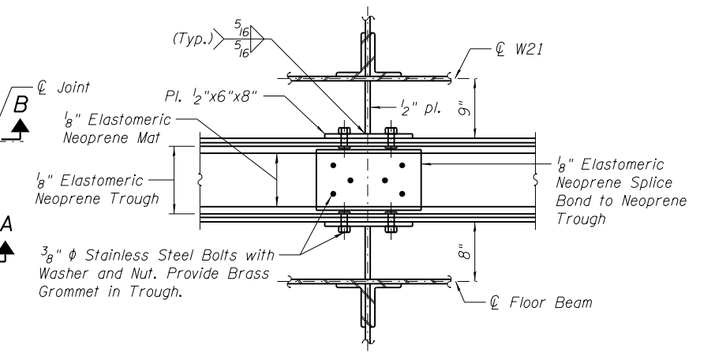
SECTION A-A AT PANEL POINT L22'



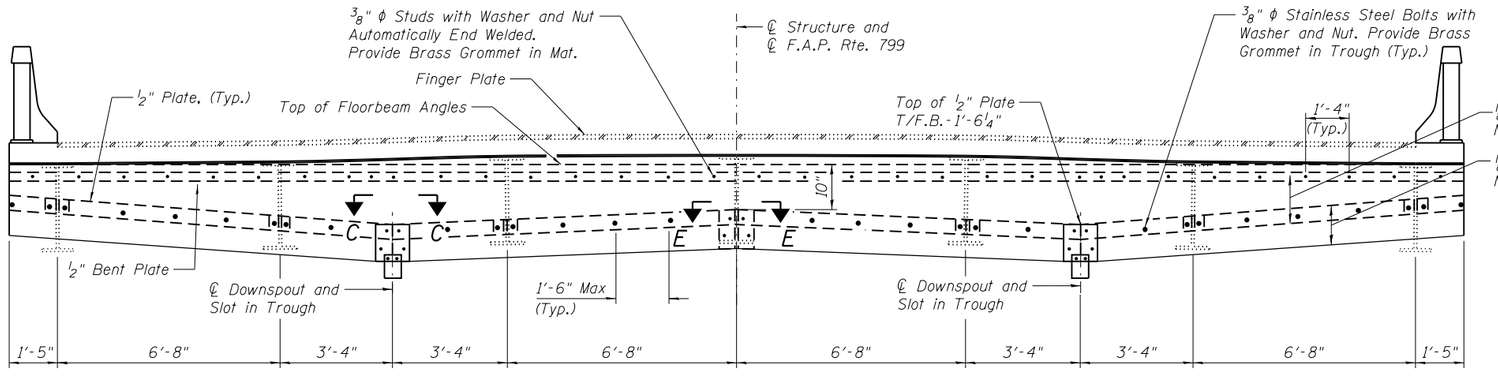
PLAN VIEW AT PANEL POINT L22'



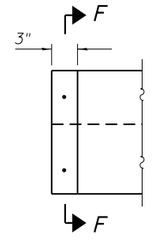
SECTION C-C



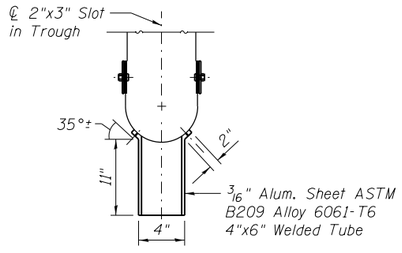
SECTION E-E



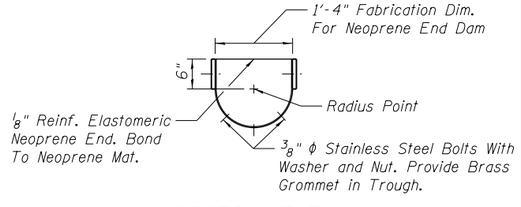
SECTION B-B



SECTION AT
END OF TROUGH



SECTION D-D



SECTION F-F

Notes:
See Sheet S105 of S138 for elevation view of parapet sliding plate and Bill of Material.
See Main Span Grid Deck Details for details of grid deck floor system.
See Sheet S103 of S138 for additional notes.
See Main Spans Aluminum Parapet Details for parapet removal and replacement.

*Stools at the locations where cover plates are provided over floor beams shall be replaced. Use existing stools at all other locations.

LIN ENGINEERING,LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - JJA	REVISED -
	FILE NAME =	CHECKED - TBP	REVISED -
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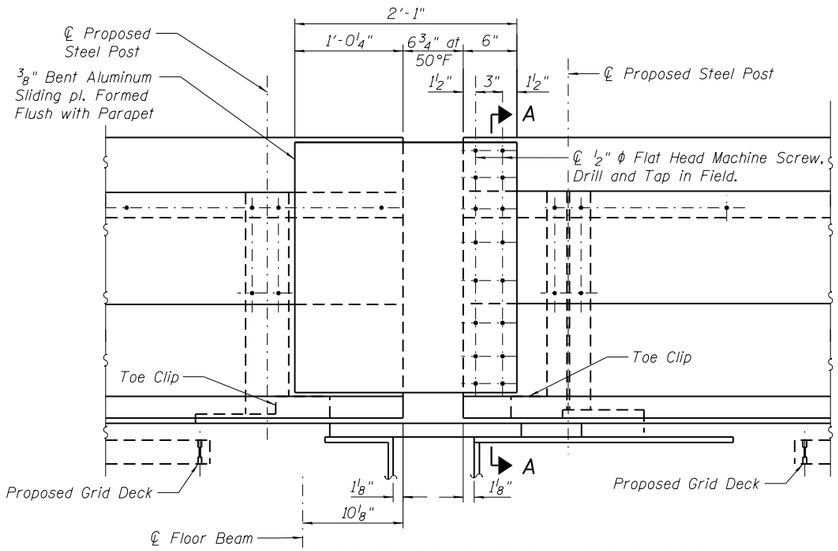
	PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

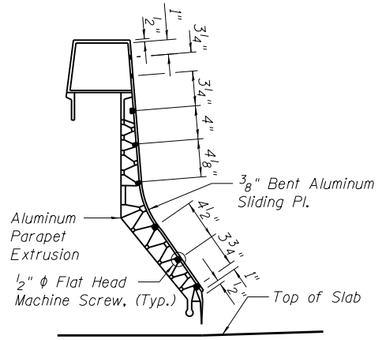
FINGER PLATE JOINT REPAIR
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S104 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	122
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			

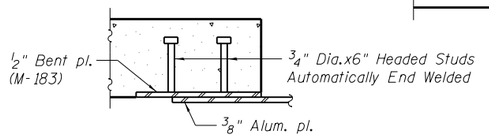


ELEVATION-PARAPET SLIDING PLATE

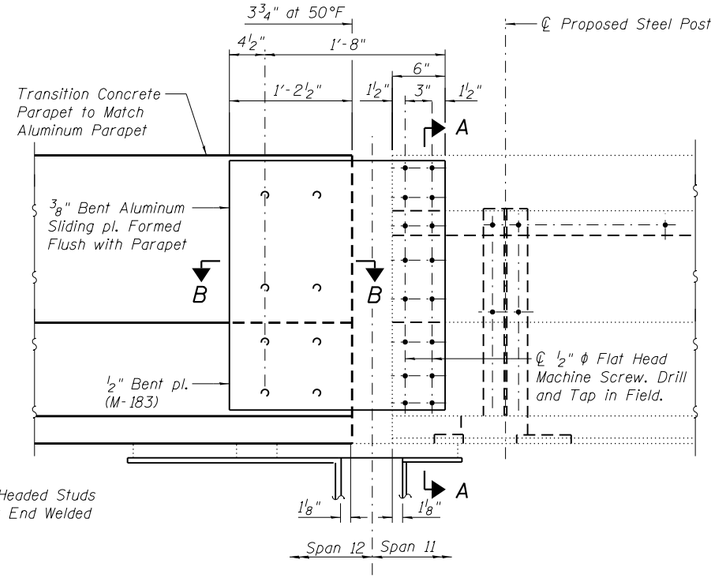
(Panel Point L22')



SECTION A-A

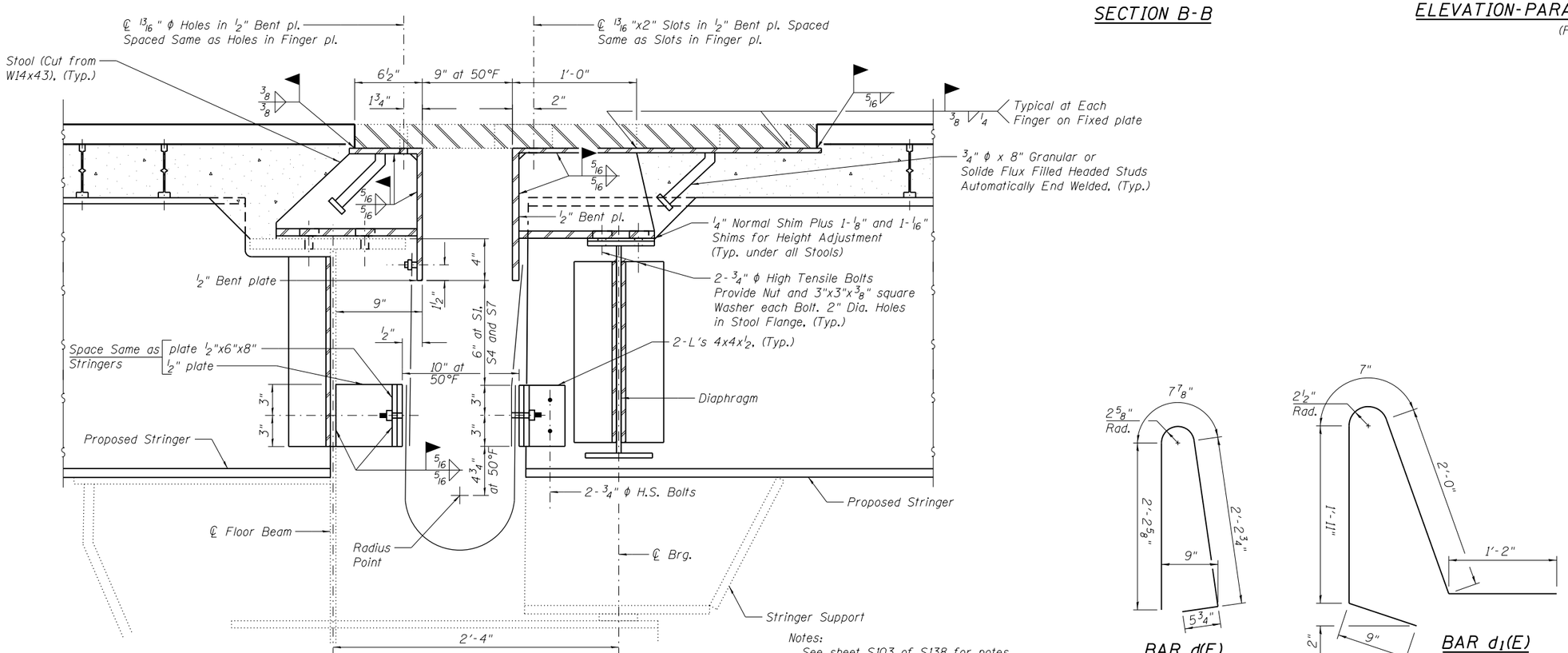


SECTION B-B



ELEVATION-PARAPET SLIDING PLATE

(Pier 11)

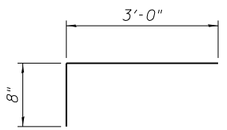


SECTION THRU EXPANSION JOINT AT PANEL POINT L22'

Notes:
See sheet S103 of S138 for notes.
Remove and Reinstall Bent Aluminum Sliding Plate. See Main Span Aluminum Parapet Details.

BAR d(E)

BAR d_1(E)



BAR x_1(E)

BILL OF MATERIAL

(All Finger Plate Joint Replacements)

Bar	No.	Size	Length	Shape
d(E)	31	#5	42'-7"	
d_1(E)	34	#6	6'-6"	
d(E)	30	#5	5'-7"	
d_1(E)	30	#5	6'-5"	
x_1(E)	160	#5	3'-8"	
Reinforcement Bars, Epoxy Coated			Pound	2,700
Concrete Superstructure			Cu. Yd.	17.6
Fabric Reinforced Elastomeric Trough			Foot	129
Remove and Reinstall Finger Plate Joint			Each	3

LIN ENGINEERING,LTD.
Consulting Engineers
Springfield, Illinois

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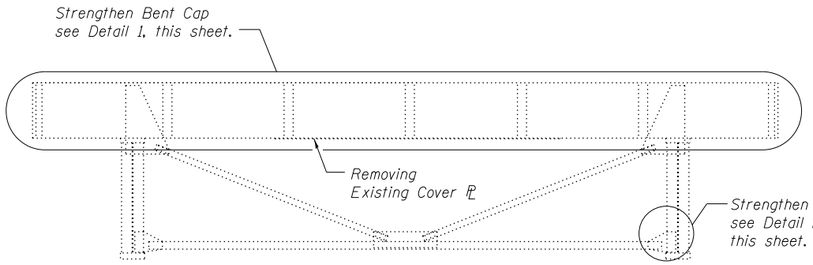
PLOT SCALE =		DRAWN - AJF	REVISED -
PLOT DATE =	05/02/2014	CHECKED - VPT	REVISED -

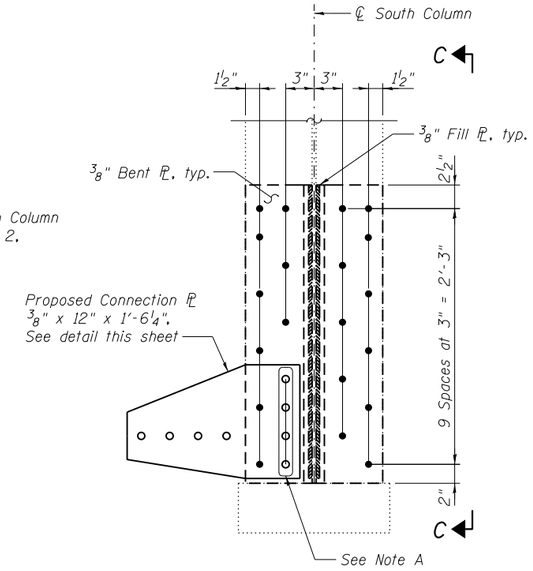
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FINGER PLATE JOINT REPAIR
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S105 OF S138 SHEETS

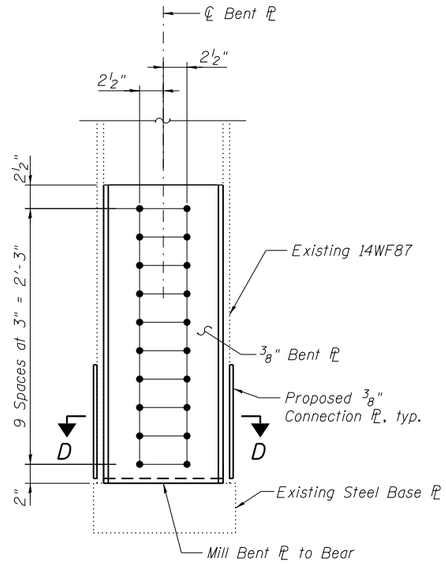
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	123
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



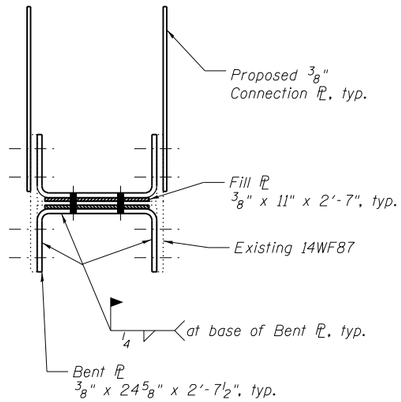
BENT W
(Looking East)



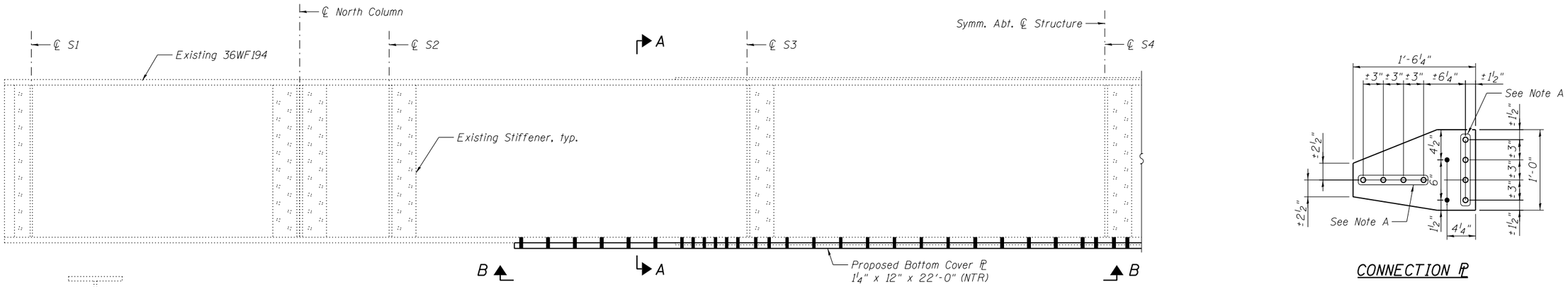
DETAIL 2



VIEW C-C

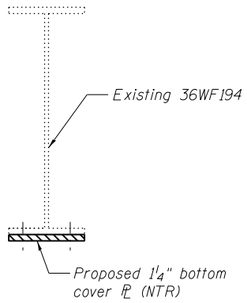


SECTION D-D

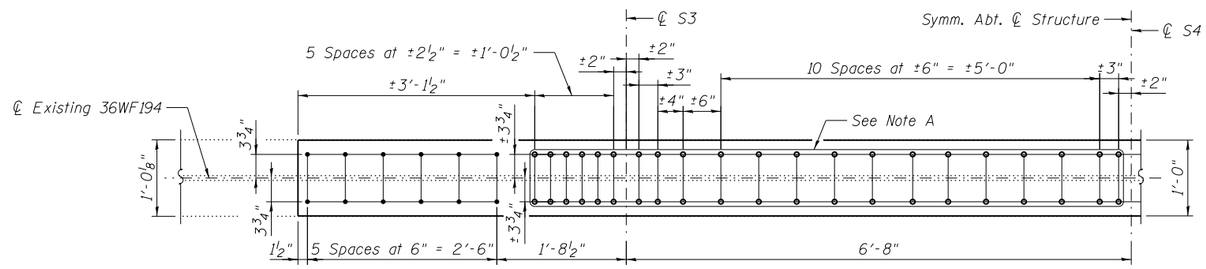


DETAIL 1

CONNECTION PL



SECTION A-A



VIEW B-B

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	1,520

Notes:
All bolted connections shown on this sheet shall be made with ¾" dia. H.S. bolts.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

Note A:
Field drill holes using existing holes as template. Remainder of holes may be shop or field drilled.

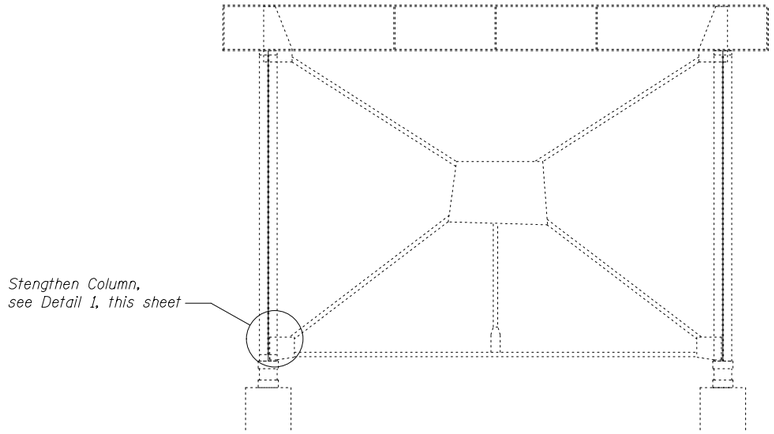
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

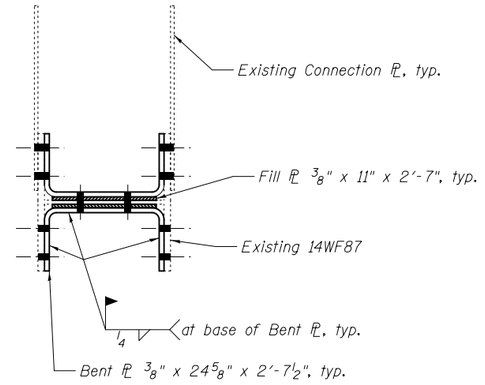
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI APPROACH BENT W REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S106 OF S138 SHEETS

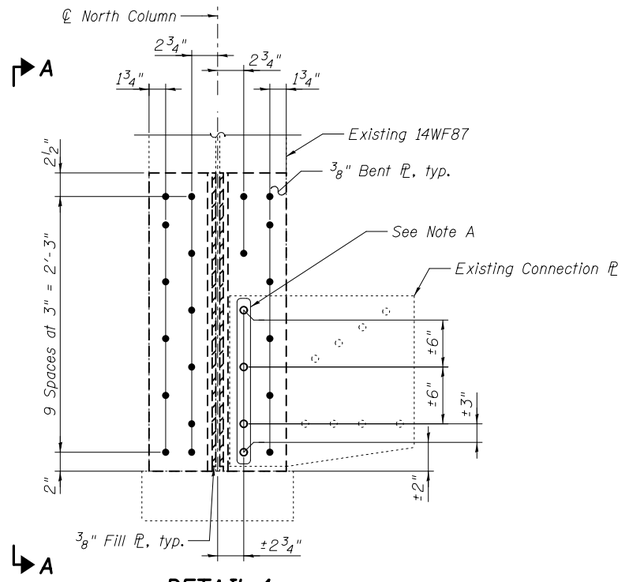
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	124
		CONTRACT NO. 76803		
	ILLINOIS FED. AID PROJECT			



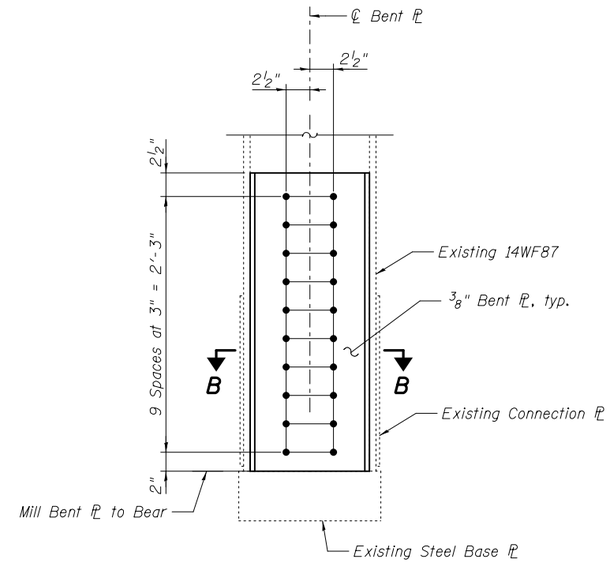
BENT 1
(Looking East)



SECTION B-B



DETAIL 1



VIEW A-A

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	280

Note A:
Field drill holes using existing holes as template.
Remainder of holes may be shop or field drilled.

Note:
All bolted connections shown on this sheet shall be made with 3/4" dia. H.S. bolts.

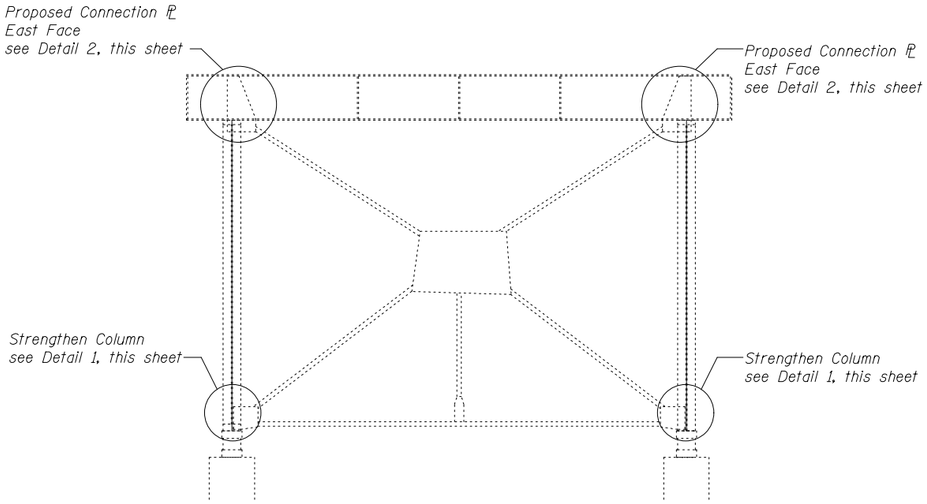
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - ZJB	REVISED
	CHECKED - YSS	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 03/20/2014	CHECKED - ZJB	REVISED

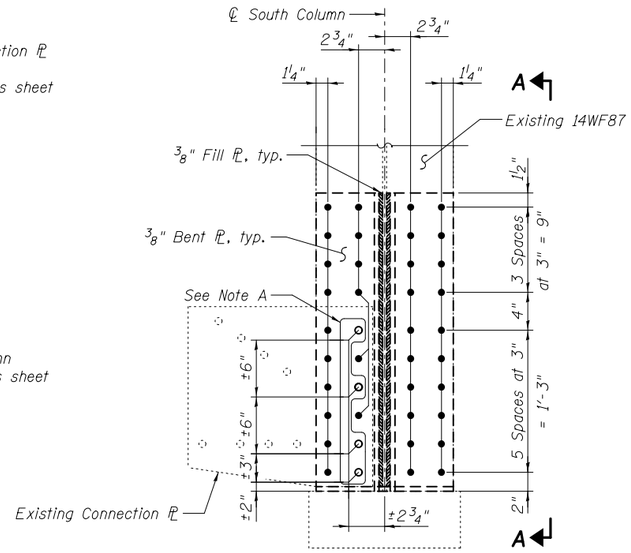
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI APPROACH BENT 1 REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S107 OF S138 SHEETS

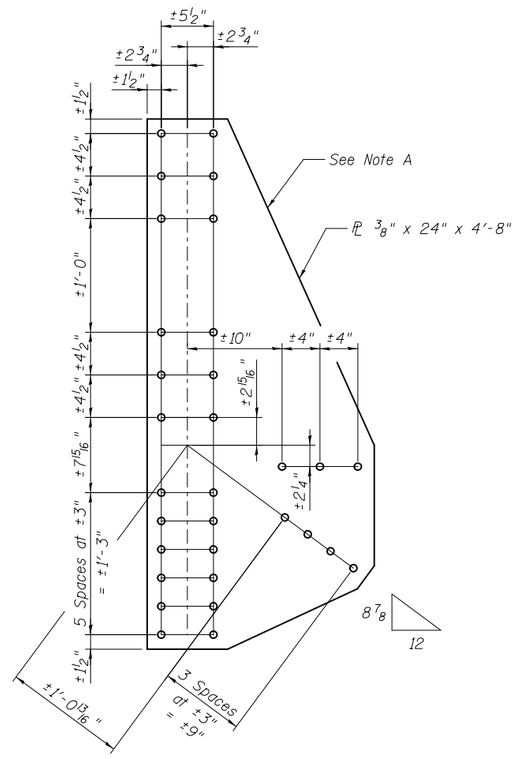
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	125
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



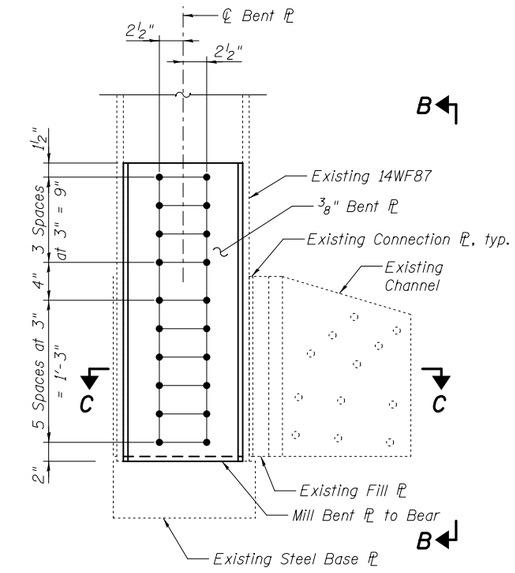
BENT 2
(Looking East)



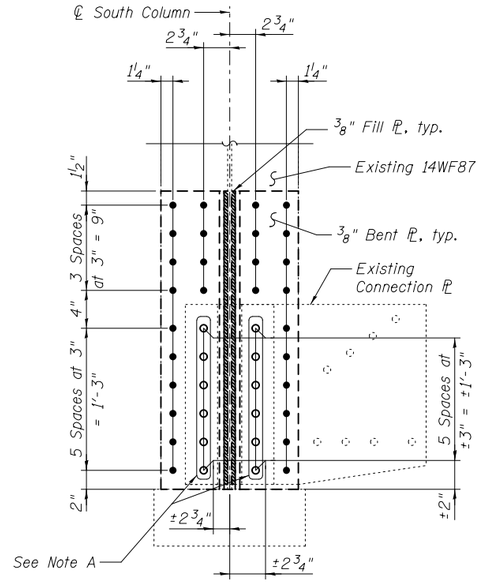
DETAIL 1
(South Column Shown, North Column similar)



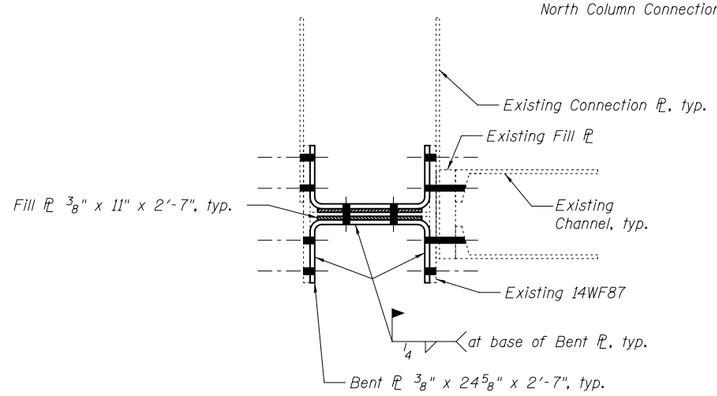
DETAIL 2
(South Column Connection ℄ East Face Shown,
North Column Connection ℄ East Face similar)



VIEW A-A



VIEW B-B
(Channel not shown for clarity)



SECTION C-C

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	850

Note A:
Field drill holes using existing holes as template.
Remainder of holes may be shop or field drilled.

Note:
All bolted connections shown on this sheet shall be made with 3/4" dia. H.S. bolts.

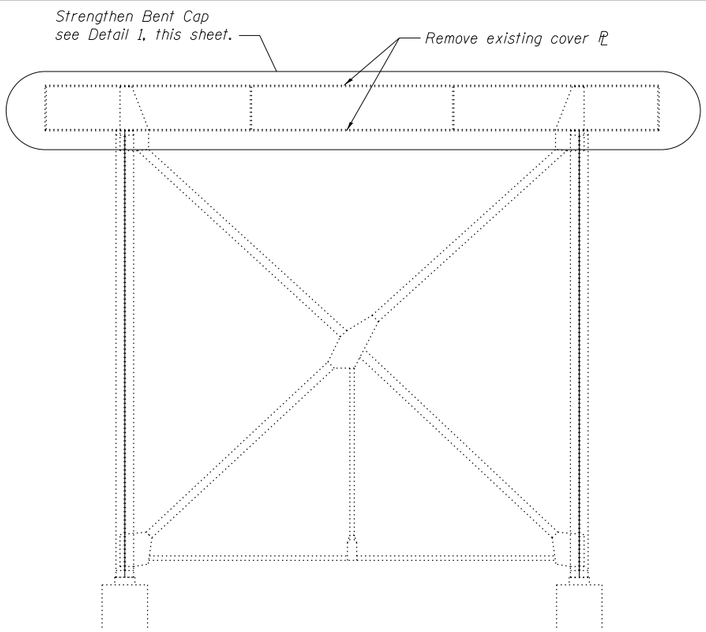
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - ZJB	REVISED
	CHECKED - YSS	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 03/20/2014	CHECKED - ZJB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI APPROACH BENT 2 REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S108 OF S138 SHEETS

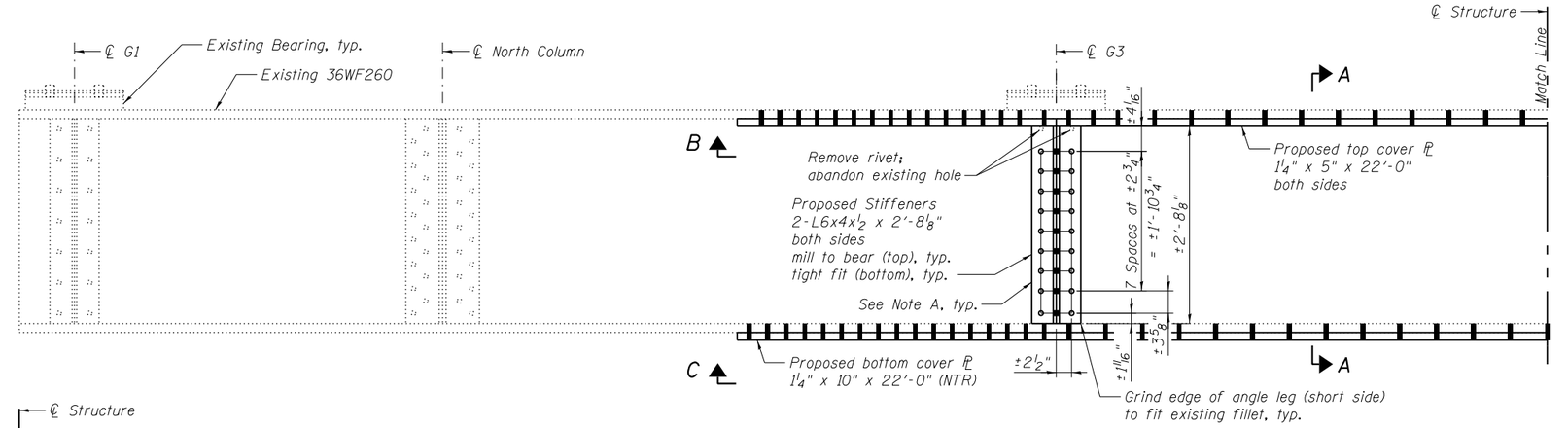
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	126
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		

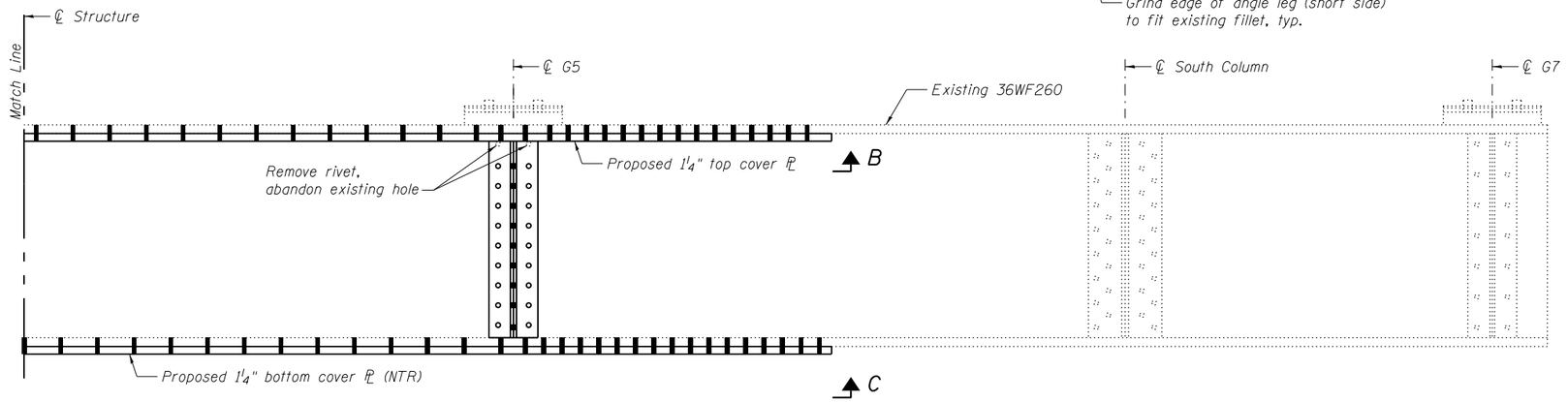


BENT 3
(Looking East)

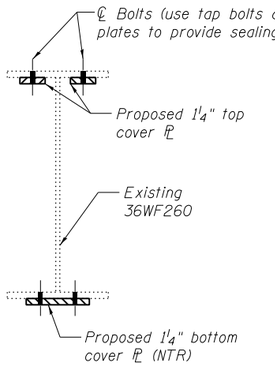
Procedure:
Remove and install bottom cover plate.

After bottom cover plate is installed, remove and install top cover plate.

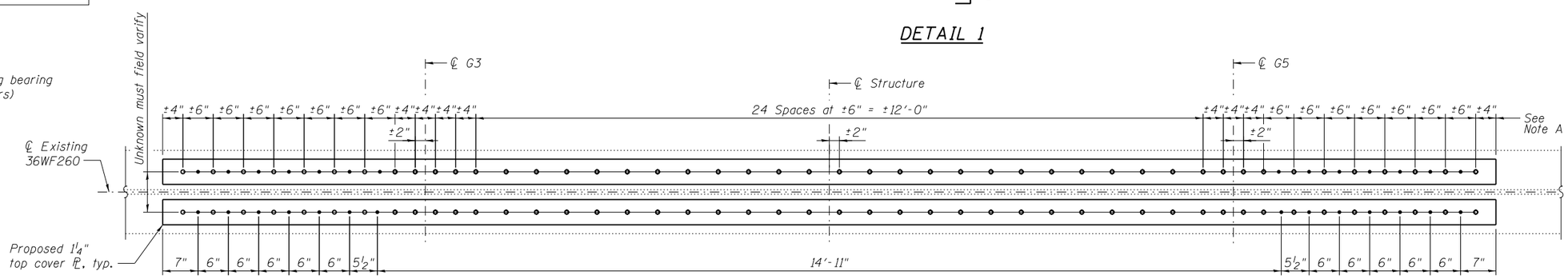




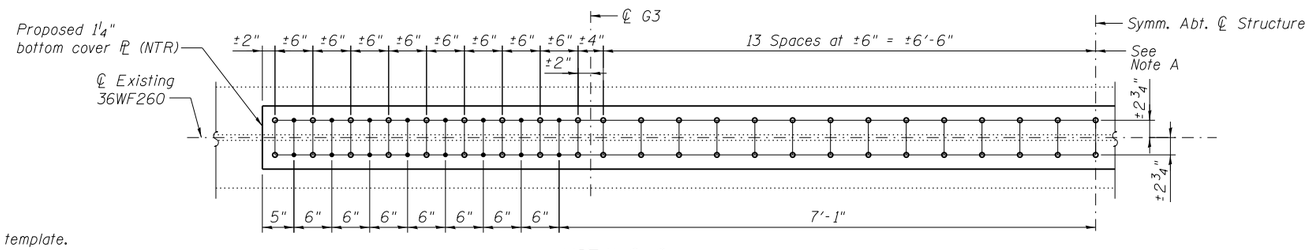
DETAIL 1



SECTION A-A



SECTION B-B



VIEW C-C

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	2,420

Notes:
All bolted connections shown on this sheet shall be made with 3/4" dia. H.S. bolts.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

Note A:
Field drill holes using existing holes as template. Remainder of holes may be shop or field drilled.

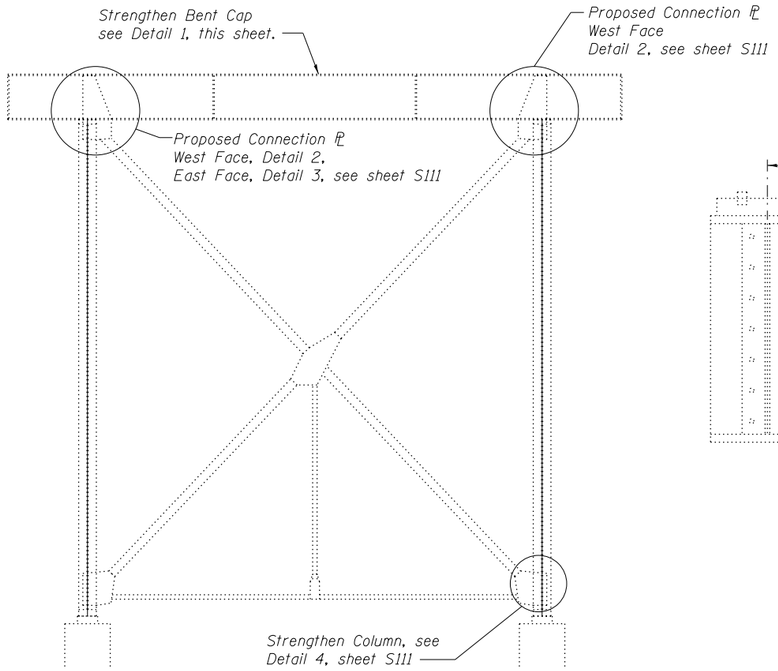
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZAC	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

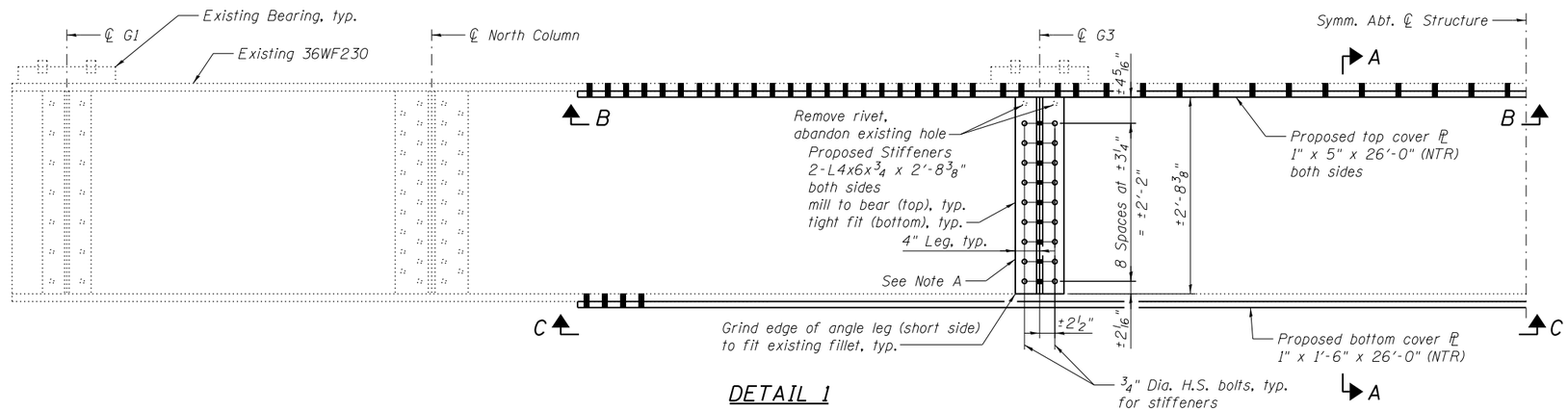
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI APPROACH BENT 3 REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S109 OF S138 SHEETS

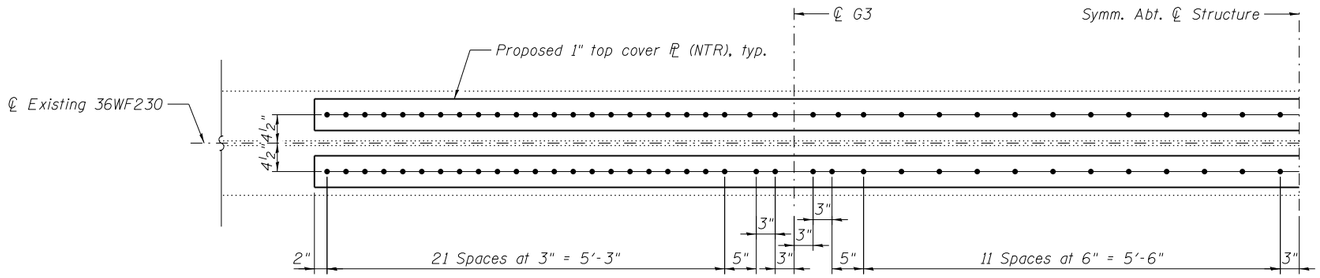
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	127
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



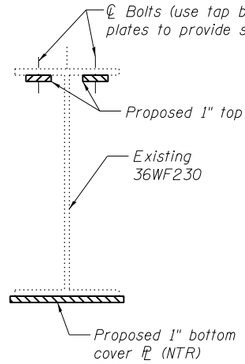
BENT 6
(Looking East)



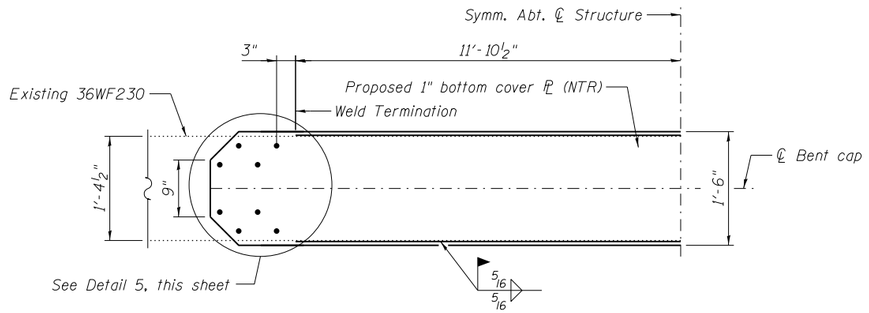
DETAIL 1



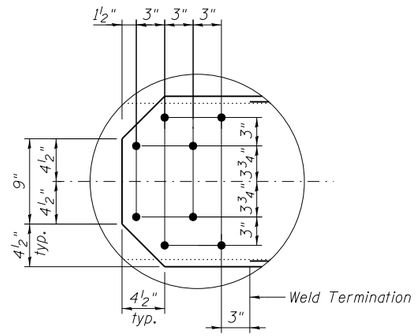
SECTION B-B



SECTION A-A



VIEW C-C



DETAIL 5

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	4,260

Notes:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
For Details 2, 3, and 4, see sheet S111.

Note A:
Field drill holes using existing holes as template. Remainder of holes may be shop or field drilled.

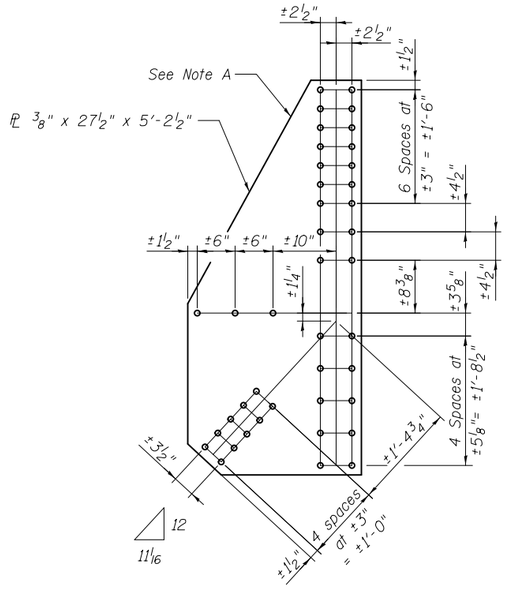
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

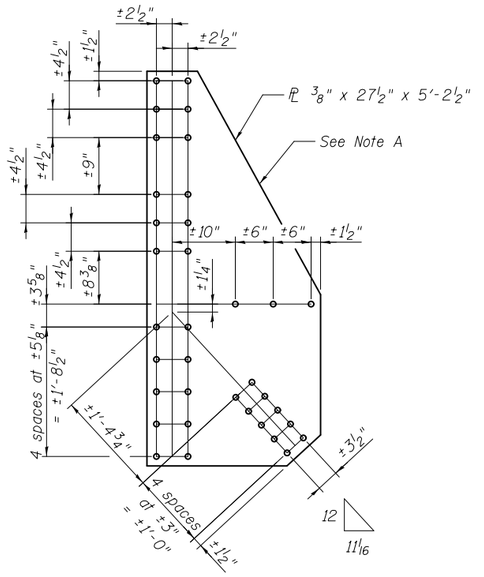
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI APPROACH BENT 6 REPAIRS – 1
S.N. 082–6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S110 OF S138 SHEETS

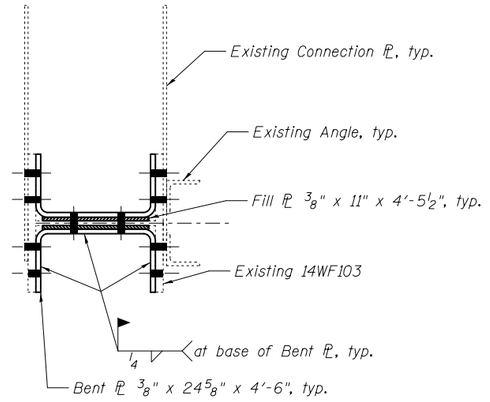
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	128
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



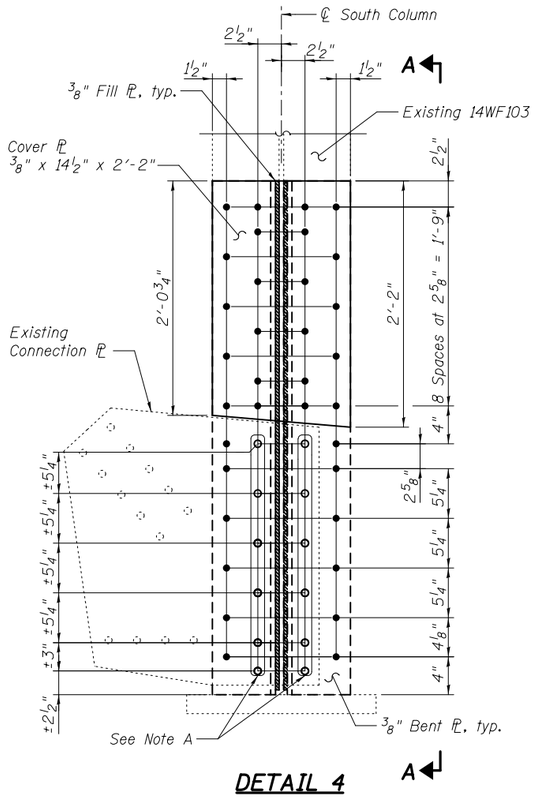
DETAIL 2
(West Face)



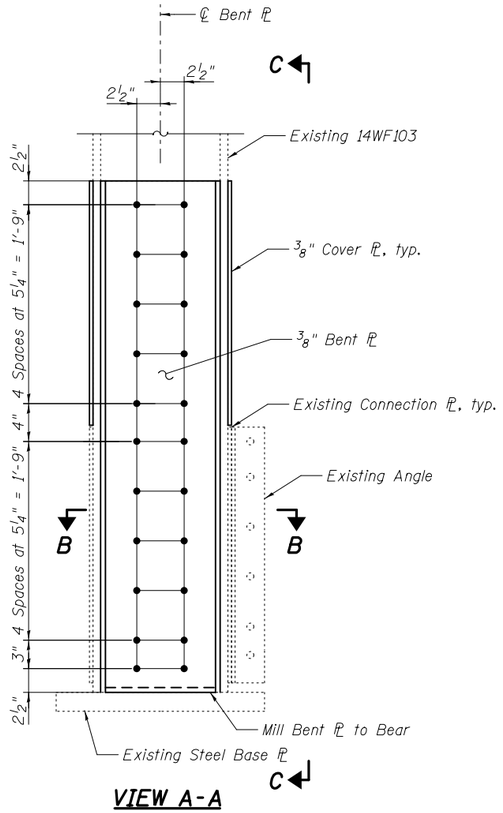
DETAIL 3
(East Face)



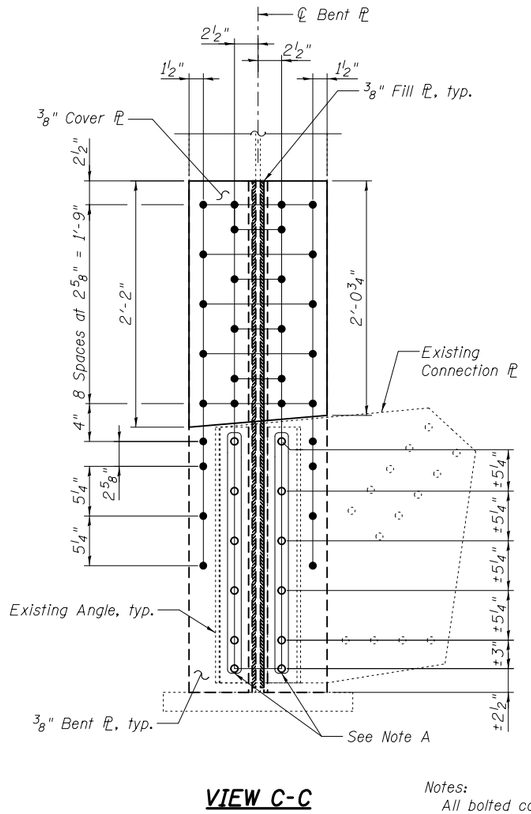
SECTION B-B



DETAIL 4



VIEW A-A



VIEW C-C

Note A:
Field drill holes using existing holes as template. Remainder of holes may be shop or field drilled.

Notes:
All bolted connections shown on this sheet shall be made with 3/4" dia. H.S. bolts.
For location of Detail 2, 3, 4 and Bill of Material see sheet S110.

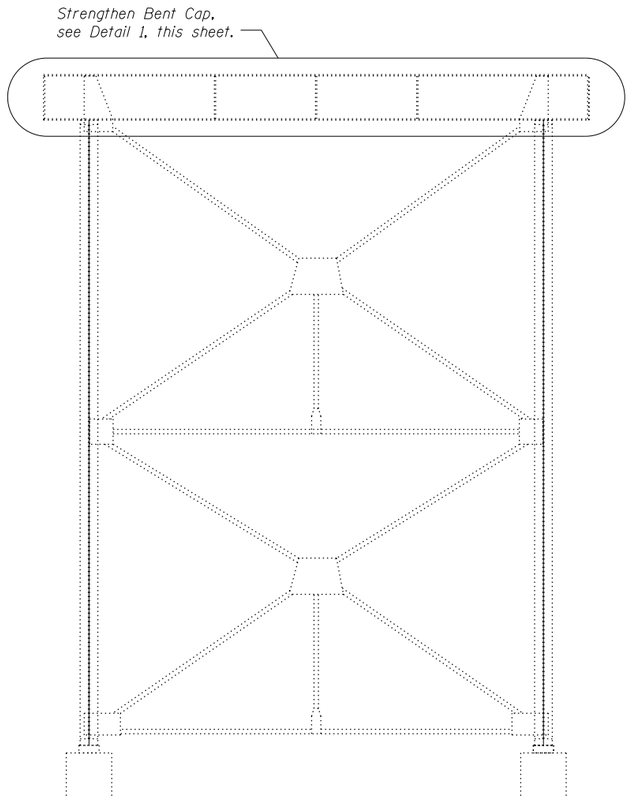
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 03/20/2014	CHECKED - YSS	REVISED

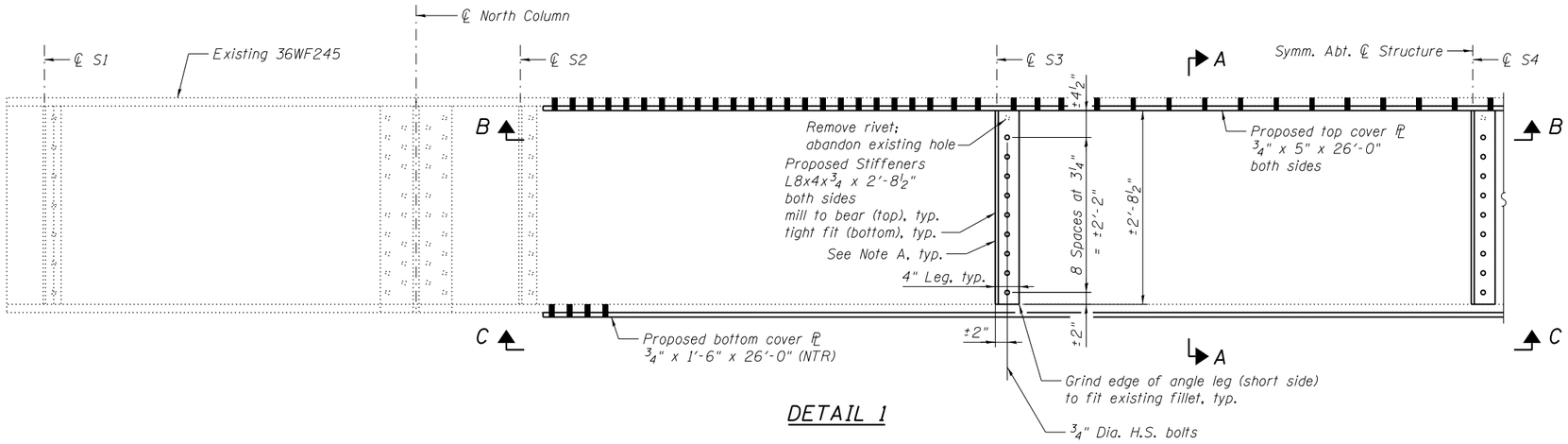
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI APPROACH BENT 6 REPAIRS – 2
S.N. 082–6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S111 OF S138 SHEETS

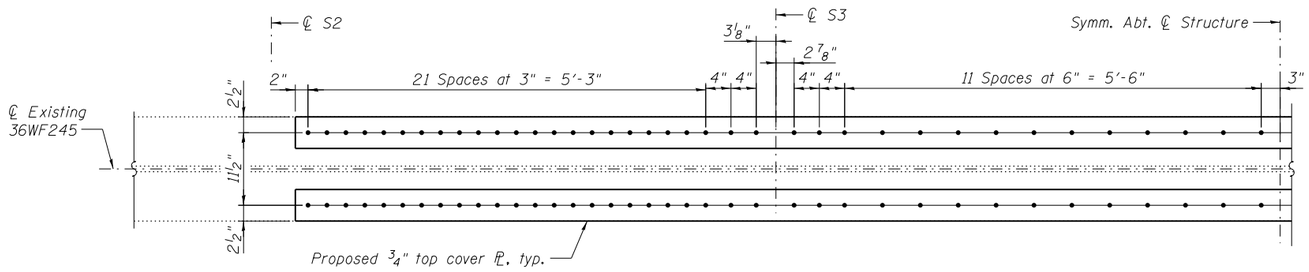
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	129
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



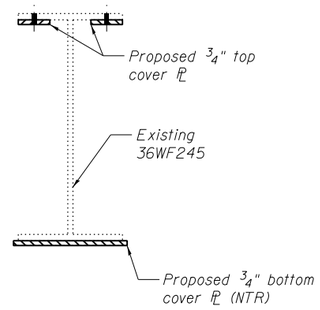
BENT 7
(Looking East)



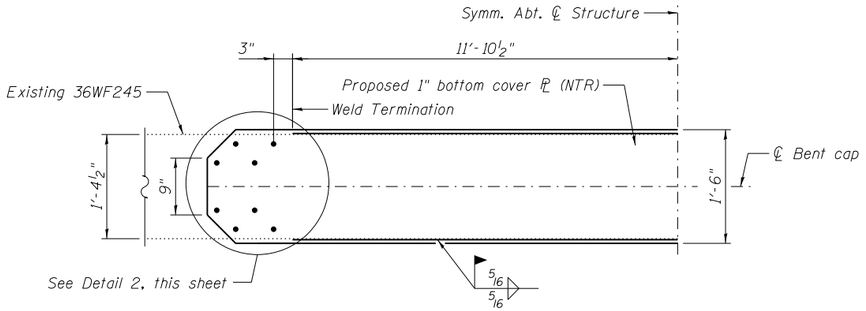
DETAIL 1



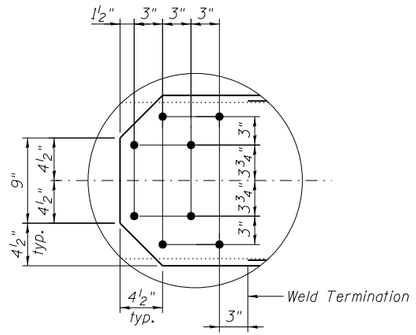
SECTION B-B



SECTION A-A



VIEW C-C



DETAIL 2

Note A:
Field drill holes using existing holes as template.
Remainder of holes may be shop or field drilled.

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	2,510

Notes:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
Per existing details, stringer bearings do not interfere with proposed top flange cover plates. Therefore bearing details are not shown and tap bolts are not required.

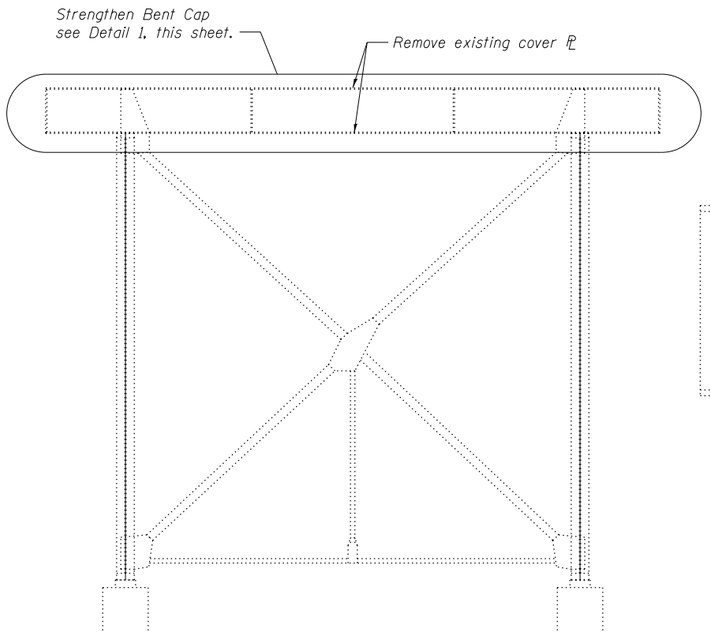
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISSOURI APPROACH BENT 7 REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S112 OF S138 SHEETS

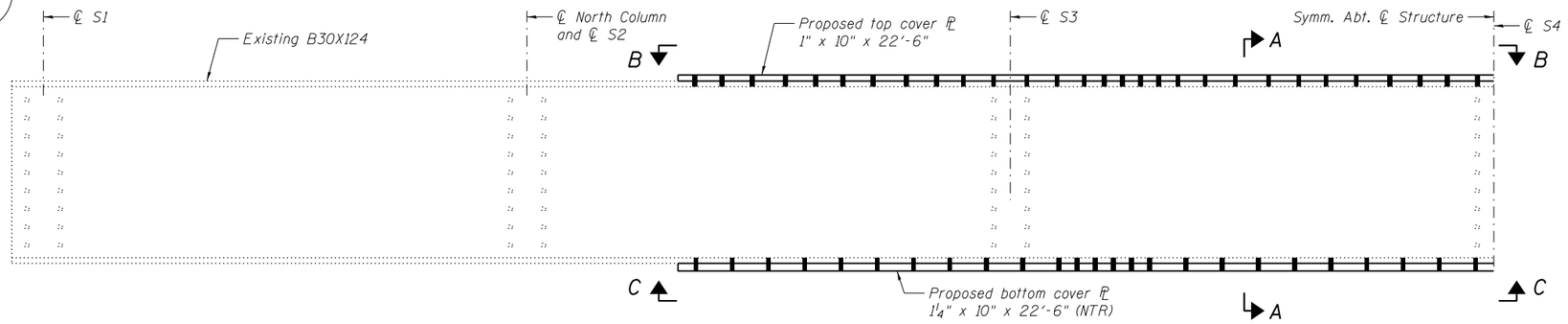
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	130
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



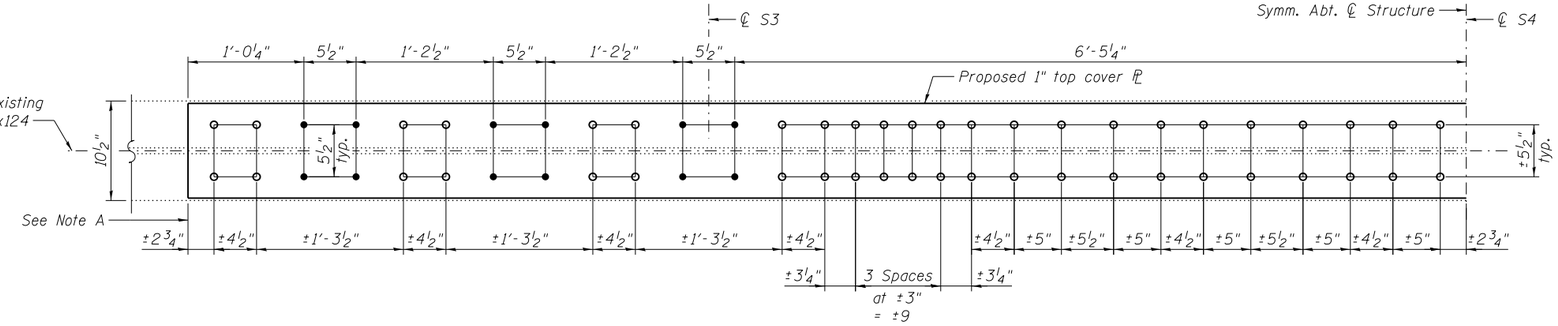
BENT 13
(Looking East)

Procedure:
Remove and install top cover plate.

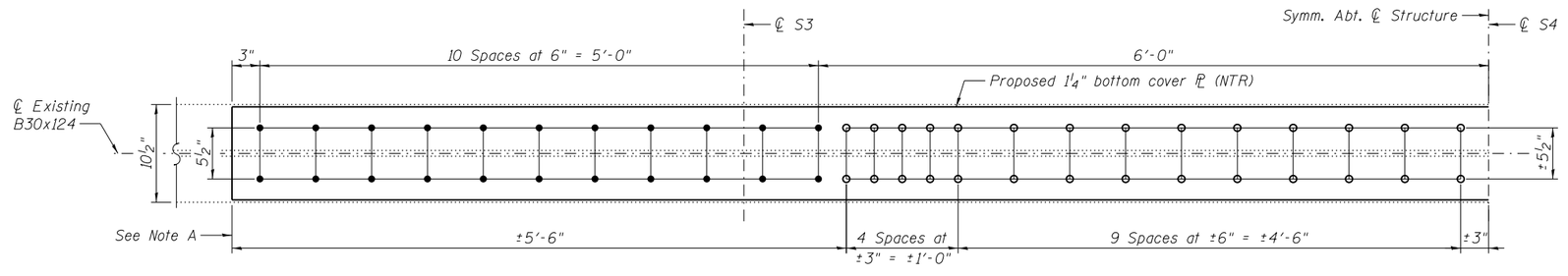
After top cover plate is installed, remove and install bottom cover plate.



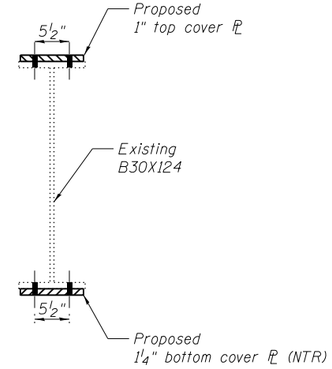
DETAIL 1



VIEW B-B



VIEW C-C



SECTION A-A

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	1,930

Note A:
Field drill holes using existing holes as template. Remainder of holes may be shop or field drilled.

Note:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

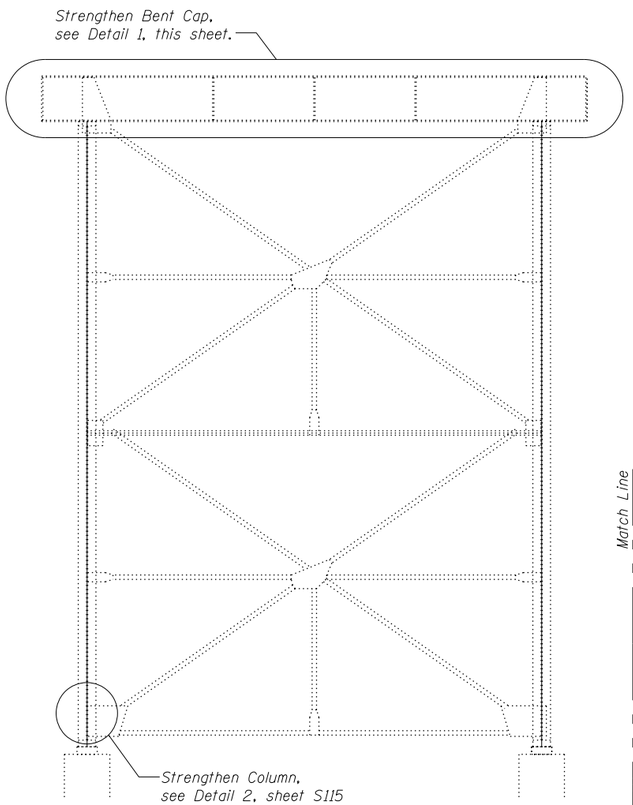
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

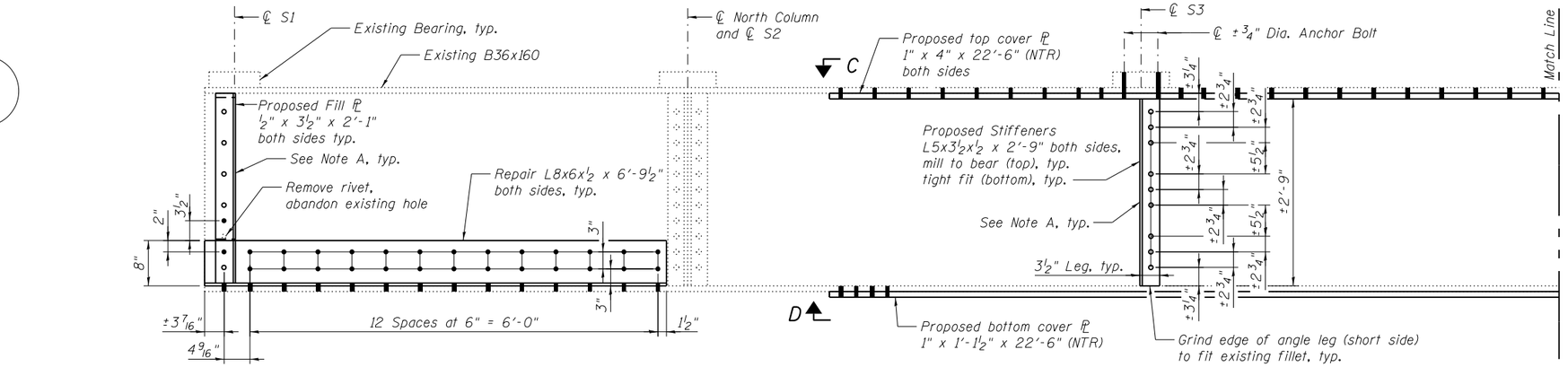
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

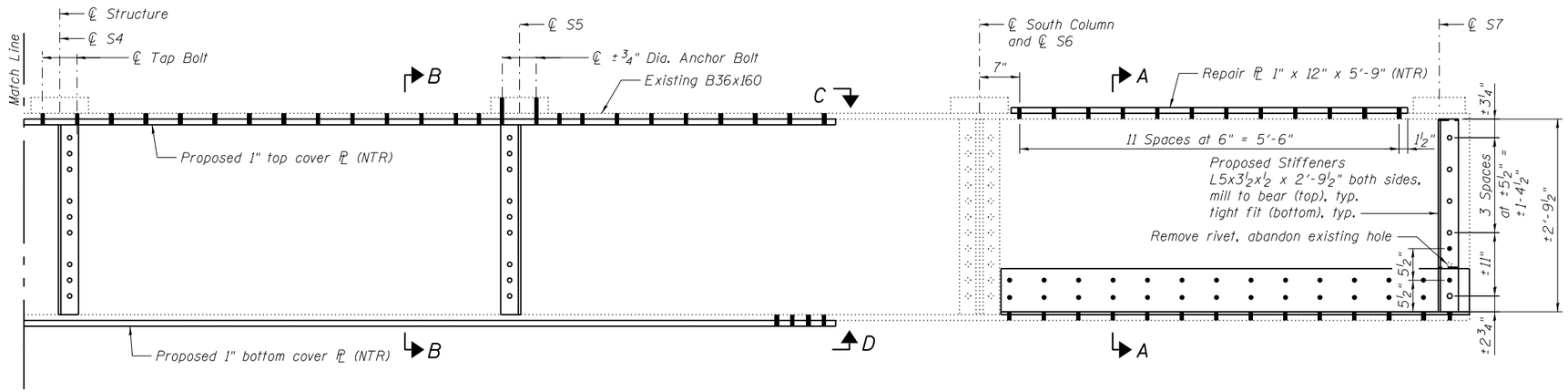
MISSOURI APPROACH BENT 13 REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S113 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	131
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			

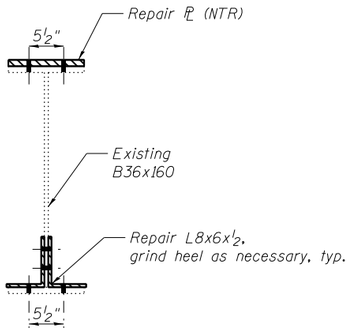


BENT 17
(Looking East)

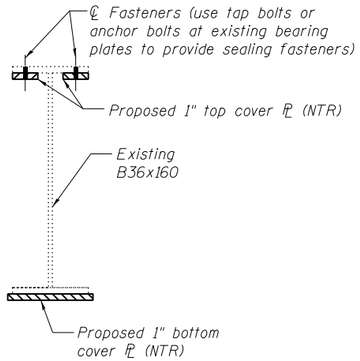




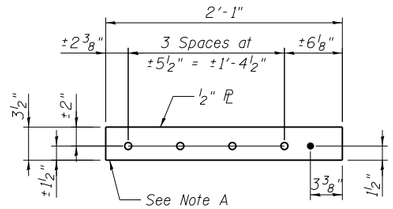
DETAIL 1



SECTION A-A



SECTION B-B



FILL PL

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	3,460

Notes:
All bolted connections shown on this sheet shall be made with ¾" dia. H.S. bolts.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
For View C-C and View D-D details, see sheet S124.

Note A:
Field drill holes using existing holes as template.
Remainder of holes may be shop or field drilled.

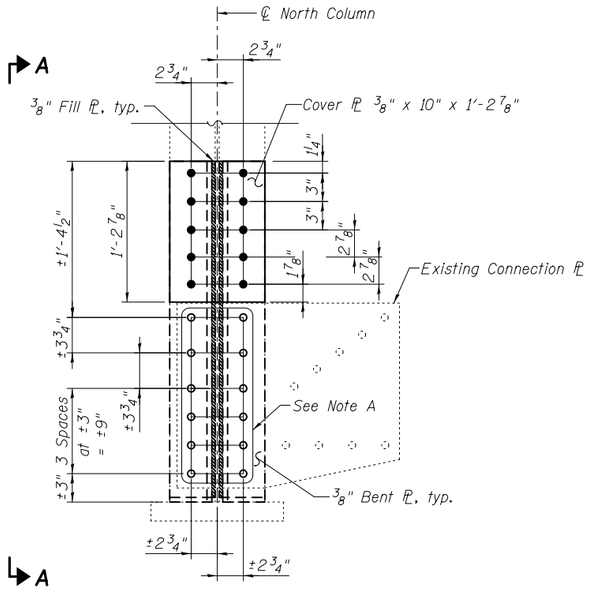
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

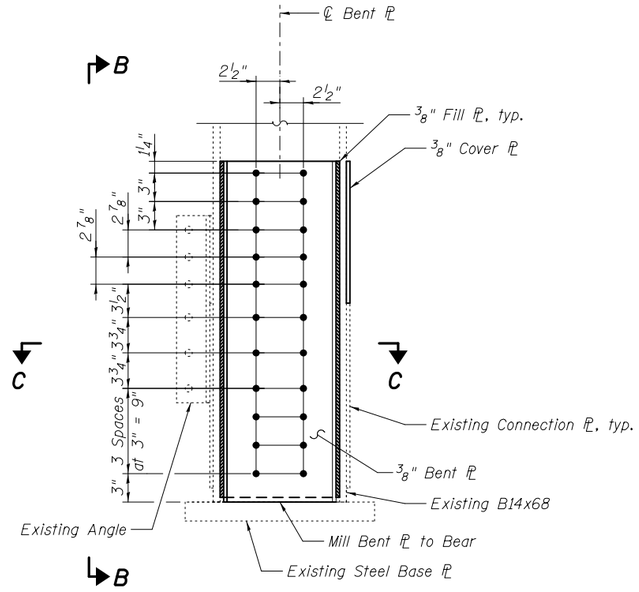
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS APPROACH BENT 17 REPAIRS – 1
S.N. 082–6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S114 OF S138 SHEETS

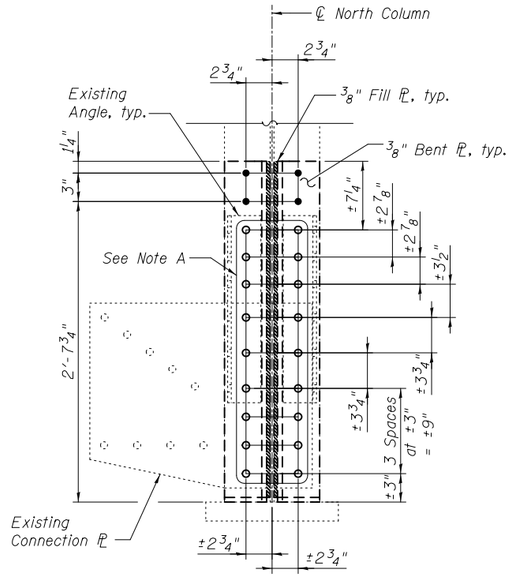
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	132
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



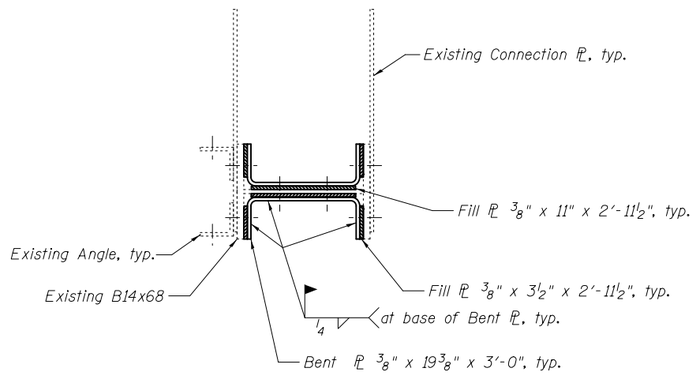
DETAIL 2



VIEW A-A



VIEW B-B



SECTION C-C

Note A:
Field drill holes using existing holes as template.
Remainder of holes may be shop or field drilled.

Notes:
All bolted connections shown on this sheet shall be made with 3/4" dia. H.S. bolts.
For location of Detail 2 and Bill of Material, see sheet S114.

MODJESKI and MASTERS
Experience great bridges.

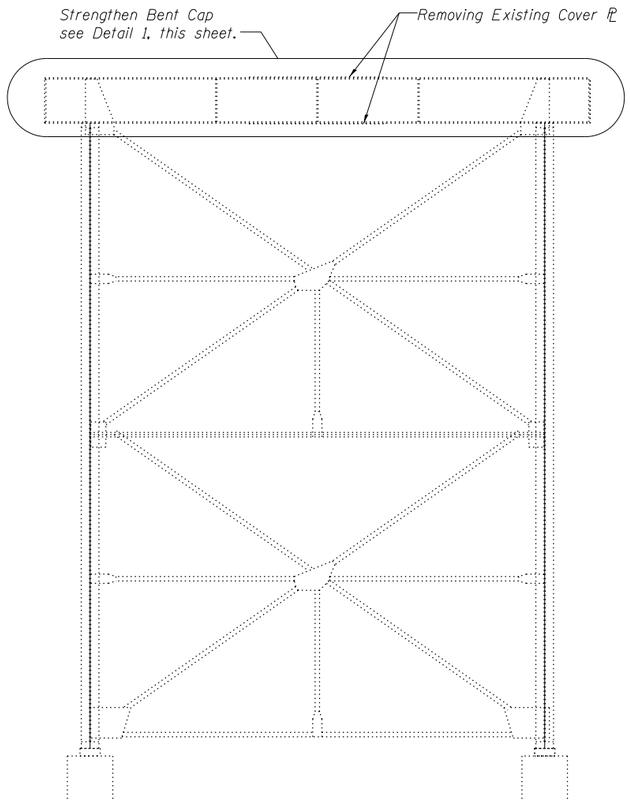
USER NAME =	DESIGNED - ZJB	REVISED
	CHECKED - YSS	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 03/20/2014	CHECKED - ZJB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

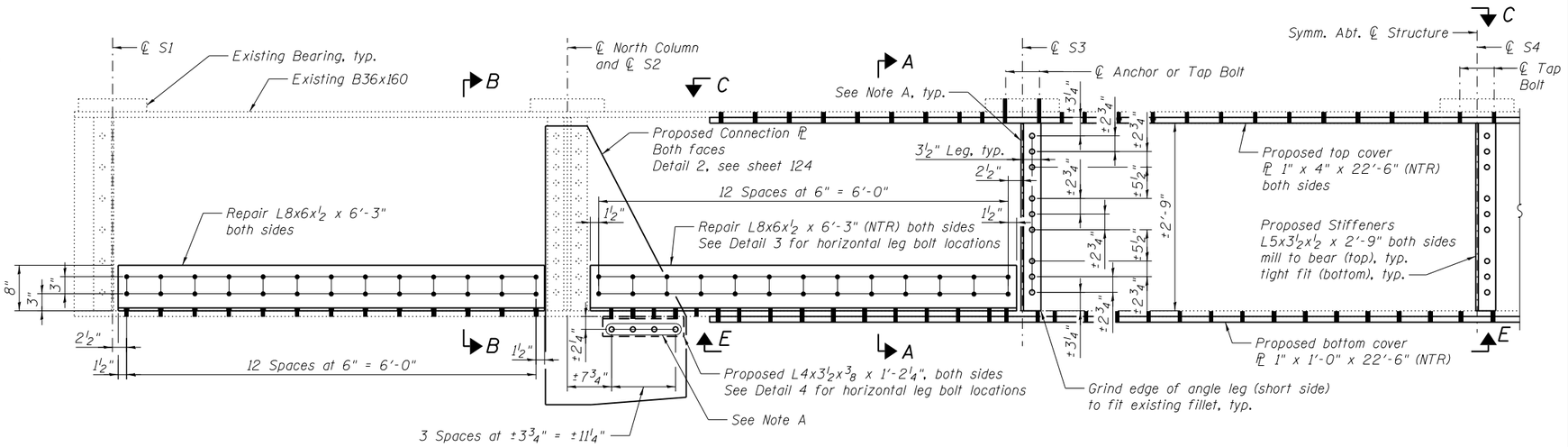
ILLINOIS APPROACH BENT 17 REPAIRS – 2
S.N. 082–6001 MLK BRIDGE OVER MISSISSIPPI RIVER

SHEET NO. S115 OF S138 SHEETS

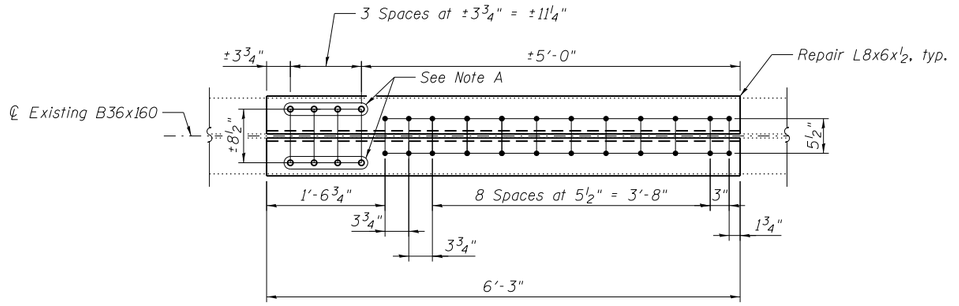
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	133
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



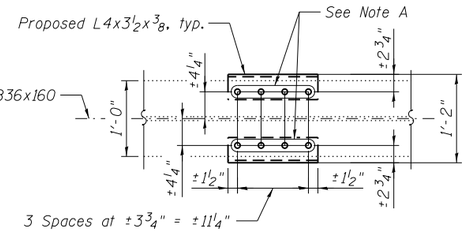
BENT 18
(Looking East)



DETAIL 1

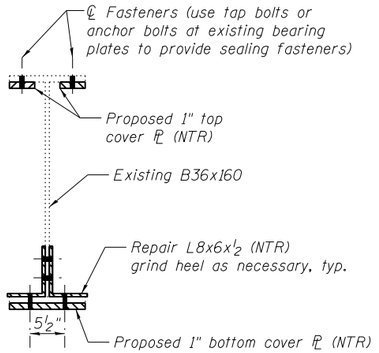


DETAIL 3

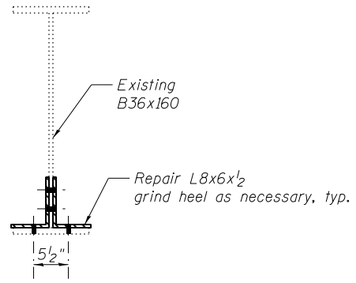


DETAIL 4

(Connection plates not shown for clarity)



SECTION A-A



SECTION B-B

Note A:
Field drill holes using existing holes as template.
Remainder of holes may be shop or field drilled.

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	3,690

Notes:
All bolted connections shown on this sheet shall be made with ¾" dia. H.S. bolts.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
For View C-C and View E-E details, see sheet S124.

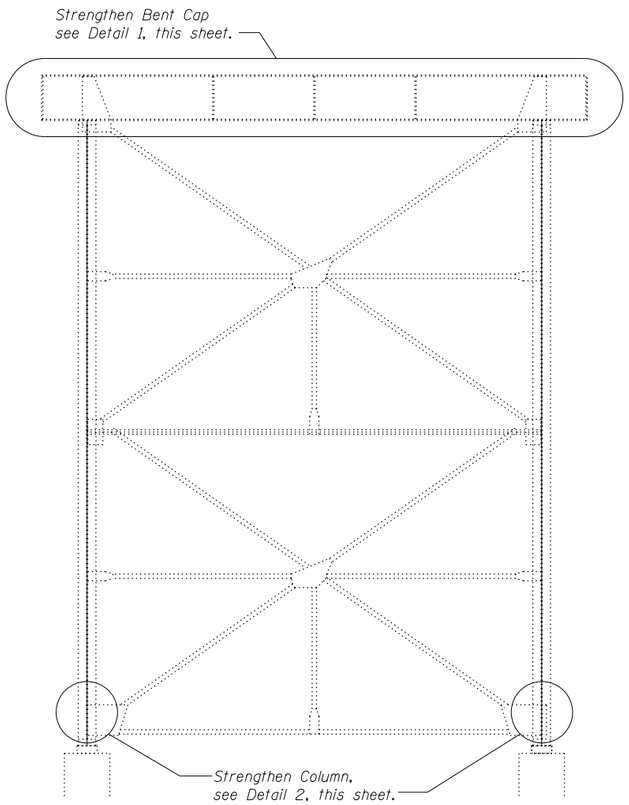
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

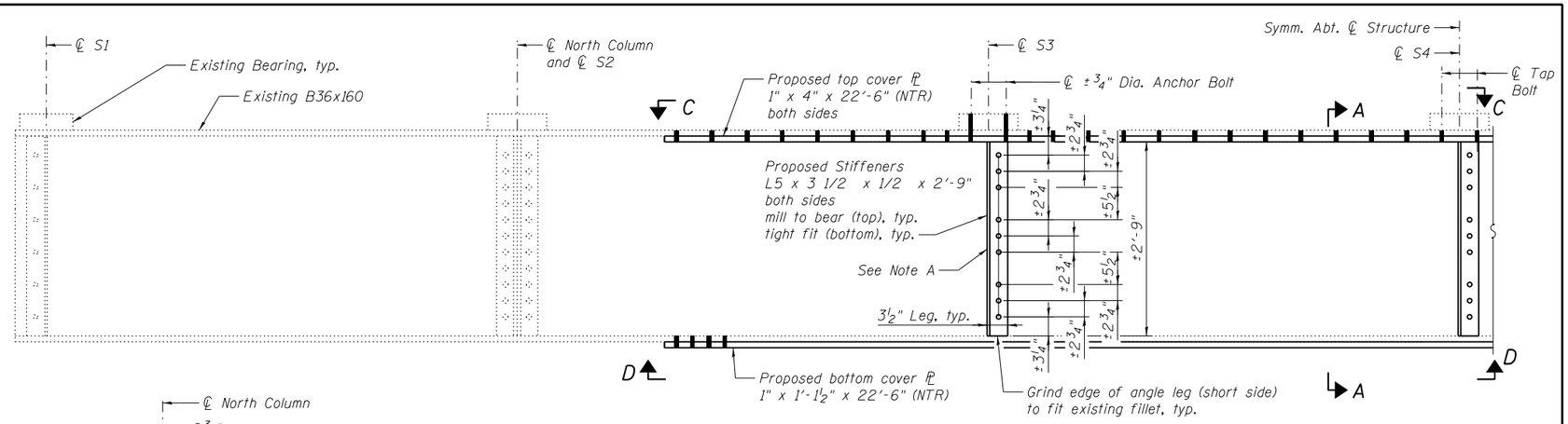
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS APPROACH BENT 18 REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S116 OF S138 SHEETS

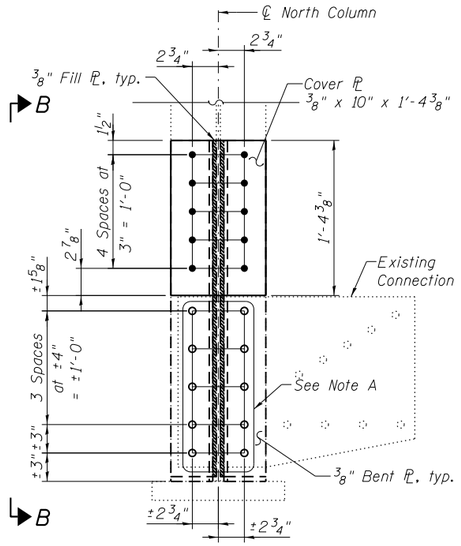
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	134
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



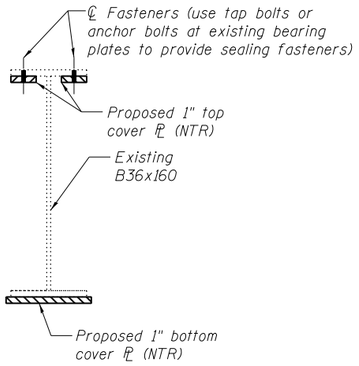
BENT 22
(Looking East)



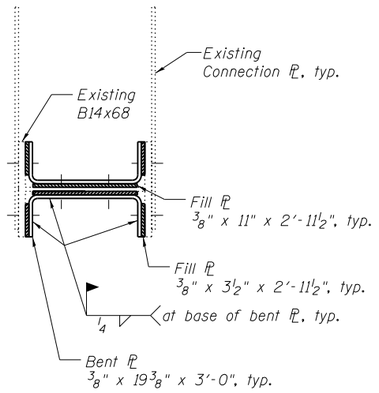
DETAIL 1



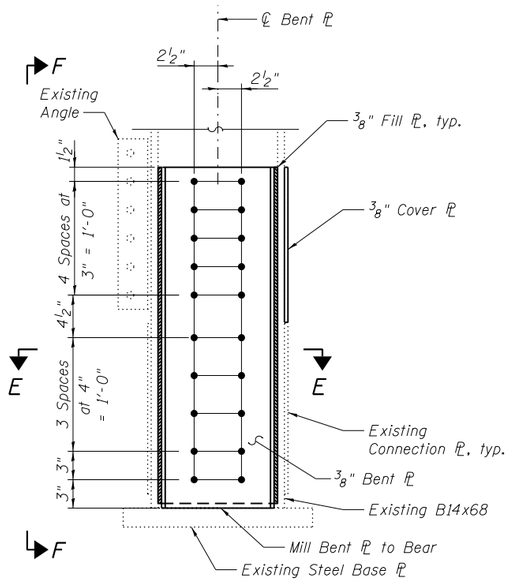
DETAIL 2
(North column shown, South column similar)



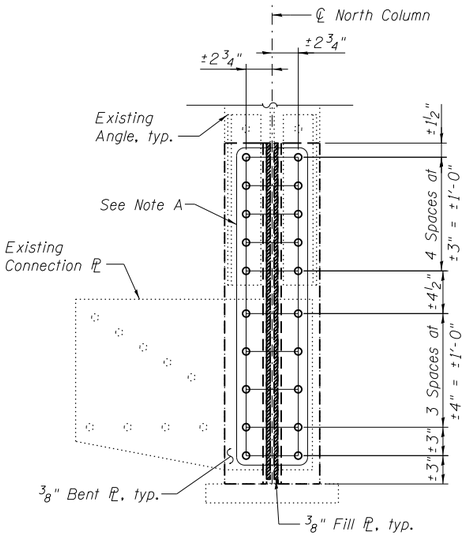
SECTION A-A



SECTION E-E



VIEW B-B



VIEW F-F

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	2,660

Notes:
All bolted connections shown on this sheet shall be made with ¾" dia. H.S. bolts.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
For View C-C and View D-D details, see sheet S124.

Note A:
Field drill holes using existing holes as template. Remainder of holes may be shop or field drilled.

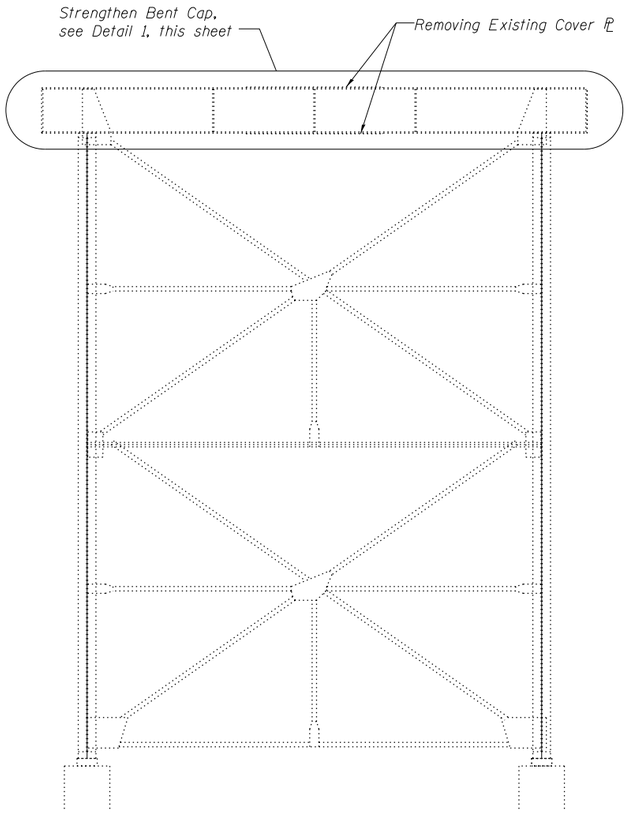
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

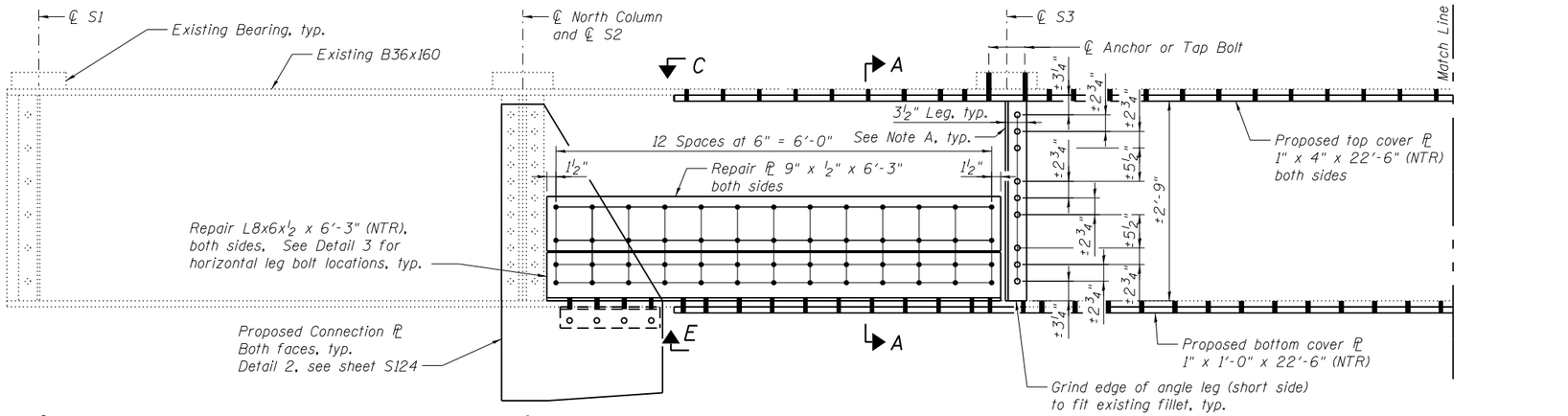
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

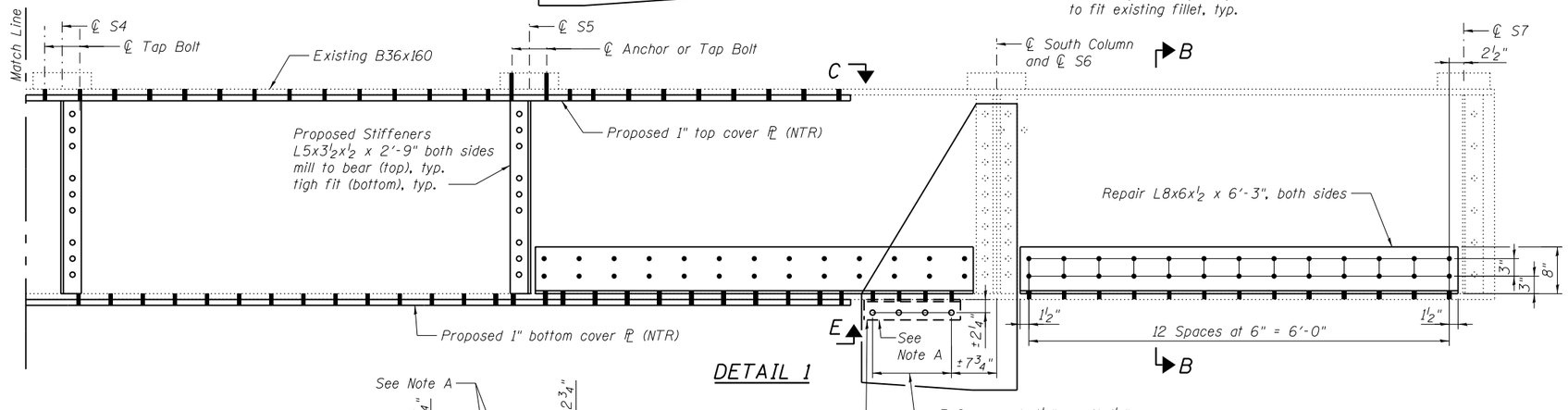
ILLINOIS APPROACH BENT 22 REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S117 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	135
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			

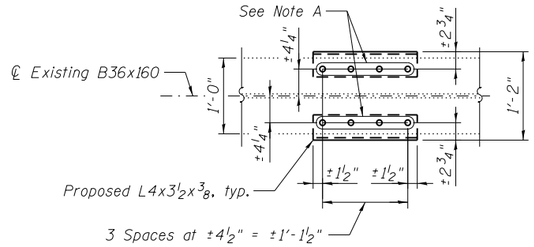


BENT 23
(Looking East)

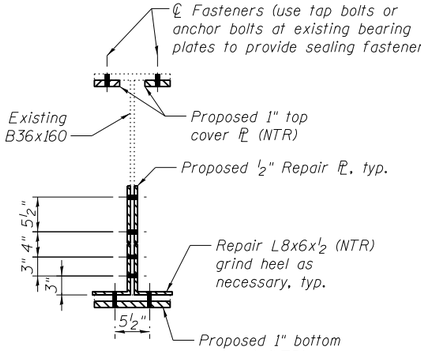




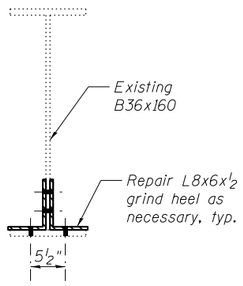
DETAIL 1



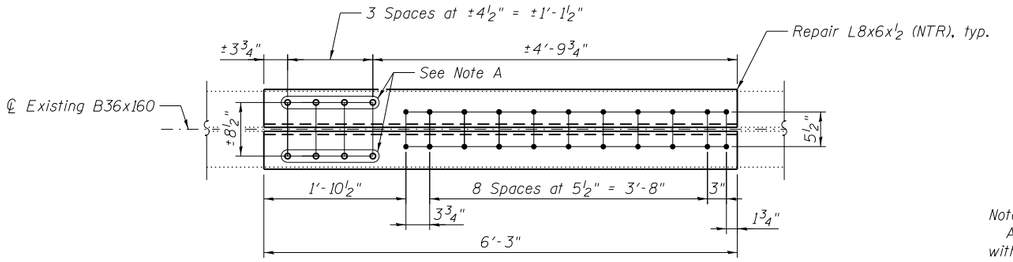
DETAIL 4
(Connection plates not shown for clarity)



SECTION A-A



SECTION B-B



DETAIL 3
(North end shown, South end similar)

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	3,630

Notes:
All bolted connections shown on this sheet shall be made with ¾" dia. H.S. bolts.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
For View C-C and View E-E details, see sheet S124.

Note A:
Field drill holes using existing holes as template. Remainder of holes may be shop or field drilled.

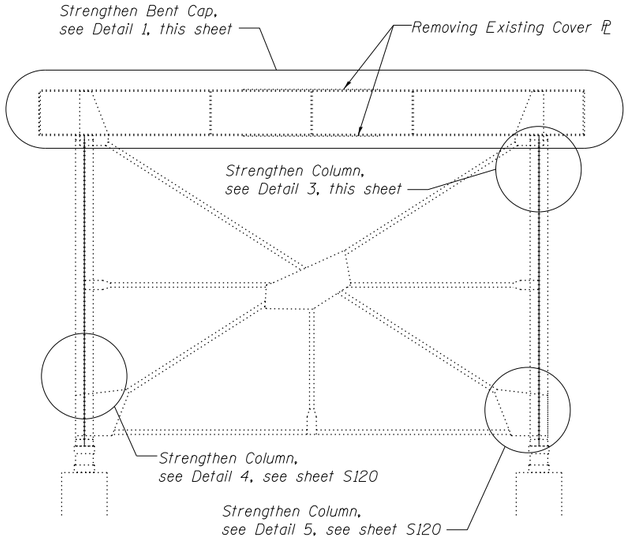
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

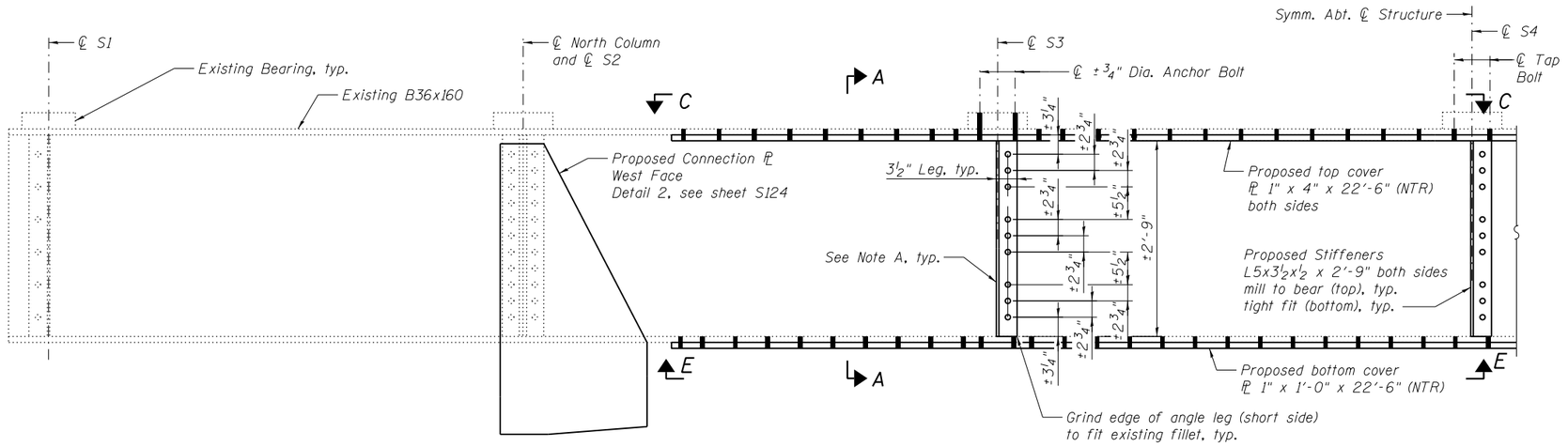
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS APPROACH BENT 23 REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S118 OF S138 SHEETS

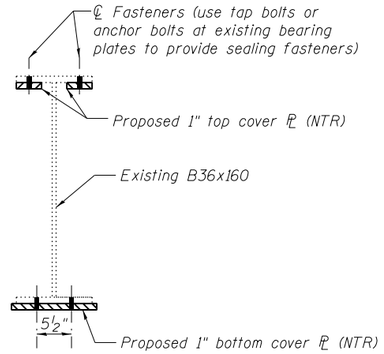
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	136
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



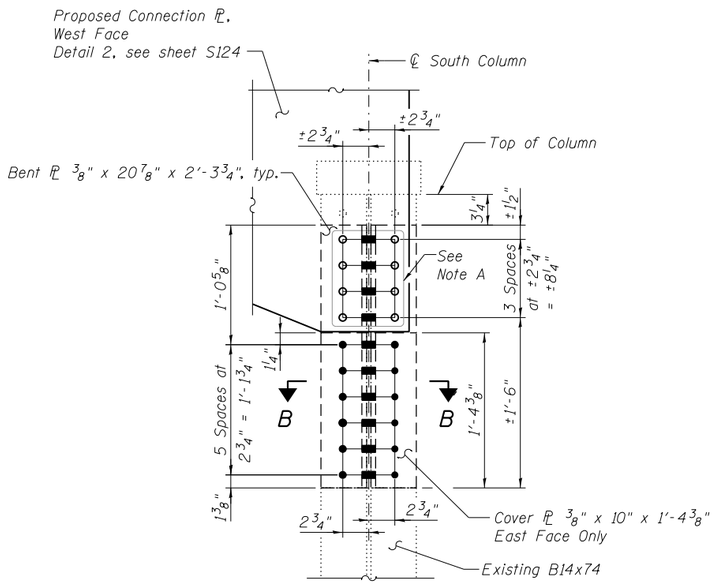
BENT 27
(Looking East)



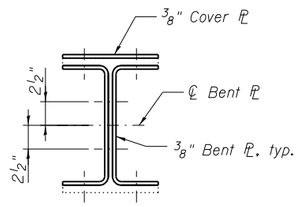
DETAIL 1



SECTION A-A



DETAIL 3



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	2,970

Notes:
All bolted connections shown on this sheet shall be made with ¾" dia. H.S. bolts.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
For View C-C and View E-E details, see sheet S124.

Note A:
Field drill holes using existing holes as template.
Remainder of holes may be shop or field drilled.

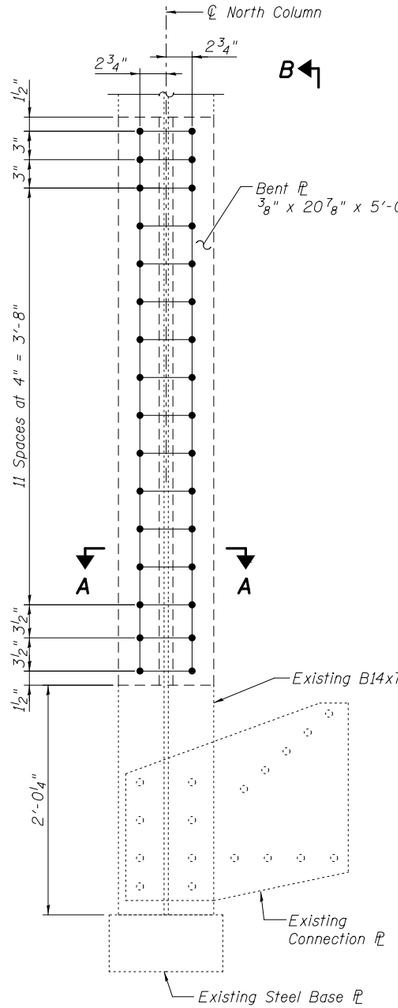
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

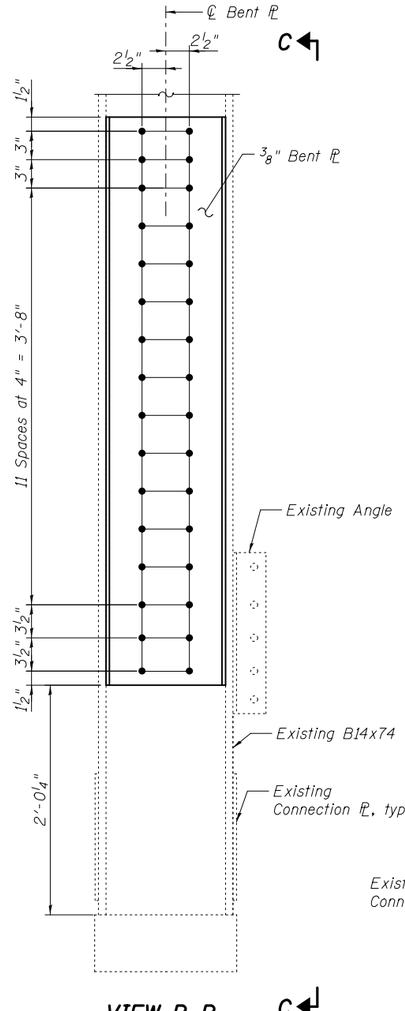
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS APPROACH BENT 27 REPAIRS – 1
S.N. 082–6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S119 OF S138 SHEETS

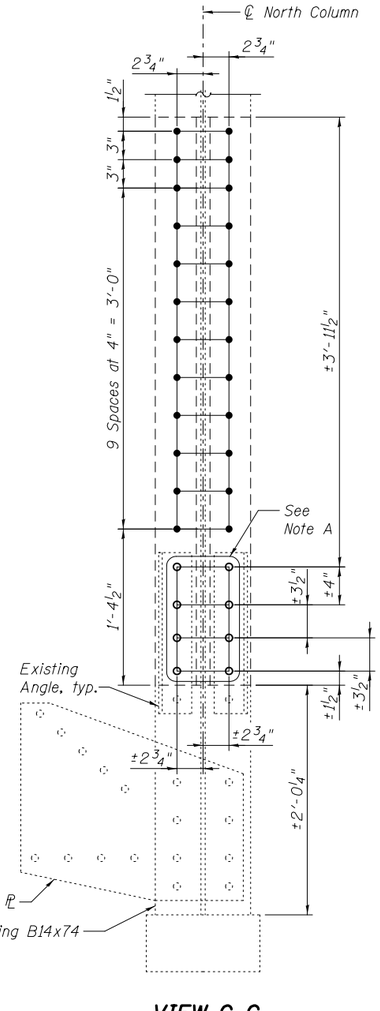
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	137
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



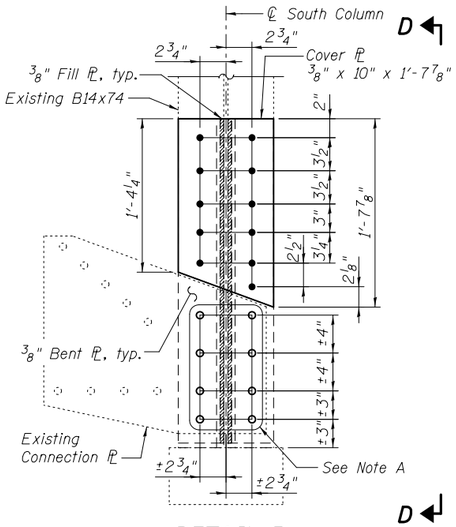
DETAIL 4



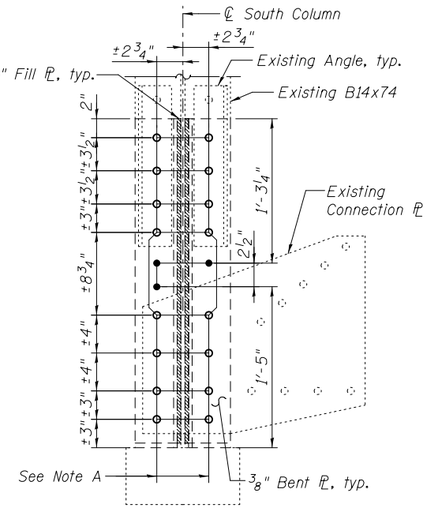
VIEW B-B



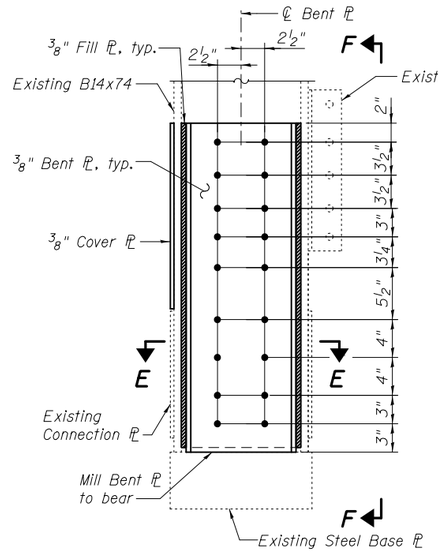
VIEW C-C



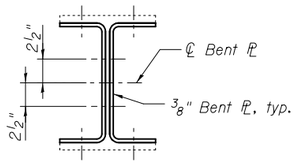
DETAIL 5



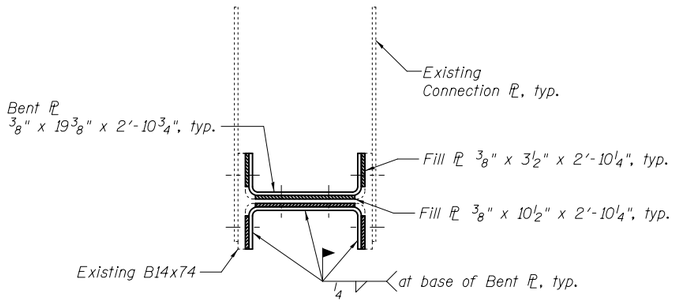
VIEW F-F



VIEW D-D



SECTION A-A



SECTION E-E

Note A:
Field drill holes using existing holes as template.
Remainder of holes may be shop or field drilled.

Notes:
All bolted connections shown on this sheet shall be made with 3/4" dia. H.S. bolts.
For location Details 4, 5 and the Bill of Material, see sheet 119.

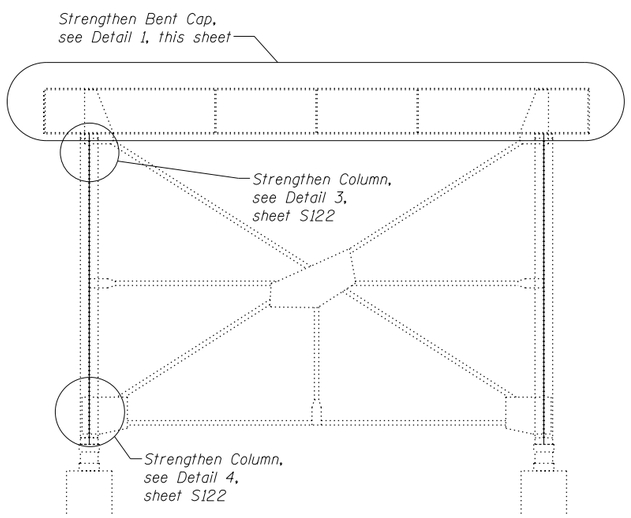
USER NAME =	DESIGNED - ZJB	REVISED	
	CHECKED - YSS	REVISED	
PLOT SCALE =	DRAWN - AEC	REVISED	
PLOT DATE = 03/20/2014	CHECKED - ZJB	REVISED	

MODJESKI and MASTERS
Experience great bridges.

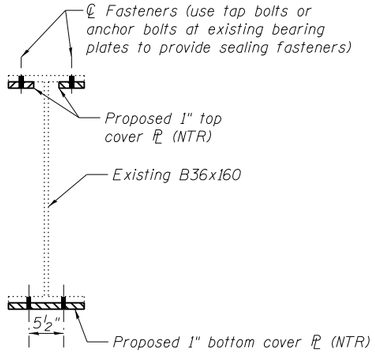
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS APPROACH BENT 27 REPAIRS – 2
S.N. 082–6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S120 OF S138 SHEETS

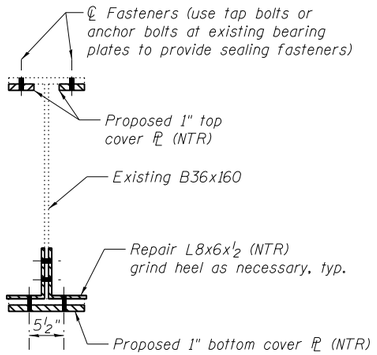
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	138
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



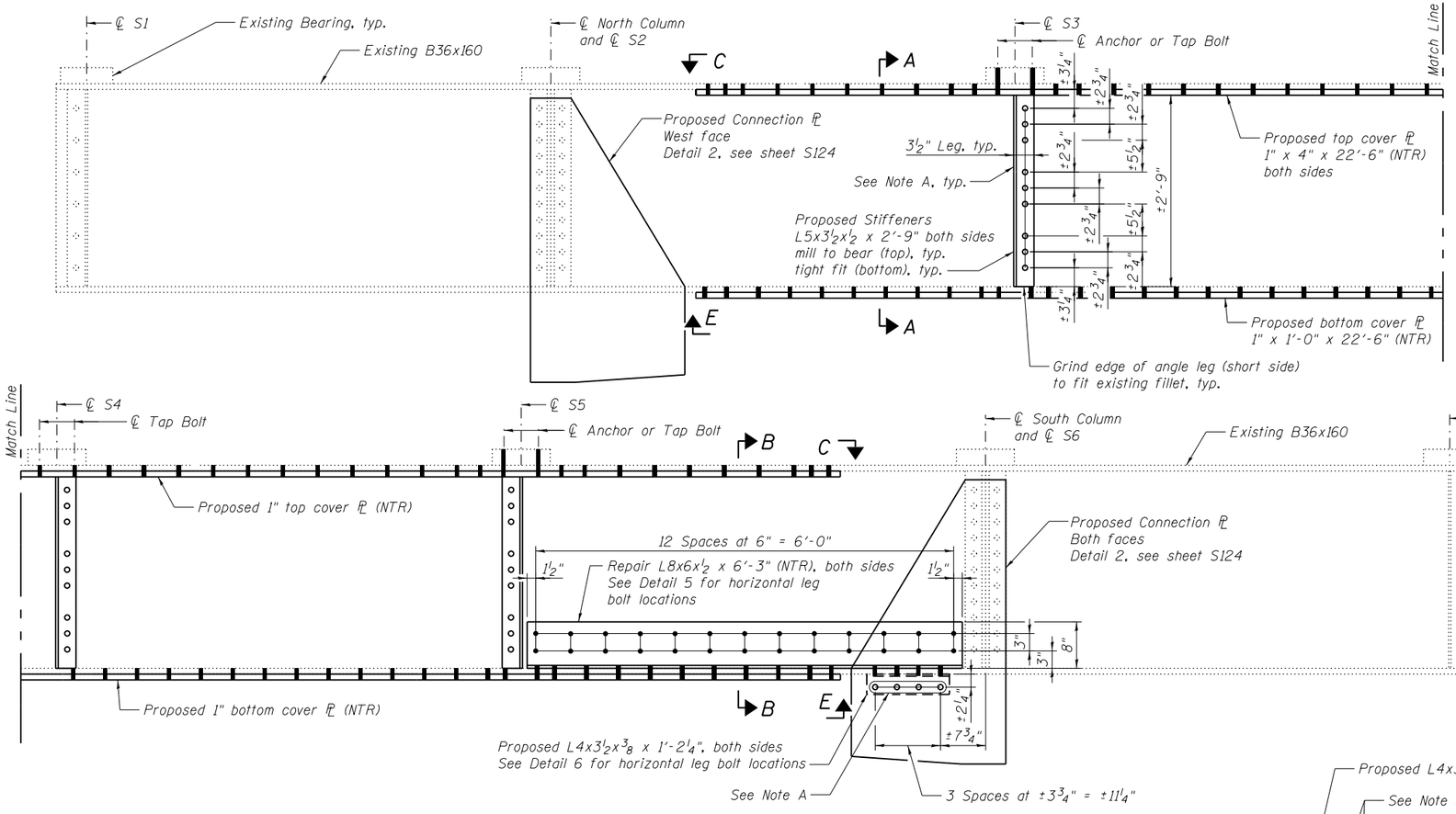
BENT 28
(Looking East)



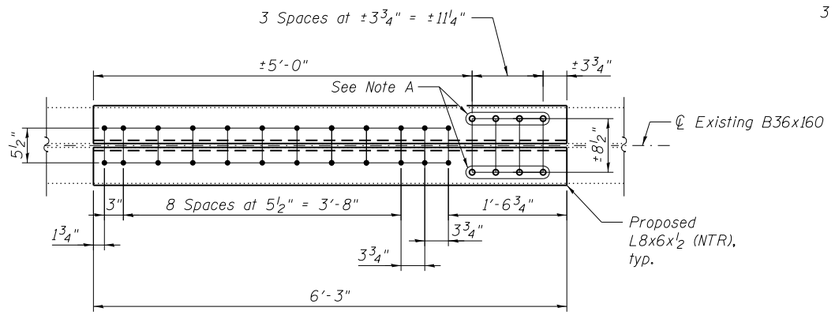
SECTION A-A



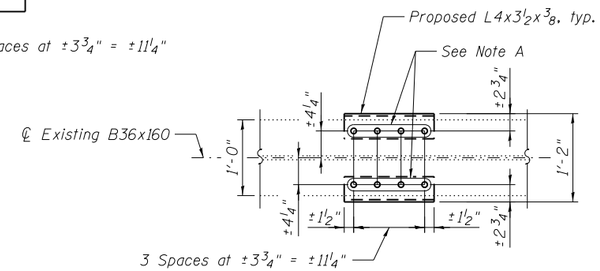
SECTION B-B



DETAIL 1



DETAIL 5



DETAIL 6
(Connecting plates not shown for clarity)

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	3,280

Note A:
Field drill holes using existing holes as template.
Remainder of holes may be shop or field drilled.

Notes:
All bolted connections shown on this sheet shall be made with ¾" dia. H.S. bolts.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
For View C-C and View E-E details, see sheet S124.

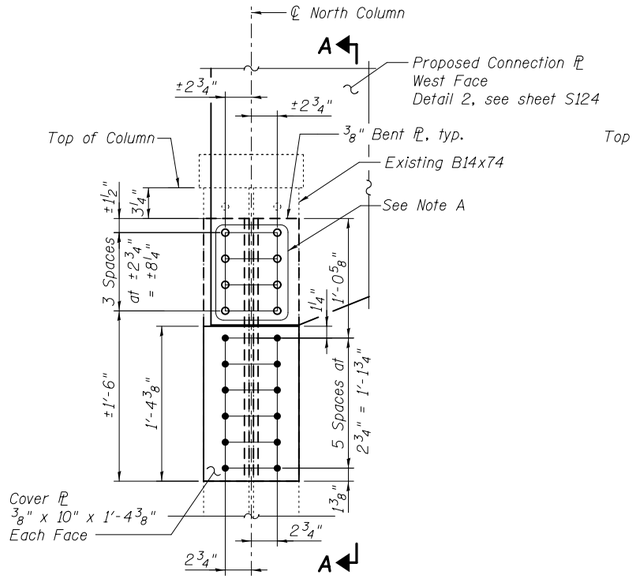
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

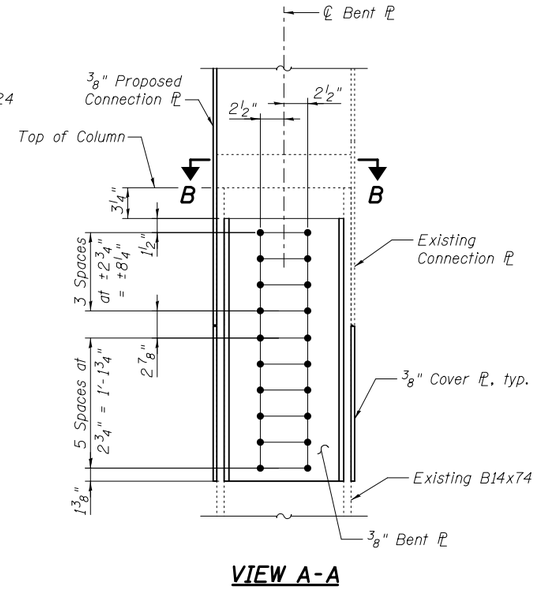
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS APPROACH BENT 28 REPAIRS – 1
S.N. 082–6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S121 OF S138 SHEETS

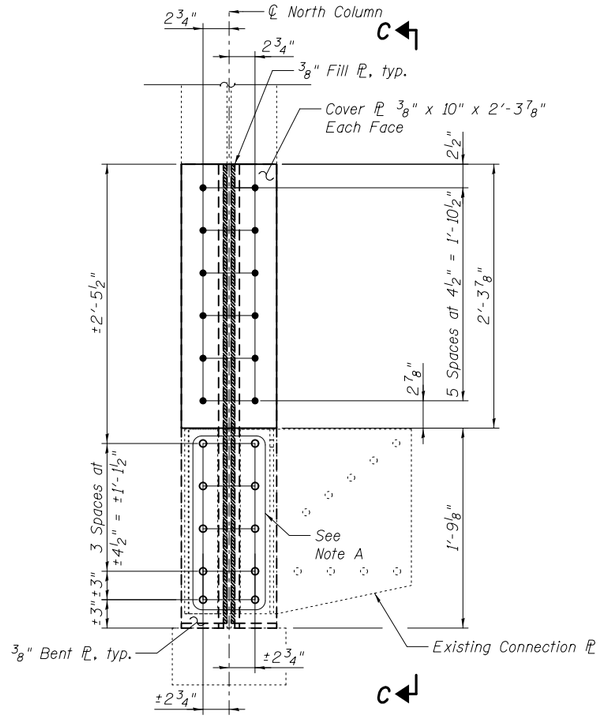
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	139
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



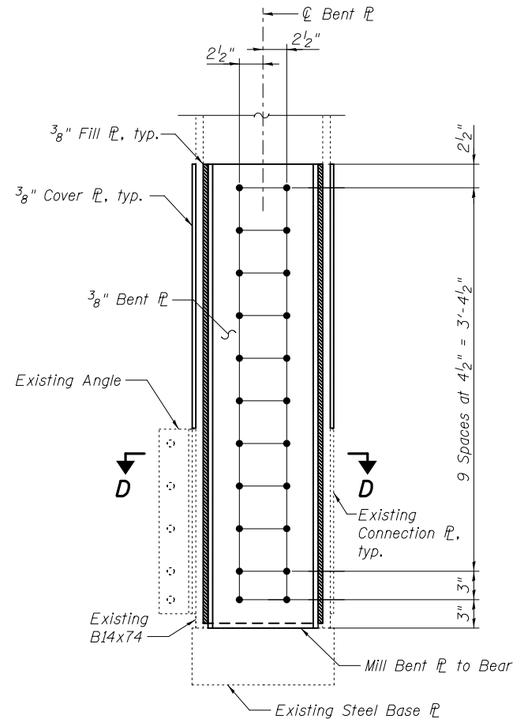
DETAIL 3



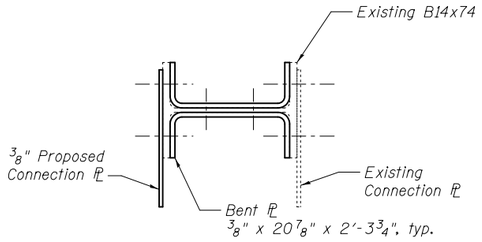
VIEW A-A



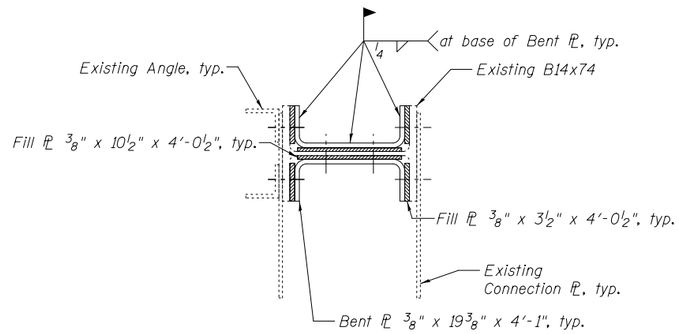
DETAIL 4



VIEW C-C



SECTION B-B



SECTION D-D

Note A:
Field drill holes using existing holes as template.
Remainder of holes may be shop or field drilled.

Notes:
All bolted connections shown on this sheet shall be made with 3/4" dia. H.S. bolts.
For location of Detail 3, Detail 4 and Bill of Material see sheet 121.

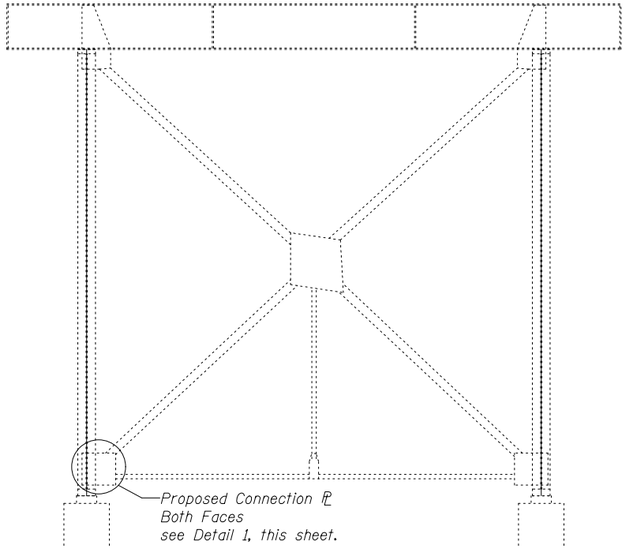
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - ZJB	REVISED
	CHECKED - YSS	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 03/20/2014	CHECKED - ZJB	REVISED

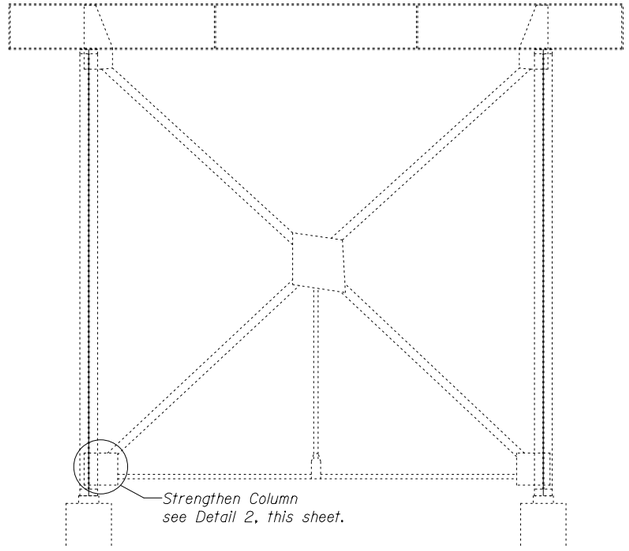
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS APPROACH BENT 28 REPAIRS – 2
S.N. 082–6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S122 OF S138 SHEETS

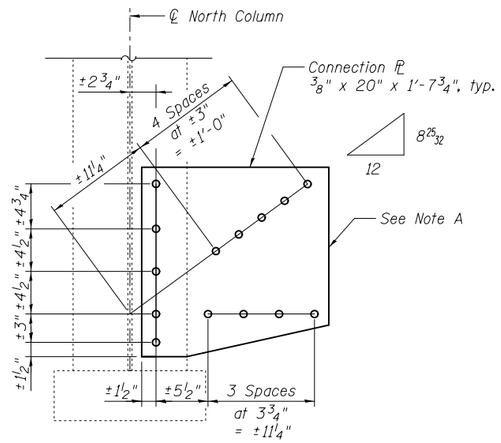
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	140
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



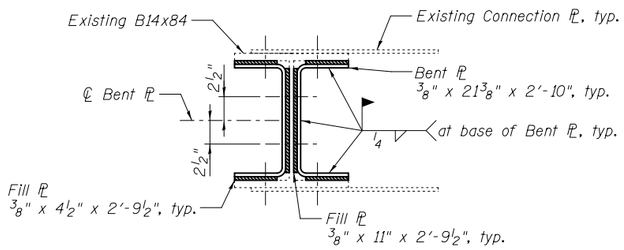
BENT 29
(Looking East)



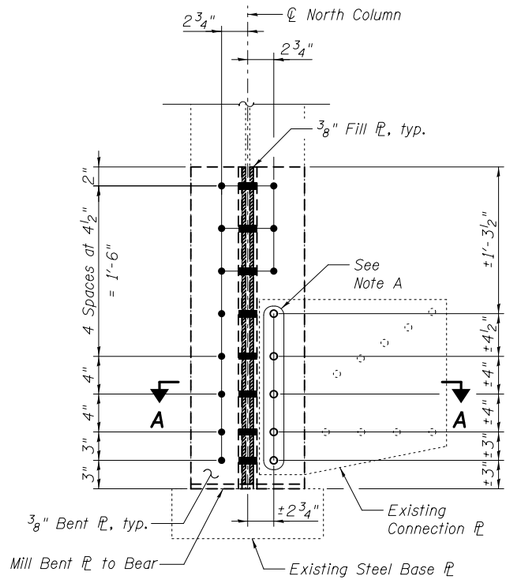
BENT 30
(Looking East)



DETAIL 1
(West ℄ shown, East ℄ similar)



SECTION A-A



DETAIL 2

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	430

Note A:
Field drill holes using existing holes as template. Remainder of holes may be shop or field drilled.

Note:
All bolted connections shown on this sheet shall be made with 3/4" dia. H.S. bolts.

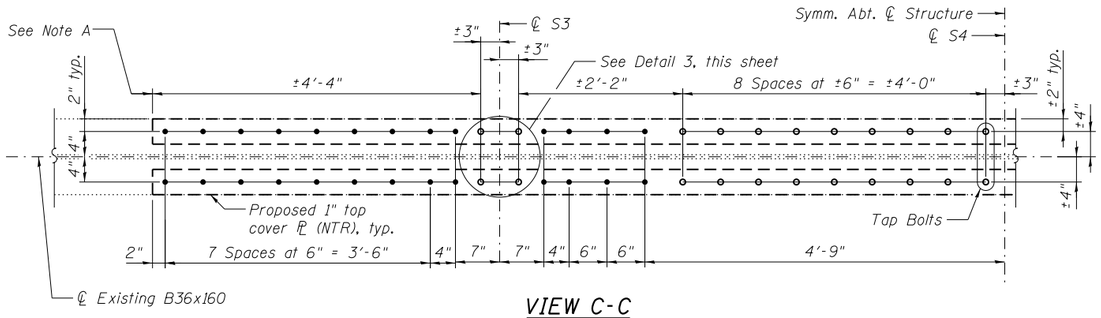
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 03/20/2014	CHECKED - YSS	REVISED

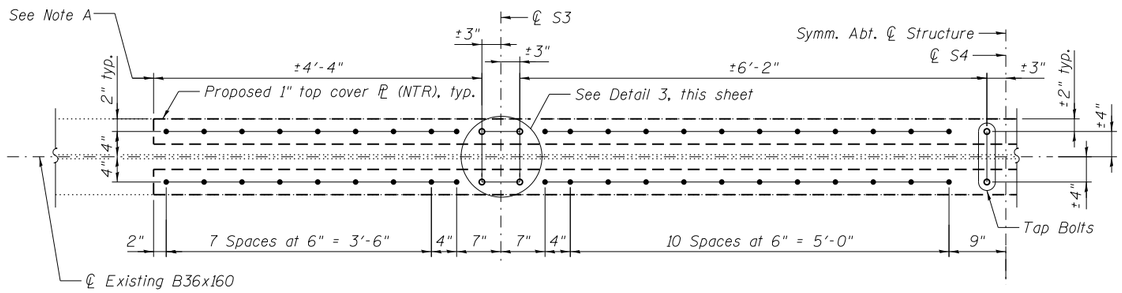
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS APPROACH BENTS 29 AND 30 REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S123 OF S138 SHEETS

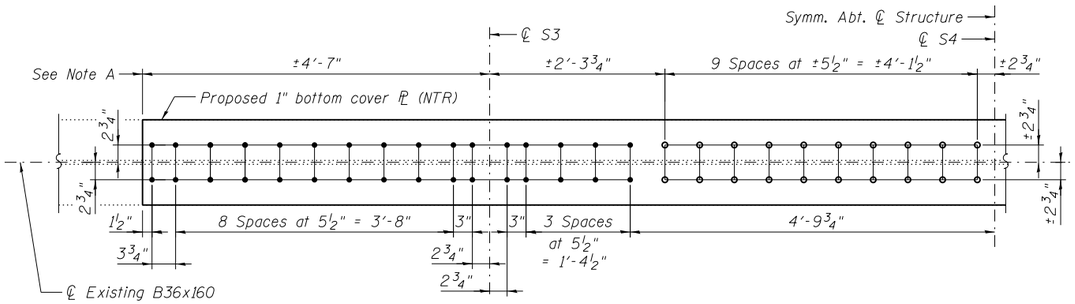
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	141
		CONTRACT NO. 76B03		
ILLINOIS	FED. AID PROJECT			



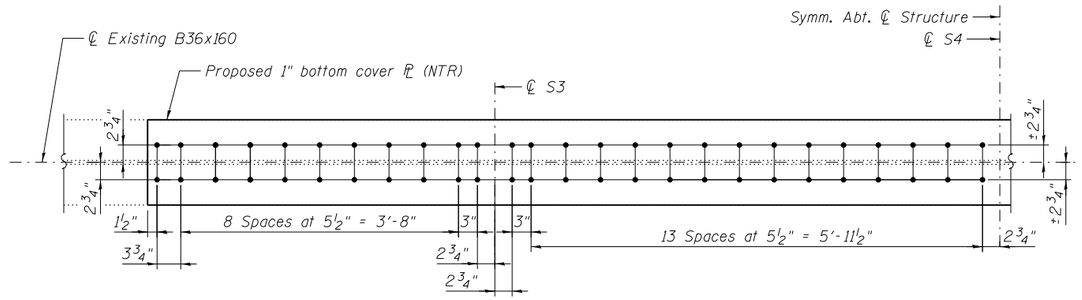
VIEW C-C
AT BENTS 18, 23 AND 27



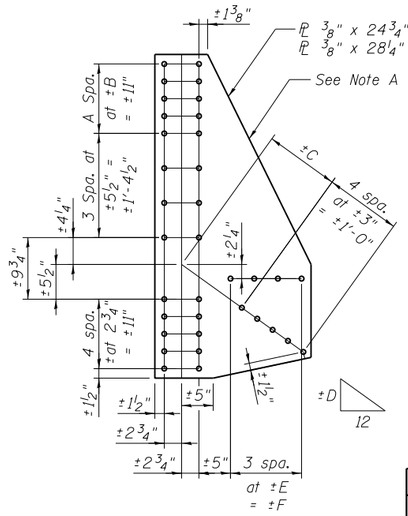
VIEW C-C
AT BENTS 17, 22 AND 28



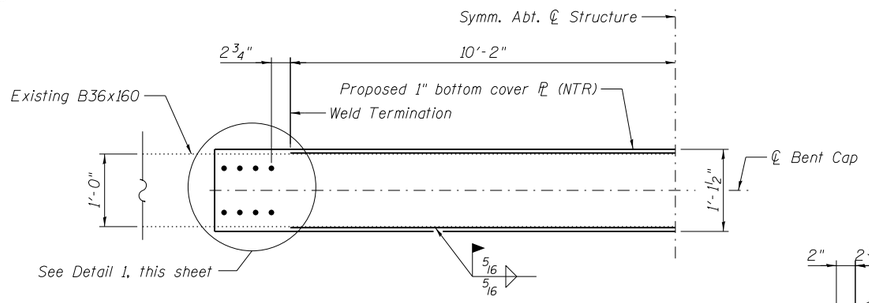
VIEW E-E
AT BENTS 18, 23 AND 27



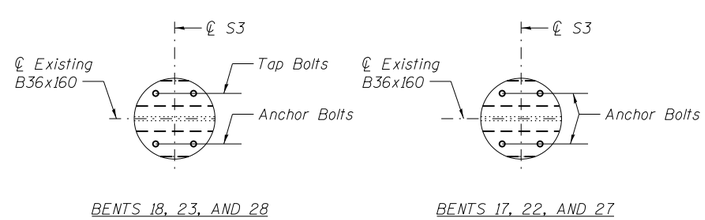
VIEW E-E
AT BENTS 28



DETAIL 2



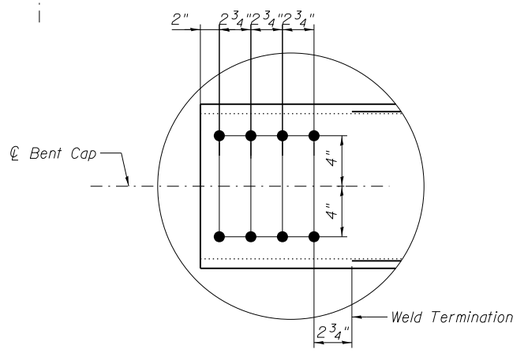
VIEW D-D
AT BENTS 17 AND 22



BENTS 18, 23, AND 28

BENTS 17, 22, AND 27

DETAIL 3



DETAIL 1

Location	Column	A	B	C	D	E	F
Bent 18-West Face	North & South	4	2¾"	11¾"	8 11/16	3¾"	11¼"
Bent 18-East Face	North & South	2	5½"	11¾"	8 11/16	3¾"	11¼"
Bent 23-West Face	North & South	4	2¾	1'-1¾"	6¾	4½"	1'-1½"
Bent 23-East Face	North & South	2	5½"	1'-1¾"	6¾	4½"	1'-1½"
Bent 27-West Face	North & South	2	5½"	11"	10 5/8	3¾"	11¼"
Bent 28-West Face	North & South	4	2¾"	11"	9 3/16	3¾"	11¼"
Bent 28-East Face	South	2	5½"	11"	9 3/16	3¾"	11¼"

Note A:
Field drill holes using existing holes as template. Remainder of holes may be shop or field drilled.

Notes:
All bolted connections shown on this sheet shall be made with ¾" dia. H.S. bolts.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
For Bill of Material, see sheets S114, S116, S117, S118, S119, and S121.

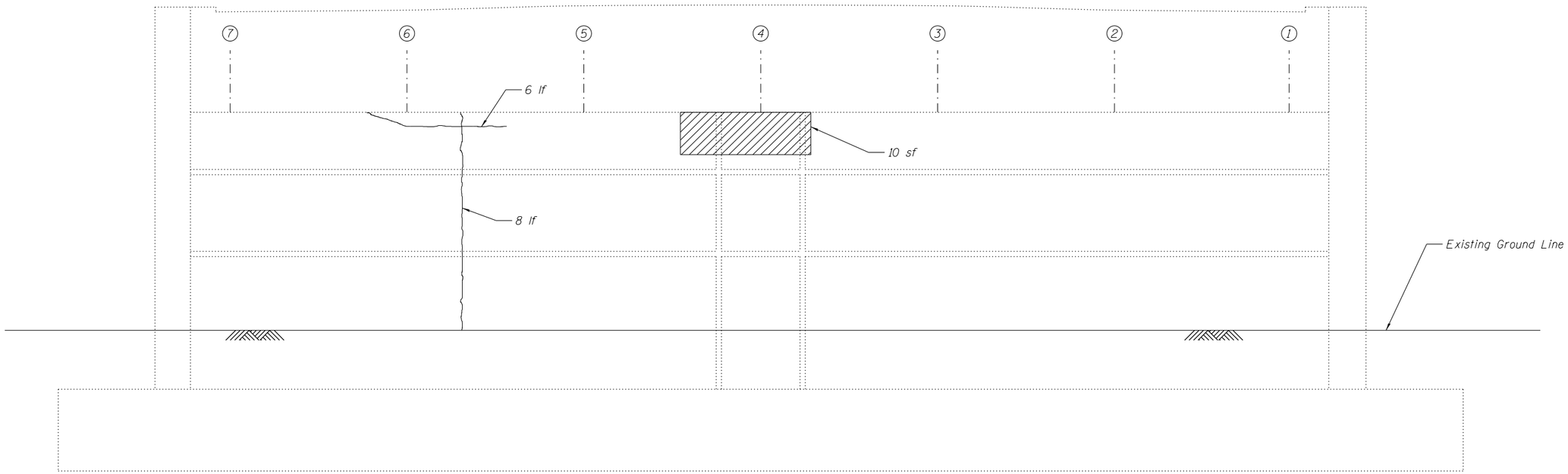
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - AEC	REVISED
PLOT DATE = 05/02/2014	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

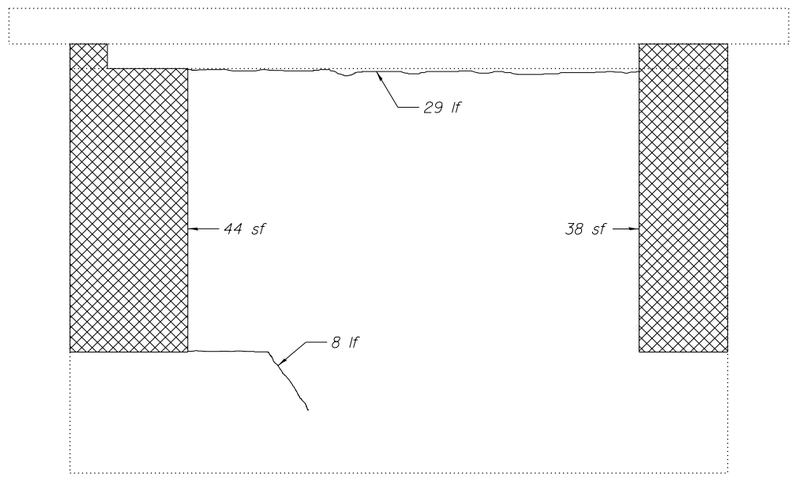
ILLINOIS APPROACH BENT MISCELLANEOUS DETAILS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S124 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	142
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



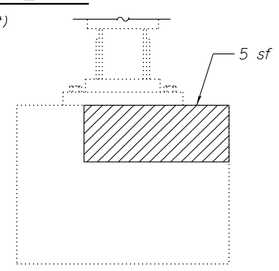
ELEVATION-ABUTMENT A

(Looking West)



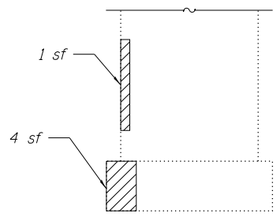
PLAN-ABUTMENT B SLOPE WALL

(Looking East)



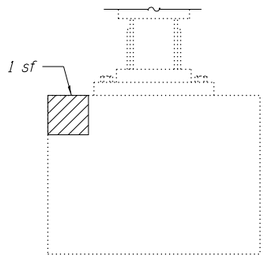
BENT 18 NORTH FOOTING

(Looking West)



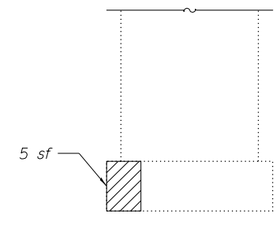
PIER 12 NORTH COLUMN

(Looking West)



BENT 18 NORTH FOOTING

(Looking West)



PIER 12 SOUTH COLUMN

(Looking West)

Notes:

Repair of the existing abutment and slope wall shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction.

Slope wall shall be reinforced with welded wire fabric, 6 in x 6 in - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

LEGEND:

- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- Slope Wall Repair
- Epoxy Crack Sealing

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	26
Slope Wall Repair	Sq. Yd.	9.1
Epoxy Crack Injection	Foot	51

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

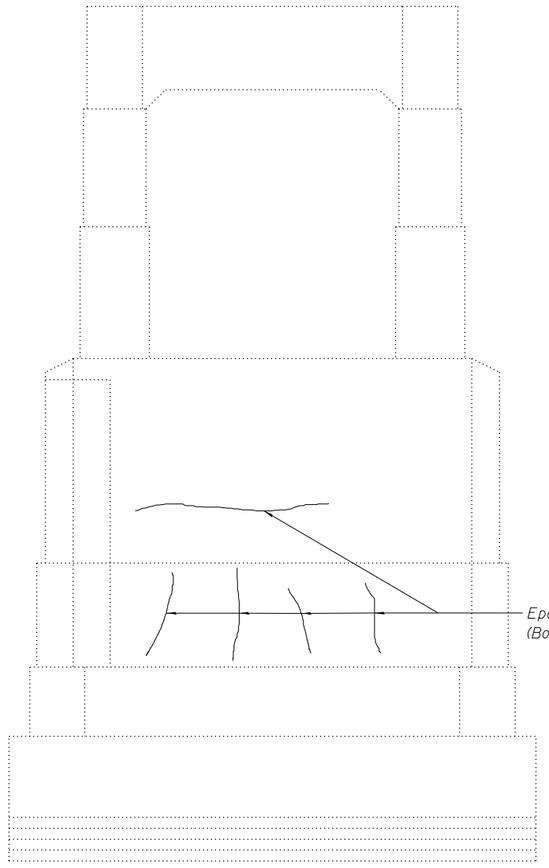
USER NAME =	DESIGNED - JJA	REVISED -	
FILE NAME =	CHECKED - TBP	REVISED -	
PLOT SCALE =	DRAWN - AJF	REVISED -	
PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

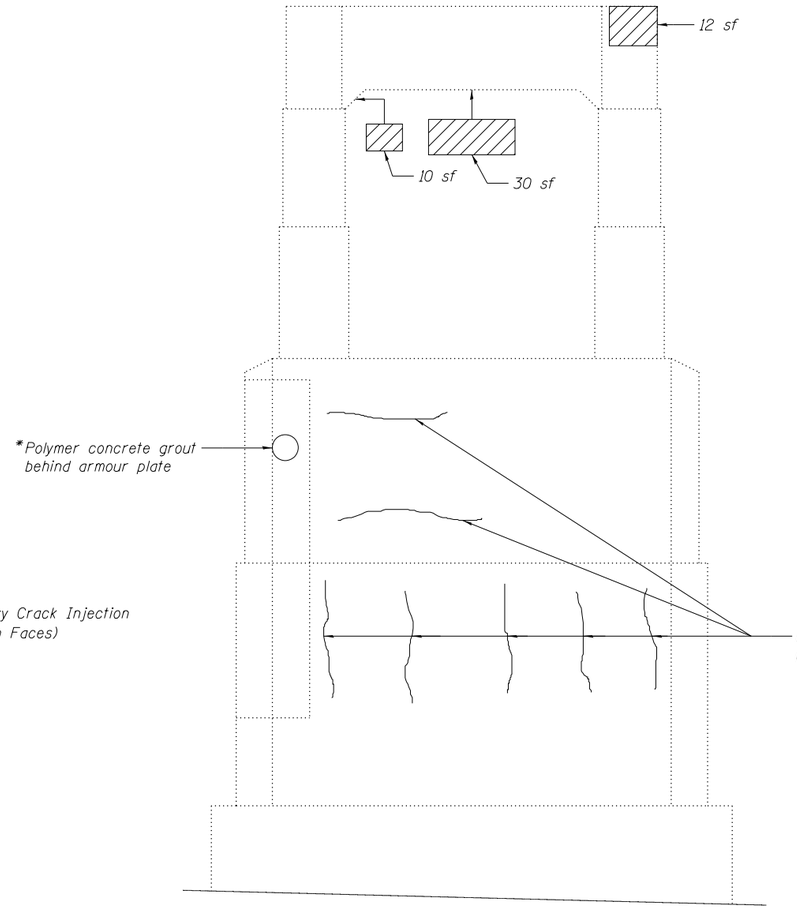
SUBSTRUCTURE AND SLOPE WALL REPAIRS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER

SHEET NO. S125 OF S138 SHEETS

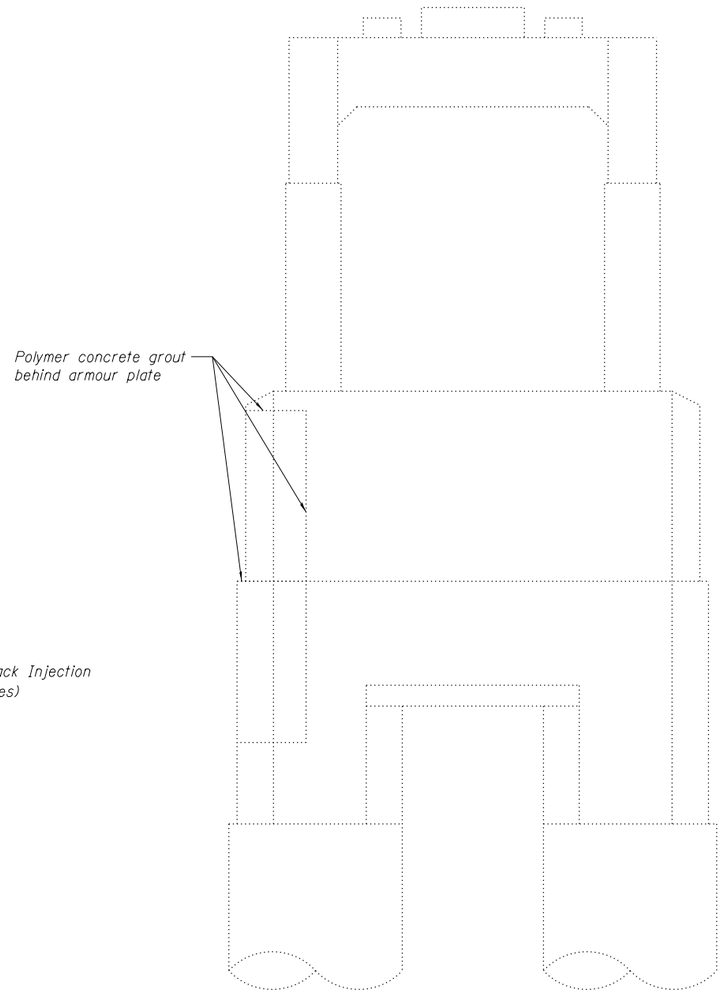
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	143
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		



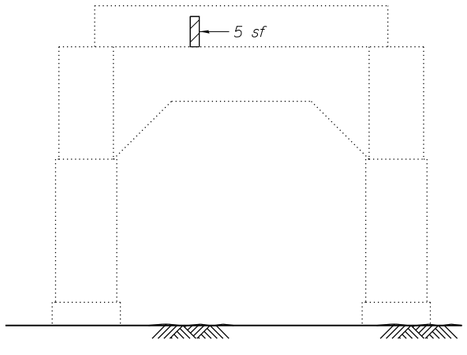
PIER 9
(West Face)



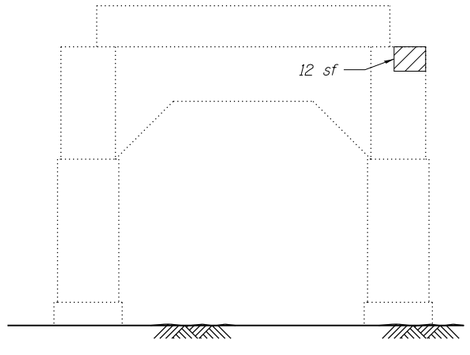
PIER 10
(West Face)



PIER 11
(West Face)



PIER 8
(East Face)



PIER 8
(West Face)

*Area shown is behind damaged steel armour plate. The area shall be grouted with Polymer Concrete. After the concrete repair, the damaged plate of armour part shall be cut and replaced in kind. The cost shall be included with pay item Polymer Concrete.

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth equal to or less than 5 in.)	Sq. Ft.	69
Polymer Concrete	Cu. Ft.	5
Epoxy Crack Injection	Foot	125

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 in.)

Epoxy Crack Injection

Note:
Repair of the existing piers shall include but may not be limited to the areas shown. The actual area to be repaired will be determined by the Engineer at the time of construction.

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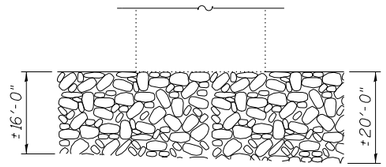
Consulting Engineers
Springfield, Illinois

USER NAME =		DESIGNED - JJA	REVISED -
FILE NAME =		CHECKED - TBP	REVISED -
PLOT SCALE =		DRAWN - AJF	REVISED -
PLOT DATE =	05/02/2014	CHECKED - VPT	REVISED -

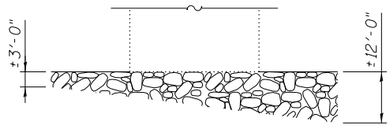
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER REPAIR DETAILS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S126 OF S138 SHEETS

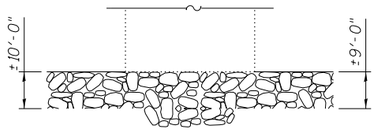
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	144
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		



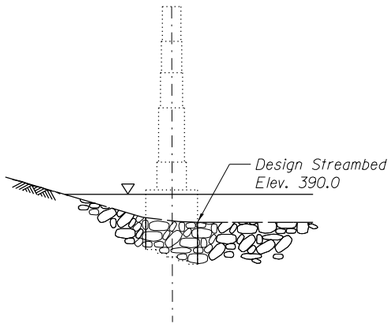
ELEVATION
(East Face)



ELEVATION
(East Face)

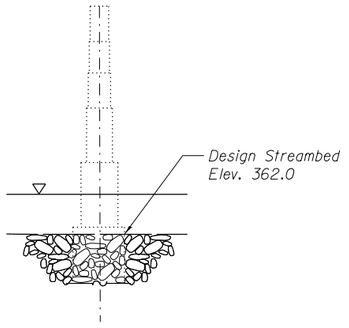


ELEVATION
(West Face)



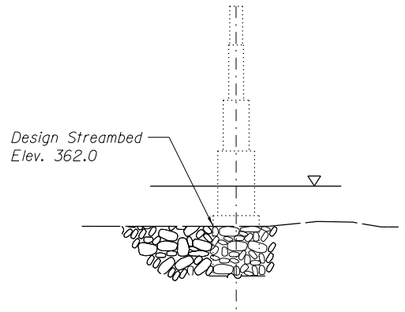
℄ Pier 9

SIDE VIEW
(South Face)



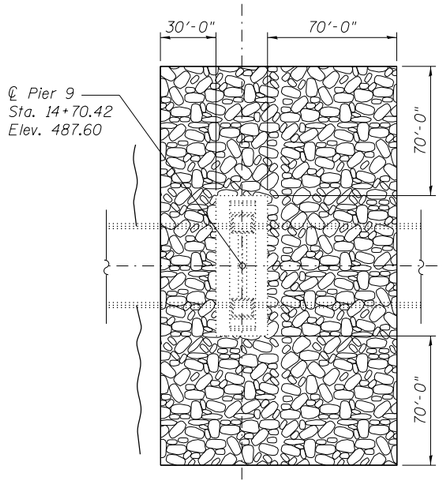
℄ Pier 10

SIDE VIEW
(South Face)

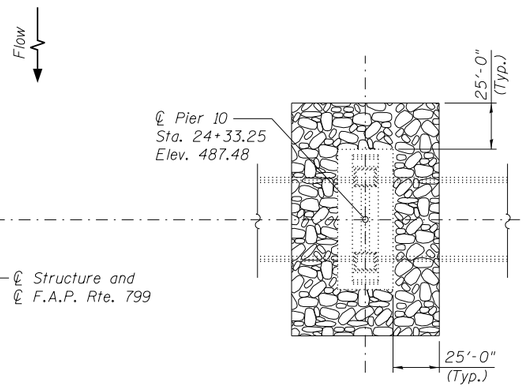


℄ Pier 11

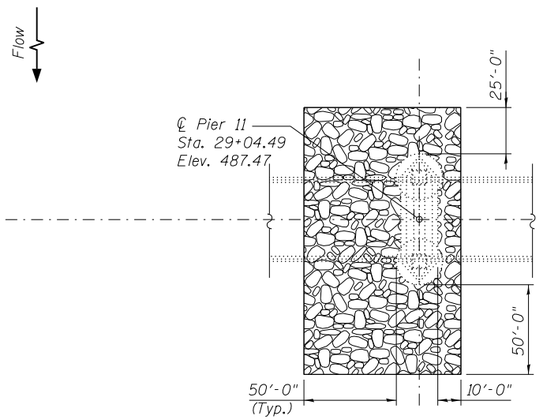
SIDE VIEW
(South Face)



PLAN
(Pier 9)



PLAN
(Pier 10)



PLAN
(Pier 11)

Notes:

The riprap depths shown are maximum depths at respective pier derived from 2013 underwater inspection report. The intention is to provide riprap up to the design stream bed elevation.

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the engineer.

Contractor shall provide sonar verification of scour limits prior to and after placement of Stone Dumped Riprap around Piers 9, 10, and 11. Cost of sonar verification shall be included in Stone Dumped Riprap, Class A7.

BILL OF MATERIAL

Item	Unit	Total
Stone Dumped Riprap, Class A7	Ton	35,085

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

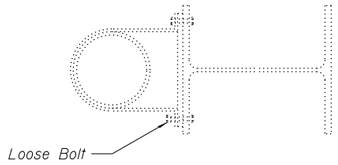
USER NAME =		DESIGNED -	JJA	REVISED -	
FILE NAME =		CHECKED -	TBP	REVISED -	
PLOT SCALE =		DRAWN -	AJF	REVISED -	
PLOT DATE =	05/02/2014	CHECKED -	VPT	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

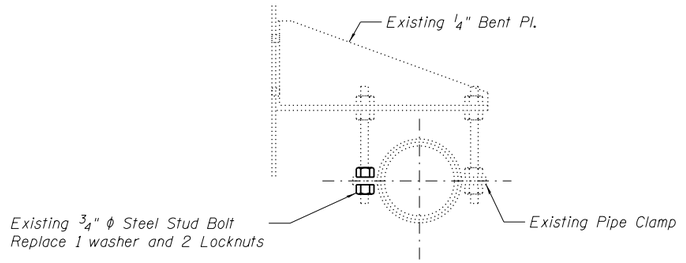
RIPRAP PLACEMENT AT PIERS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S127 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	145
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		

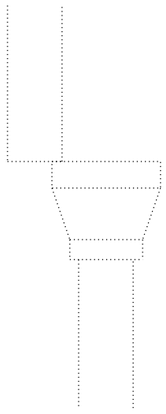
BROKEN DRAIN



1 LOOSE BOLT IN DRAIN CONNECTION

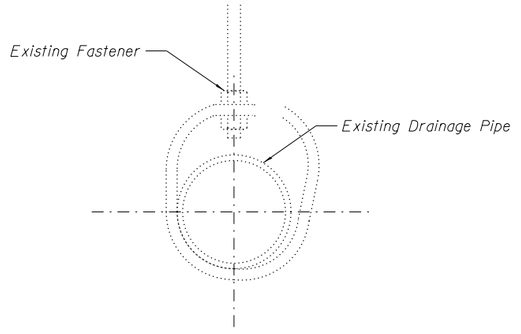


MISSING FASTENER ON DRAIN PIPE SUPPORT



DRAIN DOWNSPOUT MISALIGNED

DRAIN PIPE DISCONNECTED



BROKEN HANGER

TABLE OF REPAIRS

NBIS Item #	Span	Location	Deficiency	Repair
72	4	Midspan at Girder 4	Broken Hanger	Replace Hanger
72	9	Pan. 3, N. Side	Broken Hanger	Replace Hanger
72	9	Pan. 6, N. Side	Broken Hanger	Replace Hanger
72	9	Pan. 8, N. & S. Side	Broken Hanger	Replace Hanger
100	W	Under Stringer 5 at Bent W	Missing Fastener on Drain Pipe Support	Replace Fastener
144	9	Between L7 & L8, N. Side	Drain Downspout Misaligned	Realign Downspout
305	31, 32	North Column of Bent 31	Drain Pipe is Disconnected	Reconnect Drain Pipe
305	31, 32	North Column of Bent 31	Clogged, Full of Debris	*Unclog Drain
309	4	20' from Bent 3 at Girder 1	Broken Drain	Reconnect Drain Pipe
368	W	Throughout South Side	Clogged, Full of Debris	*Unclog Drain
369	1, 2	North Column, 6' from Ground Level	1 Loose Bolt in Drain Connection	Tighten Bolt
372	9	Throughout South Side	Clogged, Full of Debris	*Unclog Drain

*Cost included with Cleaning Drainage System.

Notes:

Repair of the existing drainage system shall include but may not be limited to the locations shown. The final repair locations will be determined by the Engineer prior to repair.

All work shown on this sheet shall be included in pay item Bridge Drainage System Repair unless noted otherwise.

In addition to the repairs shown on this sheet, the drainage system for the entire bridge including scuppers, floor drains and downspouts shall be cleaned. Cost included with Cleaning Drainage System.

BILL OF MATERIAL

Item	Unit	Total
Bridge Drainage System Repair	Each	10
Cleaning Drainage System	L Sum	1

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Consulting Engineers
Springfield, Illinois

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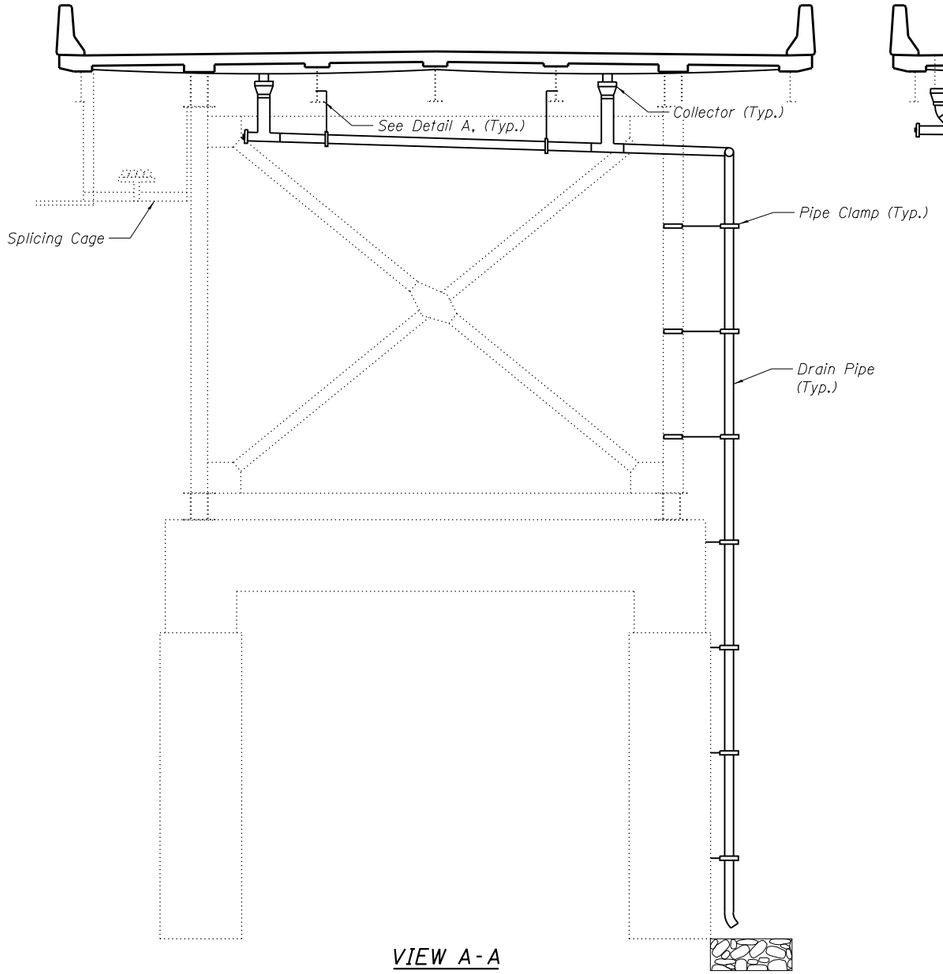
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -

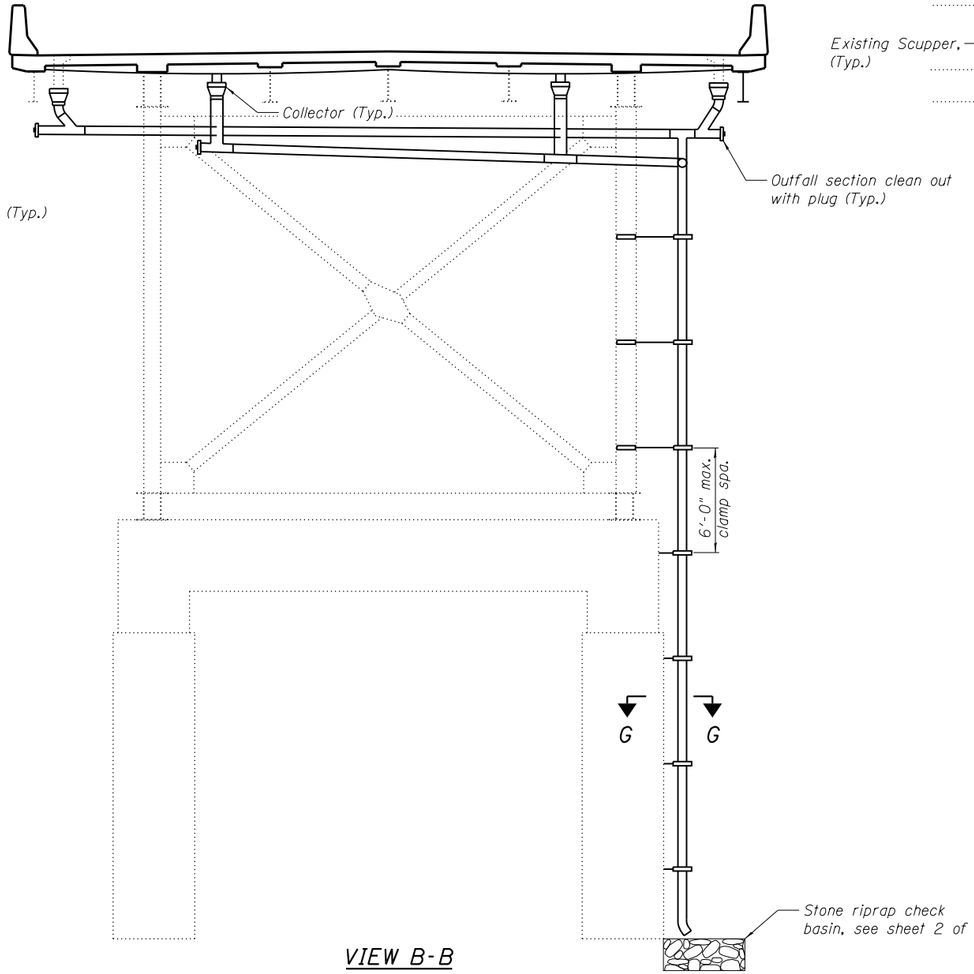
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE REPAIR DETAILS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S128 OF S138 SHEETS

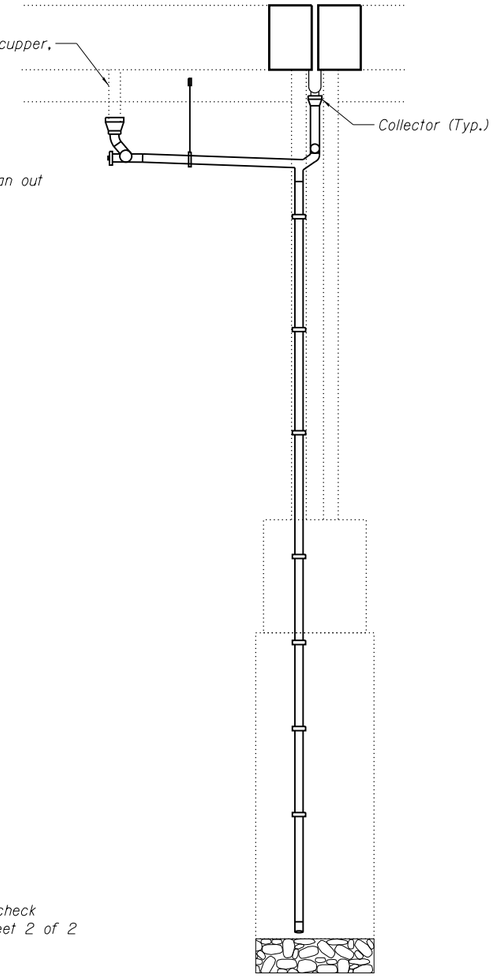
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	146
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		



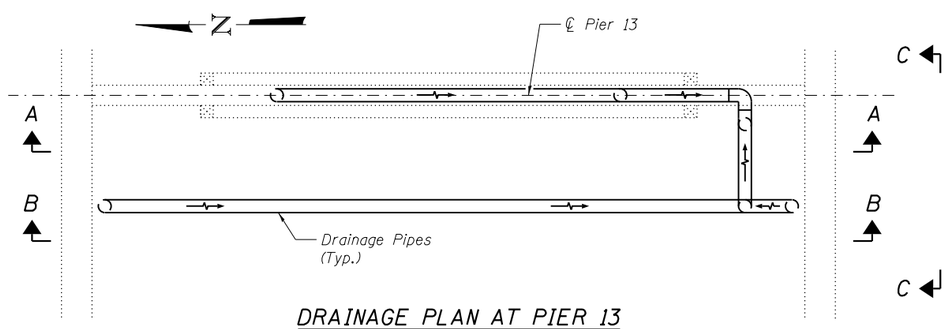
VIEW A-A



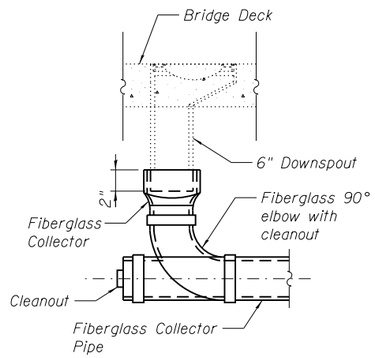
VIEW B-B



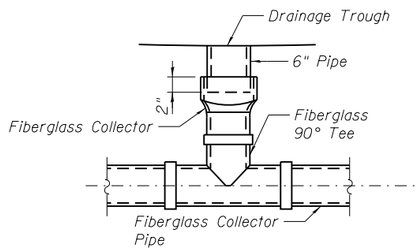
VIEW C-C



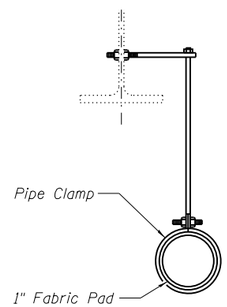
DRAINAGE PLAN AT PIER 13



COLLECTOR PIPE
DETAIL AT SCUPPERS



COLLECTOR PIPE
DETAIL - TEE SECTION



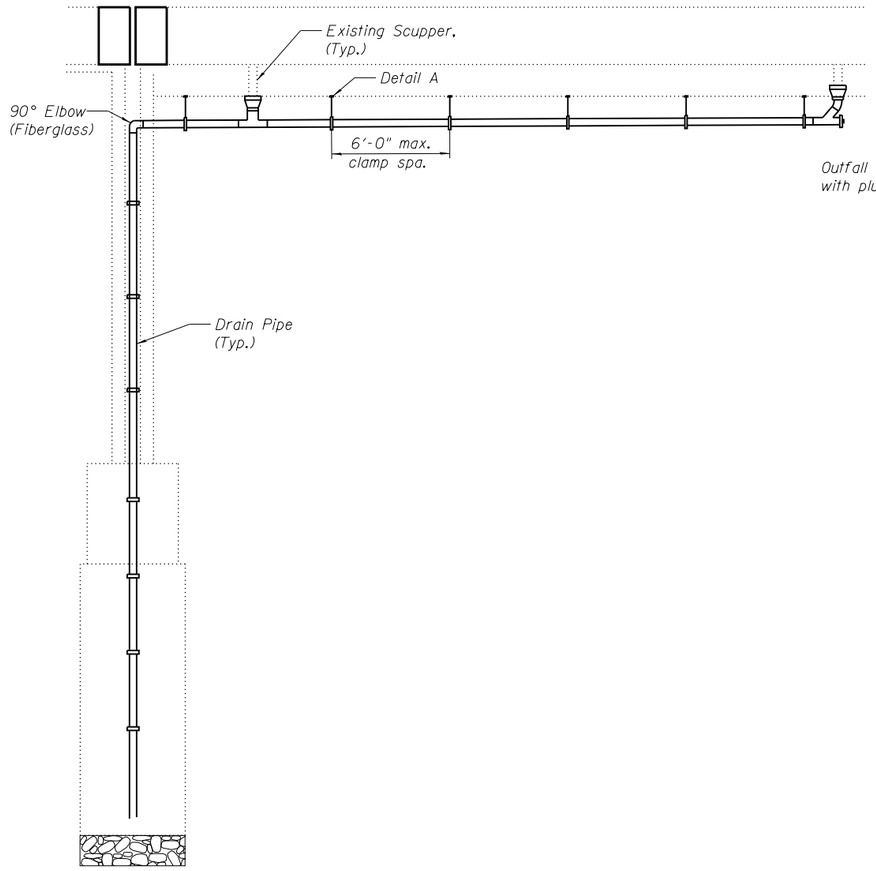
DETAIL A

Notes:
See sheet S130 of S138 for drainage details at Pier 12.
see sheet S130 of S138 for additional notes, sections, details and bill of material.

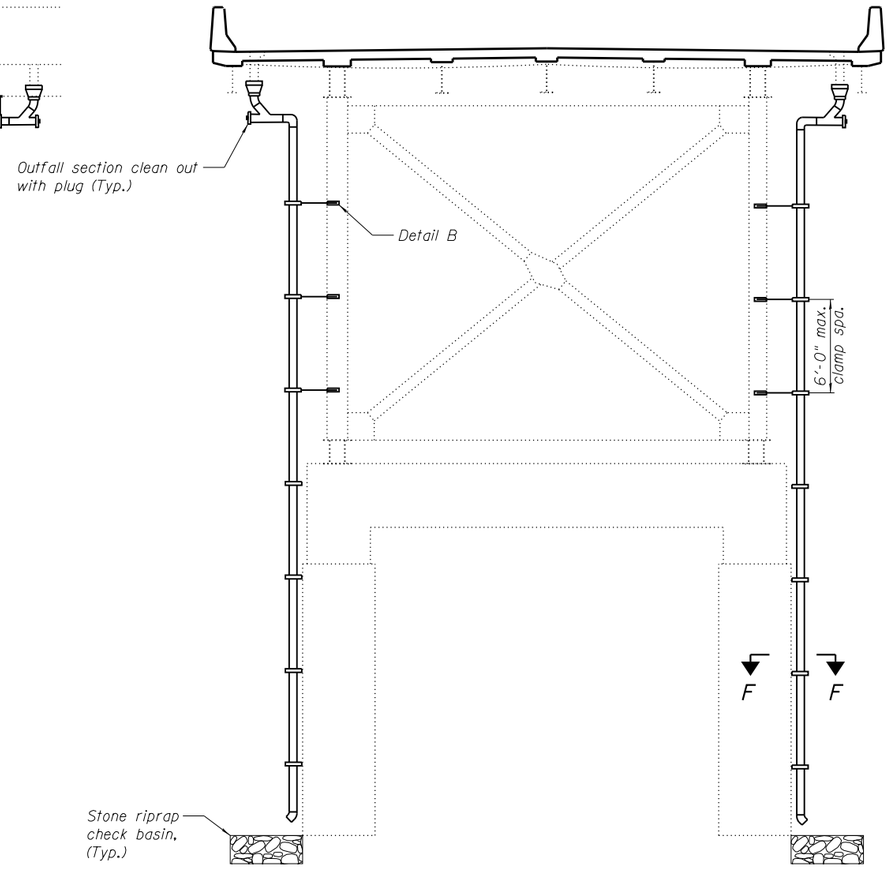
(Sheet 1 of 2)

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - JJA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ILLINOIS APPROACH DRAINAGE SYSTEM S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
	FILE NAME =	CHECKED - TBP	REVISED -		
	PLOT SCALE =	DRAWN - AJF	REVISED -		
	PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -		SHEET NO. S129 OF S138 SHEETS

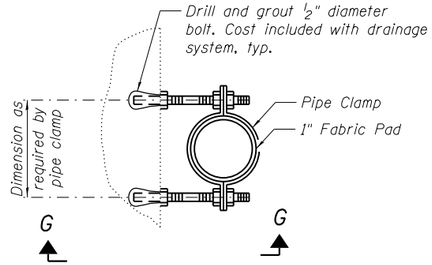
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	147
		CONTRACT NO. 76B03		
		ILLINOIS	FED. AID PROJECT	



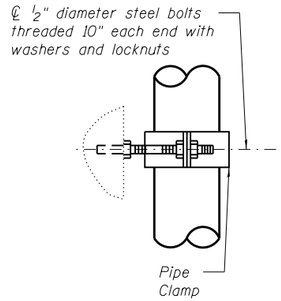
VIEW D-D



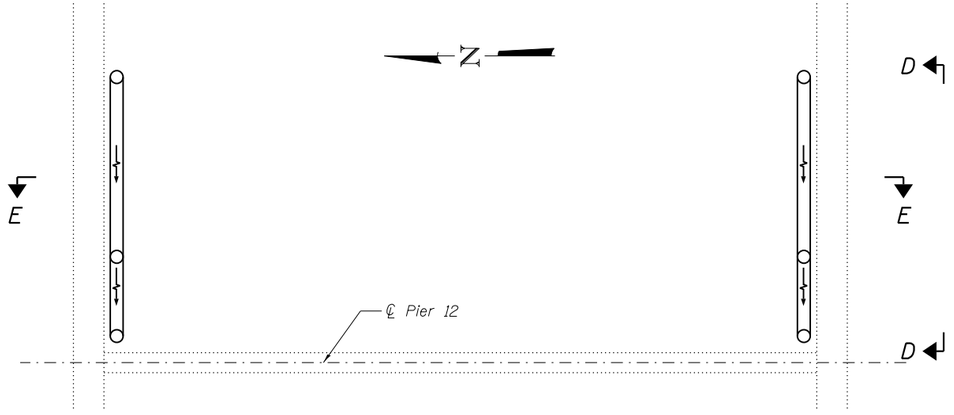
VIEW E-E



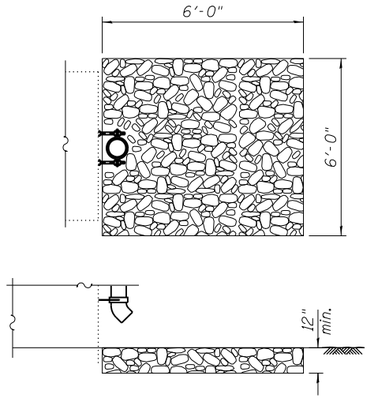
SECTION F-F



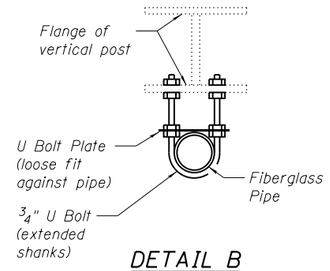
VIEW G-G



DRAINAGE PLAN AT PIER 12



STONE RIPRAP CHECK BASIN DETAIL



DETAIL B

Notes:

The areas where the pipe collector system flows opposite the bridge profile, the typical height shall be adjusted to meet a minimum 0.5% slope to drain.

See sheet S129 of S138 for Detail A, 90° elbow and Tee details at collector pipes.

All downspouts from scuppers shall be 8" unless otherwise noted.

All pipe clamps, fabric pads, inserts, collectors and other work necessary to install the system shall be considered included with the cost of the pay item Drainage System.

All fiberglass pipe shall conform to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. Color shall be concrete gray.

BILL OF MATERIAL

Item	Unit	Total
Drainage System	L Sum	1

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Springfield, Illinois

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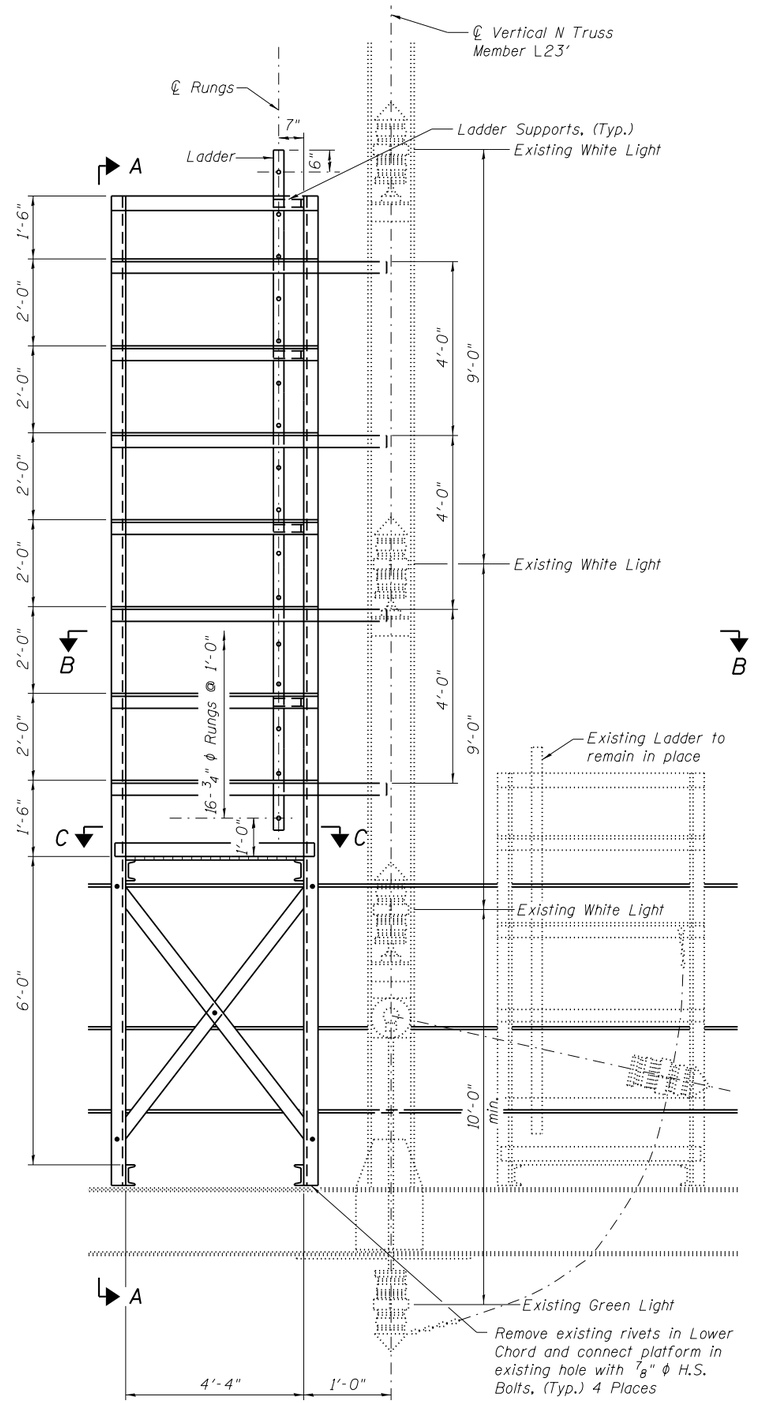
PLOT DATE =	05/02/2014	CHECKED -	VPT	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

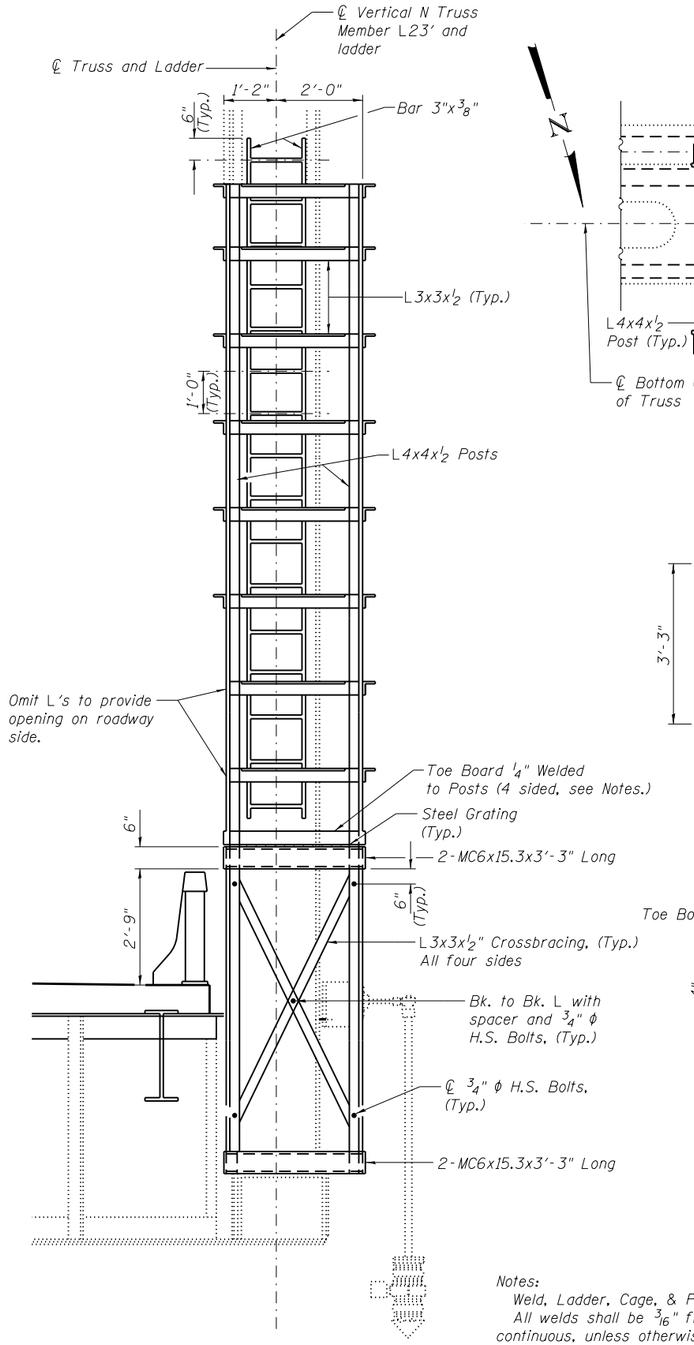
ILLINOIS APPROACH DRAINAGE SYSTEM
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S130 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	148
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		

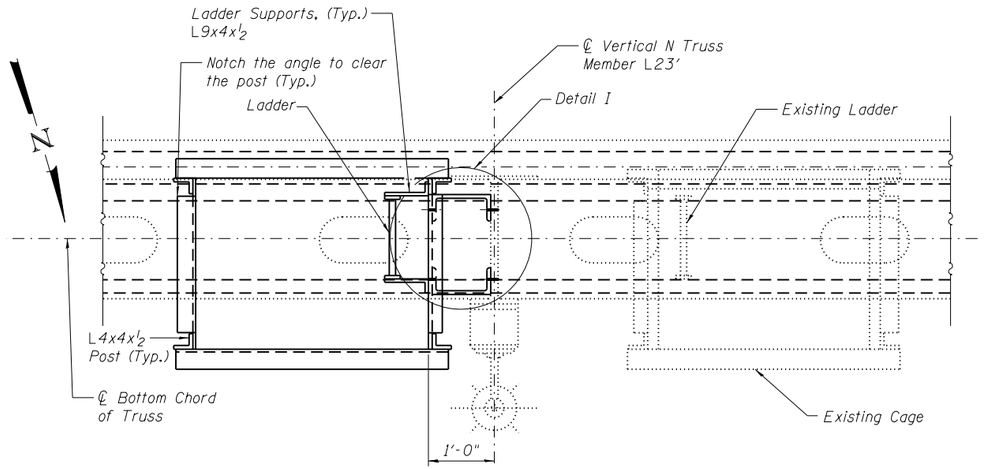


ELEVATION

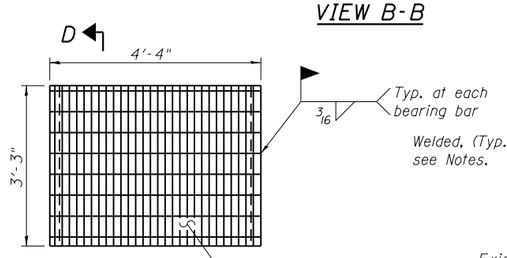
Looking South (North Truss)



VIEW A-A

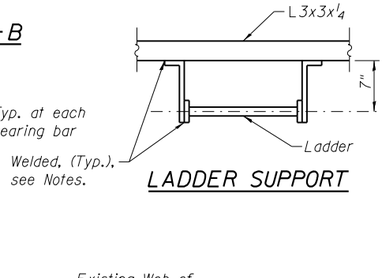


VIEW B-B

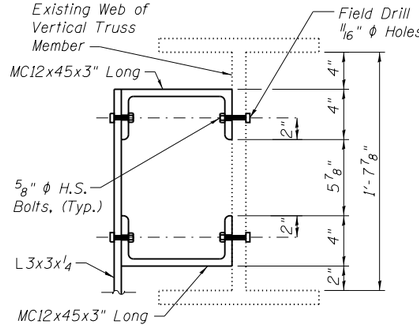


SECTION C-C

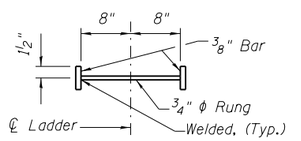
SECTION D-D



LADDER SUPPORT



DETAIL I



RUNG DETAIL

Notes:

Weld, Ladder, Cage, & Platform shall meet OSHA Requirements.

All welds shall be 3/16" fillet welds & shall be all around and continuous, unless otherwise shown.

One Access Ladder & Cage is required at L23' on the North side of the Bridge.

All work shown on this sheet is included with pay item Access Ladder.

See General notes for details of painting of new steel.

See Lighting Repairs for details about lights.

Grating shall provide 100 psf min. Live Load capacity.

BILL OF MATERIAL

Item	Unit	Total
Access Ladder	Each	1

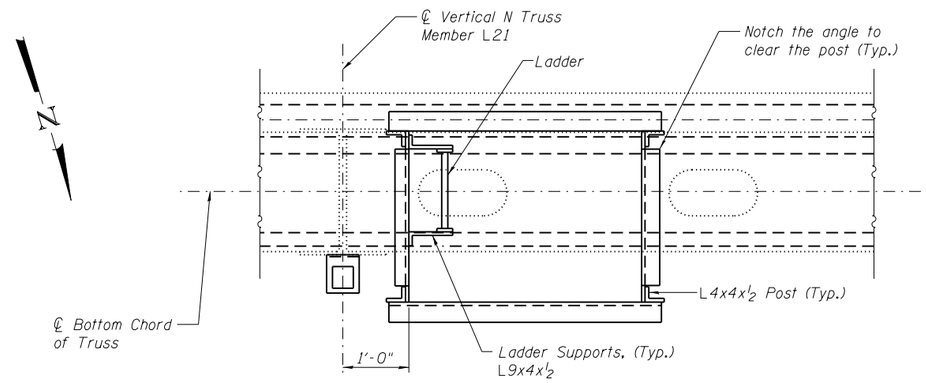
LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME =		DESIGNED -	JJA	REVISED -	
FILE NAME =		CHECKED -	TBP	REVISED -	
PLOT SCALE =		DRAWN -	AJF	REVISED -	
PLOT DATE =	05/02/2014	CHECKED -	VPT	REVISED -	

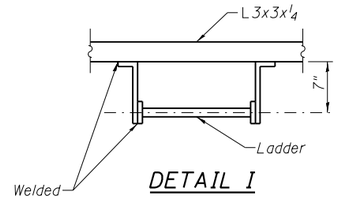
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ACCESS LADDER FOR WHITE NAVIGATION LIGHTS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S131 OF S138 SHEETS

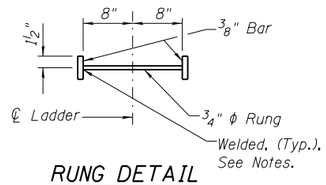
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	149
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



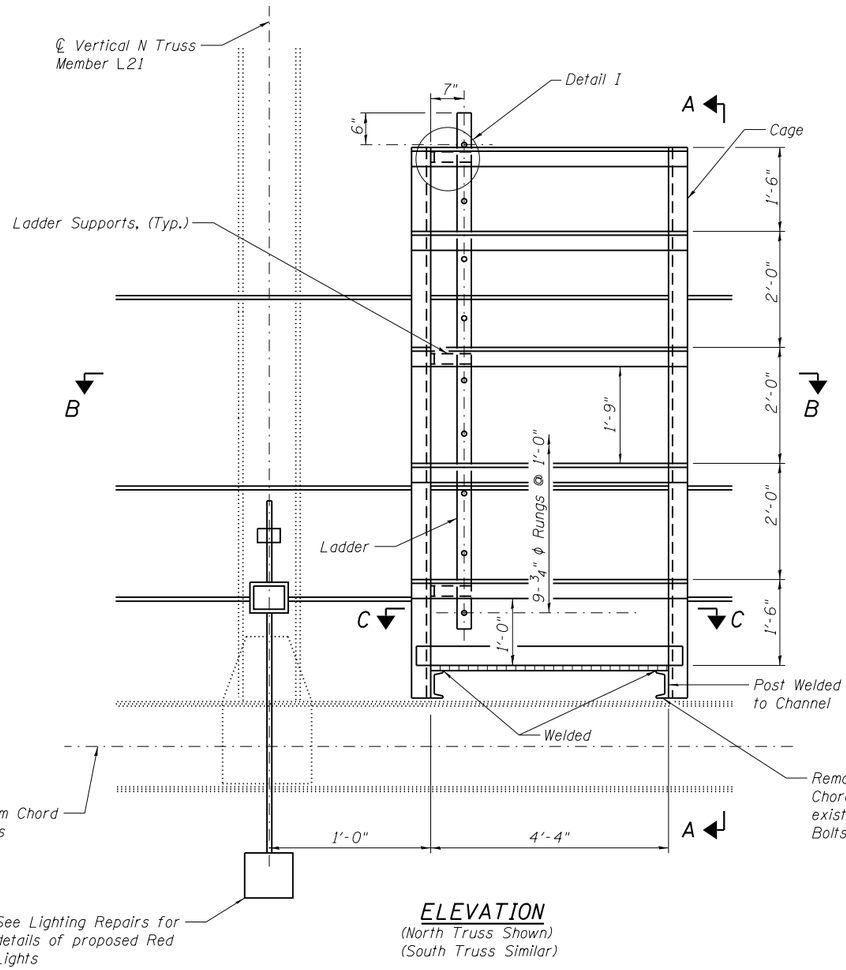
VIEW B-B



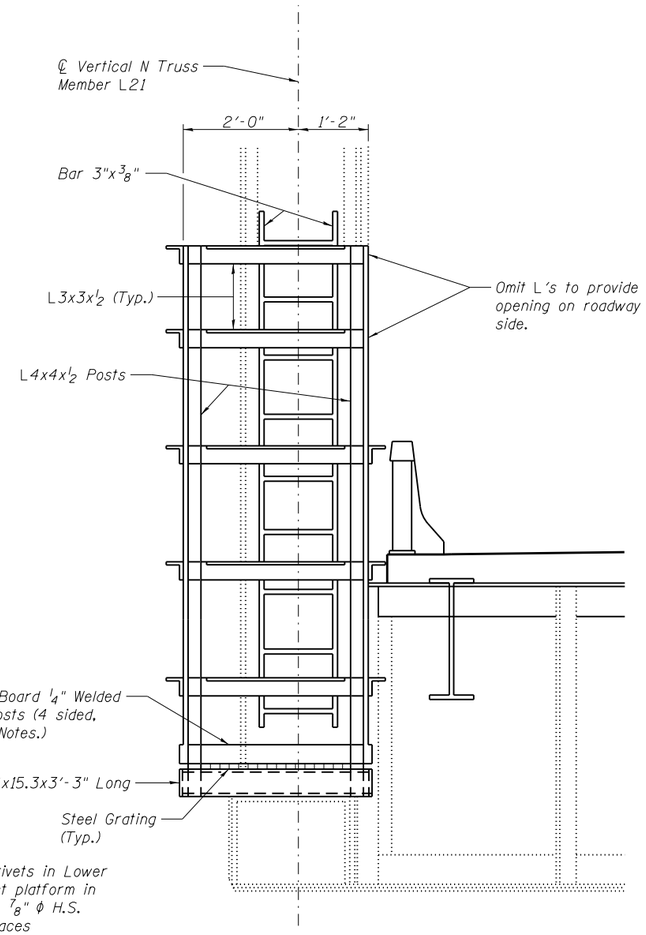
DETAIL I



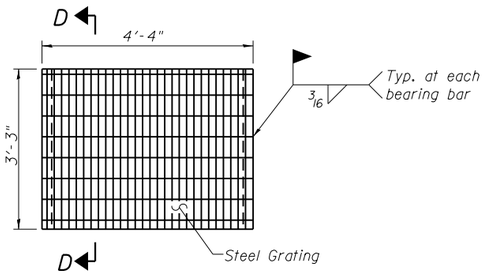
RUNG DETAIL



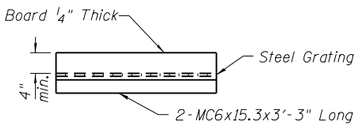
ELEVATION
(North Truss Shown)
(South Truss Similar)



VIEW A-A



SECTION C-C



SECTION D-D

BILL OF MATERIAL

Item	Unit	Total
Access Ladder	Each	2

Notes:
Weld. Ladder, Cage, & Platform shall meet OSHA Requirements.
All welds shall be 3/16" fillet welds & shall be all around and continuous, unless otherwise shown.
One cage with access ladder is required at L21 on each side of the bridge.
All work shown on this sheet is included with pay item Access Ladder.
See General notes for details of painting of new steel.
See Lighting Repairs for locations and details about lights.
Grating shall provide 100 psf min. Live Load capacity.

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Consulting Engineers
Springfield, Illinois

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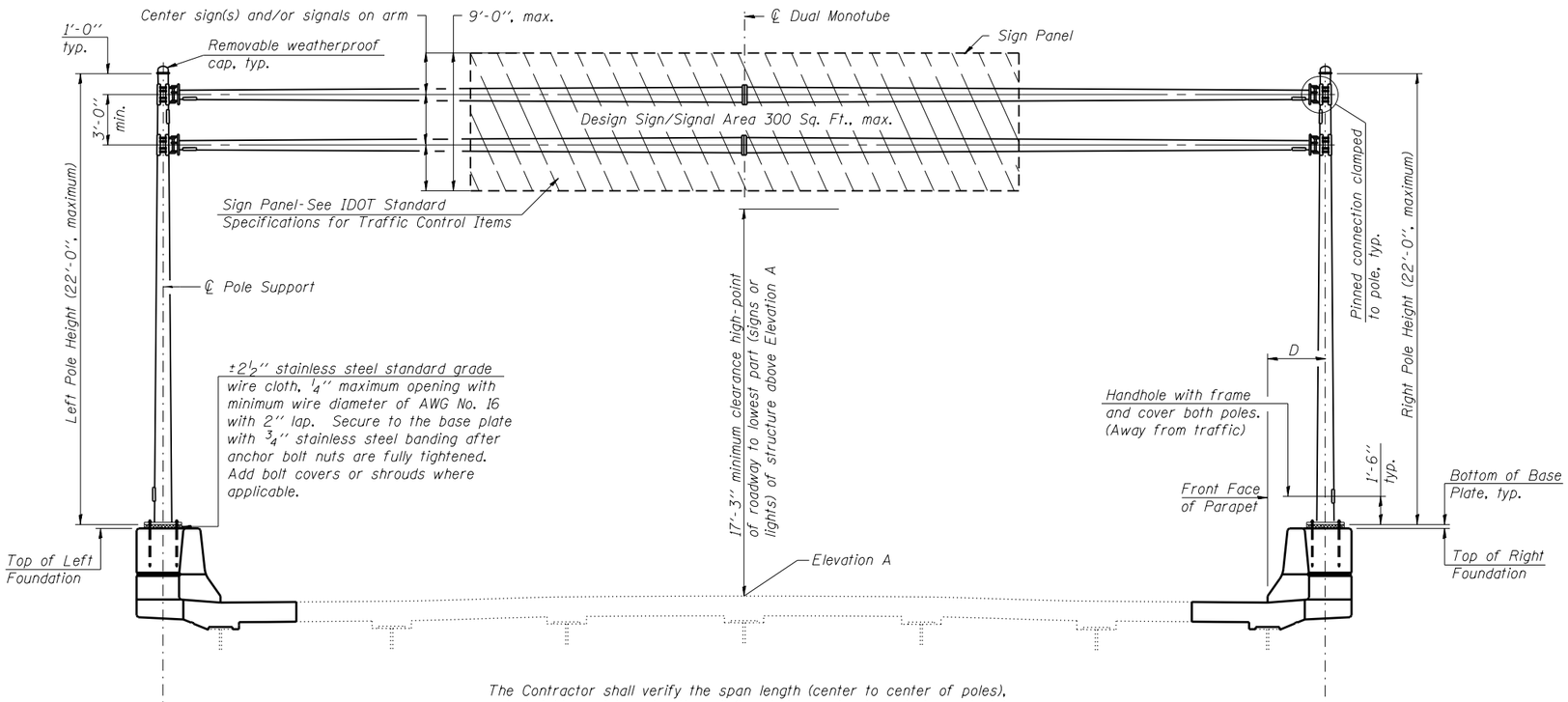
FILE NAME =	CHECKED - TBP	REVISED -	
PLOT SCALE =	DRAWN - AJF	REVISED -	
PLOT DATE = 05/02/2014	CHECKED - VPT	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED PLATFORM FOR NEW RED NAVIGATION LIGHT LOCATIONS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S132 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	150
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		



ELEVATION

Looking at face of signs.
Looking upstation for structures with signs both sides.

GENERAL NOTES

DESIGN: Current (at time of letting) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (Fatigue Category II - natural wind gust only).

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Recurring Special Provisions. ("Standard Specifications") All references to "Mast Arm Assembly and Pole" are applicable, unless otherwise noted.

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code and the Standard Specifications.

ANCHOR RODS: Shall conform to ASTM F1554 Grade 105. No welding shall be permitted on rods.

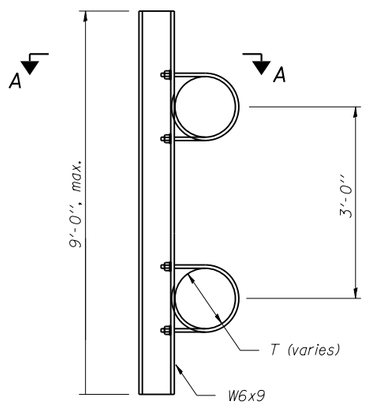
FASTENERS: All connection bolts shall be High Strength Bolts M164, Galvanize M232 (A153), Type 3, or stainless steel heavy hex conforming to ASTM A193, Grade B8 or B8M, Class 1. U-bolts shall be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished, or an equivalent material acceptable to the Engineer. Nuts for stainless steel bolts shall be stainless steel conforming to ASTM A194, Grade 8 (AISI Type 304) or Grade 8F (AISI Type 303). All nuts shall be "locknuts" with nylon or steel inserts and semifinished hexagonal heads equivalent to the finished heavy hex series of the American National Standard. Washers for stainless steel bolts shall be stainless steel conforming to ASTM A240, Type 302 or 304.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

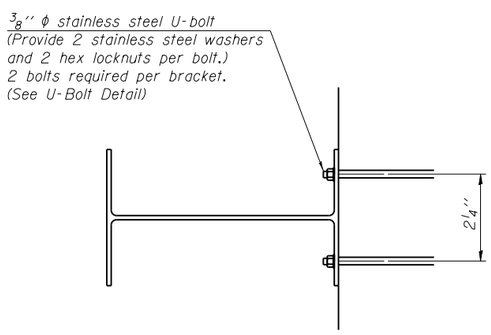
CAMBER: Minimum AASHTO camber = L / 1000 + dead load camber

SIGN STRUCTURE DATA TABLE

Structure Number	Station	℄ to ℄ Poles	Elevation A	Dimension D	Actual Sign/Signal Area
8M082NMLKR000.0	35+04.26	44'-6¾"	469.58	2'-3⅜"	81

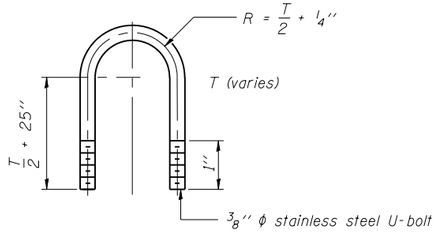


SIGN MOUNTING BRACKET



SECTION A-A

6'-0" maximum spacing.
2'-0" maximum sign overhang beyond end bracket.



U-BOLT DETAIL

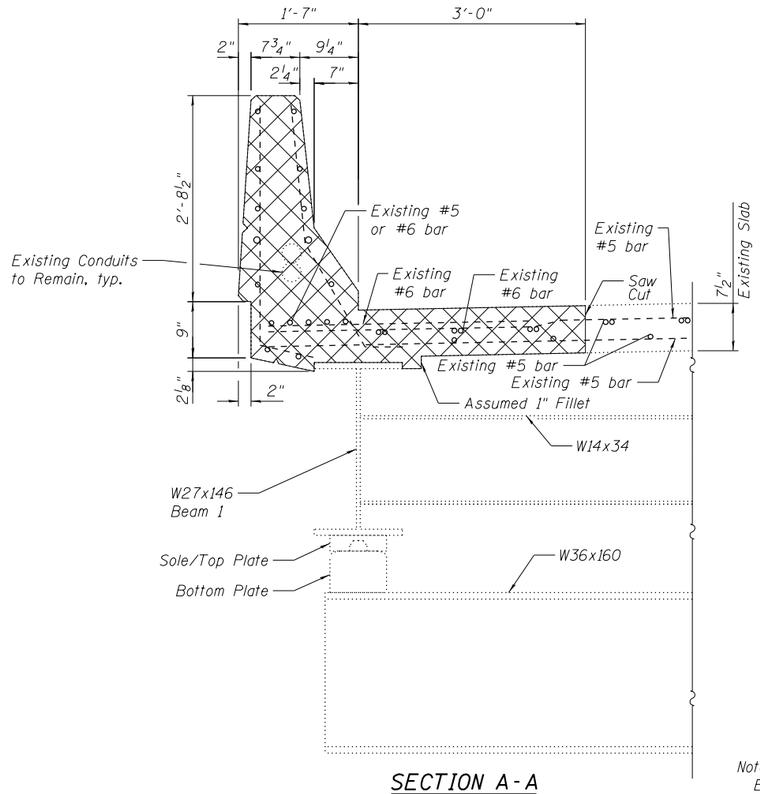
(Typical)

BILL OF MATERIAL

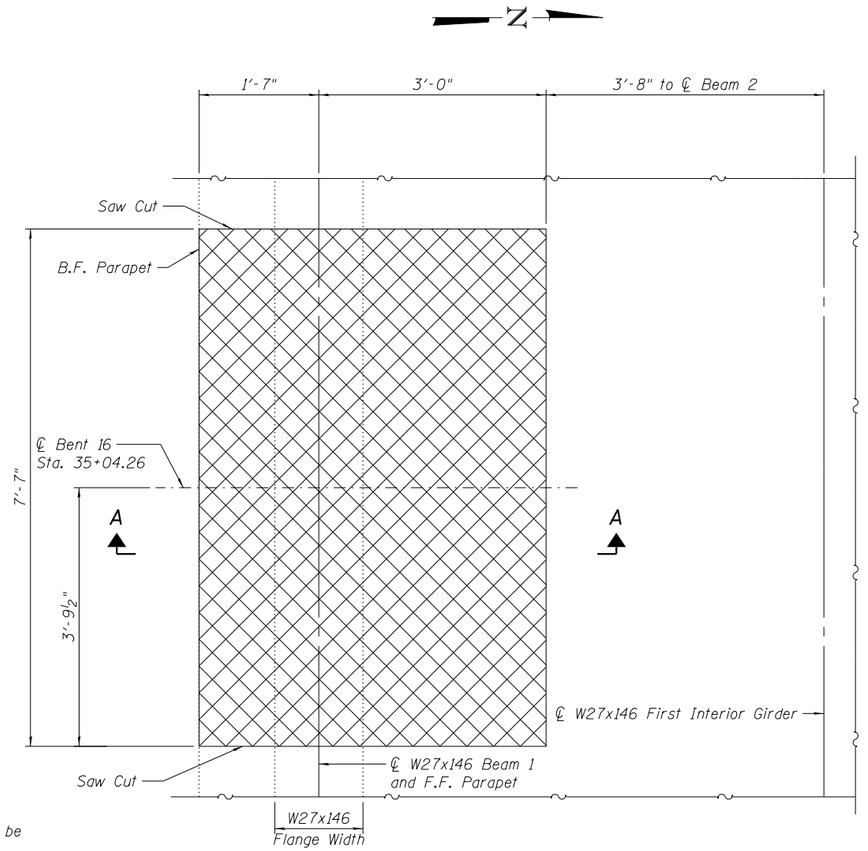
ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE MONOTUBE DUAL	Foot	45

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - RPW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DUAL MONOTUBE SIGN STRUCTURE S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
	FILE NAME =	CHECKED - LMS	REVISED -		
	PLOT SCALE =	DRAWN - AJF	REVISED -		
	PLOT DATE = 05/02/2014	CHECKED - LMS	REVISED -		SHEET NO. S133 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	151
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



SECTION A-A



CONCRETE REMOVAL PLAN

(South Parapet Shown, North Parapet Similiar)

LEGEND

Concrete Removal

Notes:

Existing reinforcement bars extending into the removal area shall be cleaned, straightened (if required) and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Superstructure.

No construction vehicles, live load, or construction equipment will be permitted on the deck area south of Beam 2 or north of Beam 6 and 5 feet east and west from the opening until requirements of the Standard Specifications Articles 503.20 and 1020.04 are met.

Contractor must take care and verify location of existing conduit in parapet before concrete removal.

Existing Conduit embedded in parapets shall remain in place and functional throughout construction. Provide temporary support during construction. Cost included with Concrete Removal.

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.

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

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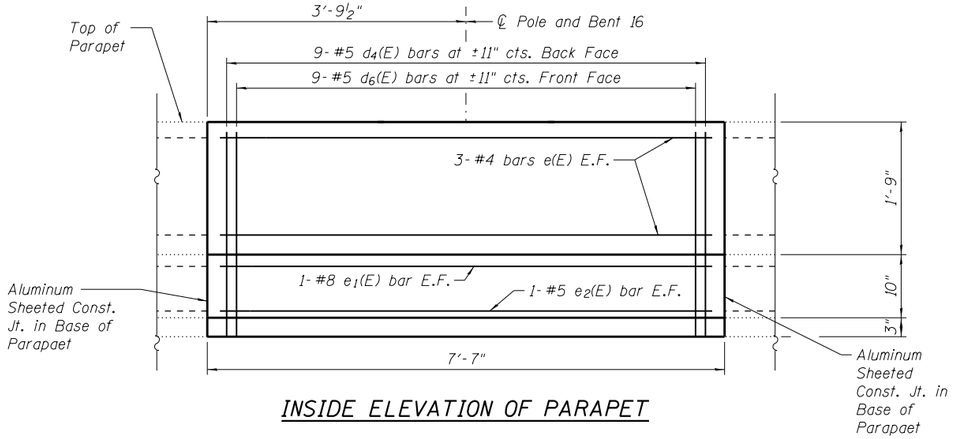
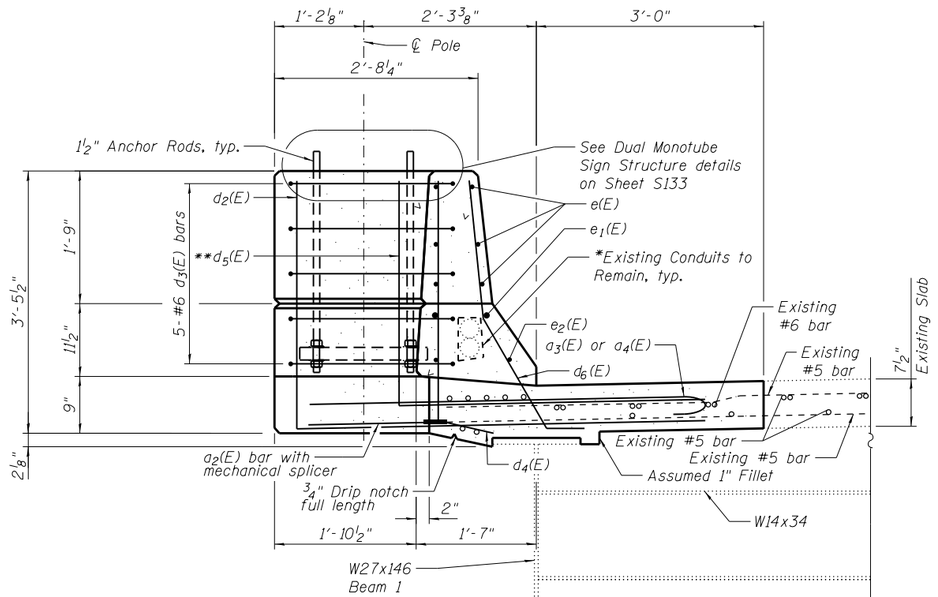
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE REMOVAL DETAILS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S134 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	152
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			

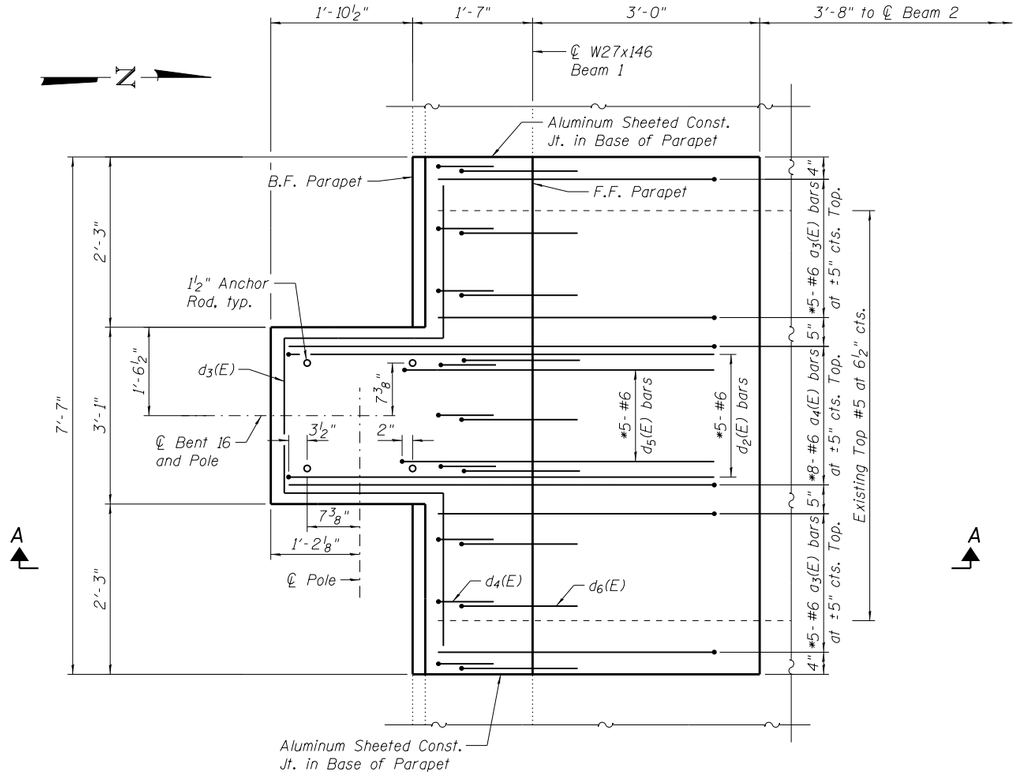


INSIDE ELEVATION OF PARAPET



SECTION A-A

*Adjust bar locations as required to miss existing reinforcement and conduit.
Maintain 1½" cl. from reinf to conduit.
**Drill holes in anchor plate to allow for placement of $d_5(E)$ bars



PLAN

(Not showing Bottom bars or longitudinal bars in Deck for clarity)
(South Parapet Shown, North Parapet Similiar)

Design Notes:

The foundations were designed to support 18" diameter vertical and horizontal poles and a 5.3 kip vertical dead load to each foundation along with the effects of wind loading. Refer to Sheet S136 for the proposed anchor bolt layout as dimensioned in the Anchor Rod Detail. Variation in the anchor bolt diameter or layout and/or increase in pole size or weight shall require the reanalysis of the proposed foundation for adequacy. This analysis shall be performed, sealed, and submitted for the Engineer's approval by an Illinois SE at no additional cost.

Fatigue loading was ignored for foundation design.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification for Highway Bridges and the Manual for Bridge Evaluation, 2nd Edition, with 2011 and 2013 Interims
2001 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals with 2002, 2003, and 2006 Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (Anchor Plate)

EXISTING CONSTRUCTION

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

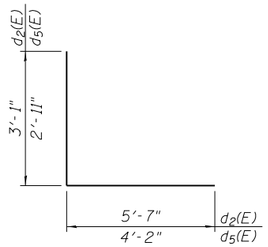
ANCHOR RODS: Shall conform to ASTM F1554 Grade 105.

Notes:

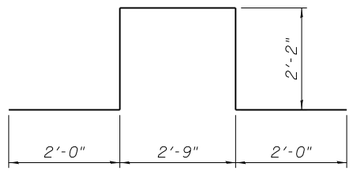
Cost of Anchor Rods included with Concrete Superstructure.
See Sheet S136 for Anchor Rod Details.
All existing longitudinal bars in deck to remain in place.
Minimum clearance to be 1½" in Foundation unless otherwise shown.
Tilt #6 $a_3(E)$ and $a_4(E)$ bars as required to maintain clearance.

BILL OF MATERIAL

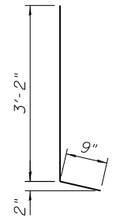
Bar	No.	Size	Length	Shape
$a_2(E)$	6	#5	2'-0"	
$a_3(E)$	20	#6	4'-5"	
$a_4(E)$	16	#6	6'-5"	
$d_2(E)$	10	#6	8'-8"	
$d_3(E)$	10	#6	11'-1"	
$d_4(E)$	18	#5	3'-11"	
$d_5(E)$	10	#6	7'-1"	
$d_6(E)$	18	#5	4'-7"	
$e(E)$	12	#4	7'-3"	
$e_1(E)$	4	#8	7'-3"	
$e_2(E)$	4	#5	7'-3"	
Concrete Removal			Cu. Yd.	3.3
Concrete Superstructure			Cu. Yd.	4.8
Reinforcement Bars, Epoxy Coated			Pound	1030



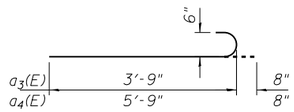
BARS $d_2(E)$ & $d_5(E)$



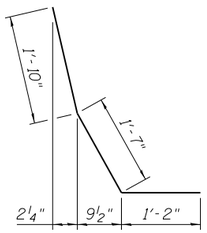
BAR $d_3(E)$



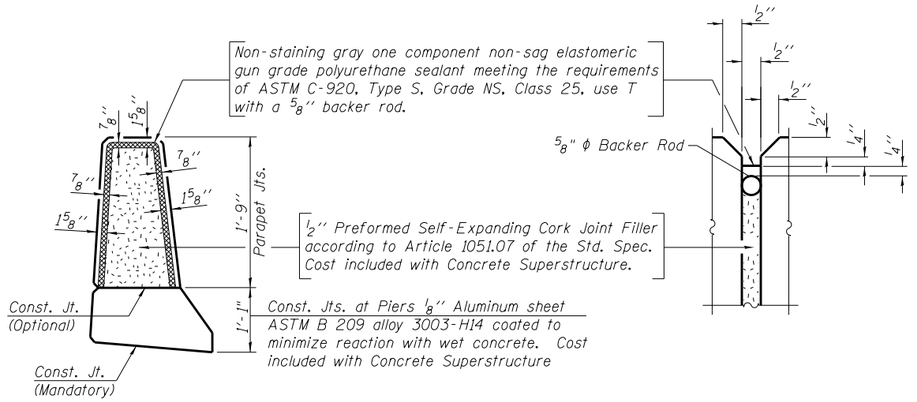
BAR $d_4(E)$



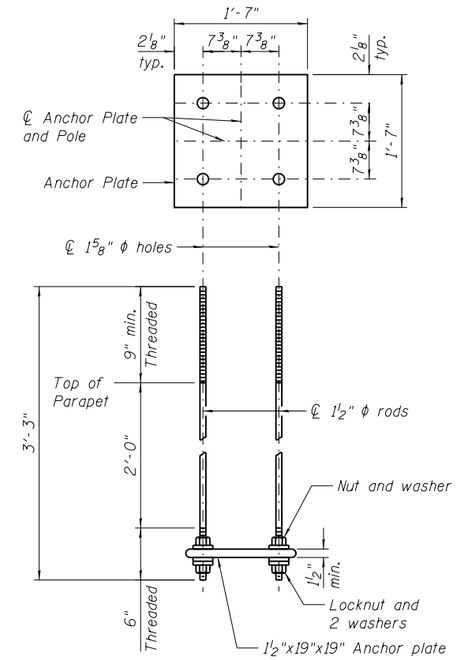
BARS $a_3(E)$ and $a_4(E)$



BAR $d_6(E)$



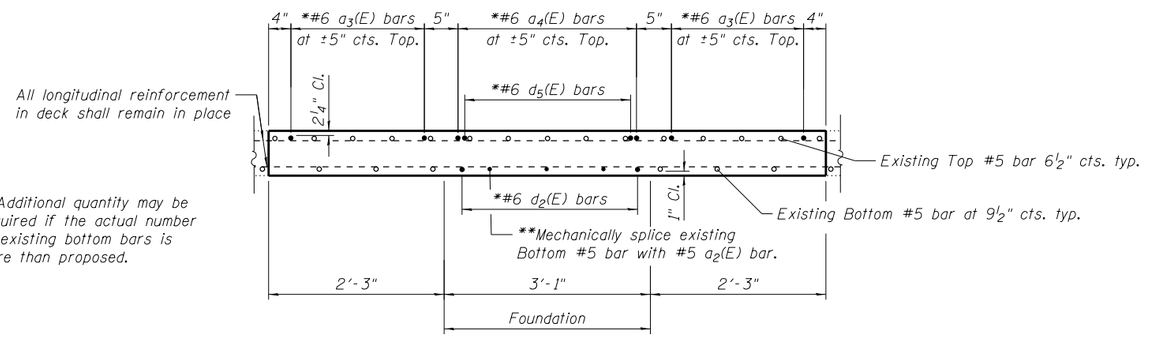
PARAPET JOINT DETAILS



ANCHOR ROD DETAIL

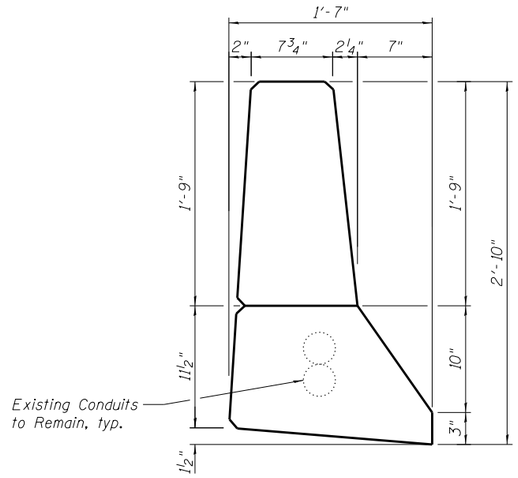
Entire assembly hot dipped galvanized

*Adjust bar locations as required to miss existing reinforcement.



**Additional quantity may be required if the actual number of existing bottom bars is more than proposed.

PROPOSED DECK ELEVATION



PARAPET DETAILS

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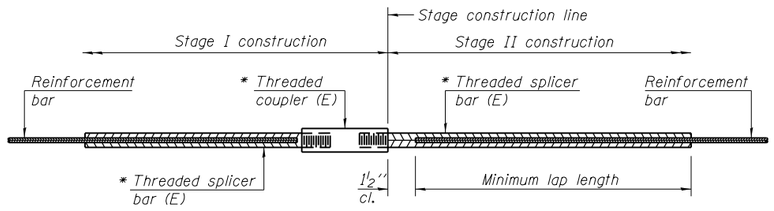
	PLOT SCALE =	DRAWN - AJF	REVISED -	
	PLOT DATE = 05/02/2014	CHECKED - LMS	REVISED -	

FOUNDATION DETAILS 2
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S136 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	154
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			



STANDARD BAR SPLICER ASSEMBLY

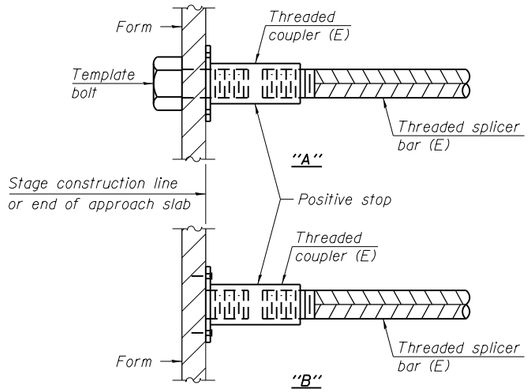
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Class C
Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

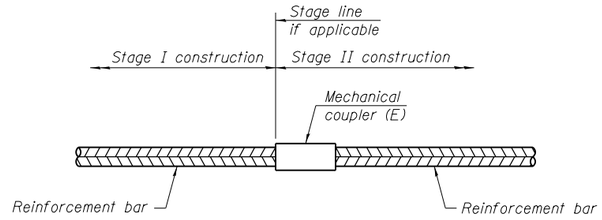
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



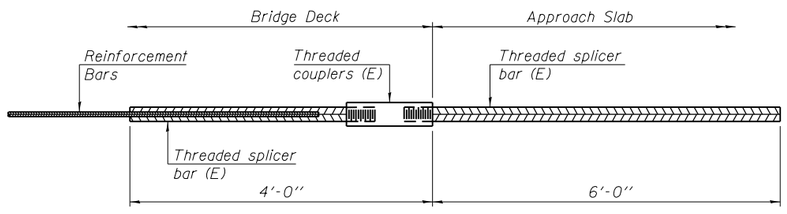
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



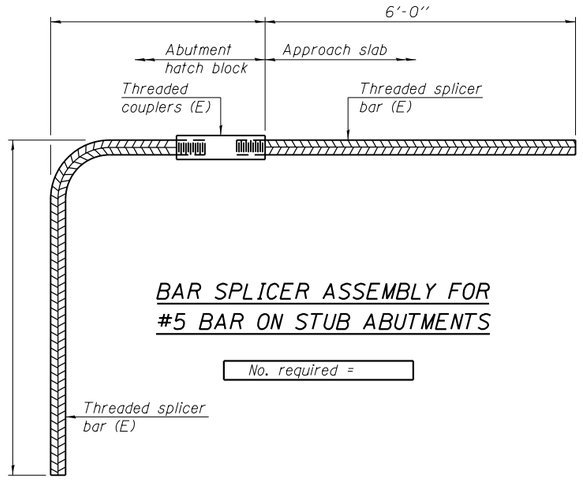
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Foundation	#5	6



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

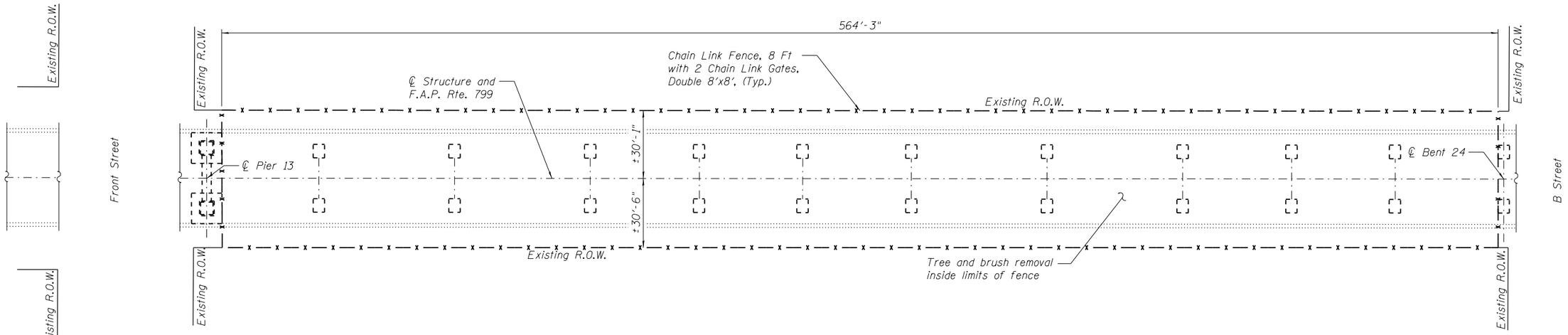
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 1-27-12

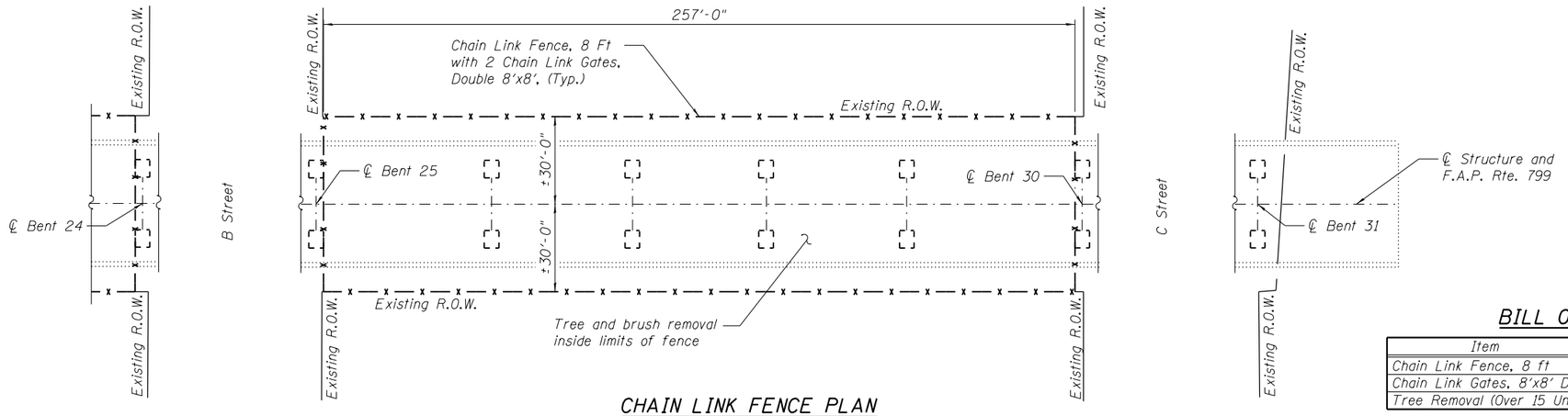
LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - RPW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER DETAILS S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
	FILE NAME =	CHECKED - LMS	REVISED -		
	PLOT SCALE =	DRAWN - AJF	REVISED -		
	PLOT DATE = 05/02/2014	CHECKED - LMS	REVISED -		SHEET NO. S137 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	155
		CONTRACT NO. 76B03		
	ILLINOIS	FED. AID PROJECT		



CHAIN LINK FENCE PLAN

(Front Street to B Street)



CHAIN LINK FENCE PLAN

(B Street to C Street)

BILL OF MATERIAL

Item	Unit	Total
Chain Link Fence, 8 ft	Foot	1884
Chain Link Gates, 8'x8' Double	Each	4
Tree Removal (Over 15 Units Diameter)	Unit	300

Notes:

Provide Chain Link Fence with two 8'x8' Double Chain Link Gates, between Front Street & B Street and between B Street & C Street. Gates shall be located near opposite ends of fenced areas.

Remove trees and brush inside the limits of Chain Link Fence. Cost included with pay item Tree Removal (Over 15 Units Diameter).

See Highway Standard 664001-02 for details about Chain Link Fence.

Contractor is responsible for locating any utilities prior to placing the fence.

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Consulting Engineers
Springfield, Illinois

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROW IMPROVEMENTS
S.N. 082-6001 MLK BRIDGE OVER MISSISSIPPI RIVER
SHEET NO. S138 OF S138 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
799	1BR, DRS-2	ST. CLAIR	156	156
		CONTRACT NO. 76B03		
	ILLINOIS FED. AID PROJECT			