

64D58

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
F.A.P. 17	6000 M-1	CARROLL	20	1	15 SHEETS
FED. AID DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED  
BRIDGE REPAIRS**

**STRUCTURE NUMBER 008-6000  
F.A.P. ROUTE 17 (US 52/L 64)  
SECTION 6000 M-1  
CARROLL COUNTY (IL.)  
JACKSON COUNTY (IA.)**

**C-92-123-07**

INDEX OF SHEETS

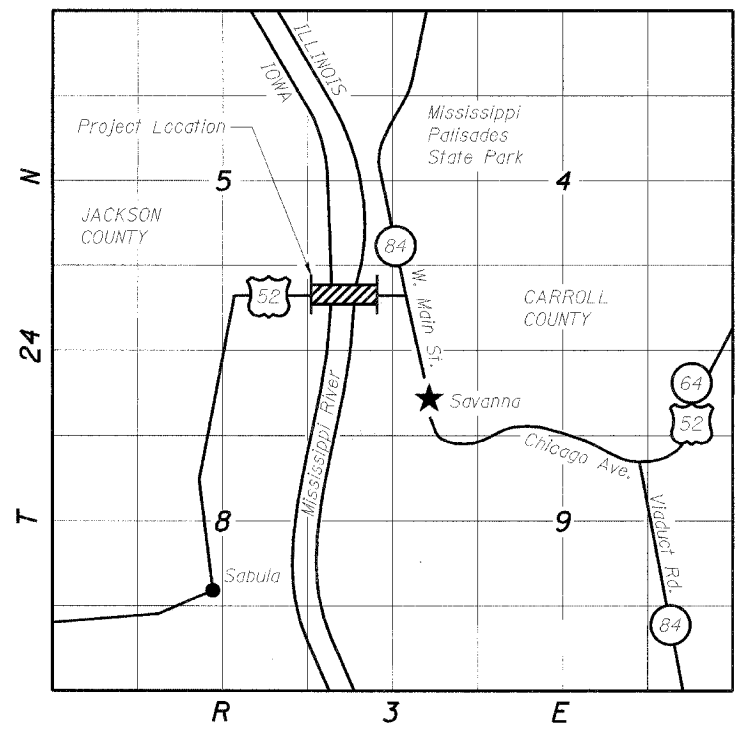
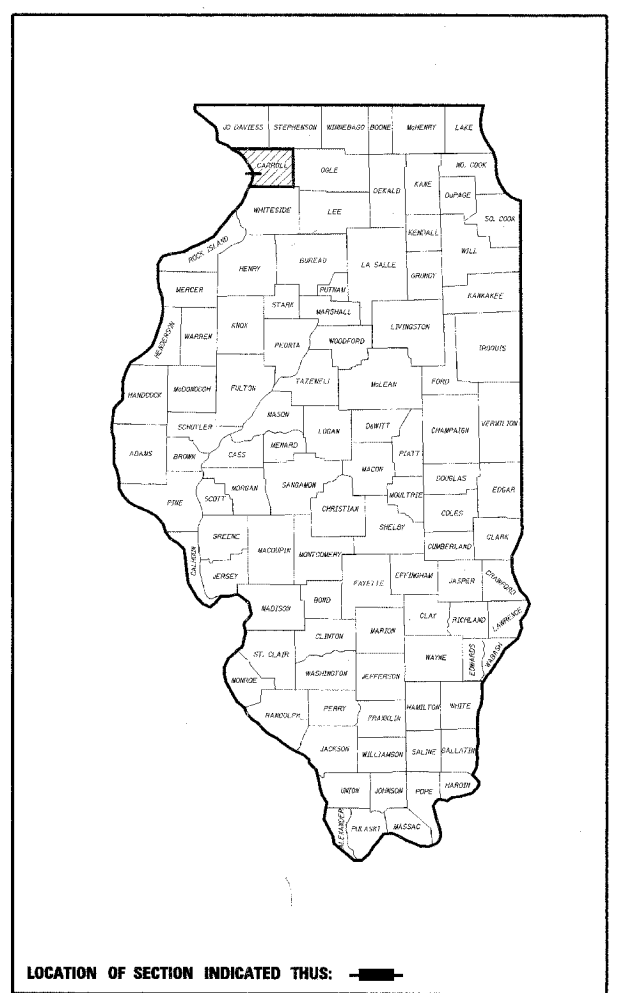
- | Sheet | Title  |
|-------|--|
| 1     | Cover Sheet  |
| 2     | Summary of Quantities                                |
| 3     | General Notes  |
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STATE STANDARDS

- | Standard  | Title   |
|-----------|---|
| 701001-01 | Off-Rd Operations, 2L, 2W, More Than 4.5 m (15') Away                           |
| 701006-02 | Off-Rd Operations, 2L, 2W, 4.5 m (15') to 600 mm (24") From Pavement Edge       |
| 701201-02 | Lane Closure, 2L, 2W, Day Only, For Speeds $\geq$ 45 mph                        |
| 701206-01 | Lane Closure, 2L, 2W, Night Only, For Speeds $\geq$ 45 mph                      |
| 701301-02 | Lane Closure, 2L, 2W, Short Time Operations                                     |
| 701306-01 | Lane Closure, 2L, 2W, Slow Moving Operations Day Only, For Speeds $\geq$ 45 mph |
| 701901    | Traffic Control Devices   |

DISTRICT STANDARDS

- | No.  | Title                            |
|------|----------------------------------|
| 40.1 | Traffic Control for Road Closure |



LOCATION MAP



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 12/17 2007

*George F. Ryan*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
February 1, 2008

*Eric E. Haran*  
ENGINEER OF DESIGN AND ENVIRONMENT  
February 1, 2008

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OF THE STATE OF ILLINOIS**

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

**CONTRACT NO. 64D58**



*Philip J. Lane*  
Philip J. Lane, Illinois Structural Engineer  
No. 4084, Expires 11/30/08

12/4/07 Date

**STS CONSULTANTS**  
111 NE Jefferson Ave.  
Peoria, Illinois 61602  
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IL Design Firm Reg. No. 184-001518

# SUMMARY OF QUANTITIES

50% Iowa / 50% Illinois  
Maintenance  
100% Rural SFTY-2A

paycode	description	units	total quantity
20400800	FURNISHED EXCAVATION	CU YD	55
28100127	STONE RIPRAP, CLASS B4	SQ YD	395
28200200	FILTER FABRIC	SQ YD	395
50300300	PROTECTIVE COAT	SQ YD	212
50102400	CONCRETE REMOVAL	CU YD	66.7
50104710	REMOVAL OF EXISTING BEARINGS	EACH	76
50157300	PROTECTIVE SHIELD	SQ YD	233
50300255	CONCRETE SUPERSTRUCTURE	CU YD	66.7
50501005	JACK AND REPOSITION BEARINGS	EACH	1
50501105	OPEN STEEL FLOOR	SQ FT	16,619
50600300	CLEANING AND PAINTING STEEL BRIDGE	L SUM	1
50606400	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	9,980
52000110	PREFORMED JOINT STRIP SEAL	FOOT	396
52100520	ANCHOR BOLTS, 1"	EACH	1
58700300	CONCRETE SEALER	SQ FT	1,539
59000200	EPOXY CRACK INJECTION	FOOT	211
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	9
67100100	MOBILIZATION	L SUM	1
X0325925	REPAIR OF EXISTING OPEN STEEL FLOOR WELDS	EACH	18
X0325926	FURNISHING AND INSTALLING FABRIC BEARINGS	EACH	76
X0325927	REMOVE AND REPLACE NONSHRINK GROUT BEARING PEDESTALS	EACH	12
X0325748	ACRYLIC COATING	SQ YD	221
X0325928	FIBER REINFORCED PROTECTION	SQ FT	1,989
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100900	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316(SPECIAL)	EACH	4
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	1,500
70300500	PAVEMENT MARKING TAPE, TYPE III	FOOT	14,500
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	6,000
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	5,900
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1100
X0325303	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	266
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	60
X7013015	TRAFFIC CONTROL FOR ROAD CLOSURE	L SUM	1
Z0031200	JACKING AND CRIBBING	EACH	4
Z0032300	JACKING EXISTING SUPERSTRUCTURE	L SUM	1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1

\* SPECIALTY ITEM

FILE NAME = D:\BR\CADD plans\Carroll County\0086000	USER NAME = linkdj	DESIGNED - ---	REVISED - ---	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0086000-rehab.dgn	DRAWN - ---	REVISED - ---			.17	6000M-1	CARBOLL	20	2
	PLOT SCALE = 50.0000' / IN.	CHECKED - ---	REVISED - ---			SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____		FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT		
	PLOT DATE = Wed Dec 12 10:33:47 2007	DATE - ---	REVISED - ---			CONTRACT NO. 64058				

# GENERAL NOTES

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 4 or 2A shall be used, except in front of properties where the grass will be mowed, then use Seeding, Class 1. Class 2A shall be used on front slopes and ditch bottoms. Class 4 shall be used behind Type A gutter, on all backslopes and areas behind the backslope, and beyond the toe of front slope on fill sections without ditches.

Install a "TO ACTIVATE SIGNAL" sign for the traffic signal detector loops. The detail of this sign is included in the plans. This work will be included in the cost of TRAFFIC CONTROL AND PROTECTION STANDARD 701316.

A Nationwide 404 Permit has been issued for this project and the conditions of that permit must be adhered to.

This structure will retain the same number 008-6000.

The contractor shall submit four copies of the required shop drawings for review and approval to the Bureau of Bridges and Structures, 2300 South Dirksen Parkway, Springfield, IL 62764. After approval of initial submittal, the contractor shall submit one set of shop drawings to Dave Lippert, Engineer of Materials, 126 East Ash Street, Springfield, IL 62706, and eight (8) sets of shop drawings to be distributed to:

- District 2 District Engineer (1)
- Fabricator (1)
- Contractor (2)
- Resident Engineer (2)
- District 2 Bureau of Materials (2)

At bridge expansion joints, if temporary expansion joint bulkheads are attached to adjacent deck slabs or abutments for support, the Contractor shall cut the attachments as soon as the concrete has set to prevent joint damage due to horizontal contraction or expansion.

The Contractor shall sandblast the top of the beams upon removal of the bridge deck. This work will be included in the cost of removing the bridge deck.

Pavement Marking shall be done according to Standard 780001, except as follows:

1. All words, such as ONLY, shall be 2.4 m (8 feet) high.
2. All non-freeway arrows shall be the large size.
3. The distance between yellow no-passing lines shall be 200 mm (8"), not 180 mm (7") as shown in the detail of Typical Lane and Edge Lines.

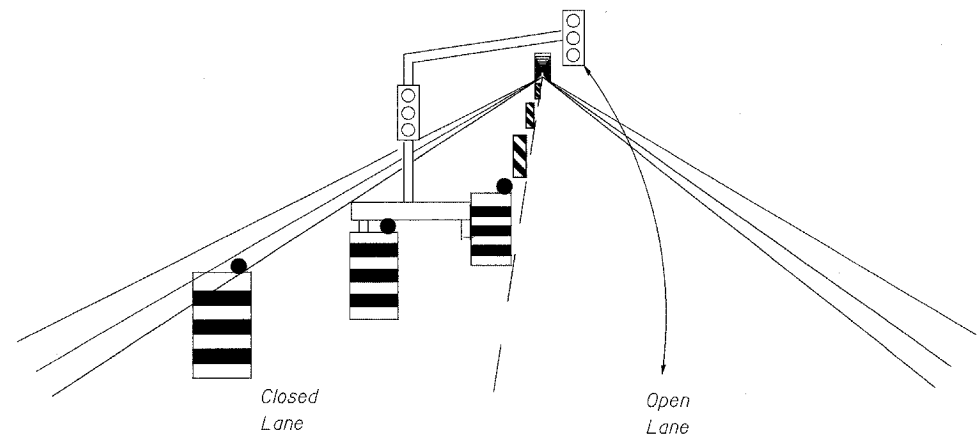
The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

Mediacom  
Gallatin River  
Jo-Carroll Energy  
City of Savanna

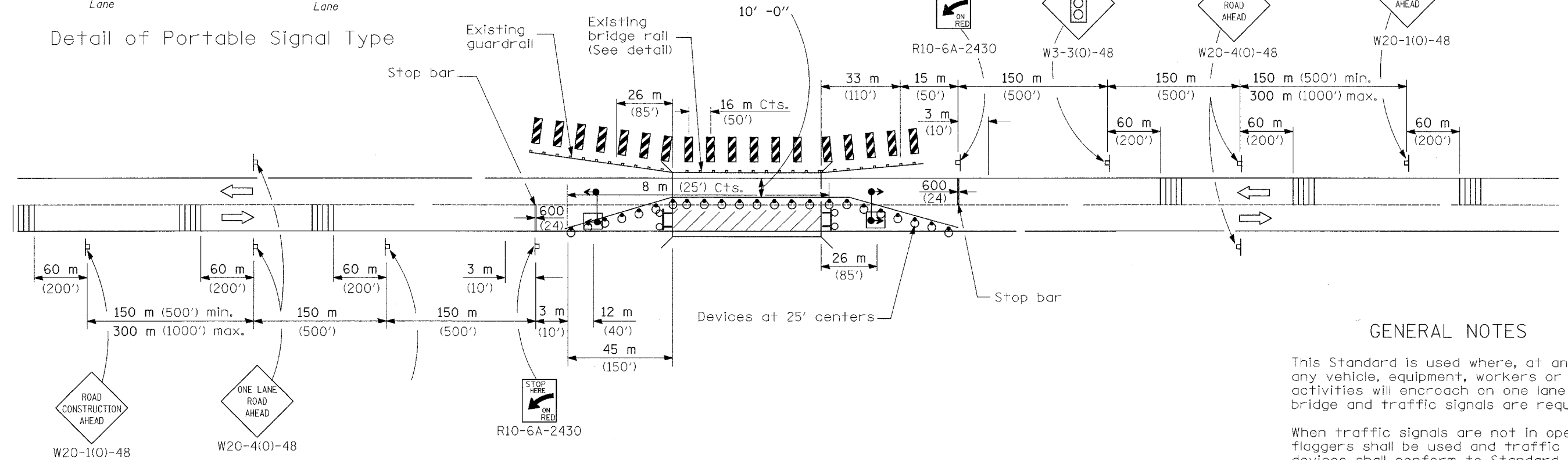
Following are the known utilities located within the project limits or immediately adjacent to the project construction limits which are not members of JULIE and should be notified individually by the contractor:

IDOT  
Mr. Kyle Lorenz 815/284-5469

FILE NAME =	USER NAME = jinkdj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT SCALE = 48.8349' / IN.	CHECKED -	REVISED -			CONTRACT NO. 64058					
	PLOT DATE = Wed Dec 12 10:13:58 2007	DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
						SCALE: _____	SHEET NO. ____ OF ____ SHEETS	STA. _____ TO STA. _____			



Detail of Portable Signal Type



For contract construction projects

GENERAL NOTES

This Standard is used where, at any time any vehicle, equipment, workers or their activities will encroach on one lane of a bridge and traffic signals are required.

When traffic signals are not in operation, flaggers shall be used and traffic control devices shall conform to Standard 701201 or 701206.

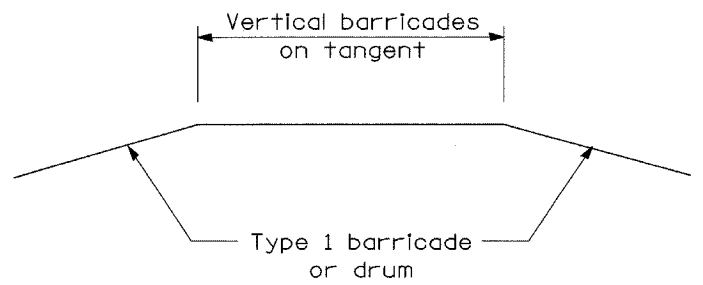
Bi-directional lights shall be used at night along the centerline where the work area is separated from the traveled lane using barricades or drums. Monodirectional lights shall be used at night on all other barricades or drums.

Existing or temporary pavement marking shall be on both sides of the open lane from stop bar to stop bar.

All dimensions are in millimeters (Inches) unless otherwise shown.

SYMBOLS

- Work area
- Sign
- Barricade, or drum with steady burning lights
- Type III barricade with flashing lights
- Traffic signal
- Temporary rumble strip (when specified)
- Induction loop detector
- Vertical panel (back to back)



LANE CLOSURE, 2L, 2W,  
BRIDGE REPAIR,  
FOR SPEEDS  $\geq$  45 MPH  
(Sheet 1 of 2)

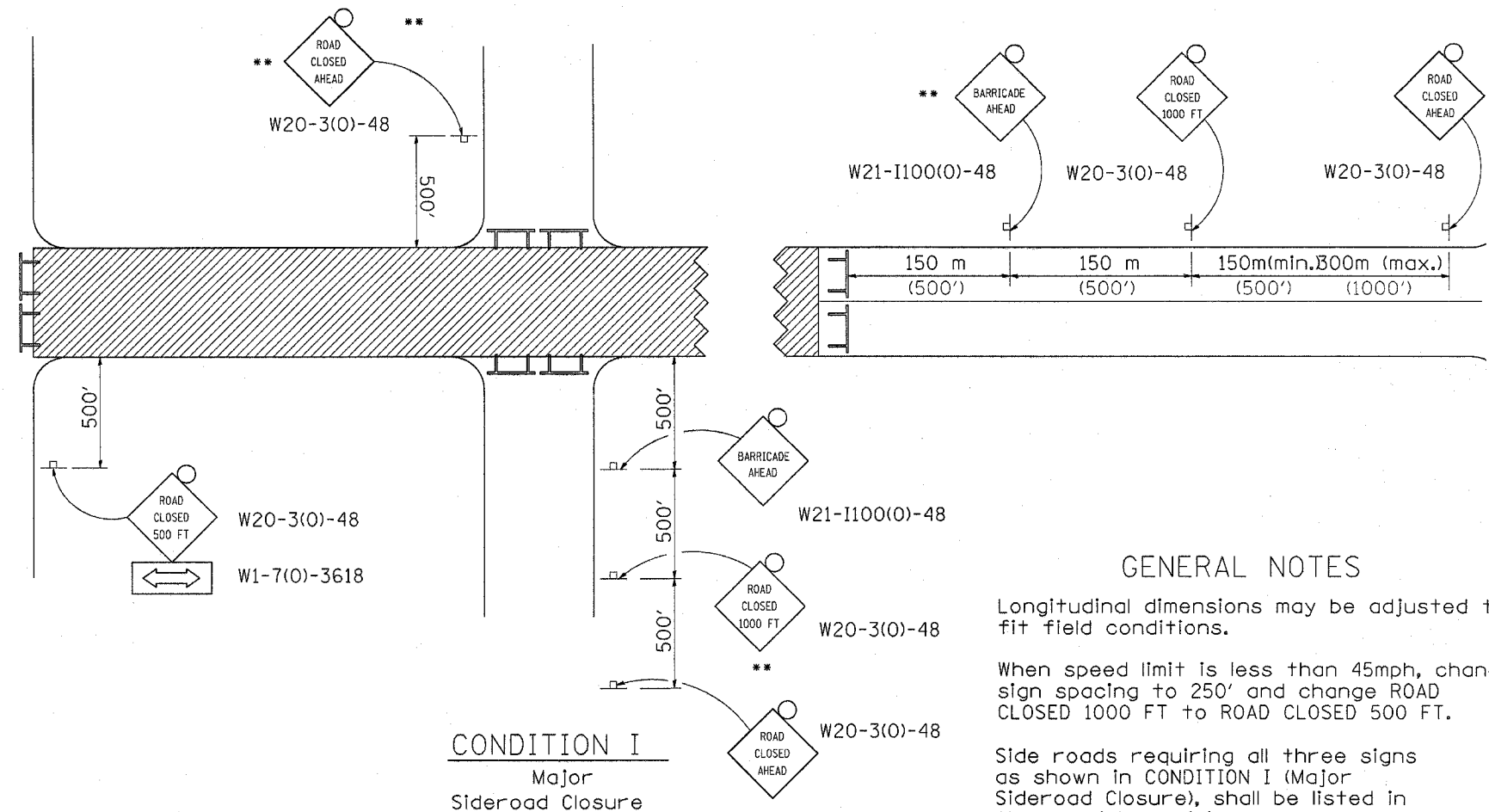
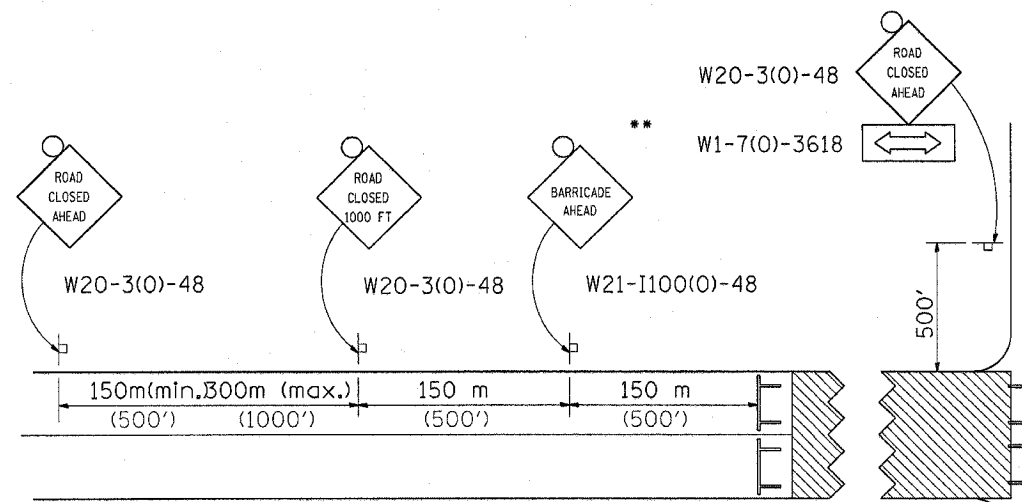
STANDARD 701316 SPECIAL

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE: _____ SHEET NO. ____ OF ____ SHEETS STA. _____ TO STA. _____	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = Wed Dec 12 10:45:39 2007		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

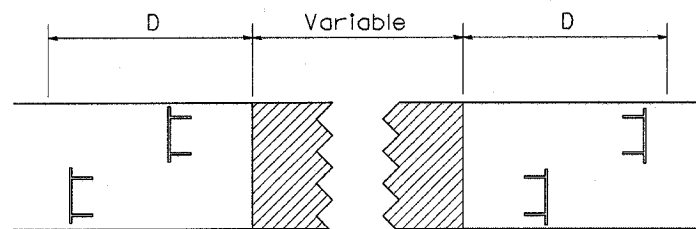
# TRAFFIC CONTROL FOR ROAD CLOSURE

## CONDITION II

Minor Sideroad Closure

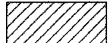




### ROAD CLOSED TO THRU TRAFFIC BARRICADE SET UP



Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed To All Thru Traffic" detail on Highway Standard 701901. If the distance "D" exceeds 600 m (2000') an additional set of barricades and R11-4-4830 shall be placed at each end of the work area.

### SYMBOLS

-  Work area
-  Type III Barricade with Flashers
-  Sign with flashing light

### GENERAL NOTES

Longitudinal dimensions may be adjusted to fit field conditions.  
When speed limit is less than 45mph, change sign spacing to 250' and change ROAD CLOSED 1000 FT to ROAD CLOSED 500 FT.

Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision.

\*\* Where local access is to be maintained, barricades are to be set up as shown in Road Closed to thru traffic. Type III Barricades and R11-2-4830 signs shall be as shown in "Road Closed To All Traffic" detail on Highway Standard 701901.

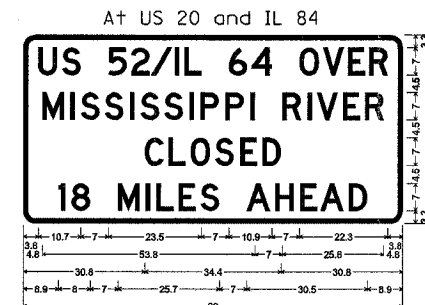
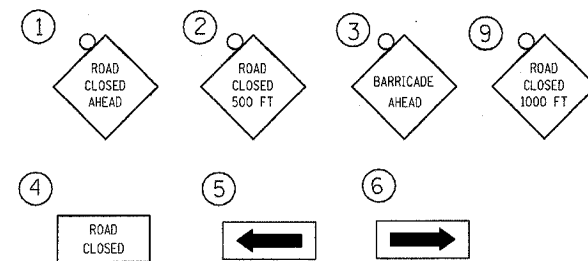
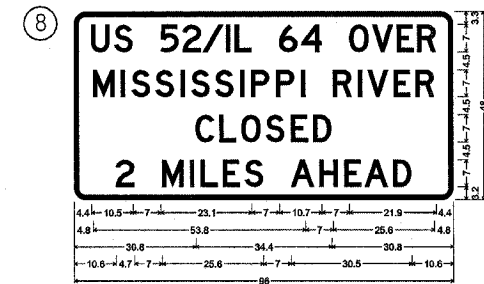
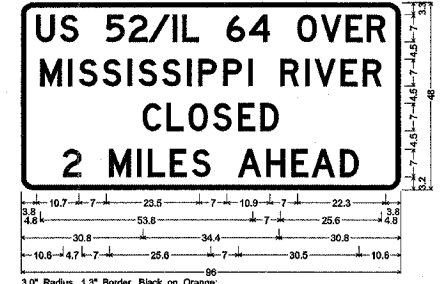
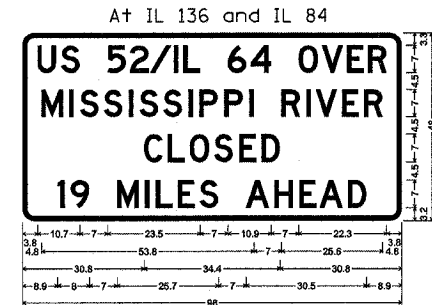
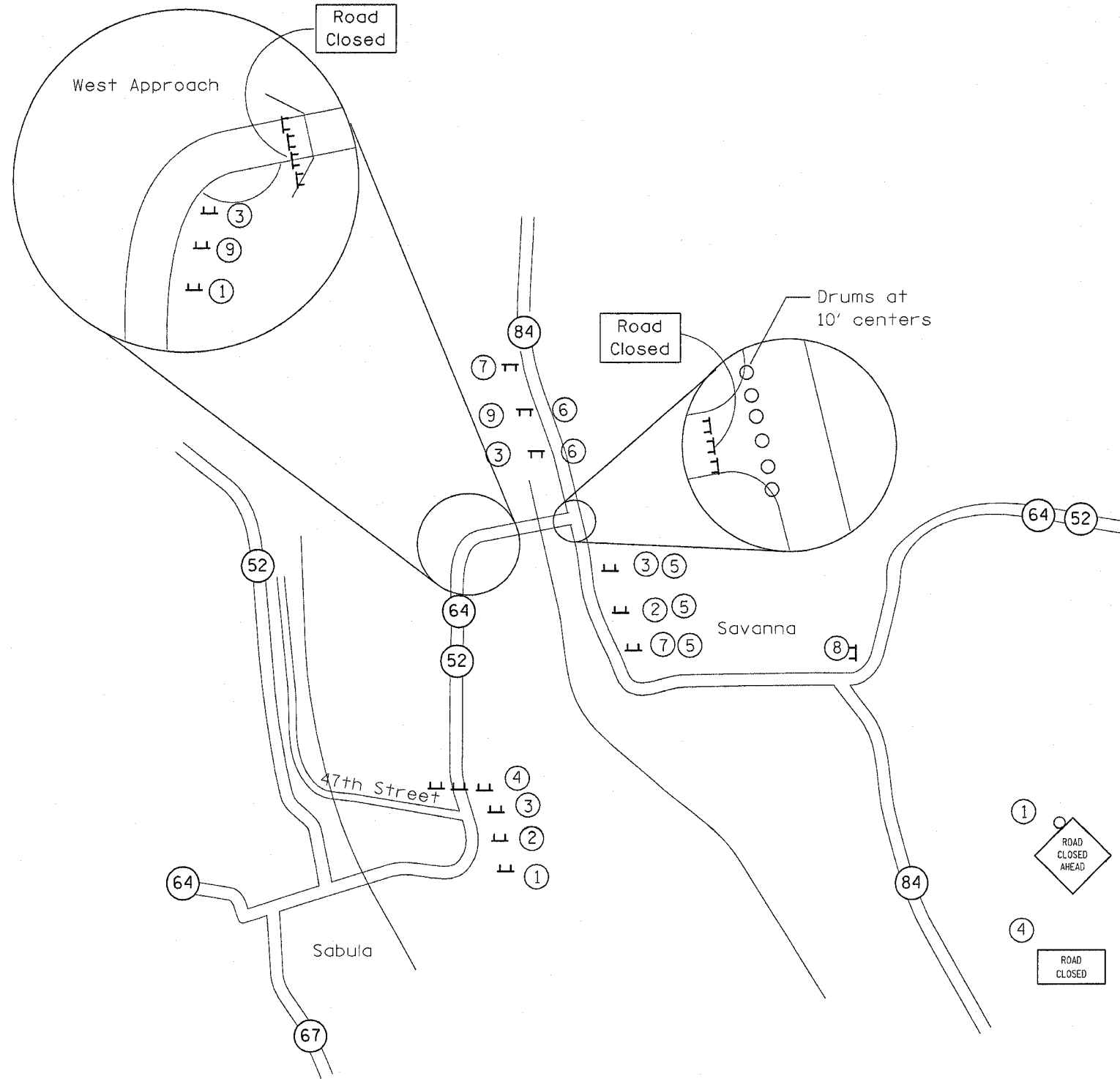
All dimensions are in millimeters (inches) unless otherwise shown.

### TYPICAL APPLICATION FOR ROAD CLOSURE

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED - 10-20-04	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>REGION 2 / DISTRICT 2 STANDARD</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 48.0349' / IN.		CHECKED -	REVISED -				CONTRACT NO. 64058				
PLOT DATE = Wed Dec 12 10:14:52 2007		DATE -	REVISED -				FED. ROAD DIST. NO. / ILLINOIS FED. AID PROJECT				

# TRAFFIC CONTROL FOR ROAD CLOSURE

## Detail of Closure Signage

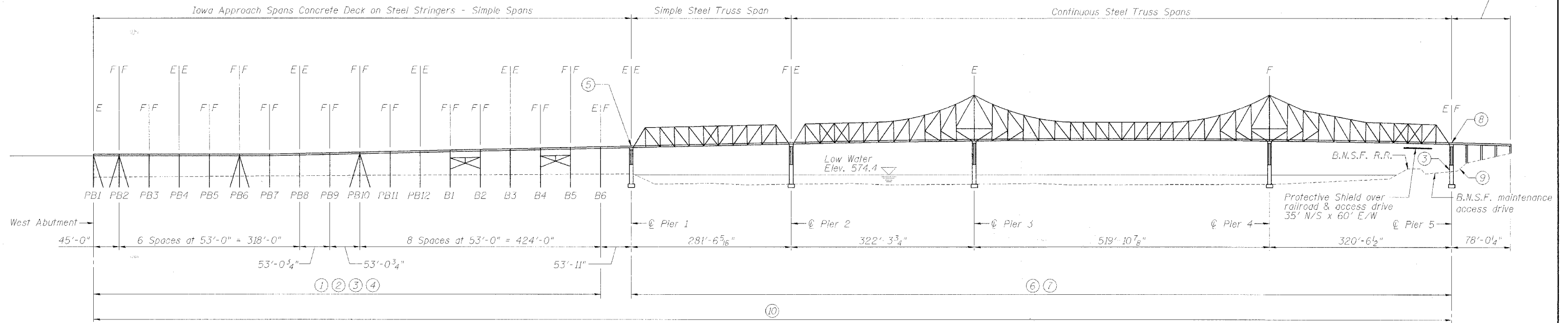


FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>Detour Signage</b>	F.A.P. RTE. =	SECTION =	COUNTY =	TOTAL SHEETS =	
D:\BR\CADD\plans\Carroll County\0006000\0006000-rehab.dgn	0006000-rehab.dgn	DRAWN -	REVISED -			17-	6000M-1	CARBOLL	20	6
PLOT SCALE = 46.0349' / IN.	CHECKED -	REVISED -	REVISED -			CONTRACT NO. 64058				
PLOT DATE = Wed Dec 12 10:01:05 2007	DATE -	REVISED -	REVISED -			FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 2
F.A.P. 17	6000 M-1	CARROLL	20	7	15 SHEETS
FED. ROAD DIST. NO. 7	ALPHAS	FED. AID PROJECT-			

Illinois Approach Spans  
Continuous, Cast-in-Place  
Concrete Slab  
(4 variable length spans)



**ELEVATION**  
(Looking Upstream, North)

**SCOPE OF WORK SUMMARY**

See also Special Provisions & Plan Details.

- ① Replace stringer bearings as scheduled, see Sht. 5 & 6 of 15.
- ② Remove & replace deck and parapet joint seals, see Sht. 7, 8, & 9 of 15.
- ③ Repair concrete substructure elements as scheduled, see Sht. 12, 13, & 14 of 15.
- ④ Clean & paint existing steel as scheduled, see Sht. 7, 8, & 12 of 15, and Note 4 this sheet.
- ⑤ Reset over-rotated north bearing of Iowa approach span at Pier 1. See Sht. 4 of 15.
- ⑥ Remove & replace existing steel grid deck as scheduled, and repair broken deck welds as scheduled, see Sht. 10 of 15.
- ⑦ Clean & paint existing bearings and grease bearing pins, typ. Pier 1 thru Pier 5, included in "Cleaning & Painting".
- ⑧ Add supplemental anchor bolt for steel truss, north bearing at Pier 5, see Sht. 4 of 15.
- ⑨ Remove existing timber retaining wall, place slope fill and stone riprap, see Sht. 15 of 15.
- ⑩ Clean bearing seats and apply concrete sealer as scheduled, see Sht. 12 of 15. (excludes PB4 and B3 which receive fiber reinforcement wrap.)

**NOTES**

- 1.) Existing Structure No. 008-6000 was originally built in 1932 and was rehabilitated in 1985 by the Iowa Department of Transportation as Project No. BHF-52-1(40)-2L-49 and was repaired in 1999 by the Illinois Department of Transportation Section 6000 M.
- 2.) The bridge carries two lanes of traffic on a 20 ft. clear roadway width.
- 3.) Portions of the proposed work will be performed while the traffic is detoured.
- 4.) The existing 1985 paint system is Organic Zinc, Epoxy and Polyurethane (without any lead base paint). The new paint shall match existing paint system and color(s).

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

**SCOPE OF WORK SUMMARY**  
**F.A.P. RTE. 17 (US 52/IL 64)**  
**OVER MISSISSIPPI RIVER**  
**SECTION 6000 M-1**  
**CARROLL COUNTY (IL)**  
**JACKSON COUNTY (IA)**  
**STRUCTURE NO. 008-6000**

**STS CONSULTANTS**  
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IL Design Firm Reg. No. 184-001518

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
F.A.P. 17	6000 M-1	CARROLL	20	8	15 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

**GENERAL NOTES**

- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.  
  
As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by an individual acceptable to the Engineer. Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas, and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
- Plan dimensions and details relative to existing plans are subject to routine 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 based upon the unit price bid for the work.
- Concrete Sealer shall be applied to the designated areas of the horizontal bearing seats of substructure elements. See Schedule, Sht. 12 of 15.
- The existing structural steel coating may contain lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

**ENVIRONMENTAL COMMITMENTS**

- No in-stream repair work or work from the ground in backwater areas will be permitted for this project. Except as noted herein, the Contractor shall conduct all work over the river or its backwater areas from atop the bridge or from a barge.  
  
The Contractor may erect nets or temporarily anchor a barge beneath the bridge to catch falling material. The Contractor shall remove all catchment measures prior to completion of the project.
- The intentional or accidental deposition of debris or other material into the river or backwater areas will not be permitted. The Contractor shall catch all materials falling from the bridge or retrieve all such fallen materials.  
  
The Contractor will be permitted to drive temporary piling in connection with the Jacking and Cribbing at Pile Bents 4, 8 and 12 to make concrete repairs to the existing piles. The Contractor shall remove all temporary piles prior to completion of the project.
- On the Illinois shore, the Contractor shall be permitted to make the repairs to Pier 5 and to the adjacent proposed riprap Slope wall from ground level provided that such work is not conducted in river flood waters and provided that it is conducted in accordance with the applicable requirements of the adjacent BNSF Railroad.
- No separate payment will be made for compliance with these Environmental Commitment requirements. The costs for compliance with these requirements shall be included in the bid prices for associated items of work.

**TOTAL BILL OF MATERIAL**

PAY CODE	ITEM	UNIT	QUANTITY
20400800	Furnished Excavation	Cu. Yd.	55
28100127	Stone Riprap, Class B4	Sq. Yd.	395
28200200	Filter Fabric	Sq. Yd.	395
50102400	Concrete Removal	Cu. Yd.	66.7
50157300	Protective Shield	Sq. Yd.	233
50300255	Concrete Superstructure	Cu. Yd.	66.7
50300300	Protective Coat	Sq. Yd.	213
50501005	Jack and Reposition Bearings	Each	1
50501105	Open Steel Floor	Sq. Ft.	16,619
	Repair of Existing Open Steel Floor Welds	Each	18
	Furnishing and Installing Fabric Bearings	Each	76
	Remove and Replace Nonshrink Grout Bearing Pedestals	Each	12
	Cleaning and Painting Steel Bridge	L Sum	1
50606400	Containment and Disposal of Lead Paint Cleaning Residues	L Sum	1
50800205	Reinforcement Bars, Epoxy Coated	Pound	9,980
52000110	Preformed Joint Strip Seal	Foot	396
52100520	Anchor Bolts, 1"	Each	1
58700300	Concrete Sealer	Sq. Ft.	1,539
59000200	Epoxy Crack Injection	Foot	211
67000400	Engineer's Field Office, Type A	Cal. Mo.	9
67100100	Mobilization	L Sum	1
70101700	Traffic Control And Protection	L Sum	1
X0325303	Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	266
X0325305	Structural Repair of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq. Ft.	60
	Fiber Reinforcement Protection	Sq. Ft.	1,989
	Acrylic Coating	Sq. Yd.	221
Z0031200	Jacking and Cribbing	Each	4
Z0032300	Jacking Existing Superstructure	L Sum	1
Z0048665	Railroad Protective Liability Insurance	L Sum	1
	Remove Existing Bearings	Each	76

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

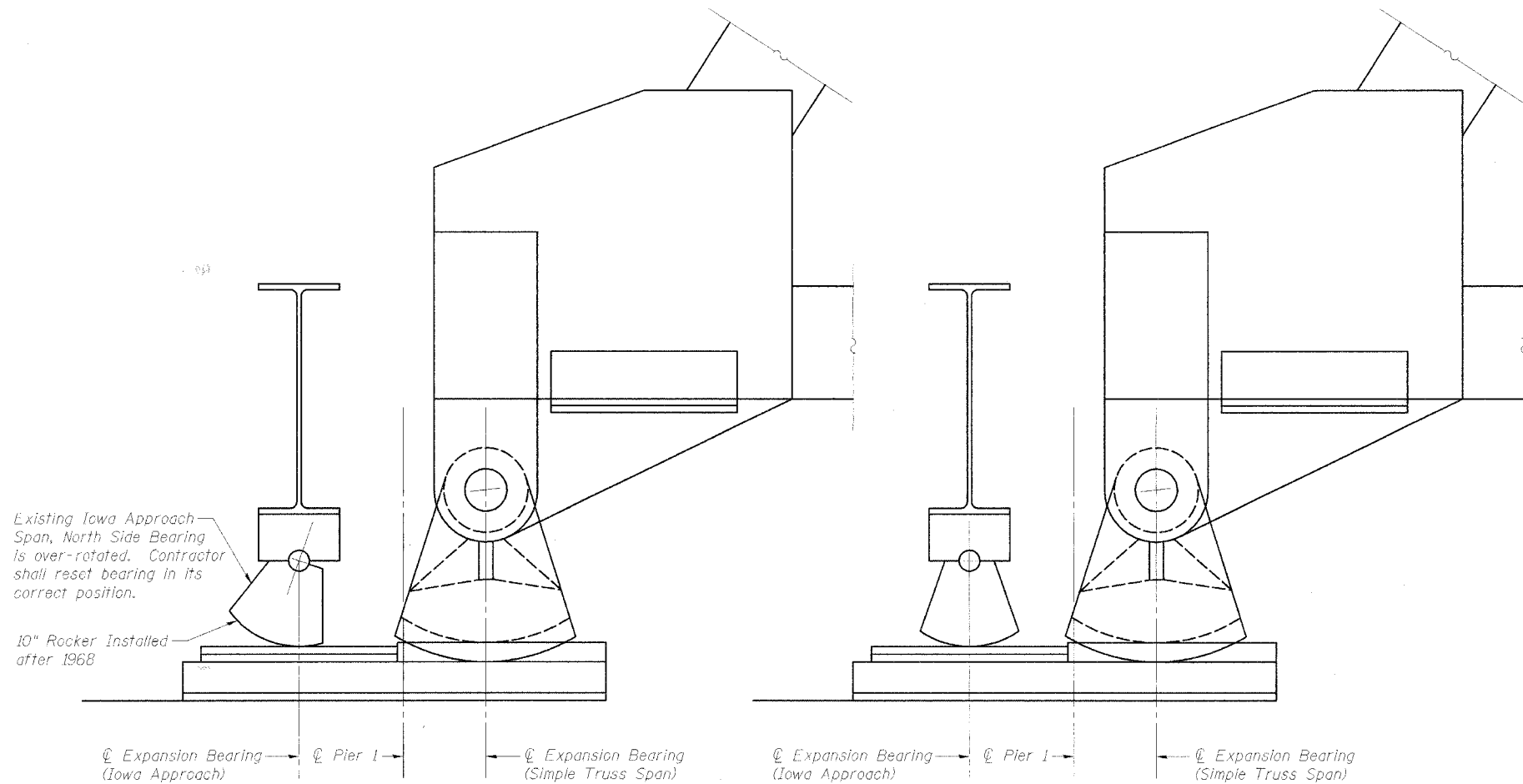
**GENERAL NOTES &  
TOTAL BILL OF MATERIAL  
F.A.P. RTE. 17 (US 52/IL 64)  
OVER MISSISSIPPI RIVER  
SECTION 6000 M-1  
CARROLL COUNTY (IL)  
JACKSON COUNTY (IA)  
STRUCTURE NO. 008-6000**

**STS CONSULTANTS**  
111 NE Jefferson Ave.  
Peoria, Illinois 61602  
Ph(309)676-8464  
FAX(309)676-8445  
IL Design Firm Reg. No. 184-001618



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

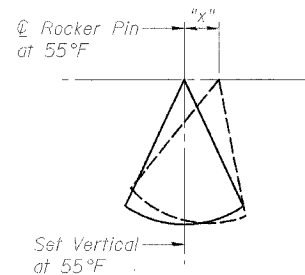
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 17	6000 M-1	CARROLL	20	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		15 SHEETS



**EXISTING BEARING CONDITION AT PIER 1**

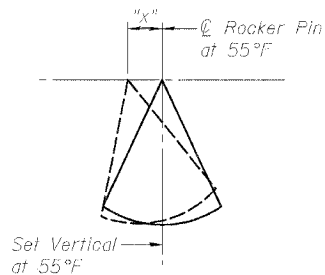
**REPAIRED BEARING CONDITION AT PIER 1**

Rockers shall be vertical at 55°F under full dead load of repaired structure.



**RESETTING OF ROCKER AT PIER 1**

(Iowa Approach)



**RESETTING OF ROCKERS AT PIER 1**

(Simple Truss Span)  
Shown for Information only.

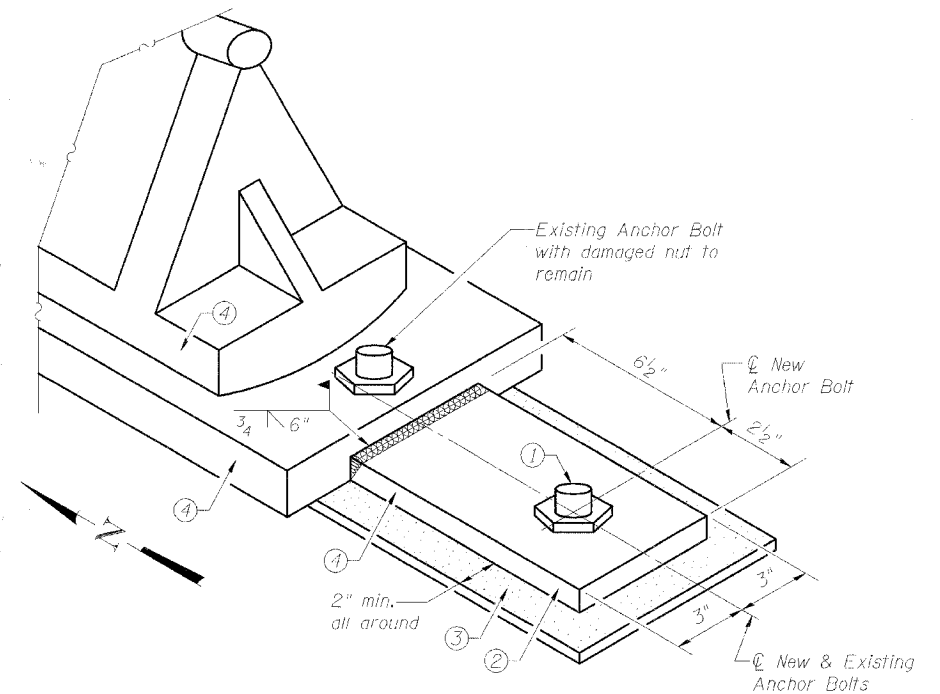
Proposed work includes resetting only the north bearing of Iowa Approach

Rocker	Set at Dimension "x"*			Dead Load Reaction per Bearing
	15°F	55°F	95°F	
Iowa Approach	-3/16"	0"	+3/16"	48 kips
Simple Truss Span	-7/8"	0"	+7/8"	131 kips

Note: Negative Dimension Indicates the bearing should be tilted in a contracted position (toward the span which it supports).

\* from 1985 Repair Plans

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL



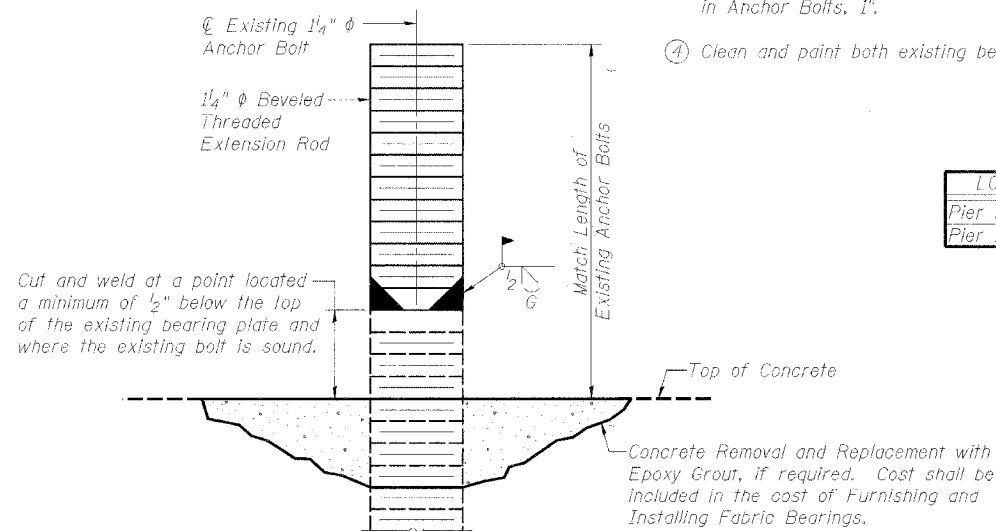
**ANCHOR BOLT DETAIL AT PIER 5**

Repair corroded nut at inside of north, main truss rocker bearing plate. (Add lateral shear tab with anchor bolt.)

- Drill and epoxy 1"  $\phi$  anchor bolt, 12" minimum embedment into existing concrete bearing seat. This work shall be paid for at the contract unit price each for Anchor Bolts, 1".
- Weld 6" x 9" x 3/4" bearing plate shear tab to south side of existing bearing plate; included in Anchor Bolts, 1".
- Set (2) on leveling bed of nonshrink grout min. 10" x 11" in plan; included in Anchor Bolts, 1".
- Clean and paint both existing bearings and new steel; included in Cleaning and Painting.

**BILL OF MATERIAL**

LOCATION	ITEM	UNIT	TOTAL
Pier 5	Anchor Bolts, 1"	Each	1
Pier 1	Jack & Reposition Bearings	Each	1



**ANCHOR BOLT EXTENSION DETAIL**

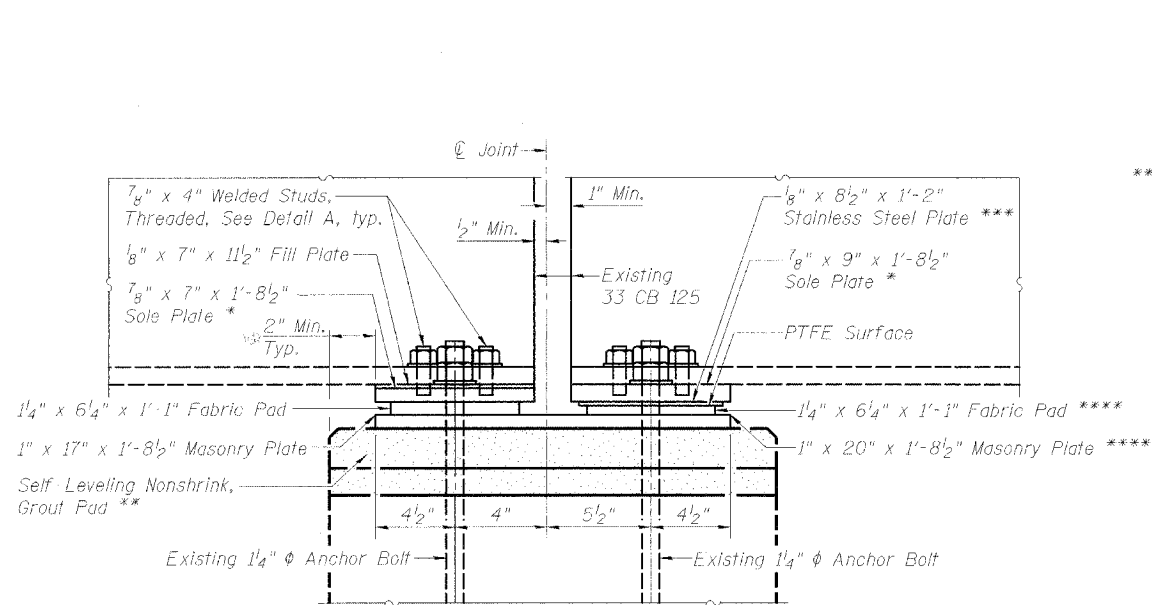
- The furnishing and installation of required Anchor Bolt Extensions shall be included in the cost of Furnishing and Installing Fabric Bearings.
- Use this detail as required to repair existing corroded or bent anchor bolts which inhibit removal and replacement of existing bearings in kind.

**ANCHOR BOLT AND  
ROCKER BEARING DETAILS  
F.A.P. RTE. 17 (US 52/IL 64)  
OVER MISSISSIPPI RIVER  
SECTION 6000 M-1  
CARROLL COUNTY (IL)  
JACKSON COUNTY (IA)  
STRUCTURE NO. 008-6000**

**STS CONSULTANTS**  
111 NE Jefferson Ave.  
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

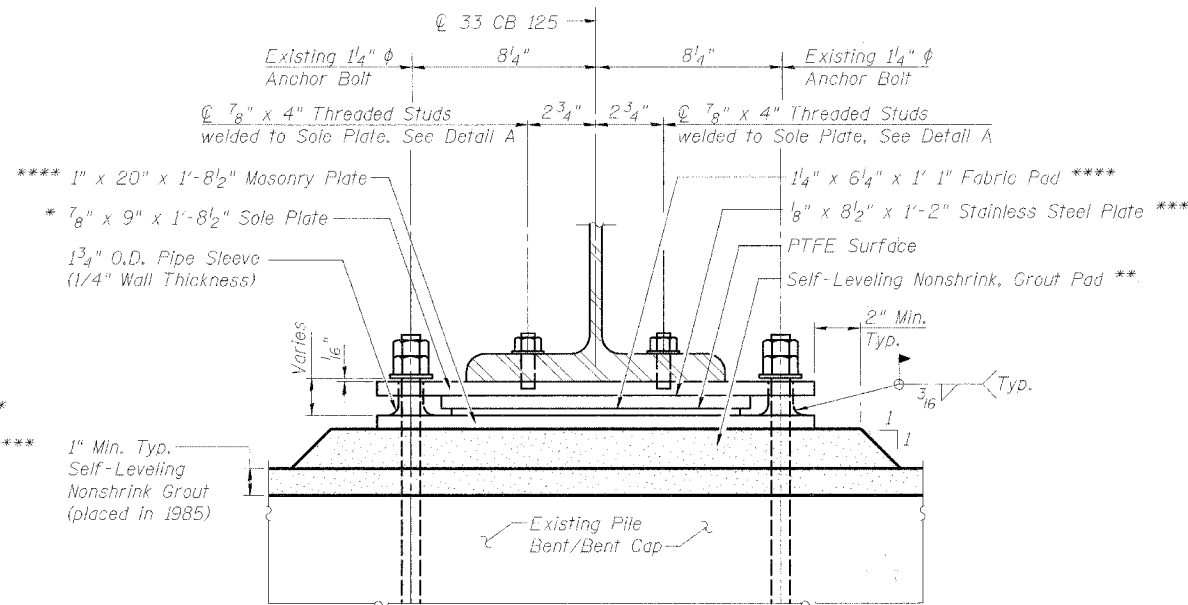
ROUTE NO. F.A.P. 17	SECTION 6000 M-1	COUNTY CARROLL	SHEET NO. 20	SHEET TOTAL 10	SHEET NO. 5 15 SHEETS
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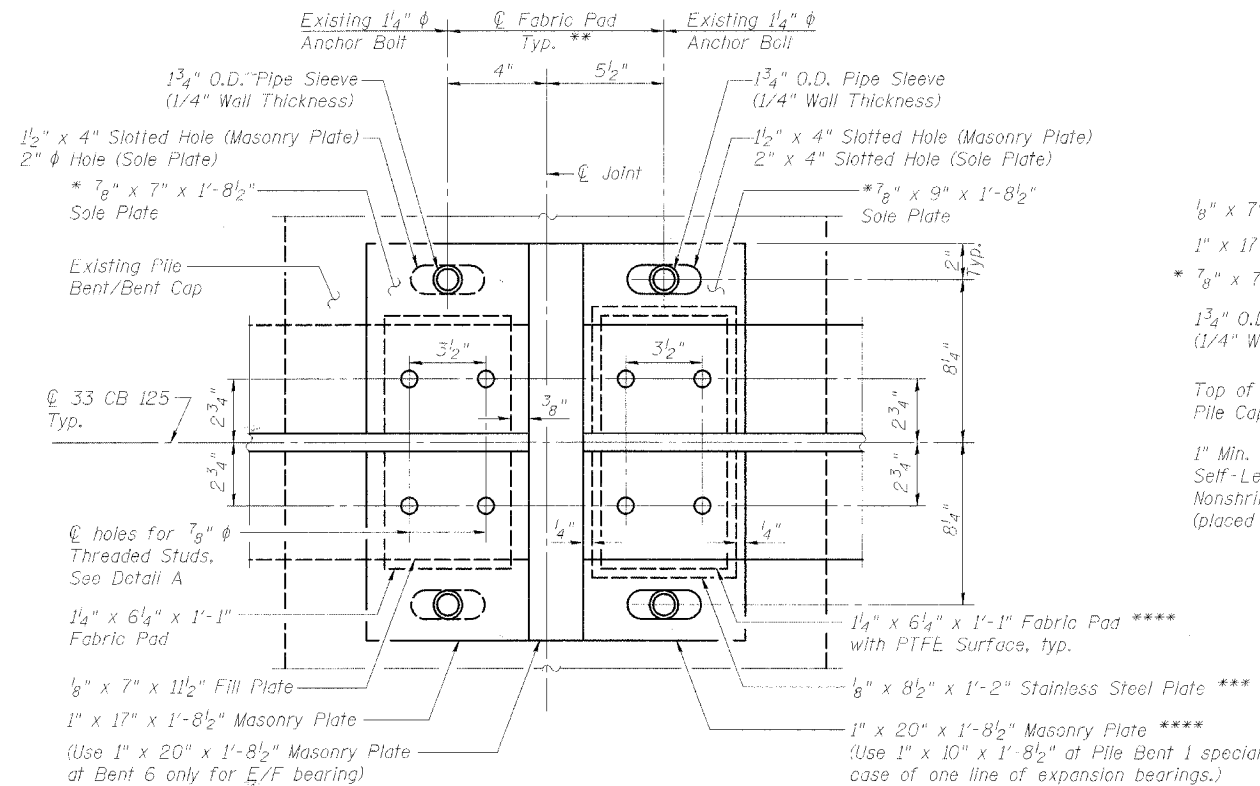
**FIXED BEARING**

**EXPANSION BEARING**

**SIDE ELEVATION**



**FRONT ELEVATION - EXPANSION BEARING**

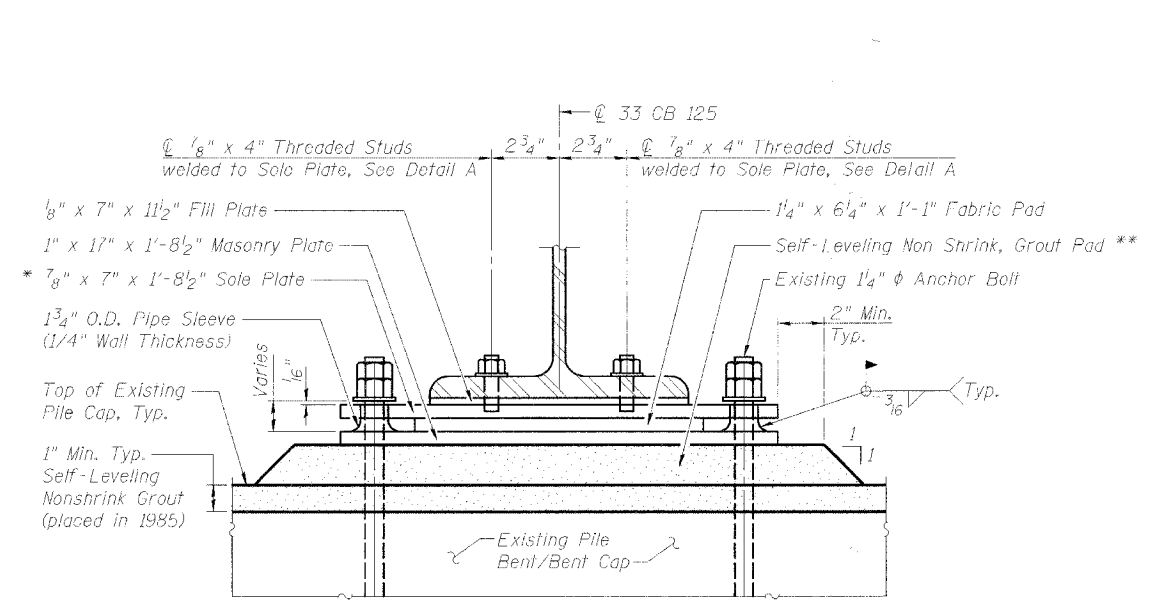


**FIXED BEARING**

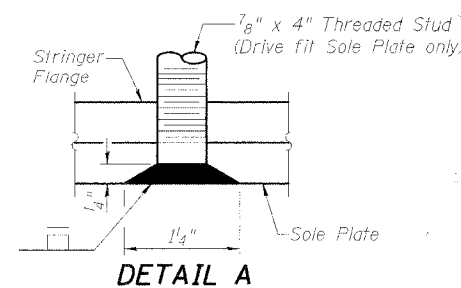
**EXPANSION BEARING**

**PLAN**

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL



**FRONT ELEVATION - FIXED BEARING**



**DETAIL A**

**STRINGER BEARING REPAIRS**

See Schedule, Sht. 7 of 15.

1. Jack superstructure and remove existing bearings as noted. Loosen nuts on bearings at far ends of stringer to prevent bending of bearing bolts and studs, and jack far ends as needed.
2. As directed by the Engineer, where necessary, remove unsound concrete from bearing area to a maximum depth of four inches below top of pile cap.
3. As directed by the Engineer, where necessary, using self leveling nonshrink grout, repair bearing seats to elevations of bottom of masonry plates.
4. Place fixed bearing unit or expansion bearing unit on bearing area.
5. Replace existing bearings in kind as scheduled. Reset stringer on new bearings and fasten washers and nuts to anchor bolts and welded studs. Repair damaged anchor bolts as necessary using detail on Sht. 4 of 15.
6. 2" min. nonshrink grout beyond all edges of Masonry Plate.
7. Minimum dimension from edge of Masonry Plate to face of pile/bent cap shall be 2 inches unless approved by the Engineer.

**NOTES**

- \* See Sht. 6 of 15 for Sole Plate Thickness table and Stringer Dimension table.
- \*\* As directed by the Engineer, where necessary, remove and replace existing pile bent or bent cap bearing seats with nonshrink grout (min. depth 1") to ensure uniform bearing area when replacing bearings.
- \*\*\* Bond Stainless Steel Plate to Sole Plate using a high temperature resistant epoxy.
- \*\*\*\* Bond Fabric Pad to Masonry Plate using high temperature resistant epoxy.

**BEARING DETAILS  
F.A.P. RTE. 17 (US 52/IL 64)  
OVER MISSISSIPPI RIVER  
SECTION 6000 M-1  
CARROLL COUNTY (IL)  
JACKSON COUNTY (IA)  
STRUCTURE NO. 008-6000**



**STS CONSULTANTS**  
111 NE Jefferson Ave.  
Peoria, Illinois 61602  
Ph(309)676-8464  
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IL Design Firm Reg. No. 184-001518

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

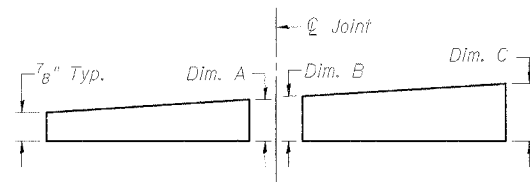
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 17	6000 M-1	CARROLL	20	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6  
15 SHEETS

**\*\* SOLE PLATE THICKNESS TABLE**

Bearing Location	Upstream Exterior Stringer Dimension			Downstream Exterior Stringer Dimension			Replace Bearings (See Schedule Sht. 7 of 15)
	A	B	C	A	B	C	
Pile Bent 1 *	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	X
Pile Bent 2	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	X
Pile Bent 3	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	X
Pile Bent 4	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	X
Pile Bent 5	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	
Pile Bent 6	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	
Pile Bent 7	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	X
Pile Bent 8	7/8"	7/8"	1"	7/8"	7/8"	1"	X
Pile Bent 9	1"	1"	1 1/4"	1"	1"	1 1/4"	
Pile Bent 10	1 1/8"	1 1/4"	1 9/16"	1 1/8"	1 1/4"	1 9/16"	
Pile Bent 11	1 3/16"	1 1/4"	1 9/16"	1 3/16"	1 1/4"	1 9/16"	
Pile Bent 12	1 5/16"	1 3/8"	1 3/4"	1 5/16"	1 3/8"	1 3/4"	X
Bent 1	1 3/16"	1 1/4"	1 9/16"	1 3/16"	1 1/4"	1 9/16"	X
Bent 2	1 3/16"	1 1/4"	1 9/16"	1 3/16"	1 1/4"	1 9/16"	
Bent 3	1 5/16"	1 3/8"	1 3/4"	1 5/16"	1 3/8"	1 3/4"	X
Bent 4	1 3/16"	1 1/4"	1 9/16"	1 3/16"	1 1/4"	1 9/16"	X
Bent 5	1 3/16"	1 1/4"	1 9/16"	1 3/16"	1 1/4"	1 9/16"	
Bent 6	1 5/16"	1 3/8"	1 1 1/16"	1 5/16"	1 3/8"	1 1 1/16"	

Note: Sole Plate Thicknesses shown in above table are those shown in 1985 Repair Plans.

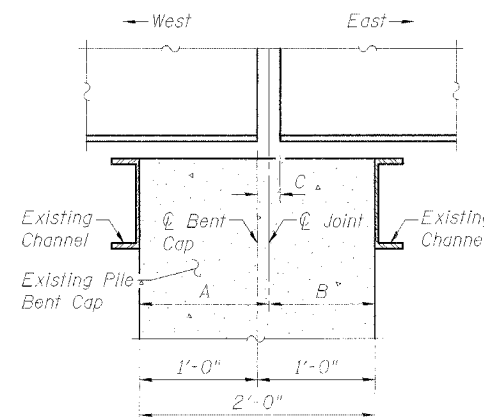


**\*\* SOLE PLATE BEVEL DETAIL**

**STRINGER DIMENSION TABLE**

Bearing Location	Bearing Type	Upstream Exterior Stringer Dimension			Downstream Exterior Stringer Dimension		
		A	B	C	A	B	C
Pile Bent 1 *	-/E	-	-	-	-	-	-
Pile Bent 2	F/F	1'-4 1/8"	7 7/8"	1"	1'-5 1/2"	6 1/2"	1"
Pile Bent 3	F/F	1'-0 7/8"	11 1/8"	1"	11 1/4"	1'-0 3/4"	1"
Pile Bent 4	E/E	11 5/8"	1'-0 3/8"	2"	1'-0 1/2"	11 1/2"	2"
Pile Bent 5	F/F	1'-0 5/8"	11 3/8"	1"	11"	1'-1"	1"
Pile Bent 6	F/F	8 7/16"	1'-3 9/16"	1 5/8"	11 1/4"	1'-0 3/4"	1"
Pile Bent 7	F/F	1'-3"	9"	1"	1'-0 1/2"	11 1/2"	1"
Pile Bent 8	E/E	10 1/8"	1'-1 7/8"	2 1/4"	1'-0"	1'-0"	2"
Pile Bent 9	F/F	11 1/2"	1'-0 1/2"	1"	11 1/2"	1'-0 1/2"	1"
Pile Bent 10	F/F	8"	1'-4"	2"	8 1/4"	1'-3 3/4"	2 1/2"
Pile Bent 11	F/F	1'-0 5/8"	11 3/8"	1 1/4"	1'-2 5/8"	9 3/8"	1 1/4"
Pile Bent 12	E/E	11 3/4"	1'-0 1/4"	2"	9 7/8"	1'-2 1/8"	2 1/4"
Bent 1	F/F	1'-1 1/8"	10 7/8"	1 1/4"	1'-2 1/8"	9 7/8"	1 1/4"
Bent 2	F/F	9 7/8"	1'-2 1/8"	1 1/4"	9 3/4"	1'-2 1/4"	1"
Bent 3	E/E	1'-1 3/4"	10 1/4"	2"	1'-1 3/4"	10 1/4"	2"
Bent 4	F/F	10"	1'-2"	1"	9 3/4"	1'-2 1/4"	1 1/2"
Bent 5	F/F	1'-2 1/4"	9 3/4"	1 1/2"	1'-2 1/4"	9 3/4"	1 1/2"
Bent 6	E/F	10 1/4"	1'-1 3/4"	1 1/2"	10 1/2"	1'-1 1/2"	1 1/2"

Note: All dimensions shown in above table are those shown in 1985 Repair Plans.



**STRINGER DETAIL**

**TYPICAL MAXIMUM BEARING REACTIONS**

53 Ft. Span

ITEM	UNIT	TOTAL
Dead Load	Kip/Stringer	23.7
HS20 Live Load	Kip/Stringer	38.5
Impact	Kip/Stringer	10.8
Total	Kip/Stringer	73.0

- Use these reactions for determination of required jacking forces and for manufacturer's design and fabrication of fabric bearing pads.
- The anticipated maximum height of stringer jacking lift is approximately 8" (= 20" anchor bolt length minus 12" minimum embedment as shown in the 1985 Repair Plans). Contractor shall verify required lifting height for the jacking system design in accordance with the Special Provision for Jacking Existing Superstructure.

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

\* Pile Bent 1 is at West Abutment.

\*\* Bevel Sole Plates as required to match grade. See Table This Sht.

\*\*\* Expansion = "E"; Fixed = "F"

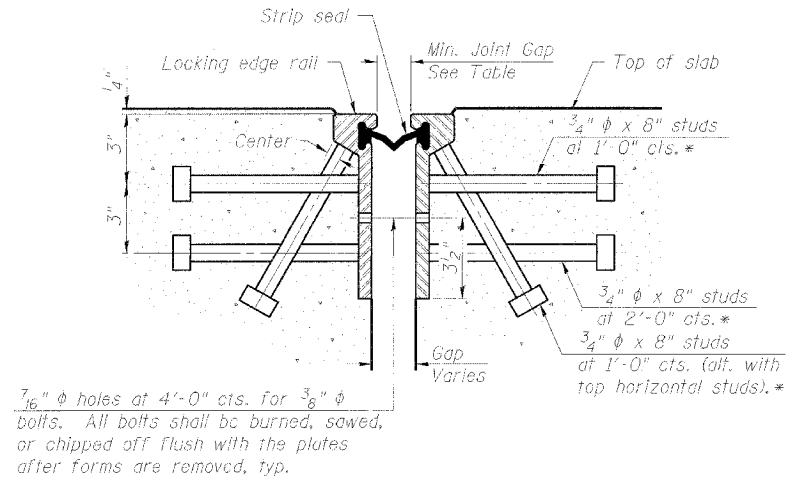
**BEARING DETAILS**  
F.A.P. RTE. 17 (US 52/IL 64)  
OVER MISSISSIPPI RIVER  
SECTION 6000 M-1  
CARROLL COUNTY (IL)  
JACKSON COUNTY (IA)  
STRUCTURE NO. 008-6000

**STS CONSULTANTS**  
111 NE Jefferson Ave.  
Peoria, Illinois 61602  
Ph(309)676-8464  
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IL Design Firm Reg. No. 184-001518

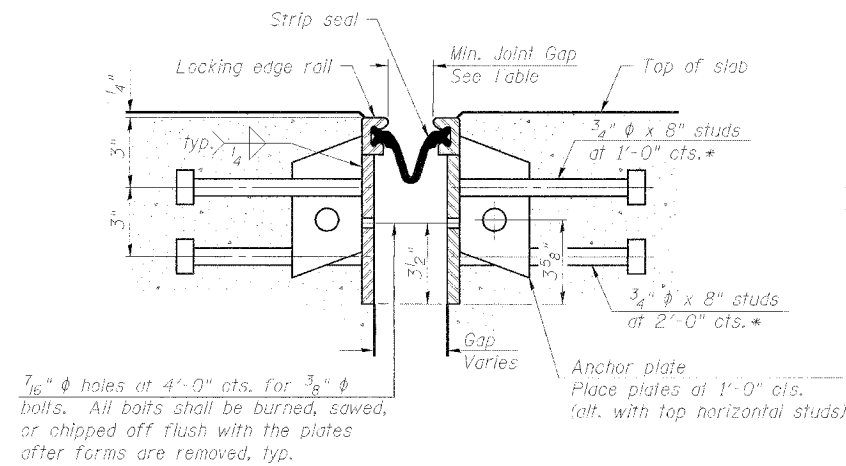
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 17	6000 M-1	CARROLL	20	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

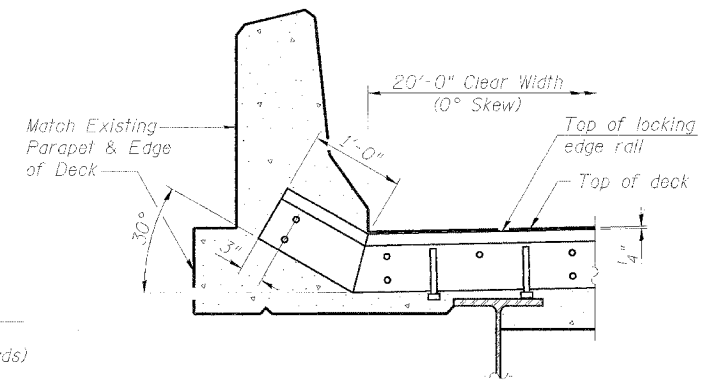
SHEET NO. 7  
15 SHEETS



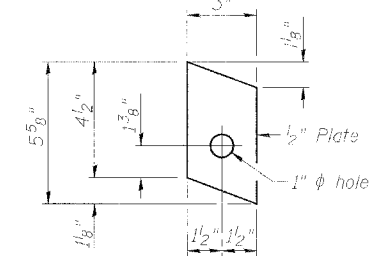
**SECTION THRU ROLLED RAIL JOINT**



**SECTION THRU WELDED RAIL JOINT**



**TYPICAL END TREATMENT AT PARAPET**



**ANCHOR PLATE (for welded rail)**

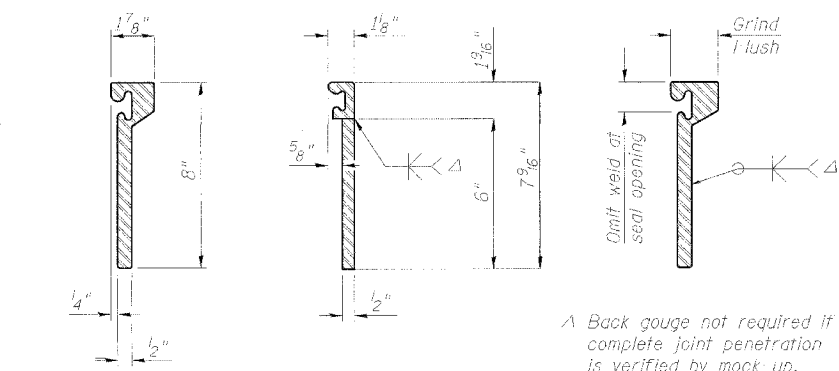
**REPLACEMENT SCHEDULE FOR IOWA APPROACH STRIP SEAL JOINTS & BEARINGS**

Substructure	Joint Type	Min. Gap	Design Movement (Total Expansion and Contraction)	Furnishing & Installing Fabric Bearings *****		Remove Existing Bearing *****	Clean and Paint Existing Bearings to Remain	Remove and Replace Nonshrink Grout Bearing Pedestals *****
				Expansion	Fixed			
Pile Bent 1 **	Expansion	*** 1 1/2"	5/8"	4		4		
Pile Bent 2	Fixed	1 1/2"	0		8	8		1
Pile Bent 3	Fixed	1 1/2"	0		8	8		
Pile Bent 4	Expansion	*** 1 7/8"	2 3/4"	8		8		
Pile Bent 5	Fixed	1 1/2"	0				X	
Pile Bent 6	Fixed	1 1/2"	0				X	
Pile Bent 7	Fixed	1 1/2"	0		8	8		
Pile Bent 8	Expansion	*** 1 7/8"	2 3/4"	8		8		
Pile Bent 9	Fixed	1 1/2"	0				X	
Pile Bent 10	Fixed	1 1/2"	0				X	
Pile Bent 11	Fixed	1 1/2"	0				X	4
Pile Bent 12	Expansion	*** 1 3/4"	2 3/8"	8		8		1 at S. Interior
Bent 1	Fixed	1 1/2"	0		8	8		
Bent 2	Fixed	1 1/2"	0				X	1 at S. Fascia
Bent 3	Expansion	*** 1 1/2"	2"	8		8		
Bent 4	Fixed	1 1/2"	0		8	8		
Bent 5	Fixed	1 1/2"	0				X	
Bent 6	Expansion/Fixed	*** 1 1/2"	1"				X	2 Interior
Total		18 @ 22 ft. Ea.		36 Ea.	40 Ea.	76 Ea.	****	12 Ea.

\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Standard Specifications, automatically end welded.  
\*\* Pile Bent 1 is at West Abutment.  
\*\*\* Expansion joint gap spacing at 50° F.  
\*\*\*\* Included in Cleaning and Painting.  
\*\*\*\*\* See also Special Provision for lump sum pay item Jacking Existing Superstructure.  
\*\*\*\*\* See Details Sht. 5 & 6 of 15 for Fabric Bearings.

**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 height and thickness of the Locking Edge Rails shown are minimum dimensions. 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 and stage construction joints.
- 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.



**ROLLED (EXTRUDED) RAIL**

**WELDED RAIL**

**LOCKING EDGE RAIL SPLICE**

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

**LOCKING EDGE RAILS**

DESIGNED	P.J.H.
CHECKED	LLV
DRAWN	MGM
CHECKED	P.J.H.

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	396

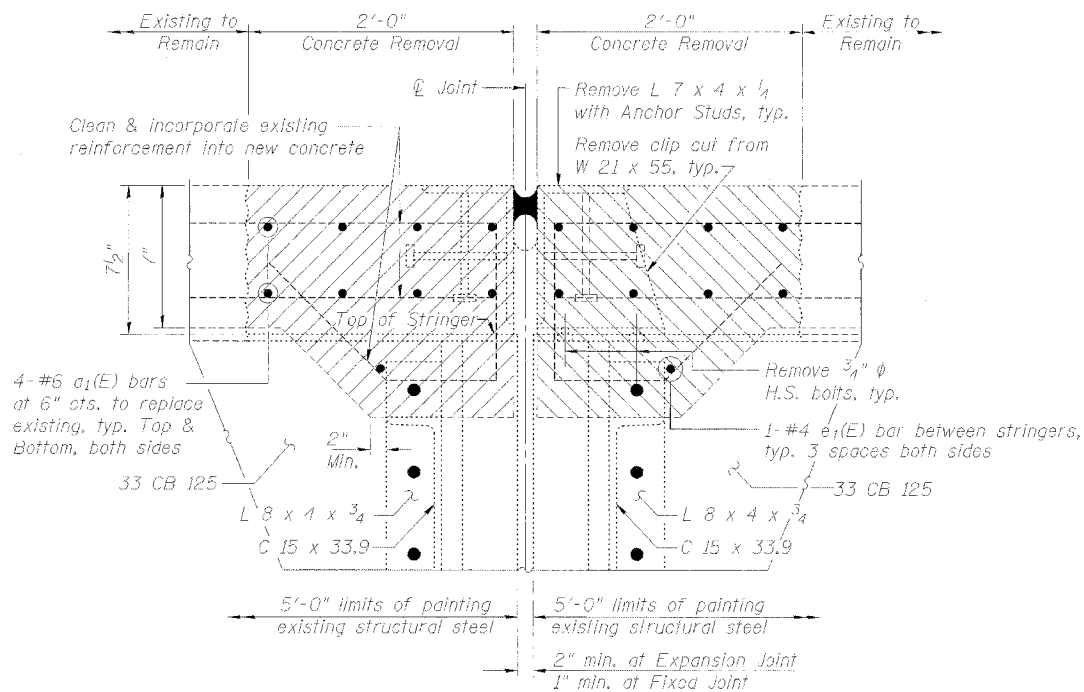
See Schedule this sht. for Joint Gaps and Design Movement.

**PREFORMED JOINT STRIP SEAL  
F.A.P. RTE. 17 (US 52/IL 64)  
OVER MISSISSIPPI RIVER  
SECTION 6000 M-1  
CARROLL COUNTY (IL)  
JACKSON COUNTY (IA)  
STRUCTURE NO. 008-6000**

**STS CONSULTANTS**  
111 NE Jefferson Ave.  
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Ph: (309) 676-8464  
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IL Design Firm Reg. No. 184-001518

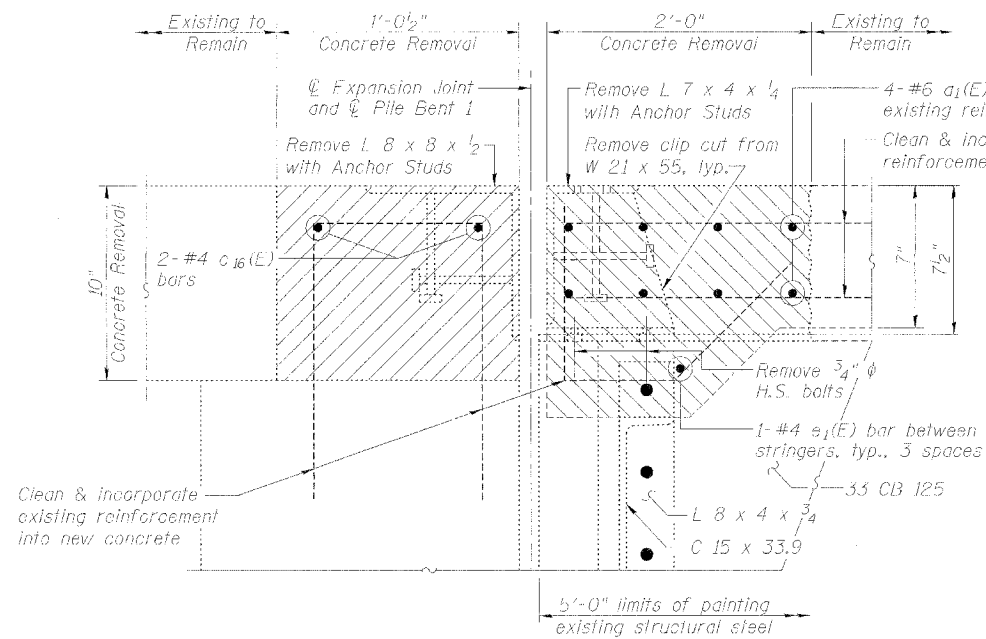
Note: Existing Reinforcement Bars shown are to be cleaned and incorporated into new construction.

PROJECT NO.	SECTION	COUNTY	DISTRICT	SHEET	SHEET NO. 8 15 SHEETS
F.A.P. 17	6000 M-1	CARROLL	20	13	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		



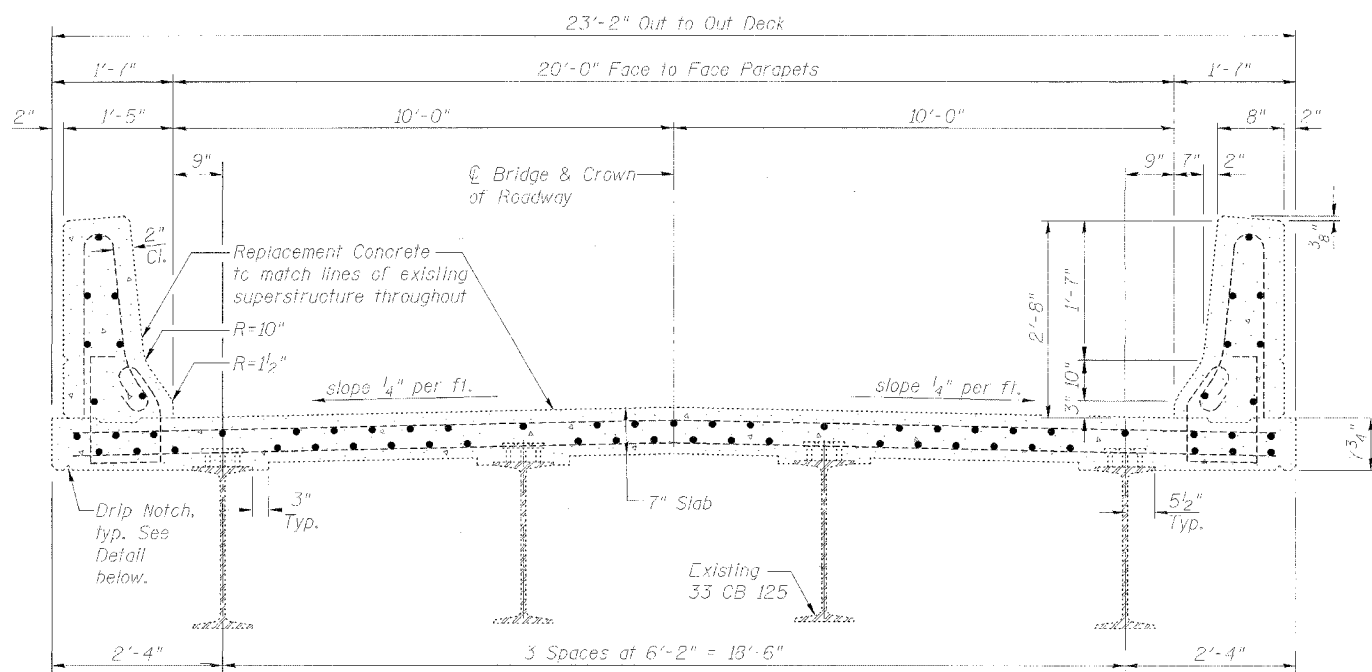
**REMOVE EXISTING ARMORED  
PREFORMED ELASTIC NEOPRENE JOINTS**

Similar at Fixed and Expansion Joints; remove all existing joint angles.

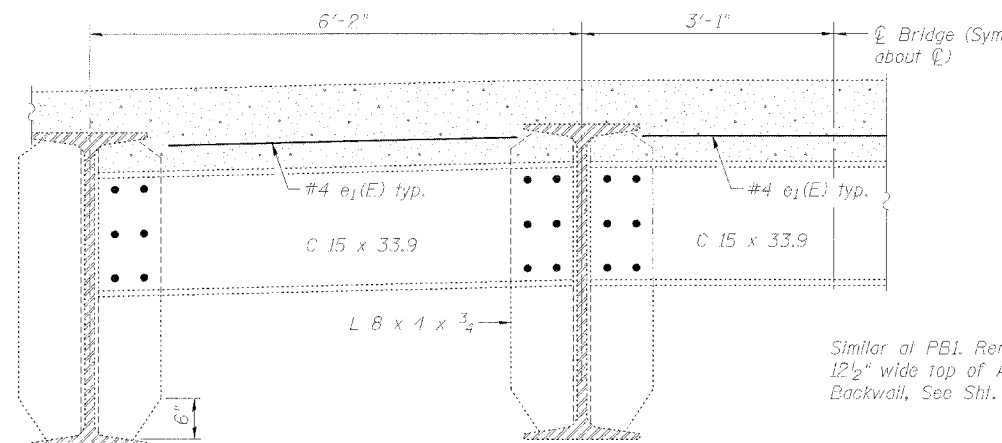


**EXISTING EXPANSION JOINT AT PILE BENT 1**

Remove all existing joint angles, typ.

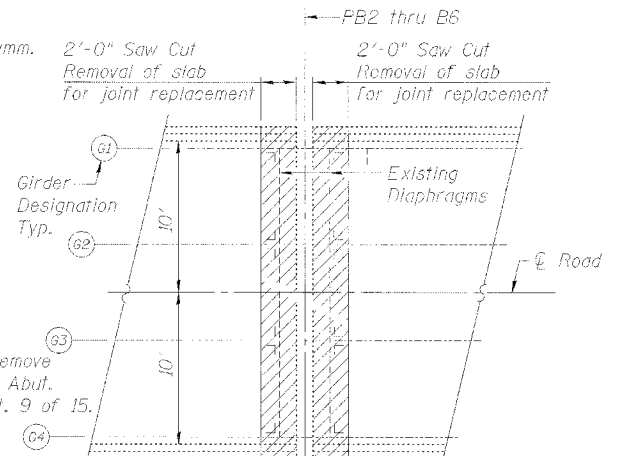


**TYPICAL CROSS SECTION**



**EXISTING END DIAPHRAGM DETAIL**

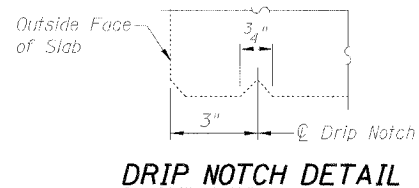
Included in Structural Steel to be Painted.



**JOINT REPLACEMENT DETAIL**

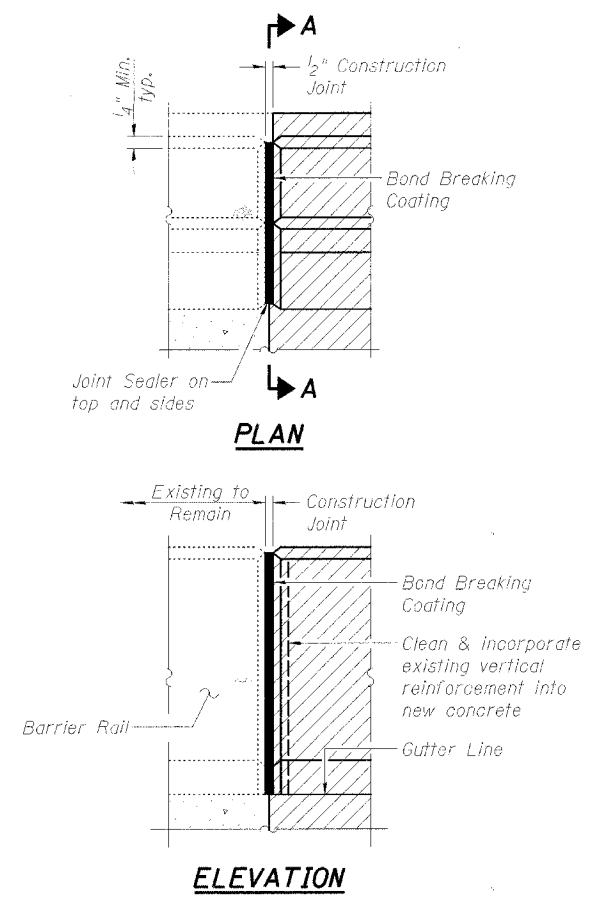
Note: See Sht. 9 of 15 for Reinforcement Bar table and Bill of Material.

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

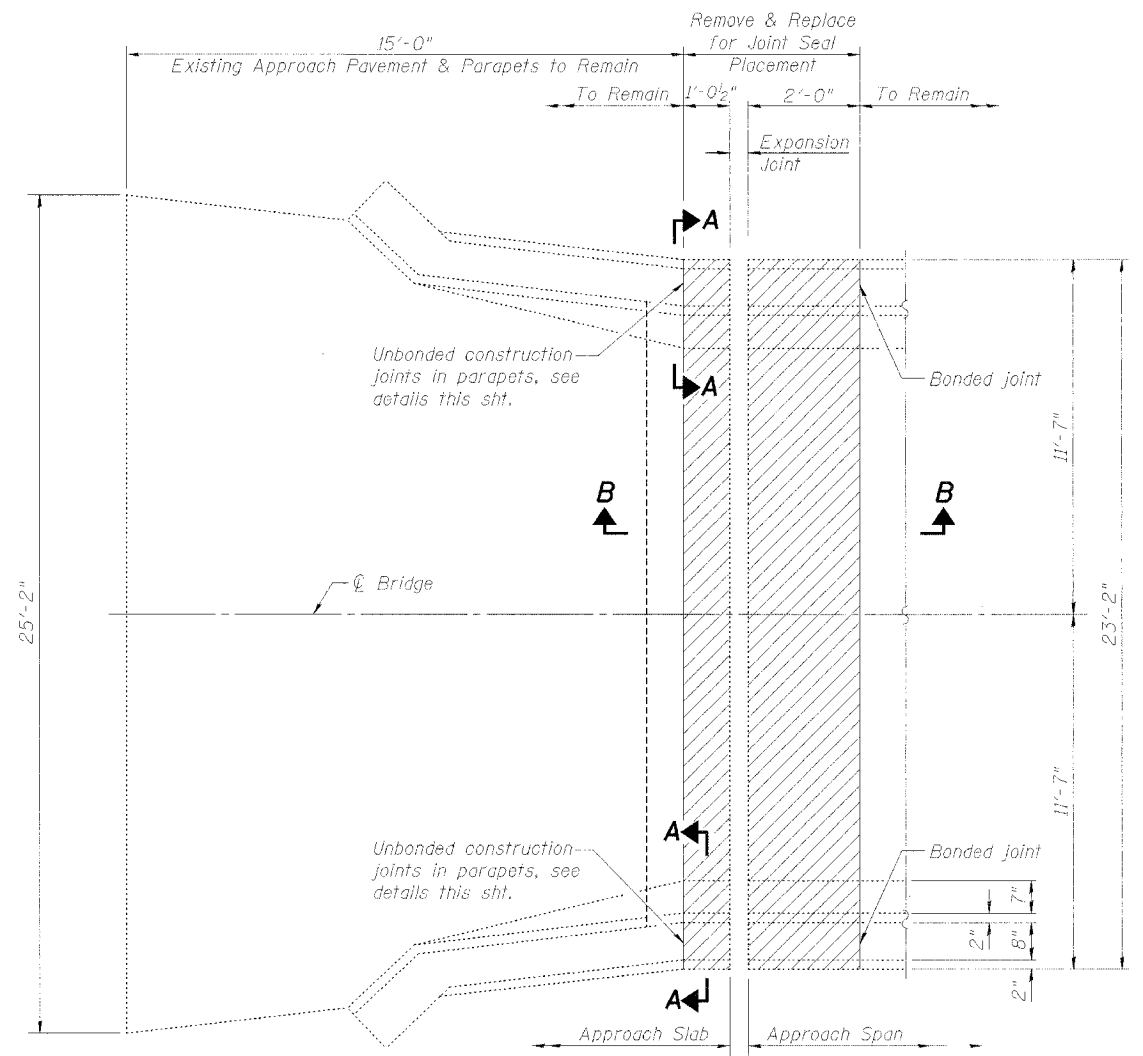


**TYPICAL SECTIONS, JOINTS, AND  
DIAPHRAGM DETAILS**  
**F.A.P. RTE. 17 (US 52/IL 64)**  
**OVER MISSISSIPPI RIVER**  
**SECTION 6000 M-1**  
**CARROLL COUNTY (IL)**  
**JACKSON COUNTY (IA)**  
**STRUCTURE NO. 008-6000**

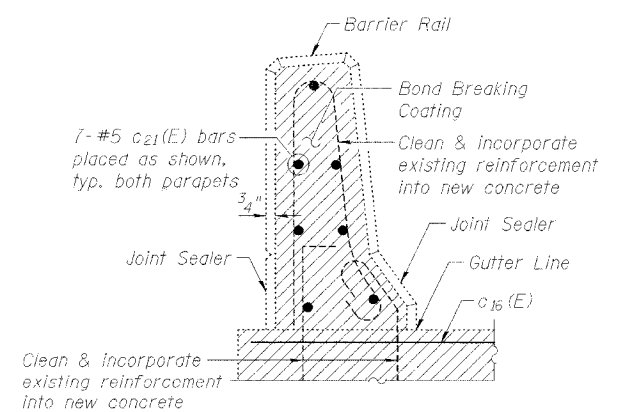
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 Peoria, Illinois 61602  
 Ph(309)676-8464  
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 IL Design Firm Reg. No. 184-001518



**BARRIER RAIL JOINT DETAILS AT CONSTRUCTION JOINTS**

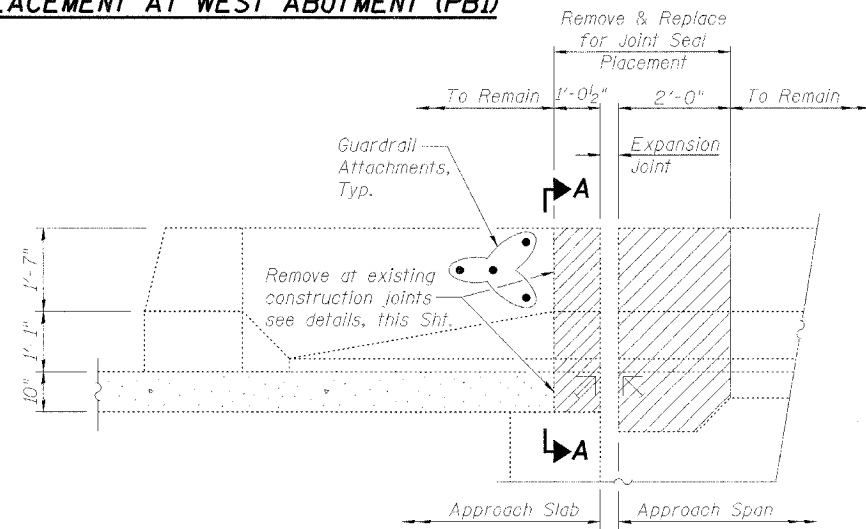


**JOINT REPLACEMENT AT WEST ABUTMENT (PB1)**



**SECTION A-A**

Note: Match Existing Concrete & Replicate Existing Construction Joint. Cost included in Concrete Superstructure.



**SECTION B-B**

**BILL OF MATERIAL**

*BAR	NO.	SIZE	LENGTH	SHAPE	LOCATION
c <sub>21</sub> (E)	14	#5	0'-7"	—	Approach Slab Parapets at PB1, W. Abut.
c <sub>16</sub> (E)	2	#1	22'-11"	—	Approach Slab closure atop W. Abut. Backwall
a <sub>1</sub> (E)	280	#6	22'-11"	—	35 Ends of Slabs at 18 Joints (PB1 thru B6)
e <sub>1</sub> (E)	105	#4	4'-4"	—	35 Ends of Slabs at 18 Joints (PB1 thru B6)
Reinforcement Bars, Epoxy Coated		Pound	9,980		
Concrete Removal		Cu. Yd.	66.7		
Concrete Superstructure		Cu. Yd.	66.7		

\*For cross reference where applicable these are same bar designations as 1985 plans.

See Sht. 8 of 15 for placement of a<sub>1</sub>(E), e<sub>1</sub>(E), and c<sub>16</sub>(E) bars.

**JOINT SEAL REPLACEMENT NOTES**

- Remove existing concrete to lines shown in accordance with Article 501.05 of the Standard Specifications.
- Clean and incorporate existing reinforcement into new concrete thus:
  - Slabs: existing longitudinal (east/west) reinforcement
  - Approach Pavement Closure Concrete atop West Abutment Backwall: vertical reinforcement
  - Parapets: existing vertical and longitudinal (east/west) reinforcement
- Install new joints, new reinforcement and place new concrete to match the lines of the existing concrete, bonding new concrete to old, throughout, except as noted.

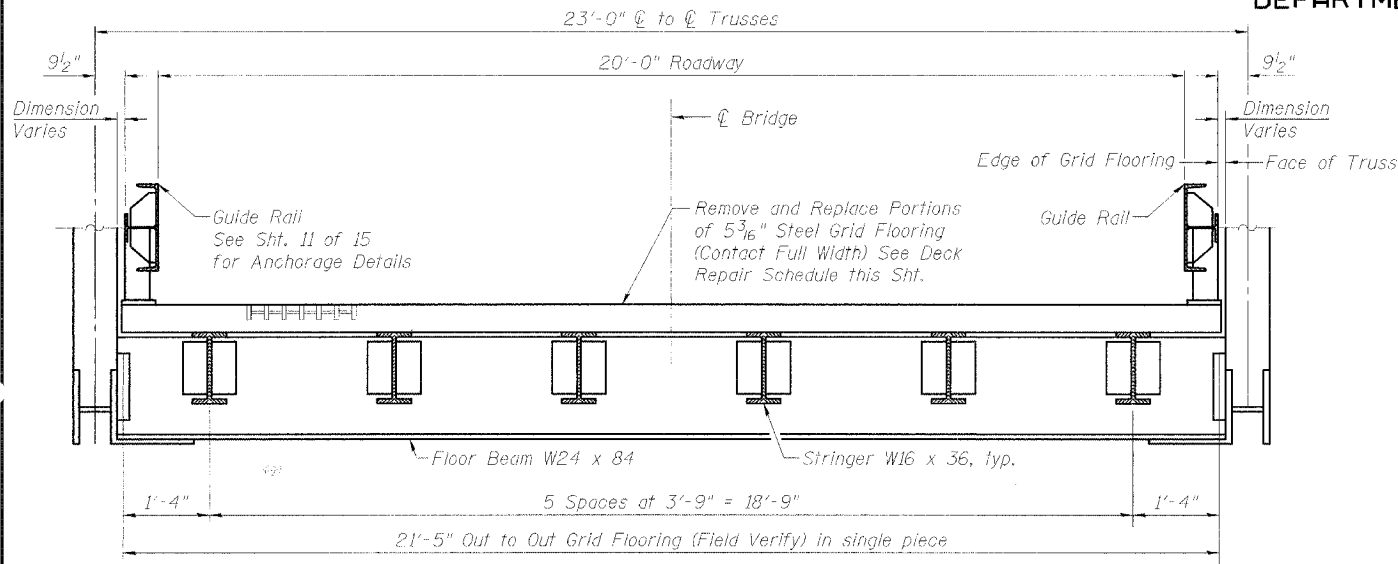
**JOINT DETAILS**  
**F.A.P. RTE. 17 (US 52/IL 64)**  
**OVER MISSISSIPPI RIVER**  
**SECTION 6000 M-1**  
**CARROLL COUNTY (IL)**  
**JACKSON COUNTY (IA)**  
**STRUCTURE NO. 008-6000**

**STS CONSULTANTS**  
 111 NE Jefferson Ave.  
 Peoria, Illinois 61602  
 Ph(309)676-8484  
 FAX(309)676-5445  
 IL Design Firm Reg. No. 184-001518

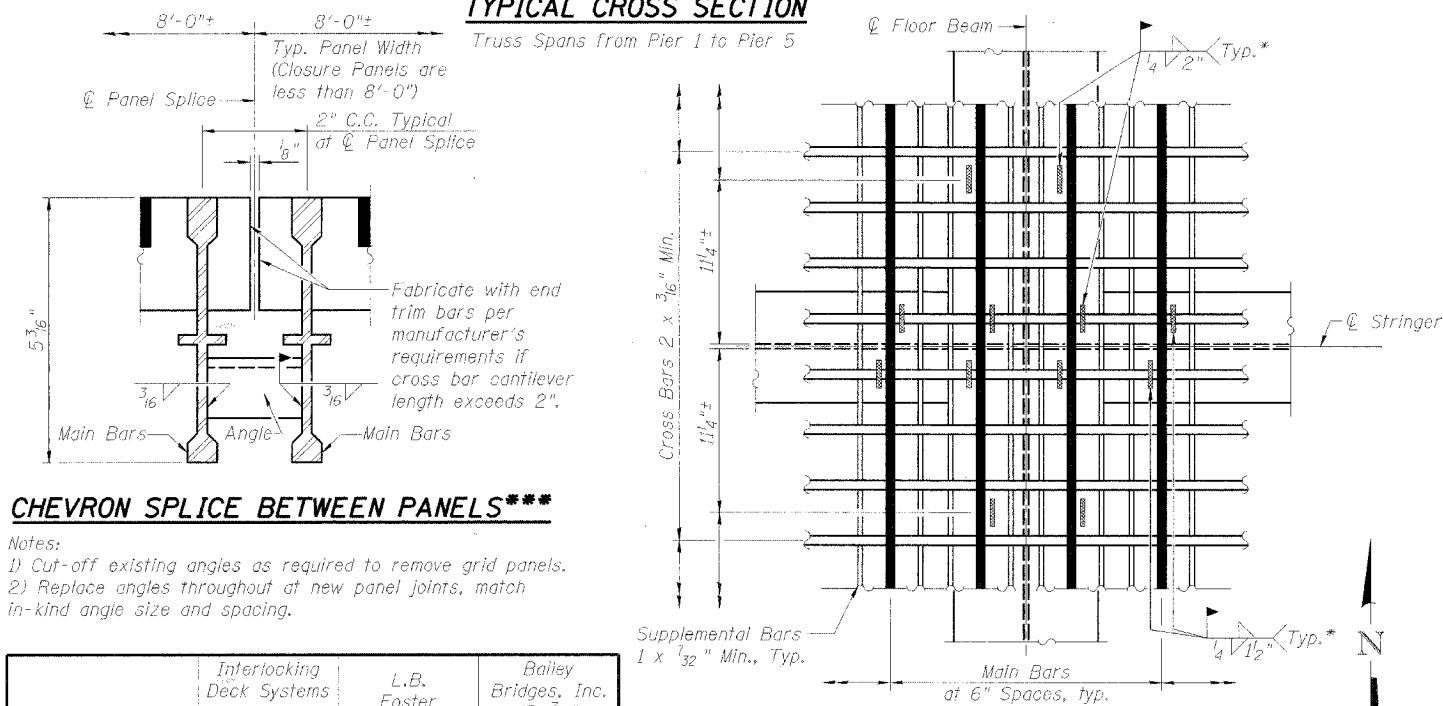
DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 17	6000 M-1	CARROLL	20	15
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT



**TYPICAL CROSS SECTION**



**CHEVRON SPLICE BETWEEN PANELS\*\*\***

- Notes:  
1) Cut-off existing angles as required to remove grid panels.  
2) Replace angles throughout at new panel joints, match in-kind angle size and spacing.

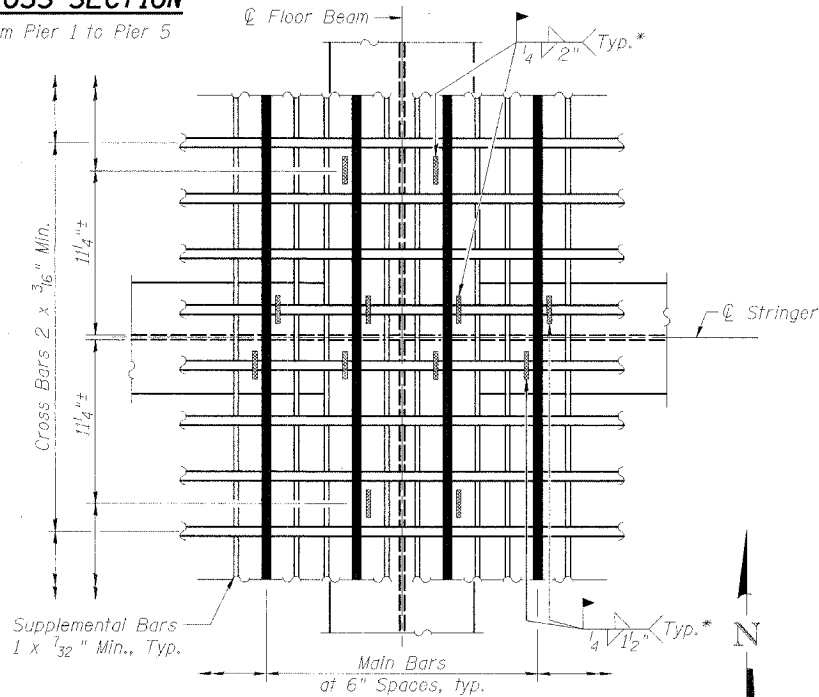
	Interlocking Deck Systems International (ODS5S-06) Main bars at 6" sp.	L.B. Foster (RB 6.2 M) Main bars at 6" sp.	Bailey Bridges, Inc. (5-3/16" RB 6.2) Main bars at 6" sp.
Uncoated Approx. Weight (psf)	19.2	19.2	20.0
** S Top (in. <sup>3</sup> /ft.)	4.24	4.281	4.185
** S Bot. (in. <sup>3</sup> /ft.)	5.00	5.260	4.571

**ALTERNATE GRID FLOORING\*\*\***  
(ASTM A36 Steel; Hot Dip Galvanized)

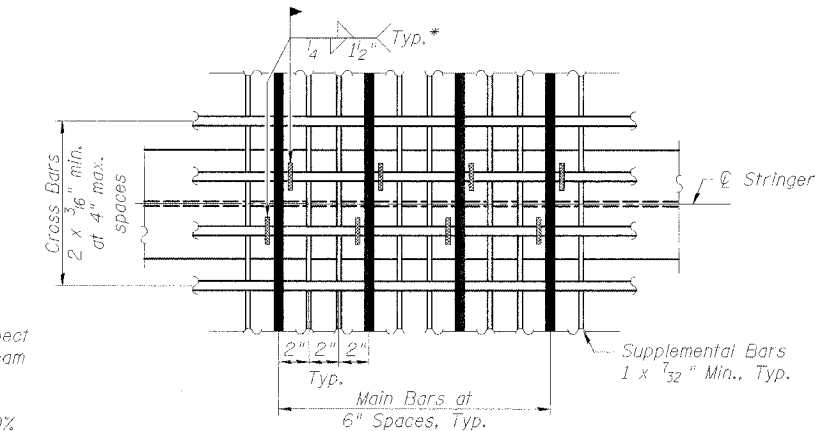
\*\*\* Do not weld to galvanized steel. Apply touch-up paint to welds. See Special Provisions.

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

\* Alternate weld location with respect to main bars as shown on floor beam and stringers.  
\*\* Section properties based on 50% of the supplemental bars active.



**PLAN OF STEEL GRID AT FLOOR BEAM\*\*\***



**PLAN OF STEEL GRID AT STRINGER\*\*\***

**DECK REPAIR SCHEDULE**

Panel Number	Remove & Replace Deck Panel	Deck Panel to Remain	Repair Cracked Deck Panel Welds
1	X		
2	X		
3	X		
4		X	
5	X		
6	X		
7	X		
8	X		
9	X		
10	X		
11	X		
12	X		
13	X		
14	X		
15	X		
16		X	
17	X		
18	X		
19		X	
20		X	
21		X	X
22		X	X
23		X	X
24		X	X
25	X		
26		X	X
27		X	
28		X	
29		X	
30	X		
31		X	
32		X	X
33	X		
34	X		
35	X		
36		X	
37		X	
38	X		
39		X	
40		X	
41	X		
42	X		
43		X	X
44		X	
45		X	
46		X	X
47		X	
48		X	
49	X		
50	X		
51	X		
52	X		
53		X	
54		X	
55		X	
56		X	
57		X	
58		X	
59		X	
60		X	
61		X	
62		X	
63		X	X
64		X	
65		X	
66		X	
67		X	
68	X		
69	X		
70	X		

Panel Number	Remove & Replace Deck Panel	Deck Panel to Remain	Repair Cracked Deck Panel Welds
71		X	X
72		X	X
73		X	X
74	X		
75		X	X
76		X	X
77		X	
78		X	
79	X		
80	X		
81	X		
82		X	
83	X		
84		X	
85	X		
86	X		
87	X		
88	X		
89	X		
90	X		
91	X		
92	X		
93		X	
94		X	
95		X	
96		X	
97		X	
98		X	
99		X	
100		X	
101		X	
102		X	
103	X		
104		X	
105		X	
106		X	X
107		X	X
108		X	
109	X		
110	X		
111	X		
112	X		
113	X		
114	X		
115	X		
116	X		
117	X		
118	X		
119	X		
120	X		
121	X		
122	X		
123	X		
124		X	
125		X	
126		X	
127	X		
128		X	X
129	X		
130		X	
131	X		
132	X		
133		X	
134		X	
135		X	X
136		X	
137	X		
138		X	
139	X		
140	X		

Panel Number	Remove & Replace Deck Panel	Deck Panel to Remain	Repair Cracked Deck Panel Welds
141		X	
142		X	
143	X		
144		X	
145		X	
146	X		
147	X		
148	X		
149	X		
150	X		
151	X		
152		X	
153		X	
154	X		
155		X	
156		X	
157	X		
158	X		
159	X		
160	X		
161	X		
162	X		
163	X		
164	X		
165	X		
166	X		
167	X		
168	X		
169	X		
170	X		
171	X		
172	X		
173	X		
174	X		
175	X		
176	X		
177	X		
178	X		
Total	97	81	18 Each
Approx. Area	16,619 SF	14,216 SF	
Pay Item	Open Steel Floor		Repair of Existing Open Steel Floor Welds

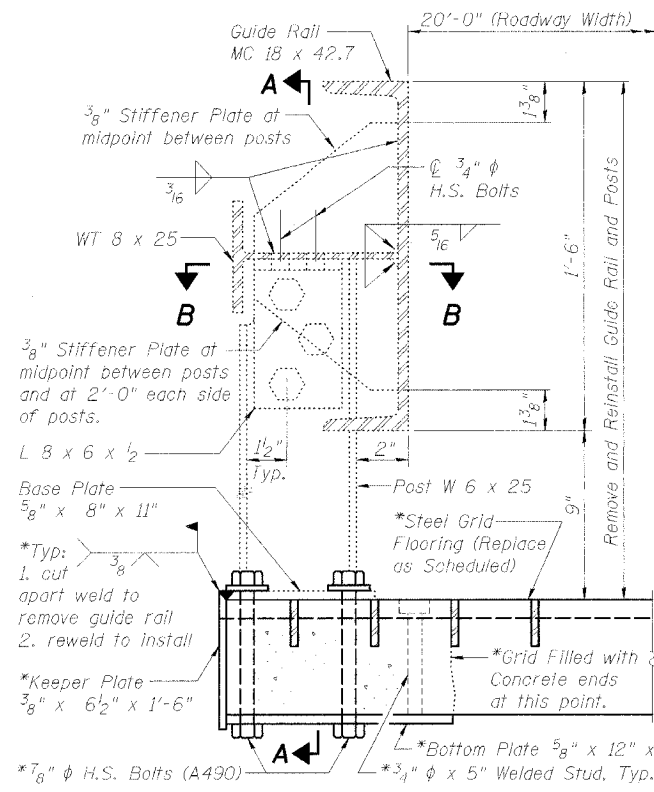
- 1) Panel numbering starts at west end, Pier 1.  
2) Verify panel lengths before ordering.

**STEEL GRID DETAILS**  
F.A.P. RTE. 17 (US 52/IL 64)  
OVER MISSISSIPPI RIVER  
SECTION 6000 M-1  
CARROLL COUNTY (IL)  
JACKSON COUNTY (IA)  
STRUCTURE NO. 008-6000

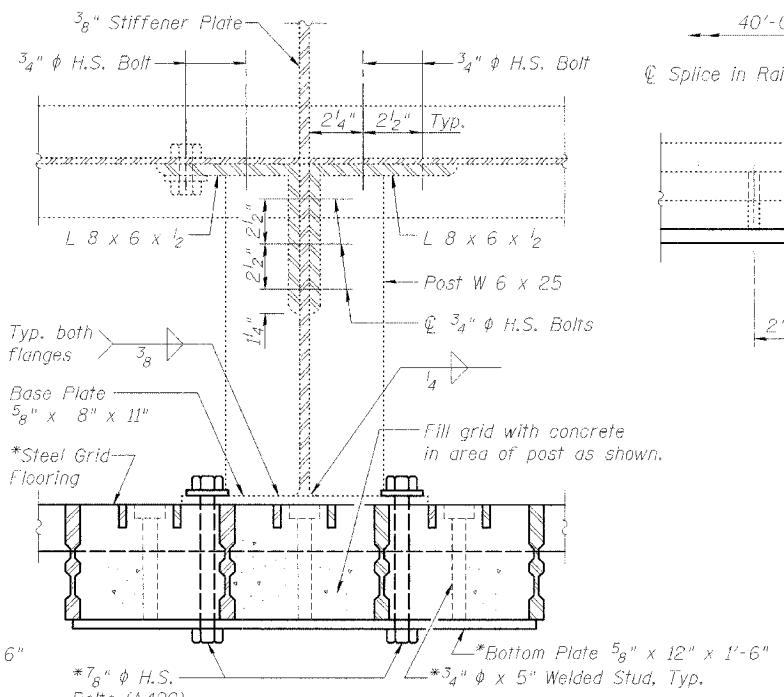
**STS CONSULTANTS**  
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Peoria, Illinois 61602  
Ph(309)676-8464  
FAX(309)676-5445  
IL Design Firm Reg. No. 184-001518

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

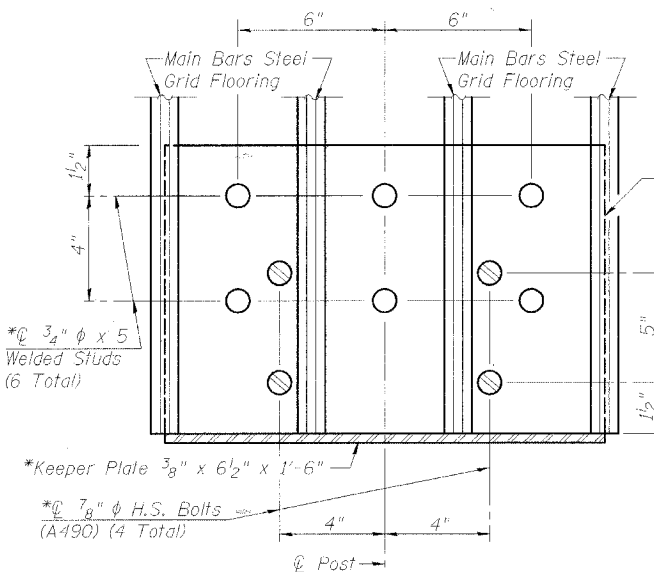
FOUR'S NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO.
F.A.P. 17	6000 M-1	CARROLL	20	16	15 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



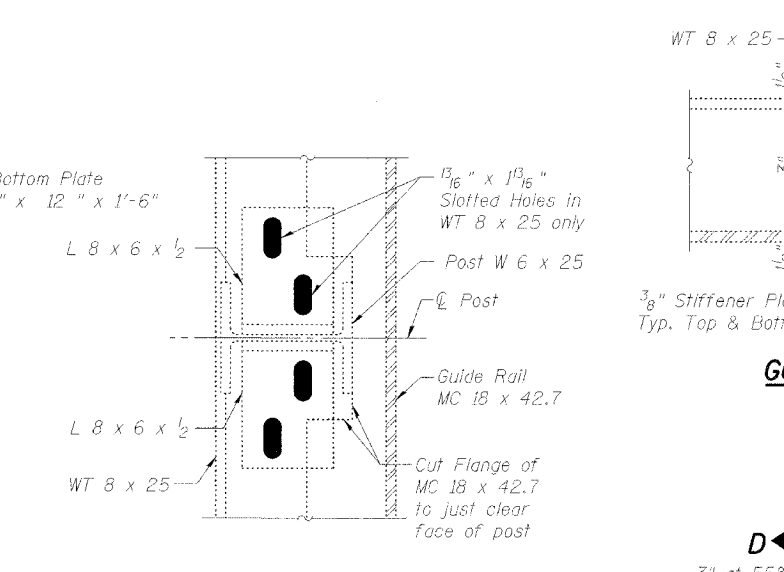
**GUIDE RAIL SECTION**



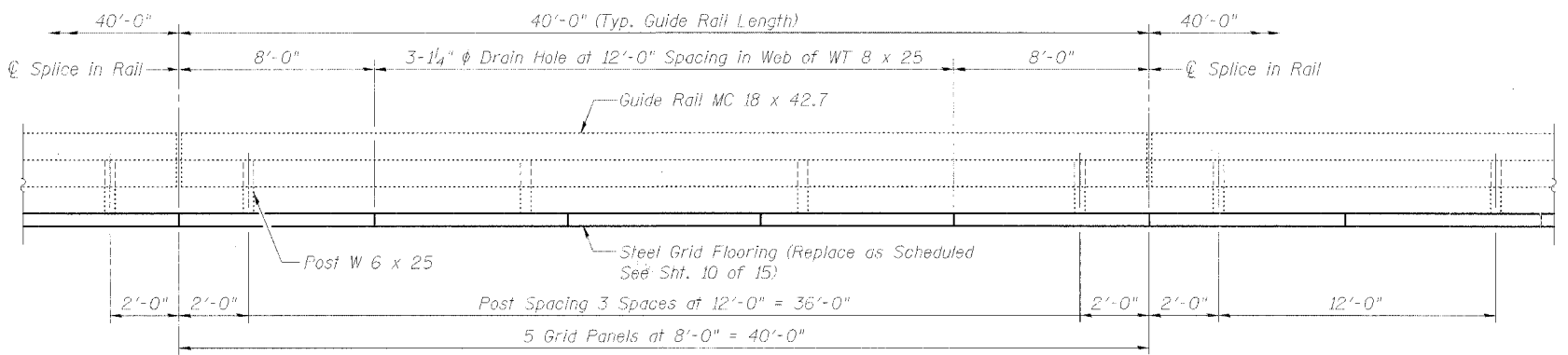
**SECTION A-A**



**\*PLAN BOTTOM PLATE**

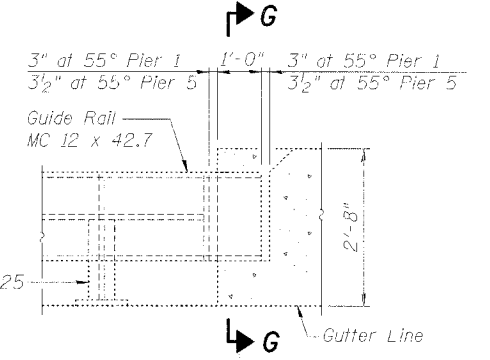


**SECTION B-B**

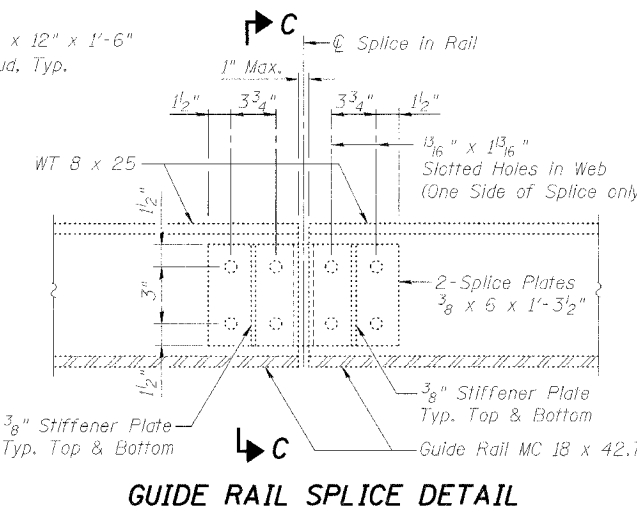


**GUIDE RAIL POST SPACING**

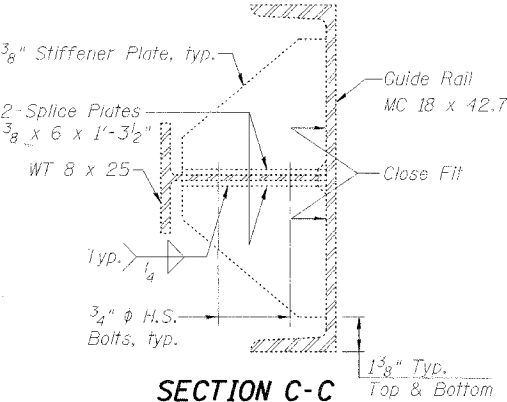
Note: Verify deck grid panel lengths before ordering replacement panels. See Schedule Sht. 10 of 15.



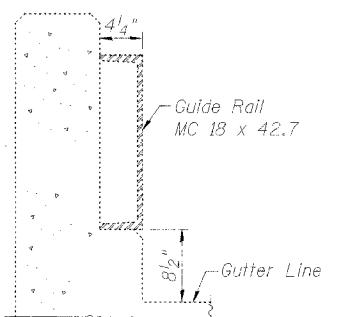
**GUIDE RAIL AT EXPANSION JOINT PIER 1 AND PIER 5**



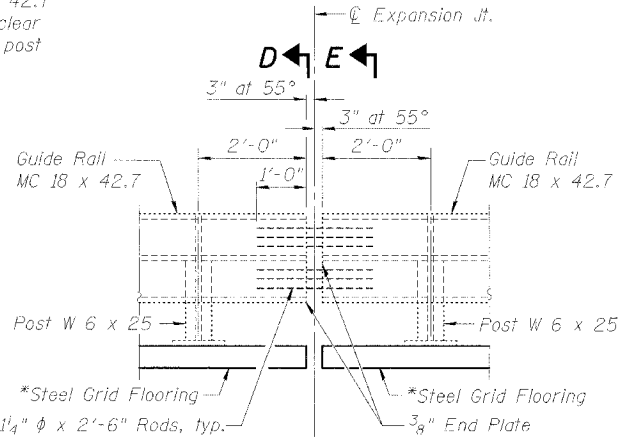
**GUIDE RAIL SPLICE DETAIL**



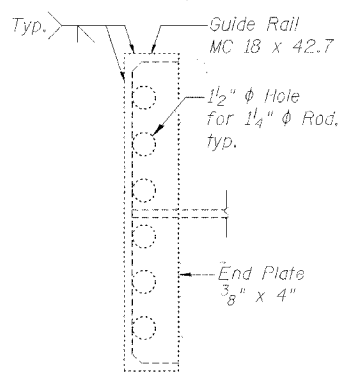
**SECTION C-C**



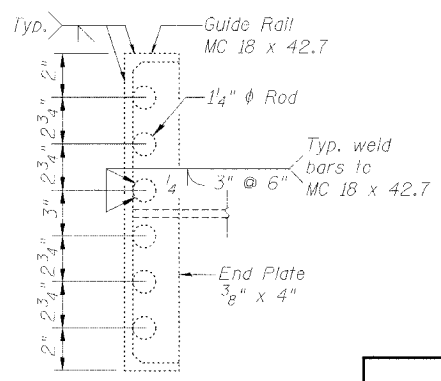
**SECTION G-G**



**GUIDE RAIL AT EXPANSION JOINT PIER 2**



**SECTION D-D**



**SECTION E-E**

**NOTES**

1. Remove existing Guide Rail as necessary to remove and replace Steel Grid Deck as scheduled on Sht. 10 of 15.
2. Replace in-kind Guide Rail components and anchorage which are damaged during removal and reinstallation of Guide Rail and removal and replacement of Steel Grid Deck.
3. Replace in-kind all Guide Rail and post bolts which are loosened during Guide Rail removal and replacement using new bolts.
4. Guide Rail and post details are as shown on 1985 plans.
5. Reinstall Guide Rail after Steel Grid Deck replacement. Use Guide Rail post anchorage as detailed on this sheet to attach Guide Rail posts to new Steel Grid Deck and to reattach posts to existing deck which remains.
6. Removal and installation of Guide Rail including all necessary replacement components is included in "Open Steel Floor".

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

**GUIDE RAILING DETAILS  
F.A.P. RTE. 17 (US 52/IL 64)  
OVER MISSISSIPPI RIVER  
SECTION 6000 M-1  
CARROLL COUNTY (IL)  
JACKSON COUNTY (IA)  
STRUCTURE NO. 008-6000**

**STS CONSULTANTS**  
111 NE Jefferson Ave.  
Peoria, Illinois 61602  
Ph (309) 676-8464  
FAX (309) 676-8445  
IL Design Firm Reg. No. 184-001518



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.P. 17	6000 M-1	CARROLL	20	17
FED. ROAD DIST. NO.	ILL. PROJ.	FED. AID PROJECT		

**SUBSTRUCTURE REPAIR SCHEDULE**

KEY	①	②	③	④	⑤	⑥	⑦	⑧	⑨	
ITEM	Structural Repair of Concrete (Depth ≤ 5")	Structural Repair of Concrete (Depth > 5")	Epoxy Crack Injection	Fiber Reinforcement Protection	Acrylic Coating	Jacking & Cribbing	Clean & Paint Steel H-Piles	Remove Channels, Clean, Paint, and Reinstall	Remove Post Tension Rods, Clean, Paint, & Reinstall	Concrete Sealer
UNIT	Sq. Ft.	Sq. Ft.	Foot	Sq. Ft.	Sq. Yd.	Each	**	**	**	Sq. Ft.
Pile Bent 1 *	2									78
Pile Bent 2			9				X			143
Pile Bent 3										0
Pile Bent 4	18	30	25	395	44	1			X	0
Pile Bent 5	10	20		269	30			X		44
Pile Bent 6		90	10				X			143
Pile Bent 7	20	1	10					X		44
Pile Bent 8	2	20	10	84	9	1			X	44
Pile Bent 9										44
Pile Bent 10										143
Pile Bent 11										44
Pile Bent 12		8	8	81	9	1		X		44
Bent 1			20							44
Bent 2	8	4	10			1				44
Bent 3		24	60	820	91					0
Bent 4		12	12					X		44
Bent 5		2	2							44
Bent 6		12	15							44
Pier 1										88
Pier 2										88
Pier 3										142
Pier 4										142
Pier 5		40	20	340	38					88
<b>TOTAL</b>	<b>60</b>	<b>266</b>	<b>211</b>	<b>1,989</b>	<b>221</b>	<b>4</b>	<b>**</b>	<b>**</b>	<b>**</b>	<b>1,539</b>

\* Pile Bent 1 is at West Abutment.  
\*\* Included in Cleaning and Painting.

**PILE BENT CAP NOTES ⑧**

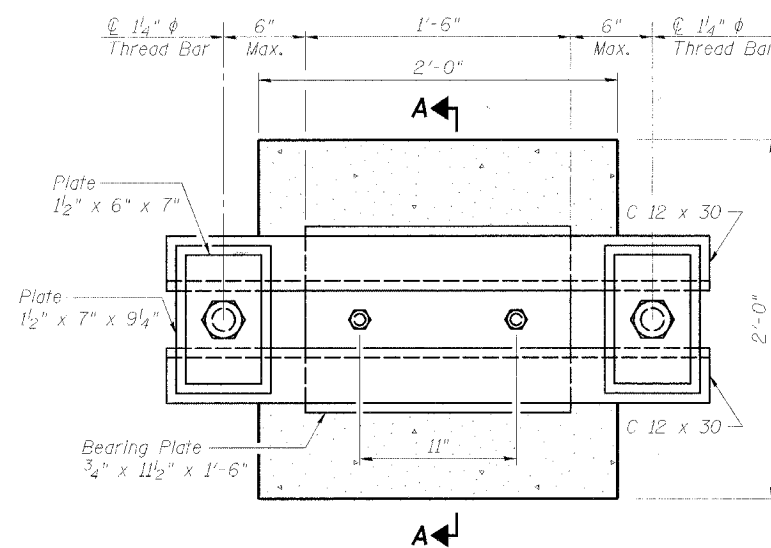
(Cleaning and Painting Existing Post-Tensioning of Pile Bent Cap: PB3, PB4, and PB8; Showing Details from 1985 Repair Plans)

1. Remove, clean, paint, and re-install existing post-tensioning steel. Portions which can be thoroughly cleaned and painted in place may be so treated at Engineer's direction.
2. Reinstall post tensioning plates and threadbars after concrete repairs are made.
3. Post-tension (jack) each threadbar to 60 kips seven days after placement of non-shrink grout. Each pair of bars shall be tensioned such that unbalance of force in bars does not exceed 5 kips during tension operations.

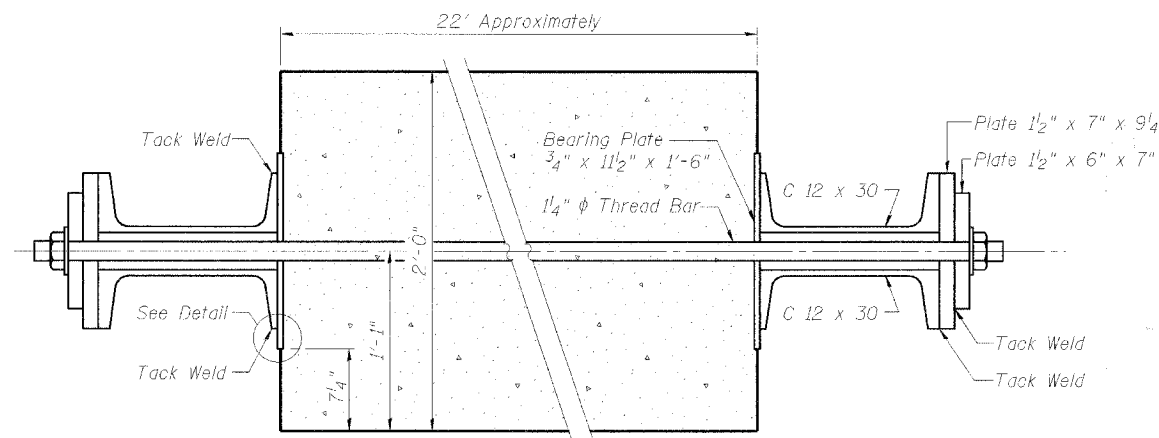
**PILE CAP STEEL NOTES ⑦**

(Cleaning and Painting of Pile Cap Steel: PB5, PB7, PB12, and B4)

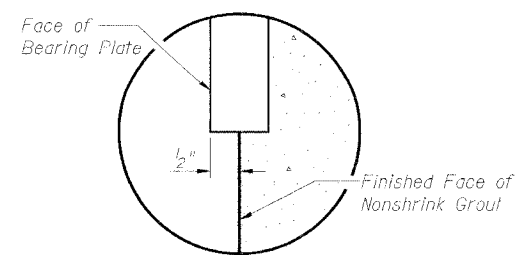
1. Remove the existing channels on each side of the pile caps and bent caps before concrete repairs are performed.
2. Sandblast clean each entire channel to SSPC SP6 (Commercial Blast)
3. Apply Paint.
4. Existing bolts fastening channels to pile and bent caps may be re-used except those that, in the judgement of the Engineer are too corroded for re-use, shall be replaced. Payment for replacement bolts shall be made in accordance with Article 109.04 of the Standard Specifications.
5. Reinstall each channel to the specific pile cap after completion of concrete repairs (if required).



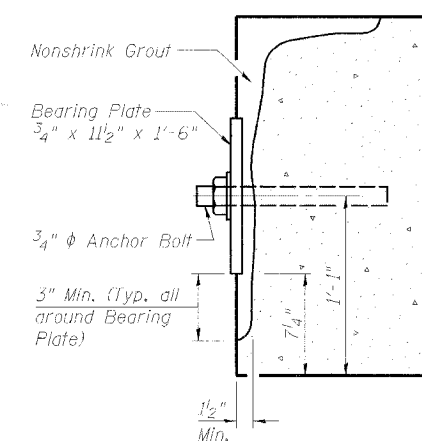
**END VIEW - EXISTING PILE CAP BENT ⑧**



**FRONT ELEVATION - EXISTING PILE CAP BENT ⑧**



**EXISTING DETAIL ⑧**



**EXISTING SECTION A-A ⑧**

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

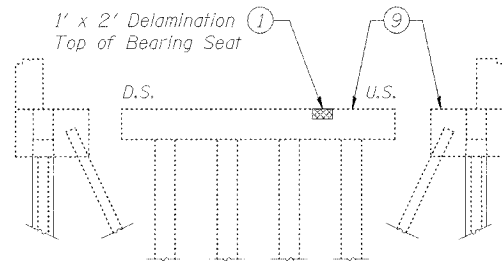
**SUBSTRUCTURE  
REPAIR PROCEDURES  
F.A.P. RTE. 17 (US 52/IL 64)  
OVER MISSISSIPPI RIVER  
SECTION 6000 M-1  
CARROLL COUNTY (IL)  
JACKSON COUNTY (IA)  
STRUCTURE NO. 008-6000**

**STS CONSULTANTS**  
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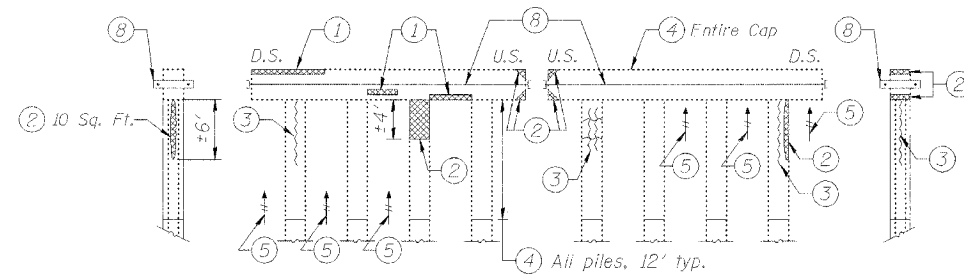
008-6000-0017 12/7/2007 12:06:26 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

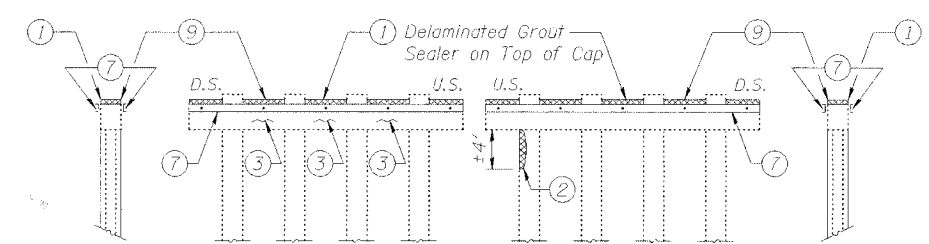
ROUTE NO.	SECTION	COUNTY	DISTRICT	SHEET	SHEET NO. 13
F.A.P. 17	6000 M-1	CARROLL	20	18	15 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT			



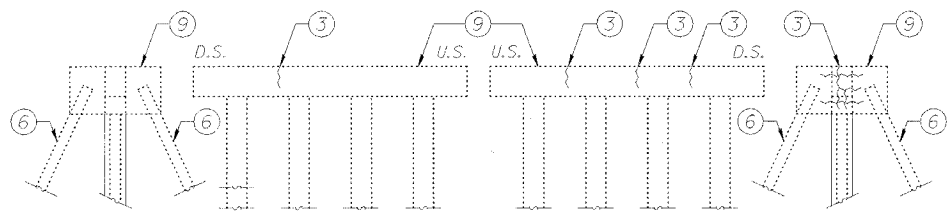
SOUTH ELEVATION   EAST ELEVATION   NORTH ELEVATION  
**PILE BENT 1**



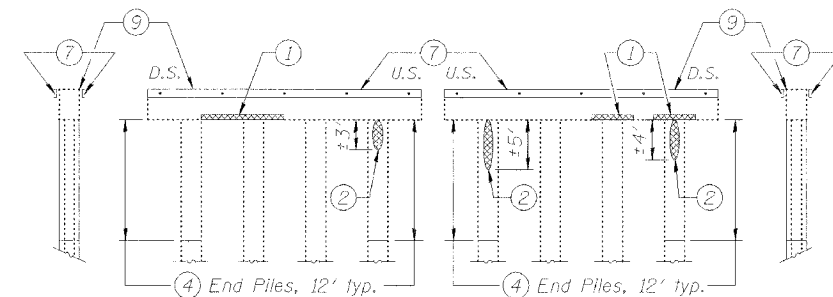
SOUTH ELEVATION   EAST ELEVATION   WEST ELEVATION   NORTH ELEVATION  
**PILE BENT 4**



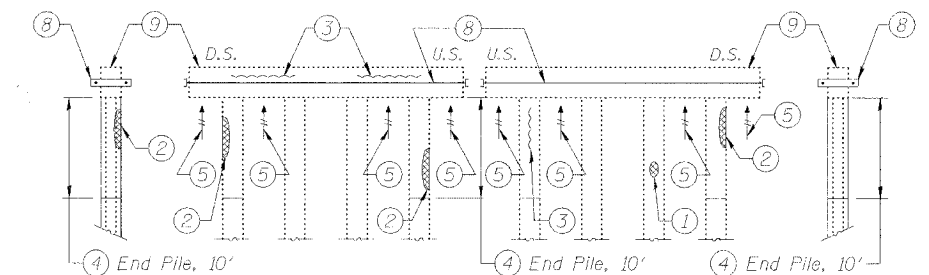
SOUTH ELEVATION   EAST ELEVATION   WEST ELEVATION   NORTH ELEVATION  
**PILE BENT 7**



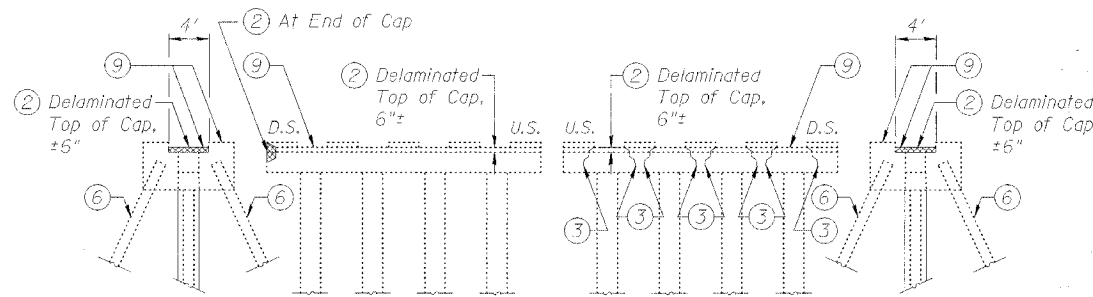
SOUTH ELEVATION   EAST ELEVATION   WEST ELEVATION   NORTH ELEVATION  
**PILE BENT 2**



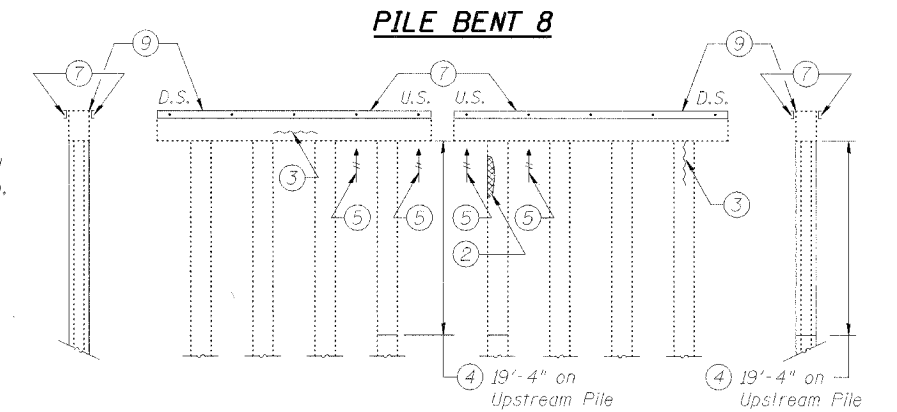
SOUTH ELEVATION   EAST ELEVATION   WEST ELEVATION   NORTH ELEVATION  
**PILE BENT 5**



SOUTH ELEVATION   EAST ELEVATION   WEST ELEVATION   NORTH ELEVATION  
**PILE BENT 8**



SOUTH ELEVATION   EAST ELEVATION   WEST ELEVATION   NORTH ELEVATION  
**PILE BENT 6**



SOUTH ELEVATION   EAST ELEVATION   WEST ELEVATION   NORTH ELEVATION  
**PILE BENT 12**

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

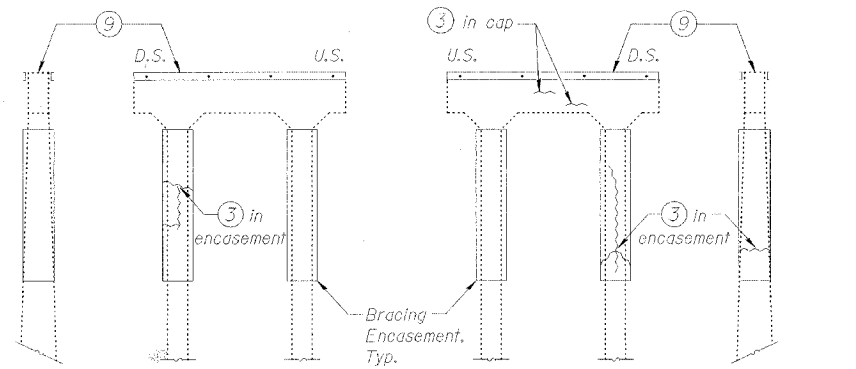
- Note:
- No Concrete Repairs proposed for PB9, PB10, or PB11, except Concrete Sealer (9)
  - No Concrete Repairs proposed for PB3.
  - See Sht. 12 of 15 for corresponding Repair Schedule.

**SUBSTRUCTURE CONCRETE REPAIRS**  
**F.A.P. RTE. 17 (US 52/IL 64)**  
**OVER MISSISSIPPI RIVER**  
**SECTION 6000 M-1**  
**CARROLL COUNTY (IL)**  
**JACKSON COUNTY (IA)**  
**STRUCTURE NO. 008-6000**

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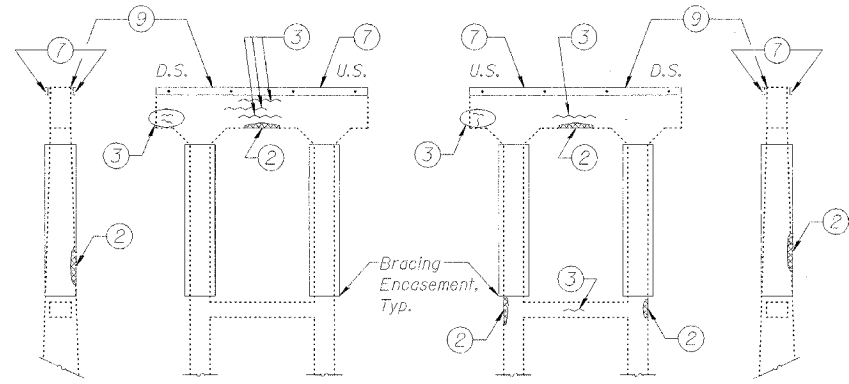
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14
F.A.P. 17	6000 M-1	CARROLL	20	19	15 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



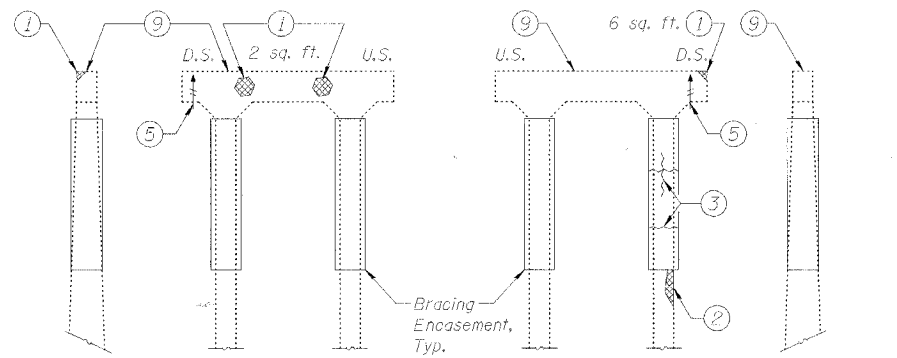
SOUTH ELEVATION EAST ELEVATION WEST ELEVATION NORTH ELEVATION

**BENT 1**



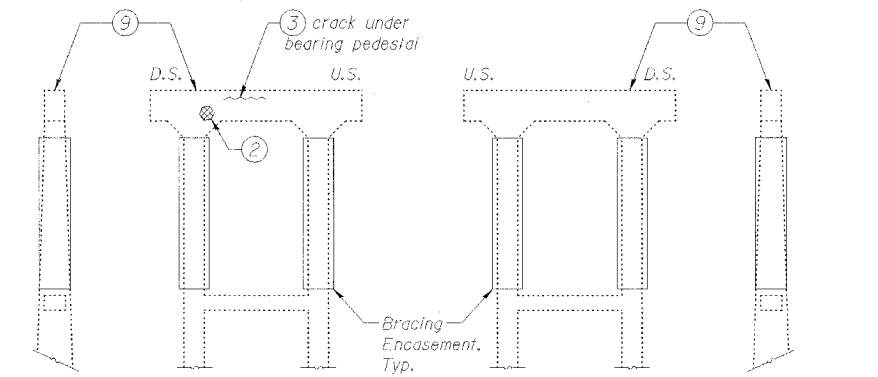
SOUTH ELEVATION EAST ELEVATION WEST ELEVATION NORTH ELEVATION

**BENT 4**



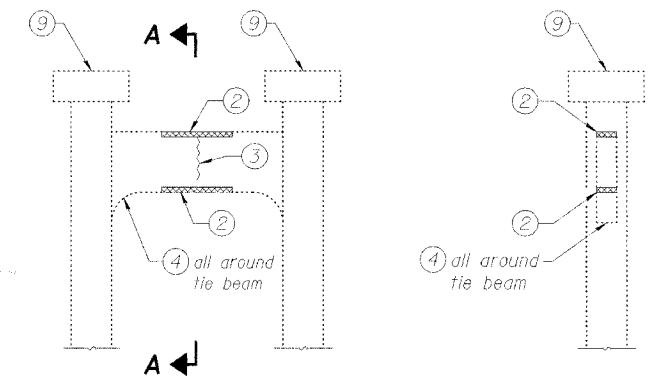
SOUTH ELEVATION EAST ELEVATION WEST ELEVATION NORTH ELEVATION

**BENT 2**



SOUTH ELEVATION EAST ELEVATION WEST ELEVATION NORTH ELEVATION

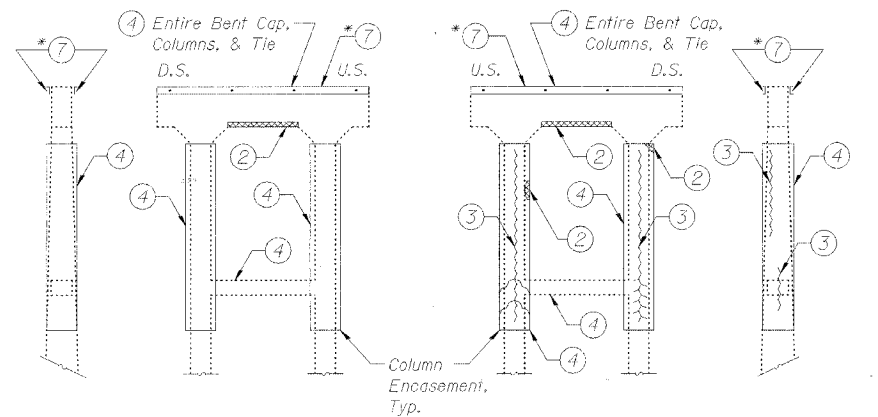
**BENT 5**



WEST ELEVATION & EAST ELEVATION

SECTION A-A

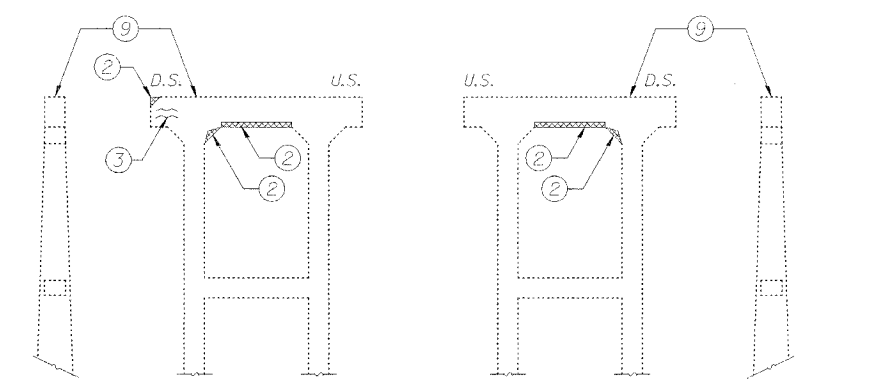
**PIER 5**



SOUTH ELEVATION EAST ELEVATION WEST ELEVATION NORTH ELEVATION

**BENT 3**

\* Necessary to accomplish (4)



SOUTH ELEVATION EAST ELEVATION WEST ELEVATION NORTH ELEVATION

**BENT 6**

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

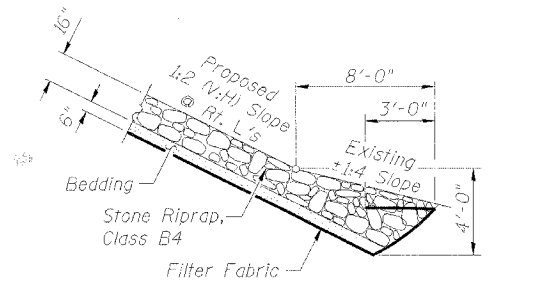
- Notes:  
1. No Concrete Repairs proposed for Pier 1, Pier 2, Pier 3, or Pier 4, except bearing seat Concrete Sealer (9)  
2. See Sht. 12 of 15 for corresponding Repair Schedule.

**SUBSTRUCTURE CONCRETE REPAIRS**  
F.A.P. RTE. 17 (US 52/IL 64)  
OVER MISSISSIPPI RIVER  
SECTION 6000 M-1  
CARROLL COUNTY (IL)  
JACKSON COUNTY (IA)  
STRUCTURE NO. 008-6000

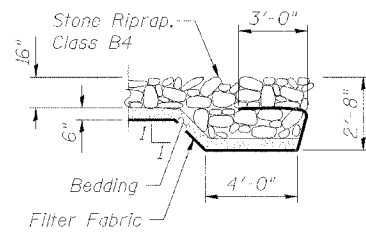
**STS CONSULTANTS**  
111 NE Jefferson Ave.  
Peoria, Illinois 61602  
Ph(309)676-8464  
FAX(309)676-5445  
IL Design Firm Reg. No. 184-001518

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

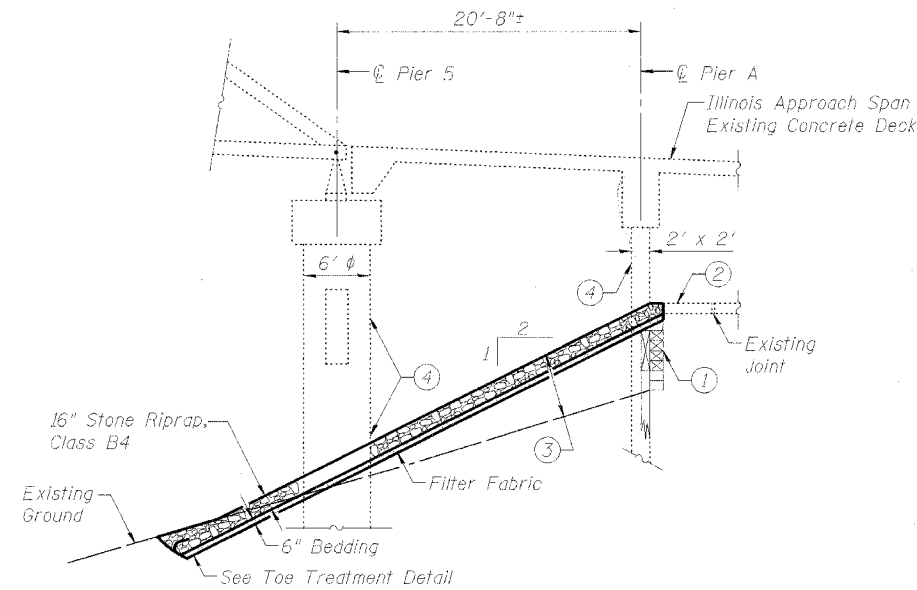
FOUR NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 17	6000 M-1	CARROLL	20	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		15 SHEETS



**TOE STONE RIPRAP TREATMENT**



**FLANK STONE RIPRAP TREATMENT**

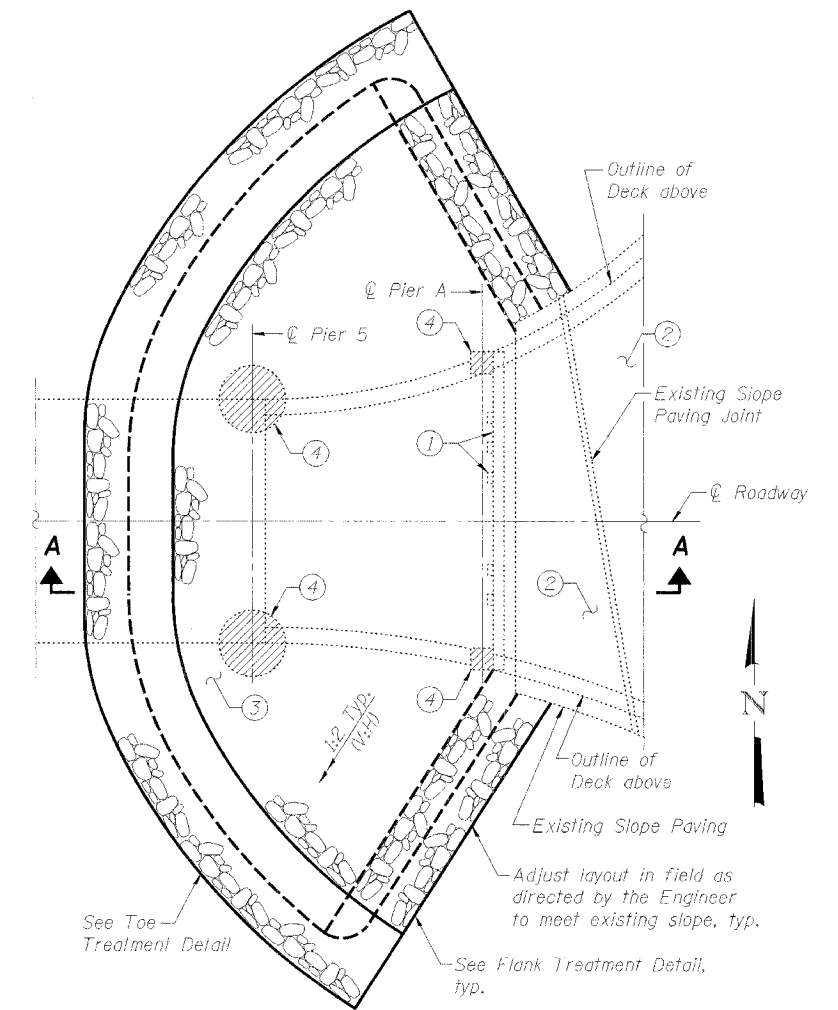


**SECTION A-A**  
(Looking North)

**KEY NOTES**

- ① Existing timber retaining wall (7'± max. height). Remove top 3 rows of timbers (5 rows to remain) and cut-off top 2'± of 5 timber piles. Cost included in Stone Riprap.
- ② Existing, approximately horizontal, concrete slope paving to remain.
- ③ Clear brush and place embankment; place Filter Fabric, Sand Bedding, and Stone Riprap, Class B4.
- ④ Do not disturb existing pier columns.

LOCATION	UNIT	TOTAL
Furnished Excavation	Cu. Yd.	55
Filter Fabric	Sq. Yd.	395
Stone Riprap, Class B4	Sq. Yd.	395



**PLAN VIEW**  
Slope Wall Treatment at East Abutment

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

**SLOPE WALL DETAILS**  
**F.A.P. RTE. 17 (US 52/IL 64)**  
**OVER MISSISSIPPI RIVER**  
**SECTION 6000 M-1**  
**CARROLL COUNTY (IL)**  
**JACKSON COUNTY (IA)**  
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