

DESIGNER: CLARK JONES  
PHONE: (309)671-3452

PROJECT ENGINEER: JIM MILLER  
PHONE: (309)671-3451

68394

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
404		TAZEWELL	7	1

D4 BRIDGE REPAIR 2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FAP 404 (IL 40)  
SECTION D4 BRIDGE REPAIR 2007

TAZEWELL COUNTY  
C-94-039-04

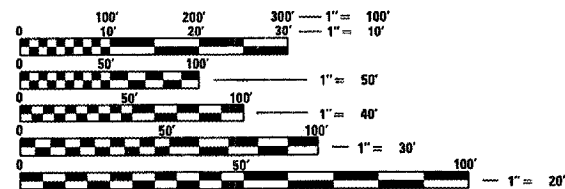
**INDEX OF SHEETS:**

1. COVER SHEET
2. COMMITMENTS & GENERAL NOTES
3. SUMMARY OF QUANTITIES
4. SCHEDULE OF QUANTITIES
- 5-7. REPAIR PLANS
8. STAGING PLANS

**STANDARDS:**

701001-01 701601-04

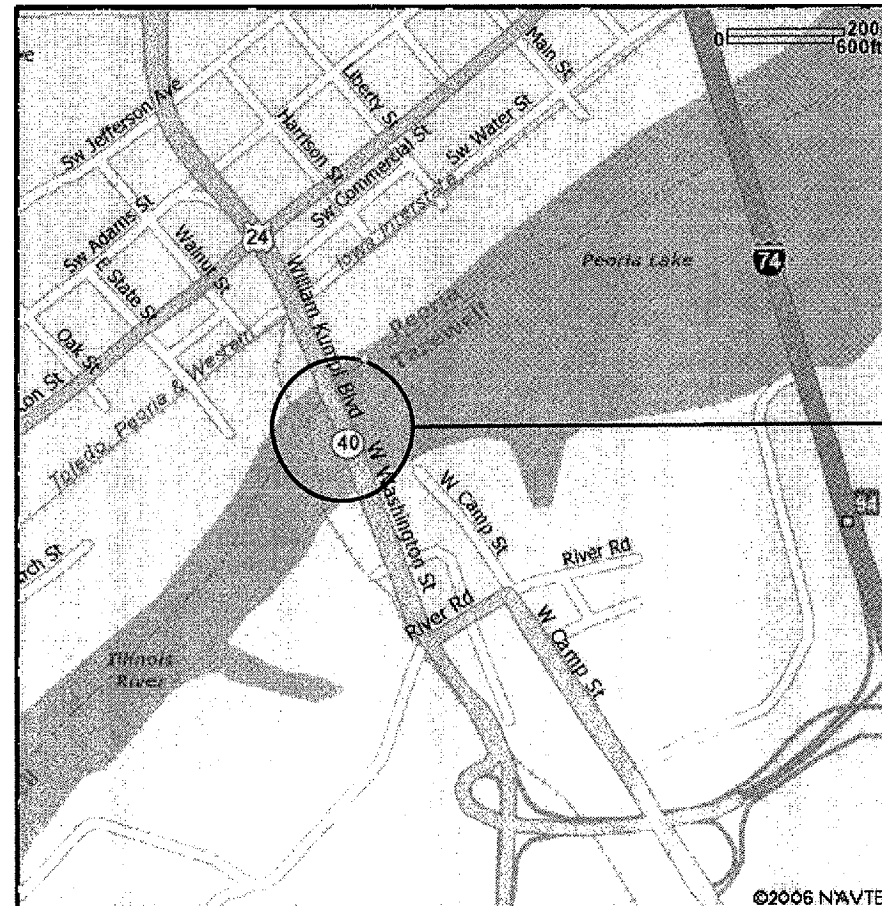
701006-02704001-03



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

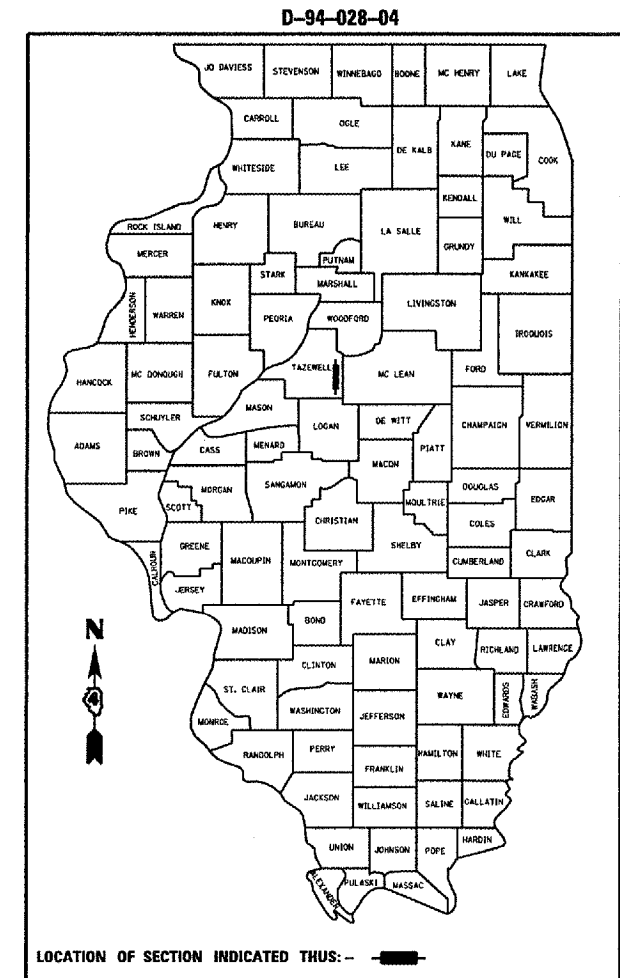
J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123

CONTRACT NO. 68394 CAT. NO. 032892-00D



LOCATION MAP

PROJECT CONSISTS OF BEAM END RETROFITS TO THE EXISTING PPC BULB TEE GIRDERS IN THE APPROACH SPANS OF THE BOB MICHEL BRIDGE, S.N. 090-0122, CARRYING IL 40 OVER THE ILLINOIS RIVER.



LOCATION OF SECTION INDICATED THUS: —

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 12/28/06  
*[Signature]*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 2, 2007  
*[Signature]*  
ENGINEER OF DESIGN AND ENVIRONMENT

February 2, 2007  
*[Signature]*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
404	*	TAZEWELL	7	2

\* D4 BRIDGE REPAIR 2007

## COMMITMENTS

NO COMMITMENTS HAVE BEEN MADE FOR THIS PROJECT.

## GENERAL NOTES

UNLESS DIRECTED OTHERWISE BY THE SHOTCRETE MANUFACTURER, 5 DAYS OF CURING TIME WILL BE REQUIRED. TRAFFIC WILL BE KEPT OFF THE REPAIR AREA DURING THIS TIME. SEE THE REPAIR PLANS FOR MORE INFORMATION.

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO WORK OR THE ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE PROJECT.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

### COMMITMENTS AND GENERAL NOTES

SCALE: VERT.  
HORIZ.  
DATE 01-03-2006

DRAWN BY CEJ  
CHECKED BY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
404	*	TAZEWELL	7	3

\* D4 BRIDGE REPAIR 2007

# SUMMARY OF QUANTITIES

100% STATE SAFETY - 2A  
TAZEWELL COUNTY

CODE NO.	ITEM	UNIT	RURAL	TOTAL
50501130	STRUCTURAL STEEL REPAIR	POUND	8,200	8,200
67100100	MOBILIZATION	L SUM	1	1
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1
X0325682	PUMPABLE CONCRETE MIX	CU. FT	81	81

PLOT DATE : \*DATE\*  
FILE NAME : \*FILE\*  
REFERENCE : \*REF\*

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SUMMARY OF QUANTITIES**  
SCALE: VERT.      DRAWN BY CEJ  
          HORIZ.      CHECKED BY  
DATE 01-03-2006

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
404		TAZEWELL	7	4

D4 BRIDGE REPAIR 2007

# SCHEDULE OF QUANTITIES

## STRUCTURAL STEEL REPAIR

PIER 1	1547 LBS
PIER 3	613 LBS
PIER 4	1056 LBS
PIER 5	541 LBS
PIER 10	478 LBS
PIER 11	700 LBS
PIER 12	955 LBS
PIER 13	700 LBS
PIER 14	477 LBS
PIER 16	1073 LBS
<u>TOTAL</u>	<u>8140 LBS</u>

## PUMPABLE CONCRETE MIX

PIER 1	13 CU. FT.
PIER 3	9 CU. FT.
PIER 4	9 CU. FT.
PIER 5	8 CU. FT.
PIER 10	7 CU. FT.
PIER 11	7 CU. FT.
PIER 12	7 CU. FT.
PIER 13	7 CU. FT.
PIER 14	7 CU. FT.
PIER 16	7 CU. FT.
<u>TOTAL</u>	<u>82 CU. FT.</u>

## TRAFFIC CONTROL & PROTECTION, STD. 701601

JOBSITE = 1.0 LUMP SUM

## RAILROAD PROTECTIVE LIABILITY INSURANCE

JOBSITE = 1.0 L SUM

## MOBILIZATION

JOBSITE = 1 EACH

PLOT DATE \* DATES  
FILE NAME \* FILES  
SCALE \* SHEETS  
REFERENCE \* SHEETS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

## SCHEDULE OF QUANTITIES

SCALE: VERT. 1"=10'  
HORIZ. 1"=40'  
DATE 01-03-2006

DRAWN BY CEJ  
CHECKED BY

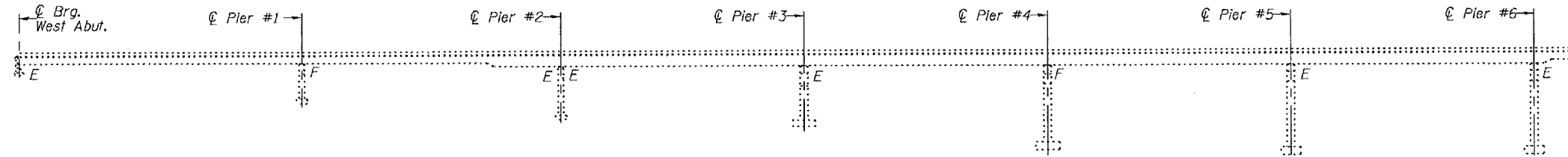
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. 1
		Tazewell	75	3 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

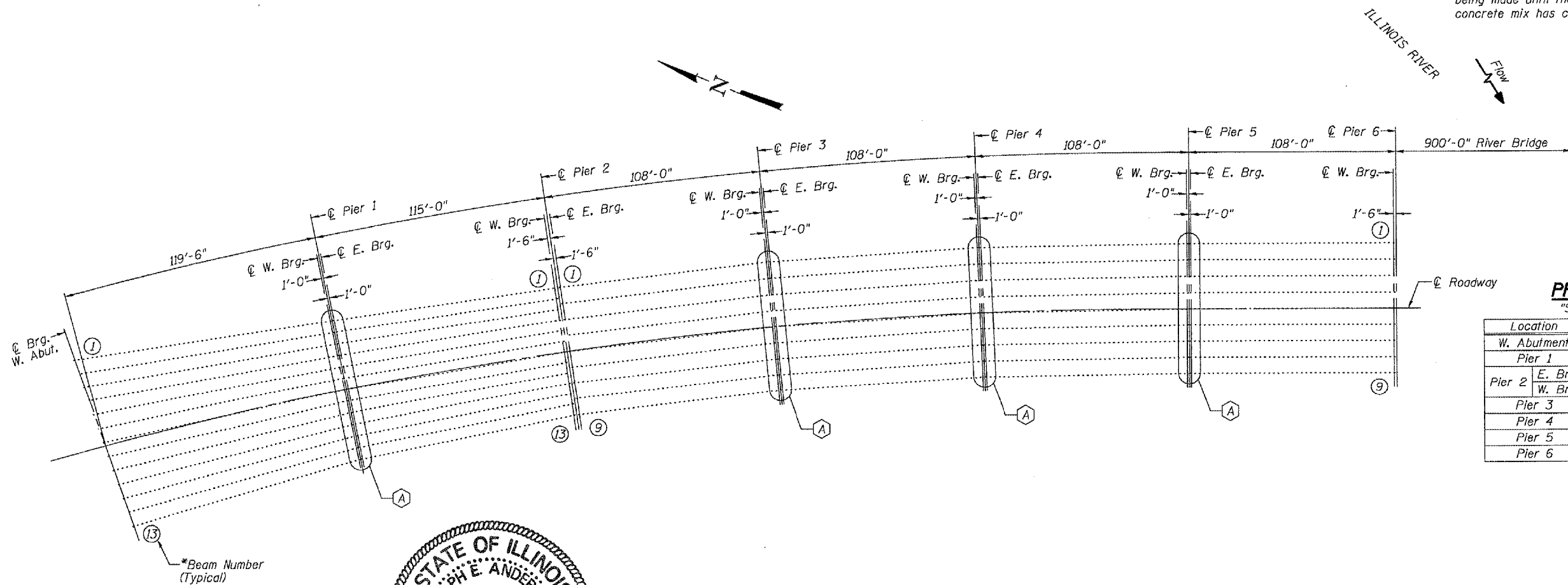
Contract Number: 68394

**GENERAL NOTES**

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.  
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.  
Existing reinforcement extending into the removal area shall be cleaned, straightened 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 shall be included with Pumpable Concrete Mix.  
All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Structural Steel Repair.  
Cost of field welding included in cost of Structural Steel Repair.  
Traffic shall be staged such that no traffic is allowed over the repair being made until the steel plate and concrete mix are placed and the concrete mix has cured according to the manufacturer's recommendations.



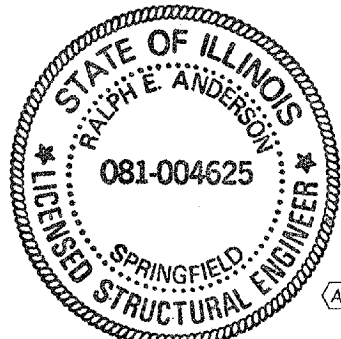
**ELEVATION**



**PPC BULB T BEAM SPACINGS**

"Spaces" spaces at "Spacing" = "Total"

Location	Spaces	Spacing	Total	Comments
W. Abutment	12	7'-8 <sup>3</sup> / <sub>16</sub> "	92'-6 <sup>3</sup> / <sub>16</sub> "	Along C. Brg.
Pier 1	12	6'-2 <sup>5</sup> / <sub>16</sub> "	74'-1 <sup>7</sup> / <sub>8</sub> "	Along C. Pier
Pier 2 E. Brg.	12	5'-8 <sup>1</sup> / <sub>4</sub> "	68'-3"	Along C. Pier
Pier 2 W. Brg.	8	8'-6 <sup>3</sup> / <sub>8</sub> "	68'-3"	Along C. Pier
Pier 3	8	8'-6 <sup>3</sup> / <sub>8</sub> "	68'-3"	Along C. Pier
Pier 4	8	8'-6 <sup>3</sup> / <sub>8</sub> "	68'-3"	Along C. Pier
Pier 5	8	8'-6 <sup>3</sup> / <sub>8</sub> "	68'-3"	Along C. Pier
Pier 6	8	8'-6 <sup>3</sup> / <sub>8</sub> "	68'-3"	Along C. Pier



**PLAN**

(A) Diaphragm Concrete Repair See Sheet 3 of 3.

\*All Beams are numbered starting with Beam 1 at the North Side of the Structure and running South to either Beam 9, Beam 10 or Beam 13.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Pumpable Concrete Mix	Cu. Ft.	81
Structural Steel Repair	Pound	8200

DESIGNED	Adrian Holloway
CHECKED	Victor Veliz
DRAWN	ATH
CHECKED	ATH

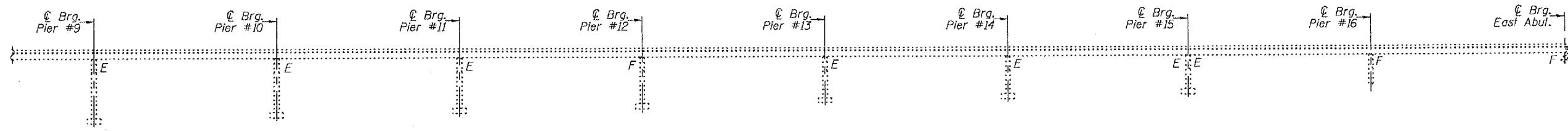
EXAMINED	January 12, 2007
PASSED	Ralph E. Anderson

Expires 11-30-08

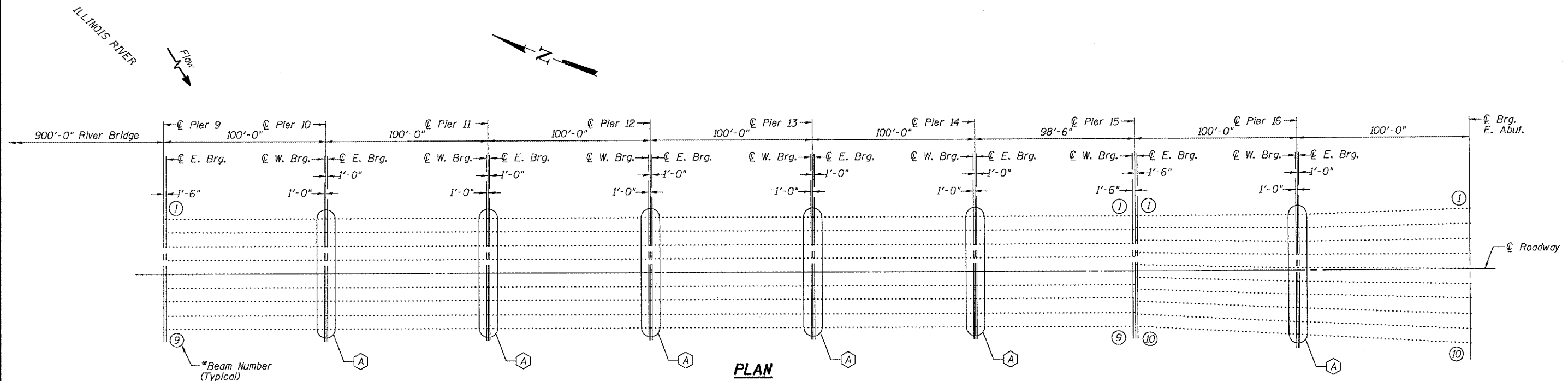
**PLAN AND ELEVATION**  
F.A.U. RT. 6713  
TAZEWELL COUNTY  
SN.090-0122

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. 2
-	-	Tazewell	76	3 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	Contract Number: 68394	



**ELEVATION**



**PLAN**

(A) Diaphragm Concrete Repair See Sheet 3 of 3.

\*All Beams are numbered starting with Beam 1 at the North Side of the Structure and running South to either Beam 9, Beam 10 or Beam 13.

**PPC BULB T BEAM SPACINGS**

"Spaces" spaces at "Spacing" = "Total"

Location	Spaces	Spacing	Total	Comments
Pier 9	8	8'-6 <sup>3</sup> / <sub>8</sub> "	68'-3"	Along $\bar{C}$ Pier
Pier 10	8	8'-6 <sup>3</sup> / <sub>8</sub> "	68'-3"	Along $\bar{C}$ Pier
Pier 11	8	8'-6 <sup>3</sup> / <sub>8</sub> "	68'-3"	Along $\bar{C}$ Pier
Pier 12	8	8'-6 <sup>3</sup> / <sub>8</sub> "	68'-3"	Along $\bar{C}$ Pier
Pier 13	8	8'-6 <sup>3</sup> / <sub>8</sub> "	68'-3"	Along $\bar{C}$ Pier
Pier 14	8	8'-6 <sup>3</sup> / <sub>8</sub> "	68'-3"	Along $\bar{C}$ Pier
Pier 15	E. Brg.	9	7'-7"	Along $\bar{C}$ Brg.
	W. Brg.	8	8'-6 <sup>3</sup> / <sub>8</sub> "	Along $\bar{C}$ Pier
Pier 16	E. Brg.	9	8'-3"	Note A
	W. Brg.	9	8'-3"	Note B
E. Abutment	9	9'-3 <sup>3</sup> / <sub>8</sub> "	83'-6 <sup>3</sup> / <sub>8</sub> "	Along $\bar{C}$ Brg.

Note A: Beam 5 is 1'-6<sup>1</sup>/<sub>4</sub>" North of  $\bar{C}$  of Roadway along  $\bar{C}$  W. Brg. Beam 6 is 6'-8<sup>3</sup>/<sub>4</sub>" South of  $\bar{C}$  of Roadway along  $\bar{C}$  W. Brg.

Note B: Beam 5 is 1'-5<sup>13</sup>/<sub>16</sub>" North of  $\bar{C}$  of Roadway along  $\bar{C}$  E. Brg. Beam 6 is 6'-9<sup>3</sup>/<sub>16</sub>" South of  $\bar{C}$  of Roadway along  $\bar{C}$  E. Brg.

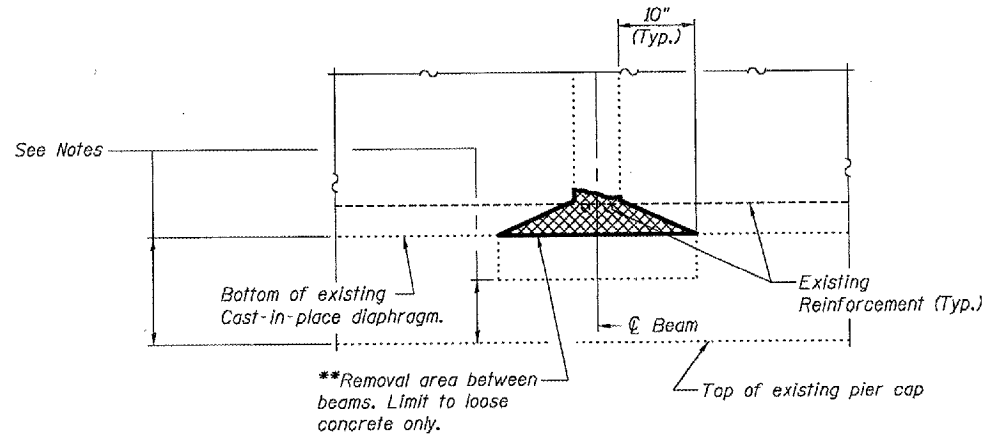
DESIGNED A.T.H.	January 12, 2007
CHECKED V.H.V.	EXAMINED <i>Carl Hoyer</i> ENGINEER OF STRUCTURAL SERVICES
DRAWN Drew Christopher	PASSED <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES
CHECKED A.T.H. V.H.V.	

**PLAN AND ELEVATION**  
**F.A.U. RT. 6713**  
**TAZEWELL COUNTY**  
**SN.090-0122**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TABLE FOR REPAIR PLATES

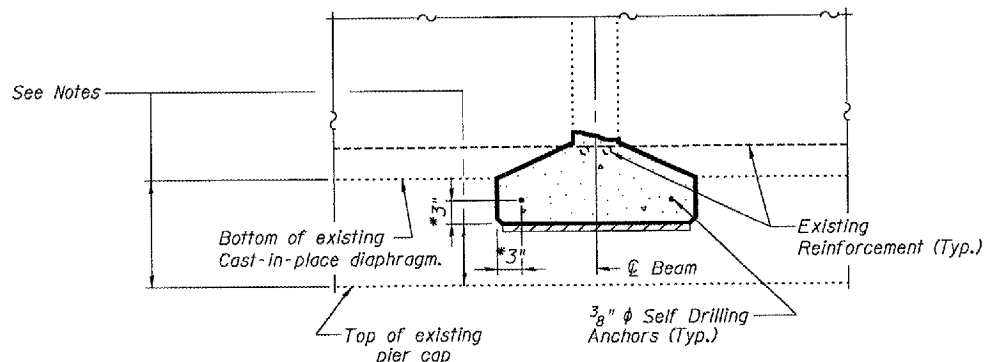
Girder	Mark	Pier 1	Pier 3	Pier 4	Pier 5	Pier 10	Pier 11	Pier 12	Pier 13	Pier 14	Pier 16
1	T	1'-3 1/4"	9 5/8"	1'-4 5/8"	8 1/2"	10"	11"	1'-3"	11"	10"	1'-2 1/2"
	B	1'-3"	8 3/8"	1'-3 3/8"	8"	10"	11"	1'-3"	11"	10"	1'-3 3/8"
	S	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"
2	T	1'-3 1/2"	9 5/8"	1'-4 5/8"	8 1/2"	10"	11"	1'-3"	11"	10"	1'-2 5/8"
	B	1'-3 1/8"	8 3/8"	1'-3 3/8"	8"	10"	11"	1'-3"	11"	10"	1'-3 3/8"
	S	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"
3	T	1'-3 3/4"	9 5/8"	1'-4 5/8"	8 1/2"	10"	11"	1'-3"	11"	10"	1'-2 5/8"
	B	1'-3 1/8"	8 3/8"	1'-3 3/8"	8"	10"	11"	1'-3"	11"	10"	1'-3 1/4"
	S	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"
4	T	1'-3 3/4"	9 5/8"	1'-4 5/8"	8 1/2"	10"	11"	1'-3"	11"	10"	1'-2 5/8"
	B	1'-3"	8 3/8"	1'-3 3/8"	8"	10"	11"	1'-3"	11"	10"	1'-3 1/4"
	S	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"
5	T	1'-4"	9 5/8"	1'-4 5/8"	8 1/2"	10"	11"	1'-3"	11"	10"	1'-2 3/4"
	B	1'-3 1/4"	8 3/8"	1'-3 3/8"	8"	10"	11"	1'-3"	11"	10"	1'-3 1/8"
	S	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"
6	T	1'-4 1/2"	9 5/8"	1'-4 5/8"	8 1/2"	10"	11"	1'-3"	11"	10"	1'-2 3/4"
	B	1'-3 1/4"	8 3/8"	1'-3 3/8"	8"	10"	11"	1'-3"	11"	10"	1'-3 1/8"
	S	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"
7	T	1'-4 3/4"	9 5/8"	1'-4 5/8"	8 1/2"	10"	11"	1'-3"	11"	10"	1'-3 1/4"
	B	1'-3 3/8"	8 3/8"	1'-3 3/8"	8"	10"	11"	1'-3"	11"	10"	1'-2 5/8"
	S	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"
8	T	1'-5 1/8"	9 5/8"	1'-4 5/8"	8 1/2"	10"	11"	1'-3"	11"	10"	1'-2 7/8"
	B	1'-3 1/2"	8 3/8"	1'-3 3/8"	8"	10"	11"	1'-3"	11"	10"	1'-3"
	S	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"
9	T	1'-5 3/8"	9 5/8"	1'-4 5/8"	8 1/2"	10"	11"	1'-3"	11"	10"	1'-3"
	B	1'-3 1/2"	8 3/8"	1'-3 3/8"	8"	10"	11"	1'-3"	11"	10"	1'-3"
	S	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"	2'-0 1/2"
10	T	1'-5 3/4"									1'-3"
	B	1'-3 5/8"									1'-3"
	S	2'-0 1/2"									2'-0 1/2"
11	T	1'-6"									
	B	1'-3 5/8"									
	S	2'-0 1/2"									
12	T	1'-6 3/8"									
	B	1'-3 3/4"									
	S	2'-0 1/2"									
13	T	1'-6 5/8"									
	B	1'-3 7/8"									
	S	2'-0 1/2"									



SECTION B-B

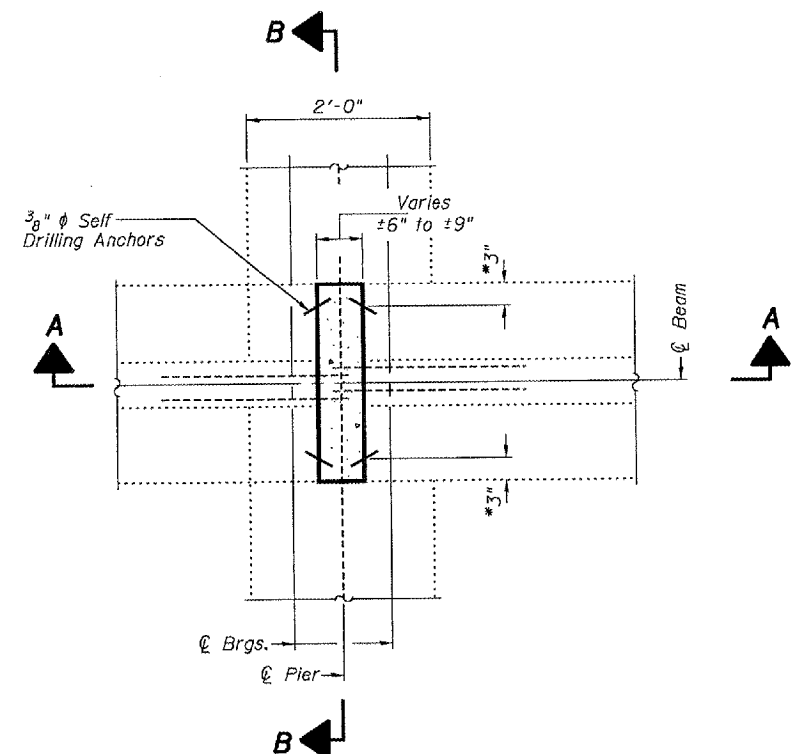
(Showing Concrete Removal)

\*\*Cost of Concrete Removal Included in cost of Pumpable Concrete Mix

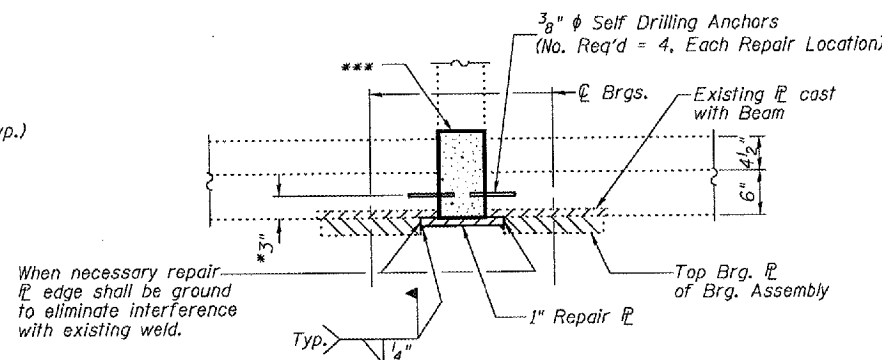


SECTION B-B

(Showing New Concrete)

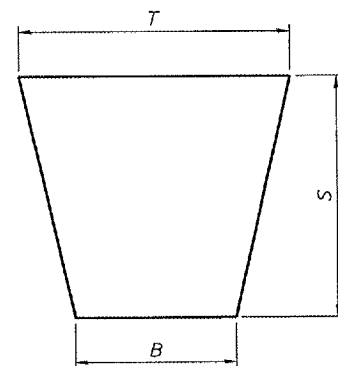


PLAN



SECTION A-A

\*\*\*Concrete mix to be placed between beam ends. Fill entire void between beam ends from top of repair I to bottom of existing diaphragm including any voids left by concrete removal. Temporary forms shall be used on the sides of the beams. A vent tube large enough to accommodate the aggregate in the mix shall be placed opposite to where the concrete mix is being applied. The vent tube shall extend as high up into the repair area as possible. Cap vent when a steady flow of the concrete mix is evident.



REPAIR PLATE DETAIL

Verify dimensions in field prior to ordering materials.

\*Adjust location as required to miss prestressing strands.

Notes:

The contractor is advised that vertical clearance between top of pier caps and bottom of existing diaphragms as well as top of pier caps and bottom of beams is small. Limited space is available for placement of steel plates and concrete mix. Top of piers to bottom of diaphragms varies and is 9" min. Top of piers to bottom of beams varies and is 3" min.

DESIGNED	A.T.H.
CHECKED	V.H.V.
DRAWN	Drew Christopher
CHECKED	A.T.H. V.H.V.

January 12, 2007	
EXAMINED	<i>[Signature]</i>
PASSED	<i>[Signature]</i>

REPAIR DETAILS  
F.A.U. RT. 6713  
TAZEWELL COUNTY  
SN.090-0122