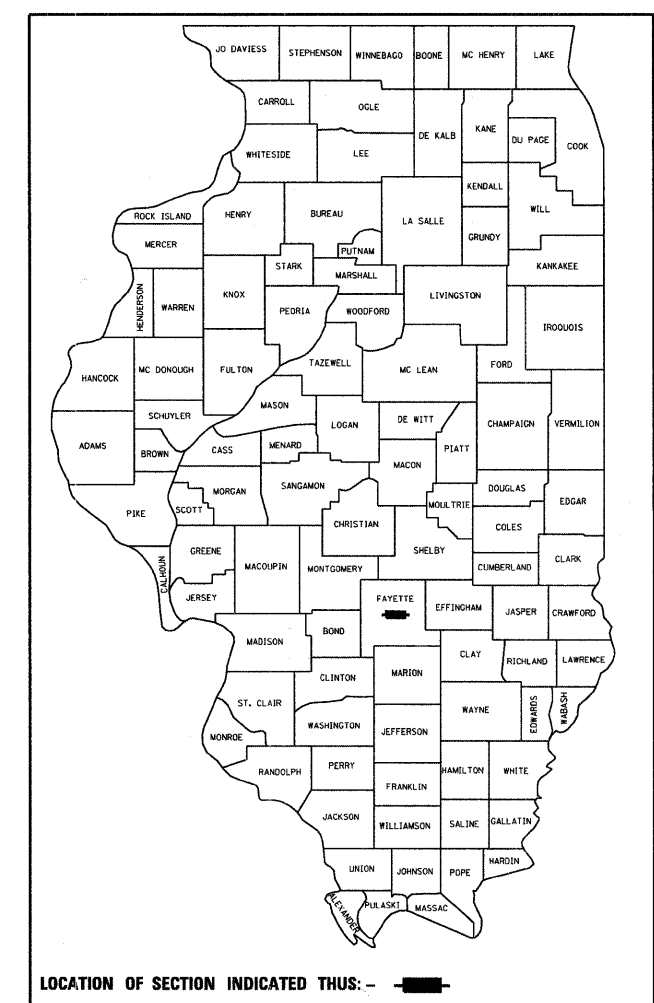


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70		FAYETTE	59	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 94993		

• D-7 BRIDGE DECK REPAIRS

D-97-028-03



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.I. ROUTE 70 (I-70)
SECTION D-7 BRIDGE DECK REPAIRS
PROJECT: IM-070-2(230)059
FAYETTE COUNTY
C-97-041-03

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STATION EQUATION:
1610 + 33.67 (BK) = STA. 90 + 55.19 (AH)

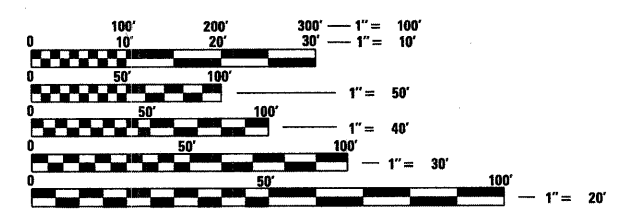
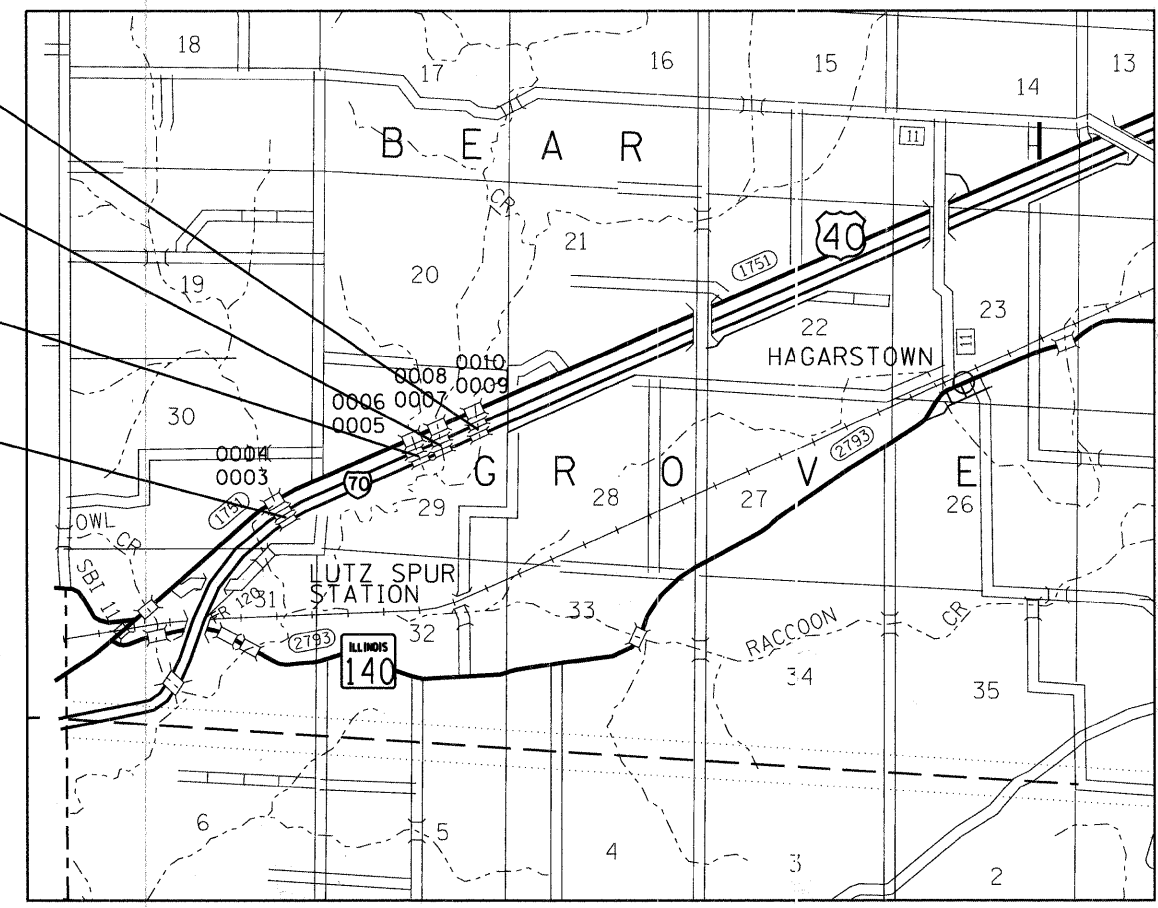
2007 ADT: 21,100 (46% TRUCKS)

STR. NOS:
026-0009 & 026-0010

STR. NOS.:
026-0007 & 026-0008

STR. NOS.:
026-0005 & 026-0006

STR. NOS.:
026-0003 & 026-0004



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

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

PROJECT ENGINEER: MIKE ALLEN
PROJECT MANAGER: KAREN THOLE
GROVE TOWNSHIP
CONTRACT NO 94993

GROSS LENGTH = 7081 FEET = 1.34 MILE
NET LENGTH = 7081 FEET = 1.34 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED October 17, 2008

Roger L. Driskell
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 5, 2008
Eric E. Harnett
INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

December 5, 2008
Christina M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS; THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" INDICATED ON THE CHECK SHEET, AND "THE SPECIAL PROVISIONS" INCLUDED IN THE PROPOSAL.

THIS PROJECT IS LOCATED ON FAI ROUTE 70 IN FAYETTE COUNTY BEGINNING 1.7 MILE EAST OF THE BOND COUNTY LINE CONTINUING EAST FOR 7081 FEET AND INCLUDES BRIDGE DECK REPAIRS ON STRUCTURES 026-0003, 026-0004, 026-0005, 026-0006, 026-0007, 026-0008, 026-0009, AND 026-0010. THE WORK INCLUDED IN THIS SECTION CONSISTS OF PCC BASE COURSE WIDENING, TRAFFIC CONTROL, BRIDGE DECK REPAIRS, PAVEMENT MARKING, AND OTHER WORK NECESSARY TO COMPLETE THE SECTION.

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

PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH SECTION 780 OF THE STANDARD SPECIFICATIONS.

THE TOTAL QUANTITY OF POLYUREA PAVEMENT MARKING, TYPE 1- LINE 4" CONSISTS OF 17,020 FEET OF YELLOW AND 17,020 FEET OF WHITE. THE TOTAL QUANTITY OF POLYUREA PAVEMENT MARKING, TYPE 1- LINE 6" CONSISTS OF 4,256 FEET OF WHITE.

THE COST OF TEMPORARY PAVEMENT MARKING IS INCLUDED IN THE COST OF STANDARDS 701400 & 701402. NO ADDITIONAL COMPENSATION WILL BE ALLOWED AS STATED IN ARTICLE 703.07 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. AN ESTIMATED QUANTITY OF 4,980 FOOT (WHITE) AND 17,020 FOOT (YELLOW) FOR STAGE 1 AND 4,980 (YELLOW) & 17,020 FOOT (WHITE) FOR STAGE 2 HAS BEEN CALCULATED.

THE SAW CUT REQUIRED FOR THE PAVED SHOULDER REMOVAL SHALL BE INCLUDED IN THE COST OF PAVED SHOULDER REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. ANY EXCAVATION NECESSARY FOR CONSTRUCTION OF THE PCC BASE COURSE WIDENING, 10" SHALL BE INCLUDED IN THE COST OF THE PCC BASE COURSE WIDENING, 10" AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

THE REMOVAL OF EXISTING RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER SQ YD FOR HOT-MIX ASPHALT SURFACE REMOVAL (DECK).

THE MATERIAL USED FOR AGGREGATE SHOULDERS, TYPE B SHALL BE CRUSHED STONE, OR CRUSHED CONCRETE.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN THE CALCULATING PLAN QUANTITIES:

AGGREGATE SHOULDERS	2.05 TONS/CU. YD.
SUB-BASE GRANULAR MATERIAL	2.05 TONS/CU. YD.

INDEX OF SHEETS

<u>SHEET NO</u>	<u>TITLE</u>
1	COVER SHEET
2	GENERAL NOTES & INDEX OF SHEETS
3	SUMMARY OF QUANTITIES
4	TYPICAL SECTION
5	SCHEDULE OF QUANTITIES
6-7	STRUCTURE STAGING TYPICAL
8-11	STAGE I TRAFFIC CONTROL
12-15	STAGE II TRAFFIC CONTROL
16-59	BRIDGE REPAIR PLANS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 59.

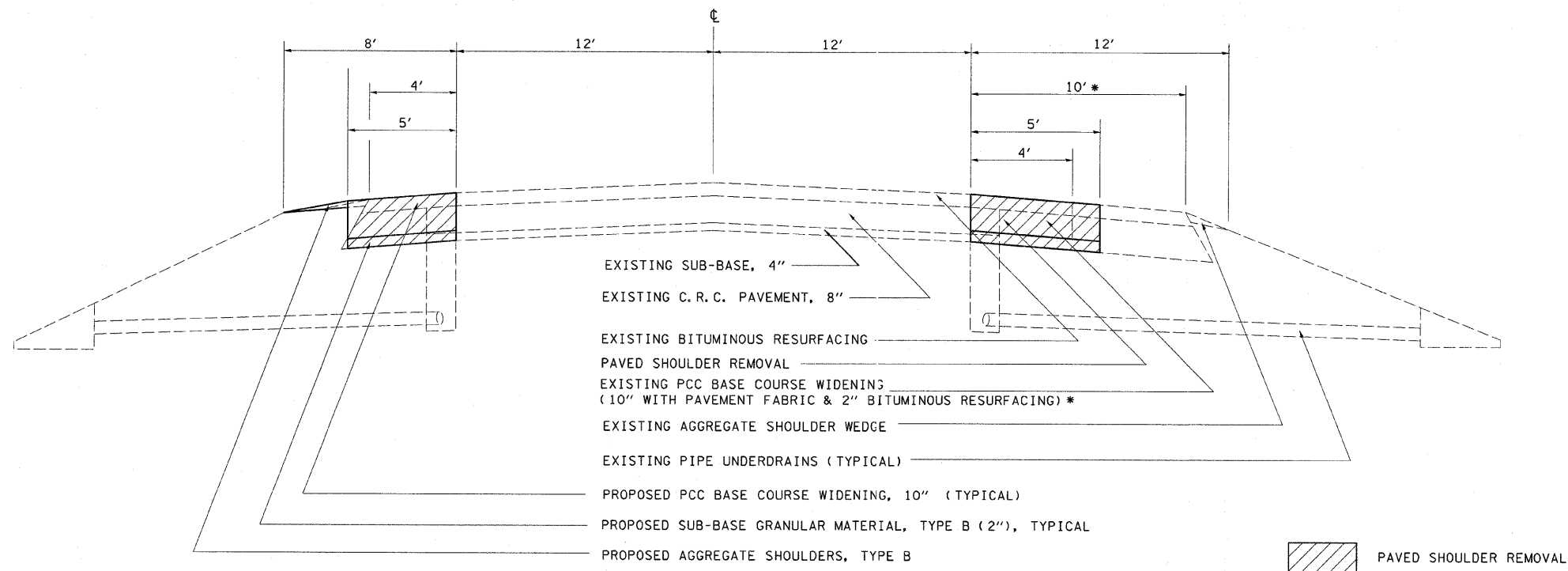
<u>STD. NO.</u>	<u>DESCRIPTION</u>
000001-05	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
515001-03	NAME PLATE FOR BRIDGES
642001-01	SHOULDER RUMBLE STRIPS
701400-03	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-05	LANE CLOSURE FREEWAY/EXPRESSWAY
701402-07	LANE CLOSURE, FREE-WAY/EXPRESSWAY WITH BARRIER
701426-03	LANE CLOSURE, MULTILANE INTERMITTENT OR MOVING OPERATIONS FOR SPEEDS > 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-05	TEMPORARY CONCRETE BARRIER
780001-02	TYPICAL PAVEMENT MARKINGS

• D-7 BRIDGE DECK REPAIRS

SUMMARY OF QUANTITIES			90% FED. 10% STATE TOTAL	CONSTRUCTION TYPE CODE SFTY-2A	CONSTRUCTION TYPE CODE SFTY-2A	CONSTRUCTION TYPE CODE SFTY-2A	CONSTRUCTION TYPE CODE SFTY-2A	CONSTRUCTION TYPE CODE SFTY-2A	CONSTRUCTION TYPE CODE SFTY-2A	CONSTRUCTION TYPE CODE SFTY-2A	CONSTRUCTION TYPE CODE SFTY-2A	CONSTRUCTION TYPE CODE SFTY-2A
CODE NO	ITEM	UNIT	QUANTITIES	S.N. 026-0003	S.N. 026-0001	S.N. 026-0005	S.N. 026-0006	S.N. 026-0007	S.N. 026-0008	S.N. 026-0009	S.N. 026-0010	
20201500	SUB-BASE GRANULAR MATERIAL, TYPE B	TON	500	63	63	57	66	61	61	63	66	
35400500	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 10"	SO YD	4391	556	550	498	579	538	538	553	579	
44000915	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SO YD	5496	457	457	490	490	778	778	1023	1023	
44004250	PAVED SHOULDER REMOVAL	SO YD	4006	500	550	447	522	485	483	497	522	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	2026	258	253	235	262	243	253	256	266	
50102400	CONCRETE REMOVAL	CU YD	148.6	10.4	10.3	23	23.1	26.9	26.9	14.1	13.9	
50300100	FLOOR DRAINS	EACH	71	14	14					21	22	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	164.7	18.4	18.4	23	23.1	26.9	26.9	14.1	13.9	
50300260	BRIDGE DECK GROOVING	SO YD	5208	433	433	464	464	737	737	970	970	
50300300	PROTECTIVE COAT	SO YD	5240	438	438	451	451	731	731	1000	1000	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3700							1850	1850	
50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	28							14	14	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	25150	1005	1005	4630	4630	4980	4980	1960	1960	
50800515	BAR SPLICERS	EACH	216	12	12	36	36	36	36	24	24	
51500200	RELOCATING NAME PLATES	EACH	6			1	1	1	1	1	1	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	626			93	93	110	110	110	110	
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	28							14	14	
52100520	ANCHOR BOLTS, 1"	EACH	56							28	28	
64200105	SHOULDER RUMBLE STRIP	FOOT	7903	1001	990	897	1041	969	967	995	1043	
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	
67100100	MOBILIZATION	L SUM	1	0.13	0.12	0.13	0.12	0.13	0.12	0.13	0.12	
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	0.13	0.12	0.13	0.12	0.13	0.12	0.13	0.12	
70100805	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	L SUM	1	0.13	0.12	0.13	0.12	0.13	0.12	0.13	0.12	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	8	1	1	1	1	1	1	1	1	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	14666	1834	1833	1833	1833	1833	1833	1833	1834	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	3375	362.5	362.5	375	375	437.5	437.5	512.5	512.5	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	3375	362.5	362.5	375	375	437.5	437.5	512.5	512.5	
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	34040	4255	4255	4255	4255	4255	4255	4255	4255	
* 78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	4256	532	532	532	532	532	532	532	532	
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	20	2	2	2	2	3	3	3	3	
X0321468	PLUG EXISTING DECK DRAINS	EACH	113					28	28	28	29	
X0325774	RELOCATE TEMPORARY IMPACT ATTENUATOR	EACH	8	1	1	1	1	1	1	1	1	
XZ193500	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 1/4"	SO YD	5240	438	438	451	451	731	731	1000	1000	
Z0006204	BRIDGE DECK HYDRO-SCARIFICATION 1/2"	SO YD	5240	438	438	451	451	731	731	1000	1000	
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SO YD	137	7	7	4	2		3	49	65	
Z0030290	IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, WIDE), TEST LEVEL 3	EACH	8	1	1	1	1	1	1	1	1	

*Specialty Items

* D-7 BRIDGE DECK REPAIRS



**FAI ROUTE 70
EASTBOUND AND WESTBOUND LANES**

SEE PCC BASE COURSE WIDENING SCHEDULE FOR STATION TO STATION LOCATIONS

* EXISTING PCC BASE COURSE WIDENING IS 10' FROM:
STATION 1591+20 TO STATION 1594+00
STATION 1595+08 TO STATION 1596+05

NOTE:
TYPICALS NOT DRAWN TO SCALE

• D-7 BRIDGE DECK REPAIRS

FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -
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	PLT SCALE = 50.0000 1/ IN.	CHECKED -	REVISED -
	PLT DATE = 10/17/2009	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TYPICAL CROSS SECTION

SCALE: NA	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	F.A.I. RTE. 70	SECTION *	COUNTY FAYETTE	TOTAL SHEETS 59	SHEET NO. 4
				FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
				CONTRACT NO. 94993				

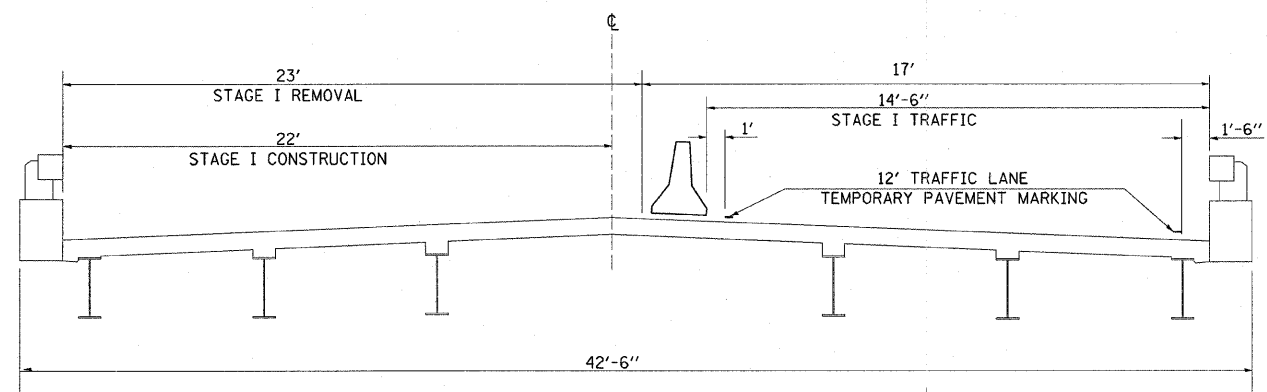
PAVEMENT MARKING SCHEDULE							
STATION TO STATION		LENGTH	POLYUREA PAVEMENT MARKING - LINE 4" (YELLOW)	POLYUREA PAVEMENT MARKING - LINE 4" (WHITE)	POLYUREA PAVEMENT MARKING - LINE 6" (WHITE)	WORK ZONE PAVEMENT MARKING REMOVAL	
		FEET	FEET	FEET	FEET	SQ FT	
I-70 WB							
1591+80.00	TO	1593+10.00	130	130	130	32.5	173
1593+10.00	TO	1596+13.00	303	303	303	75.8	404
1596+13.00	TO	1597+43.00	130	130	130	32.5	173
1597+43.00	TO	1610+33.67	1291	1290.7	1290.7	322.7	860
1610+33.67 BK = 90+55.19 AH STATION EQUATION							
90+55.19	TO	117+25.00	2670	2669.8	2669.8	667.5	1780
117+25.00	TO	118+55.00	130	130	130	32.5	173
118+55.00	TO	128+48.00	993	993	993	248.3	1324
128+48.00	TO	129+78.00	130	130	130	32.5	173
129+78.00	TO	135+45.00	567	567	567	141.8	378
135+45.00	TO	136+75.00	130	130	130	32.5	173
136+75.00	TO	141+29.00	454	454	454	113.5	605
141+29.00	TO	142+59.00	130	130	130	32.5	173
142+59.00	TO	147+59.00	500	500	500	125.0	333
147+59.00	TO	157+59.00	1000	1000	1000	250.0	667
I-70 EB							
1576+97.00	TO	1586+97.00	1000	1000	1000	250.0	667
1586+97.00	TO	1591+97.00	500	500	500	125.0	333
1591+97.00	TO	1593+27.00	130	130	130	32.5	173
1593+27.00	TO	1596+40.00	313	313	313	78.3	417
1596+40.00	TO	1597+70.00	130	130	130	32.5	173
1597+70.00	TO	1610+33.67	1264	1263.7	1263.7	315.9	842
1610+33.67 BK = 90+55.19 AH STATION EQUATION							
90+55.19	TO	117+38.00	2683	2682.8	2682.8	670.7	1789
117+38.00	TO	118+68.00	130	130	130	32.5	173
118+68.00	TO	127+86.00	918	918	918	229.5	1224
127+86.00	TO	129+16.00	130	130	130	32.5	173
129+16.00	TO	134+82.00	566	566	566	141.5	377
134+82.00	TO	136+27.00	130	130	130	32.5	173
136+27.00	TO	140+66.00	439	439	439	109.8	585
140+66.00	TO	141+96.00	130	130	130	32.5	173
TOTAL			17020	17020	17020	4256	14666

BASE COURSE WIDENING							
LOCATION		SUB-BASE GRANULAR MATERIAL, TYPE B	PAVED SHOULDER REMOVAL	PCC BASE COURSE WIDENING, 10"	SHOULDER RUMBLE STRIPS		
		TON	SQ YD	SQ YD	FOOT		
I-70 WB							
1591+60.00	TO	1594+34.00	17.3	152.2	152.2	274.0	
1595+41.00	TO	1597+63.00	14.0	123.3	123.3	222.0	
117+05.00	TO	119+95.00	18.3	161.1	161.1	290.0	
121+11.00	TO	125+90.00	30.3	266.1	266.1	479.0	
127+64.00	TO	129+98.00	14.8	130.0	130.0	234.0	
135+25.00	TO	138+15.00	18.3	161.1	161.1	290.0	
140+45.00	TO	142+79.00	14.8	130.0	130.0	234.0	
1591+60.00	TO	1594+25.00	16.8	147.2	147.2	265.0	
1595+34.00	TO	1597+63.00	14.5	127.2	127.2	229.0	
117+05.00	TO	119+81.00	17.5	122.7	153.3	276.0	
120+92.00	TO	125+64.00	29.9	209.8	262.2	472.0	
127+40.00	TO	129+98.00	16.3	114.7	143.3	258.0	
135+25.00	TO	137+86.00	16.5	116.0	145.0	261.0	
140+21.00	TO	142+79.00	16.3	114.7	143.3	258.0	
I-70 EB							
1591+77.00	TO	1594+00.00	14.1	123.9	123.9	223.0	
1595+16.00	TO	1597+90.00	17.3	152.2	152.2	274.0	
117+17.00	TO	119+37.00	13.9	122.2	122.2	220.0	
120+49.00	TO	124+86.00	27.6	242.8	242.8	437.0	
126+61.00	TO	129+36.00	17.4	152.8	152.8	275.0	
134+82.00	TO	137+02.00	13.9	122.2	122.2	220.0	
139+41.00	TO	142+16.00	17.4	152.8	152.8	275.0	
1591+77.00	TO	1594+07.00	14.6	102.2	127.8	230.0	
1595+16.00	TO	1597+90.00	17.3	121.8	152.2	274.0	
117+17.00	TO	119+51.00	14.8	104.0	130.0	234.0	
120+62.00	TO	125+10.00	28.3	199.1	248.9	448.0	
126+85.00	TO	129+36.00	15.9	111.6	139.4	251.0	
134+82.00	TO	137+36.00	16.1	112.9	141.1	254.0	
139+70.00	TO	142+16.00	15.6	109.3	136.7	246.0	
TOTALS			500.0	4006.0	4391.0	7903.0	

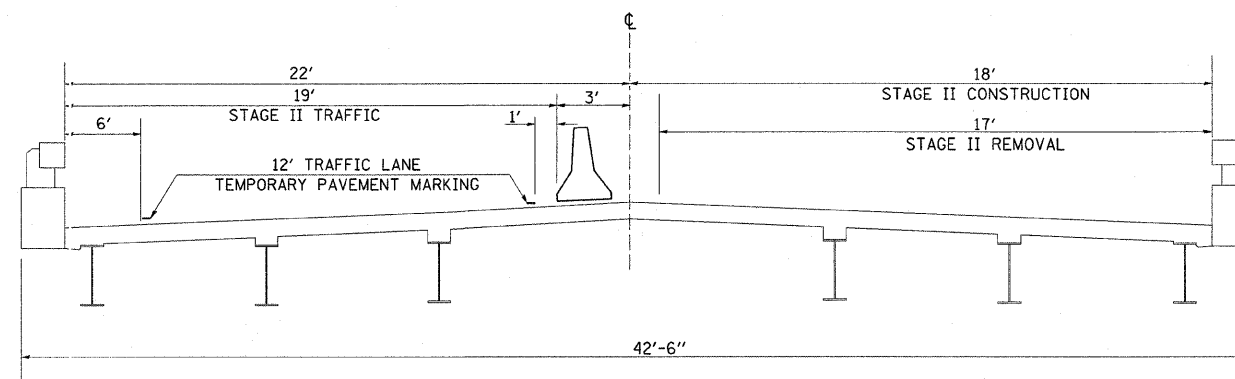
AGGREGATE SHOULDERS, TYPE B			TON
I-70 WB			
1591+60.00	TO	1594+25.00	136
1595+34.00	TO	1597+63.00	117
117+05.00	TO	119+81.00	141
120+92.00	TO	125+64.00	242
127+40.00	TO	129+98.00	132
135+25.00	TO	137+86.00	134
140+21.00	TO	142+79.00	132
I-70 EB			
1591+77.00	TO	1594+07.00	118
1595+16.00	TO	1597+90.00	140
117+17.00	TO	119+51.00	120
120+62.00	TO	125+10.00	230
126+85.00	TO	129+36.00	129
134+82.00	TO	137+36.00	130
139+70.00	TO	142+16.00	126
TOTAL			2026

* D-7 BRIDGE DECK REPAIRS

STAGE I CONSTRUCTION

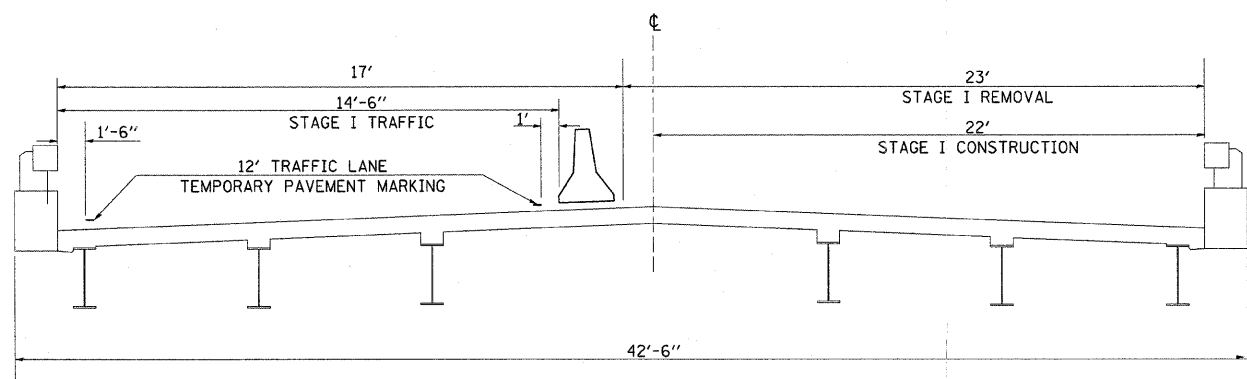


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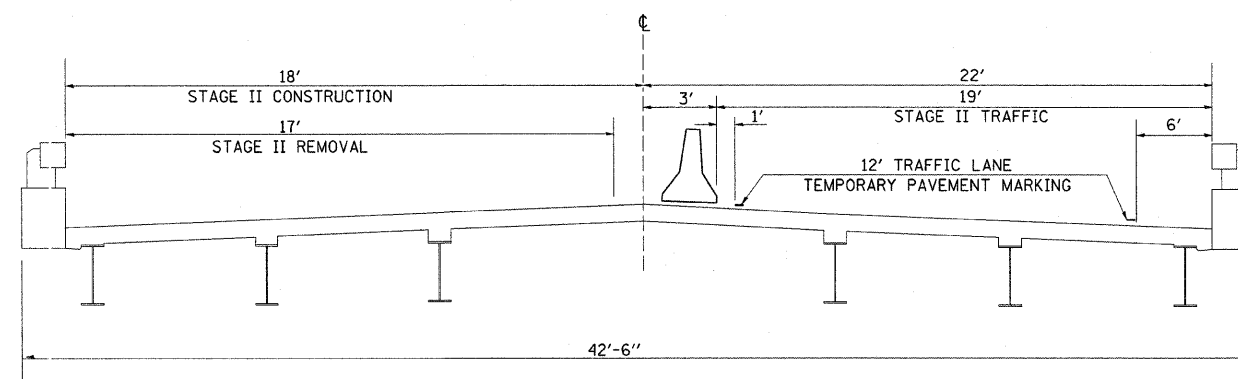


(LOOKING EAST)
STR # 026-0004

STAGE I CONSTRUCTION



STAGE II CONSTRUCTION



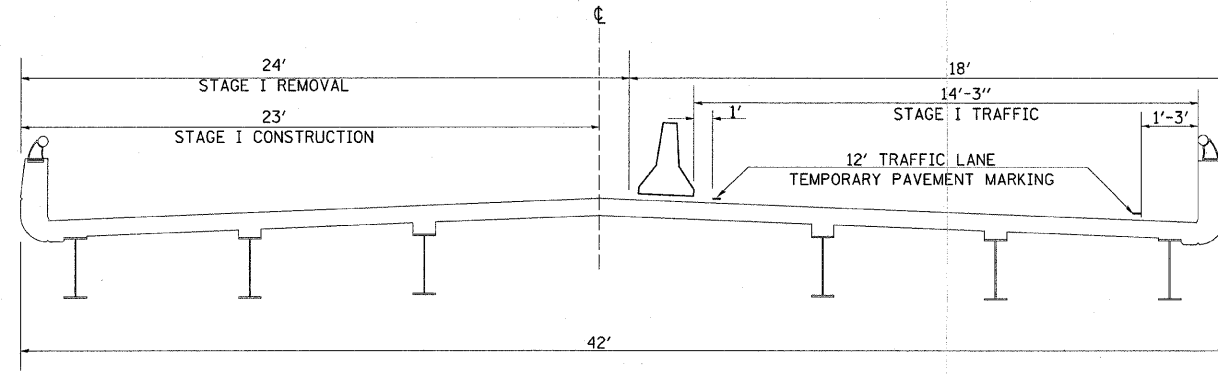
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NOTE:
TYPICALS NOT DRAWN TO SCALE

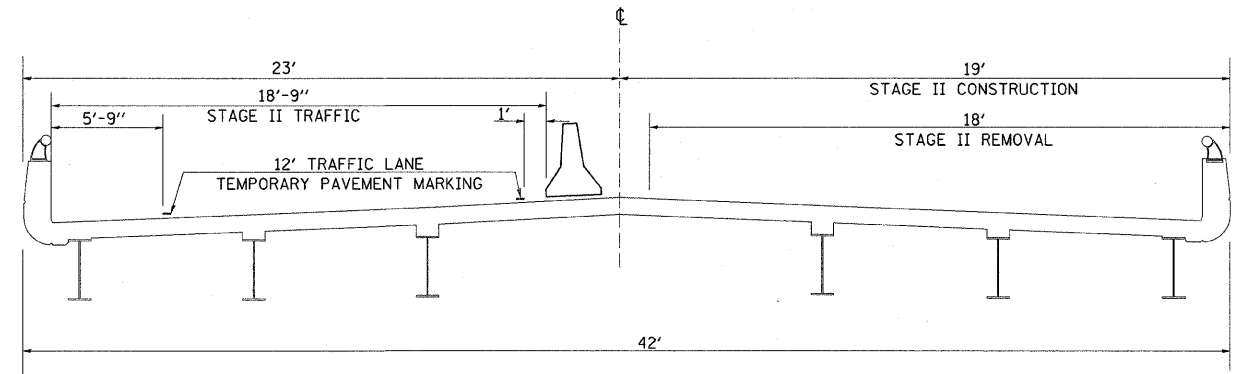
• D-7 BRIDGE DECK REPAIRS

FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STRUCTURE STAGING TYPICAL			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\pwork\swartzw\dms50711\shhtp\picels_94993.dgn	DRAWN -	REVISED -	70					•	FAYETTE	59	6	
PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -	CONTRACT NO. 94993									
PLOT DATE = 10/17/2009	DATE -	REVISED -	SCALE: NA		SHEET NO. 1 OF 2 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT				

STAGE I CONSTRUCTION



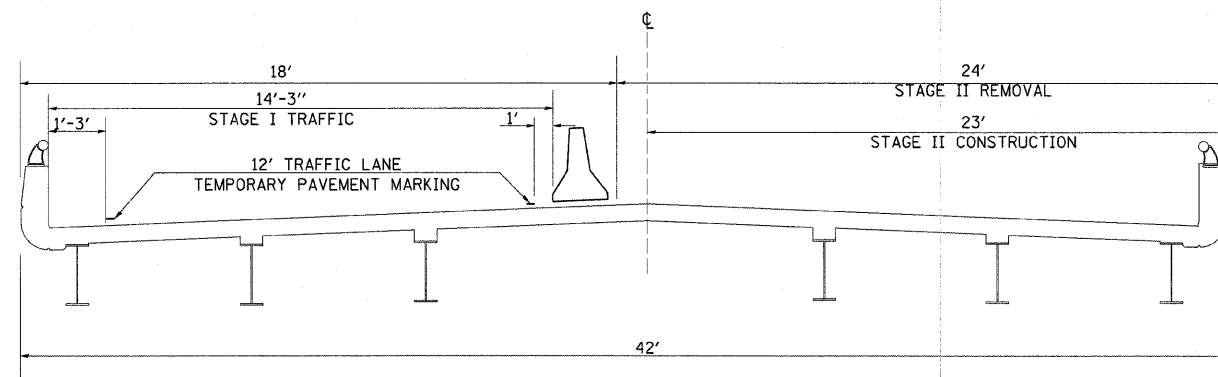
STAGE II CONSTRUCTION



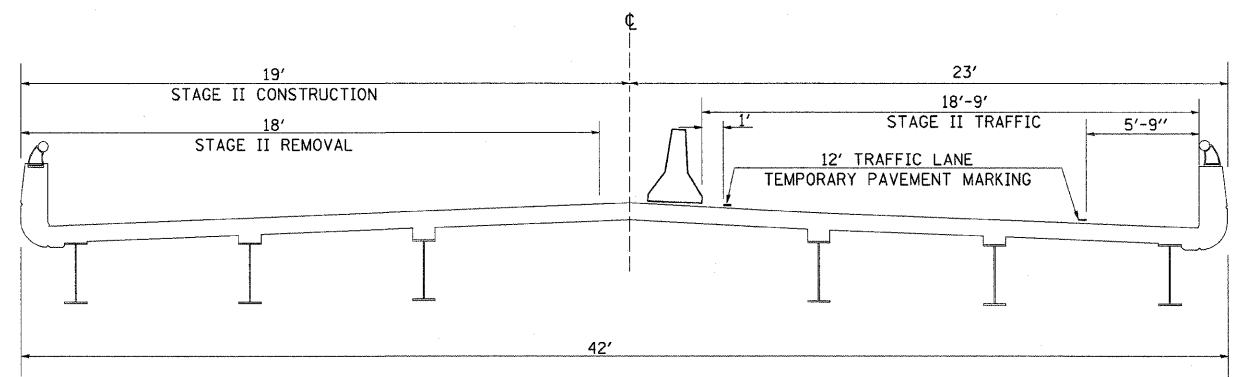
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STR # 026-0006
 STR # 026-0008
 STR # 026-0010

STAGE I CONSTRUCTION



STAGE II CONSTRUCTION



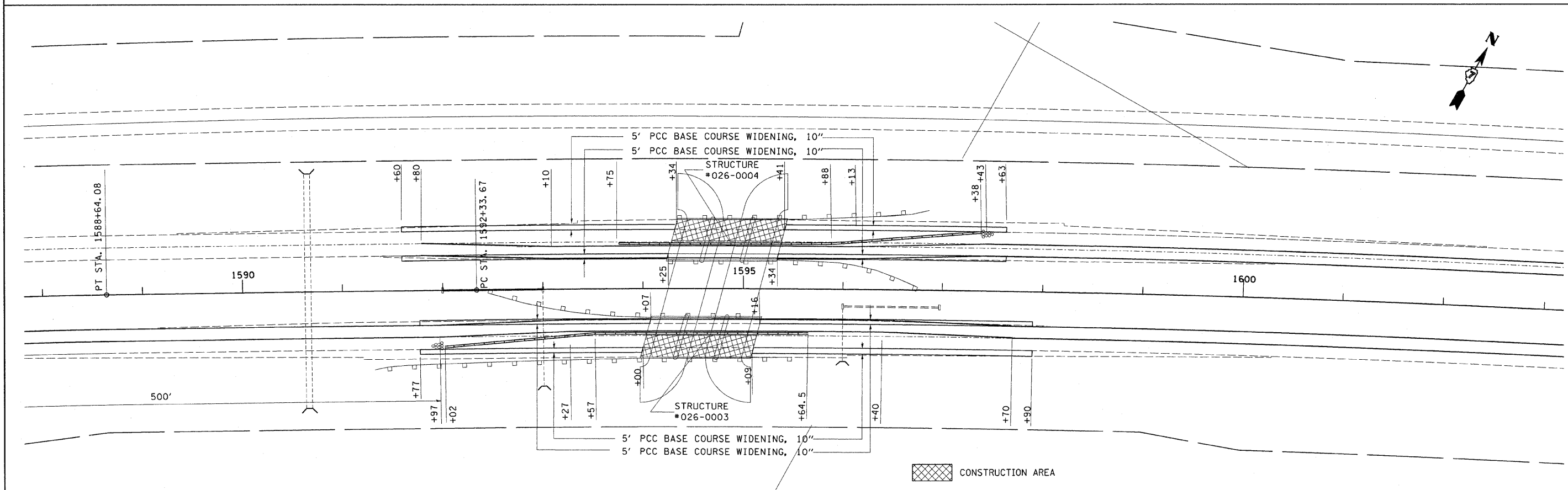
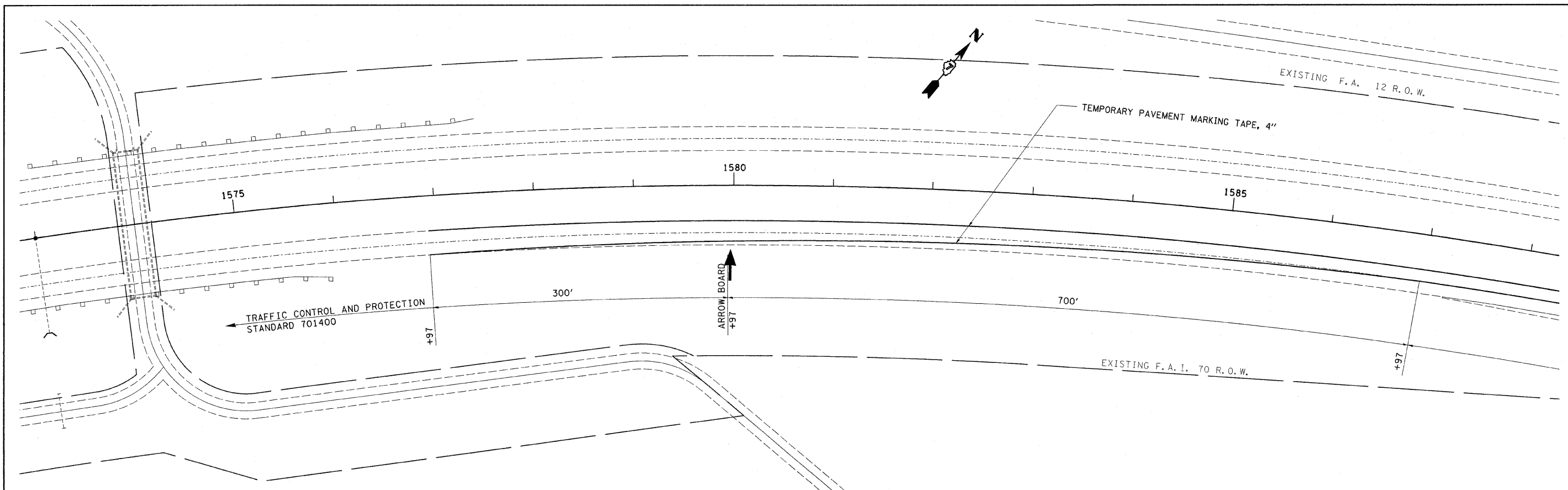
(LOOKING EAST)

STR # 026-0005
 STR # 026-0007
 STR # 026-0009

NOTE:
 TYPICALS NOT DRAWN TO SCALE

• D-7 BRIDGE DECK REPAIRS

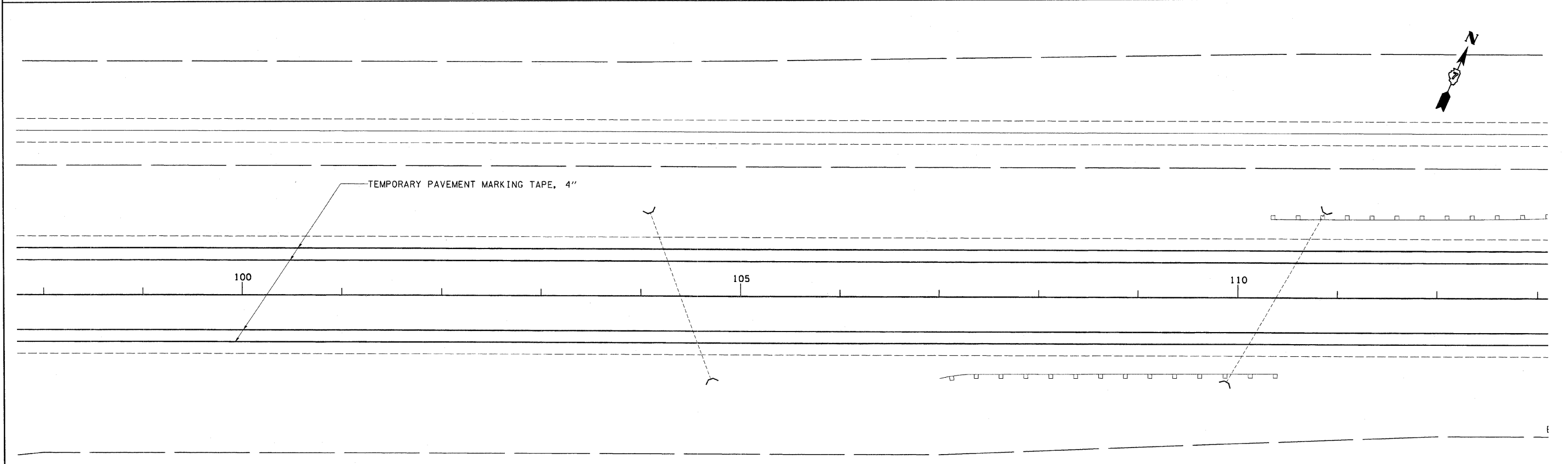
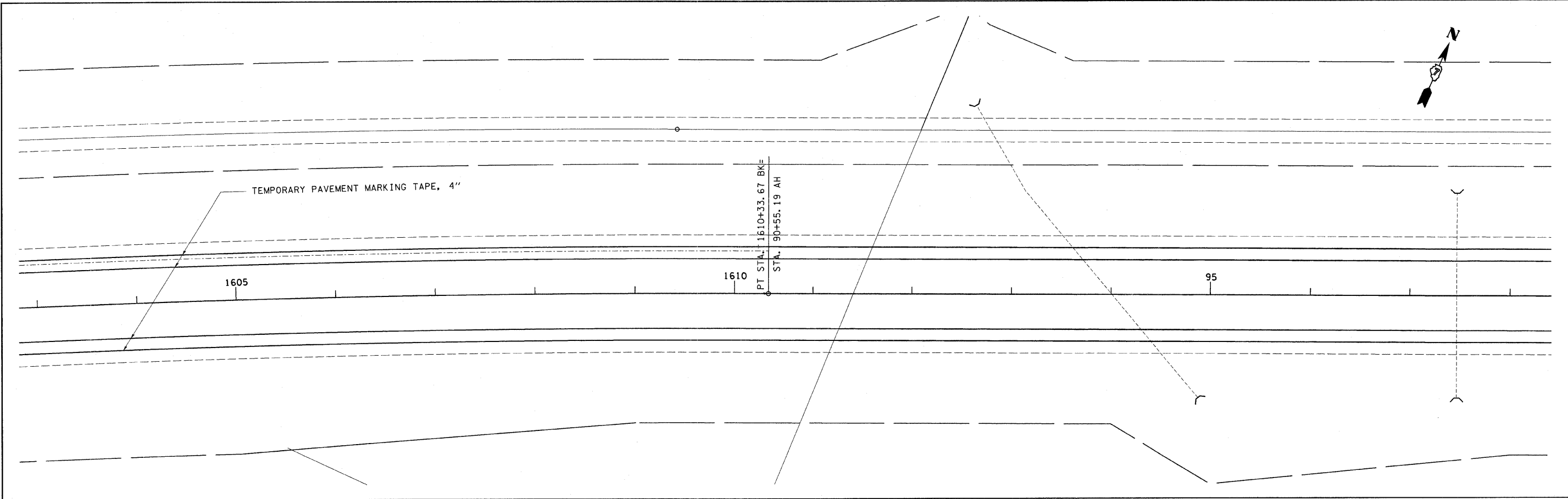
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	PLOT DATE = 10/17/2008	CHECKED -	REVISED -				TO STA.						
		DATE -	REVISED -					FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT				CONTRACT NO. 94993



CONSTRUCTION AREA

FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE I TRAFFIC CONTROL	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwork\pwork\swartzw\dms50711\shs	egel_94993.dgn	DRAWN -	REVISED -			70	.	FAYETTE	59	8	
	PLOT SCALE = 50,0000 "/> <td>CHECKED -</td> <td>REVISED -</td> <td colspan="6" style="text-align: center;">CONTRACT NO. 94993</td>	CHECKED -	REVISED -			CONTRACT NO. 94993					
	PLOT DATE = 10/17/2006	DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
					SCALE: 50	SHEET NO. 1 OF 4 SHEETS	STA. 1574+00	TO STA. 1603+00			

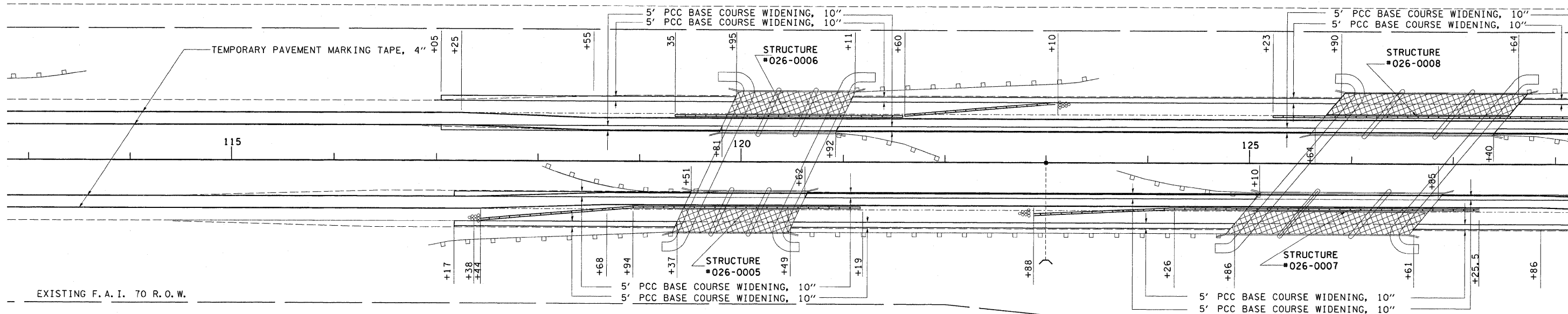
• 0-7 BRIDGE DECK REPAIRS



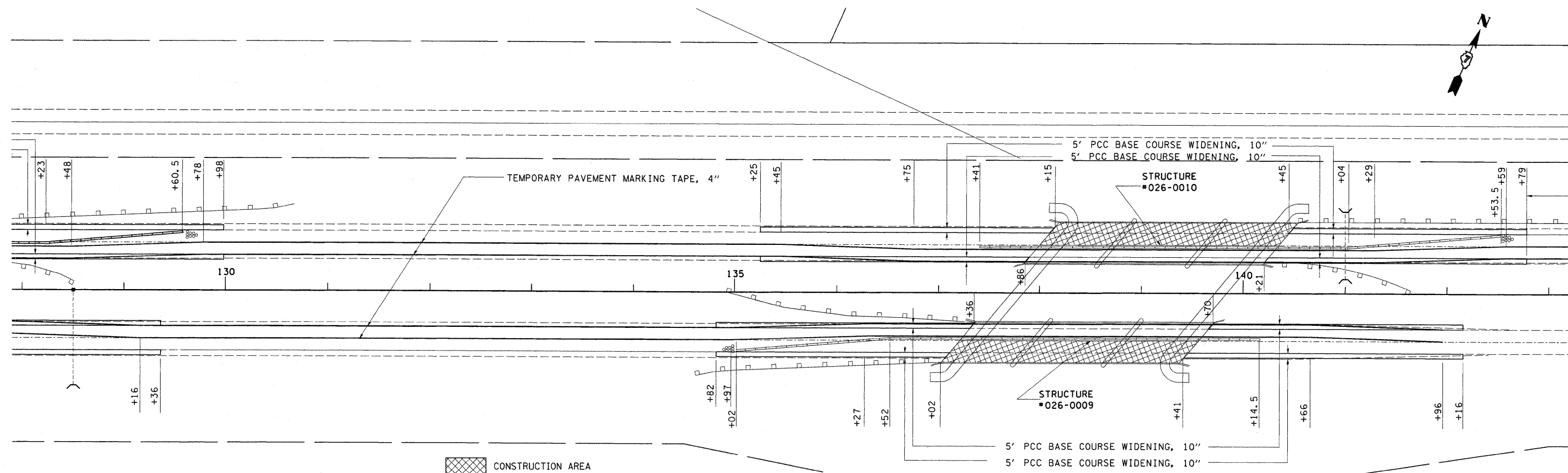
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PLOT SCALE = 50.0000' / IN.		CHECKED -		REVIS	REVISED -		SCALE: 50		SHEET NO. 2 OF 4 SHEETS		STA. 1603+00	TO STA. 113+00	CONTRACT NO. 94993	
PLOT DATE = 10/17/2008		DATE -		REVIS	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

• D-7 BRIDGE DECK REPAIRS

EXISTING F. A. I. 70 R. O. W.



 CONSTRUCTION AREA



 CONSTRUCTION AREA

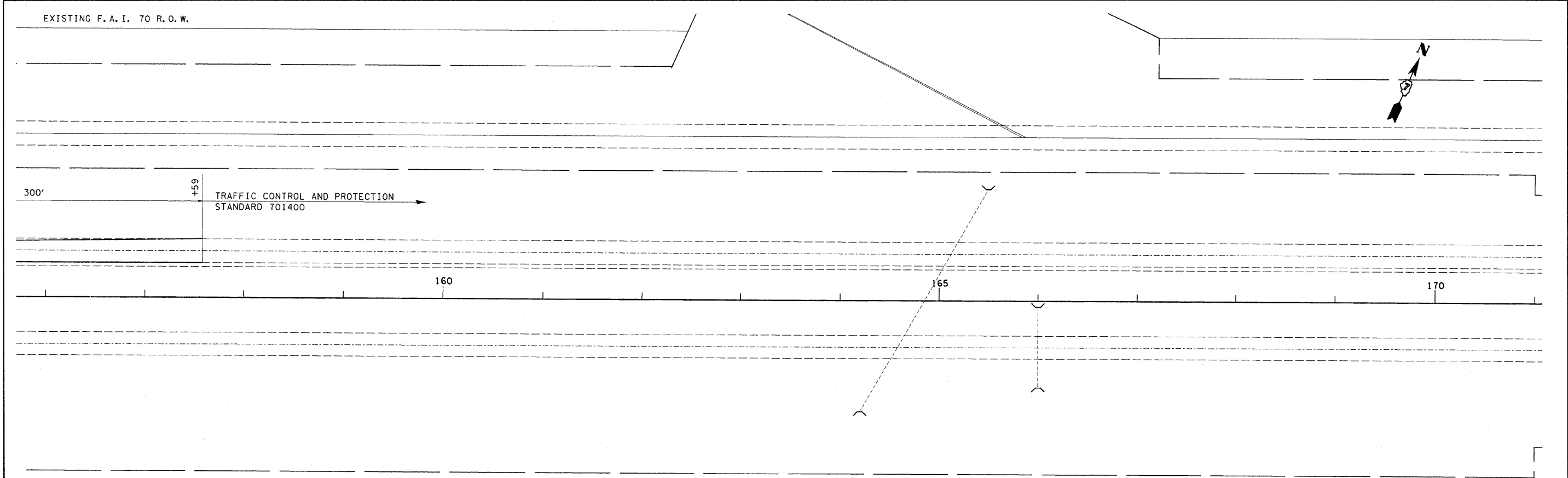
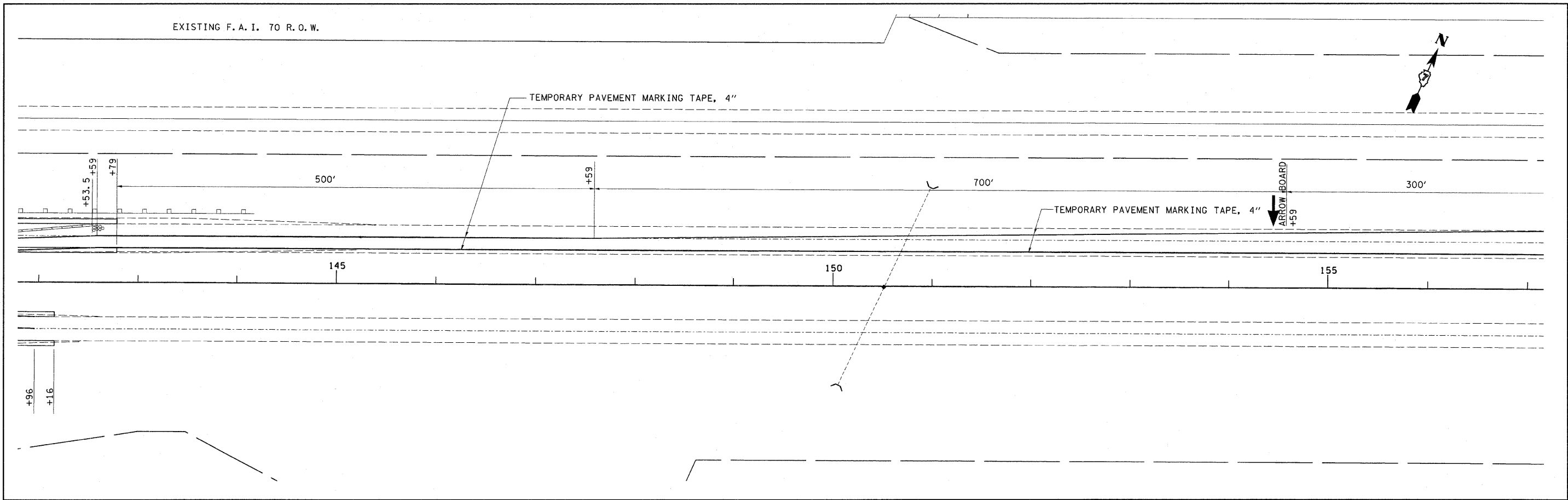
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I TRAFFIC CONTROL

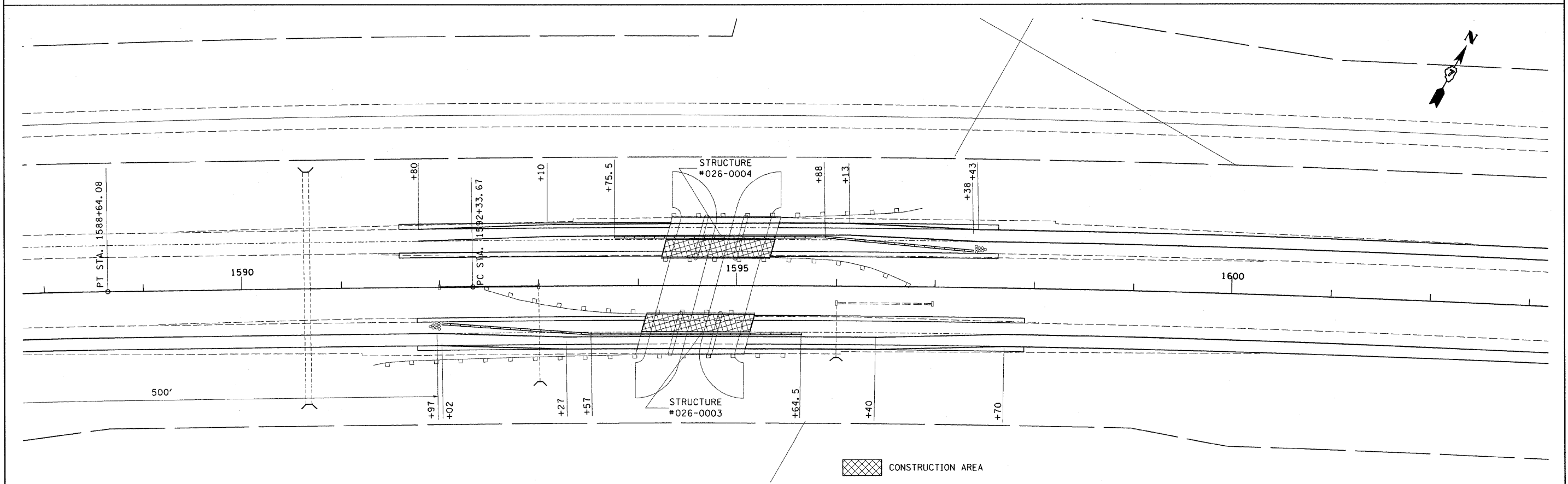
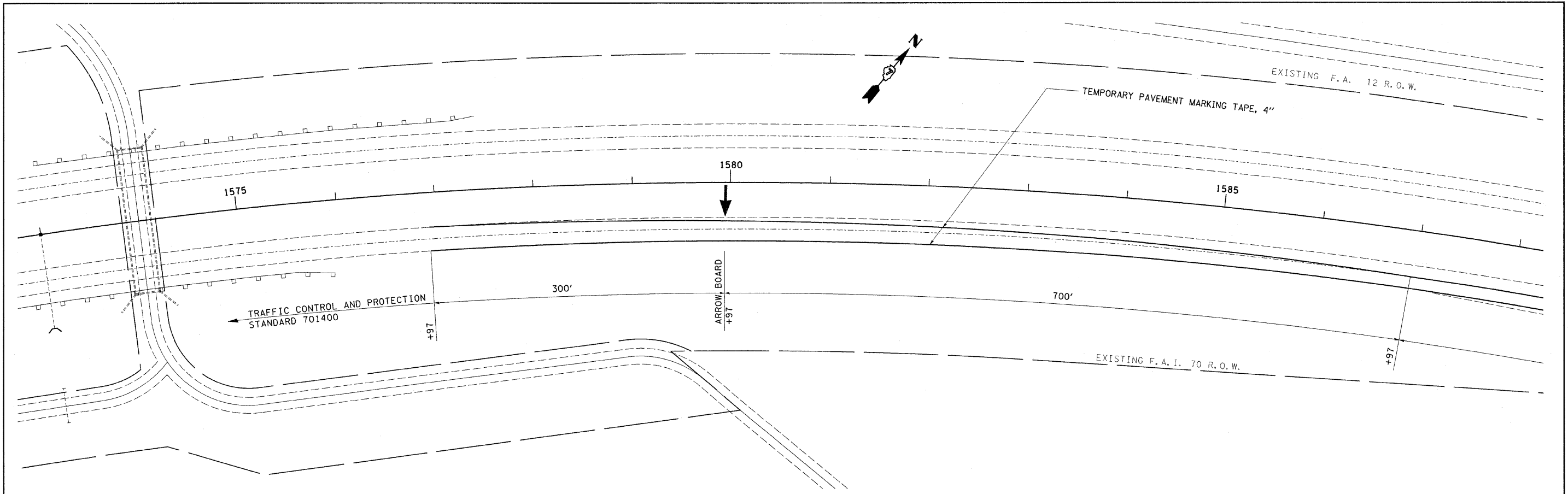
• D-7 BRIDGE DECK REPAIRS

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			CONTRACT NO. 04007	

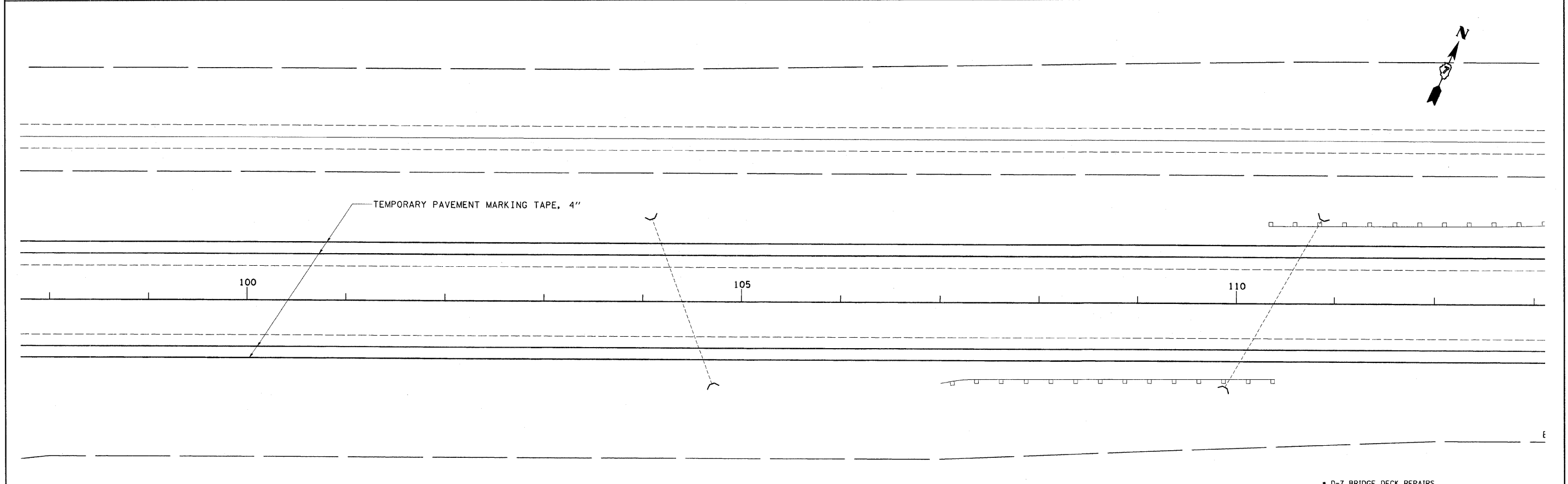
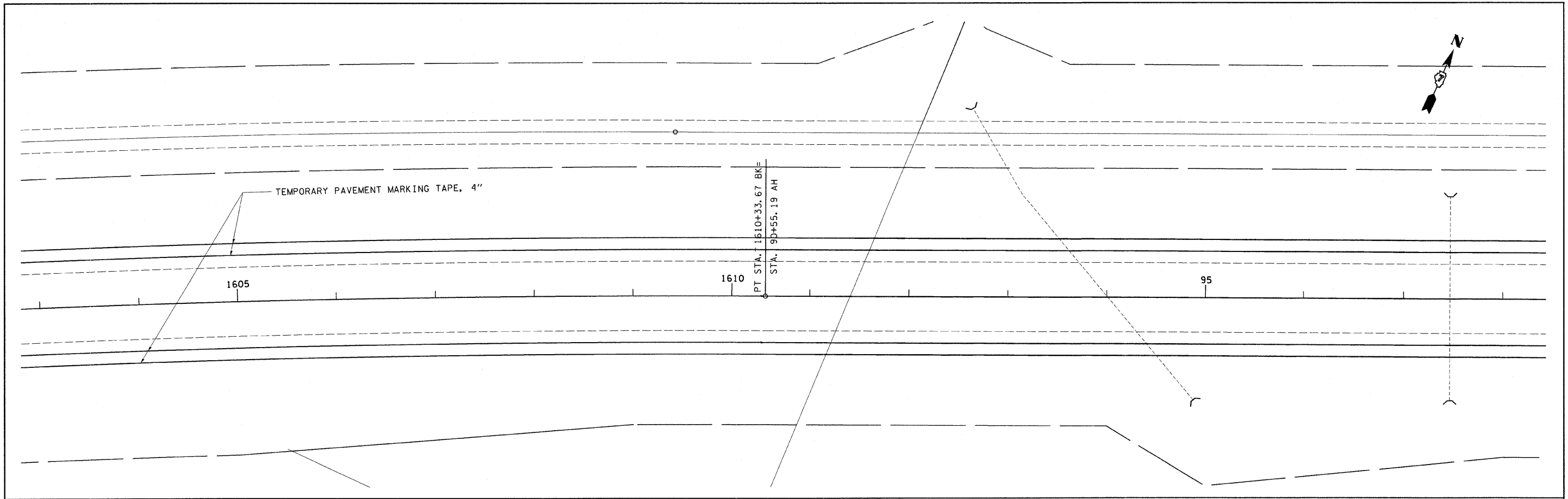


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PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -	SCALE: 50			SHEET NO. 4 OF 4 SHEETS			STA. 142+00 TO STA. 171+00			
PLOT DATE = 10/17/2008		DATE -	REVISED -	FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT			CONTRACT NO. 94993			

• D-7 BRIDGE DECK REPAIRS



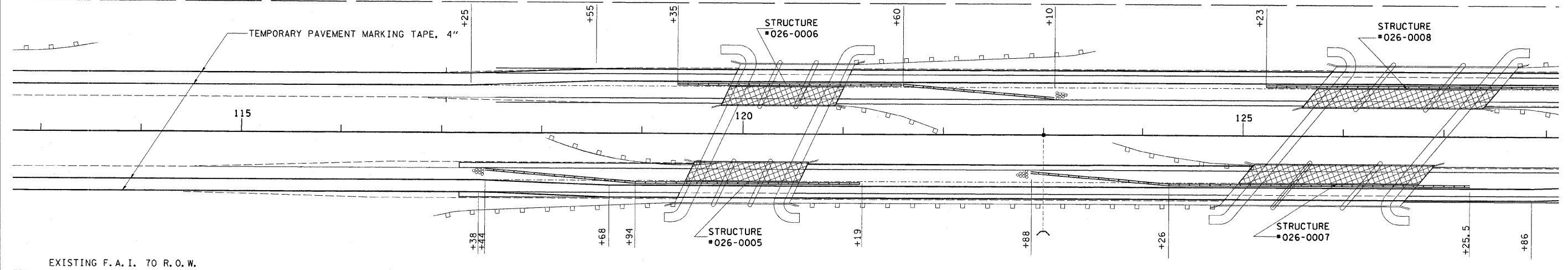
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		CHECKED -	REVISED -									
		DATE -	REVISED -									



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	PLOT DATE = 10/17/2008	DATE -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

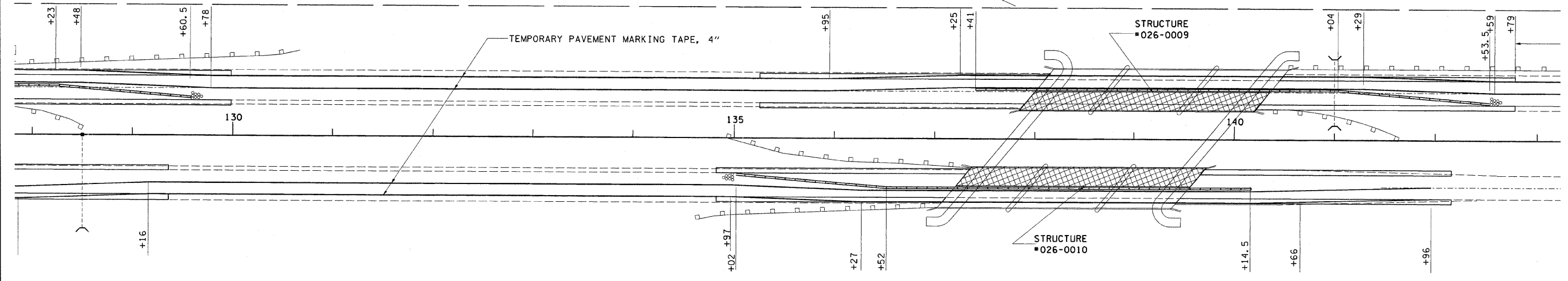
• D-7 BRIDGE DECK REPAIRS

EXISTING F. A. I. 70 R. O. W.



EXISTING F. A. I. 70 R. O. W.

CONSTRUCTION AREA



CONSTRUCTION AREA

• D-7 BRIDGE DECK REPAIRS

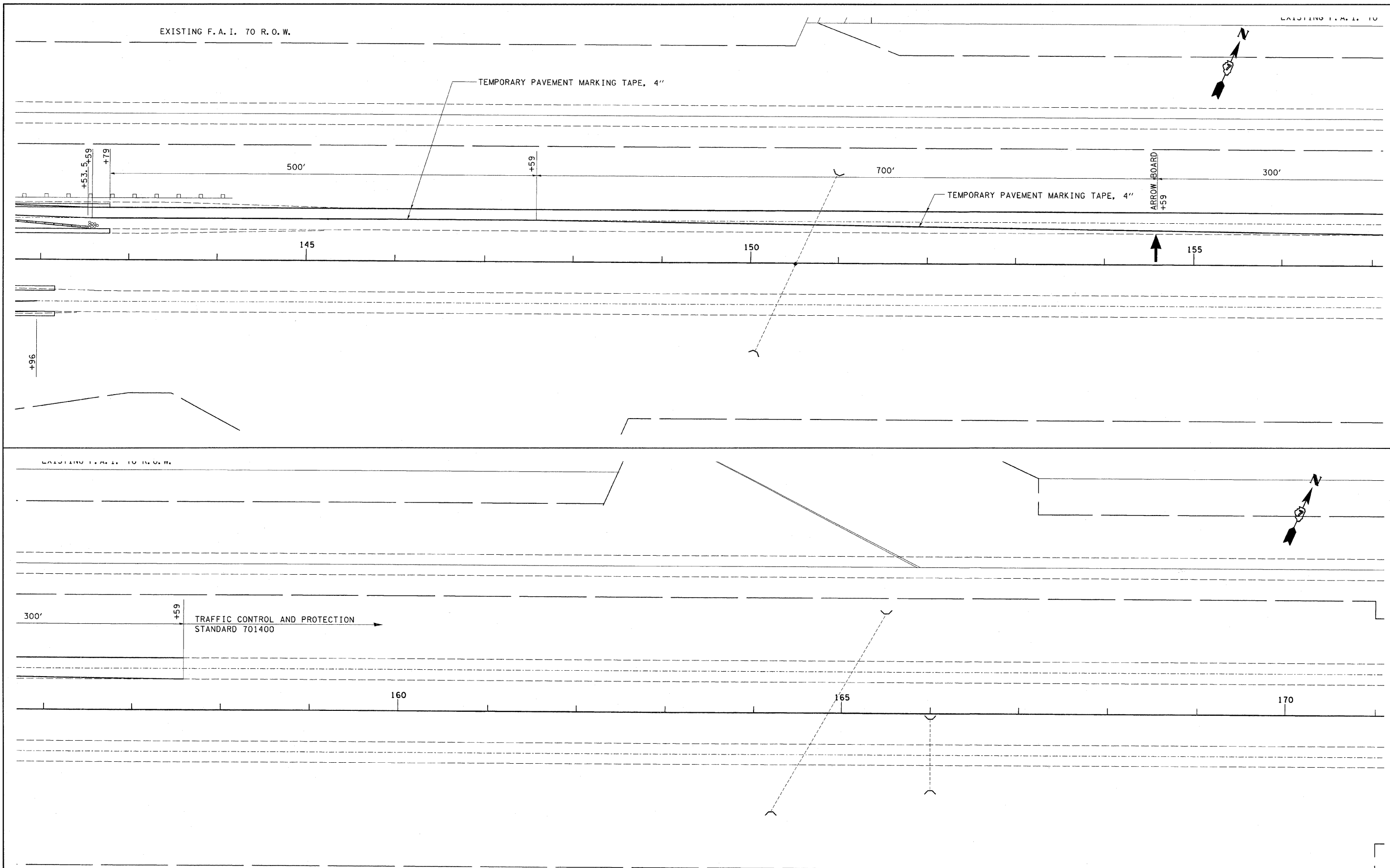
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	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/17/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL

SCALE: 50 SHEET NO. 3 OF 4 SHEETS STA. 113+00 TO STA. 143+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70		FAYETTE	59	14
CONTRACT NO. 94993				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



FILE NAME = <small>c:\pw_work\p1da\swartzw\dms58711\shhsage2_94993.dgn</small>		USER NAME = swartzw		DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE II TRAFFIC CONTROL		F.A.I. RTE. 70	SECTION 	COUNTY FAYETTE	TOTAL SHEETS 59	SHEET NO. 15
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -	SCALE: 50			SHEET NO. 4 OF 4 SHEETS	STA. 142+00 TO STA. 171+00	FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT		CONTRACT NO. 94993		
PLOT DATE = 10/17/2008		DATE -	REVISED -	• D-7 BRIDGE DECK REPAIRS									

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to the existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to the construction or ordering of material. Such variations shall not be cause for additions compensation or a change in scope of the work. The Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included in concrete removal.

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on as-built plans.

TOTAL BILL OF MATERIALS

SN 026-0003 (EB)

ITEM DESCRIPTION	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	10.4
Concrete Superstructure	Cu. Yd.	18.4
Reinforcement Bars, Epoxy Coated	Pound	1005
Bar Splicers	Each	12
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	457
Bridge Deck Hydro-Scarification, 1/2"	Sq. Yd.	438
Bridge Deck Microsilica Concrete Overlay, 2 1/4"	Sq. Yd.	438
Bridge Deck Grooving	Sq. Yd.	433
Protective Coat	Sq. Yd.	438
Deck Slab Repair (Full Depth Type I)	Sq. Yd.	7
Floor Drains	Each	14

TOTAL BILL OF MATERIALS

SN 026-0004 (WB)

ITEM DESCRIPTION	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	10.3
Concrete Superstructure	Cu. Yd.	18.4
Reinforcement Bars, Epoxy Coated	Pound	1005
Bar Splicers	Each	12
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	457
Bridge Deck Hydro-Scarification, 1/2"	Sq. Yd.	438
Bridge Deck Microsilica Concrete Overlay, 2 1/4"	Sq. Yd.	438
Bridge Deck Grooving	Sq. Yd.	433
Protective Coat	Sq. Yd.	438
Deck Slab Repair (Full Depth Type I)	Sq. Yd.	7
Floor Drains	Each	14

SHEET NO. 1
8 SHEETS

FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE GENERAL NOTES & BILL OF MATERIALS SN. 026-0003 (EB) & 026-0004 (WB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ca:\pw_work\PWIDOT\SWARTZRW\dms36288\sh	elatedesign-94993.dgn	DRAWN -	REVISED -			70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	16	
PLOT SCALE = 20,0000 ' / IN.	CHECKED -	REVISED -	SCALE: N/A			SHEET NO. 1 OF 8 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 94993
PLOT DATE = 10/17/2008	DATE -	REVISED -									

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

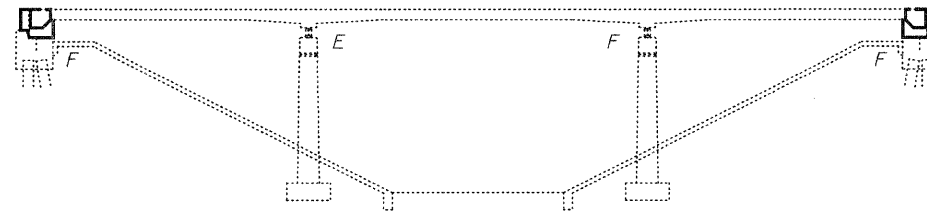
GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. (See Special Provisions.)

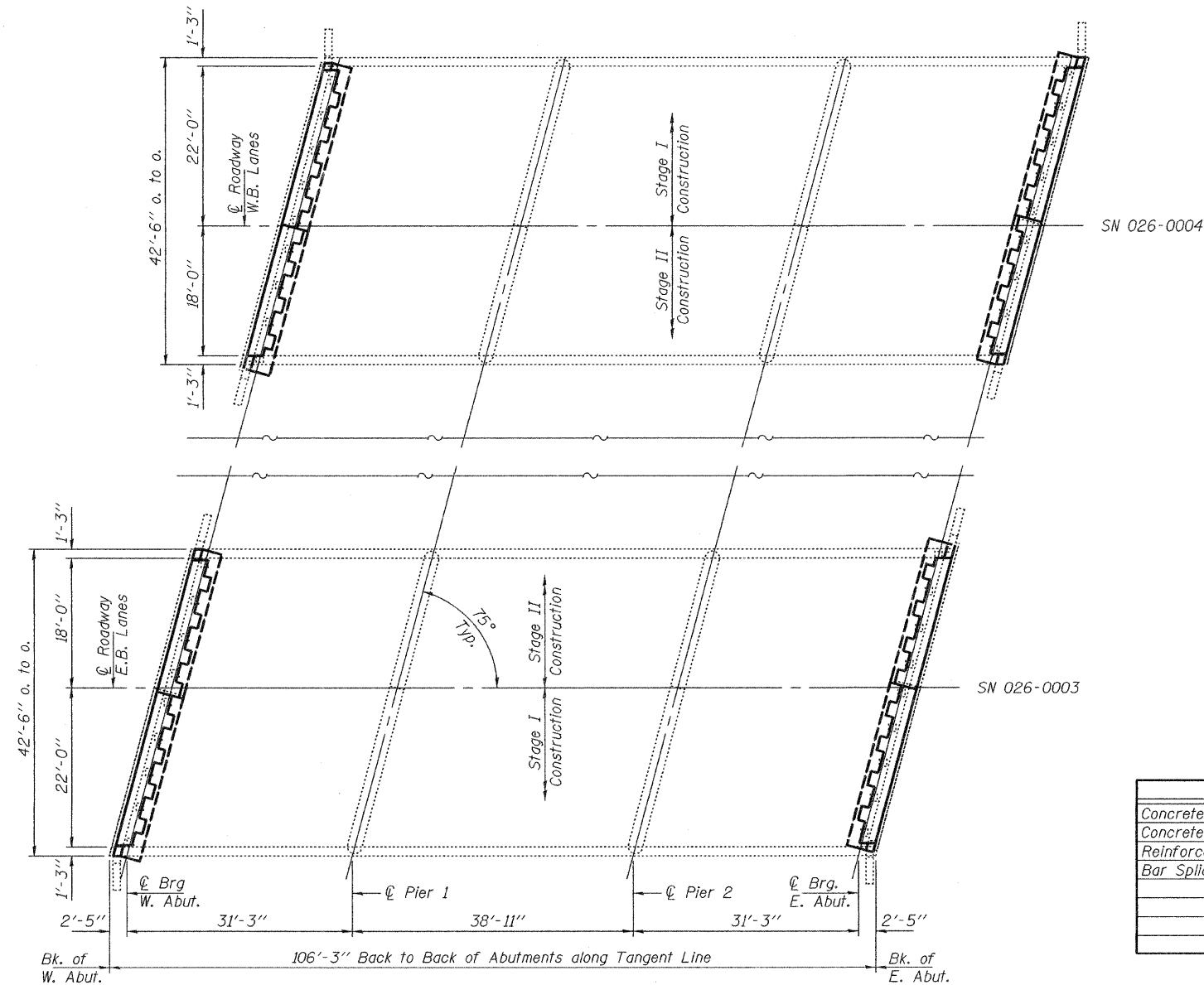
Reinforcement bars designated (E) shall be epoxy coated.
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to 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.

Existing reinforcement bars 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 included with Concrete Removal.

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.



ELEVATION



PLAN

DESIGN STRESSES

$f'_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi (Reinf.)}$

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	20.7
Concrete Superstructure	Cu. Yd.	36.8
Reinforcement Bars, Epoxy Coated	Pound	2010
Bar Splicers	Each	24

**PLAN & ELEVATION
F.A.I. RTE. 70 OVER LICK CREEK
SN 026-0003 (EB) & 0004 (WB)**

DESIGNED	<i>[Signature]</i>
CHECKED	<i>[Signature]</i>
DRAWN	Kyle M. Steffen
CHECKED	<i>[Signature]</i>

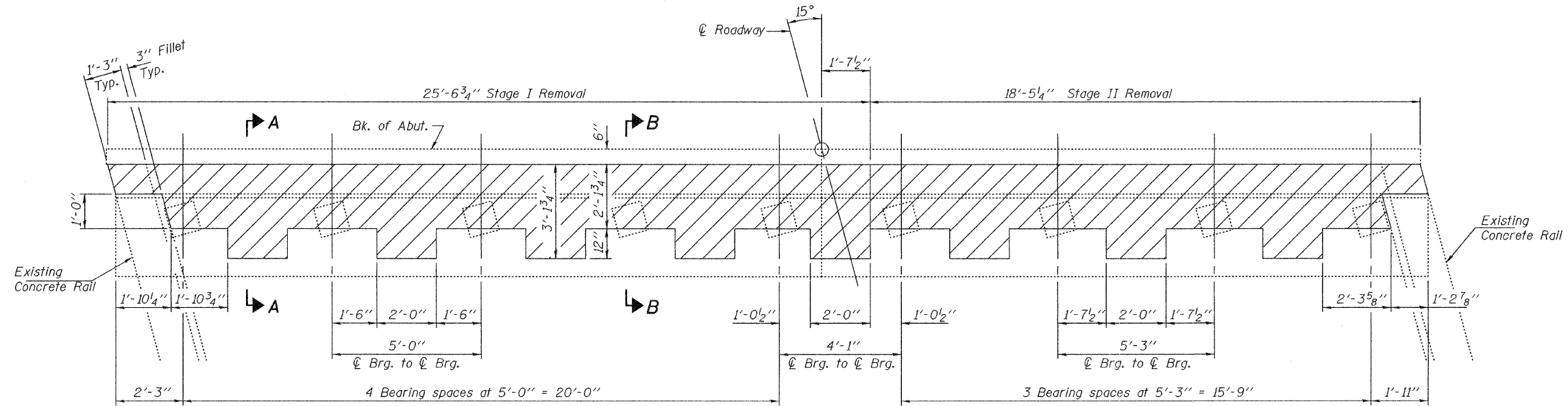
NOVEMBER 21, 2008
EXAMINED *[Signature]*
ENGINEER OF STRUCTURAL SERVICES
PASSED *[Signature]*
ENGINEER OF BRIDGES AND STRUCTURES



Expires: November 30, 2010

SHEET NO. 2 8 SHEETS	F.A.I. RTE. 70	SECTION -	COUNTY FAYETTE	TOTAL SHEETS 59	SHEET NO. 17
	CONTRACT NO. 94993			ILLINOIS FED. AID PROJECT	

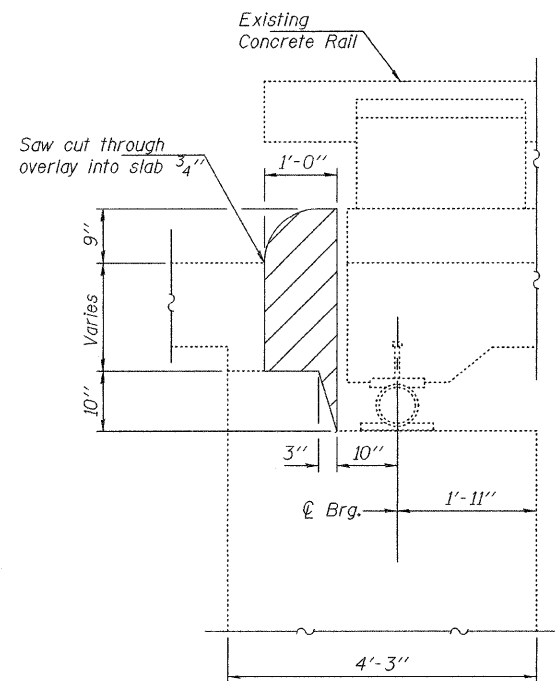
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



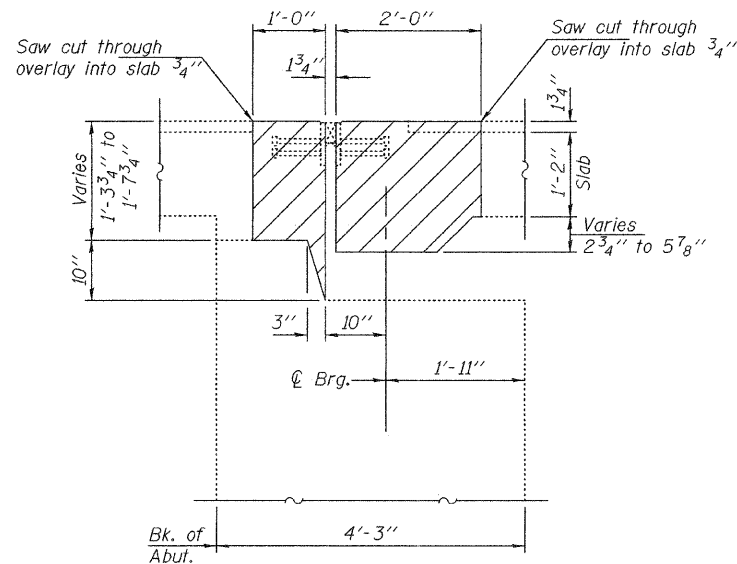
TYPICAL ABUTMENT PLAN

Wing Walls not shown for clarity.
026-0003 W. Abut., 026-0004 E. Abut. shown
026-0003 E. Abut., 026-0004 W. Abut. similar by 180° rotation

Note:
Hatched areas indicate Concrete Removal.

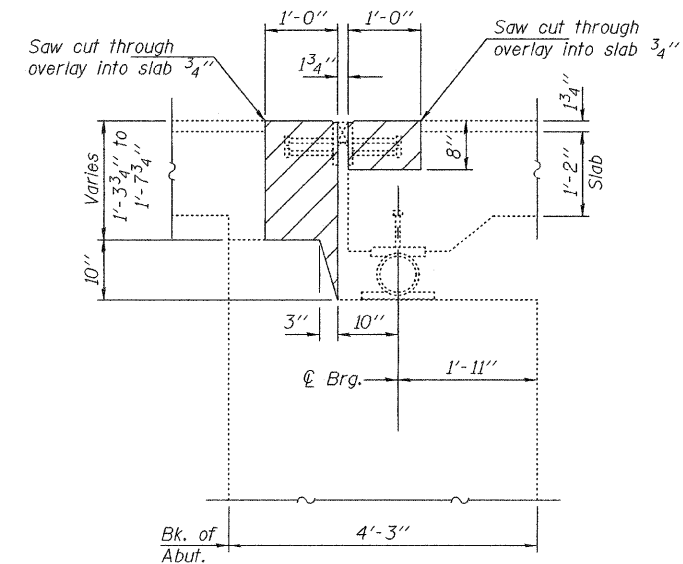


TYPICAL CURB VIEW



SECTION A-A

Horiz. Dim. at Rt. L's



SECTION B-B

Horiz. Dim. at Rt. L's

DESIGNED	AJB
CHECKED	GGE
DRAWN	Kyle M. Steffen
CHECKED	AJB GGE

NOVEMBER 21, 2008

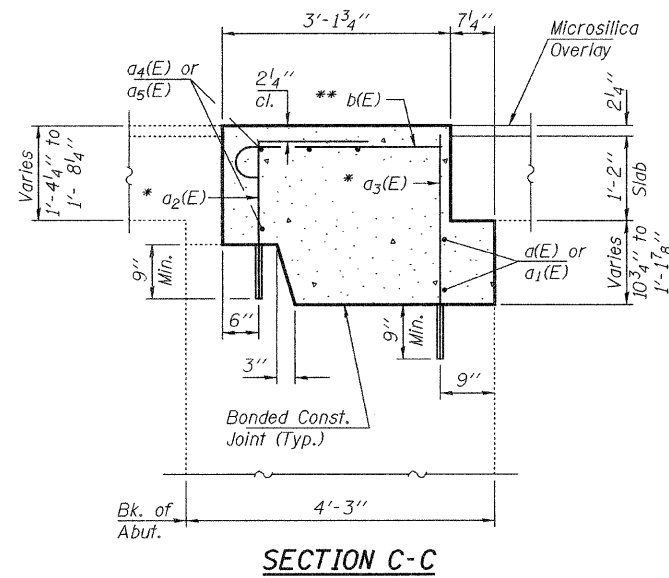
EXAMINED *A. Carl Hoyer*
ENGINEER OF STRUCTURAL SERVICES

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

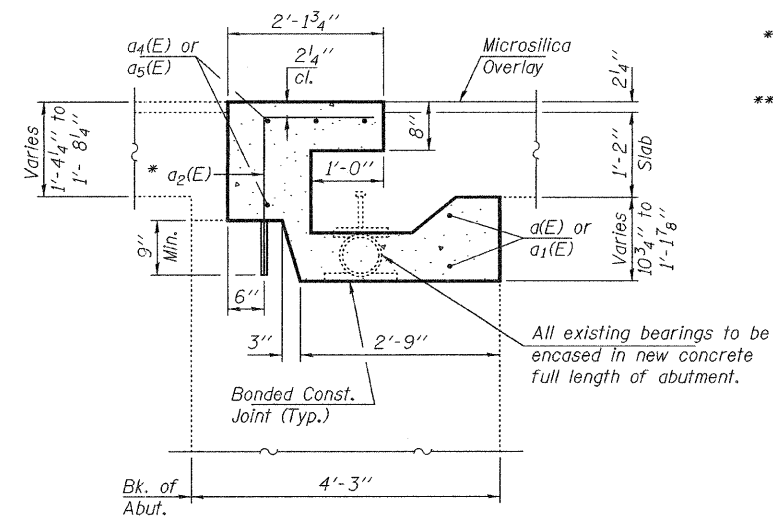
REPAIR DETAILS
F.A.I. RTE. 70 OVER LICK CREEK
SN 026-0003 (EB) & 0004 (WB)

SHEET NO. 3	F.A.I. RTE. 70	SECTION -	COUNTY FAYETTE	TOTAL SHEETS 59	SHEET NO. 18
	8 SHEETS	CONTRACT NO. 94993			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

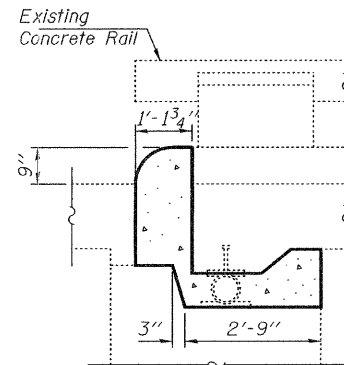
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION C-C



SECTION D-D

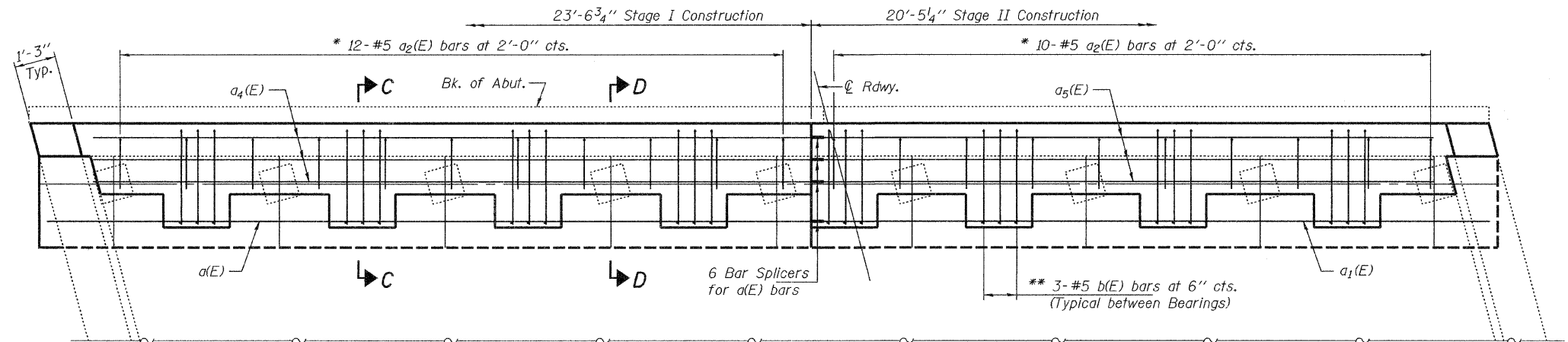


TYPICAL CURB VIEW

(See Section D-D For dimensions not shown)

DESIGNED	AJB
CHECKED	GGE
DRAWN	Kyle M. Steffen
CHECKED	AJB GGE

NOVEMBER 21, 2008
EXAMINED *Carl Hoyer*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

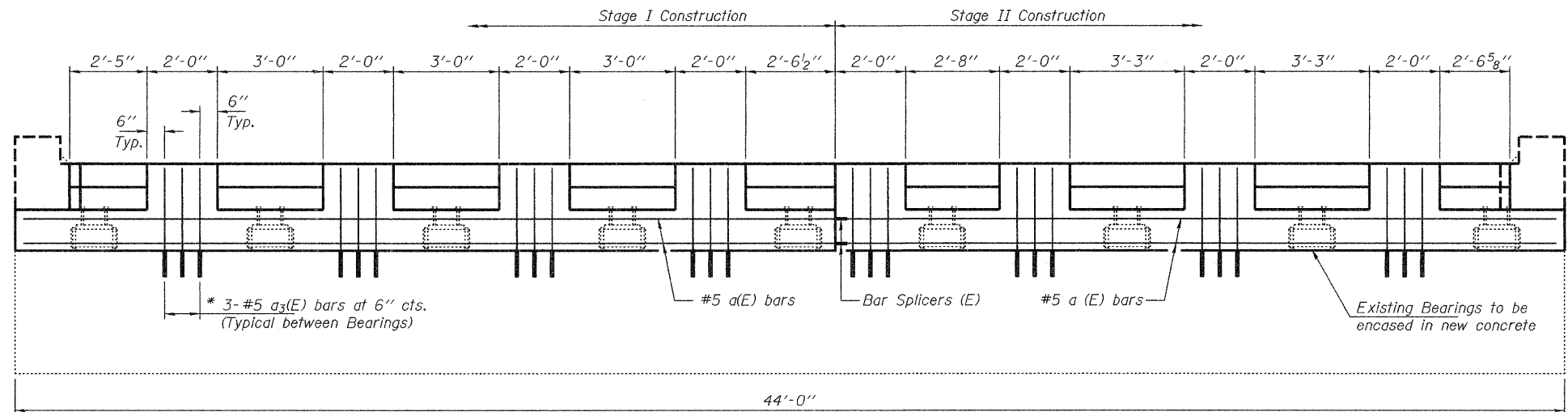


026-0003 W. ABUT. & 026-0004 E. ABUT. PLAN

Opposite Abutments similar by 180°
(Wing Walls not shown for clarity)

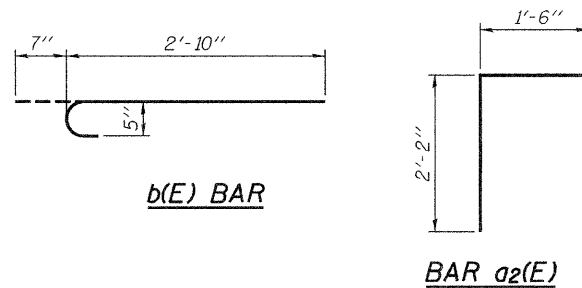
* Epoxy grout a₂(E) & a₃(E) bars in 7/8"φ x 9" (Min.) drilled holes according to Section 584 of the Standard Specifications.

** Where possible, lap b(E) bars with existing longitudinal bars.



026-0003 W. ABUT. & 026-0004 E. ABUT. ELEVATION

Opposite Abutments similar by 180°
(Wing Walls not shown for clarity)



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	8	#5	23'-0"	—
a ₁ (E)	8	#5	20'-5"	—
a ₂ (E)	88	#5	3'-8"	Γ
a ₃ (E)	96	#5	2'-11"	—
a ₄ (E)	16	#5	21'-6"	—
a ₅ (E)	16	#5	18'-10"	—
b(E)	96	#5	3'-5"	—
Concrete Removal			Cu. Yd.	20.7
Concrete Superstructure			Cu. Yd.	36.8
Reinforcement Bars, Epoxy Coated			Pound	2010

REPAIR DETAILS
F.A.I. RTE. 70 OVER LICK CREEK
SN 026-0003 (EB) & 0004 (WB)

SHEET NO. 4 8 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	70	-	FAYETTE	59	19
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 94993					

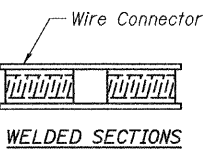
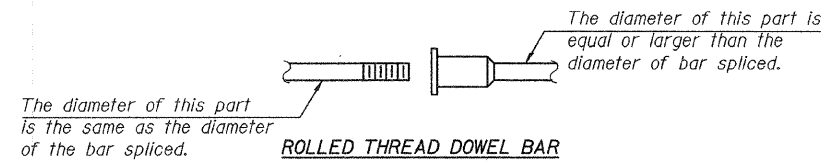
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

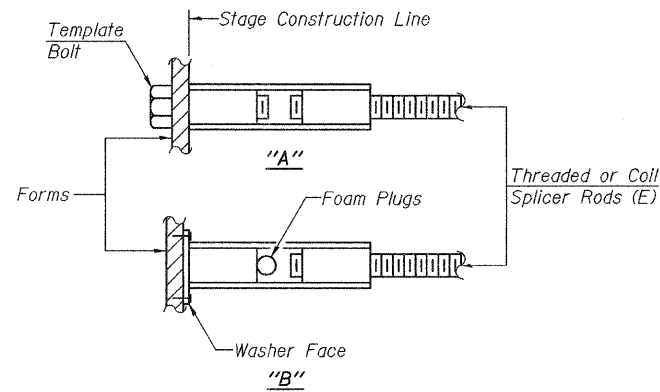
- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



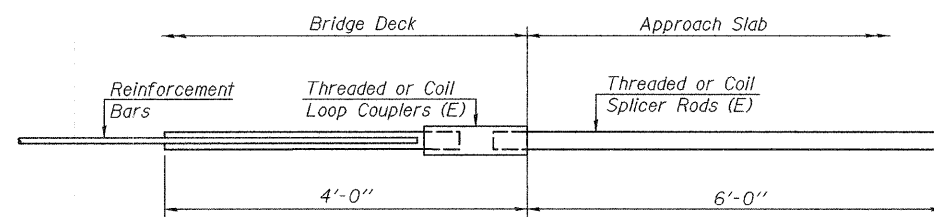
BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.

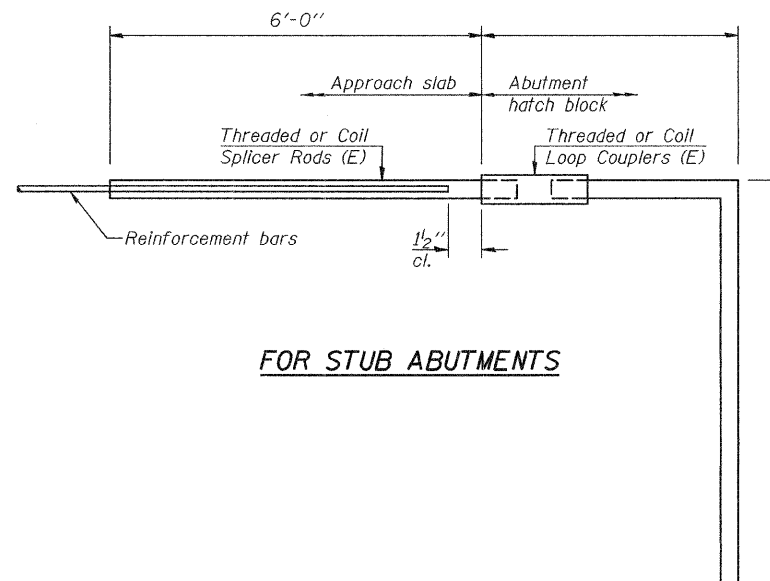


INSTALLATION AND SETTING METHODS

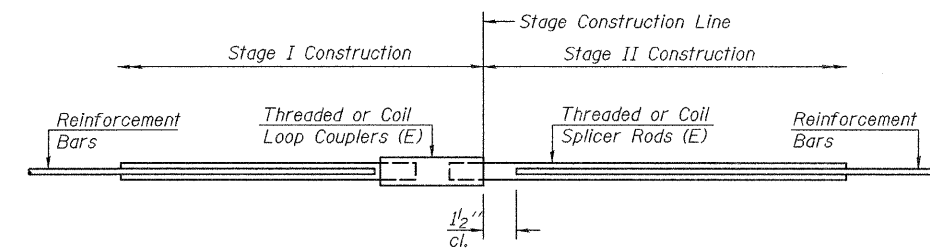
"A": Set bar splicer assembly by means of a template bolt.
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS



FOR STUB ABUTMENTS



STANDARD

Bar Size	No. Assemblies Required	Location
#5	24	Abutments

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required =	

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required =	

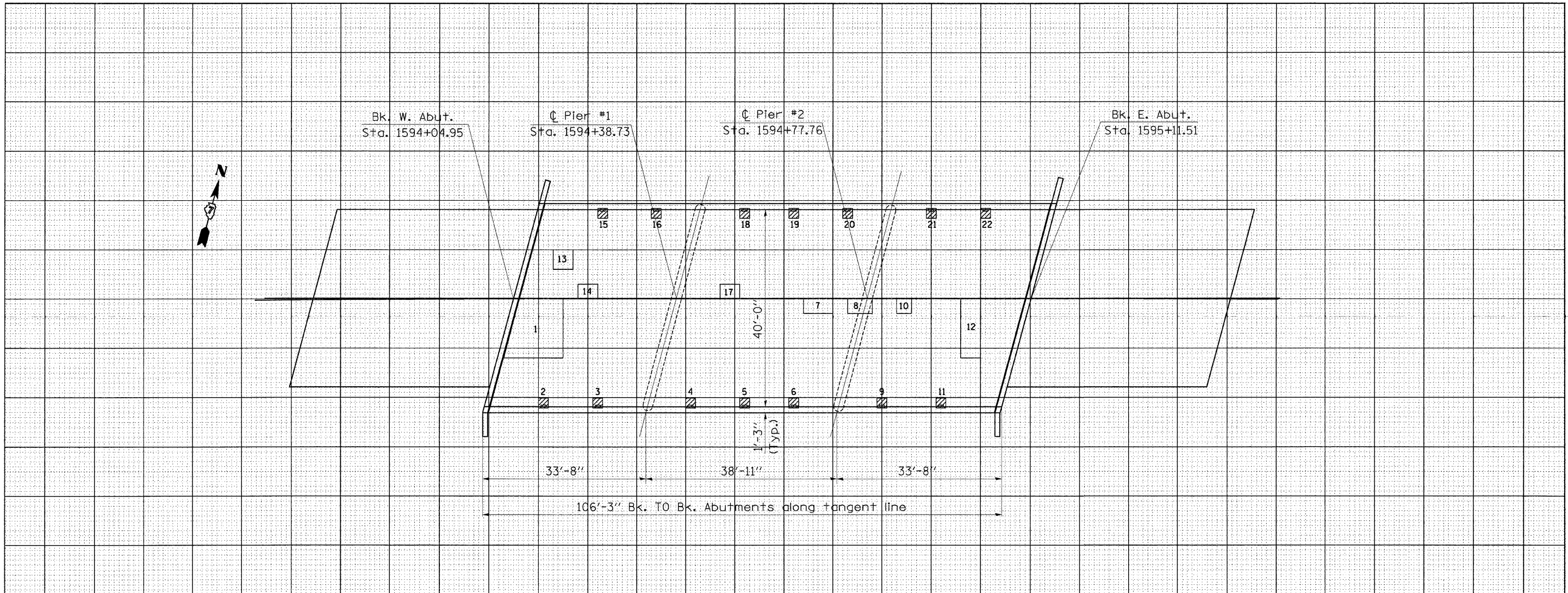
BAR SPLICER ASSEMBLY DETAILS
F.A.I. RTE. 70 OVER LICK CREEK
SN 026-0003 (EB) & 0004 (WB)

DESIGNED	AJB
CHECKED	GGE
DRAWN	Kyle M. Steffen
CHECKED	AJB GGE

NOVEMBER 21, 2008
EXAMINED *Carl Perry*
PASSED *Ralph E. Anderson*
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

BSD-1 5-16-08

SHEET NO. 5 8 SHEETS	F.A.I. RTE. 70	SECTION -	COUNTY FAYETTE	TOTAL SHEETS 59	SHEET NO. 20
	CONTRACT NO. 94993			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	



PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		
1	12.0 x 10.5	126.0			
2	2.0 x 2.0		4.0		
3	2.0 x 2.0		4.0		
4	2.0 x 2.0		4.0		
5	2.0 x 2.0		4.0		
6	2.0 x 2.0		4.0		
7	6.0 x 3.0	18.0			
8	5.0 x 3.0	15.0			
9	2.0 x 2.0		4.0		
10	3.0 x 3.0	9.0			
11	2.0 x 2.0		4.0		
12	4.0 x 12.0	48.0			
13	4.0 x 4.0	16.0			
14	4.0 x 3.0	12.0			
15	2.0 x 2.0		4.0		
16	2.0 x 2.0		4.0		
17	4.0 x 3.0	12.0			
18	2.0 x 2.0		4.0		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		
19	2.0 x 2.0		4.0		
20	2.0 x 2.0		4.0		
21	2.0 x 2.0		4.0		
22	2.0 x 2.0		4.0		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		
PARTIAL DEPTH					
		256	/ 9 = 28.4		
		USE	29 SQ YD		
FULL DEPTH, TYPE 1					
		56	/ 9 = 6.2		
		USE	7 SQ YD		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

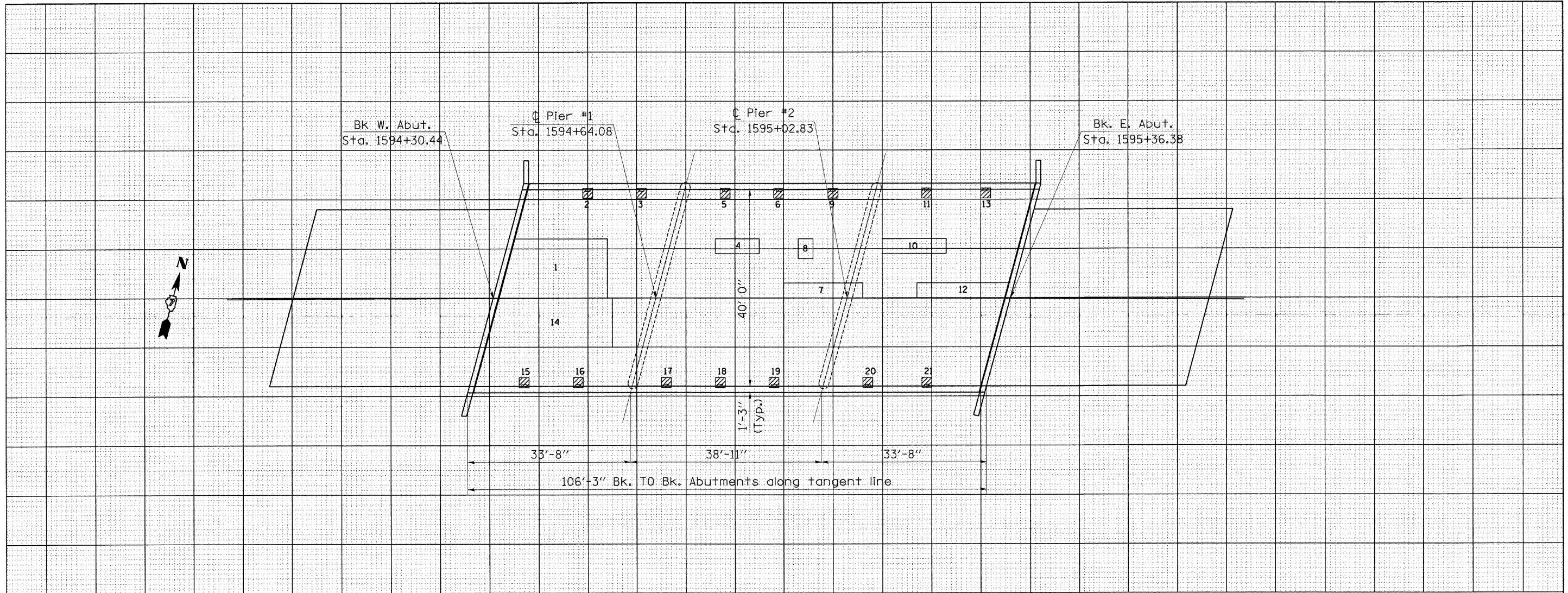
- PATCHING LEGEND**
- PARTIAL DEPTH (FOR INFORMATION ONLY)
 - FULL DEPTH
 - FLOOR DRAIN TO BE REPLACED

DATE OF SURVEY: 04/21/08
 SURVEY BY: M. ALLEN, K. THOEL
 METHOD OF SURVEY: VISUAL

BRIDGE DECK PATCHING
 FAYETTE COUNTY

SHEET NO. 6
 8 SHEETS

003



PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		
1	20.5 x 12.0	246.0			
2	2.0 x 2.0		4.0		
3	2.0 x 2.0		4.0		
4	9.0 x 3.0	27.0			
5	2.0 x 2.0		4.0		
6	2.0 x 2.0		4.0		
7	16.0 x 3.0	48.0			
8	3.0 x 4.0	12.0			
9	2.0 x 2.0		4.0		
10	13.0 x 3.0	39.0			
11	2.0 x 2.0		4.0		
12	18.5 x 3.0	55.5			
13	2.0 x 2.0		4.0		
14	24.5 x 10.0	245.0			
15	2.0 x 2.0		4.0		
16	2.0 x 2.0		4.0		
17	2.0 x 2.0		4.0		
18	2.0 x 2.0		4.0		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		
19	2.0 x 2.0		4.0		
20	2.0 x 2.0		4.0		
21	2.0 x 2.0		4.0		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		
PARTIAL DEPTH					
		627.5	/ 9 = 74.7		
		USE	75	SQ YD	
FULL DEPTH, TYPE 1					
		56	/ 9 = 6.2		
		USE	7	SQ YD	

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

PATCHING LEGEND

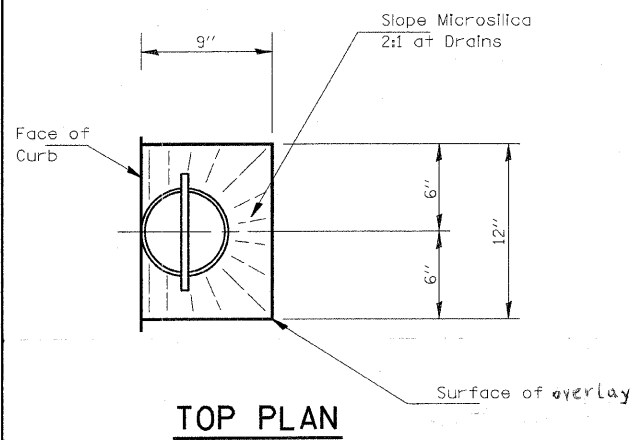
- PARTIAL DEPTH (FOR INFORMATION ONLY)
- FULL DEPTH
- FLOOR DRAIN TO BE REPLACED

DATE OF SURVEY: 04/21/08
 SURVEY BY: M. ALLEN, K. THOELE
 METHOD OF SURVEY: VISUAL

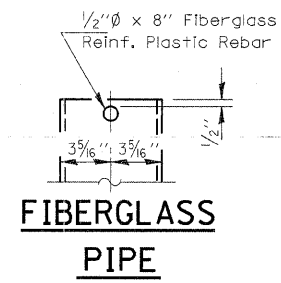
BRIDGE DECK PATCHING
 FAYETTE COUNTY

SHEET NO. 7
 8 SHEETS

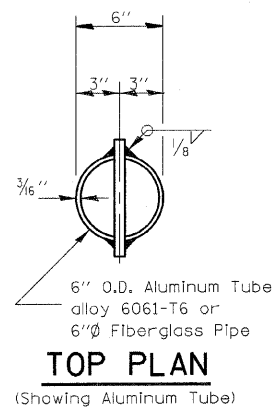
004



TOP PLAN

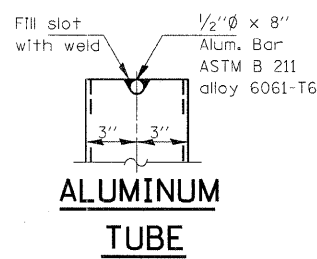


FIBERGLASS PIPE



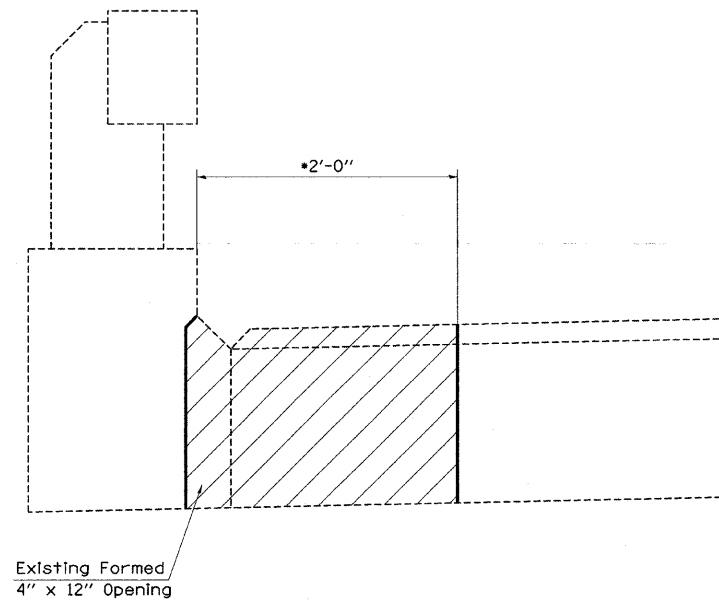
TOP PLAN

(Showing Aluminum Tube)



ALUMINUM TUBE

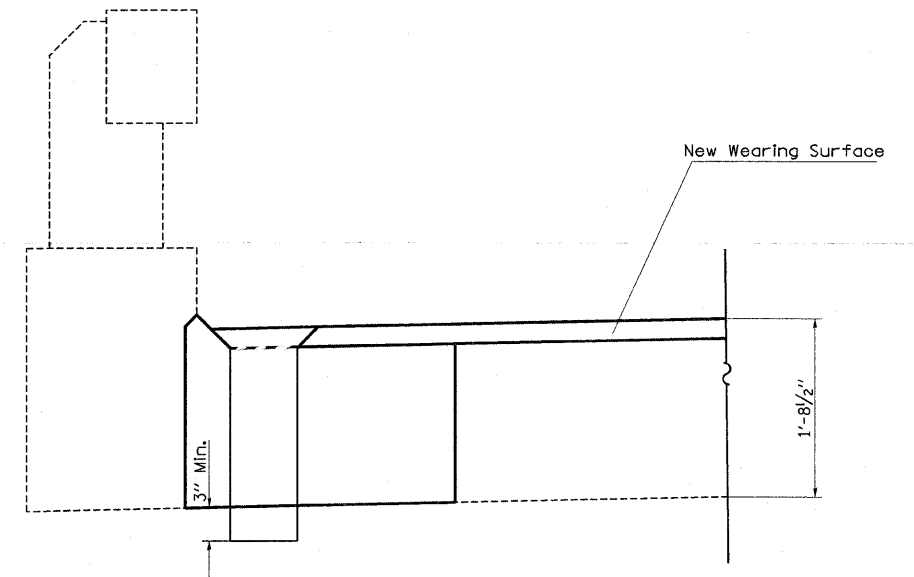
• Dimensions shall be determined by the Engineer in the field based on extent of deck deterioration at each drain.



SECTION THRU EXISTING FLOOR DRAIN

Hatched area indicates concrete removal at floor drain replacement.

Cost included with Deck Slab Repair (Full Depth Type I)



DRAIN REPLACEMENT DETAIL

Note: See "Bridge Deck Patching" plan sheets for Floor Drain replacement locations. See "Total Bill of Materials" for each structure for quantities.

Note:
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

SHEET NO. 8
8 SHEETS

FILE NAME = c:\pwork\pww\DOT\SWARTZRW\dms36208\thel... USER NAME = swartzrw DESIGNED - DRAWN - CHECKED - PLOT DATE = 10/17/2008	DESIGNED - DRAWN - CHECKED - DATE -	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FLOOR DRAIN DETAIL SN. 026-0003 (EB) & SN. 026-0004 (WB)		F.A.I. RTE. 70	SECTION D-7 BRIDGE DECK REPAIRS	COUNTY FAYETTE	TOTAL SHEETS 59	SHEET NO. 23
				SCALE: N/A	SHEET NO. 8 OF 8 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT CONTRACT NO. 94993			

TOTAL BILL OF MATERIALS

SN 026-0005 (EB)

ITEM DESCRIPTION	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	23.0
Concrete Superstructure	Cu. Yd.	23.0
Reinforcement Bars, Epoxy Coated	Pound	4630
Bar Splicers	Each	36
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	490
Bridge Deck Hydro-Scarification, 1/2"	Sq. Yd.	451
Bridge Deck Microsilica Concrete Overlay, 2/4"	Sq. Yd.	451
Bridge Deck Grooving	Sq. Yd.	464
Protective Coat	Sq. Yd.	451
Deck Slab Repair (Full Depth Type I)	Sq. Yd.	4
Preformed Joint Strip Seal	Foot	93
Relocating Name Plates	Each	1

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to the existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to the construction or ordering of material. Such variations shall not be cause for additional compensation or a change in the scope of the work. The Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost Included in concrete removal.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on as-built plans.

The Contractor shall use extreme care during concrete removal so as not to damage the PPC I-beams.

Removal and reinstallation of the existing name plates on both structures will be necessary for construction of the expansion joints. This work and all materials shall be included in the contract unit price for Relocating Name Plates.

TOTAL BILL OF MATERIALS

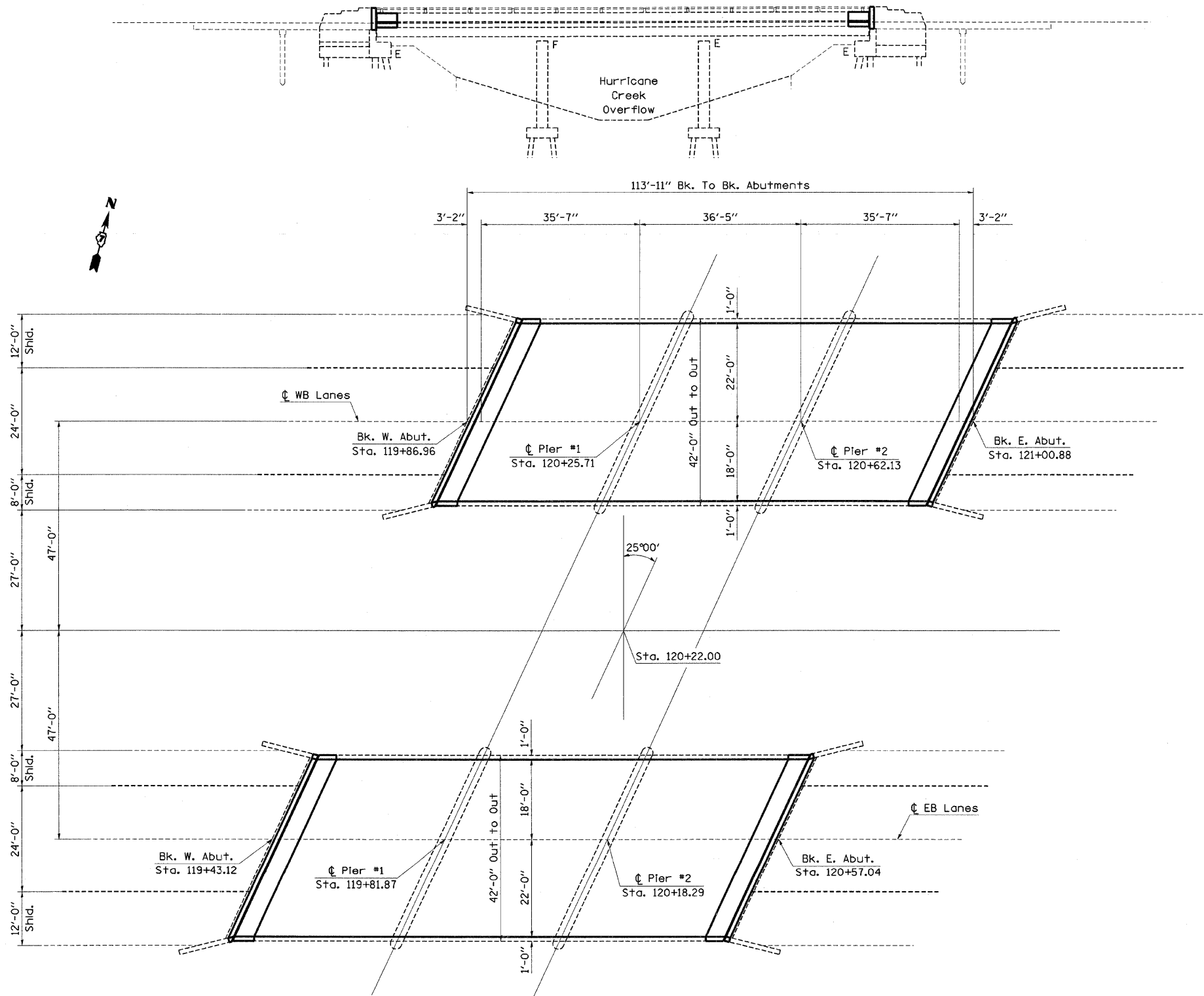
SN 026-0006 (WB)

ITEM DESCRIPTION	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	23.1
Concrete Superstructure	Cu. Yd.	23.1
Reinforcement Bars, Epoxy Coated	Pound	4630
Bar Splicers	Each	36
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	490
Bridge Deck Hydro-Scarification, 1/2"	Sq. Yd.	451
Bridge Deck Microsilica Concrete Overlay, 2/4"	Sq. Yd.	451
Bridge Deck Grooving	Sq. Yd.	464
Protective Coat	Sq. Yd.	451
Deck Slab Repair (Full Depth Type I)	Sq. Yd.	2
Preformed Joint Strip Seal	Foot	93
Relocating Name Plates	Each	1

SHEET NO. 1
10 SHEETS

FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE GENERAL NOTES & BILL OF MATERIALS SN. 026-0005 (EB) & 026-0006 (WB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwork\FWIDOT\SWARTZRW\dms36208\theledesign_94993.dgn	ledesign_94993.dgn	DRAWN -	REVISED -			70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	24
PLOT SCALE = 20,000' / IN.		CHECKED -	REVISED -		SCALE: N/A					
PLOT DATE = 10/17/2008		DATE -	REVISED -		SHEET NO. 1 OF 10 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 94993

The existing 3 span precast prestressed I-beam structures were constructed in 1965 as section 26-0B-2 at Sta. 120+22. SN 026-0005 carries FAI-70 eastbound and SN 026-0006 carries FAI-70 westbound. The proposed project consists of new expansion joints, partial and full depth deck patching, new microsilica wearing surface and new deck drains.



Expires Nov. 30, 2010

FILE NAME = c:\pwwork\pwwid01\SWARTZRW\dms36208\br...
 USER NAME = swartzrw
 PLOT SCALE = 20.0000' / IN.
 PLOT DATE = 10/17/2008

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVIS...
 REVIS...
 REVIS...
 REVIS...

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
 SN 026-0005 (EB) & SN 026-0006 (WB)

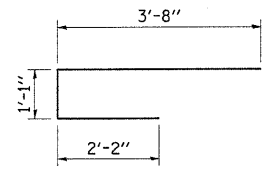
SCALE: N/A
 SHEET NO. 2 OF 10 SHEETS
 STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	25
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 94993	

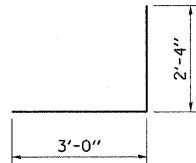
SHEET NO. 2
 10 SHEETS

BILL OF MATERIAL

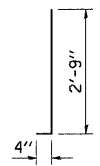
BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a2(E)	18		18	#7	25'-0"	—
a3(E)	20	20	40	#6	7'-6"	—
a4(E)		18	18	#7	20'-7"	—
a5(E)	10		10	#6	5'-9"	—
d(E)	11	11	22	#5	3'-1"	┘
d1(E)	11	11	22	#5	5'-4"	┘
d2(E)	11	11	22	#4	2'-1"	┘
h2(E)	8		8	#6	24'-1"	—
h3(E)		8	8	#6	19'-8"	—
x1(E)	90	70	160	#6	6'-11"	┘
CONCRETE REMOVAL				CU. YD.	23.0	
REINFORCEMENT BARS (EPOXY COATED)				POUND	4630	
CONCRETE SUPERSTRUCTURE				CU. YD.	23.0	



Bar x1(E)



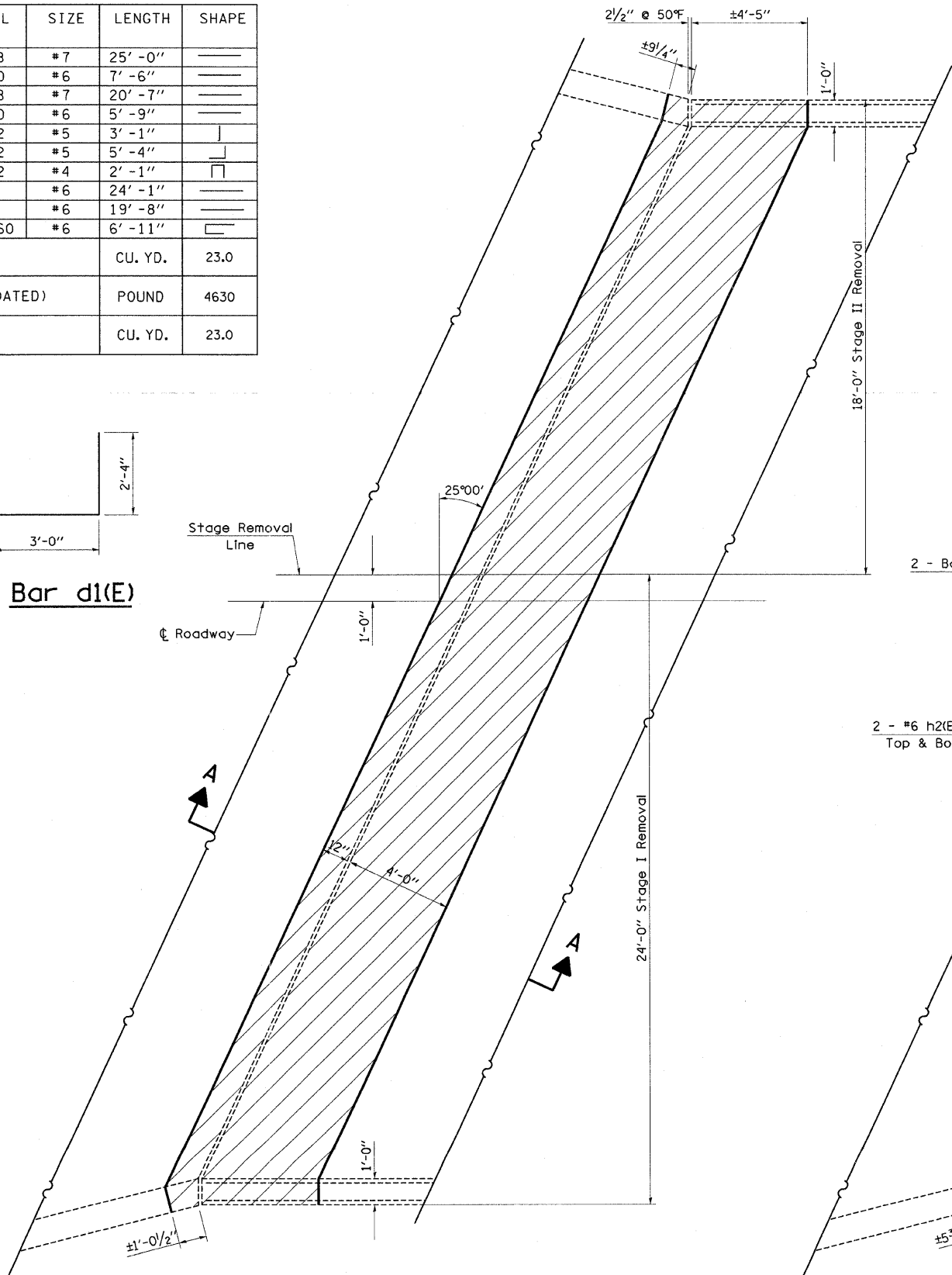
Bar d1(E)



Bar d(E)



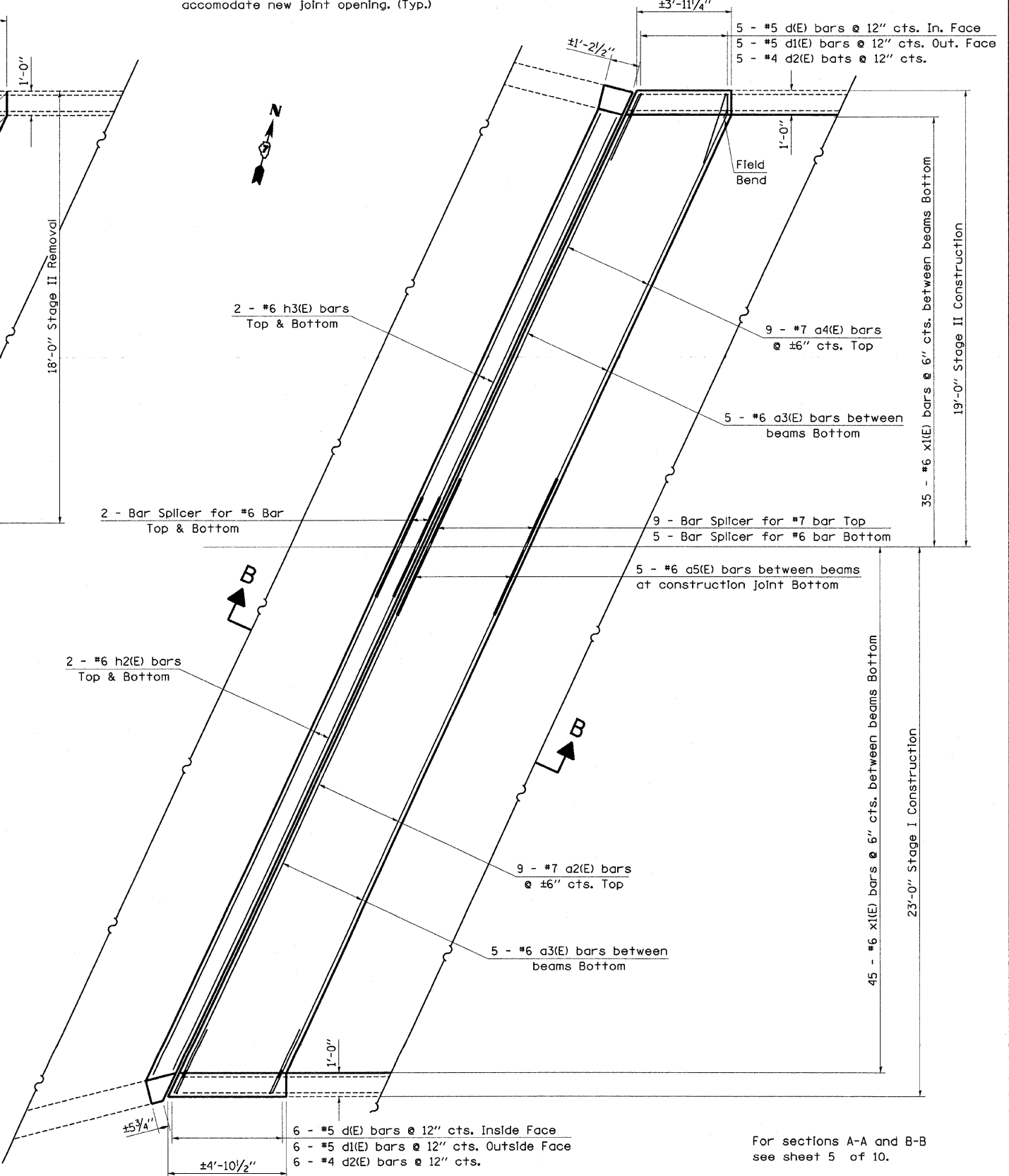
Bar d2(E)



EXISTING PARTIAL PLAN

(West Abutment shown; East Abutment similar)

Note: Trim existing joint reinforcement to accommodate new joint opening. (Typ.)



PROPOSED PARTIAL PLAN

(West Abutment shown; East Abutment similar)

For sections A-A and B-B see sheet 5 of 10.

FILE NAME =	USER NAME = swartzrw
PROJECT WORK \PWIDOT\SWARTZRW\dms36208\the	design\94993.dgn
PLOT SCALE = 20,0000 ' / IN.	
PLOT DATE = 10/17/2009	

DESIGNED -	REVISD -
DRAWN -	REVISD -
CHECKED -	REVISD -
DATE -	REVISD -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT REPLACEMENT DETAILS
SN 026-0005 (EB)**

SCALE: N/A SHEET NO. 3 OF 10 SHEETS STA. TO STA.

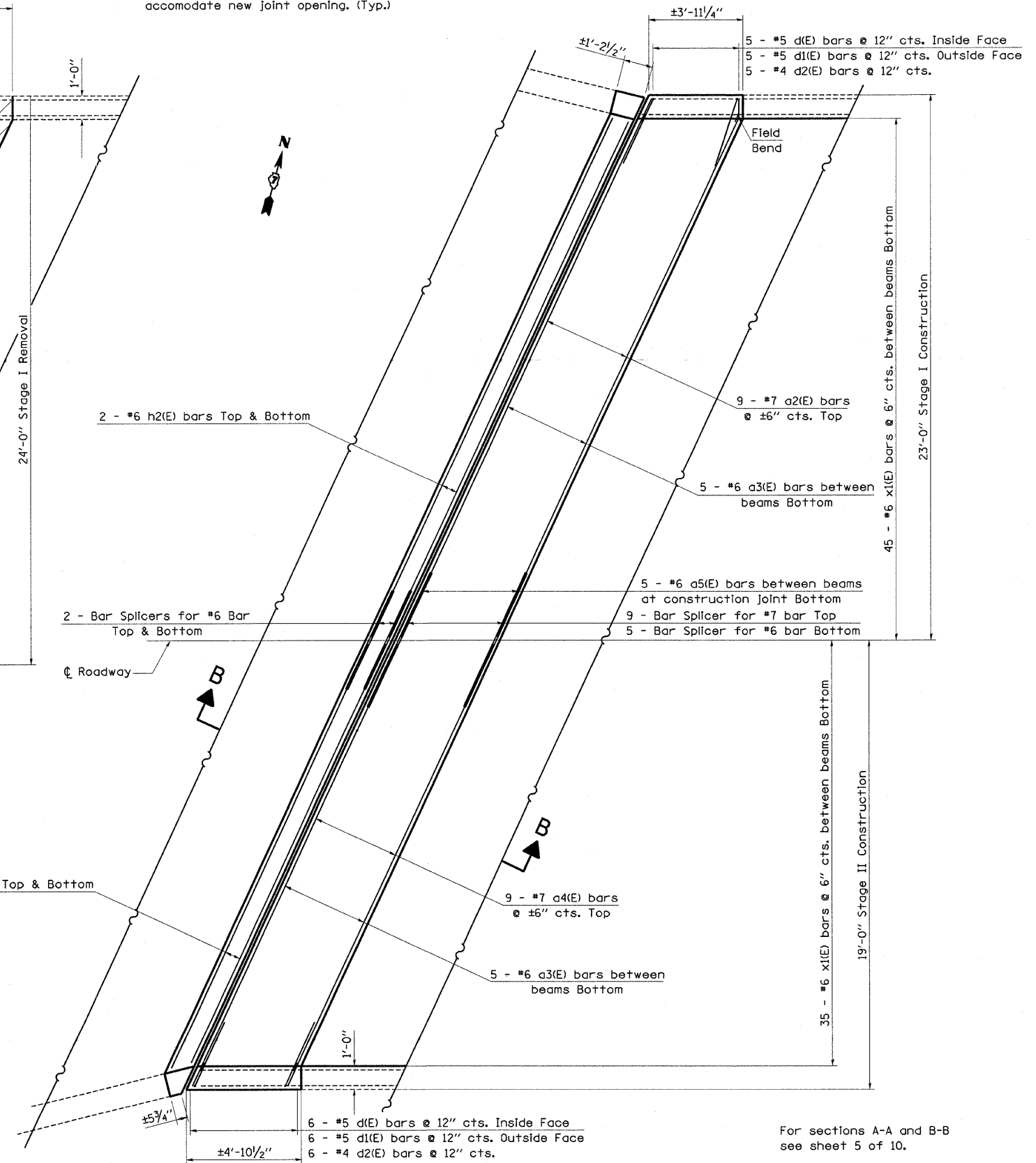
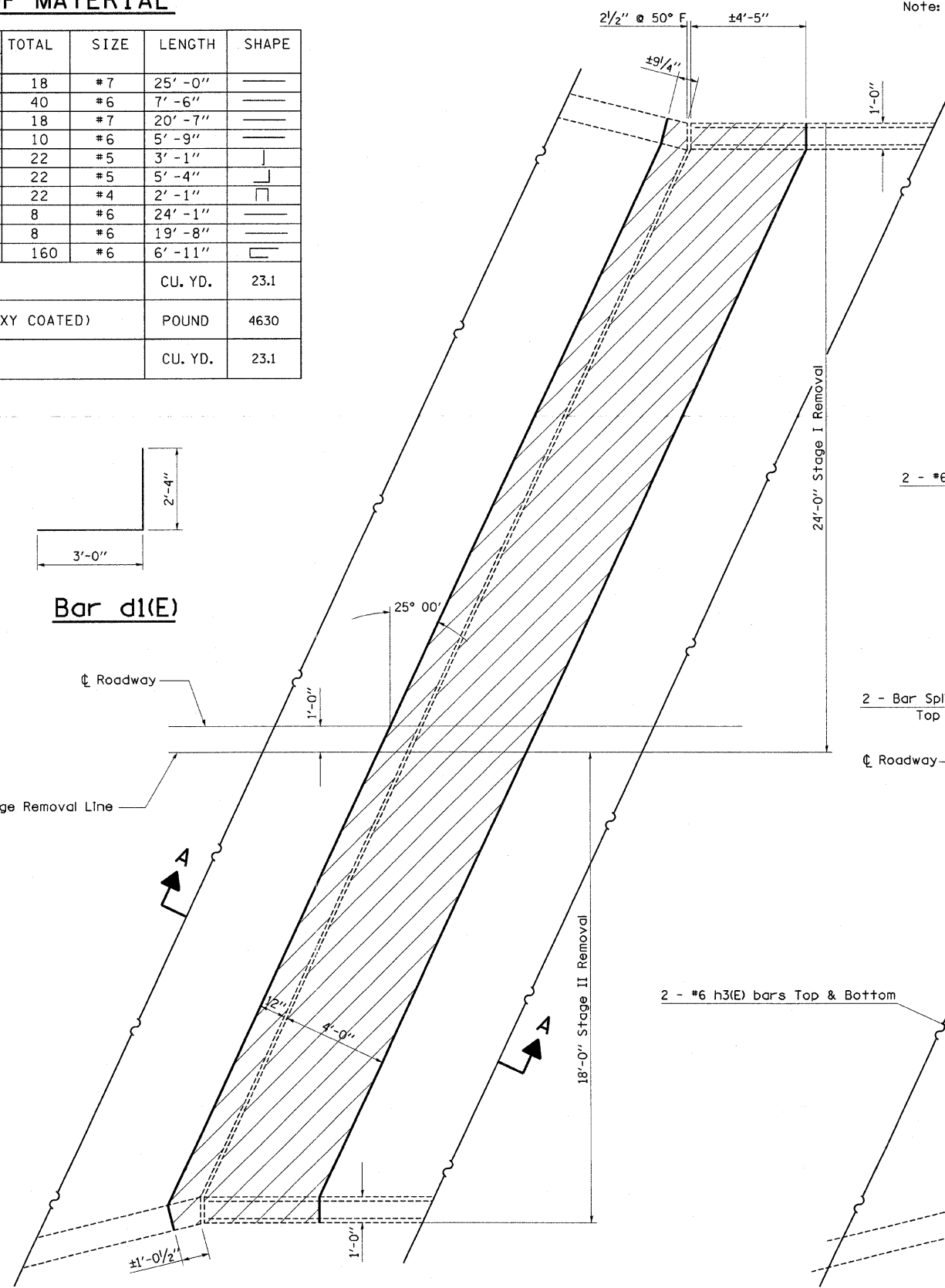
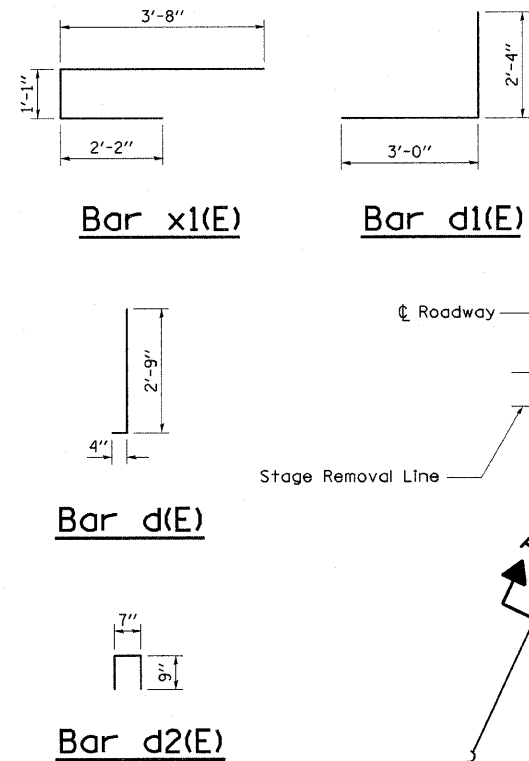
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	26
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 94993	

SHEET NO. 3
10 SHEETS

BILL OF MATERIAL

BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a2(E)	18		18	#7	25'-0"	—
a3(E)	20	20	40	#6	7'-6"	—
a4(E)		18	18	#7	20'-7"	—
a5(E)	10		10	#6	5'-9"	—
d(E)	11	11	22	#5	3'-1"	┘
d1(E)	11	11	22	#5	5'-4"	┘
d2(E)	11	11	22	#4	2'-1"	┘
h2(E)	8		8	#6	24'-1"	—
h3(E)		8	8	#6	19'-8"	—
x1(E)	90	70	160	#6	6'-11"	┘
CONCRETE REMOVAL					CU. YD.	23.1
REINFORCEMENT BARS (EPOXY COATED)					POUND	4630
CONCRETE SUPERSTRUCTURE					CU. YD.	23.1

Note: Trim existing joint reinforcement to accommodate new joint opening. (Typ.)



For sections A-A and B-B see sheet 5 of 10.

FILE NAME = ...
USER NAME = swartzrw
DESIGNED -
DRAWN -
CHECKED -
DATE -

DESIGNED -
DRAWN -
CHECKED -
DATE -

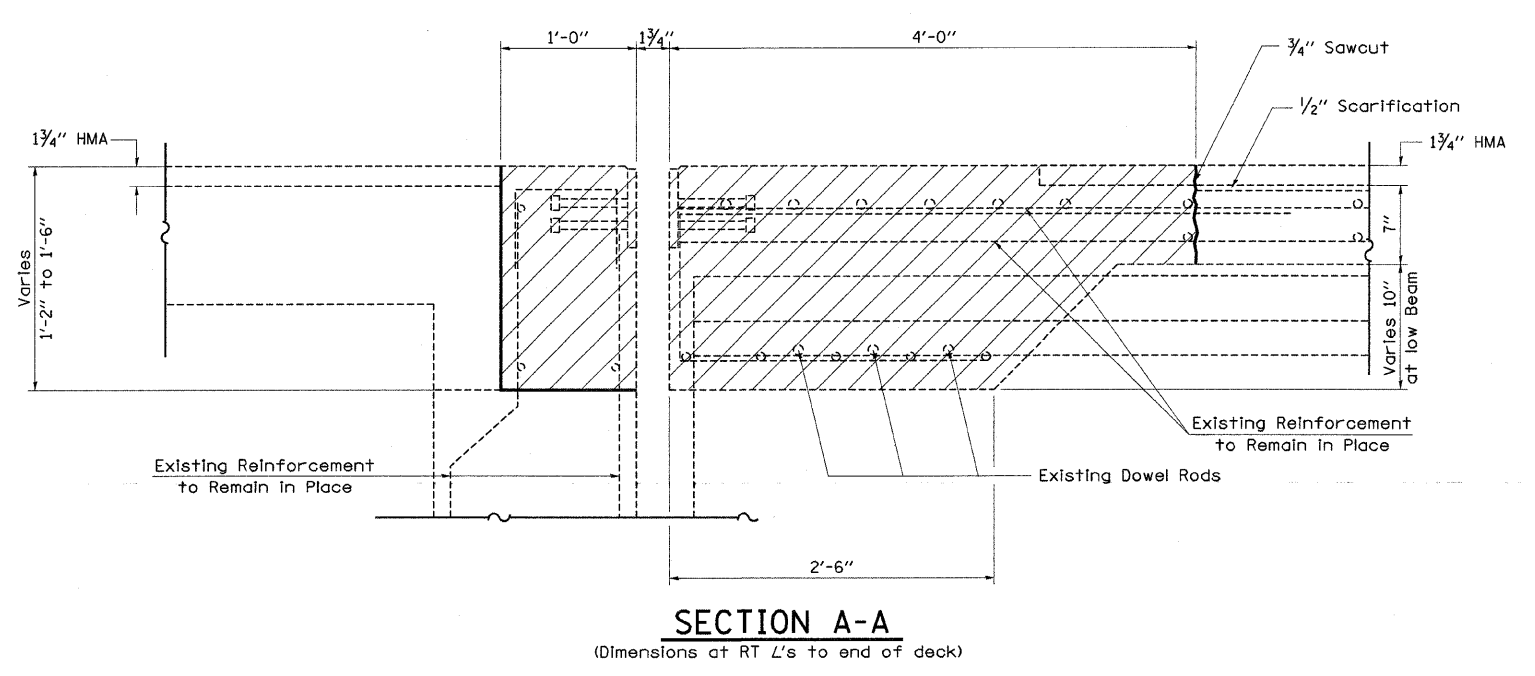
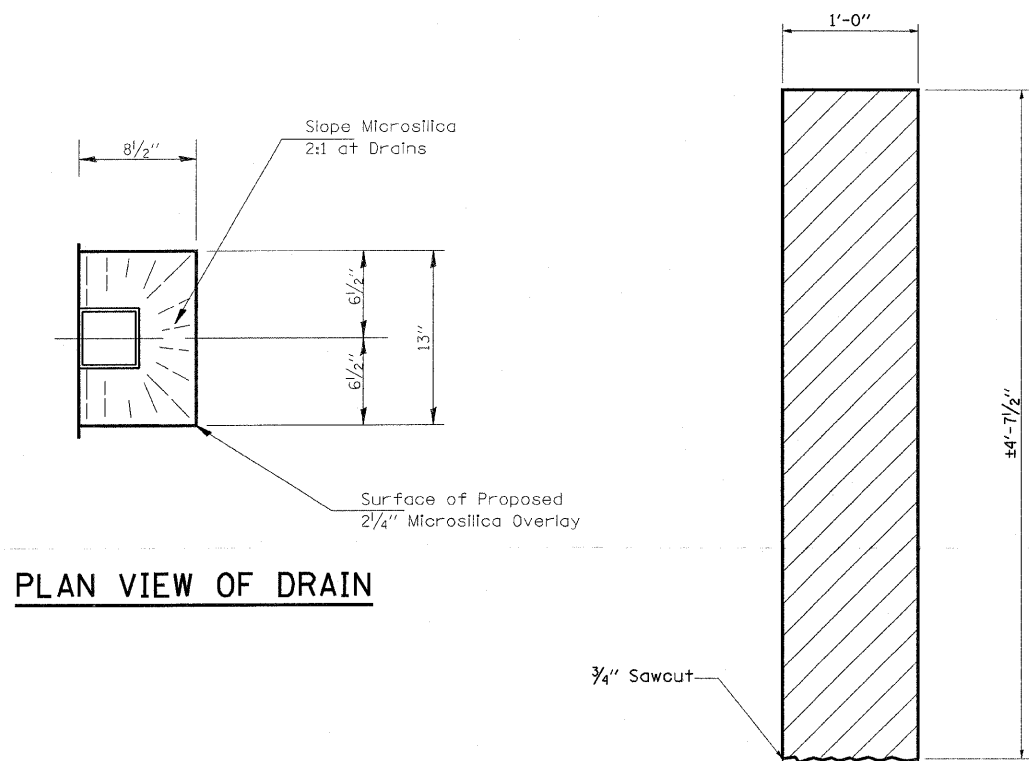
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REPLACEMENT DETAILS
SN 026-0006 (WB)

SCALE: N/A SHEET NO. 4 OF 10 SHEETS STA. TO STA.

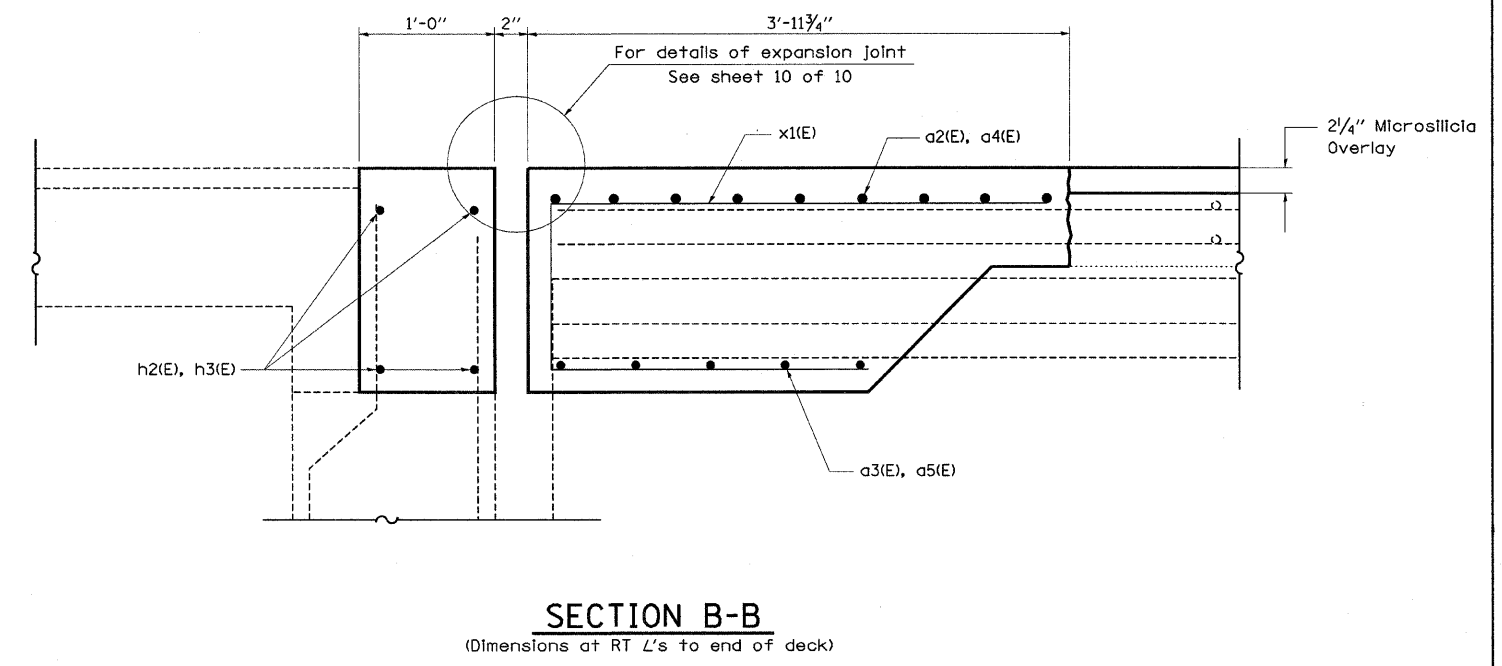
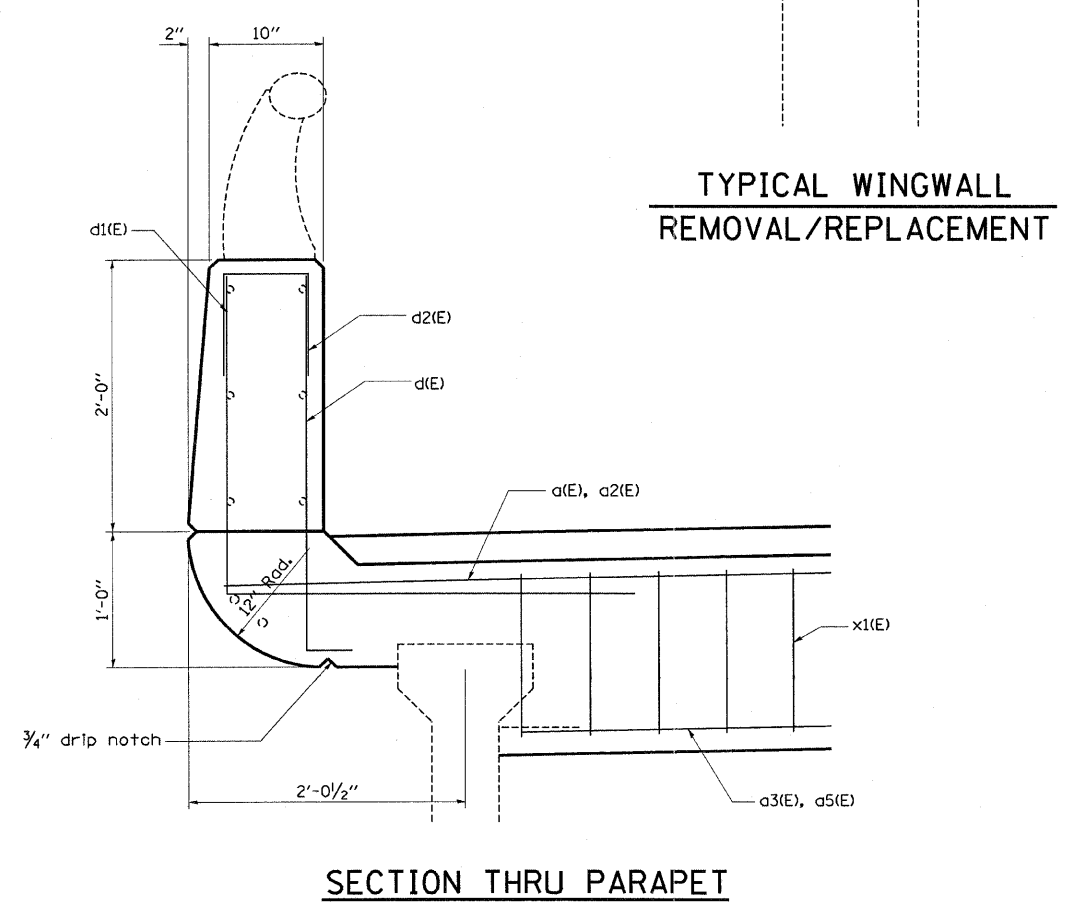
F.A.I. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
70 D-7 BRIDGE DECK REPAIRS FAYETTE 59 27
CONTRACT NO. 94993
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

SHEET NO. 4
10 SHEETS



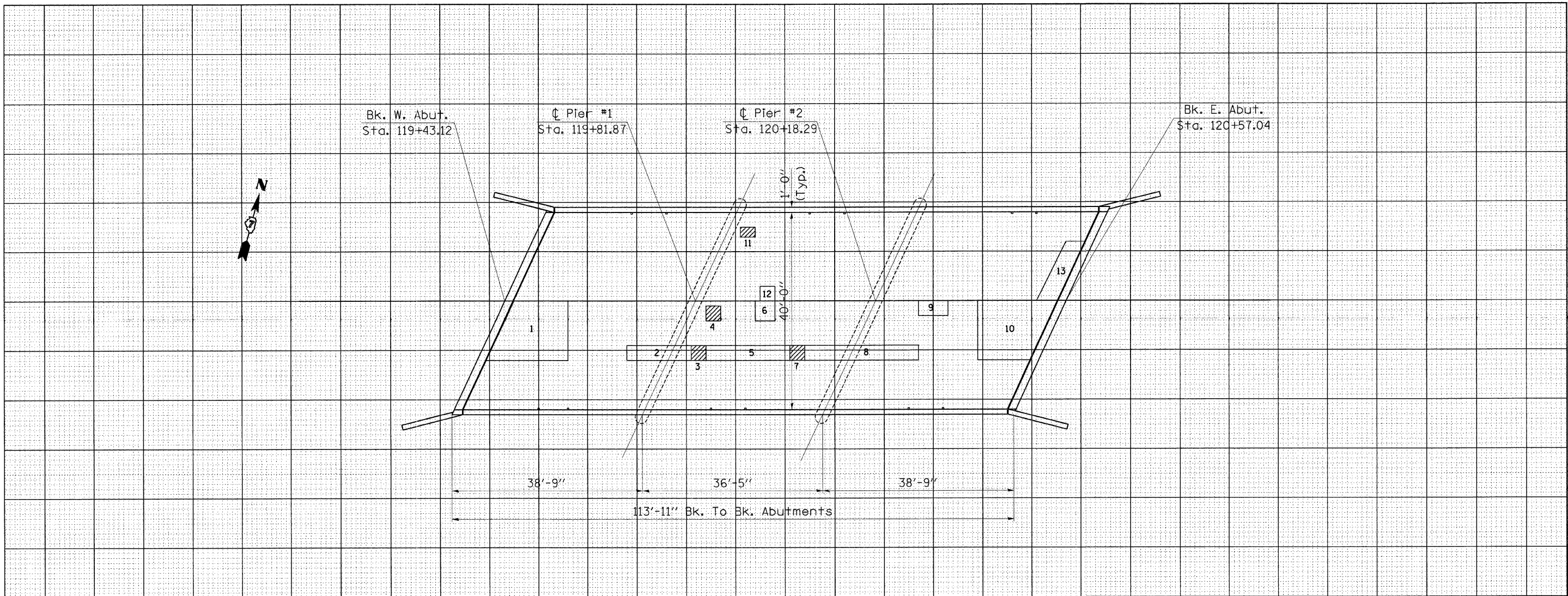
Note: Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Base Sheet EJ-SSJ.

- Existing Reinforcement
- Proposed Reinforcement



FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXPANSION JOINT REPLACEMENT DETAILS SN 026-0005 (EB) & SN 026-0006 (WB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\piv\work\FWIDOT\SWARTZRW\dms36208\th	el\edesign_94993.dgn	DRAWN -	REVISED -			70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	28	
PLOT SCALE = 20,000' / IN.		CHECKED -	REVISED -			CONTRACT NO. 94993					
PLOT DATE = 10/17/2008		DATE -	REVISED -			FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT				
					SCALE: N/A	SHEET NO. 5 OF 10 SHEETS	STA.	TO STA.			

SHEET NO. 5
10 SHEETS



PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	SQ FT	SQ FT
1	14.0 x 12.0	168.0		
2	13.0 x 3.0	39.0		
3	3.0 x 3.0		9.0	
4	3.0 x 3.0		9.0	
5	17.0 x 3.0	51.0		
6	4.0 x 4.0	16.0		
7	3.0 x 3.0		9.0	
8	23.0 x 3.0	69.0		
9	6.0 x 3.0	18.0		
10	13.5 x 12.0	162.0		
11	3.0 x 2.0		6.0	
12	3.0 x 3.0		9.0	
13	4.0 x 12.0	48.0		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	SQ FT	SQ FT
PARTIAL DEPTH				
	580 / 9 =	64.4		
	USE	65	SQ YD	
FULL DEPTH, TYPE 1				
	33 / 9 =	3.7		
	USE	4	SQ YD	

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	SQ FT	SQ FT

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	SQ FT	SQ FT

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	SQ FT	SQ FT

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

PATCHING LEGEND

□ PARTIAL DEPTH (FOR INFORMATION ONLY)

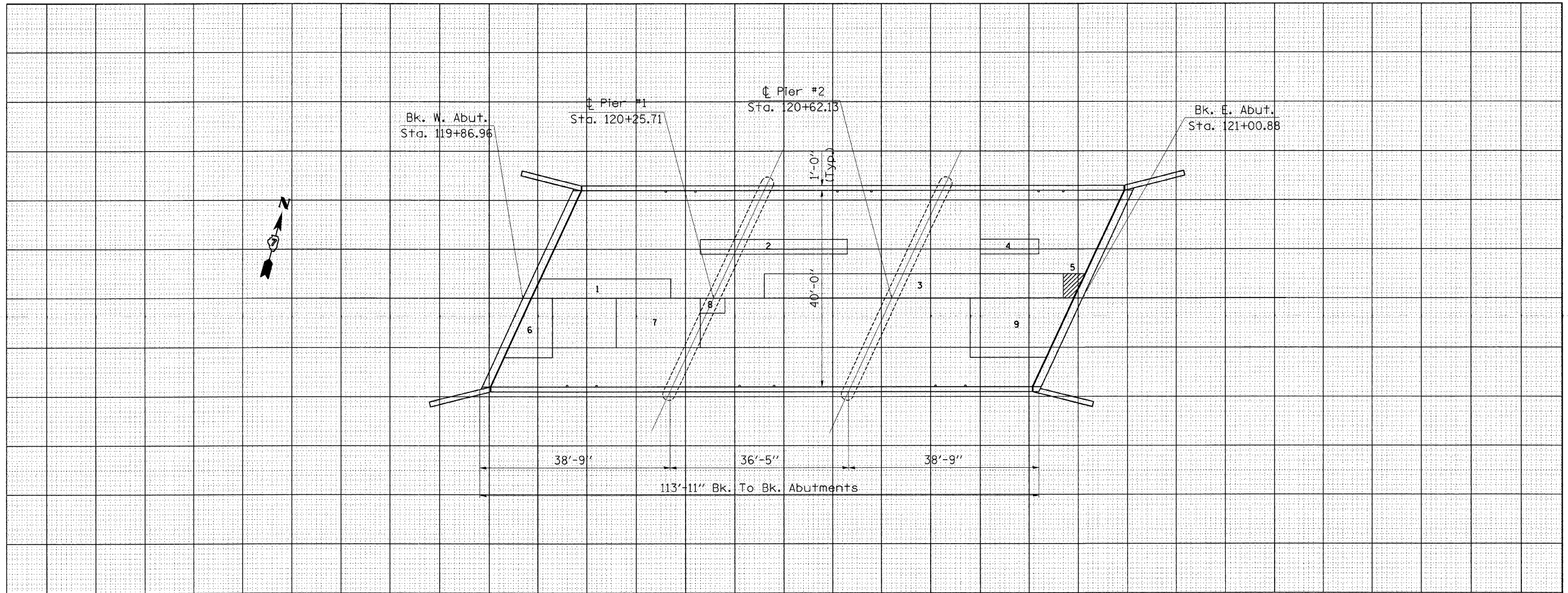
▨ FULL DEPTH

DATE OF SURVEY: 04/21/08
 SURVEY BY: M. ALLEN, K. THOELE
 METHOD OF SURVEY: VISUAL

BRIDGE DECK PATCHING
 FAYETTE COUNTY

SHEET NO. 6
 10 SHEETS

005



PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT	SO FT
1	27.0 x 4.0	108.0		
2	30.0 x 3.0	90.0		
3	61.0 x 5.0	305.0		
4	12.0 x 3.0	36.0		
5	3.0 x 5.0		15.0	
6	7.0 x 12.0	84.0		
7	17.0 x 10.0	170.0		
8	5.0 x 3.0	15.0		
9	18.0 x 12.0	216.0		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT	SO FT
	PARTIAL DEPTH			
	1024 / 9 =	113.8		
	USE	114	SQ YD	
	FULL DEPTH, TYPE 1			
	15 / 9 =	1.7		
	USE	2	SQ YD	

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT	SO FT

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT	SO FT

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT	SO FT

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

PATCHING LEGEND

□ PARTIAL DEPTH (FOR INFORMATION ONLY)

▨ FULL DEPTH

DATE OF SURVEY: 04/21/08
 SURVEY BY: M. ALLEN, K. THOLE
 METHOD OF SURVEY: VISUAL

BRIDGE DECK PATCHING
 FAYETTE COUNTY

SHEET NO. 7
 10 SHEETS

FILE NAME = c:\pwork\p\WIDOT\SWARTZR\dm36208\thole\design_94993.dgn
 USER NAME = swartzw
 PLOT SCALE = 50.0000' / IN.
 PLOT DATE = 10/17/2008

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

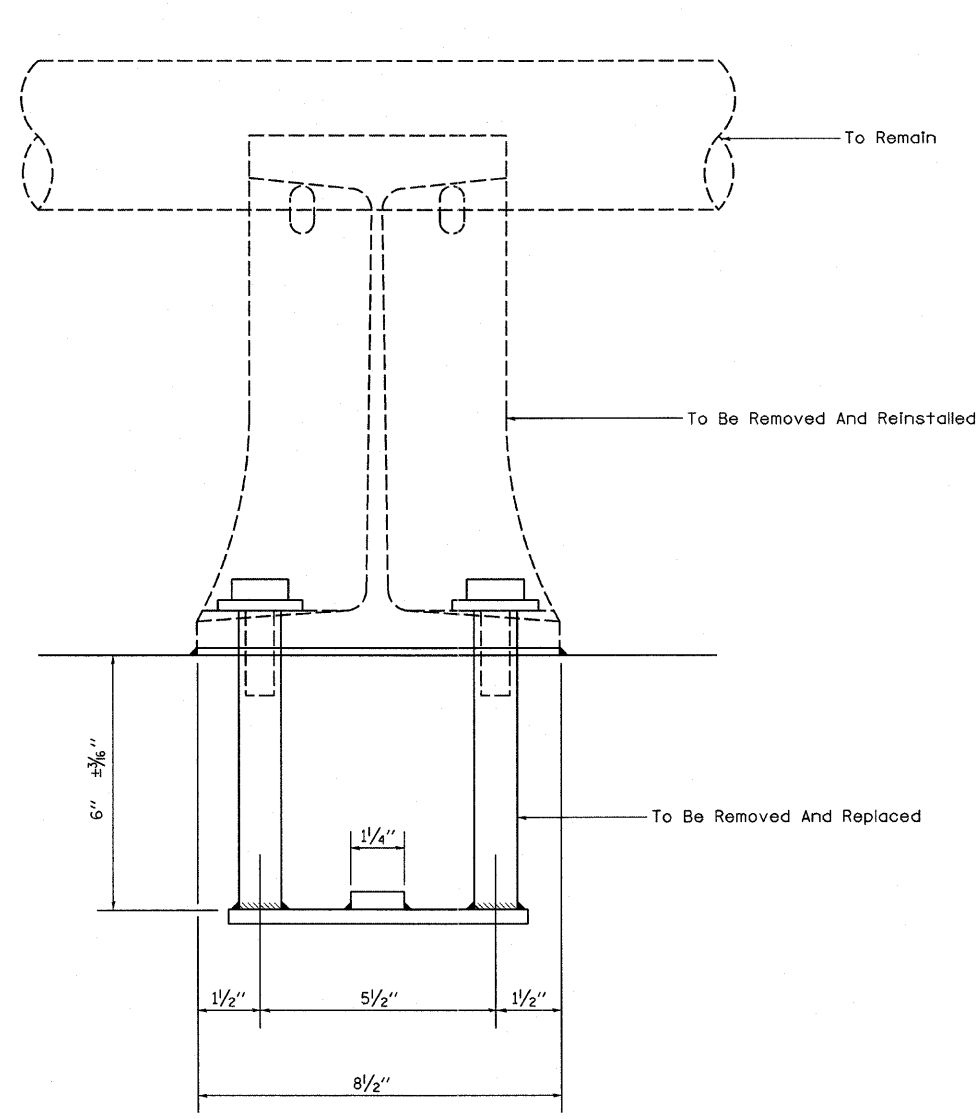
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BRIDGE DECK PATCHING
 SN. 026-0006 (WB)

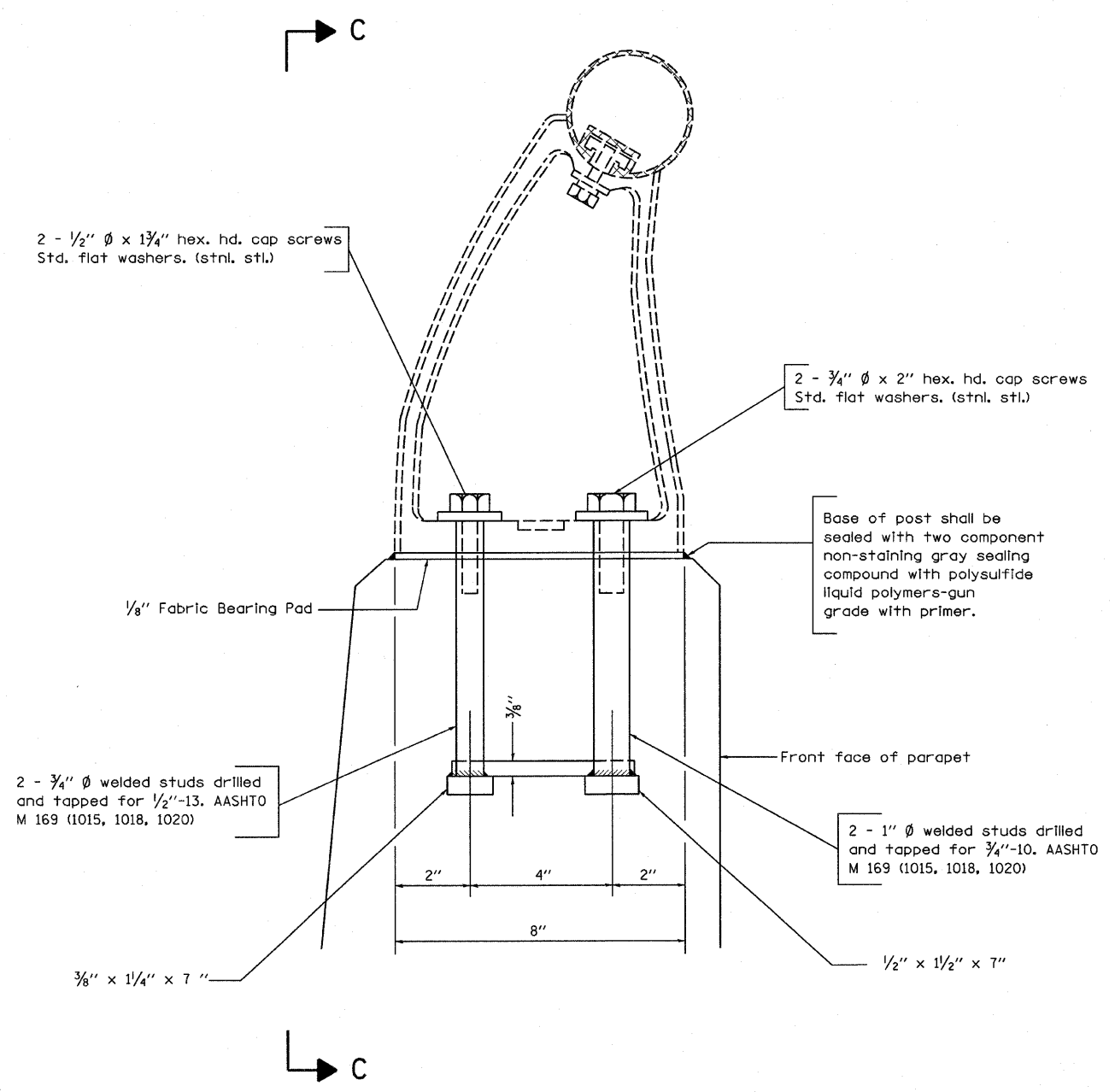
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TO	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	30
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 94993		

006



VIEW C-C



Note: New Rail Post anchorage devices will be required at each location where posts are connected to new construction. Cost shall be included with Concrete Superstructure.

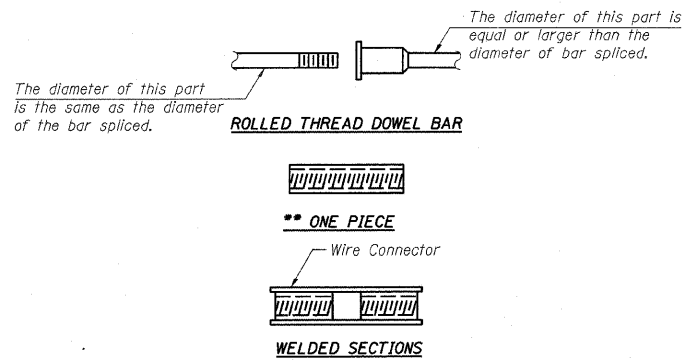
FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -
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PLOT SCALE = 20,0000 ' / IN.		CHECKED -	REVISED -
PLOT DATE = 10/17/2008		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RAIL SUPPORT ANCHOR DETAILS
SN. 026-0005 AND 026-0006**

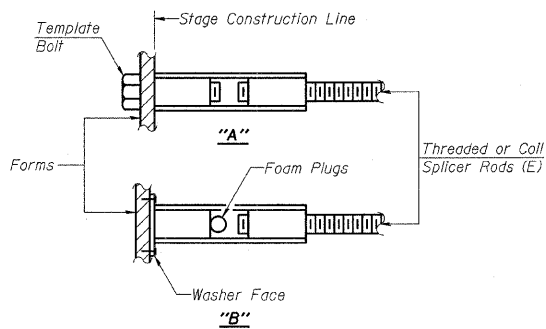
SCALE: N/A SHEET NO. 8 OF 10 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	31
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 94993	



BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

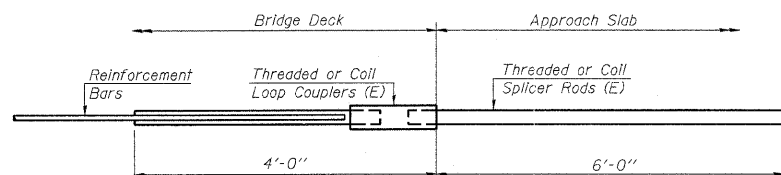
"A" :Set bar splicer assembly by means of a template bolt.
 "B" :Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

NOTES

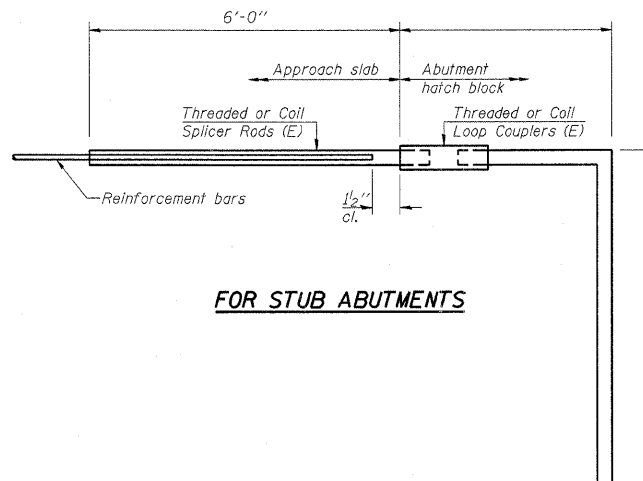
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
 - ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

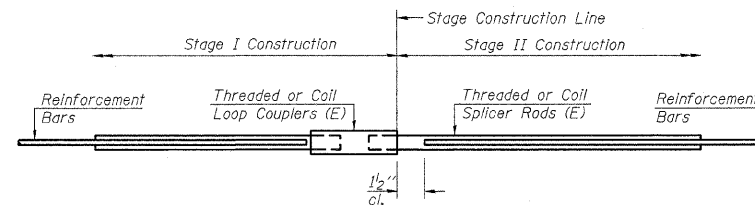
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS



FOR STUB ABUTMENTS



STANDARD

Bar Size	No. Assemblies Required	Location
#6	18	026-0005
#7	18	026-0005
#6	18	026-0006
#7	18	026-0006

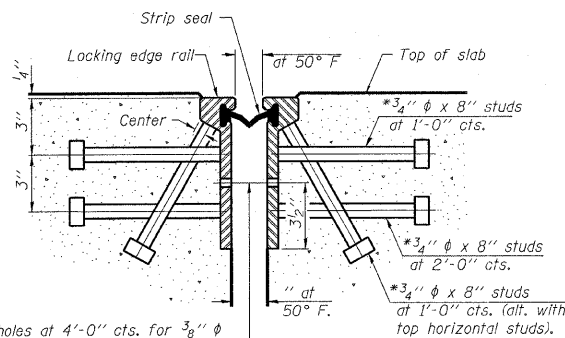
BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO.

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	

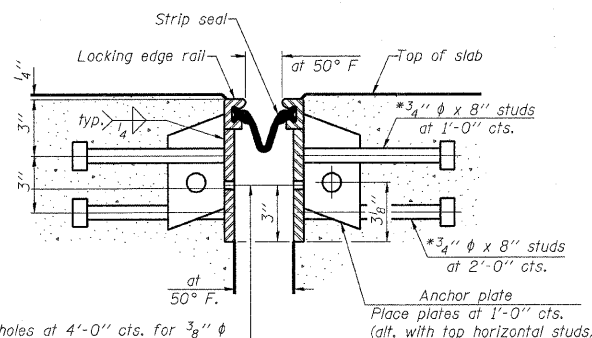
BSD-1 5-16-08

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



$\frac{1}{16}$ " ϕ holes at 4'-0" cts. for $\frac{3}{8}$ " ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

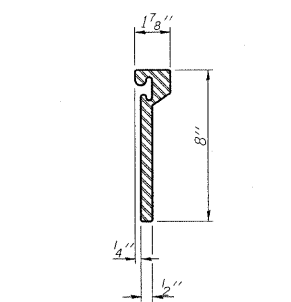
SECTION THRU ROLLED RAIL JOINT



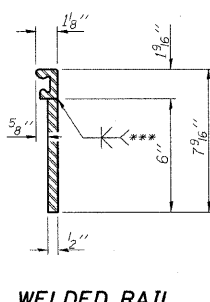
$\frac{1}{16}$ " ϕ holes at 4'-0" cts. for $\frac{3}{8}$ " ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

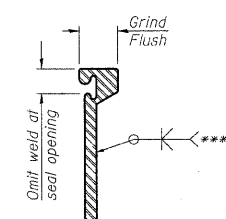
Notes:
The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum 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



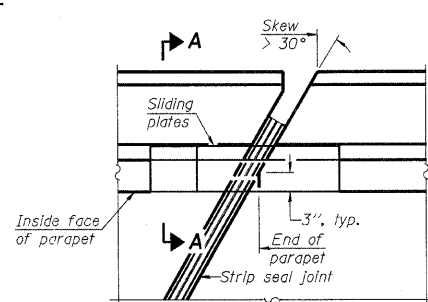
WELDED RAIL



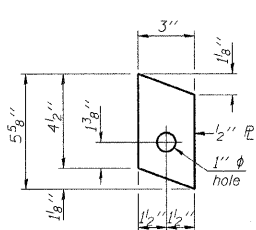
LOCKING EDGE RAIL SPLICE

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

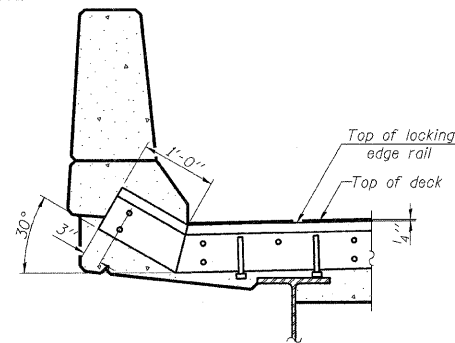
LOCKING EDGE RAILS



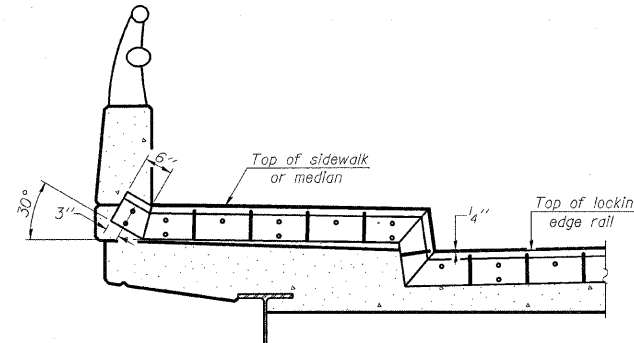
PLAN



ANCHOR PLATE
(for welded rail)



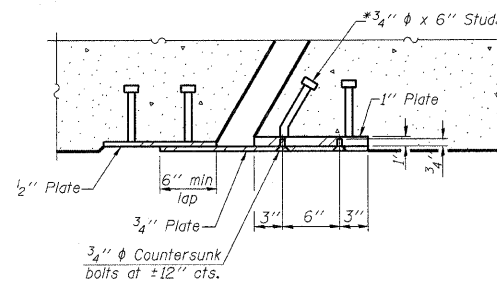
AT PARAPET



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.

TYPICAL END TREATMENTS



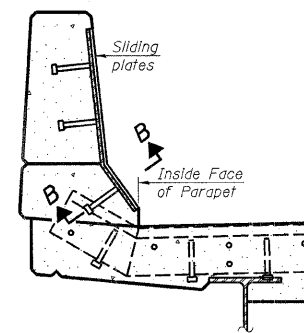
SECTION B-B

BILL OF MATERIAL

Item	Unit	Total	SN.
Preformed Joint Strip Seal	Foot	93	026-0005
Preformed Joint Strip Seal	Foot	93	026-0006

PREFORMED JOINT STRIP SEAL STRUCTURE NO.

POINT BLOCK DETAILS
(for skews > 30°)



SECTION A-A

EJ-SSJ

5-16-08

SHEET NO. 10
10 SHEETS

FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PERFORMED JOINT STRIP SEAL SN. 026-0005 AND 026-0006	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLT SCALE = 2E,0000' / IN.	DATE = 10/17/2008	DRAWN -	REVISED -			TO	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	33	
PLT DATE = 10/17/2008	DATE =	CHECKED -	REVISED -			SCALE: N/A	SHEET NO. 10 OF 10 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
		DATE =	REVISED -								CONTRACT NO. 94993

TOTAL BILL OF MATERIALS

SN 026-0007 (EB)

ITEM DESCRIPTION	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	26.9
Concrete Superstructure	Cu. Yd.	26.9
Reinforcement Bars, Epoxy Coated	Pound	4980
Bar Splicers	Each	36
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	778
Bridge Deck Hydro-Scarification, 1/2"	Sq. Yd.	731
Bridge Deck Microsilica Concrete Overlay, 2/4"	Sq. Yd.	731
Bridge Deck Grooving	Sq. Yd.	737
Protective Coat	Sq. Yd.	731
Preformed Joint Strip Seal	Foot	110
Relocating Name Plates	Each	1
Plug Existing Deck Drains	Each	28

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to the existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to the construction or ordering of material. Such variations shall not be cause for additional compensation or a change in the scope of the work. The Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included in concrete removal.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on as-built plans.

The Contractor shall use extreme care during concrete removal so as not to damage the PPC I-Beams.

Removal and reinstallation of the existing name plates on both structures will be necessary for construction of the expansion joints. This work and all materials shall be included in the contract unit price for Relocating Name Plates.

TOTAL BILL OF MATERIALS

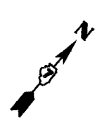
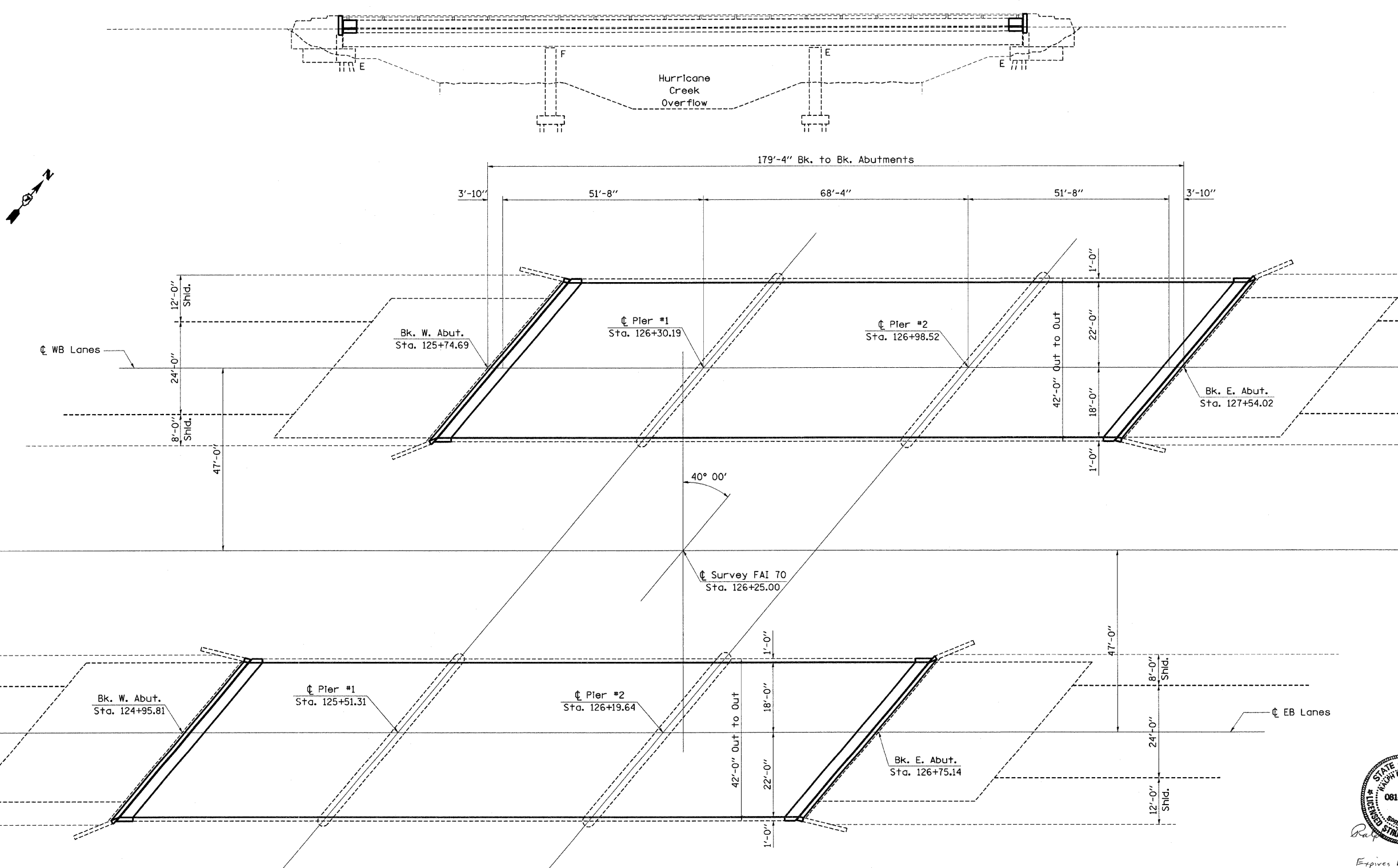
SN 026-0008 (WB)

ITEM DESCRIPTION	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	26.9
Concrete Superstructure	Cu. Yd.	26.9
Reinforcement Bars, Epoxy Coated	Pound	4980
Bar Splicers	Each	36
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	778
Bridge Deck Hydro-Scarification, 1/2"	Sq. Yd.	731
Bridge Deck Microsilica Concrete Overlay, 2/4"	Sq. Yd.	731
Bridge Deck Grooving	Sq. Yd.	737
Protective Coat	Sq. Yd.	731
Deck Slab Repair (Full Depth Type I)	Sq. Yd.	3
Preformed Joint Strip Seal	Foot	110
Relocating Name Plates	Each	1
Plug Existing Deck Drains	Each	28

SHEET NO. 1
12 SHEETS

FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE GENERAL NOTES & BILL OF MATERIALS SN. 026-0007 (EB) & 026-0008 (WB)	F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = 10/17/2008		DATE -	REVISED -			SCALE: N/A	SHEET NO. 1 OF 12 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

The existing 3 span precast prestressed I-beam structures were constructed in 1965 as section 26-0B-2 at Sta. 126+25. SN 026-0007 carries FAI-70 eastbound and SN 026-0008 carries FAI-70 westbound. The proposed project consists of new expansion joints, partial and full depth deck patching, new microsilica wearing surface, and new deck drains.



Expires Nov. 30, 2010

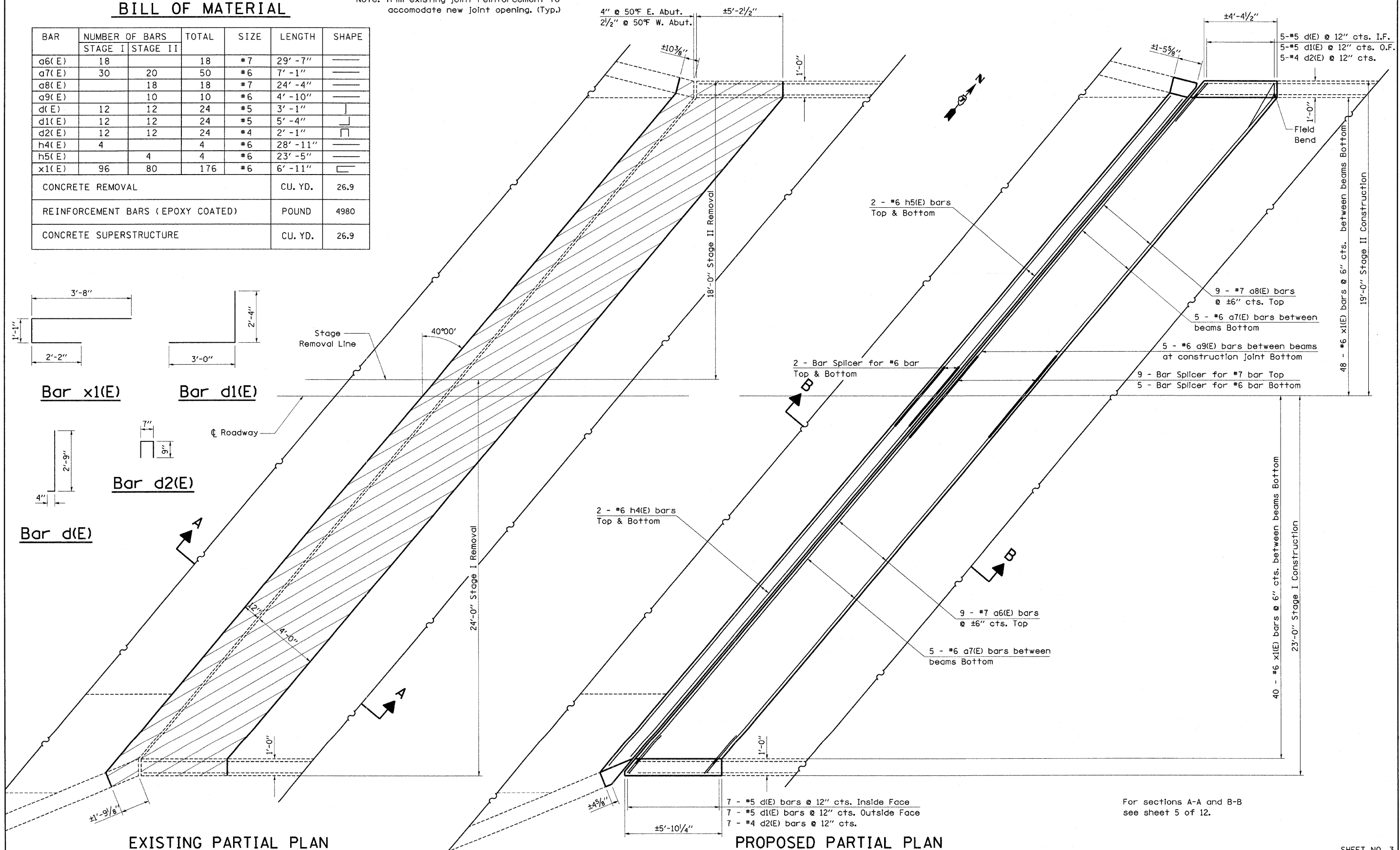
SHEET NO. 2
12 SHEETS

FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION SN. 026-0007 (EB) & SN. 026-0008 (WB)			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 20,0000' / IN.		CHECKED -	REVISED -		CONTRACT NO. 94993			FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
PLOT DATE = 10/17/2008		DATE -	REVISED -		SCALE: N/A	SHEET NO. 2 OF 12 SHEETS	STA.	TO STA.				

BILL OF MATERIAL

Note: Trim existing joint reinforcement to accommodate new joint opening. (Typ.)

BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a6(E)	18		18	#7	29' - 7"	—
a7(E)	30	20	50	#6	7' - 1"	—
a8(E)		18	18	#7	24' - 4"	—
a9(E)		10	10	#6	4' - 10"	—
d(E)	12	12	24	#5	3' - 1"	┘
d1(E)	12	12	24	#5	5' - 4"	┘
d2(E)	12	12	24	#4	2' - 1"	┘
h4(E)	4		4	#6	28' - 11"	—
h5(E)		4	4	#6	23' - 5"	—
x1(E)	96	80	176	#6	6' - 11"	┘
CONCRETE REMOVAL					CU. YD.	26.9
REINFORCEMENT BARS (EPOXY COATED)					POUND	4980
CONCRETE SUPERSTRUCTURE					CU. YD.	26.9



EXISTING PARTIAL PLAN
(West Abutment shown; East Abutment similar)

PROPOSED PARTIAL PLAN
(West Abutment shown; East Abutment similar)

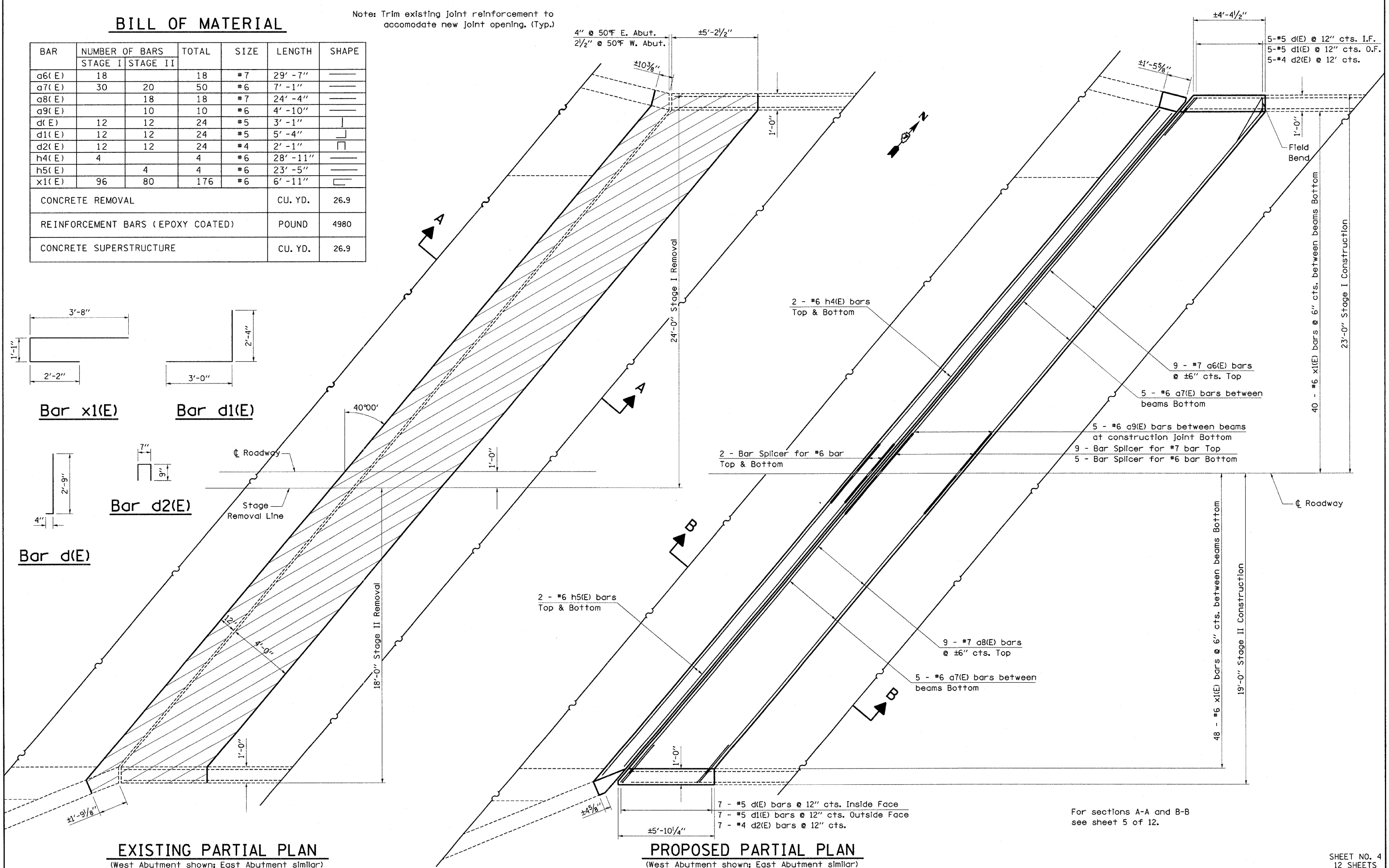
For sections A-A and B-B see sheet 5 of 12.

BILL OF MATERIAL

BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a6(E)	18		18	#7	29'-7"	—
a7(E)	30	20	50	#6	7'-1"	—
a8(E)		18	18	#7	24'-4"	—
a9(E)		10	10	#6	4'-10"	—
d(E)	12	12	24	#5	3'-1"	┘
d1(E)	12	12	24	#5	5'-4"	┘
d2(E)	12	12	24	#4	2'-1"	┘
h4(E)	4		4	#6	28'-11"	—
h5(E)		4	4	#6	23'-5"	—
x1(E)	96	80	176	#6	6'-11"	┘
CONCRETE REMOVAL					CU. YD.	26.9
REINFORCEMENT BARS (EPOXY COATED)					POUND	4980
CONCRETE SUPERSTRUCTURE					CU. YD.	26.9

Note: Trim existing joint reinforcement to accommodate new joint opening. (Typ.)

4" @ 50°F E. Abut.
2 1/2" @ 50°F W. Abut.



EXISTING PARTIAL PLAN

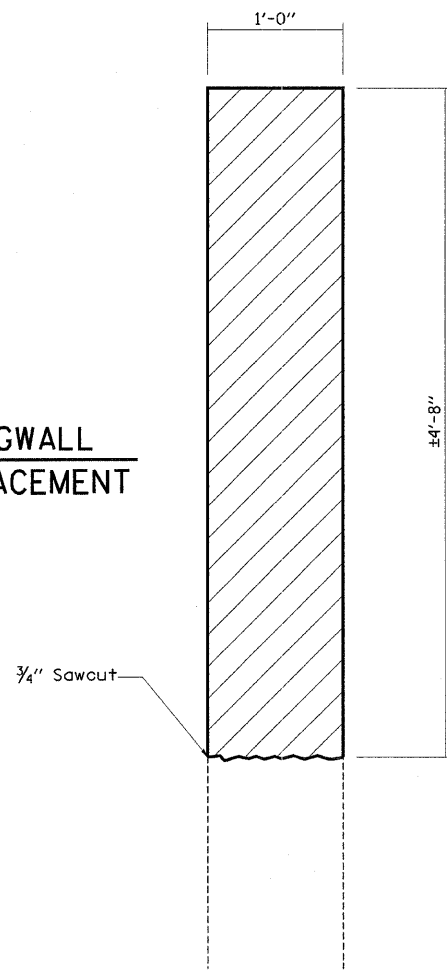
(West Abutment shown; East Abutment similar)

PROPOSED PARTIAL PLAN

(West Abutment shown; East Abutment similar)

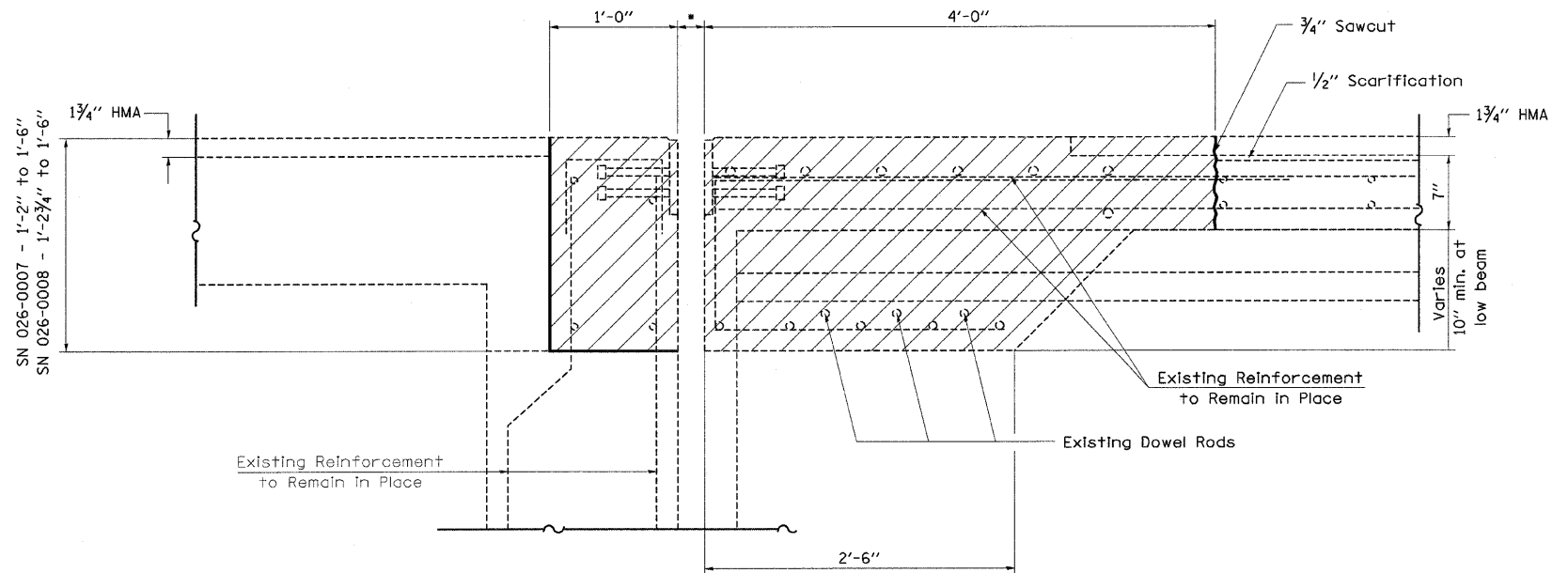
For sections A-A and B-B see sheet 5 of 12.

**TYPICAL WINGWALL
REMOVAL/REPLACEMENT**



SN 026-0007 - 1'-2" to 1'-6"
SN 026-0008 - 1'-2 3/4" to 1'-6"

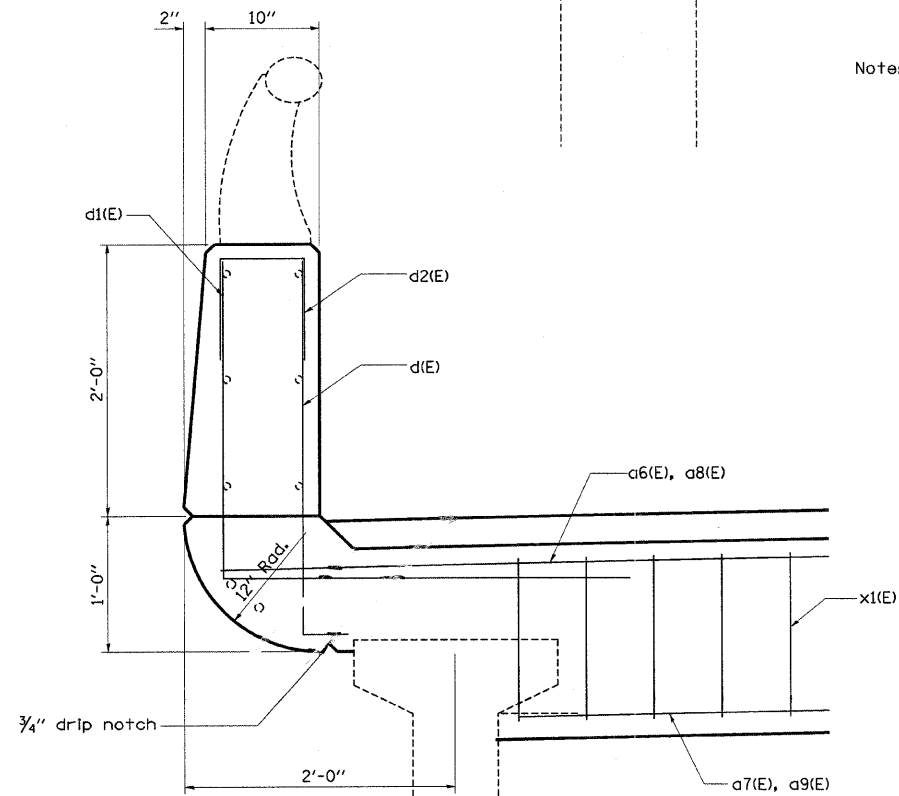
• 1 3/4" @ West Abutment
• 2 3/4" @ East Abutment



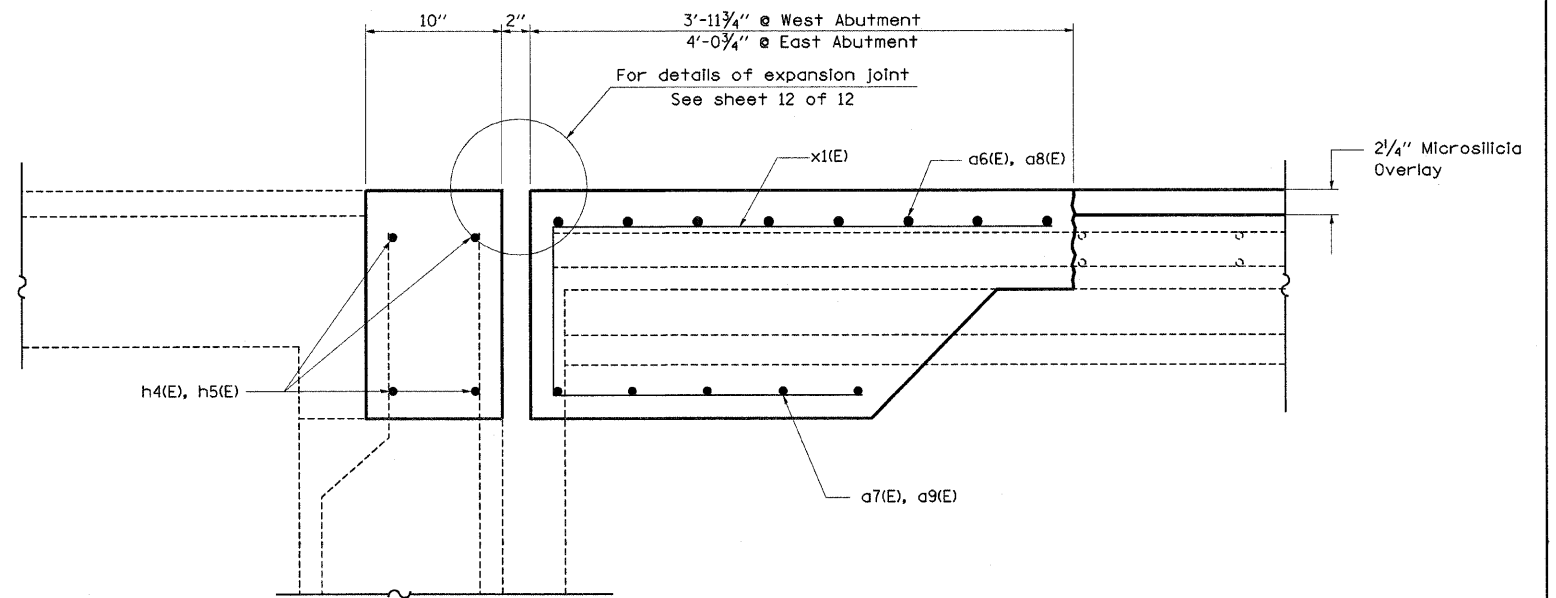
SECTION A-A
(Dimensions at RT L's to end of deck)

○ Existing Reinforcement
● Proposed Reinforcement

Note: Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Base Sheet EJ-SSJ.



SECTION THRU PARAPET



SECTION B-B
(Dimensions at RT L's to end of deck)

FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -
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PLOT SCALE = 20,0000 ' / IN.		CHECKED -	REVISED -
PLOT DATE = 10/17/2008		DATE -	REVISED -

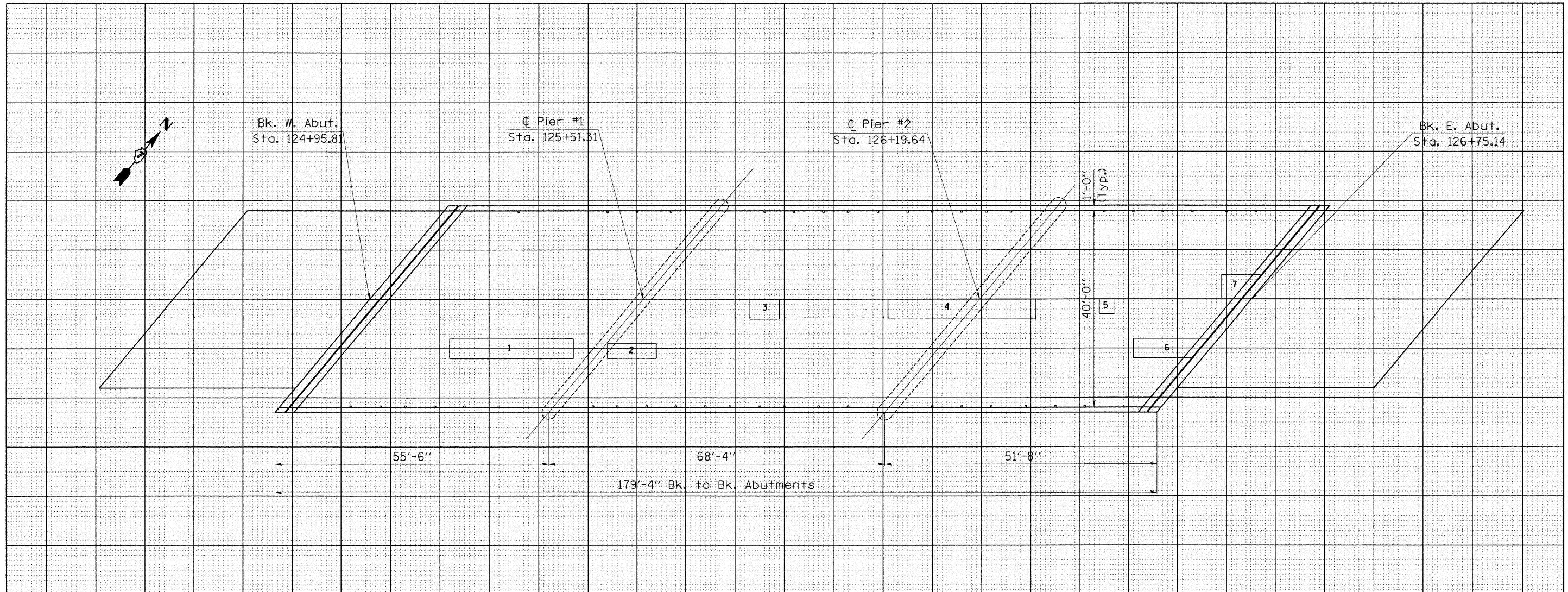
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT REPLACEMENT DETAILS
SN 026-0007 (EB) & SN 026-0008 (WB)**

SCALE: N/A SHEET NO. 5 OF 12 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	38
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 94993	

SHEET NO. 5
12 SHEETS



PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	SQ FT	SQ FT
1	25.0 x 4.0	100.0		
2	10.0 x 3.0	30.0		
3	6.0 x 4.0	24.0		
4	30.0 x 4.0	120.0		
5	3.0 x 3.0	9.0		
6	13.5 x 4.0	54.0		
7	6.0 x 5.0	30.0		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	SQ FT	SQ FT
	PARTIAL DEPTH			
	367.0 / 9 =	40.8		
	USE	41	SQ YD	

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	SQ FT	SQ FT

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	SQ FT	SQ FT

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	SQ FT	SQ FT

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

PATCHING LEGEND

- PARTIAL DEPTH (FOR INFORMATION ONLY)
- FULL DEPTH

DATE OF SURVEY: 04/21/08
 SURVEY BY: M. ALLEN, K. THOLE
 METHOD OF SURVEY: VISUAL

BRIDGE DECK PATCHING
 FAYETTE COUNTY

SHEET NO. 6
 12 SHEETS

FILE NAME =
 USER NAME = swartzrw
 DESIGN -
 DRAWN -
 CHECKED -
 DATE -

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

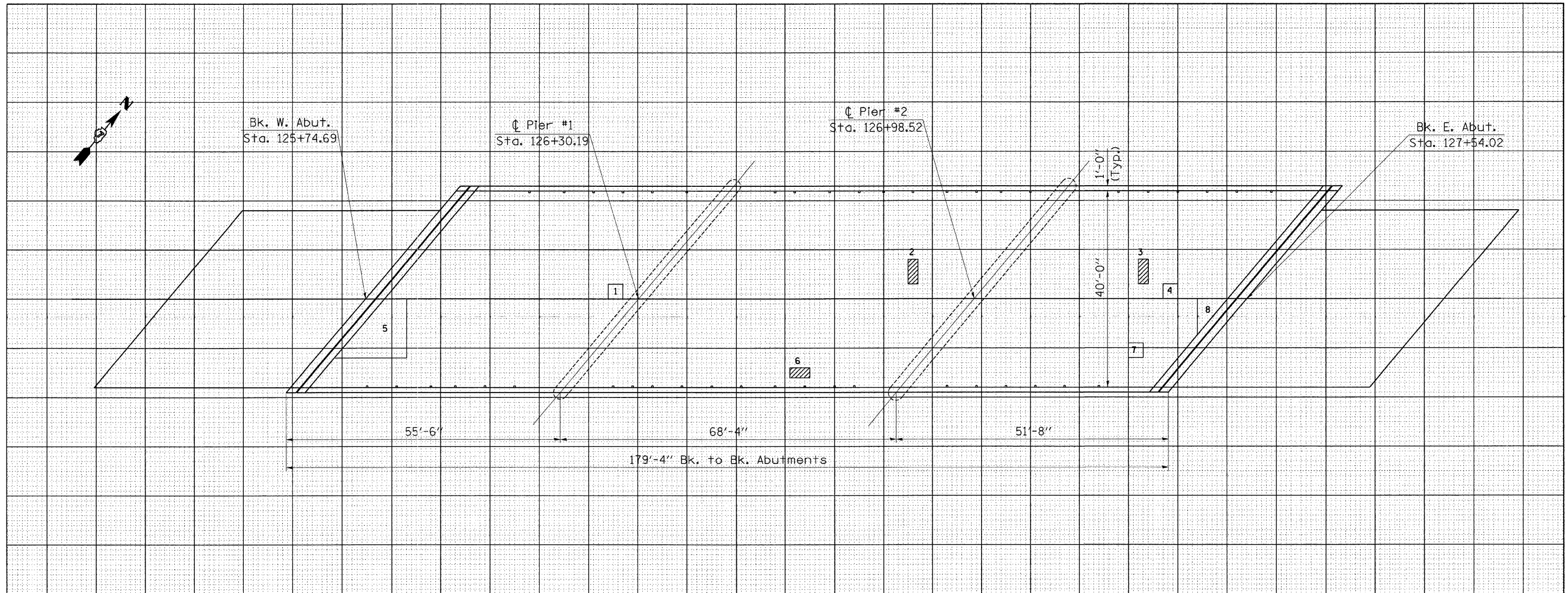
REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BRIDGE DECK PATCHING
 SN. 026-0007 (EB)

SCALE: 50 SHEET NO. 6 OF 12 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	39
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	CONTRACT NO. 94993	



PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		
1	3.0 x 3.0	9.0			
2	2.0 x 5.0	10.0			
3	2.0 x 5.0	10.0			
4	3.0 x 3.0	9.0			
5	9.5 x 12.0	114.0			
6	4.0 x 2.0	8.0			
7	3.0 x 3.0	9.0			
8	3.0 x 7.0	21.0			

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		
PARTIAL DEPTH					
		190.0	/ 9 =	21.1	
		USE	21	SO YD	

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
		SO FT	SO FT		

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

PATCHING LEGEND

PARTIAL DEPTH (FOR INFORMATION ONLY)

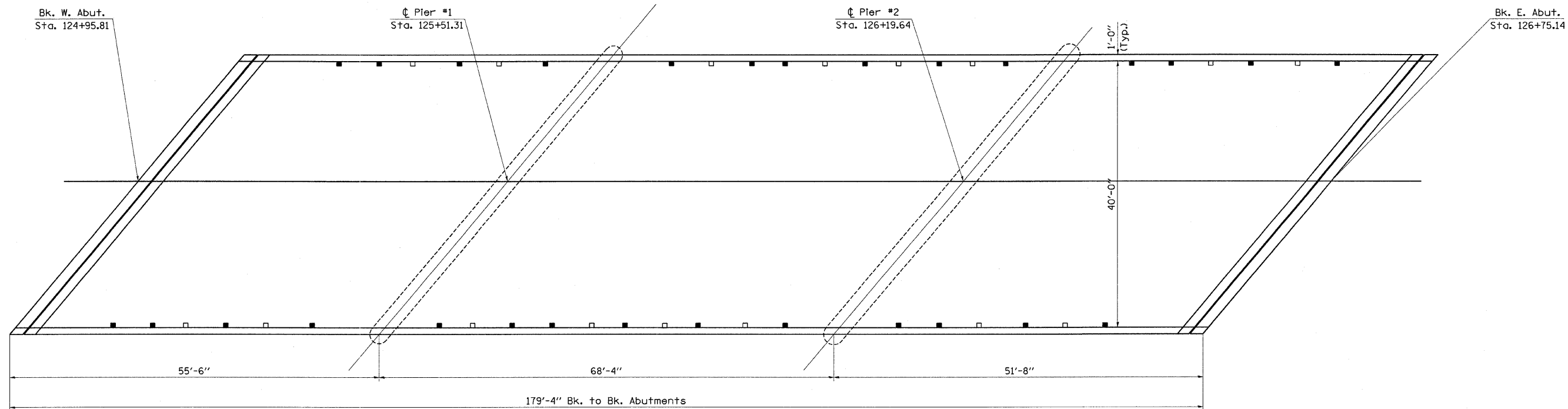
FULL DEPTH

DATE OF SURVEY: 04/21/08
 SURVEY BY: M. ALLEN, K. THOLEE
 METHOD OF SURVEY: VISUAL

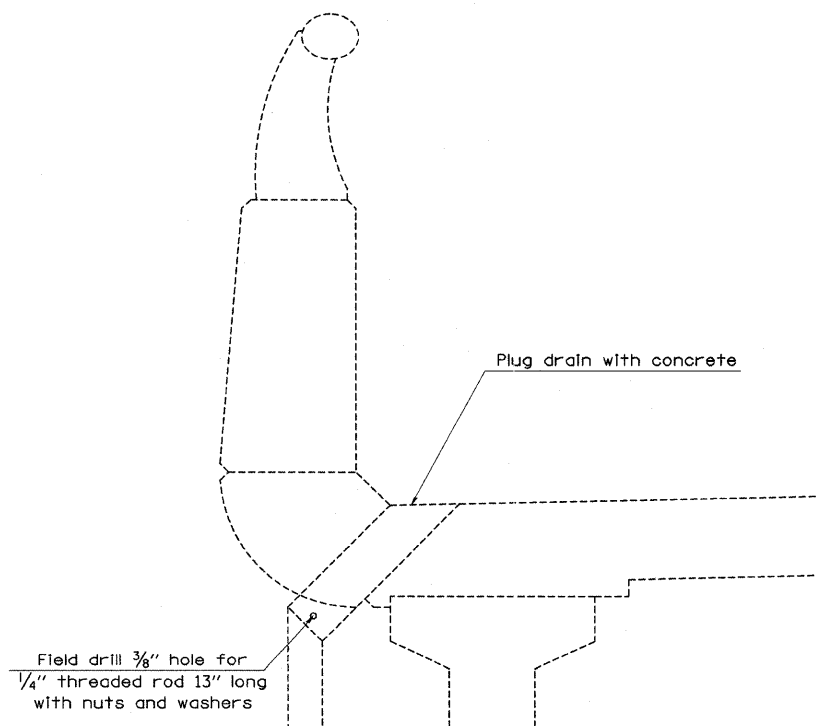
BRIDGE DECK PATCHING
 FAYETTE COUNTY

SHEET NO. 7
 12 SHEETS

008

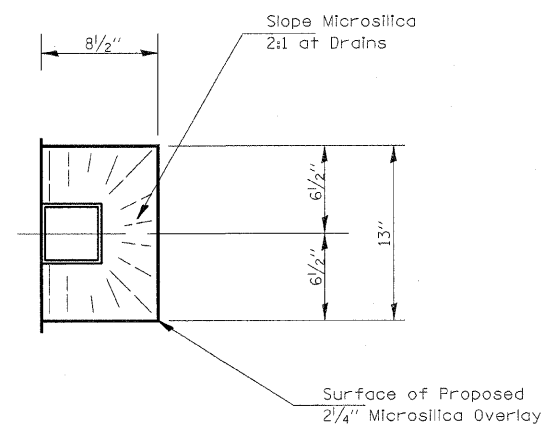


- Existing Drain to Be Plugged
- Existing Drain to Remain Open



DRAINS TO BE PLUGGED DETAIL

Note: See "Total Bill of Materials for each structure for quantities.

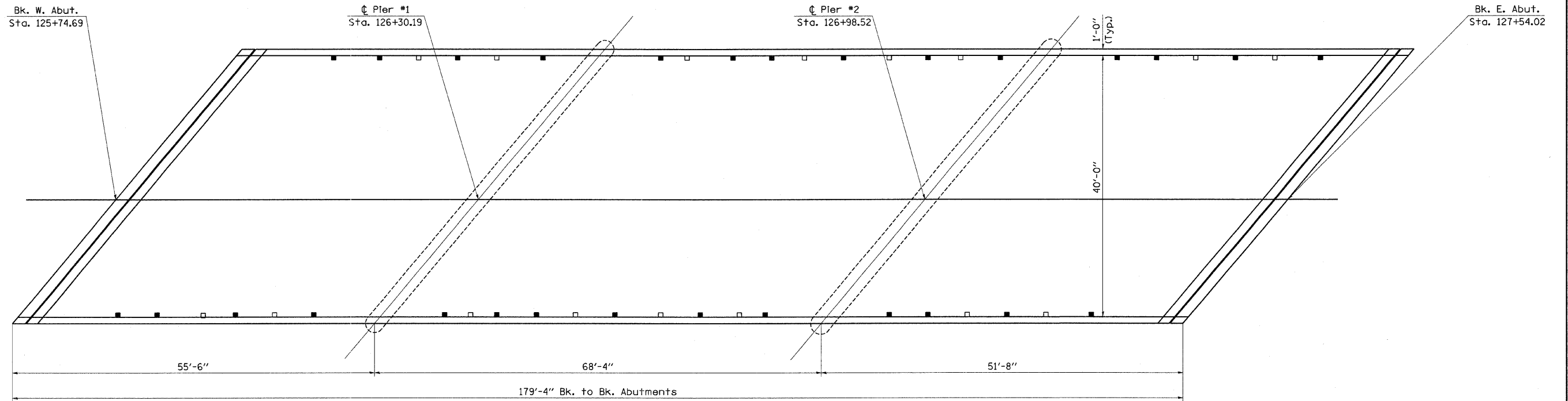


PLAN VIEW OF EXISTING DRAIN TO REMAIN OPEN

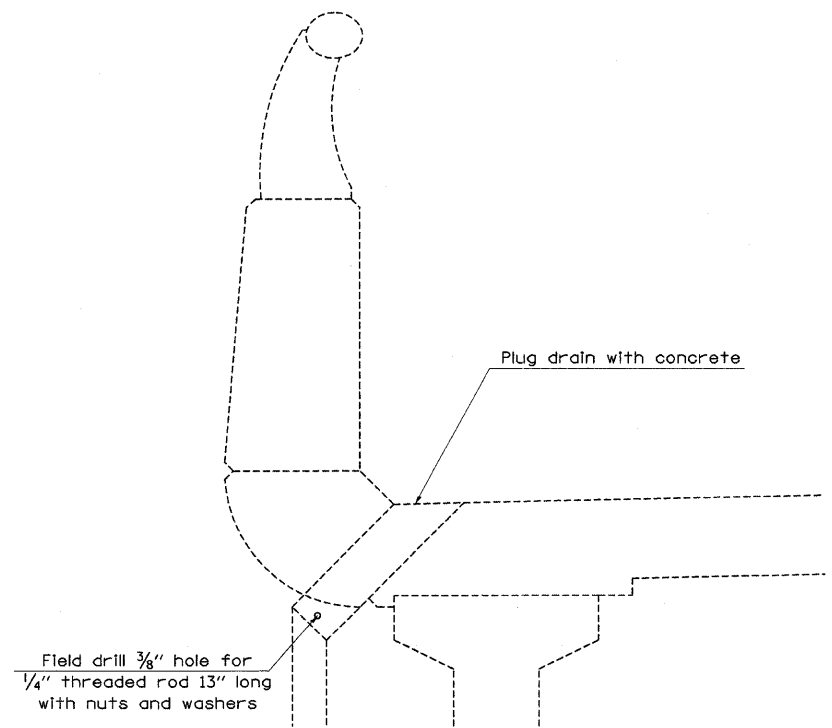
FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING DECK DRAINS TO BE PLUGGED SN. 026-0007 (EB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwwork\pwwid01\SWARTZRW\dms36208\th	elidedesign_94993.dgn	DRAWN -	REVISED -			70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	41
	PLOT SCALE = 20.0000' / IN.	CHECKED -	REVISED -			CONTRACT NO. 94993				
	PLOT DATE = 10/17/2009	DATE -	REVISED -			FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

SHEET NO. 8
12 SHEETS

SCALE: N/A SHEET NO. 8 OF 12 SHEETS STA. TO STA.

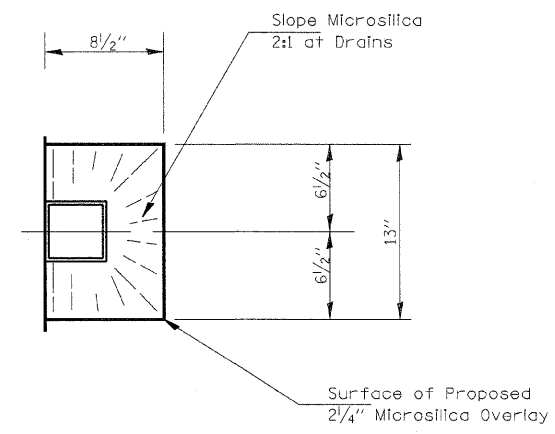


- Existing Drain to be Plugged
- Existing Drain to Remain Open



DRAINS TO BE PLUGGED DETAIL

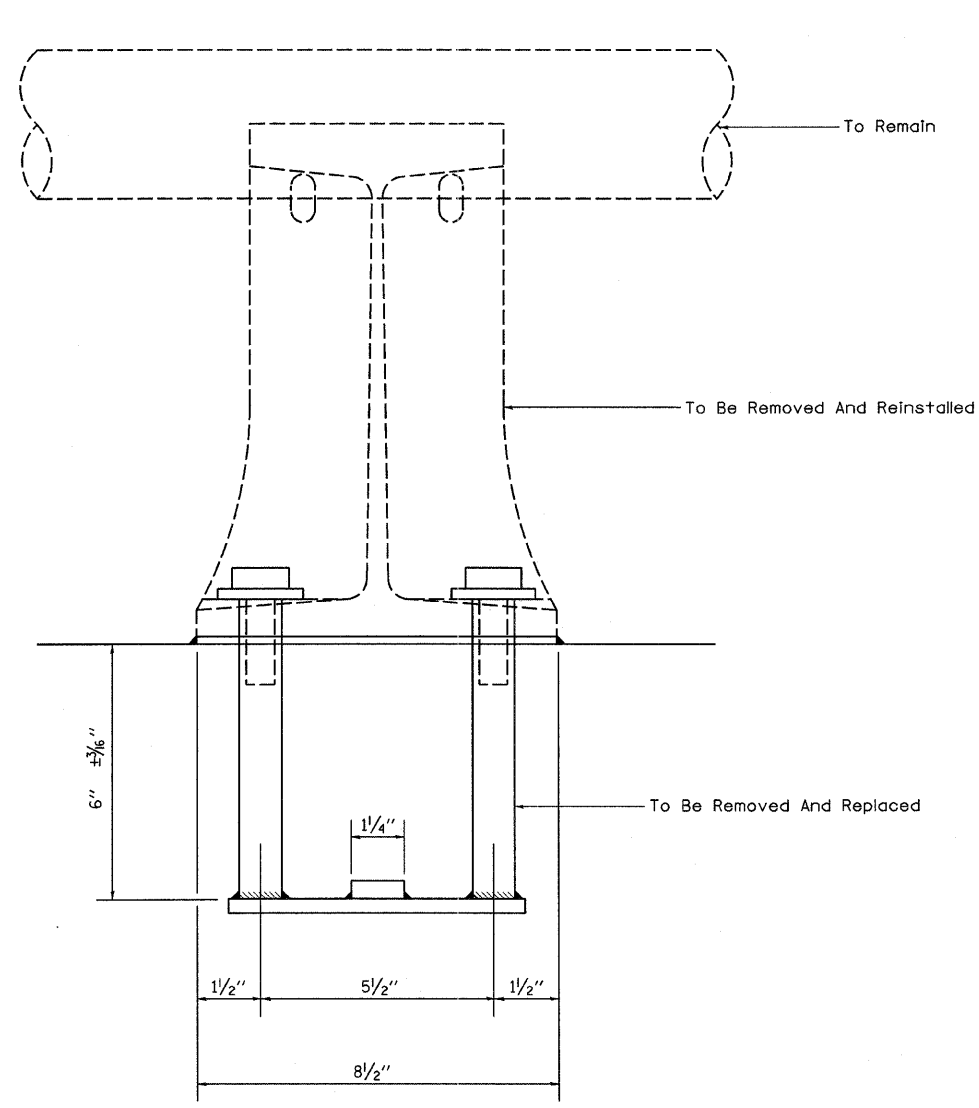
Note: See "Total Bill of Material for each structure for quantities."



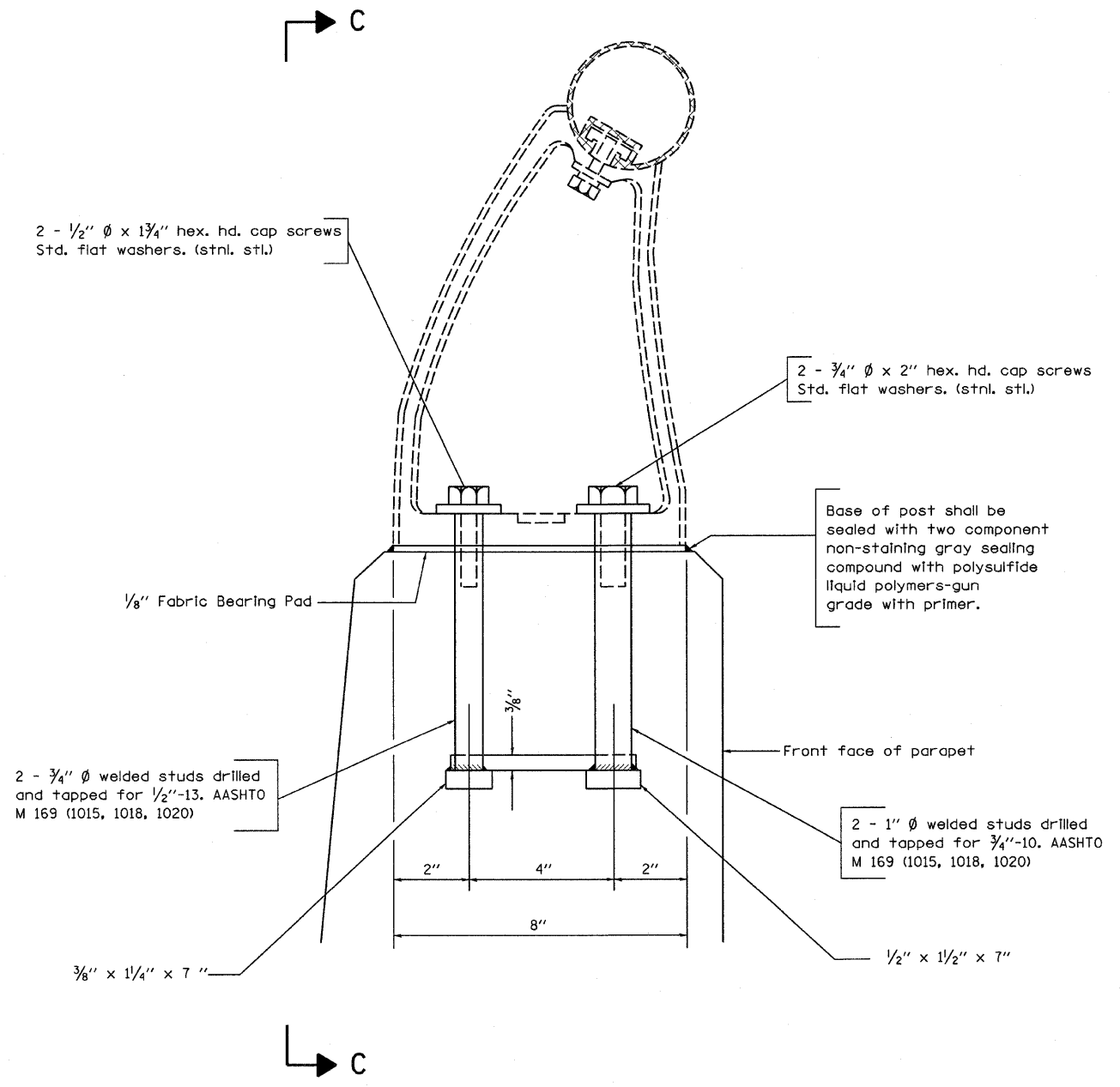
PLAN VIEW OF EXISTING DRAIN TO REMAIN OPEN

FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING DECK DRAINS TO BE PLUGGED SN. 026-0008 (WB)		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\pwork\SWARTZRW\dms36208\thelodesign_94993.dgn	PLOT SCALE = 20.0000' / IN.	DRAWN -	REVISED -				70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	42
PLOT DATE = 10/17/2008	DATE -	CHECKED -	REVISED -		SCALE: N/A SHEET NO. 9 OF 12 SHEETS STA. TO STA.		CONTRACT NO. 94993				
					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT						

SHEET NO. 9
12 SHEETS

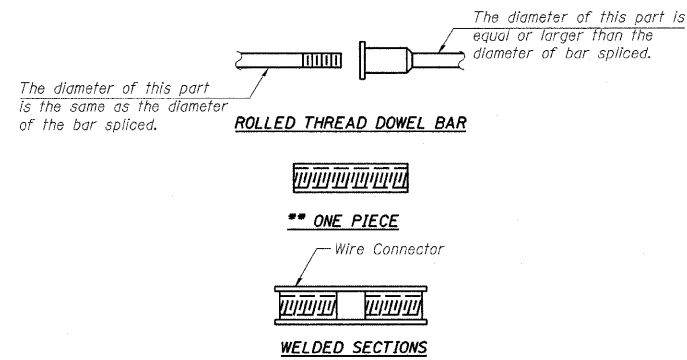


VIEW C-C



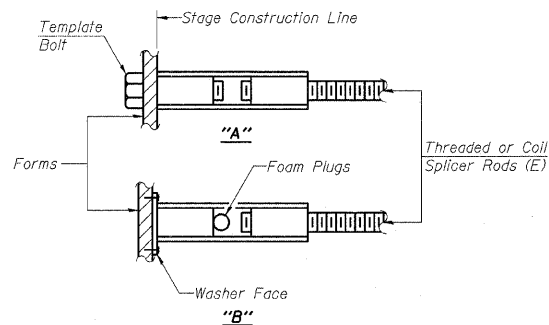
Note: New Rail Post anchorage devices will be required at each location where posts are connected to new construction. Cost shall be included with Concrete Superstructure.

FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RAIL SUPPORT ANCHOR DETAILS SN. 026-0007 AND 026-0008	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ca:\pwwork\pwwid01\SWARTZRW\dms36208\thel...edesign_94993.dgn	PLOT SCALE = 20.0000 "/td> <td>DRAWN -</td> <td>REVISED -</td> <td>70</td> <td>D-7 BRIDGE DECK REPAIRS</td> <td>FAYETTE</td> <td>59</td> <td>43</td>	DRAWN -	REVISED -			70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	43	
PLOT DATE = 10/17/2008	DATE -	CHECKED -	REVISED -			CONTRACT NO. 94993					
						ILLINOIS FED. AID PROJECT					



BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



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.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

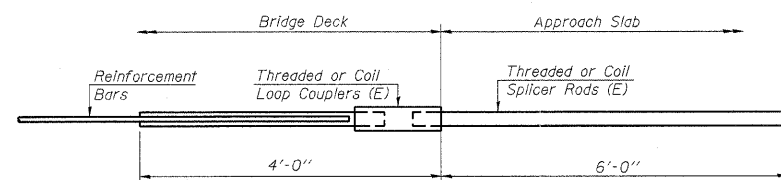
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

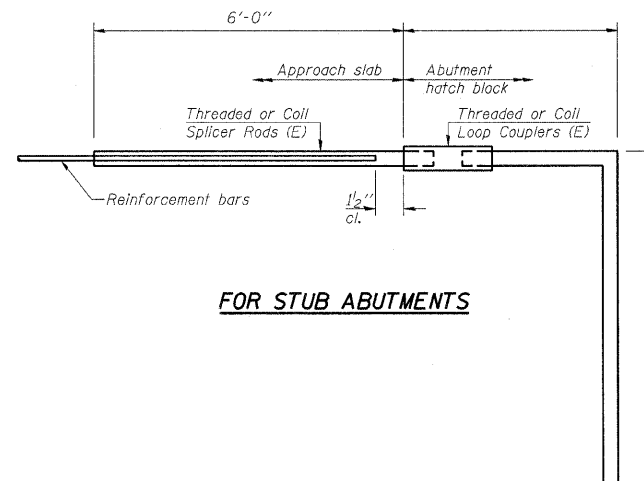
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_s$
 - ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_s$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_s = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

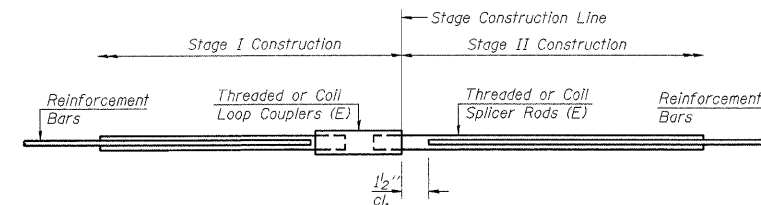
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS



FOR STUB ABUTMENTS



STANDARD

Bar Size	No. Assemblies Required	Location
#6	18	026-0007
#7	18	026-0007
#6	18	026-0008
#7	18	026-0008

**BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO.**

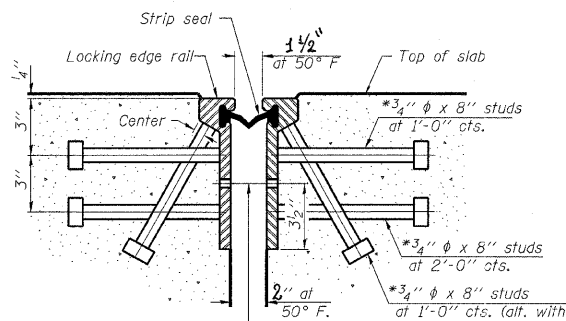
BSD-1 5-16-08

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =

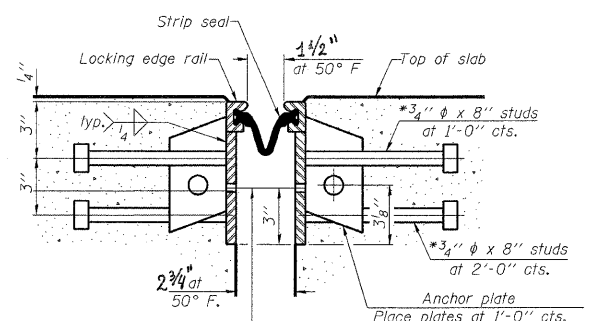
Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =

SHEET NO. 11
12 SHEETS

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



SECTION THRU ROLLED RAIL JOINT



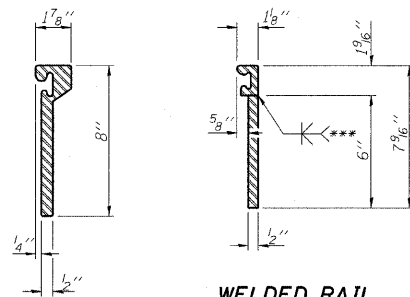
SECTION THRU WELDED RAIL JOINT

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.

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.

Notes:

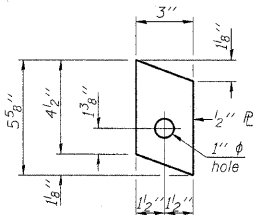
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of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



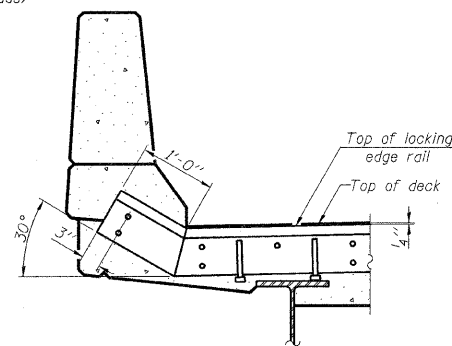
ROLLED EXTRUDED RAIL

WELDED RAIL

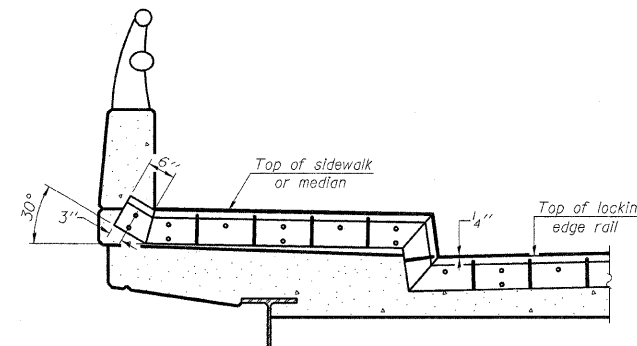
***Back gauge not required if complete joint penetration is verified by mock-up.



ANCHOR PLATE
(for welded rail)



AT PARAPET



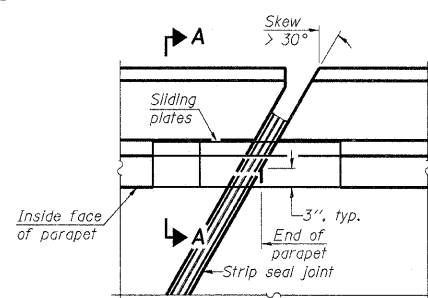
AT SIDEWALK OR MEDIAN

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.

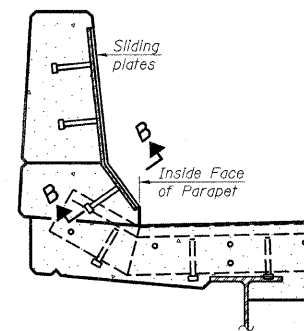
LOCKING EDGE RAIL SPLICE

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

LOCKING EDGE RAILS



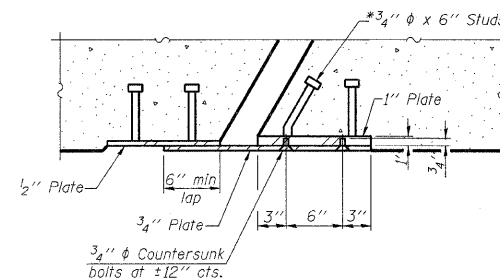
PLAN



SECTION A-A

POINT BLOCK DETAILS
(for skews > 30°)

TYPICAL END TREATMENTS



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total	S/N.
Preformed Joint Strip Seal	Foot	110	026-0007
Preformed Joint Strip Seal	Foot	110	026-0008

PREFORMED JOINT STRIP SEAL STRUCTURE NO.

EJ-SSJ

5-16-08

SHEET NO. 12
12 SHEETS

FILE NAME =	USER NAME = swartcrw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PERFORMED JOINT STRIP SEAL SN. 026-0007 AND 026-0008	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
el\pwork\PWID01\SWARTZRW\dms36208\th	el\design_94993.dgn	DRAWN -	REVISED -			70	0-7 BRIDGE DECK REPAIRS	FAYETTE	59	45
PLOT SCALE = 20.0000' / IN.		CHECKED -	REVISED -			CONTRACT NO. 94993				
PLOT DATE = 10/17/2008		DATE -	REVISED -			FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

SCALE: N/A SHEET NO. 12 OF 12 SHEETS STA. TO STA.

TOTAL BILL OF MATERIALS

SN 026-0009 (EB)

ITEM DESCRIPTION	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	14.1
Concrete Superstructure	Cu. Yd.	14.1
Reinforcement Bars, Epoxy Coated	Pound	1960
Bar Splicers	Each	24
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	1023
Bridge Deck Hydro-Scarification, 1/2"	Sq. Yd.	1000
Bridge Deck Microsilica Concrete Overlay, 2 1/4"	Sq. Yd.	1000
Bridge Deck Grooving	Sq. Yd.	970
Protective Coat	Sq. Yd.	1000
Deck Slab Repair (Full Depth Type I)	Sq. Yd.	49
Floor Drains	Each	21
Preformed Joint Strip Seal	Foot	110
Relocating Name Plates	Each	1
Elastomeric Bearing Assembly, Type II	Each	14
Furnishing and Erecting Structural Steel	Pound	1850
Jack and Remove Existing Bearings	Each	14
Anchor Bolts 1"Ø	Each	28
Plug Existing Deck Drains	Each	28

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to the existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to the construction or ordering of material. Such variations shall not be cause for additional compensation or a change in the scope of the work. The Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included in concrete removal.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on as-built plans.

Removal and reinstallation of the existing name plates on both structures will be necessary for construction of the expansion joints. This work and all materials shall be included in the contract unit price for Relocating Name Plates.

TOTAL BILL OF MATERIALS

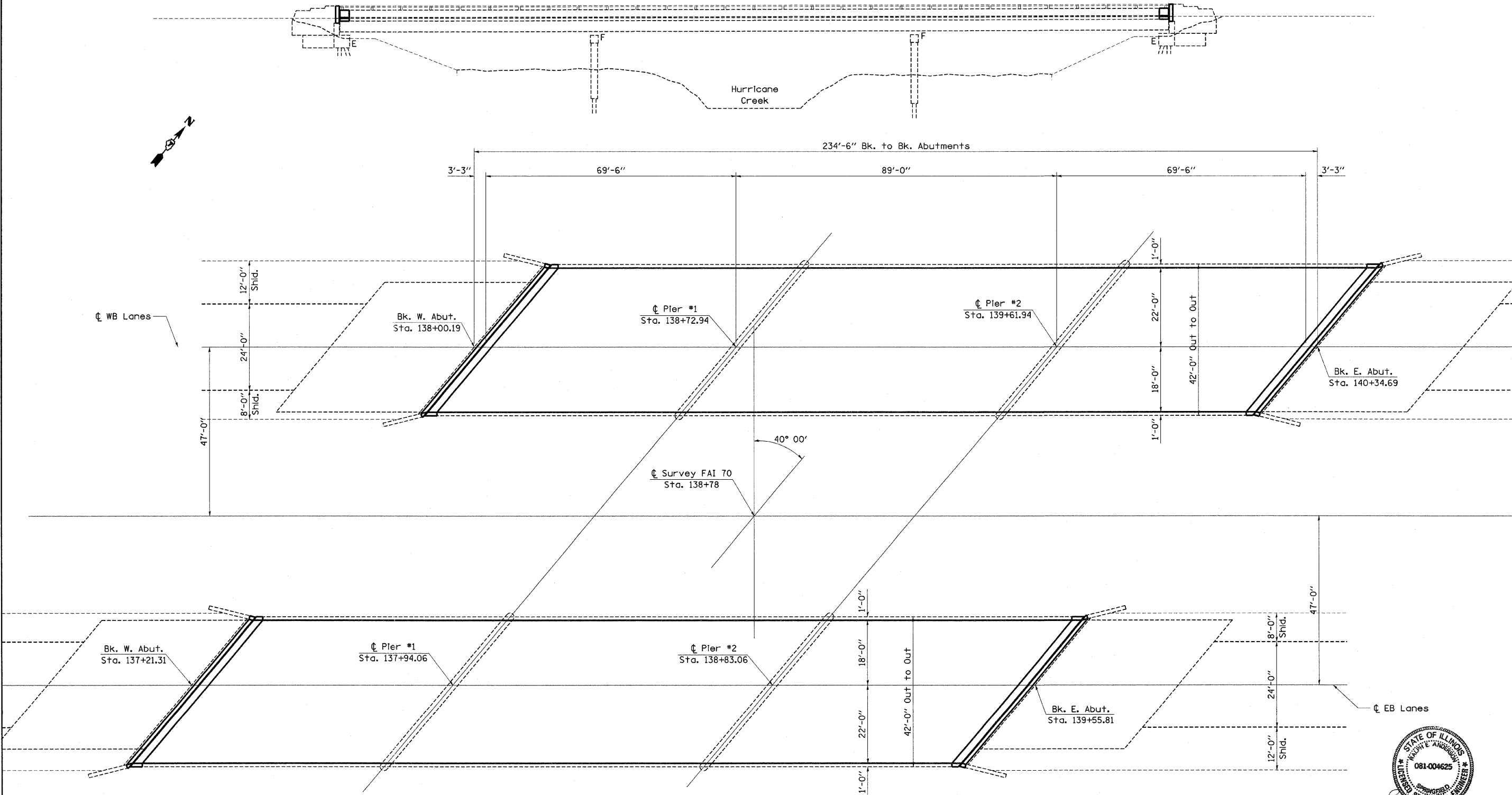
SN 026-0010 (WB)

ITEM DESCRIPTION	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	13.9
Concrete Superstructure	Cu. Yd.	13.9
Reinforcement Bars, Epoxy Coated	Pound	1960
Bar Splicers	Each	24
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	1023
Bridge Deck Hydro-Scarification, 1/2"	Sq. Yd.	1000
Bridge Deck Microsilica Concrete Overlay, 2 1/4"	Sq. Yd.	1000
Bridge Deck Grooving	Sq. Yd.	970
Protective Coat	Sq. Yd.	1000
Deck Slab Repair (Full Depth Type I)	Sq. Yd.	65
Floor Drains	Each	22
Preformed Joint Strip Seal	Foot	110
Relocating Name Plates	Each	1
Elastomeric Bearing Assembly, Type II	Each	14
Furnishing and Erecting Structural Steel	Pound	1850
Jack and Remove Existing Bearings	Each	14
Anchor Bolts 1"Ø	Each	28
Plug Existing Deck Drains	Each	29

SHEET NO. 1
14 SHEETS

FILE NAME = #FILEL#	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE GENERAL NOTES & BILL OF MATERIALS SN. 026-0009 (EB) & 026-0010 (WB)	F.A.I. RTE. TO	SECTION D-7 BRIDGE DECK REPAIRS	COUNTY FAYETTE	TOTAL SHEETS 59	SHEET NO. 46	CONTRACT NO. 94993
		DRAWN -	REVISED -		SCALE: N/A	SHEET NO. 1 OF 14 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -								
	PLOT DATE = #DATE#	DATE -	REVISED -								

The existing 3 span steel beam structures were constructed in 1965 as section 26-0B-4 at Sta. 138+78. SN 026-0009 carries FAI-70 eastbound and SN 026-0010 carries FAI-70 westbound. The proposed project consists of new expansion joints, partial and full depth deck patching, new microsilica wearing surface, and new deck drains.



Expires Nov. 30, 2010

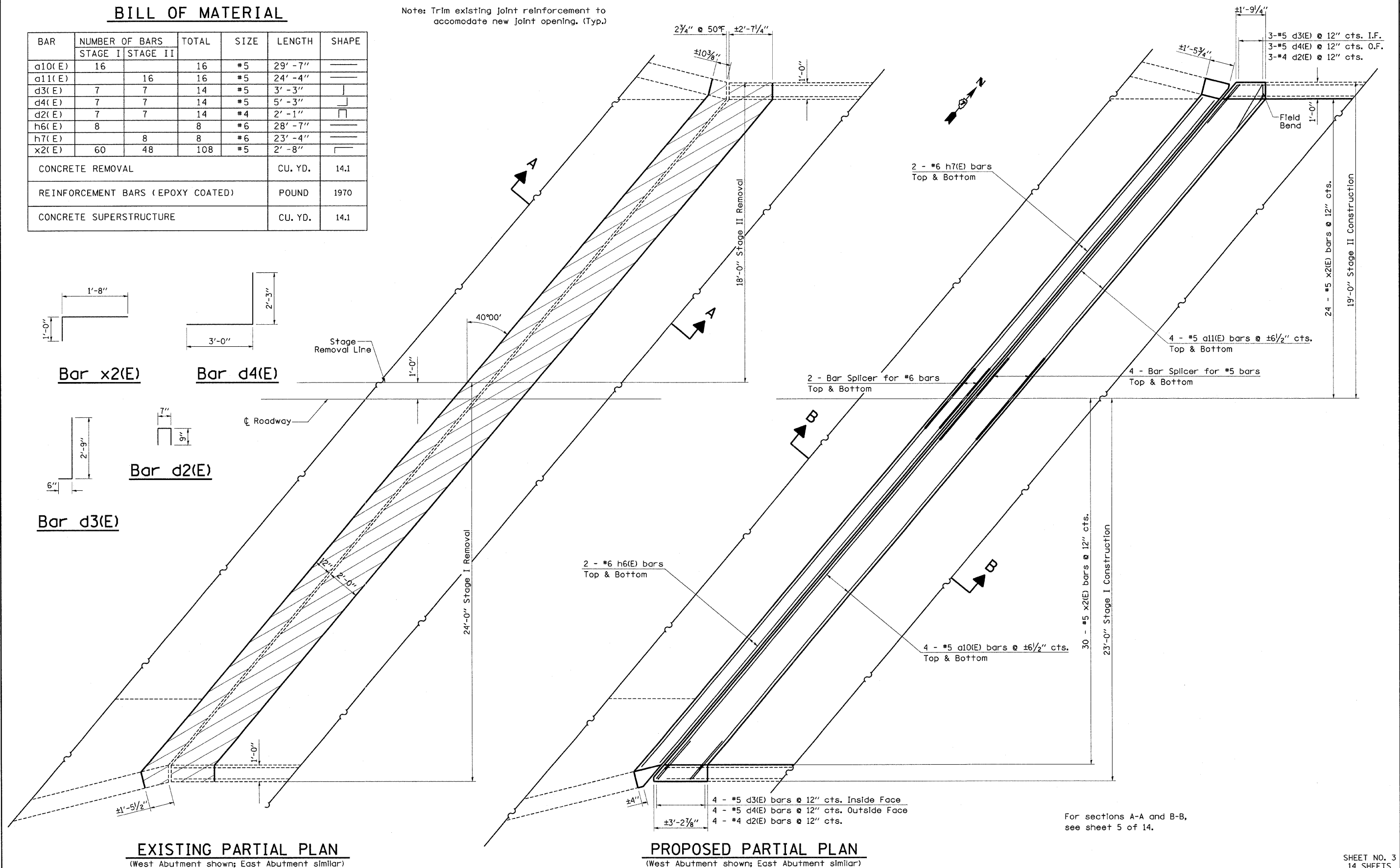
FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION SN. 026-0009 (EB) & SN. 026-0010 (WB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pw_work\PW\DOT\SWARTZRW\dms36208\th	elidesign_94993.dgn	DRAWN -	REVISED -			70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	47	
	PLOT SCALE = 20,0000 1/2 IN.	CHECKED -	REVISED -			CONTRACT NO. 94993					
	PLOT DATE = 12/17/2008	DATE -	REVISED -			SCALE: N/A	SHEET NO. 2 OF 14 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT

SHEET NO. 2
14 SHEETS

BILL OF MATERIAL

BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a10(E)	16		16	#5	29'-7"	—
a11(E)		16	16	#5	24'-4"	—
d3(E)	7	7	14	#5	3'-3"	┘
d4(E)	7	7	14	#5	5'-3"	┘
d2(E)	7	7	14	#4	2'-1"	┘
h6(E)	8		8	#6	28'-7"	—
h7(E)		8	8	#6	23'-4"	—
x2(E)	60	48	108	#5	2'-8"	┘
CONCRETE REMOVAL					CU. YD.	14.1
REINFORCEMENT BARS (EPOXY COATED)					POUND	1970
CONCRETE SUPERSTRUCTURE					CU. YD.	14.1

Note: Trim existing joint reinforcement to accommodate new joint opening. (Typ.)



For sections A-A and B-B, see sheet 5 of 14.

EXISTING PARTIAL PLAN
(West Abutment shown; East Abutment similar)

PROPOSED PARTIAL PLAN
(West Abutment shown; East Abutment similar)

FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -
ca:\piv\work\p\100T\SWARTZRW\dms36220\theledesign_94993.dgn		DRAWN -	REVISED -
PLOT SCALE = 20.0000 / 1/4"		CHECKED -	REVISED -
PLOT DATE = 10/17/2008		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REPLACEMENT DETAILS
SN. 026-0009 (EB)

SCALE: N/A SHEET NO. 3 OF 14 SHEETS STA. TO STA.

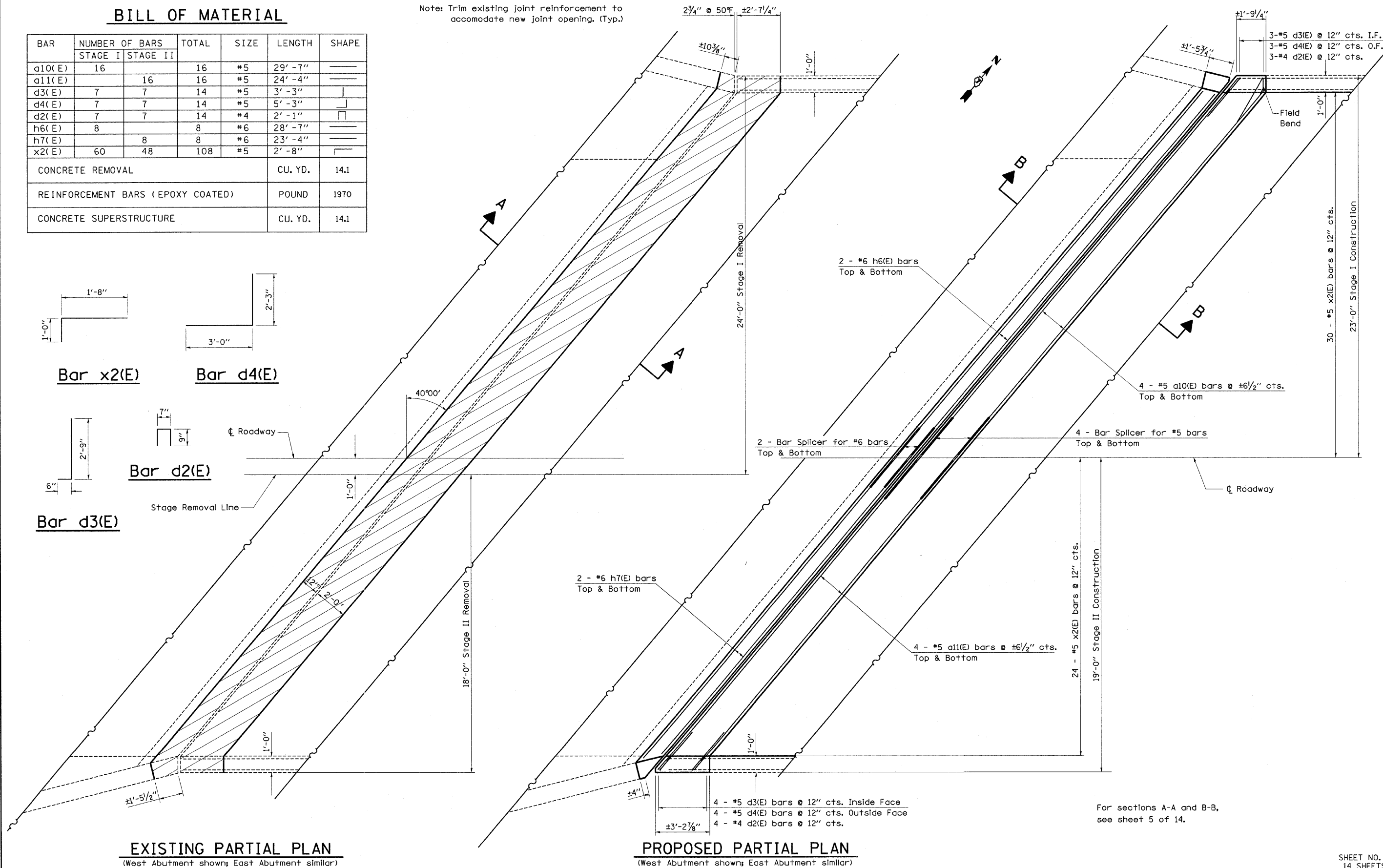
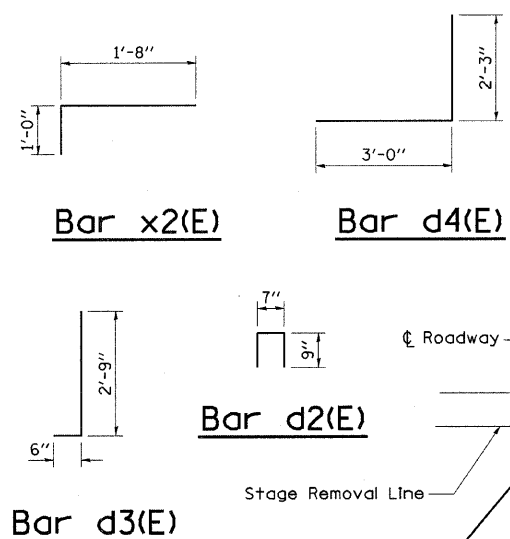
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TO	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	48
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 94993	

SHEET NO. 3
14 SHEETS

BILL OF MATERIAL

BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a10(E)	16		16	#5	29'-7"	—
a11(E)		16	16	#5	24'-4"	—
d3(E)	7	7	14	#5	3'-3"	J
d4(E)	7	7	14	#5	5'-3"	J
d2(E)	7	7	14	#4	2'-1"	□
h6(E)	8		8	#6	28'-7"	—
h7(E)		8	8	#6	23'-4"	—
x2(E)	60	48	108	#5	2'-8"	□
CONCRETE REMOVAL					CU. YD.	14.1
REINFORCEMENT BARS (EPOXY COATED)					POUND	1970
CONCRETE SUPERSTRUCTURE					CU. YD.	14.1

Note: Trim existing joint reinforcement to accommodate new joint opening. (Typ.)



EXISTING PARTIAL PLAN
(West Abutment shown; East Abutment similar)

PROPOSED PARTIAL PLAN
(West Abutment shown; East Abutment similar)

For sections A-A and B-B, see sheet 5 of 14.

FILE NAME =
 USER NAME = swartzw
 DRAWN =
 CHECKED =
 PLOT SCALE = 200.0000 1 / IN.
 PLOT DATE = 12/17/2008

DESIGNED -
 REVISER -
 DATE -

REVISER -
 REVISER -
 REVISER -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

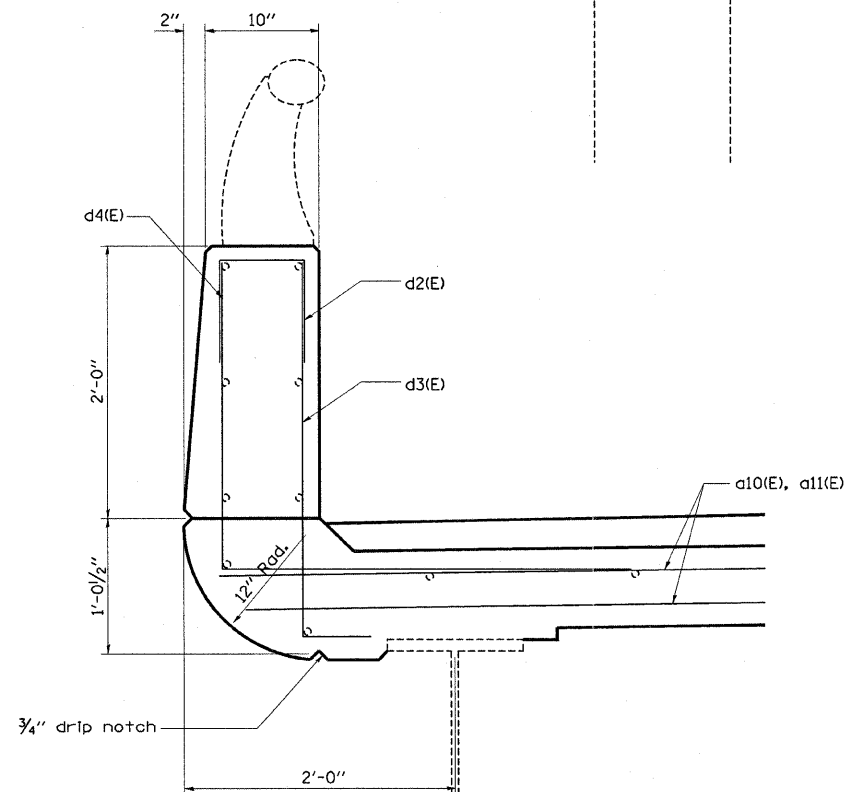
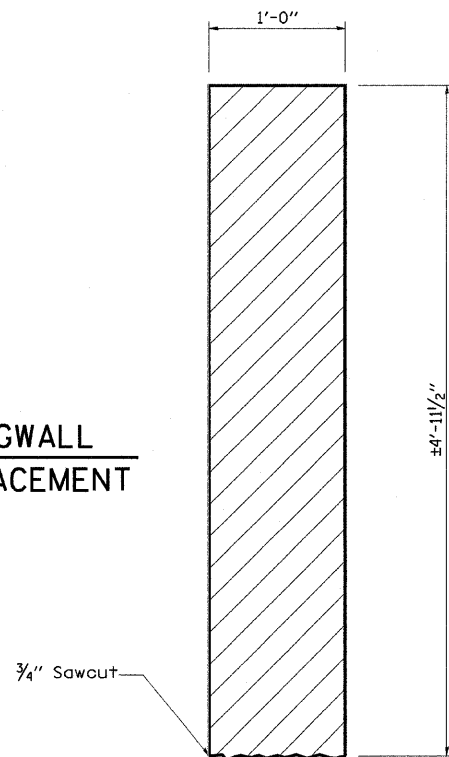
EXPANSION JOINT REPLACEMENT DETAILS
 SN. 026-0010 (WB)

SCALE: N/A SHEET NO. 4 OF 14 SHEETS STA. TO STA.

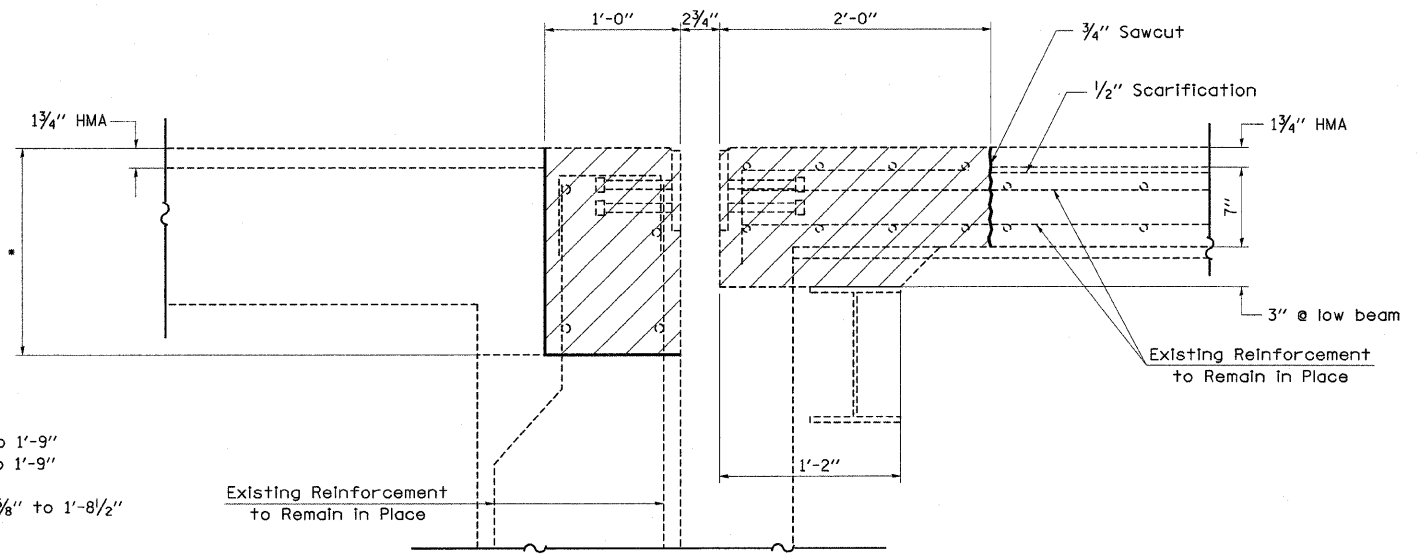
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	49
CONTRACT NO. 94993				
ILLINOIS FED. AID PROJECT				

SHEET NO. 4
 14 SHEETS

**TYPICAL WINGWALL
REMOVAL/REPLACEMENT**



SECTION THRU PARAPET

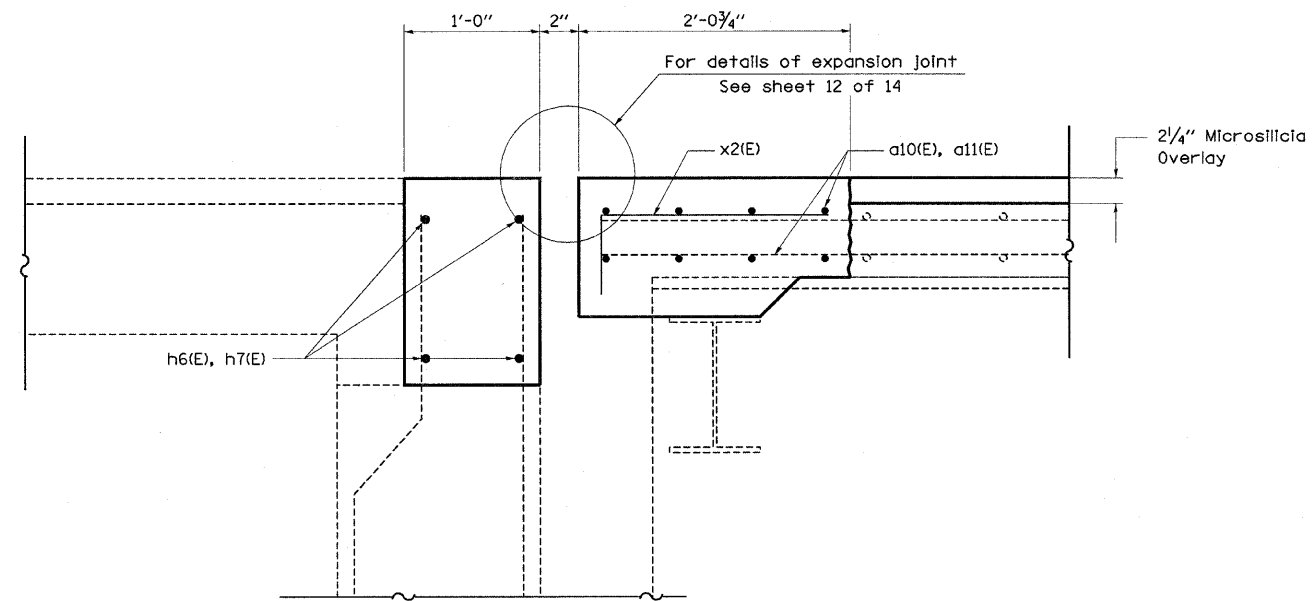


SECTION A-A
(Dimensions at RT L's to end of deck)

- 026-0009
W. Abut. 1'-4 1/2" to 1'-9"
E. Abut. 1'-4 3/4" to 1'-9"
- 026-0010
E. & W. Abut. 1'-4 5/8" to 1'-8 1/2"

Note: Dimensions are based on a Rolled Rail Strip Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Base Sheet EJ-SSJ.

- Existing Reinforcement
- Proposed Reinforcement



SECTION B-B
(Dimensions at RT L's to end of deck)

FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -
ct:\pvc_work\PW\DOT\SWARTZRW\dms36288\thel	elredesign_94993.dgn	DRAWN -	REVISED -
	PLOT SCALE = 20.0000' / 1" IN.	CHECKED -	REVISED -
	PLOT DATE = 10/17/2008	DATE -	REVISED -

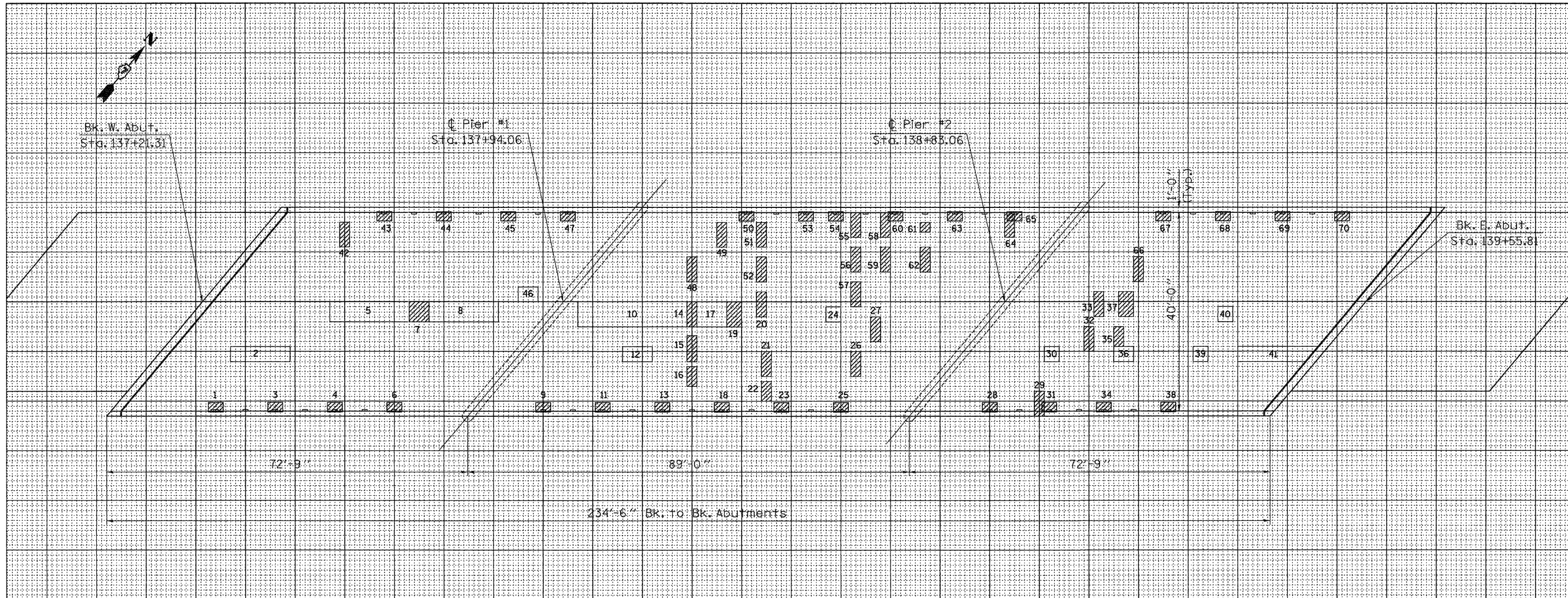
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT REPLACEMENT DETAILS
SN. 026-0009 (EB) & SN. 026-0010 (WB)**

SCALE: N/A SHEET NO. 5 OF 14 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	50
CONTRACT NO. 94993				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SHEET NO. 5
14 SHEETS



PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
1	3.0 x 1.9		5.7	
2	12.0 x 3.0	36.0		
3	3.0 x 1.9		5.7	
4	3.0 x 1.9		5.7	
5	15.0 x 4.0	60.0		
6	3.0 x 1.9		5.7	
7	4.0 x 4.0		16.0	
8	14.0 x 4.0	56.0		
9	3.0 x 1.9		5.7	
10	22.0 x 5.0	110.0		
11	3.0 x 1.9		5.7	
12	6.0 x 3.0	18.0		
13	3.0 x 1.9		5.7	
14	2.0 x 5.0		10.0	
15	2.0 x 5.0		10.0	
16	2.0 x 4.0		8.0	
17	6.0 x 5.0	30.0		
18	3.0 x 1.9		5.7	

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
19	3.0 x 5.0	15.0		
20	2.0 x 5.0		10.0	
21	2.0 x 5.0		10.0	
22	2.0 x 4.0		8.0	
23	3.0 x 1.9		5.7	
24	3.0 x 3.0	9.0		
25	3.0 x 1.9		5.7	
26	2.0 x 5.0		10.0	
27	2.0 x 5.0		10.0	
28	3.0 x 1.9		5.7	
29	2.0 x 5.0		10.0	
30	3.0 x 3.0	9.0		
31	3.0 x 1.9		5.7	
32	2.0 x 5.0		10.0	
33	2.0 x 5.0		10.0	
34	3.0 x 1.9		5.7	
35	2.0 x 4.0		8.0	
36	4.0 x 3.0	12.0		

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
37	3.0 x 5.0	15.0		
38	3.0 x 1.9		5.7	
39	3.0 x 3.0	9.0		
40	3.0 x 3.0	9.0		
41	15.0 x 3.0	45.0		
42	2.0 x 5.0		10.0	
43	3.0 x 1.9		5.7	
44	3.0 x 1.9		5.7	
45	3.0 x 1.9		5.7	
46	4.0 x 3.0	12.0		
47	3.0 x 1.9		5.7	
48	2.0 x 5.0		10.0	
49	2.0 x 5.0		10.0	
50	3.0 x 1.9		5.7	
51	2.0 x 5.0		10.0	
52	2.0 x 5.0		10.0	
53	3.0 x 1.9		5.7	
54	3.0 x 1.9		5.7	

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
55	2.0 x 5.0		10.0	
56	2.0 x 5.0		10.0	
57	2.0 x 5.0		10.0	
58	2.0 x 5.0		10.0	
59	2.0 x 5.0		10.0	
60	3.0 x 1.9		5.7	
61	2.0 x 2.0		4.0	
62	2.0 x 5.0		10.0	
63	3.0 x 1.9		5.7	
64	2.0 x 5.0		10.0	
65	3.0 x 1.9		5.7	
66	2.0 x 5.0		10.0	
67	3.0 x 1.9		5.7	
68	3.0 x 1.9		5.7	
69	3.0 x 1.9		5.7	
70	3.0 x 1.9		5.7	

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
	PARTIAL DEPTH			
	430.0 / 9 =	47.8		
	USE	48	SQ YD	
	FULL DEPTH, TYPE 1			
	438.6 / 9 =	48.7		
	USE	49	SQ YD	

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

PATCHING LEGEND
(FOR INFORMATION ONLY)

□ PARTIAL DEPTH

▨ FULL DEPTH

▩ FLOOR DRAIN TO BE REPLACED

DATE OF SURVEY: 04/21/08
SURVEY BY: M. ALLEN, K. THOLE
METHOD OF SURVEY: VISUAL

BRIDGE DECK PATCHING
FAYETTE COUNTY

SHEET NO. 6
14 SHEETS

009

FILE NAME =
FILEL

USER NAME = #USER#
DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISIED -
REVISIED -
REVISIED -
REVISIED -

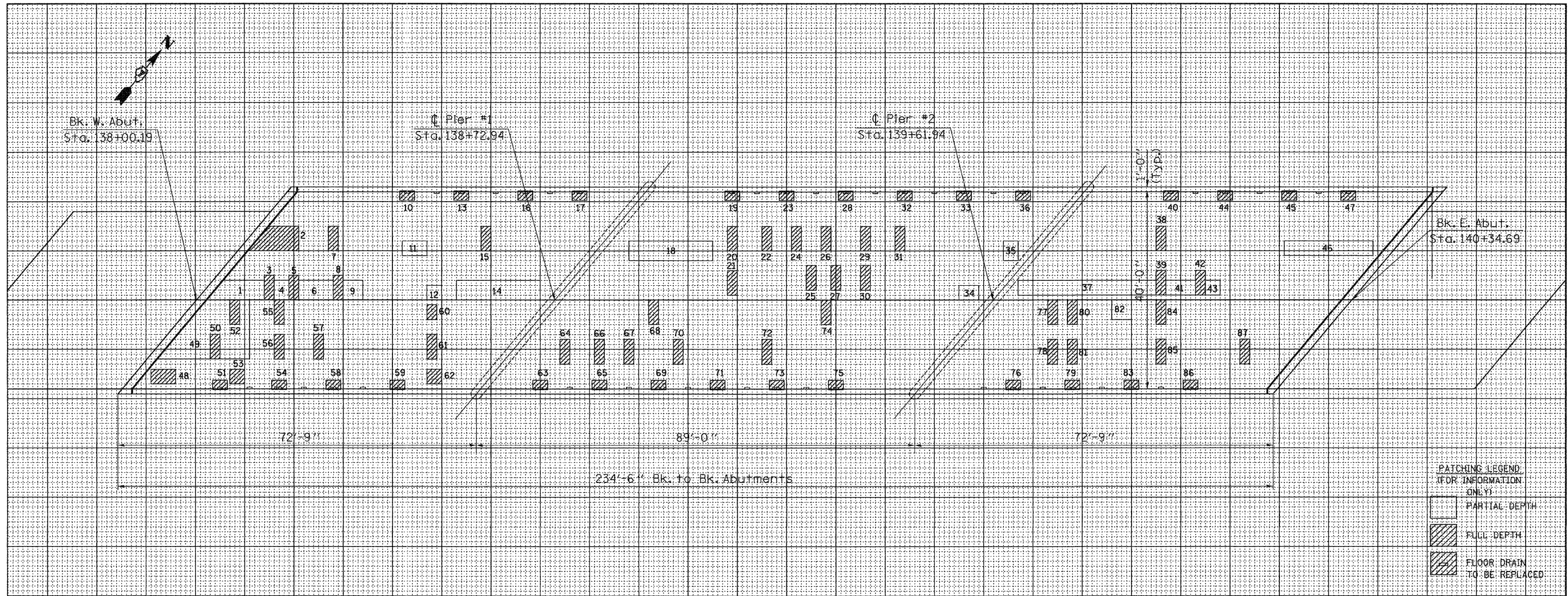
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE DECK PATCHING
SN. 026-0009 (EB)

SCALE: 50 SHEET NO. 6 OF 14 SHEETS STA. TO STA.

F.A.I. RTE. 70	SECTION D-7 BRIDGE DECK REPAIRS	COUNTY FAYETTE	TOTAL SHEETS 59	SHEET NO. 51
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT CONTRACT NO. 94993		

V:\94993-revised\sheet\009.dwg 11/25/2008 2:35:47 PM



PATCHING LEGEND
(FOR INFORMATION ONLY)

□ PARTIAL DEPTH

▨ FULL DEPTH

▩ FLOOR DRAIN TO BE REPLACED

PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)		
		SQ FT	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
1	10.0 x 4.0	40.0		
2	8.0 x 5.0	40.0		
3	2.0 x 5.0		10.0	
4	3.0 x 4.0	12.0		
5	2.0 x 5.0		10.0	
6	7.0 x 4.0	28.0		
7	2.0 x 5.0		10.0	
8	2.0 x 5.0		10.0	
9	4.0 x 4.0	16.0		
10	3.0 x 1.9		5.7	
11	5.0 x 3.0	15.0		
12	3.0 x 3.0	9.0		
13	3.0 x 1.9		5.7	
14	17.0 x 4.0	68.0		
15	2.0 x 5.0		10.0	
16	3.0 x 1.9		5.7	
17	3.0 x 1.9		5.7	
18	17.0 x 4.0	68.0		
19	3.0 x 1.9		5.7	
20	2.0 x 5.0		10.0	
21	2.0 x 5.0		10.0	
22	2.0 x 5.0		10.0	
23	3.0 x 1.9		5.7	
24	2.0 x 5.0		10.0	
25	2.0 x 5.0		10.0	
26	2.0 x 5.0		10.0	
27	2.0 x 5.0		10.0	
28	3.0 x 1.9		5.7	
29	2.0 x 5.0		10.0	
30	2.0 x 5.0		10.0	
31	2.0 x 5.0		10.0	
32	3.0 x 1.9		5.7	
33	3.0 x 1.9		5.7	
34	4.0 x 3.0	12.0		
35	3.0 x 4.0	12.0		
36	3.0 x 1.9		5.7	
37	28.0 x 3.0	84.0		
38	2.0 x 5.0		10.0	
39	2.0 x 5.0		10.0	
40	3.0 x 1.9		5.7	
41	6.0 x 3.0	18.0		
42	2.0 x 5.0		10.0	
43	3.0 x 3.0	9.0		
44	3.0 x 1.9		5.7	
45	3.0 x 1.9		5.7	
46	18.0 x 3.0	54.0		
47	3.0 x 1.9		5.7	
48	5.0 x 3.0		15.0	
49	13.0 x 12.0	156.0		
50	2.0 x 5.0		10.0	
51	3.0 x 1.9		5.7	
52	2.0 x 5.0		10.0	
53	3.0 x 3.0		9.0	
54	3.0 x 1.9		5.7	
55	2.0 x 5.0		10.0	
56	2.0 x 5.0		10.0	
57	2.0 x 5.0		10.0	
58	3.0 x 1.9		5.7	
59	3.0 x 1.9		5.7	
60	2.0 x 3.0		6.0	
61	2.0 x 5.0		10.0	
62	3.0 x 3.0		9.0	
63	3.0 x 1.9		5.7	
64	2.0 x 5.0		10.0	
65	3.0 x 1.9		5.7	
66	2.0 x 5.0		10.0	
67	2.0 x 5.0		10.0	
68	2.0 x 5.0		10.0	
69	3.0 x 1.9		5.7	
70	2.0 x 5.0		10.0	
71	3.0 x 1.9		5.7	
72	2.0 x 5.0		10.0	
73	3.0 x 1.9		5.7	
74	2.0 x 5.0		10.0	
75	3.0 x 1.9		5.7	
76	3.0 x 1.9		5.7	
77	2.0 x 5.0		10.0	
78	2.0 x 5.0		10.0	
79	3.0 x 1.9		5.7	
80	2.0 x 5.0		10.0	
81	2.0 x 5.0		10.0	
82	4.0 x 4.0	16.0		
83	3.0 x 1.9		5.7	
84	2.0 x 5.0		10.0	
85	2.0 x 5.0		10.0	
86	3.0 x 1.9		5.7	
87	2.0 x 5.0		10.0	

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

PARTIAL DEPTH
657.0 / 9 = 73.0
USE 73 SQ YD

FULL DEPTH, TYPE 1
578.6 / 9 = 64.3
USE 65 SQ YD

DATE OF SURVEY: 04/21/08
SURVEY BY: M. ALLEN, K. THOLEE
METHOD OF SURVEY: VISUAL

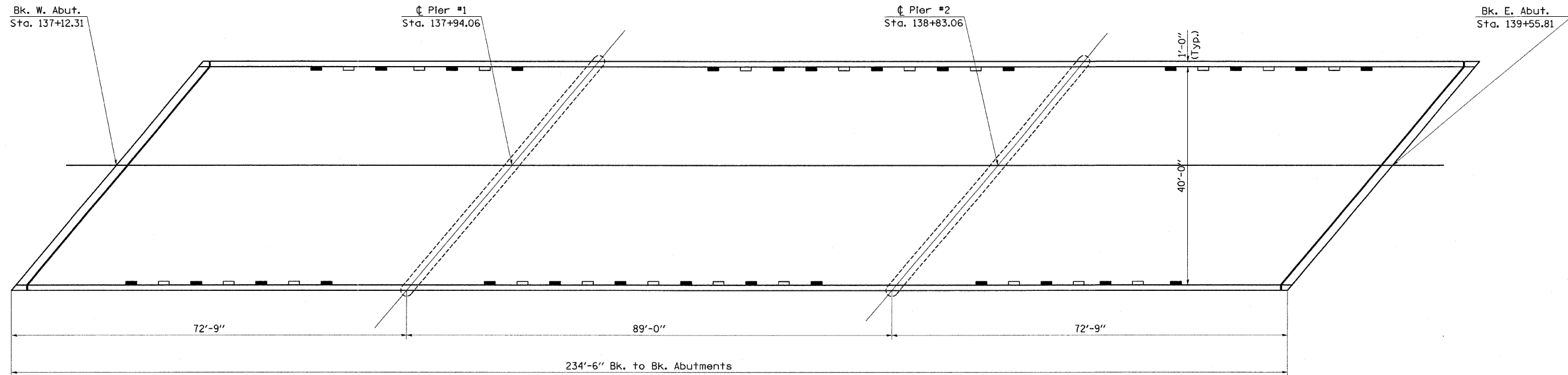
BRIDGE DECK PATCHING
FAYETTE COUNTY

SHEET NO. 7
14 SHEETS

010

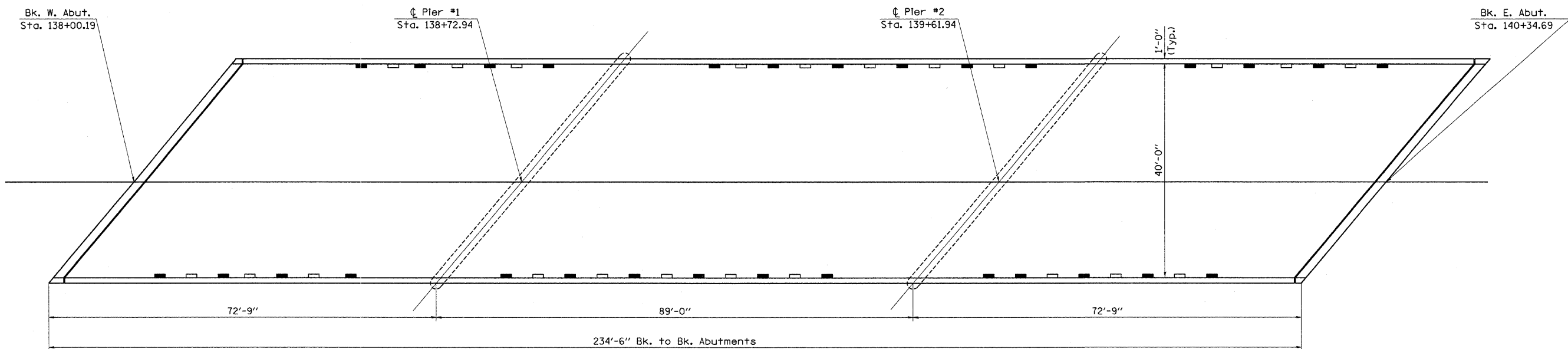
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		DRAWN -	REVISED -					70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	52
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -	SCALE: 50		SHEET NO. 7 OF 14 SHEETS		STA.	TO STA.	CONTRACT NO. 94993		
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BRIDGE DECK PATCHING



SN 026-0009

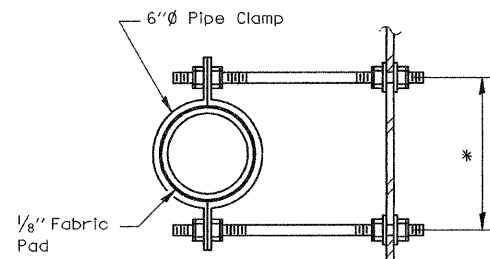
- Existing Drain to Be Replaced (See Sheet 9 of 14 for Details)
- Existing Drain to be Plugged



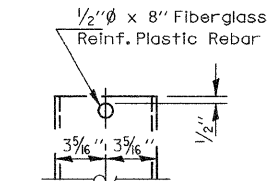
SN 026-0010

FILE NAME =	USER NAME = swartzw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING DECK DRAINS TO BE PLUGGED SN. 026-0009 & SN. 026-0010			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEET
cs:\pw\work\PIWIDDT\SWARTZRW\dms36208\theledesign_94993.dgn	DRAWN -	REVISED -	TO					D-7 BRIDGE DECK REPAIRS	FAYETTE	SHEETS	
PLOT SCALE = 28,2000 / IN.	CHECKED -	REVISED -	SCALE: N/A		SHEET NO. 8 OF 14 SHEETS	STA.	TO STA.	CONTRACT NO. 94993			
PLOT DATE = 10/17/2008	DATE -	REVISED -	FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	SHEET NO. 8 14 SHEETS				

• Dimension as required by Pipe Clamp

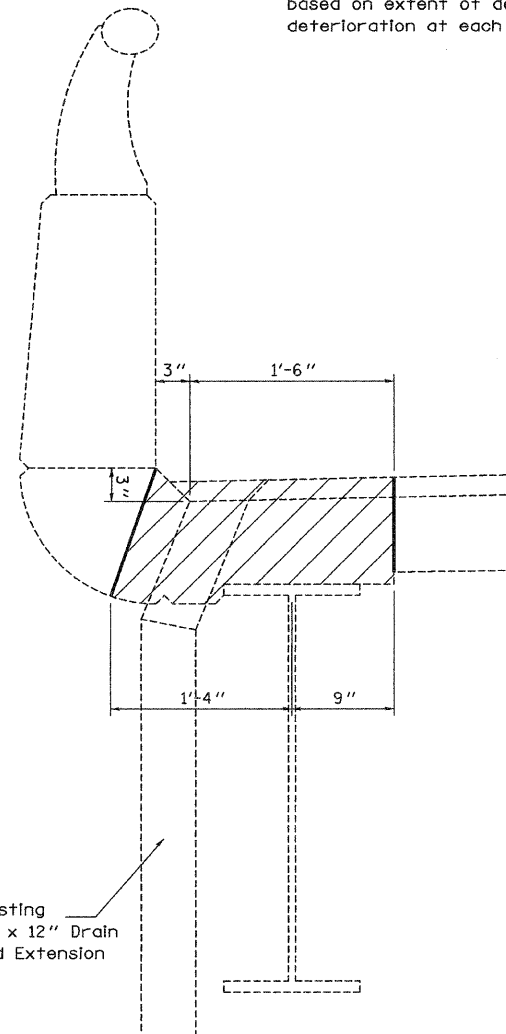


SECTION A-A



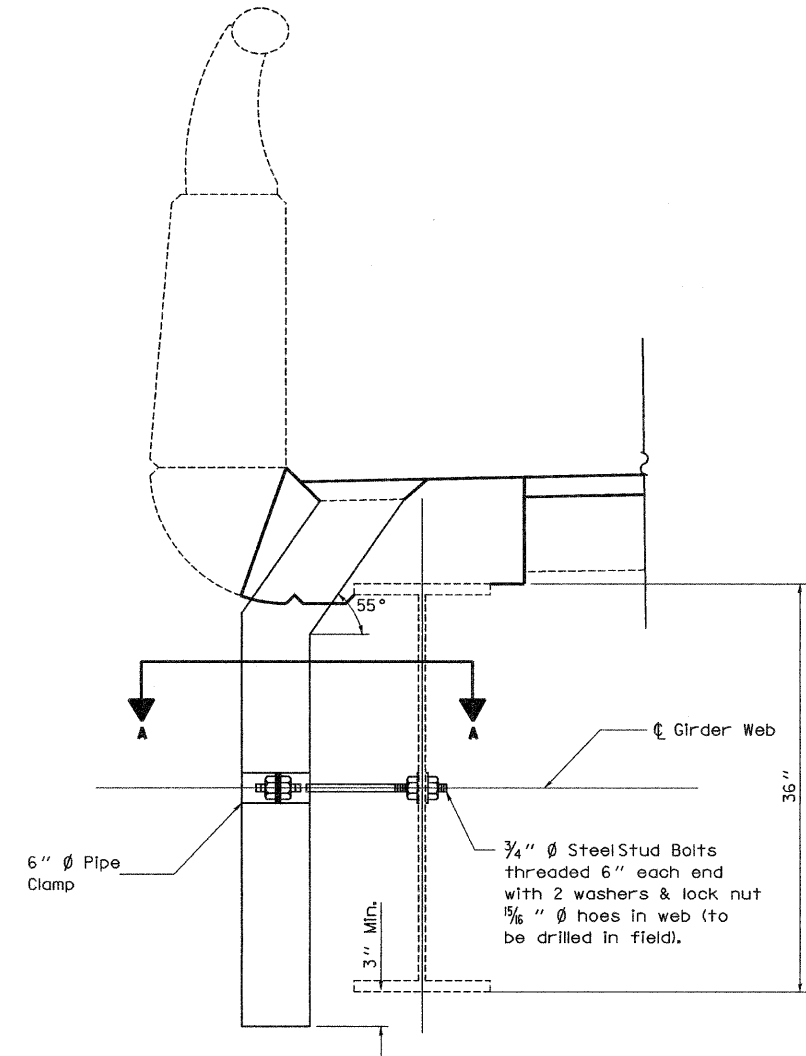
FIBERGLASS PIPE

• Dimensions shall be determined by the Engineer in the field based on extent of deck deterioration at each drain.



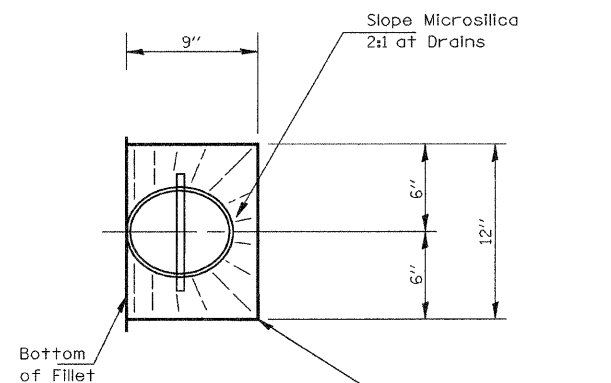
SECTION THRU EXISTING FLOOR DRAIN

Hatched area indicates concrete removal at floor drain replacement.

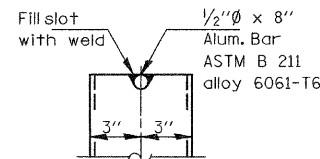


DRAIN REPLACEMENT DETAIL

Note: See "Bridge Deck Patching" plan sheets for Floor Drain replacement locations. See "Total Bill of Materials" for each structure for quantities.

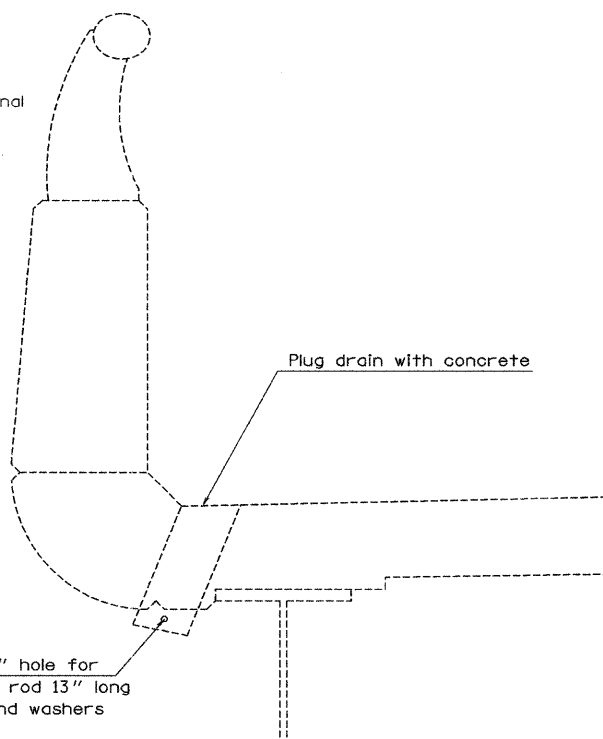


TOP PLAN



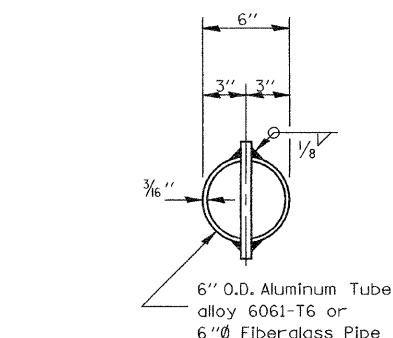
ALUMINUM TUBE

Surface of Original Concrete Deck



DRAINS TO BE PLUGGED DETAIL

Note: See "Existing Deck Drains to Be Plugged" plan sheets for Plug Existing Deck Drains locations. See "Total Bill of Materials" for each structure for quantities.



TOP PLAN

(Showing Aluminum Tube)

Note: Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -
#FILE#		DRAWN -	REVISED -
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

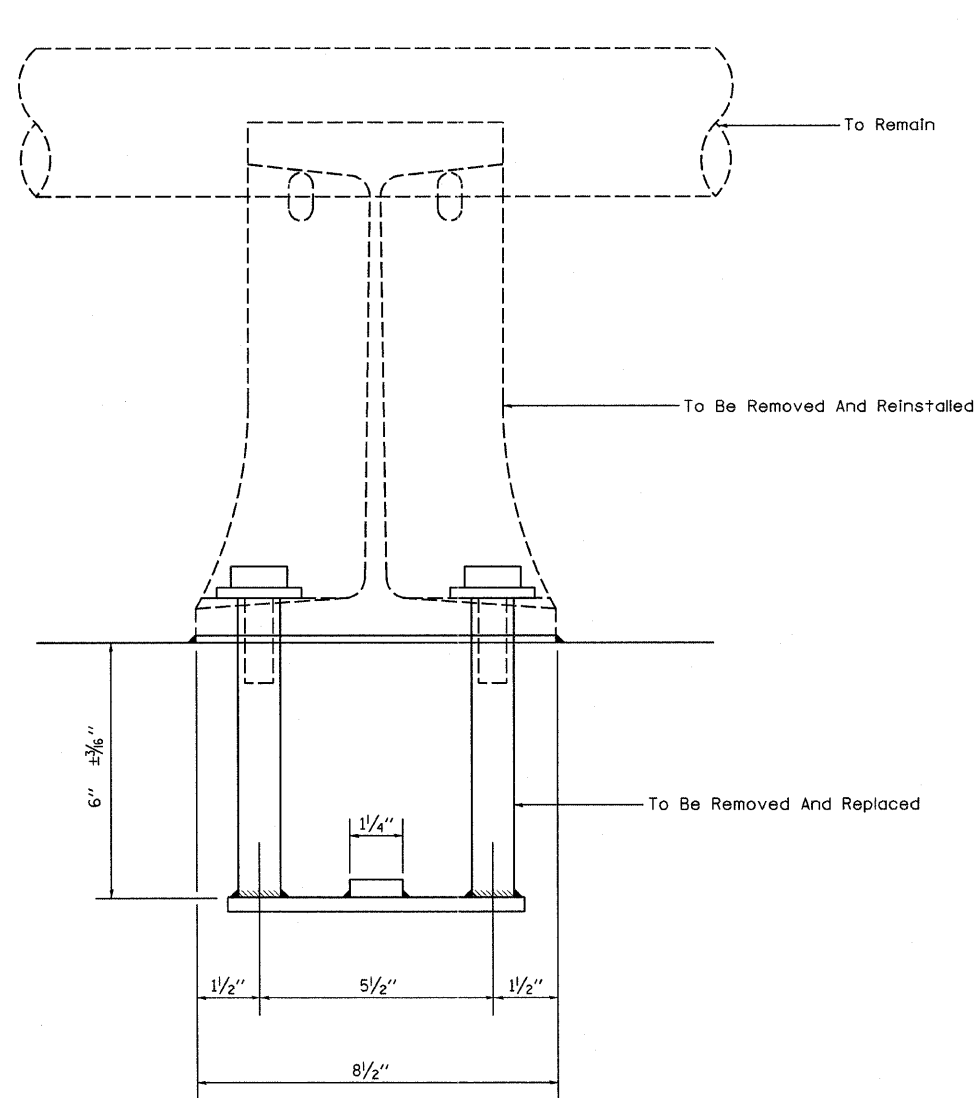
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FLOOR DRAIN DETAIL
SN. 026-0009 & SN. 026-0010

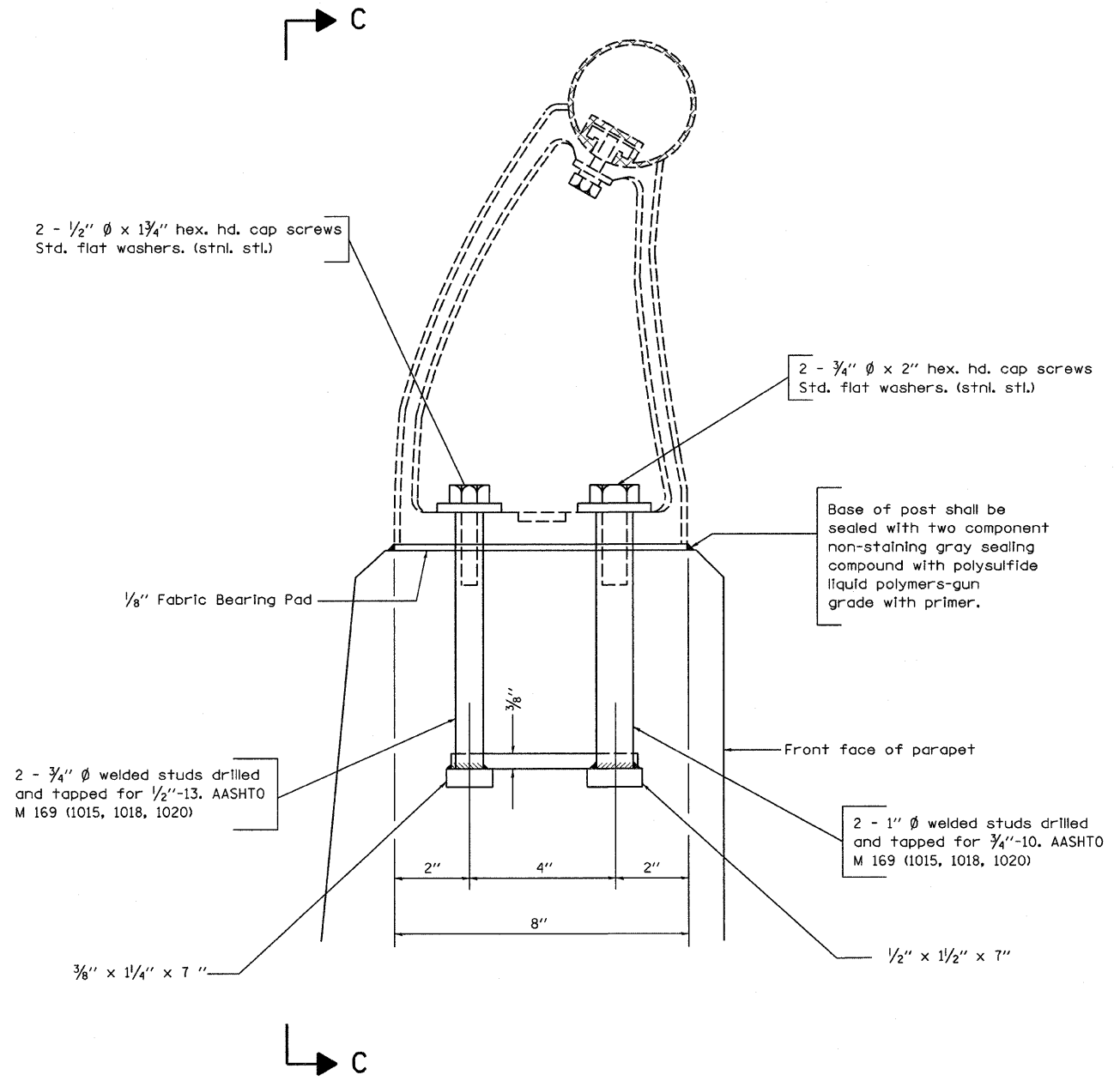
SCALE: N/A SHEET NO. 9 OF 14 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D-7 BRIDGE DECK REPAIRS	FAYETTE	59	54
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 94993	

SHEET NO. 9
14 SHEETS

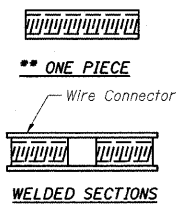
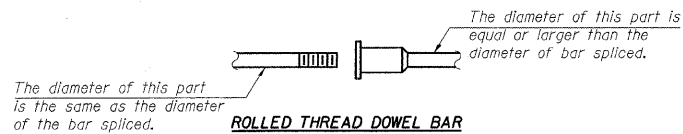


VIEW C-C



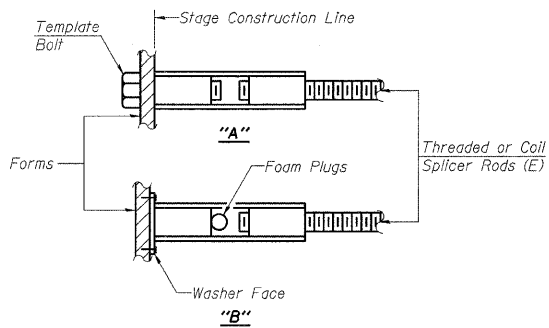
Note: New Rail Post anchorage devices will be required at each location where posts are connected to new construction. Cost shall be included with Concrete Superstructure.

FILE NAME =		USER NAME = swartzrw		DESIGNED -		REVISED -		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		RAIL SUPPORT ANCHOR DETAILS SN. 026-0009 AND 026-0010				F.A.I. RTE.		SECTION		COUNTY		TOTAL SHEETS		SHEET NO.	
ca:\pwwork\PWIDOT\SWARTZRW\dms36208\th		eledesign_94993.dgn		DRAWN -		REVISED -								SCALE: N/A		SHEET NO. 10 OF 14 SHEETS		STA.		TO STA.		D-7 BRIDGE DECK REPAIRS	
PLOT SCALE = 20,000 / / IN.		CHECKED -		REVISED -		REVISED -				FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT		CONTRACT NO. 94993							
PLOT DATE = 10/17/2008		DATE -		REVISED -		REVISED -																	



BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

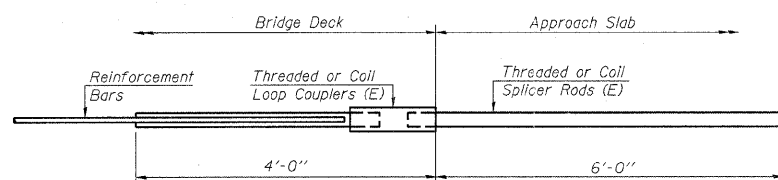
"A" :Set bar splicer assembly by means of a template bolt.
 "B" :Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

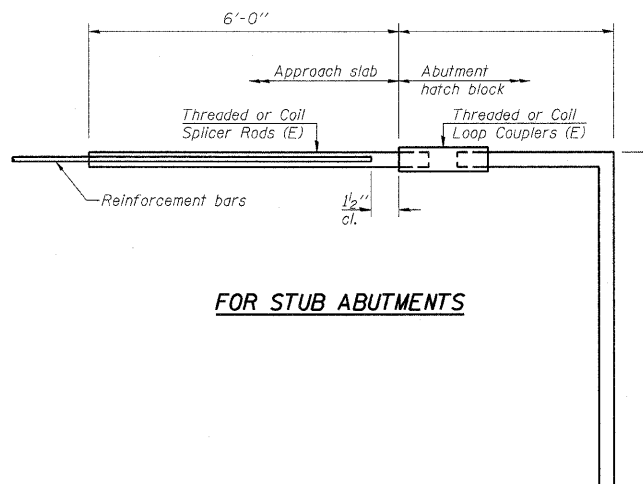
- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
 - ② Minimum Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



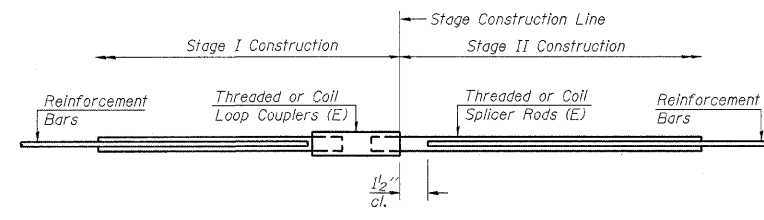
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required =	



FOR STUB ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required =	



STANDARD

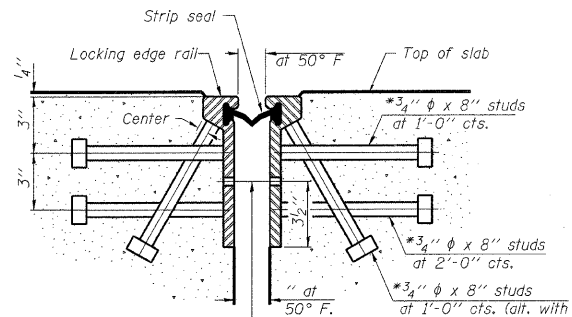
Bar Size	No. Assemblies Required	Location
#5	16	026-0009
#6	8	026-0009
#5	16	026-0010
#6	8	026-0010

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO.

BSD-1

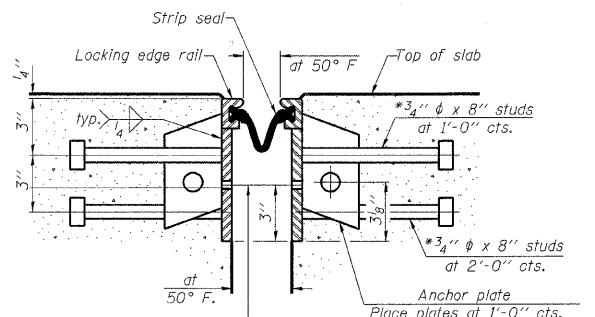
5-16-08

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



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.

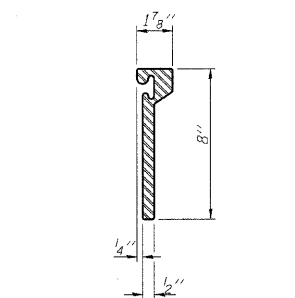
SECTION THRU ROLLED RAIL JOINT



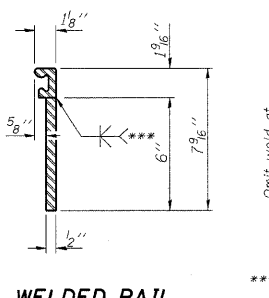
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

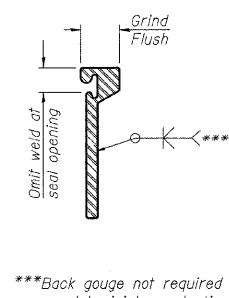
Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement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



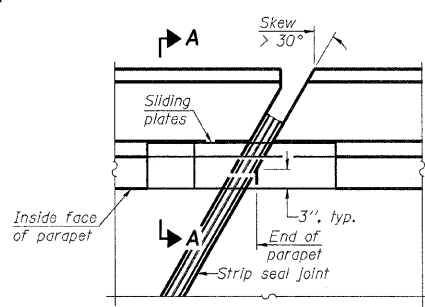
WELDED RAIL



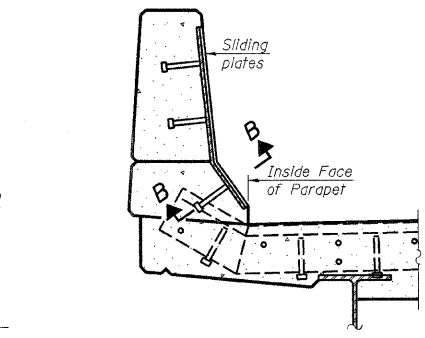
LOCKING EDGE RAIL SPLICE

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

LOCKING EDGE RAILS

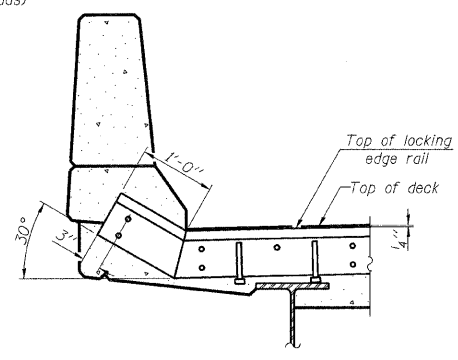


PLAN

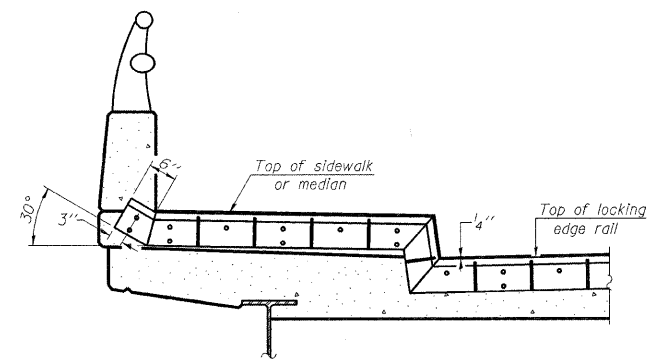


SECTION A-A

POINT BLOCK DETAILS
(for skews > 30°)



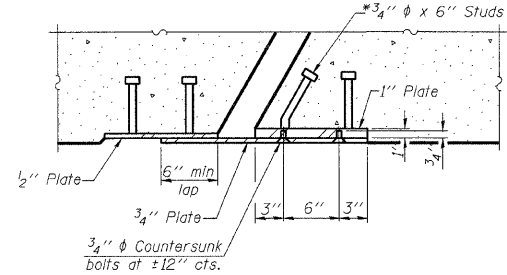
AT PARAPET



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.

TYPICAL END TREATMENTS



SECTION B-B

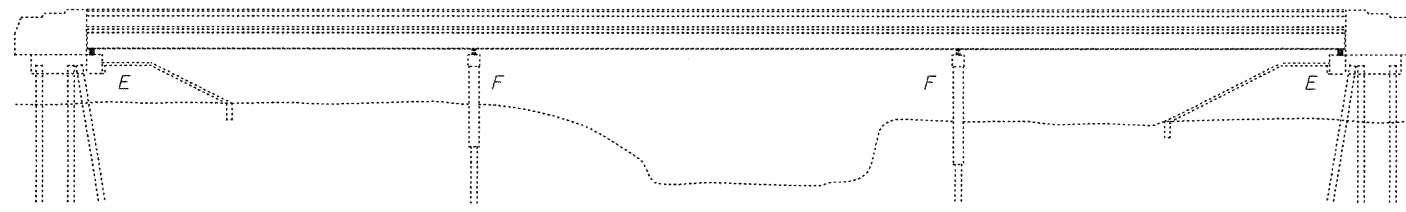
BILL OF MATERIAL

Item	Unit	Total	SN.
Preformed Joint Strip Seal	Foot	110	026-0009
Preformed Joint Strip Seal	Foot	110	026-0010

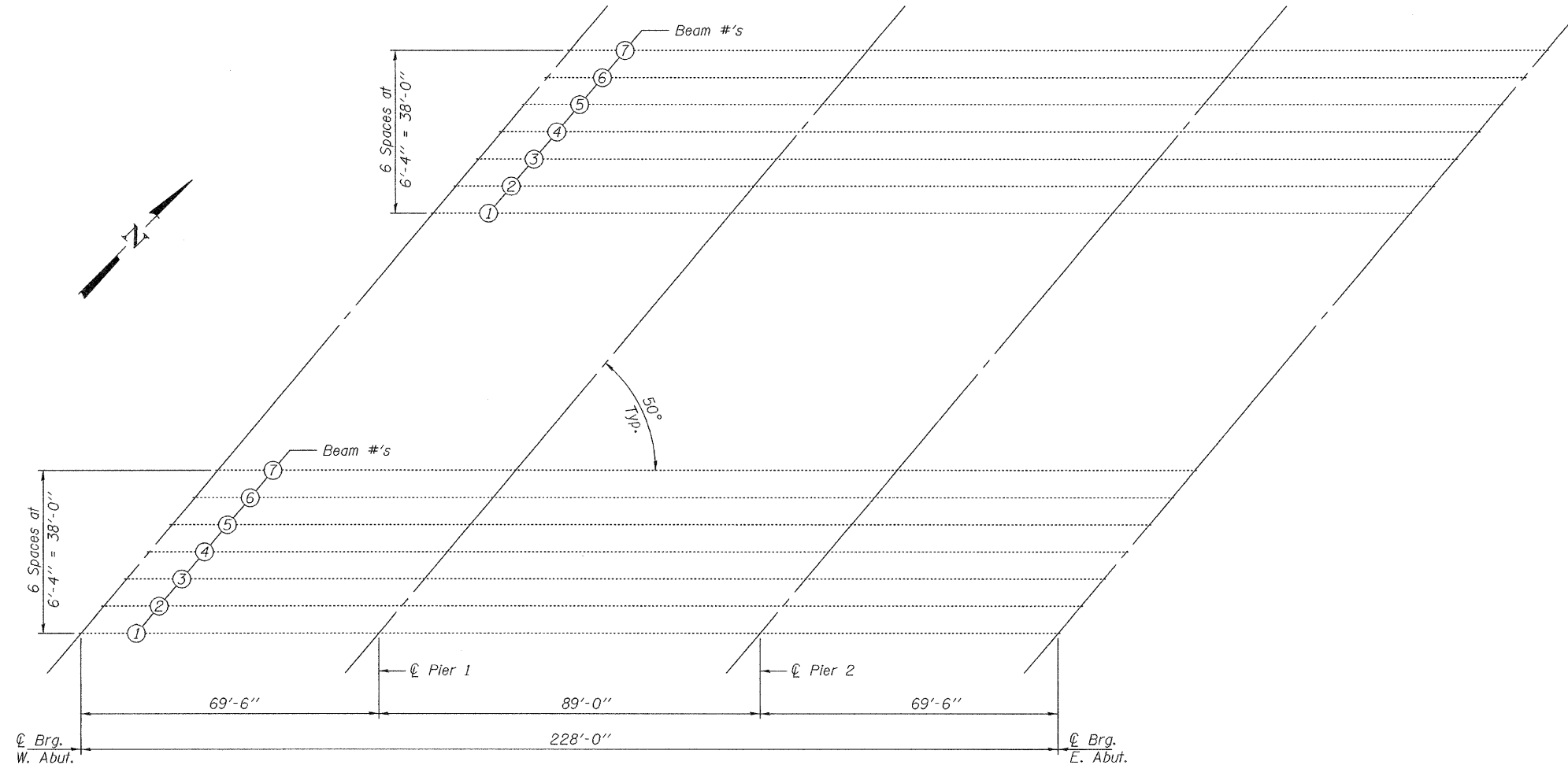
PREFORMED JOINT STRIP SEAL STRUCTURE NO.

EJ-SSJ 5-16-08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



FRAMING PLAN

Remove and Replace Bearings at Abutments

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.
 If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
 Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
 All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing & Erecting Structural Steel	Pound	3700
Anchor Bolts, 1"φ	Each	56
Elastomeric Bearing Assembly, Type II	Each	28
Jack and Remove Existing Bearings	Each	28

**BEARING REPLACEMENT
PLAN & ELEVATION**

FAI RT. 70
SN 026-0009 (EB) & 0010 (WB)

DESIGNED	<i>[Signature]</i>
CHECKED	<i>[Signature]</i>
DRAWN	Kyle M. Steffen
CHECKED	AJB WE

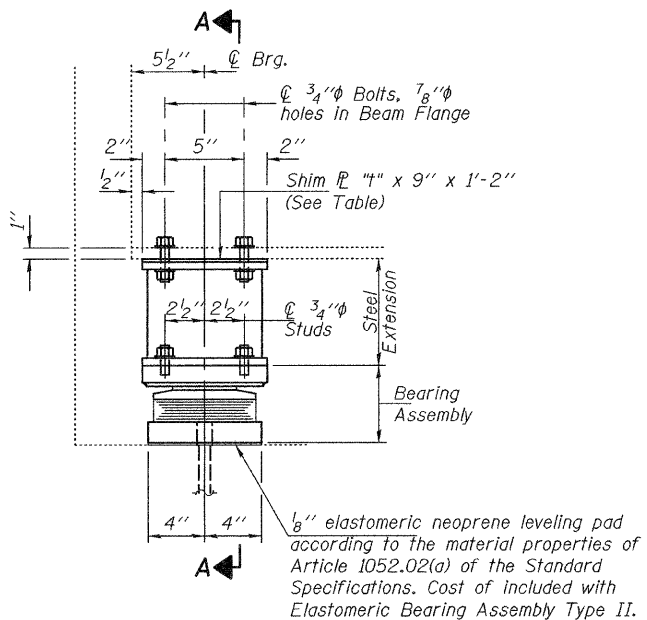
NOVEMBER 21, 2008
 EXAMINED *[Signature]*
 ENGINEER OF STRUCTURAL SERVICES
 PASSED *[Signature]*
 ENGINEER OF BRIDGES AND STRUCTURES



Expires: November 30, 2010

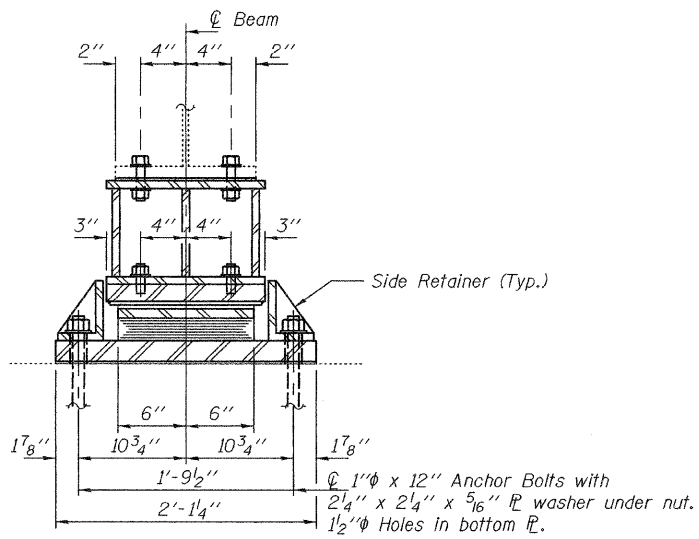
SHEET NO. 13	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	70	-	FAYETTE	59	58
14 SHEETS	CONTRACT NO. 94993				
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT ABUTMENT

TYPE II ELASTOMERIC EXP. BRG.

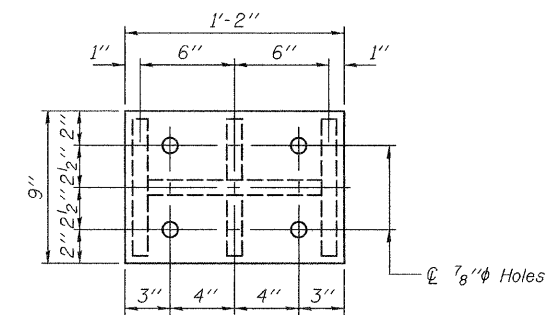


SECTION A-A

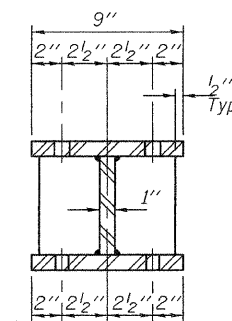
Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 40 Tons.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.
The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

BEAM REACTIONS

R _l	(K)	24.0
R _t	(K)	38.9
Imp.	(K)	10.0
R (Total)	(K)	72.9

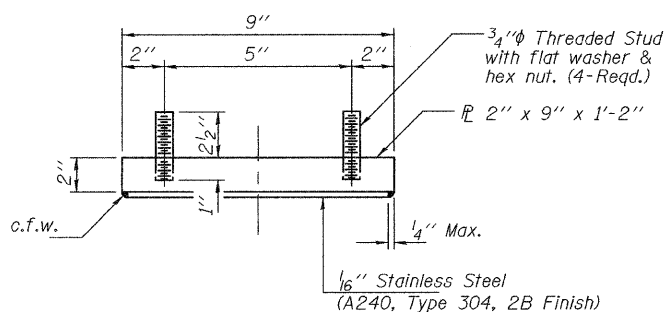


PLAN TOP AND BOTTOM PLATE

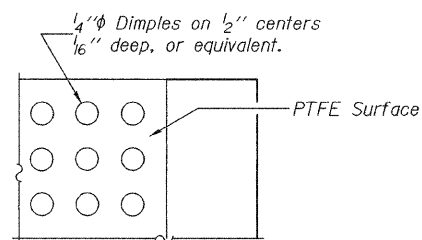


SECTION B-B

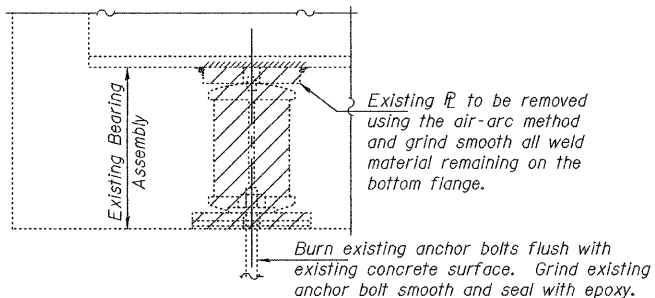
STEEL EXTENSION DETAIL



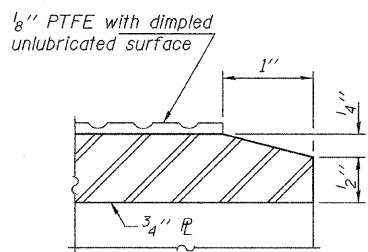
TOP BEARING ASSEMBLY



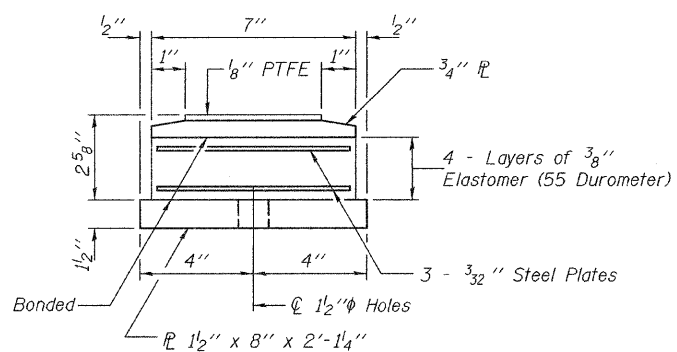
PLAN-PTFE SURFACE



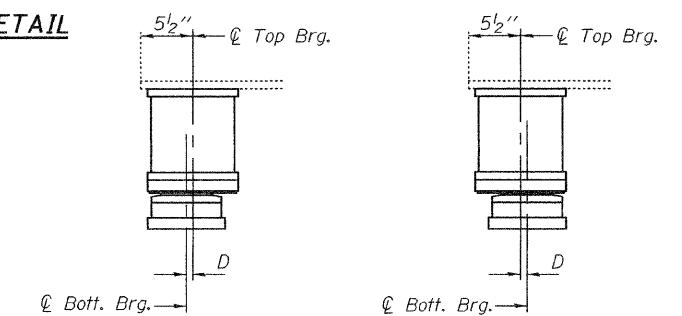
EXISTING BEARING REMOVAL DETAIL



SECTION THRU PTFE



BOTTOM BEARING ASSEMBLY



BELOW 50° F. (Move bott. brg. away from fixed brg.)
ABOVE 50° F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

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

SHIM PLATES

SN	Beam	Abut.	"#"
026-0009	4	W & E	9/16"
026-0010	4	W & E	7/8"
026-0010	5	W & E	7/8"

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	28
Jack and Remove Existing Bearings	Each	28
Furnishing and Erecting Structural Steel	Pound	3700
Anchor Bolts, 1"φ	Each	56

DESIGNED	AJB
CHECKED	GGE
DRAWN	Kyle M. Steffen
CHECKED	AJB GGE

NOVEMBER 21, 2008
EXAMINED *Carl Kuyper*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

TYII/REPS 11-01-2006

SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

SHEET NO. 14	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	70	-	FAYETTE	59	59
14 SHEETS	CONTRACT NO. 94993				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			