

FOR INDEX OF SHEETS AND LIST OF STANDARDS, SEE SHEET NO. 3

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

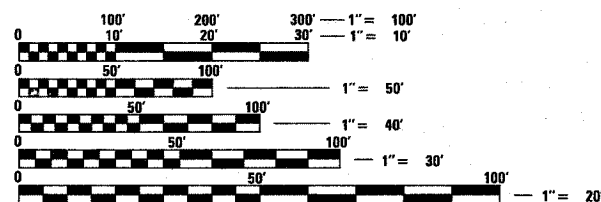
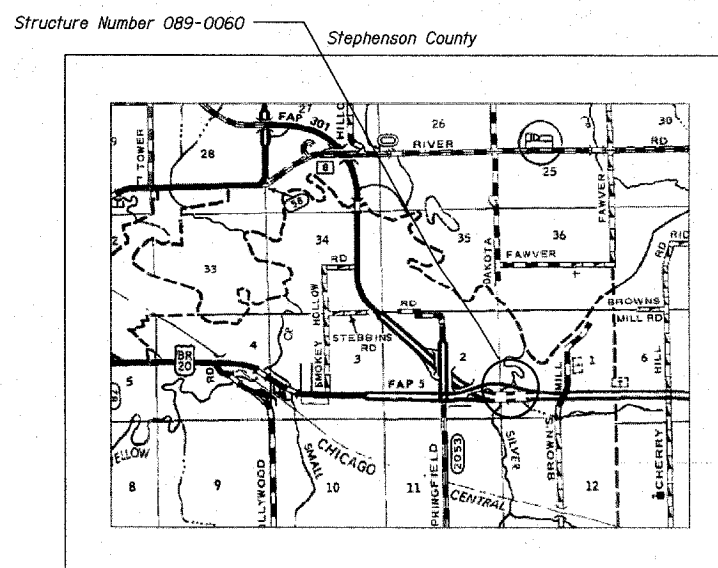
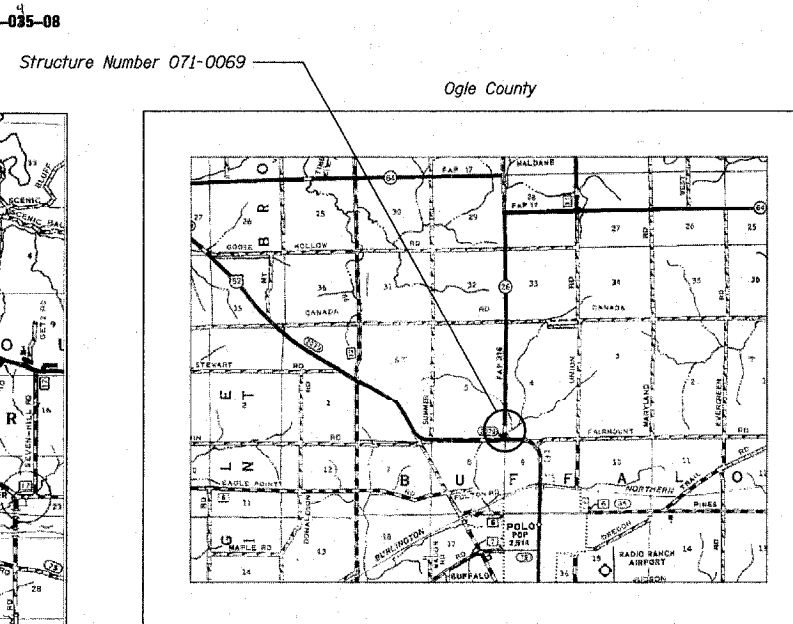
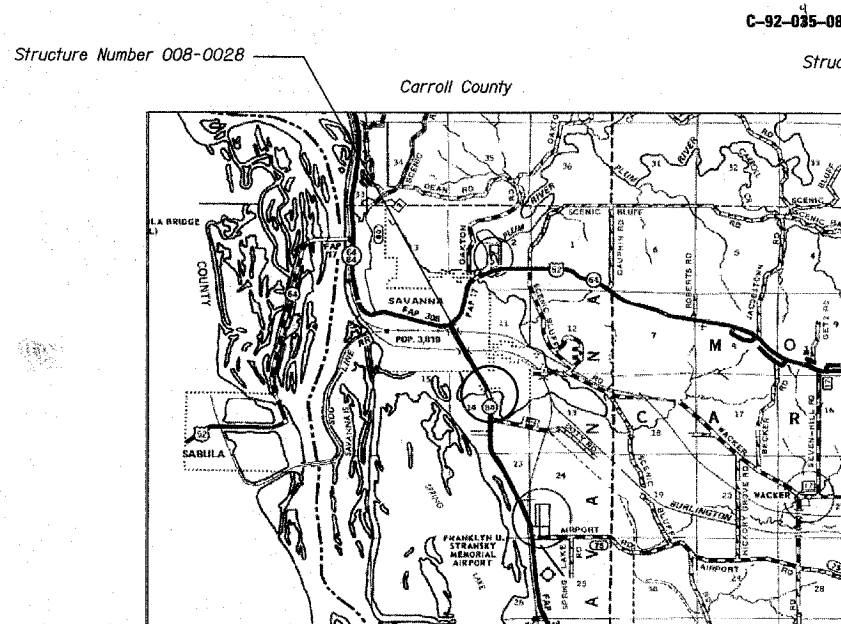
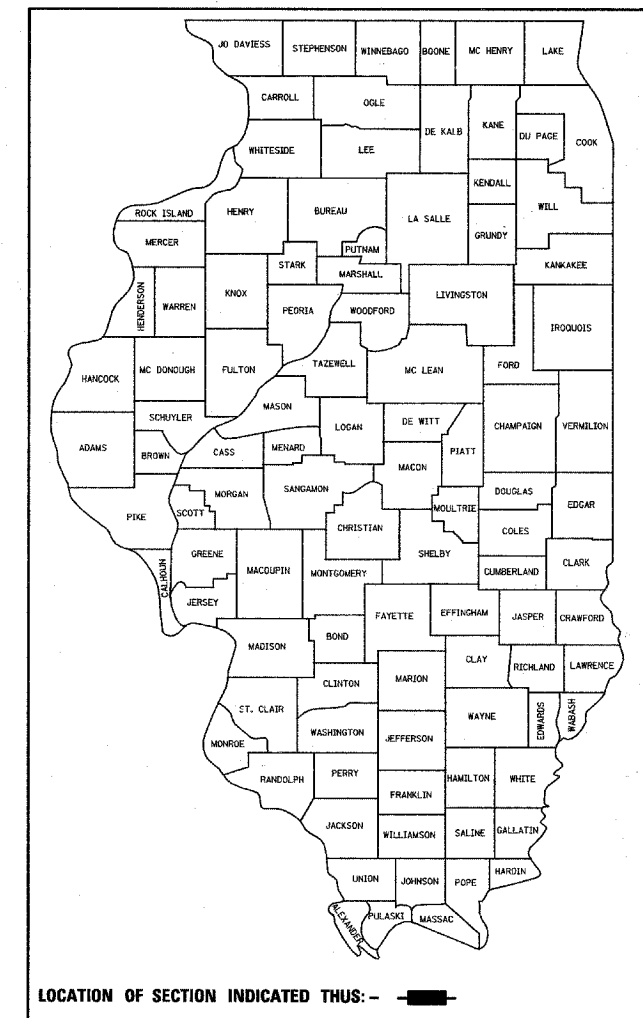
PROPOSED HIGHWAY PLANS

**VARIOUS ROUTES
SECTION (106BR)M, (4B-2)M & (177-4B-3)M
VARIOUS COUNTIES**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	**	Various	26	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 64D99		

* Various
** (106BR)M, (4B-2)M & 177-4B-3)M

D-92-035-08



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 – Mahmoud Etemadi (815) 284-5393

CONTRACT NO. 64D99

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 1-25 2008

George F. Ryan
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 9, 20 08
Eric E. Harm
Interim ENGINEER OF DESIGN AND ENVIRONMENT

May 9, 20 08
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

SUMMARY OF QUANTITIES

Pay Code	Description	Unit	Total Quantity	SFTY-2A 100% STATE		
				SN 008-0028	SN 071-0069	SN 089-0060
50102400	CONCRETE REMOVAL	CU YD	34	18	12	4
50300255	CONCRETE SUPERSTRUCTURE	CU YD	34	18	12	4
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4640	2550	1520	570
50800515	BAR SPLICERS	EACH	71	38	22	11
52000110	PREFORMED JOINT STRIP SEAL	FOOT	255	135	90	30
63300405	REMOVAL AND REINSTALLATION OF EXISTING TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	10	4	4	2
67100100	MOBILIZATION	L SUM	1	0.4	0.3	0.3
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1			1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	4	2	2	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5	0.5	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1	1	
70106700	TEMPORARY RUMBLE STRIP	EACH	15	6	9	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	1800	960	840	
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	8805	3360	1895	3550
70300570	PAVEMENT MARKING TAPE, TYPE III 24"	FOOT	60	24	36	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2965	1125	650	1190
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1000	512.5	312.5	175
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	2000	1025	625	350
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	9500	2700	1600	5200
* 78001150	PAINT PAVEMENT MARKING - LINE 12"	FOOT	140		140	
* 78001140	PAINT PAVEMENT MARKING - LINE 8"	FOOT	120		120	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1675	750	525	400
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	5	2	2	1
* Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	10	4	4	2

* SPECIALTY ITEM

* Various
** (106BR)M, (4B-2)M & 177-4B-3)M

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Summary of Quantities			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Ca\BR\CADD\plans\Various Counties\Contract #64099 2008 expansion joints\02000208.dgn	PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -					*	**	Various	26	2
PLOT DATE = Sat Mar 15 11:20:16 2008	CHECKED -	REVISED -	REVISED -		ILLINOIS			CONTRACT NO. 64099				
	DATE -	REVISED -	REVISED -		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT						

SCALE: SHEET NO. OF SHEETS STA. TO STA.

GENERAL NOTES

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

Fertilizer shall be applied to all disturbed areas and incorporated into the seedbed prior to seeding or placement of sod at the rate specified in Sections 250 and 252 of the Standard Specifications. This work shall be included in the cost of MOBILIZATION.

Mulch Method II shall be applied over all seeded areas. This shall be included in the cost of the MOBILIZATION.

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

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

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

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

- Mediacom - Moline
- Gallatin River Communications - Galesburg
- Commonwealth Edison Company - Rockford
- Verizon - Sycamore
- Jo-Carroll Energy - Elizabeth
- NICOR Gas Co. - Naperville
- Frontier/Citizens - Lanark
- Insight Communications - Rockford

INDEX OF SHEETS

1. Cover Sheet
2. Summary of Quantities
3. General Notes
4. Traffic Control Plan SN 008-0028
5. -6. Traffic Control Plan SN 071-0069
7. -8. Traffic Control Plan SN 089-0060
9. Traffic Control and Protection for Ramps

Structure Number 008-0028

10. General Plan & Elevation
11. Existing Deck Plan & Cross Section
12. Existing Deck Plan & Cross Section
13. Joint Details
14. Joint Details
15. Preformed Joint Strip Seal
16. Bar Splicer Assembly Details

Structure Number 071-0069

17. General Plan & Elevation
18. Existing Deck Plan & Cross Section
19. Joint Details
20. Preformed Joint Strip Seal
21. Bar Splicer Assembly Details

Structure Number 089-0060

22. General Plan & Elevation
23. Existing Deck Plan and Cross Section
24. Joint Details
25. Preformed Joint Strip Seal
26. Bar Splicer Assembly Details

STANDARDS

- 701201-02 Lane Closure, 2L, 2W, Day Only, for Speeds > 45 MPH
- 701321-09 Lane Closure, 2L, 2W, Bridge Repair with Barrier
- 701400-02 Approach to Lane Closure, Freeway/Expressway
- 701401-04 Lane Closure, Freeway/Expressway
- 701901 Traffic Control Devices
- 704001-04 Temporary Concrete Barrier

* Various
** (106BR)M, (4B-2)M & 177-4B-3)M

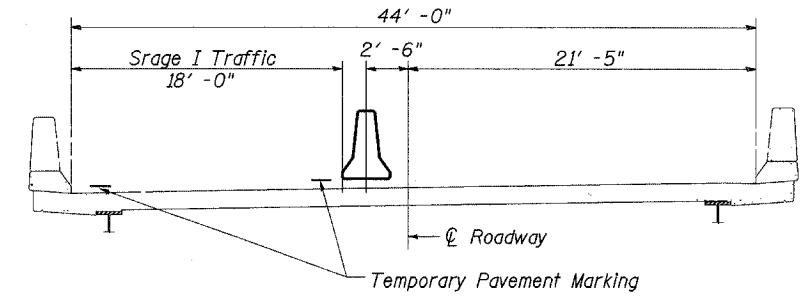
FILE NAME =	USER NAME = lmkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BR\CADD plans\Various Counties\Contract #64099 2008 expansion joints\0080028.dgn	DRAWN -	REVISED -	*					**	Various	26	3	
PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -	ILLINOIS					CONTRACT NO. 64099				
PLOT DATE = Sat Mar 15 11:20:55 2008	DATE -	REVISED -	FED. ROAD DIST. NO.					ILLINOIS FED. AID PROJECT				

Traffic Control Plan

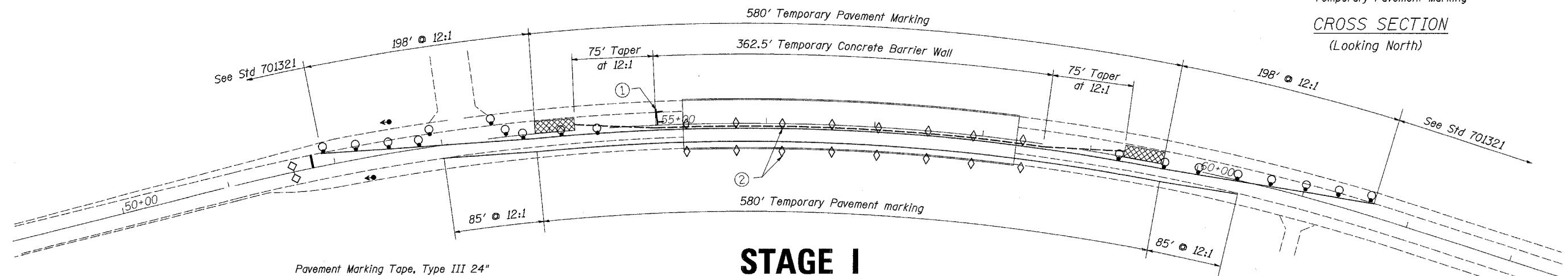
Location 1

Structure Number 008-0028

Refer to Standard 701321 for additional details



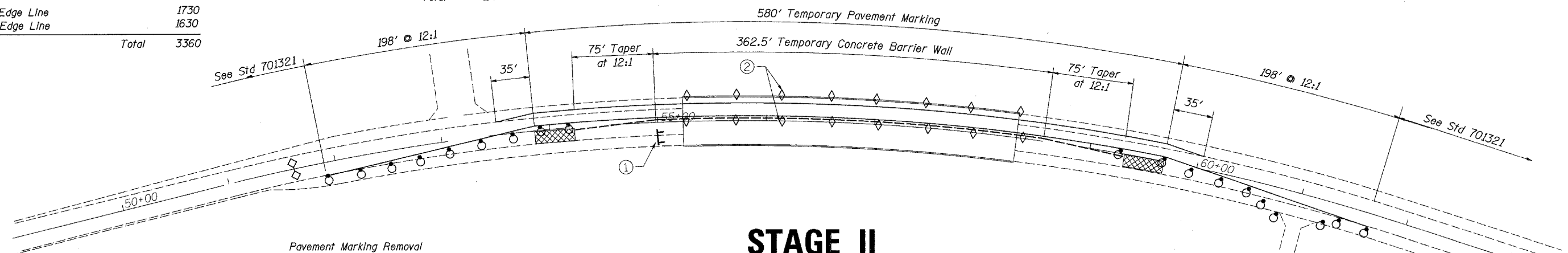
CROSS SECTION
(Looking North)



STAGE I

Pavement Marking Tape, Type III 4"	Foot
Stage I Edge Line	1730
Stage II Edge Line	1630
Total	3360

Pavement Marking Tape, Type III 24"	Foot
Stop Bars	24
Total	24



STAGE II

Temporary Concrete Barrier	Foot
Stage I	512.5
Total	512.5

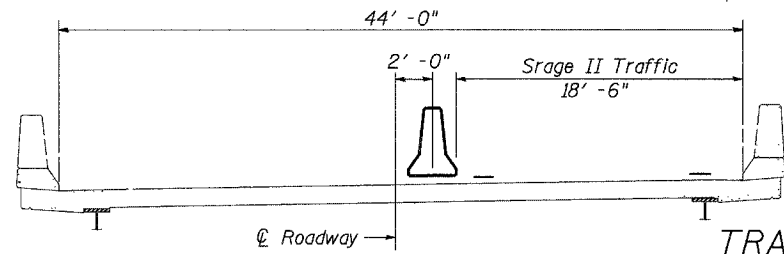
Pavement Marking Removal	Sq. Ft.
Stage I	750
Total	750

Work Zone Pavement Marking Removal	Sq. Ft.
Stage I Temporary Lines	575
Stage II	550
Total	1125

Paint Pavement Marking - Line 4"	Foot
Stp Bar to Stop Bar	1600
Edge Lines Centerline	1100
Total	2700

Relocate Temporary Concrete Barrier	Foot
Stage II	512.5
Temporary Storage	512.5
Total	1025

Short Term Pavement Marking 4"	Foot
Temporary Centerline Skip Dash and Solid Yellow	240
Total	960



CROSS SECTION
(Looking North)

TRAFFIC CONTROL PLAN
IL 84 OVER PLUM CREEK
VARIOUS ROUTES
SECTION (106BR)M, (4B-2)M & (177-4B-3)M
VARIOUS COUNTIES
STRUCTURE NUMBER 008-0028

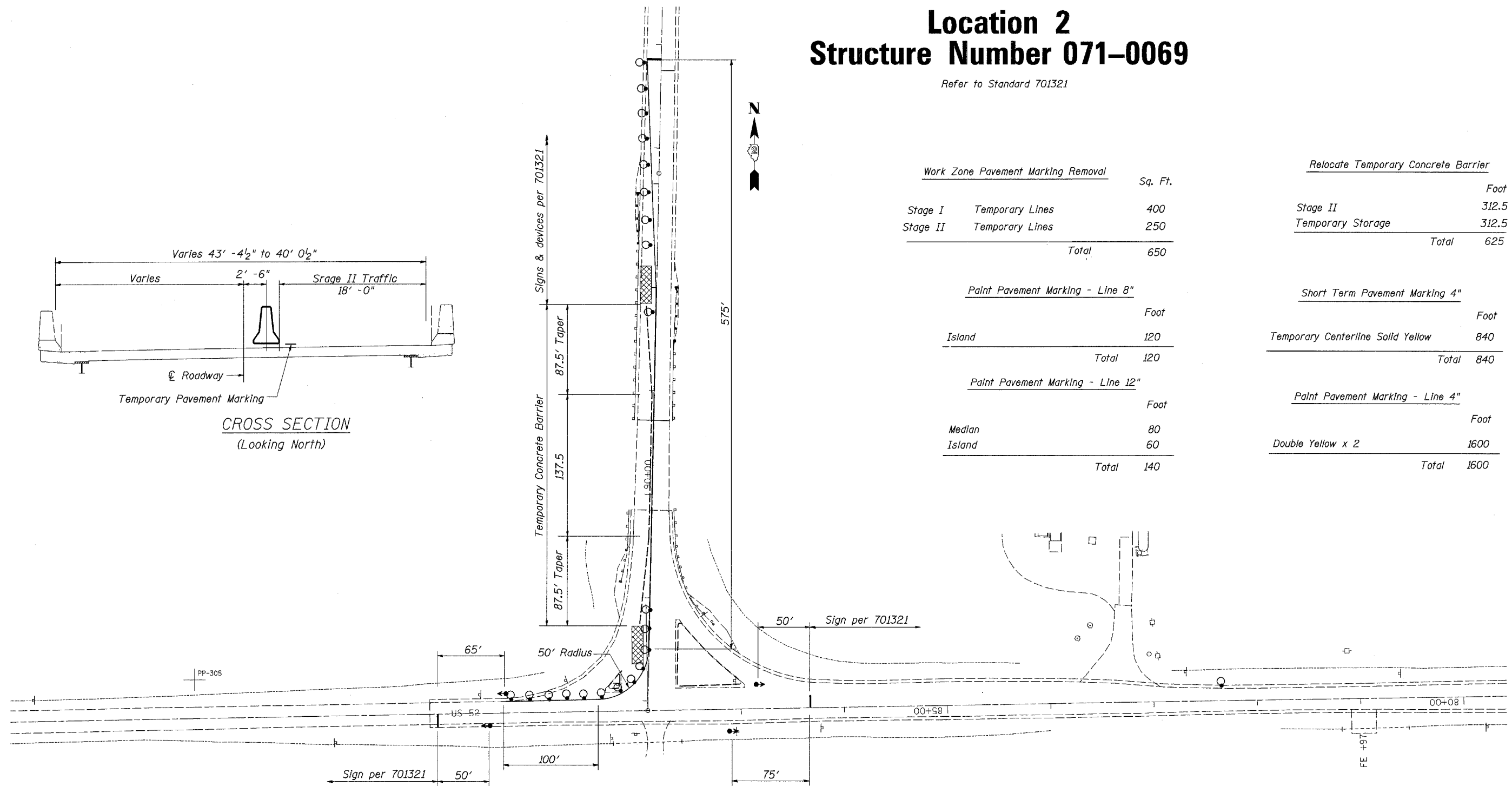
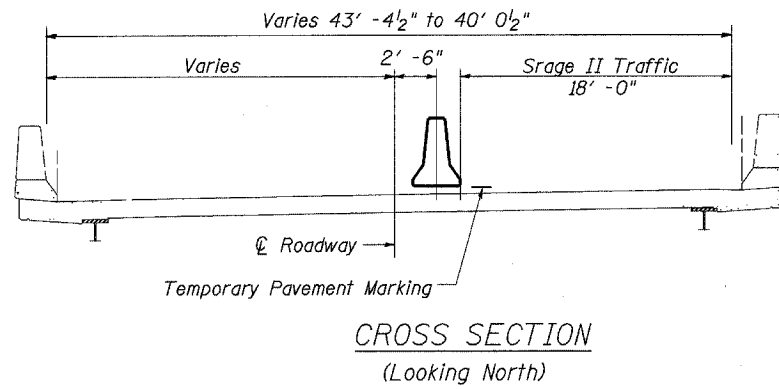
- ① Type III barricade to be placed when no work is being performed.
- ② Barrier wall/guardrail markers at 7.6 m (25') cts. See Standards 704001 & 635011.

* Various
** (106BR)M, (4B-2)M & 177-4B-3)M

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BRYCADD plans\Various Counties\Contract #64099 2008 expansion joints\0080028.dgn	PLLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -						*	**	Various	26	4
PLOT DATE = Sat Mar 15 11:13:19 2008	DATE -	CHECKED -	REVISED -						ILLINOIS CONTRACT NO. 64099				
		DATE -	REVISED -						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

Traffic Control Plan Location 2 Structure Number 071-0069

Refer to Standard 701321



Work Zone Pavement Marking Removal		Sq. Ft.
Stage I	Temporary Lines	400
Stage II	Temporary Lines	250
Total		650

Paint Pavement Marking - Line 8"		Foot
Island		120
Total		120

Paint Pavement Marking - Line 12"		Foot
Median		80
Island		60
Total		140

Relocate Temporary Concrete Barrier		Foot
Stage II		312.5
Temporary Storage		312.5
Total		625

Short Term Pavement Marking 4"		Foot
Temporary Centerline Solid Yellow		840
Total		840

Paint Pavement Marking - Line 4"		Foot
Double Yellow x 2		1600
Total		1600

Stage II

TRAFFIC CONTROL PLAN
IL 26 OVER BUFFALO CREEK
VARIOUS ROUTES
SECTION (106BR)M, (4B-2)M & (177-4B-3)M
VARIOUS COUNTIES
STRUCTURE NUMBER 071-0069

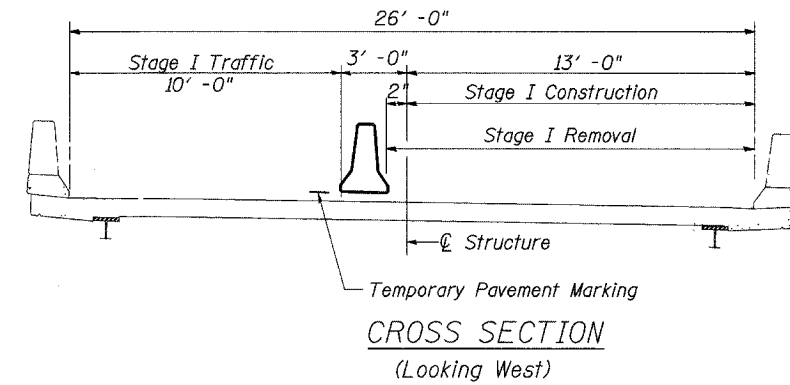
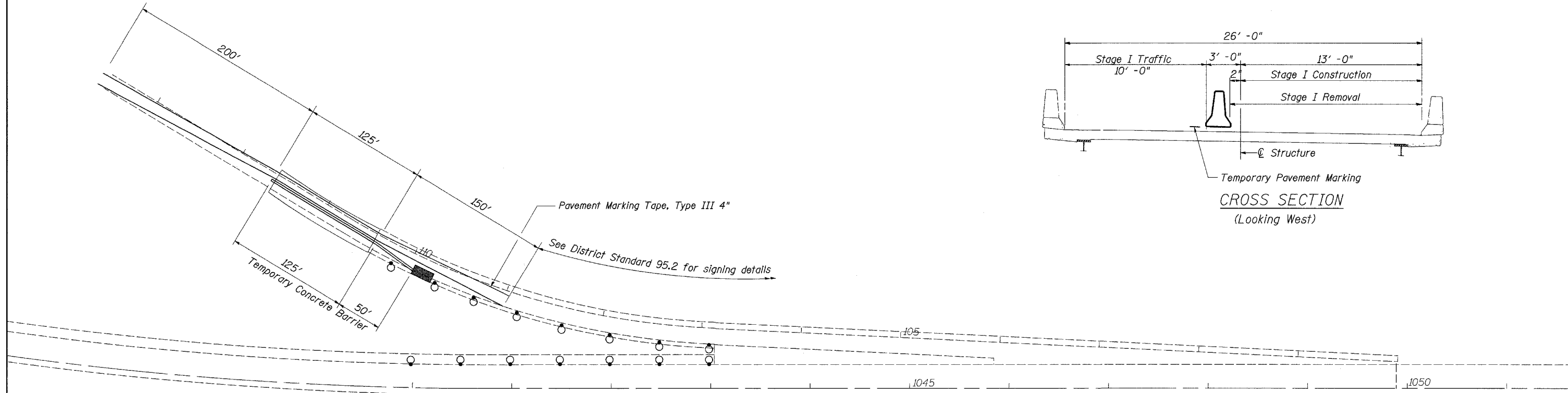
* Various
** (106BR)M, (4B-2)M & 177-4B-3)M

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CA:\BR\CADD plans\Various Counties\Contract #64D99 2008 expansion joints\006020.dgn	Plot SCALE = 50.0000' / IN.	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	ILLINOIS	CONTRACT NO. 64D99	26	6
PLOT DATE = Sat Mar 15 11:13:20 2008	DATE -	CHECKED -	REVISED -		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT							

Traffic Control Plan

Location 3

Structure Number 089-0060



<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;"><u>Pavement Marking Removal</u></td> <td style="text-align: right;">Sq. Ft.</td> </tr> <tr> <td style="text-align: center;">Edge Lines</td> <td style="text-align: right;">400</td> </tr> <tr> <td style="text-align: right;">Total</td> <td style="text-align: right;">400</td> </tr> </table>	<u>Pavement Marking Removal</u>	Sq. Ft.	Edge Lines	400	Total	400	<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;"><u>Temporary Concrete Barrier</u></td> <td style="text-align: right;">Foot</td> </tr> <tr> <td style="text-align: center;">Stage I</td> <td style="text-align: right;">175</td> </tr> <tr> <td style="text-align: right;">Total</td> <td style="text-align: right;">175</td> </tr> </table>	<u>Temporary Concrete Barrier</u>	Foot	Stage I	175	Total	175
<u>Pavement Marking Removal</u>	Sq. Ft.												
Edge Lines	400												
Total	400												
<u>Temporary Concrete Barrier</u>	Foot												
Stage I	175												
Total	175												
<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;"><u>Pavement Marking Tape, Type III 4"</u></td> <td style="text-align: right;">Foot</td> </tr> <tr> <td style="text-align: center;">Stage I Edge Line</td> <td style="text-align: right;">950</td> </tr> <tr> <td style="text-align: center;">Stage II Edge Line</td> <td style="text-align: right;">2600</td> </tr> <tr> <td style="text-align: right;">Total</td> <td style="text-align: right;">3550</td> </tr> </table>		<u>Pavement Marking Tape, Type III 4"</u>	Foot	Stage I Edge Line	950	Stage II Edge Line	2600	Total	3550				
<u>Pavement Marking Tape, Type III 4"</u>	Foot												
Stage I Edge Line	950												
Stage II Edge Line	2600												
Total	3550												

TRAFFIC CONTROL PLAN
US ROUTE 20 WESTBOUND RAMP OVER SILVER CREEK
VARIOUS ROUTES
SECTION (106BR)M, (4B-2)M & (177-4B-3)M
VARIOUS COUNTIES
STRUCTURE NUMBER 089-0060

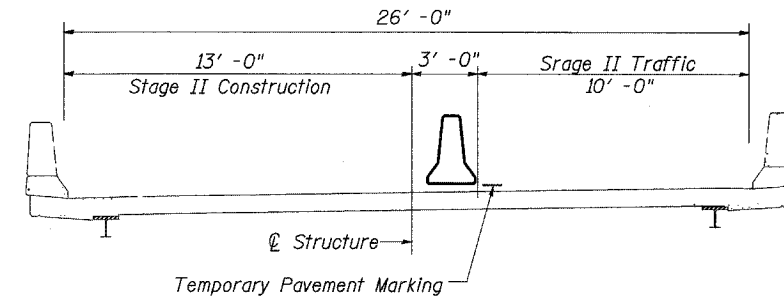
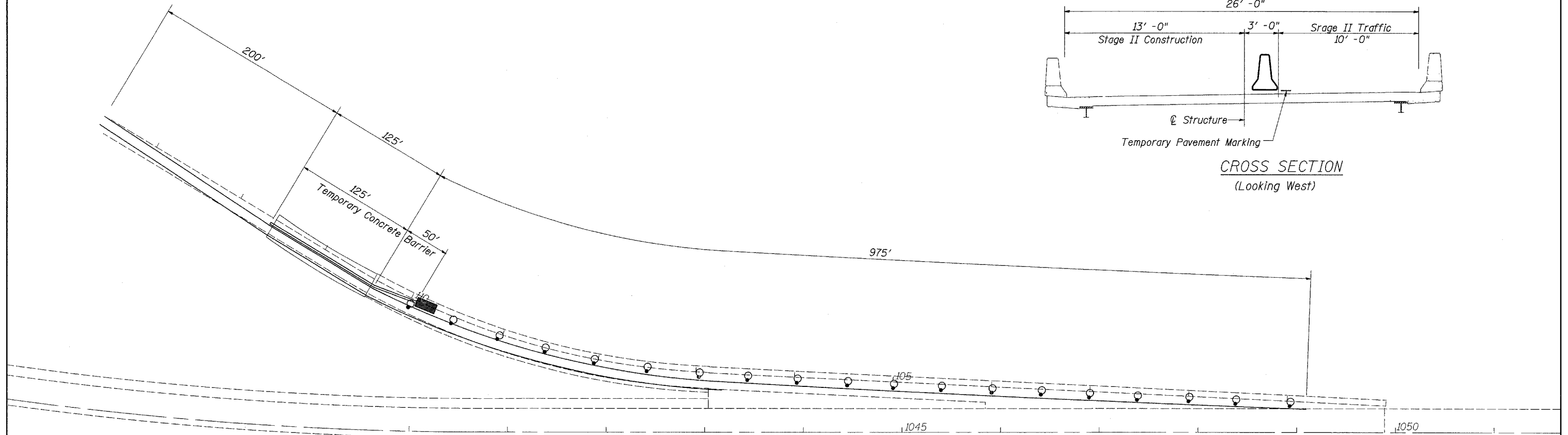
* Various
 ** (106BR)M, (4B-2)M & 177-4B-3)M

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS	Traffic Control Plan			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BR\CADD plans\Various Counties\Contract #64D99 2008 expansion joints\0000026.dgn				DEPARTMENT OF TRANSPORTATION	SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	ILLINOIS	CONTRACT NO. 64D99	7
PLOT SCALE = 50,0000 "/ IN.		CHECKED -	REVISED -									
PLOT DATE = Sat Mar 15 11:13:19 2008		DATE -	REVISED -									
											ILLINOIS	CONTRACT NO. 64D99

Traffic Control Plan

Location 3

Structure Number 089-0060



CROSS SECTION
(Looking West)

<u>Work Zone Pavement Marking Removal</u>		Sq. Ft.
Stage I	Temporary Lines	320
Stage II	Temporary Lines	870
Total		1190

<u>Paint Pavement Marking - Line 4"</u>		Foot
Edge Lines		5200
Total		5200

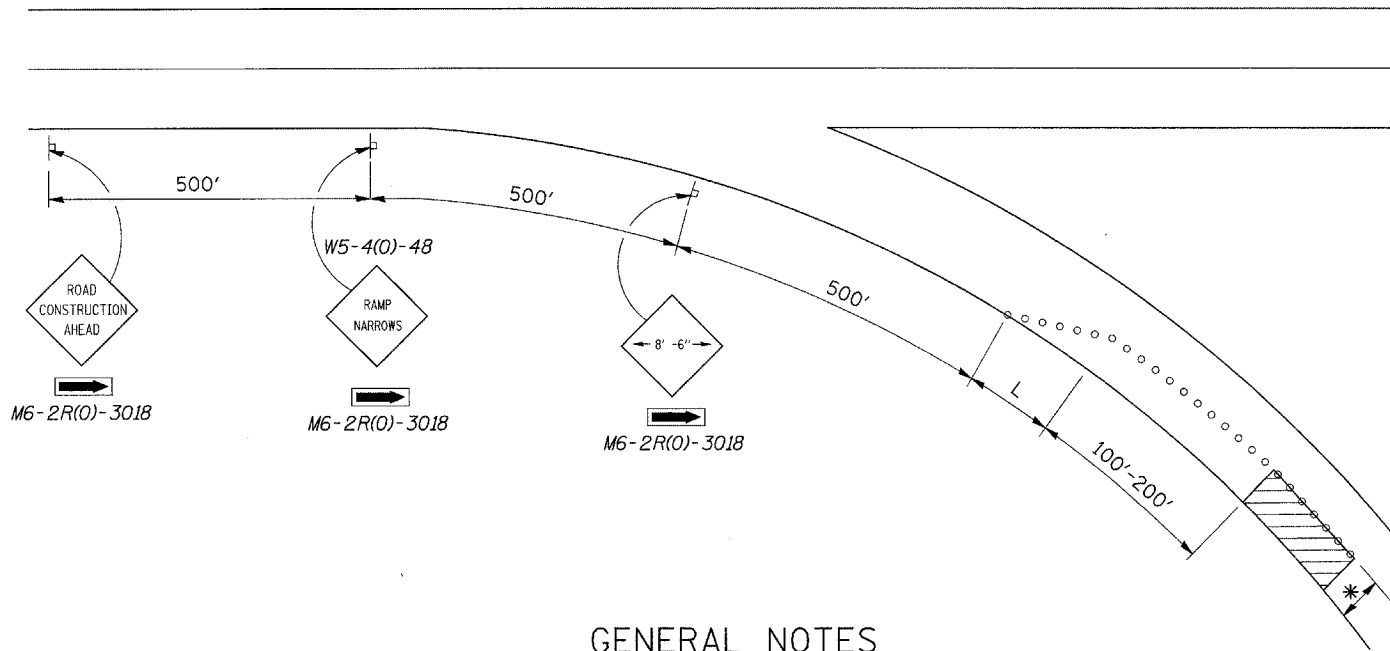
<u>Relocate Temporary Concrete Barrier</u>		Foot
Stage II		175
Temporary Storage		175
Total		350

TRAFFIC CONTROL PLAN
US ROUTE 20 WESTBOUND RAMP OVER SILVER CREEK
VARIOUS ROUTES
SECTION (106BR)M, (4B-2)M & (177-4B-3)M
VARIOUS COUNTIES
STRUCTURE NUMBER 089-0060

* Various
 ** (106BR)M, (4B-2)M & 177-4B-3)M

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
0:\BR\CAAD plans\Various Counties\Contract #64099 2008 expansion joints\0080028.dgn	#64099 2008 expansion joints\0080028.dgn	DRAWN -	REVISED -					*	**	Various	26	8	
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -			SCALE:	SHEET NO.	OF	SHEETS	STA.	TO	STA.	ILLINOIS
PLOT DATE = Sat Mar 15 11:13:20 2008		DATE -	REVISED -										FED. ROAD DIST. NO.
											CONTRACT NO. 64099		

TRAFFIC CONTROL AND PROTECTION FOR RAMPS



GENERAL NOTES

CONES AT 8 m (25') CENTERS FOR 105 m (350'). ADDITIONAL CONES MAY BE PLACED AT 15 m (50') CENTERS. WHEN DRUMS OR BARRICADES ARE USED, THE INTERVAL DEVICES MAY BE DOUBLED.

* WIDTH OF CLOSURE SHOWN ON RAMP PATCHING SCHEDULE OR AS DIRECTED BY ENGINEER.

$L = \text{CLOSURE WIDTH} \times \text{TAPER RATIO IS SPEED LIMIT}/1$ (POSTED OR ADVISORY)

ANY VISIBLE REPAIRS REQUIRED ON THE SHOULDER BECAUSE OF TRAFFIC SHALL BE PROVIDED AT THE CONTRACTORS EXPENSE. THE ENGINEER SHALL BE THE SOLE JUDGE FOR ANY SHOULDER REPAIRS.

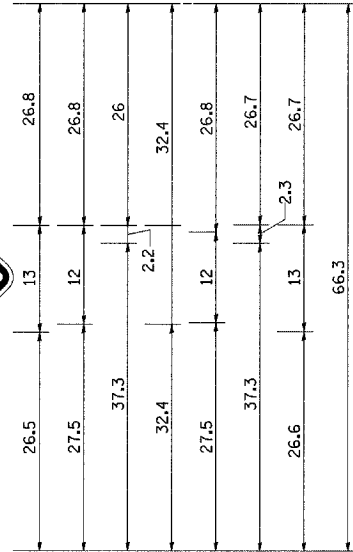
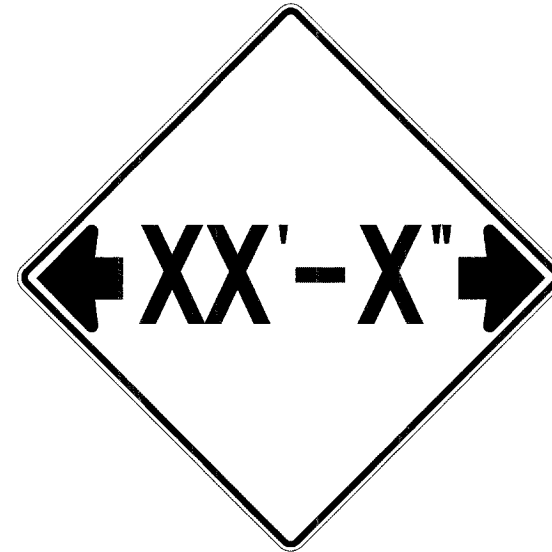
TRAFFIC CONTROL AND PROTECTION FOR RAMPS SHALL BE INCLUDED IN THE COST OF THE SPECIFIED TRAFFIC CONTROL ITEMS.

SYMBOLS

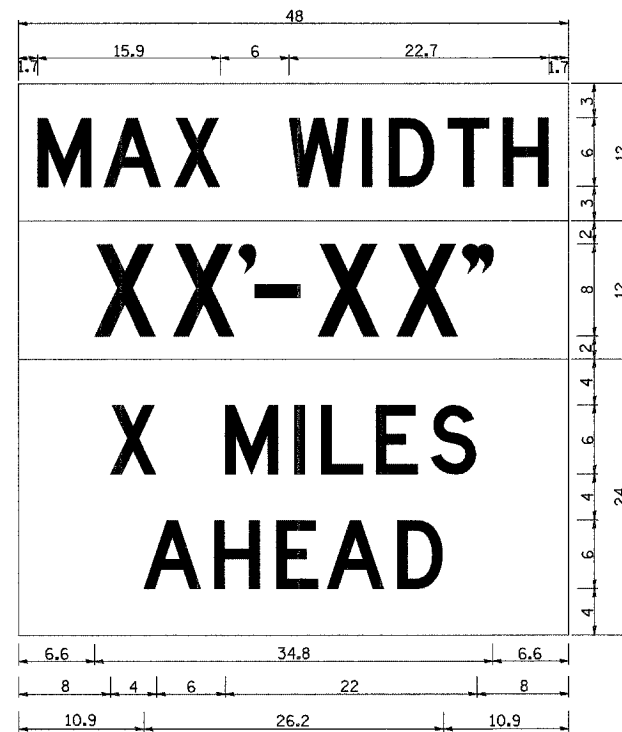
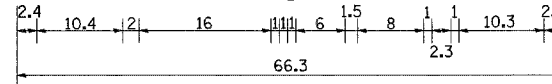
- WORK AREA
- SIGN
- BARRICADE OR DRUM
- CONE, DRUM OR BARRICADE
- FLAGGER WITH TRAFFIC CONTROL SIGN

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)



NOTES
 W12-2 - Horizontal Clearance Sign
 48.0" across sides, 1.9" Radius,
 0.8" Border, 0.5" Indent, Black on
 Orange; Standard Arrow Custom
 10.4" X 8.1" 180° Black 11 Inch
 D Series Lettering; Standard Arrow
 Custom 10.4" X 8.1" 0°



W12-1103 (Width is 8D);
 No border, Black on White;
 [MAX WIDTH] D;

No border, Black on Orange;
 [XX'-XX'] D;

No border, Black on White;
 [X MILES] D; [AHEAD] D;

All work to furnish and install these signs shall be included in the cost of the Traffic Control Standards and shall not be paid for separately.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 1-9-08

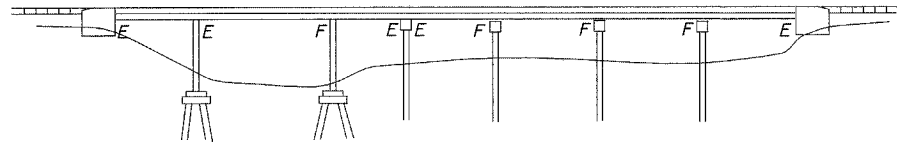
INFORMATIONAL WARNING SIGNS (FOR NARROW TRAVEL LANES) 39.2

* Various
 ** (106BR)M, (4B-2)M & (77-4B-3)M

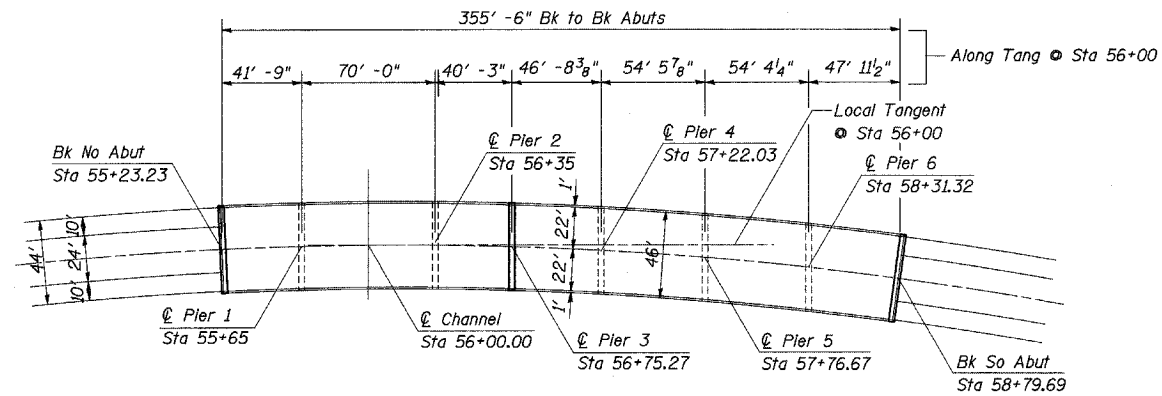
REVISED - 10-15-04

REVISED -	REGION 2 / DISTRICT 2 STANDARD	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -		*	**	Various	26	9
REVISED -		SCALE: 50:2000' / 1"	ILLINOIS		CONTRACT NO. 64D99	
REVISED -		SHEET NO. OF SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		

Illinois Route 84 bridge over Plum River.
 Existing structure number is 008-0028.
 Remove and reconstruct three expansion joints
 One joint at each abutment and one at pier 3.



Elevation



Plan

EXISTING HORIZONTAL CURVE DATA

P.I. STA= 56+64.72
 $\Delta = 31^\circ - 36'$
 $D = 2^\circ - 54'$
 $R = 1975.72'$
 $T = 559.07'$
 $L = 1089.66'$
 $E = 77.58'$

S.E. = 0.065 '"/>
 P.C. STA= 51+05.65
 P.T. STA= 61+93.31



General Notes

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

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.

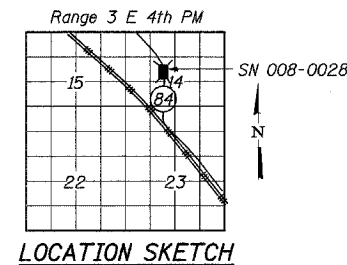
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

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.

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.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
CONCRETE SUPERSTRUCTURE	CU YD	18.0
CONCRETE REMOVAL	CU YD	18.0
REINFORCEMENT BARS, EPOXY COATED	POUND	2,550
PREFORMED JOINT STRIP SEAL	FOOT	135
BAR SPLICERS	EACH	38
REM REIN T B TERM T1	EACH	4



GENERAL PLAN & ELEVATION
 IL 84 OVER PLUM RIVER
 FA ROUTE 18 (IL 84)
 SECTION 106BR
 CARROLL COUNTY
 STRUCTURE NUMBER 008-0028

* Various
 ** (106BR)M, (4B-2)M & 177-4B-3)M

FILE NAME =	USER NAME = lmkdj	DESIGNED -	REVISED -
C:\BR\CADD plans\Various Counties\Contract #64099 2008 expansion joints\0080028.dgn		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = Sat Mar 15 11:12:57 2008	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

General Plan & Elevation

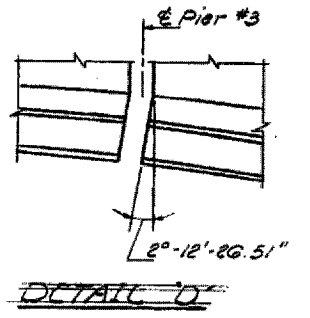
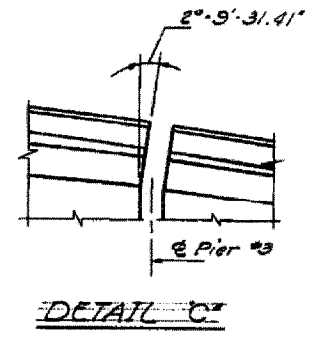
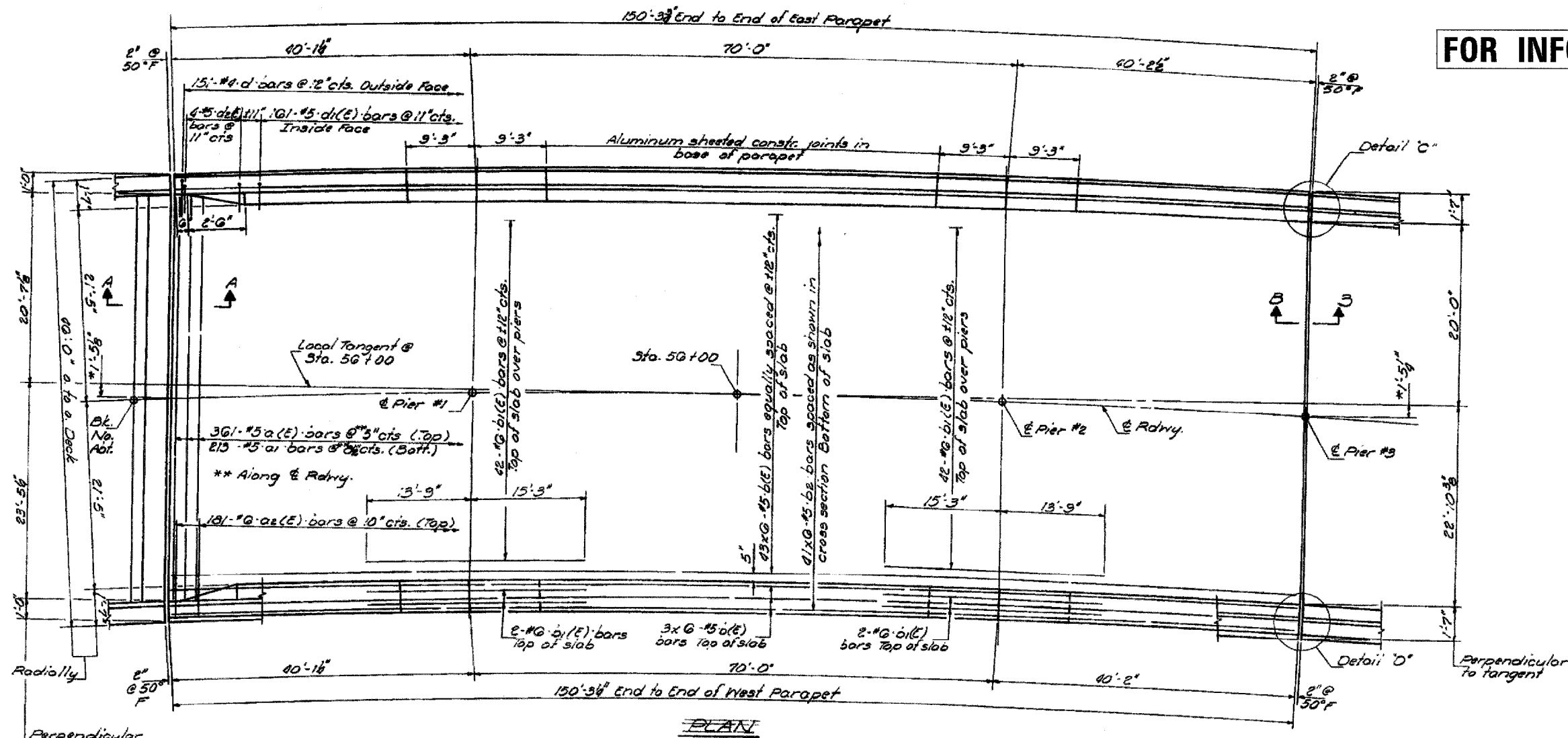
SCALE: None SHEET NO. 1 OF 7 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	26	10
ILLINOIS			CONTRACT NO. 64099	
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

* At end of slab

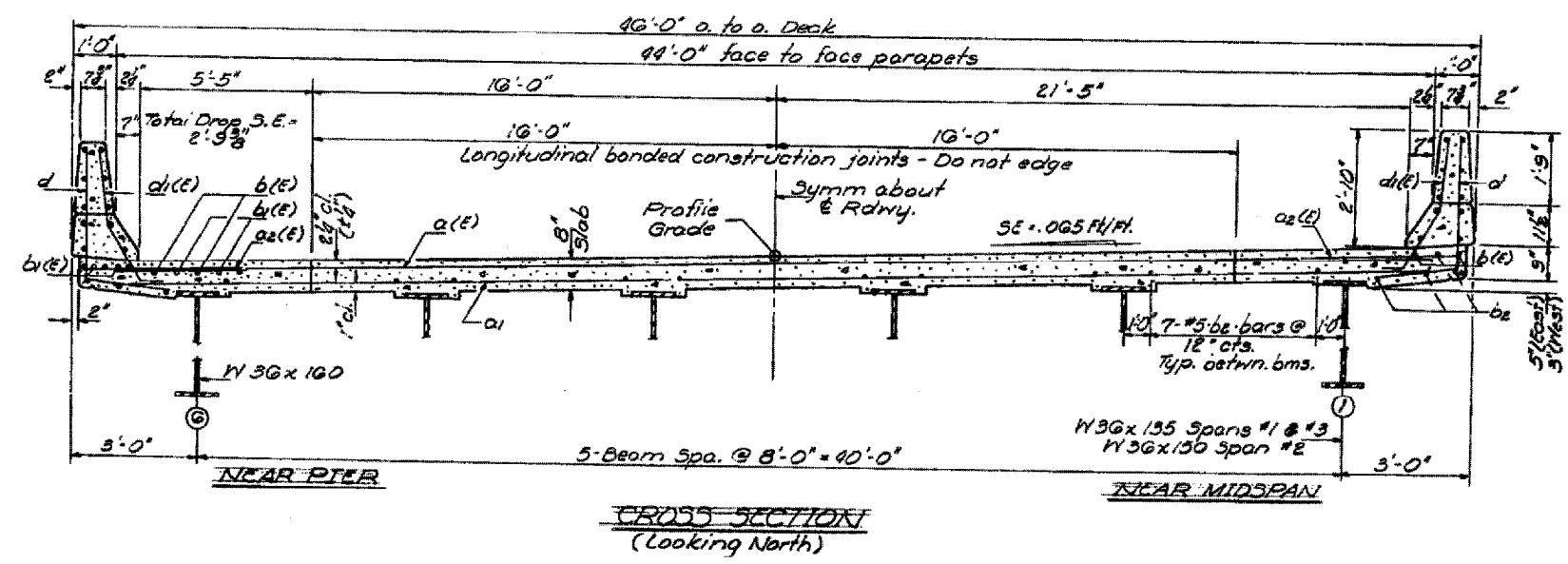
MINI BAR LAPS
#5 bars = 1'-9"

FOR INFORMATION ONLY



NOTES:

Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



DECK PLAN & CROSS SECTION
SPANS 1-3
IL 84 OVER PLUM RIVER
FA ROUTE 18 (IL 84)
SECTION 106BR
CARROLL COUNTY
STRUCTURE NUMBER 008-0028

FILE NAME =	USER NAME = lmkdj	DESIGNED -	REVISED -
D:\BR\CADD plans\Various Counties\Contract #64D99 2008 expansion joints\0080028.dgn		DRAWN -	REVISED -
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -
PLOT DATE = Sat Mar 15 11:25:58 2008		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

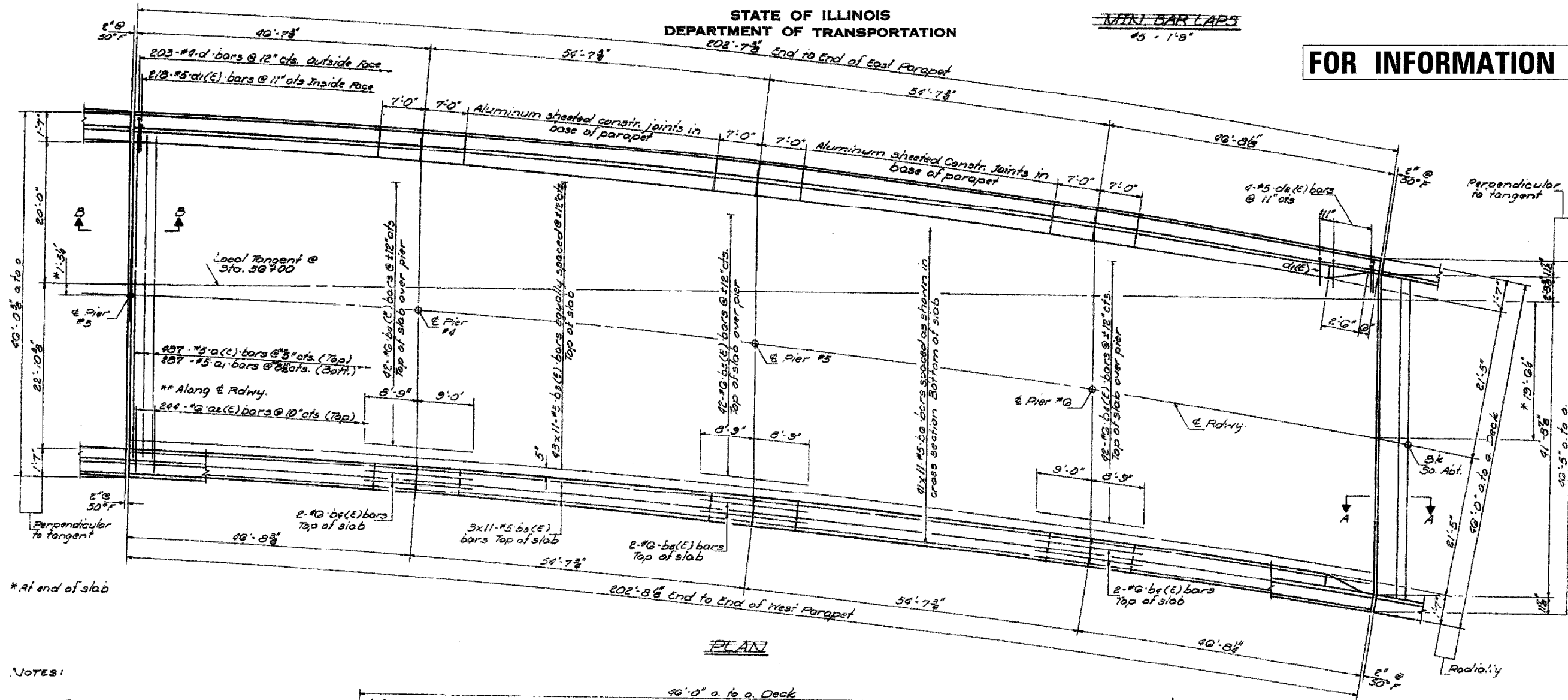
Existing Deck Plan & Cross-Section (Spans 1-3)

SCALE: None SHEET NO. 2 OF 7 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	**	Various	26	11
ILLINOIS		CONTRACT NO. 64D99		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

* Various
** (106BR)M, (4B-2)M & 177-4B-3)M

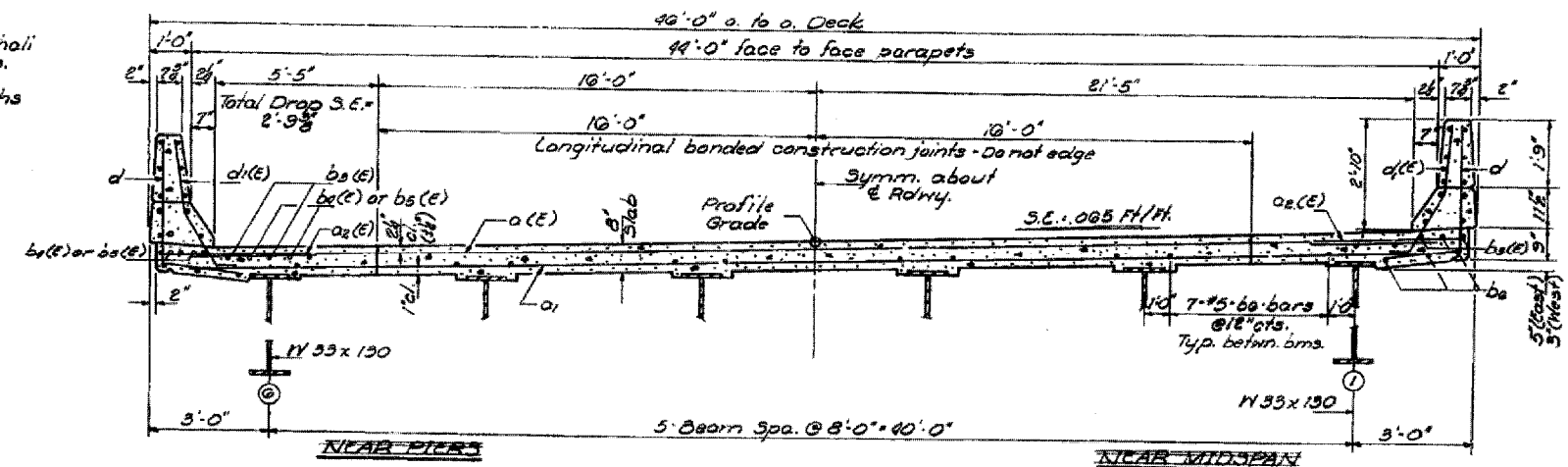
FOR INFORMATION ONLY



PLAN

NOTES:

Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



CROSS SECTION
(Looking North)

DECK PLAN & CROSS SECTION
SPANS 4-7
IL 84 OVER PLUM RIVER
FA ROUTE 18 (IL 84)
SECTION 106BR
CARROLL COUNTY
STRUCTURE NUMBER 008-0028

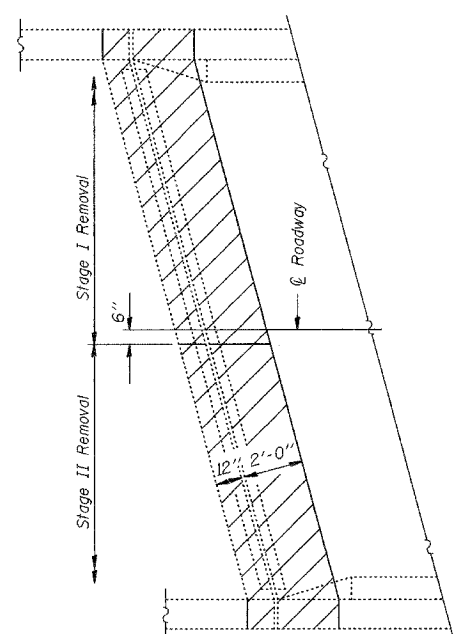
* Various
** (106BR/M, (4B-2)M & 177-4B-3)M

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -
0:\BRY\CADD\plans\Various Counties\Contract #64099 2008 expansion joints\0080028.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

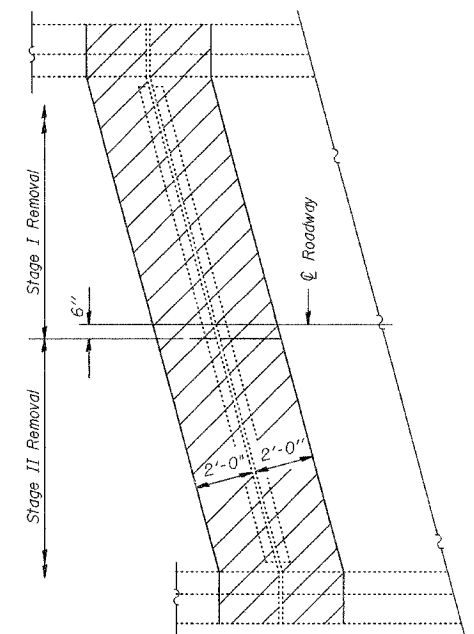
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Deck Plan & Cross-Section (Spans 4-7)
SCALE: None SHEET NO. 3 OF 7 SHEETS STA. TO STA.

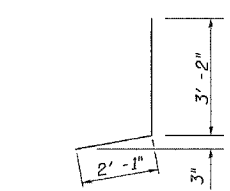
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	26	12
ILLINOIS CONTRACT NO. 64099				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



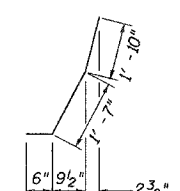
EXISTING PARTIAL PLAN
(At Abutments)



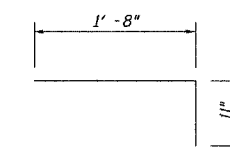
EXISTING PARTIAL PLAN
(At Pier 3)



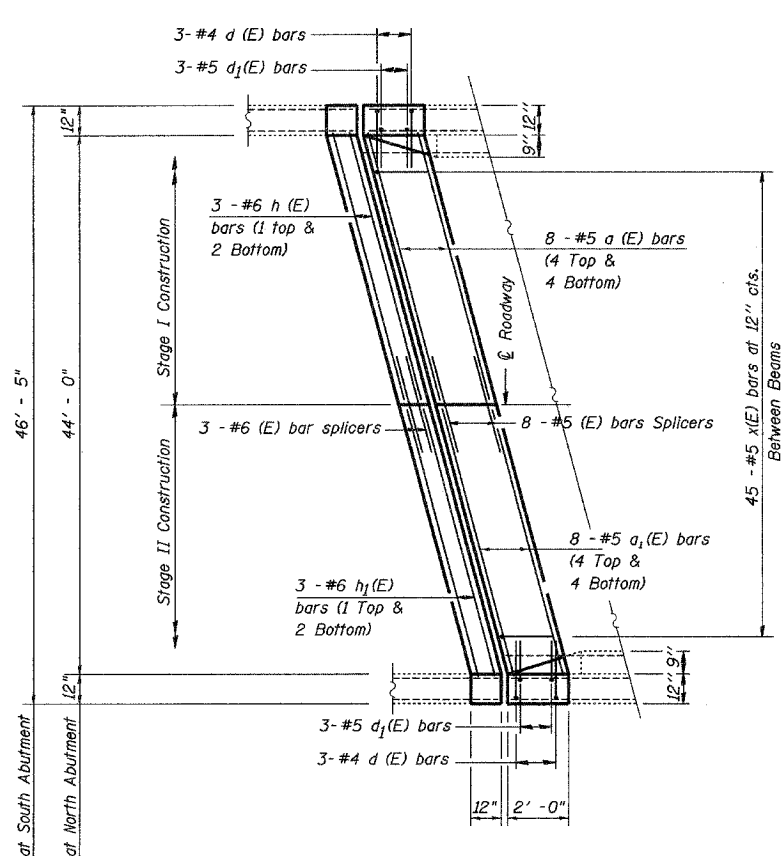
#4 d (E) BAR



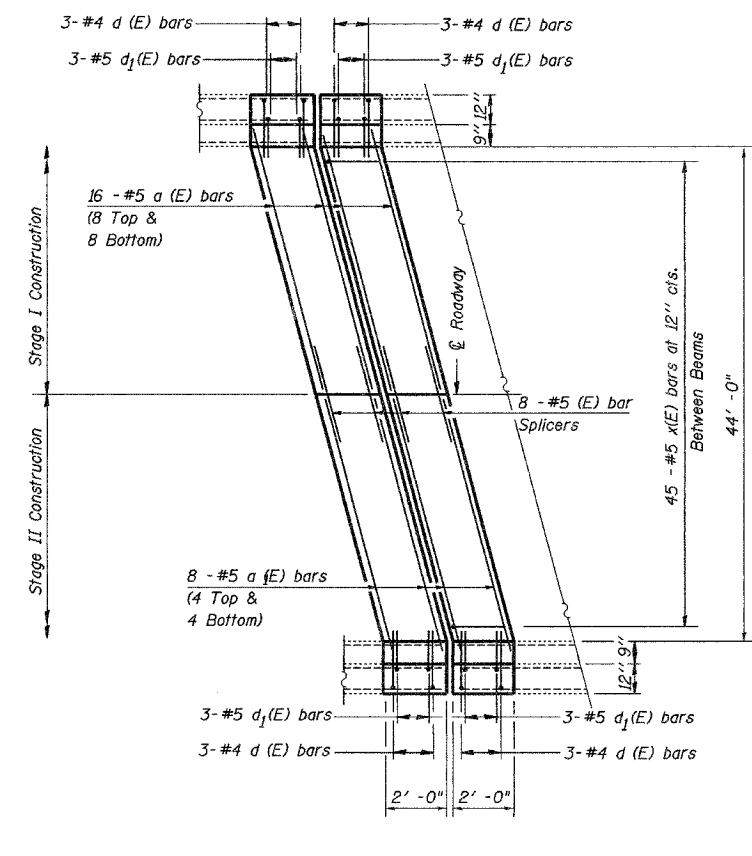
#5 d₁ (E) BAR



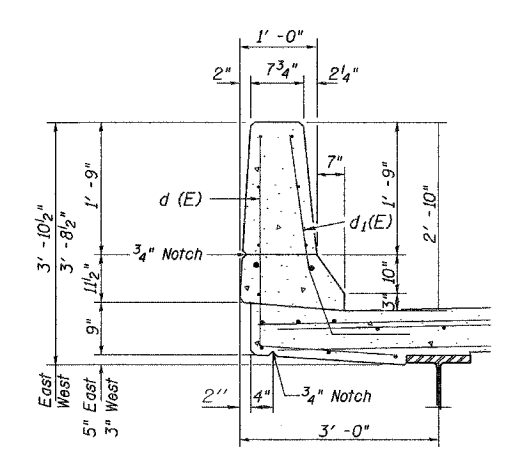
#5 x (E) BAR



PROPOSED PARTIAL PLAN
(At Abutment)



PROPOSED PARTIAL PLAN
(At Pier 3)

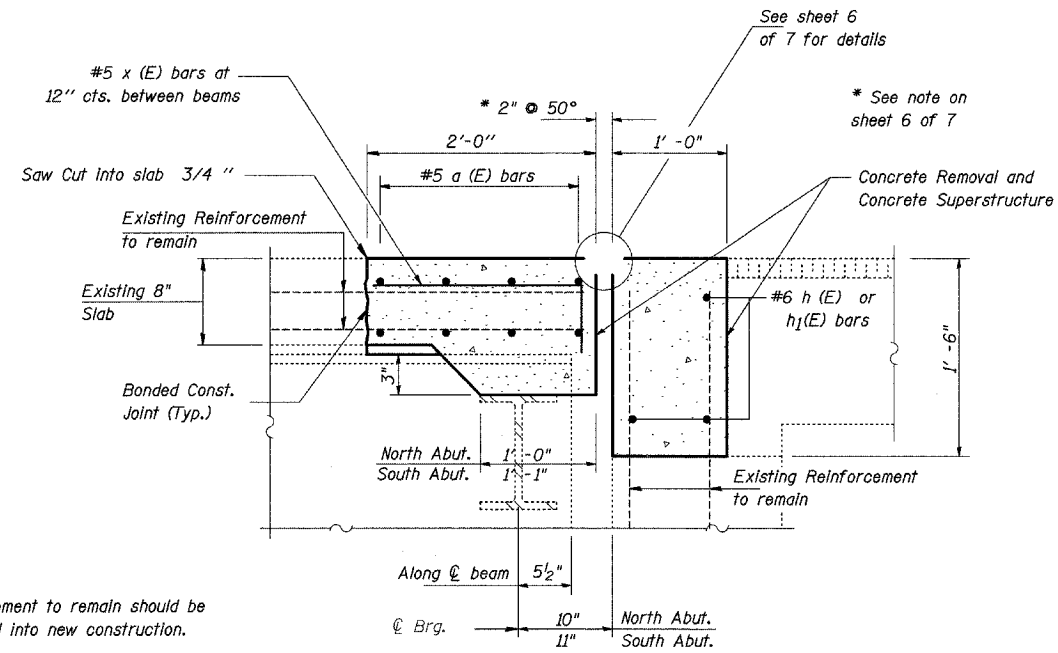


TYPICAL SECTION THRU PARAPET

JOINT DETAILS
IL 84 OVER PLUM RIVER
FA ROUTE 18 (IL 84)
SECTION 106BR
CARROLL COUNTY
STRUCTURE NUMBER 008-0028

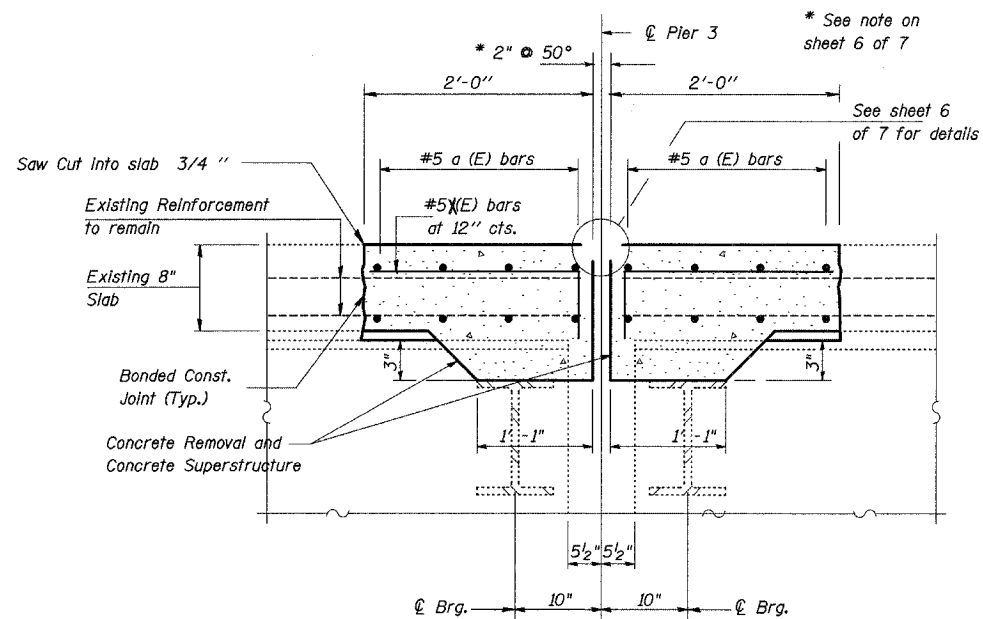
* Various
** (106BR)M, (4B-2)M & 177-4B-3)M

FILE NAME = #FILEL*	USER NAME = #USER*	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Joint Details		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED -		SCALE: None	SHEET NO. 4 OF 7 SHEETS	STA.	TO STA.	Various	26	13	
		PLOT SCALE = #SCALE*	CHECKED -						ILLINOIS	CONTRACT NO. 64D99		
		PLOT DATE = #DATE*	DATE -						FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		



Note: Existing reinforcement to remain should be cleaned and incorporated into new construction.

SECTION THRU JOINT
(At Abutments)



SECTION THRU JOINT
(At Pier 3)

Bill of Material

BAR	NO.	SIZE	LENGTH	SHAPE
a (E)	32	5	21' - 9"	—
a ₁ (E)	32	5	22' - 3"	—
d (E)	24	4	5' - 3"	J
d ₁ (E)	24	5	3' - 11"	J
h (E)	6	6	22' - 9"	—
h ₁ (E)	6	6	23' - 3"	—
x (E)	180	5	2' - 7"	—
CONCRETE SUPERSTRUCTURE			CU YD	18.0
CONCRETE REMOVAL			CU YD	18.0
REINFORCEMENT BARS, EPOXY COATED			POUND	2,550
PREFORMED JOINT STRIP SEAL			FOOT	135
BAR SPLICERS			EACH	38
REM REIN T B TERM T1			EACH	4

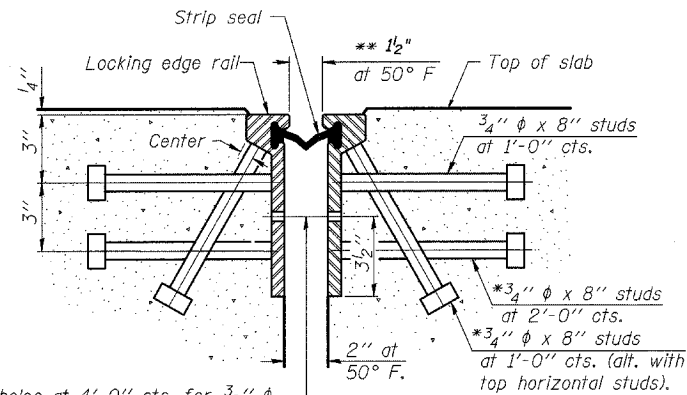
JOINT DETAILS
IL 84 OVER PLUM RIVER
FA ROUTE 18 (IL 84)
SECTION 106BR
CARROLL COUNTY
STRUCTURE NUMBER 008-0028

* Various
 ** (106BR)M, (4B-2)M & 177-4B-3)M

FILE NAME =	USER NAME = linkd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Joint Details	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
0:\BRY\CADD plans\Various Counties\Contract #64099 2008 expansion joints\20080028.dgn		DRAWN -	REVISED -			*	**	Various	26	14	
PLOT SCALE = 5/8" = 1' IN.		CHECKED -	REVISED -			ILLINOIS		CONTRACT NO. 64099			
PLOT DATE = Sat Mar 15 11:13:01 2008		DATE -	REVISED -			FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			
				SCALE: None		SHEET NO. 5 OF 7 SHEETS		STA.		TO STA.	

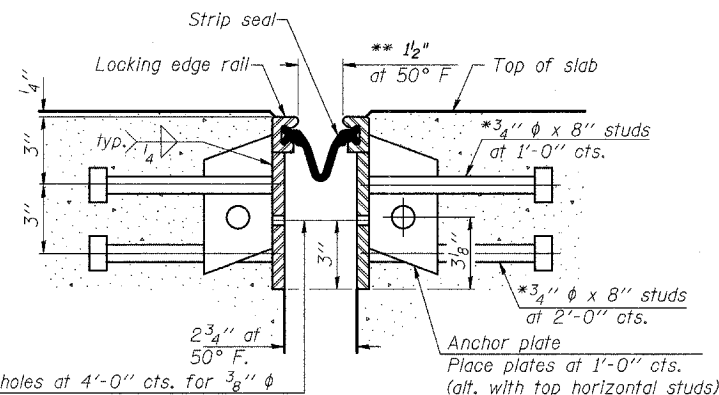
*Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

**When joint is fixed, dimension is set at 1 1/2".



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:

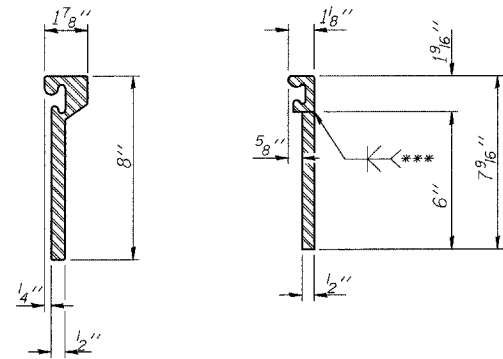
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of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

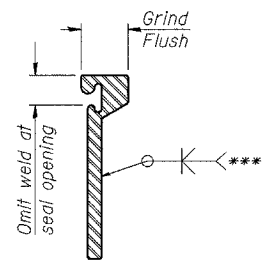
The manufacturer's recommended installation methods shall be followed.

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.



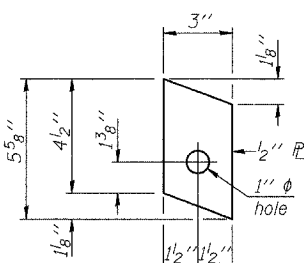
ROLLED (EXTRUDED) RAIL WELDED RAIL



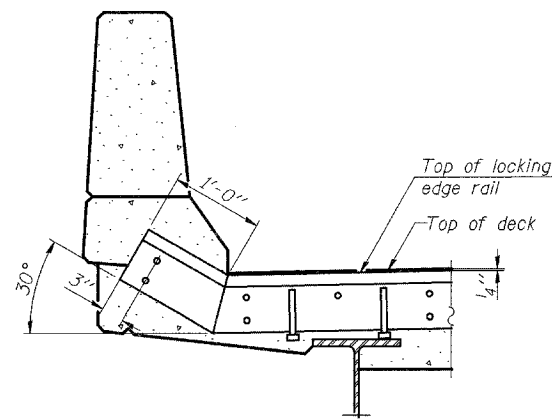
***Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

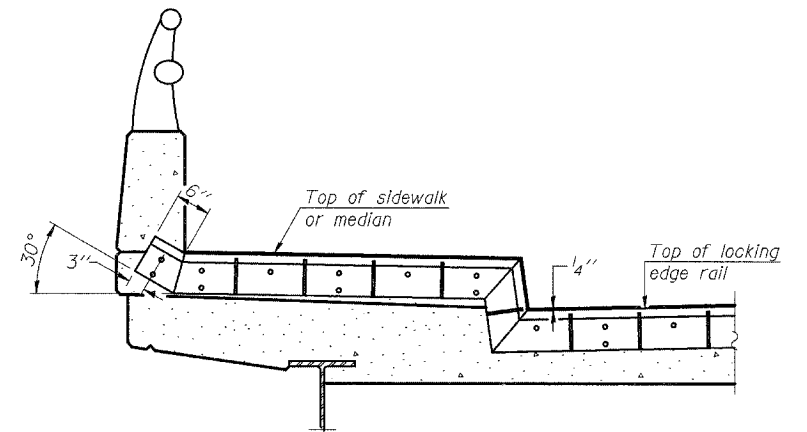
The inside of the locking edge rail groove shall be free of weld residue.



ANCHOR PLATE (for welded rail)



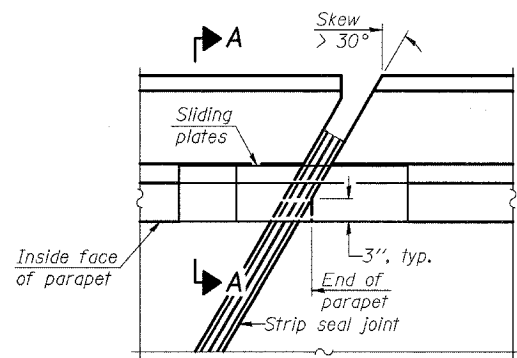
AT PARAPET



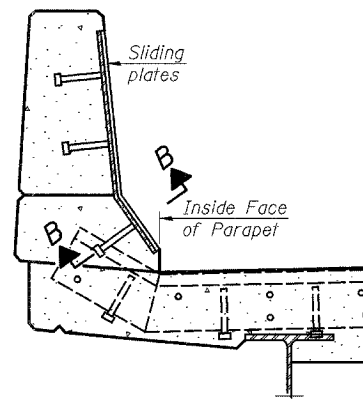
AT SIDEWALK OR MEDIAN

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 RAILS

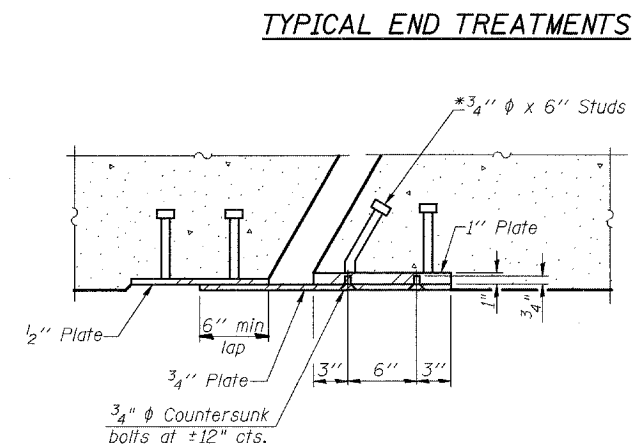


PLAN



SECTION A-A

POINT BLOCK DETAILS (for skews > 30°)



SECTION B-B

TYPICAL END TREATMENTS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	135

**PREFORMED JOINT STRIP SEAL
IL 84 OVER PLUM RIVER
FA ROUTE 18 (IL 84)
SECTION 106BR
CARROLL COUNTY
STRUCTURE NUMBER 008-0028**

* Various
** (106BR)M, (4B-2)M & 177-4B-3)M

EJ-SSJ

9-3-07

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -
G:\BR\CADD plans\Various Counties\Contract #64099 2008 expansion joints\0080028.dgn		DRAWN -	REVISED -
PLDT SCALE = 5/8" = 1" / IN.		CHECKED -	REVISED -
PLDT DATE = Sat Mar 15 11:13:01 2008		DATE -	REVISED -

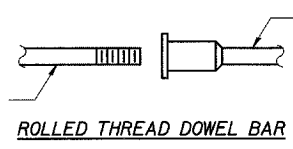
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

Preformed Joint Strip Seal

SCALE: None SHEET NO. 6 OF 7 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	26	15
		ILLINOIS	CONTRACT NO. 64099	
		ILLINOIS FED. AID PROJECT		

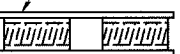
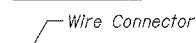
The diameter of this part is equal or larger than the diameter of bar spliced.



ROLLED THREAD DOWEL BAR



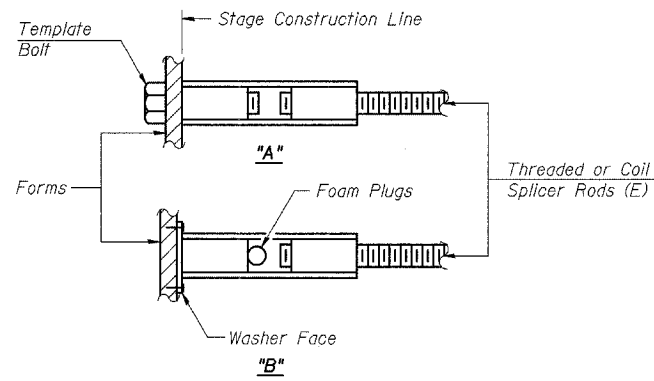
**** ONE PIECE**



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

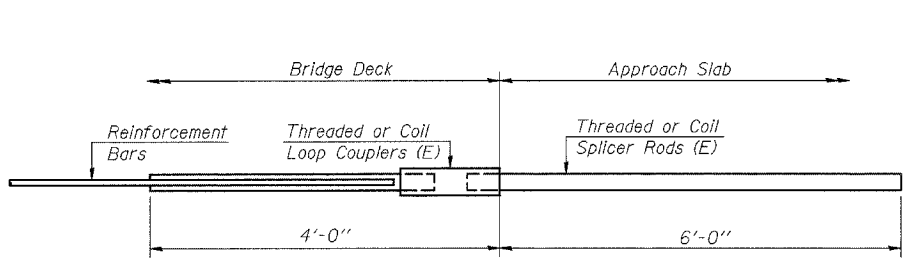
"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

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:

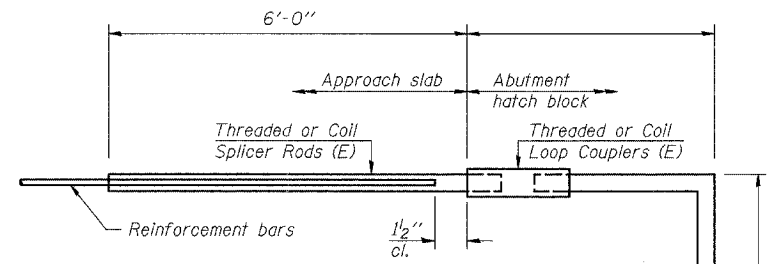
- ① Minimum Capacity = $1.25 \times f_y \times A_t$
 (Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
 (Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

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



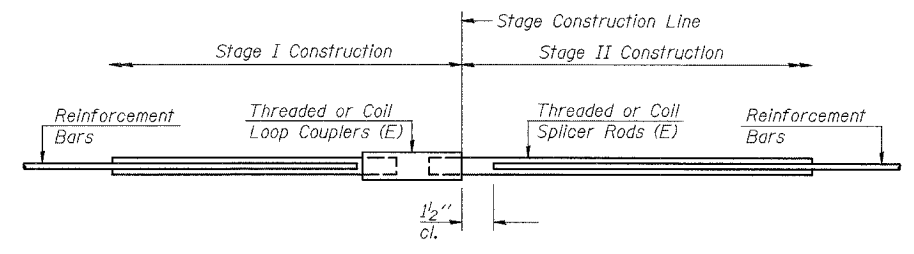
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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	32	Deck
#6	6	Abutments

**BAR SPLICER ASSEMBLY DETAILS
 IL 84 OVER PLUM RIVER
 FA ROUTE 18 (IL 84)
 SECTION 106BR
 CARROLL COUNTY
 STRUCTURE NUMBER 008-0028**

Illinois Route 26 bridge over Buffalo Creek.
 Existing structure number is 071-0069.
 Remove and reconstruct two expansion joints
 One joint at each abutment.

General Notes

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

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.

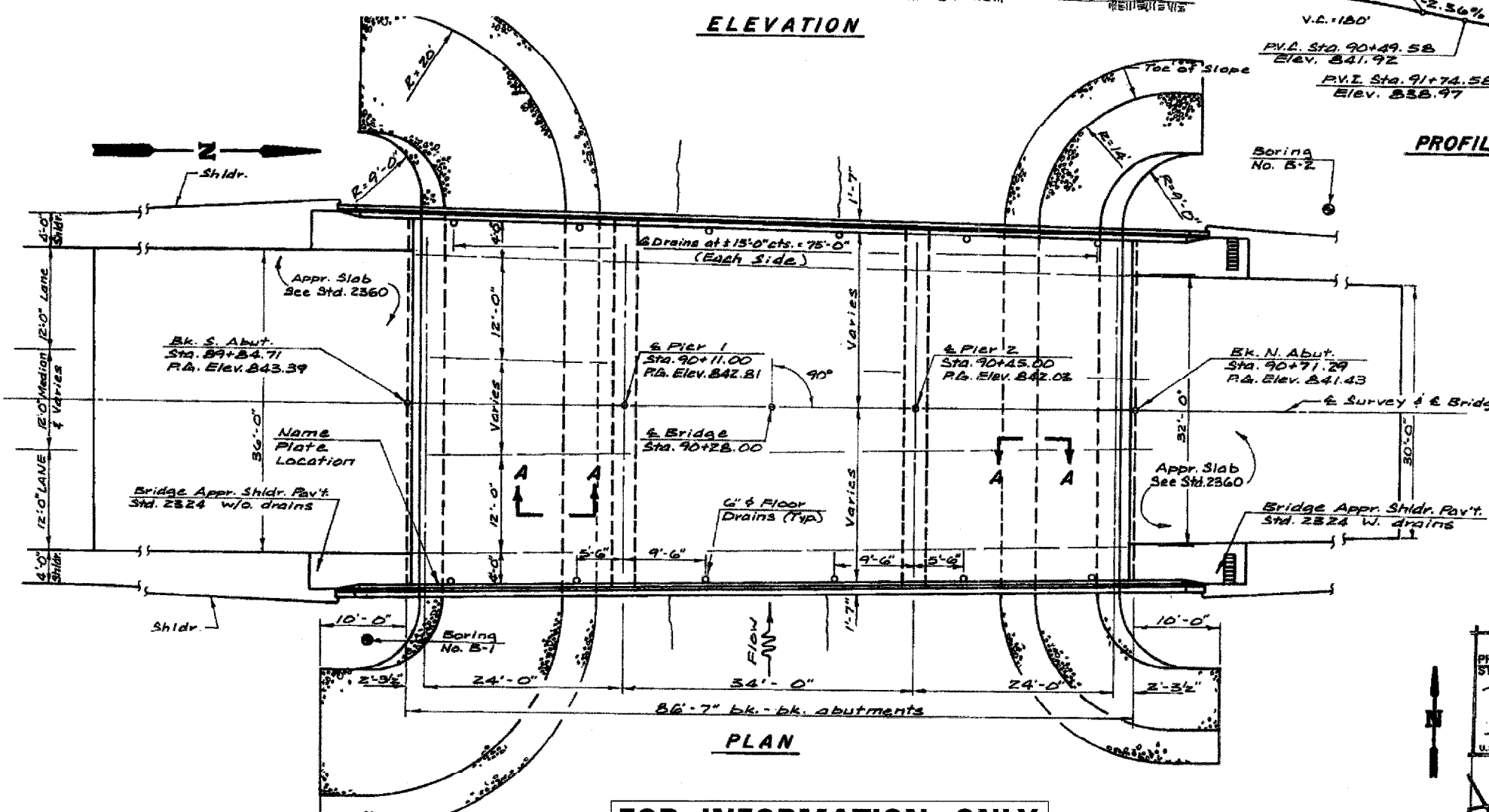
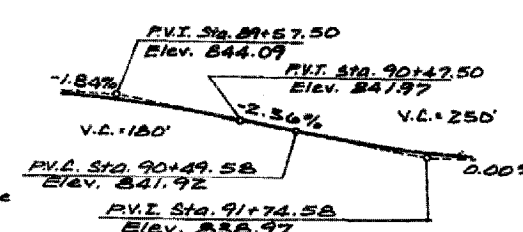
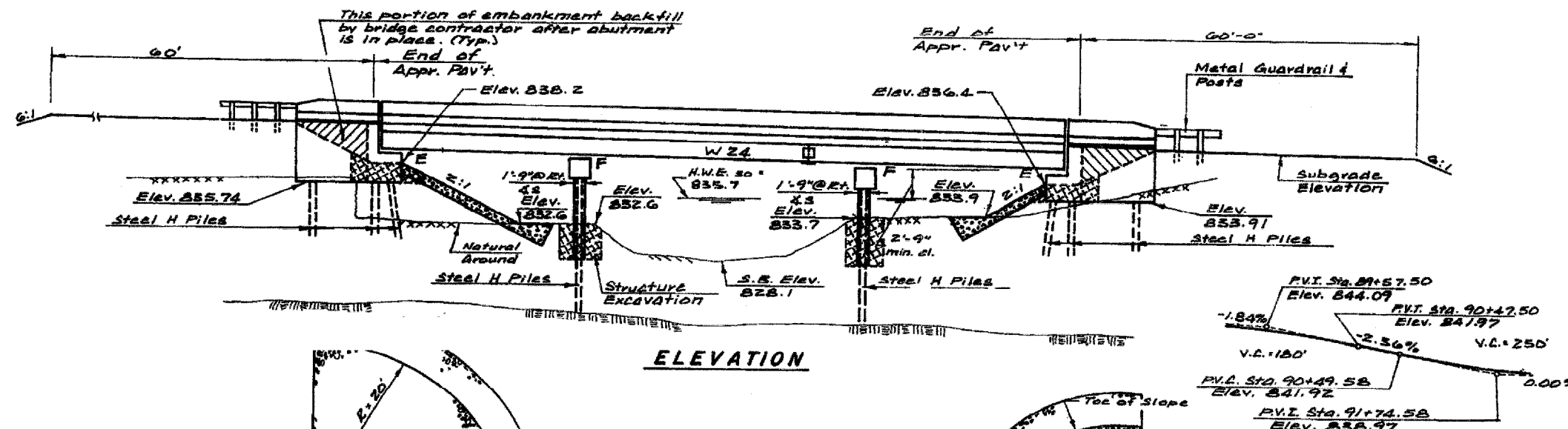
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

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.

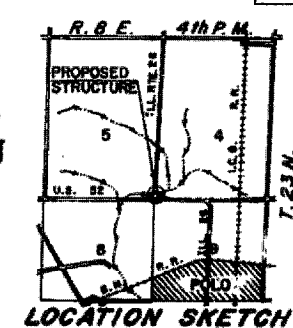
Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
CONCRETE SUPERSTRUCTURE	CU YD	12.0		12.0
CONCRETE REMOVAL	CU YD	12.0		12.0
REINFORCEMENT BARS, EPOXY COATED	POUND			1520
PREFORMED JOINT STRIP SEAL	FOOT	90		90
BAR SPLICERS	EACH	22		22
REM REIN T B TERM T1	EACH	4		4



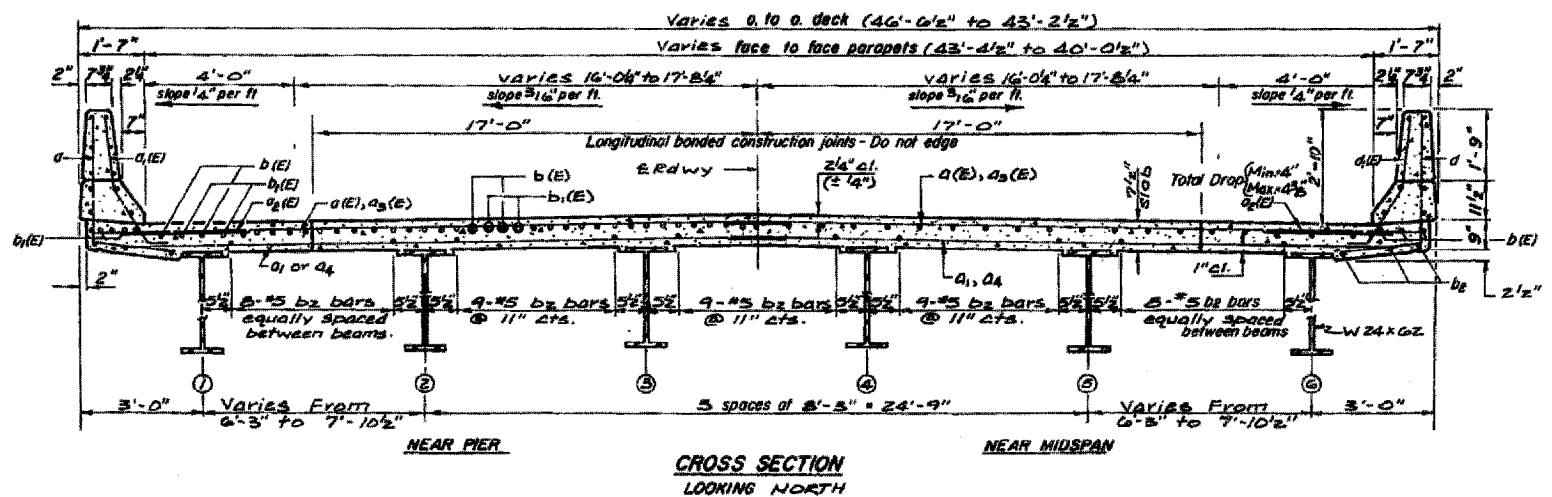
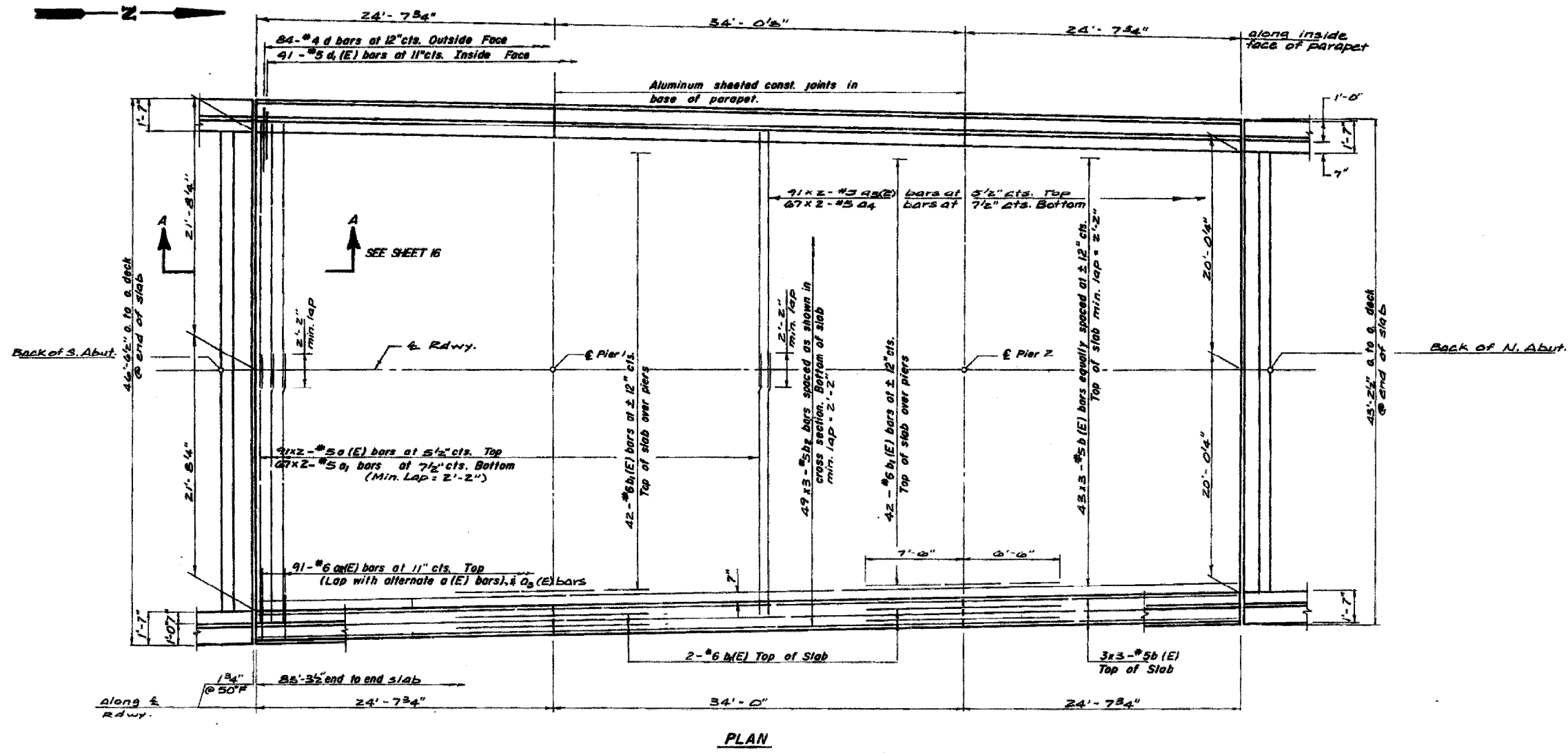
FOR INFORMATION ONLY



GENERAL PLAN & ELEVATION
 IL 26 OVER BUFFALO CREEK
 FA ROUTE 38 (IL 26)
 SECTION 4B-2
 OGLE COUNTY
 STRUCTURE NUMBER 071-0069

* Various
 ** (106BR)M, (4B-2)M & 177-4B-3)M

FOR INFORMATION ONLY



NOTES:
 Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
 Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

**DECK PLAN & CROSS-SECTION
 IL 26 OVER BUFFALO CREEK
 FA ROUTE 38 (IL 26)
 SECTION 4B-2
 OGLE COUNTY
 STRUCTURE NUMBER 071-0069**

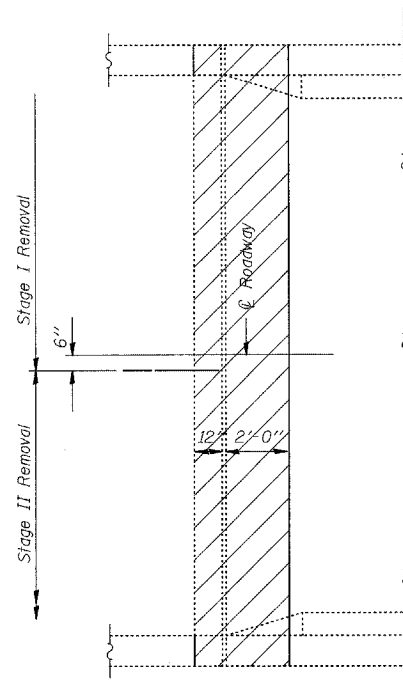
FILE NAME =	USER NAME = lmkj	DESIGNED -	REVISED -
C:\BR\CADD\plans\Various Counties\Contract #6499 2009 expansion joints\0080028.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

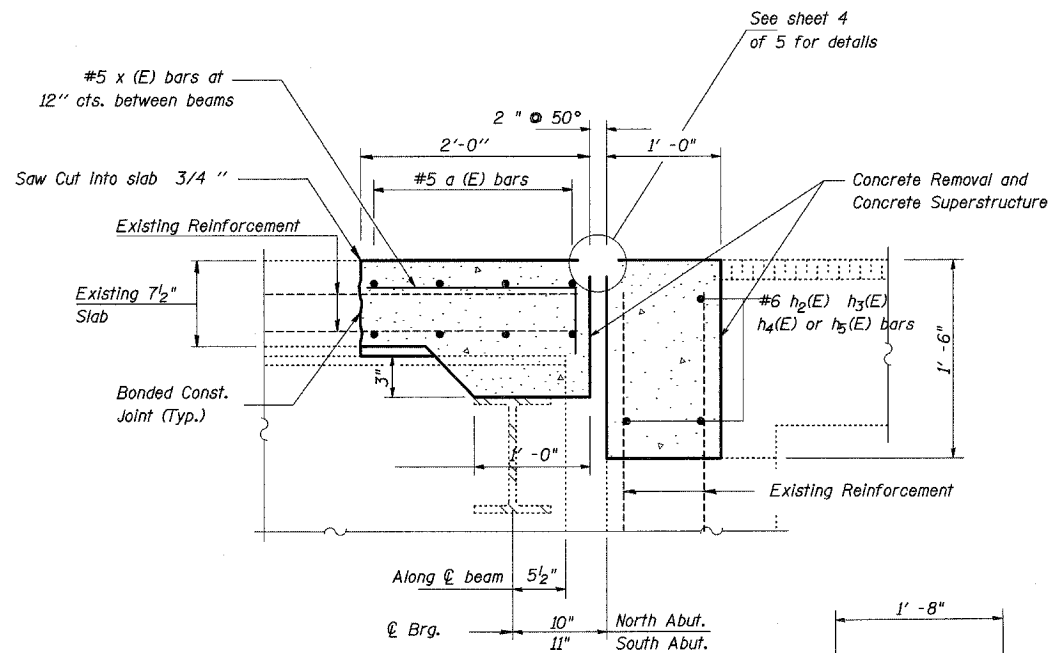
Existing Deck Plan & Cross-Section
 SCALE: None SHEET NO. 2 OF 5 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	26	18
ILLINOIS		CONTRACT NO. 6499		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

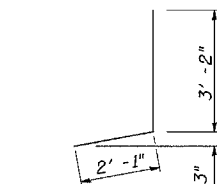
* Various
 ** (106BR)M, (4B-2)M & 177-4B-3)M



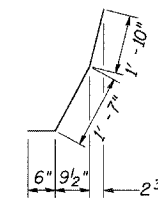
EXISTING PARTIAL PLAN
(South Abutment Shown)



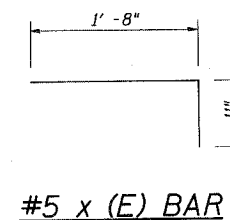
SECTION THRU JOINT
(At Abutments)



#4 d (E) BAR



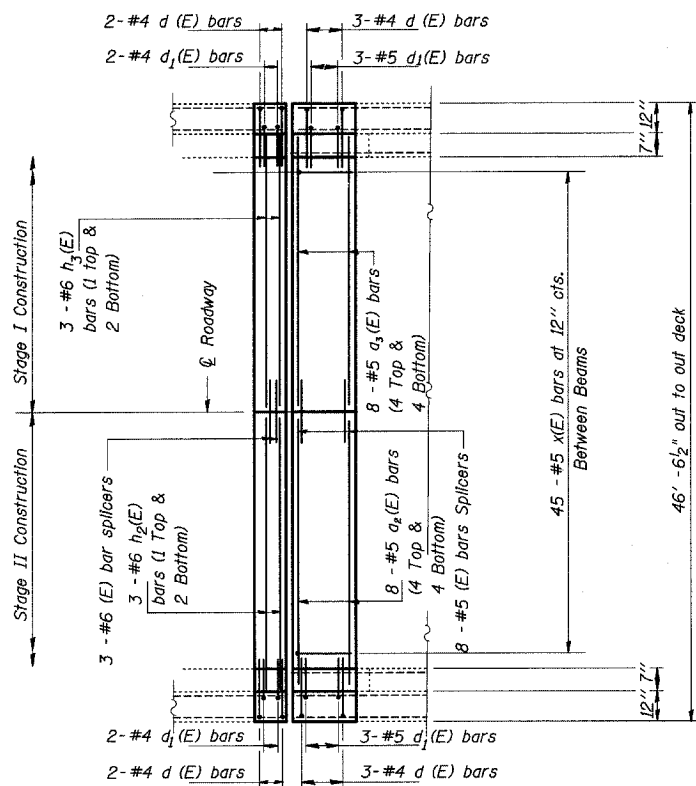
#5 d₁ (E) BAR



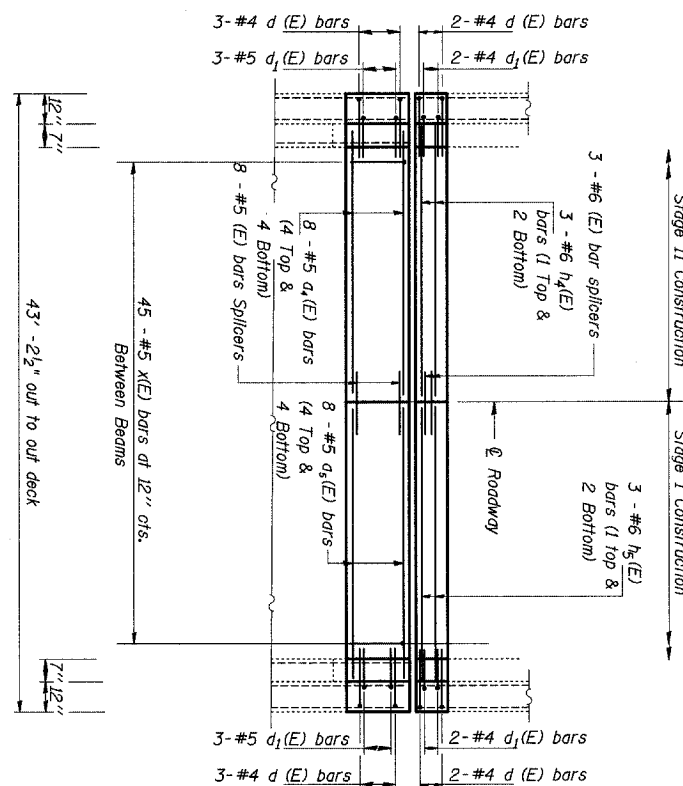
#5 x (E) BAR

Bill of Material

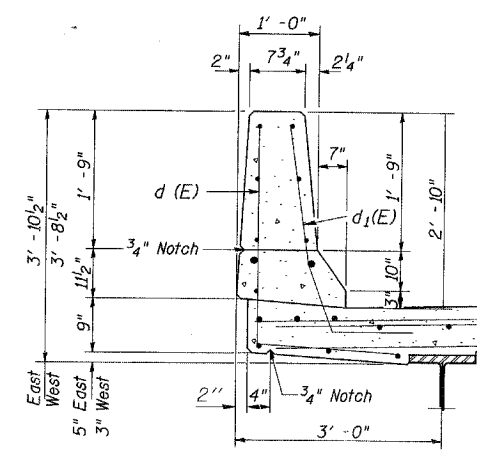
BAR	NO.	SIZE	LENGTH	SHAPE	
a ₂ (E)	8	5	23' - 0"	—	
a ₃ (E)	8	5	23' - 4"	—	
a ₄ (E)	8	5	22' - 0"	—	
a ₅ (E)	8	5	22' - 4"	—	
d (E)	20	4	5' - 3"	J	
d ₁ (E)	20	5	3' - 11"	J	
h ₂ (E)	3	6	21' - 2"	—	
h ₃ (E)	3	6	21' - 6"	—	
h ₄ (E)	3	6	19' - 5"	—	
h ₅ (E)	3	6	18' - 10"	—	
x (E)	90	5	2' - 7"	—	
CONCRETE SUPERSTRUCTURE				CU YD	12.0
CONCRETE REMOVAL				CU YD	12.0
REINFORCEMENT BARS, EPOXY COATED				POUND	1,520
PREFORMED JOINT STRIP SEAL				FOOT	90
BAR SPLICERS				EACH	22
REM REIN T B TERM T1				EACH	4



PROPOSED PARTIAL PLAN
(At South Abutment)



PROPOSED PARTIAL PLAN
(At North Abutment)



TYPICAL SECTION THRU PARAPET

• = Existing Reinforcement

JOINT DETAILS
IL 26 OVER BUFFALO CREEK
FA ROUTE 38 (IL 26)
SECTION 4B-2
OGLE COUNTY
STRUCTURE NUMBER 071-0069

* Various
** (106BR)M, (4B-2)M & 177-4B-3)M

FILE NAME =	USER NAME = lunkdj	DESIGNED -	REVISED -
D:\BR\CADD plans\Various Counties\Contract #64099 2008 expansion joints\0080028.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

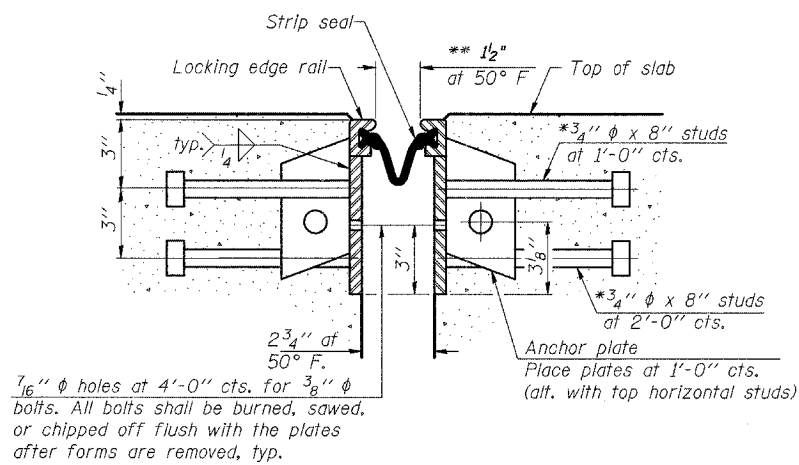
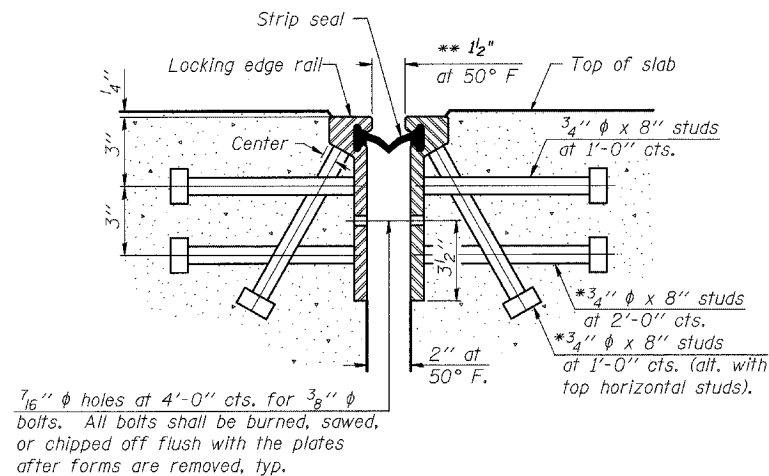
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Joint Details
SCALE: None SHEET NO. 3 OF 5 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	26	19
ILLINOIS		CONTRACT NO. 64099		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

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

**When joint is fixed, dimension is set at 1/2".



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.

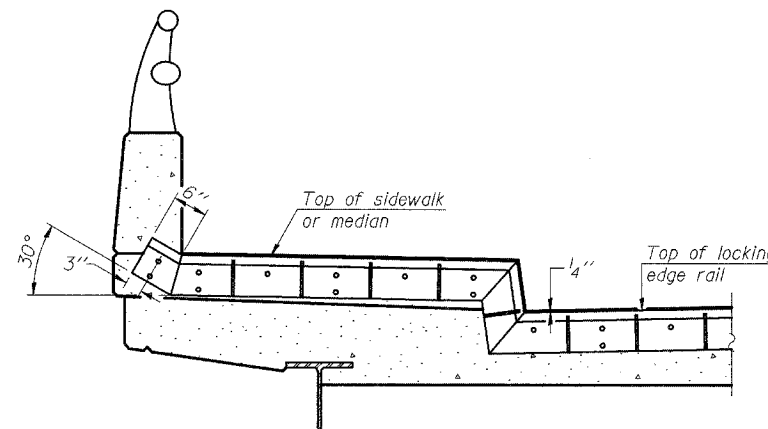
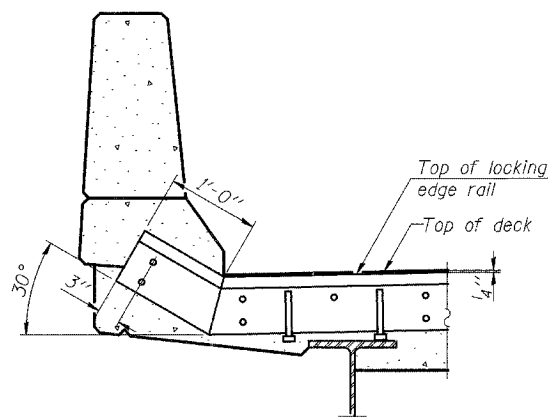
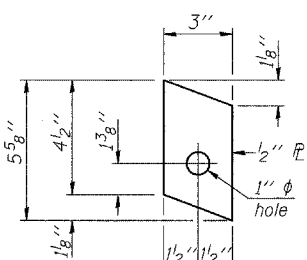
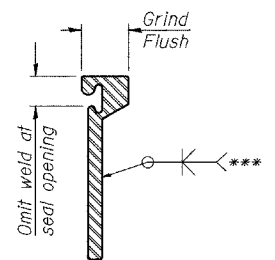
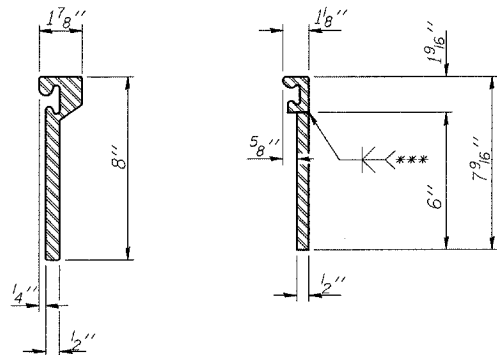
The manufacturer's recommended installation methods shall be followed.

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.

SECTION THRU ROLLED RAIL JOINT

SECTION THRU WELDED RAIL JOINT



***Back gouge 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.

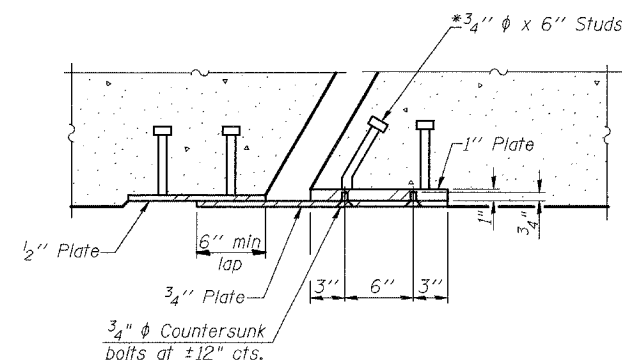
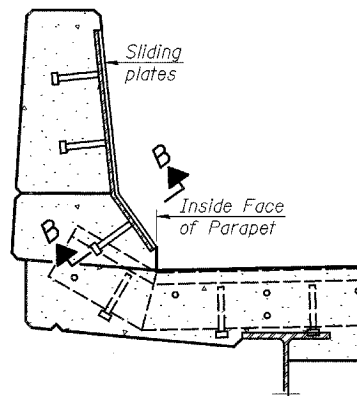
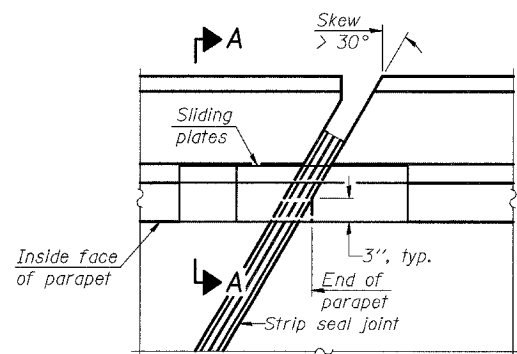
ROLLED (EXTRUDED) RAIL **WELDED RAIL**

LOCKING EDGE RAIL SPLICE

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

TYPICAL END TREATMENTS

LOCKING EDGE RAILS



BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	90

**PREFORMED JOINT STRIP SEAL
IL 26 OVER BUFFALO CREEK
FA ROUTE 38 (IL 26)
SECTION 4B-2
OGLE COUNTY
STRUCTURE NUMBER 071-0069**

* Various
** (106BR)M, (4B-2)M & 177-4B-3)M

EJ-SSJ 9-3-07

FILE NAME =	USER NAME = lrikdj	DESIGNED -	REVISED -
0:\BRY\CADD\plans\Various Counties\Contract #64D99 2008 expansion joints\0060028.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

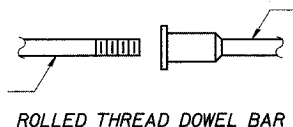
Preformed Joint Strip Seal

SCALE: None SHEET NO. 4 OF 5 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	26	20
ILLINOIS			CONTRACT NO. 64D99	
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

The diameter of this part is the same as the diameter of the bar spliced.

The diameter of this part is equal or larger than the diameter of bar spliced.

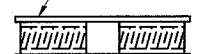


ROLLED THREAD DOWEL BAR



**** ONE PIECE**

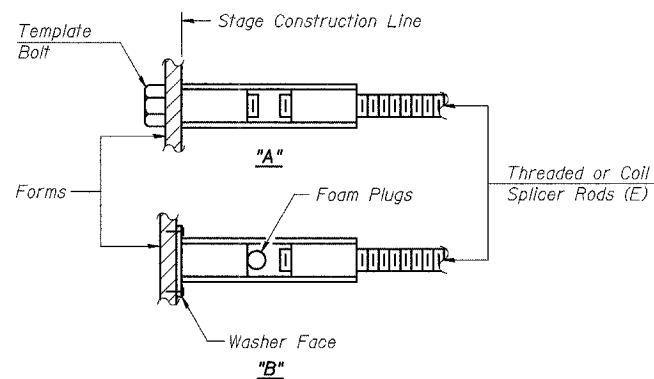
Wire Connector



WELDED SECTIONS

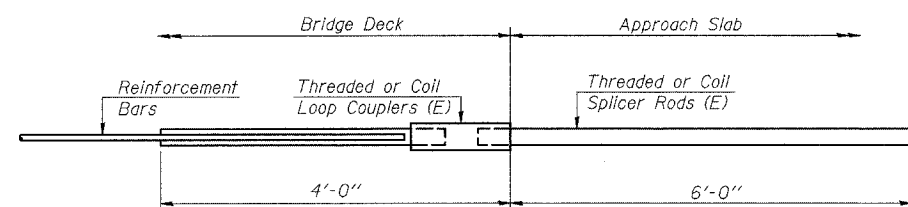
BAR SPLICER ASSEMBLY ALTERNATIVES

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



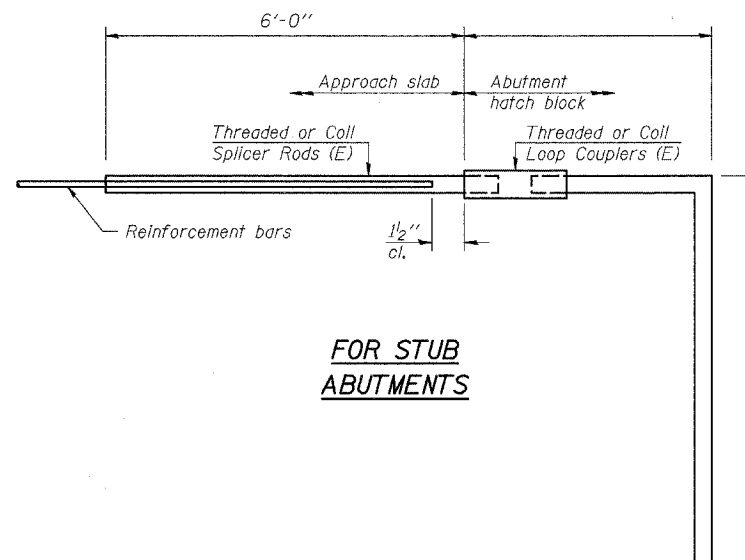
INSTALLATION AND SETTING METHODS

"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

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 =	

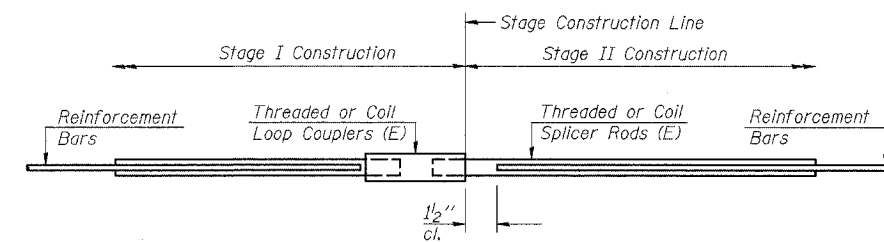
NOTES

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

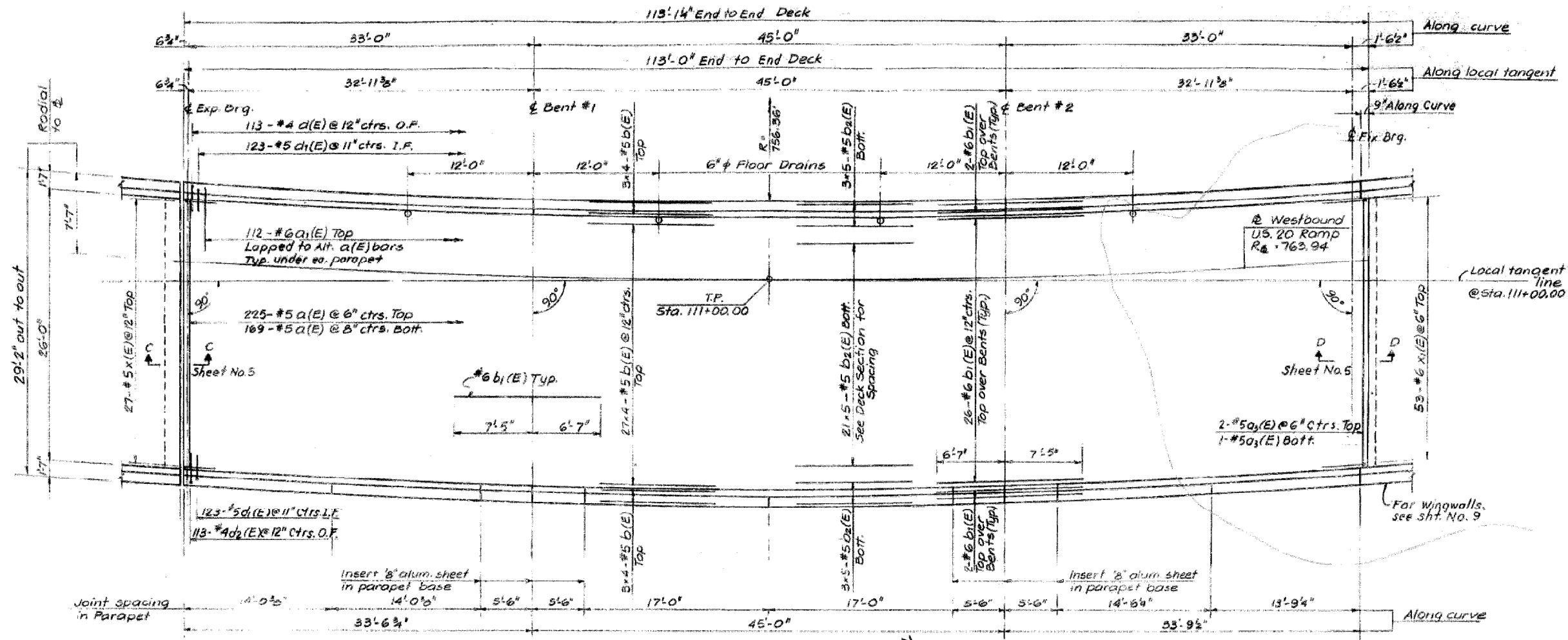
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	16	Deck
#6	6	Abutments

**BAR SPLICER ASSEMBLY DETAILS
 IL 26 OVER BUFFALO CREEK
 FA ROUTE 38 (IL 26)
 SECTION 4B-2
 OGLE COUNTY
 STRUCTURE NUMBER 071-0069**

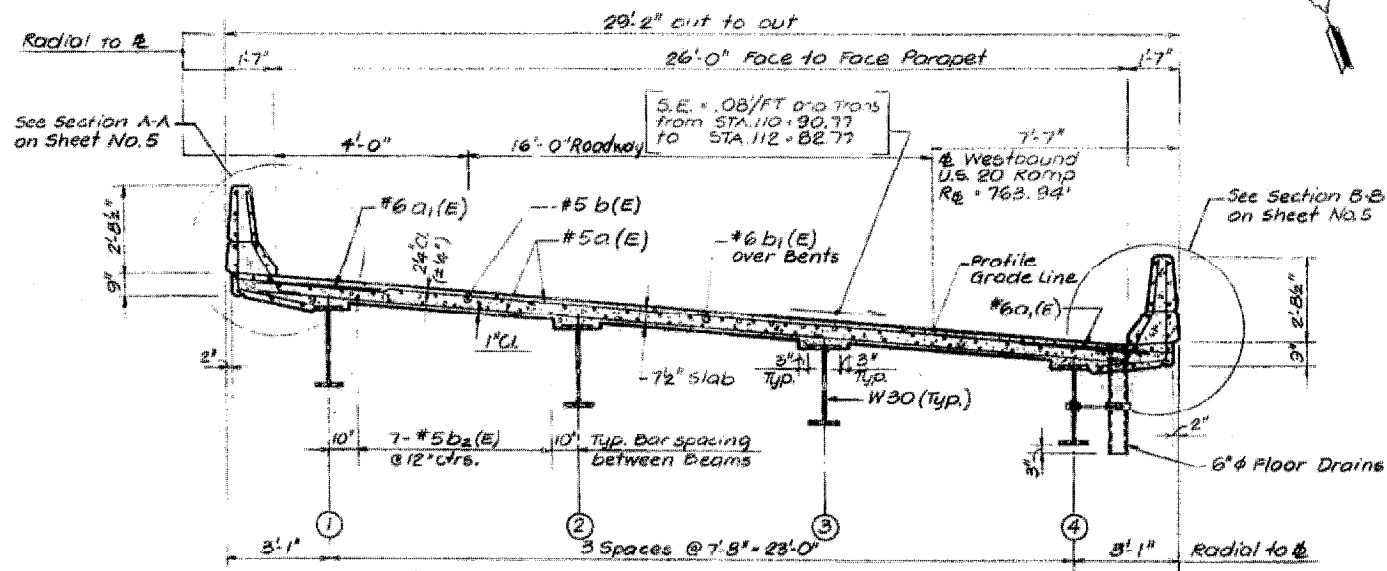


Bars indicated Thus 27-4-#5 etc. Indicates 27 Lines of Bars with 4 Lengths per Line

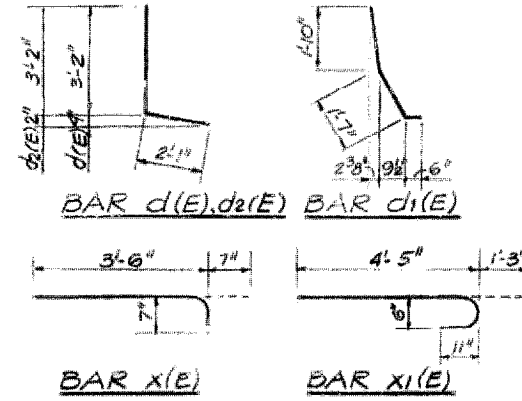
DECK PLAN



Min Lop #5 Bars - 2'-2"



CROSS SECTION (LOOKING WEST)

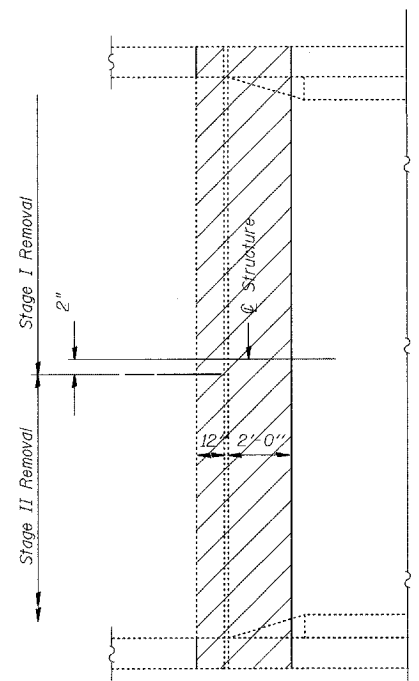


**DECK PLAN & CROSS-SECTION
US 20 WB RAMP OVER SILVER CREEK
FA 401 (US 20)
SECTION 177-4B-3
STEPHENSON COUNTY
STRUCTURE NUMBER 089-0060**

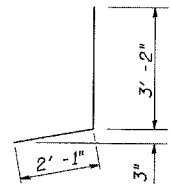
FOR INFORMATION ONLY

FILE NAME =	USER NAME = inkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Existing Deck Plan & Cross Section		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
C:\BR\CADD\plans\Various Counties\Contract #64099 2008 expansion joints\0890028.dgn		DRAWN -	REVISED -		SCALE: None	SHEET NO. 1 OF 5 SHEETS	STA.	TO STA.	ILLINOIS	Various	26	23
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -							CONTRACT NO. 64099		
PLOT DATE = Sat Mar 15 11:31:19 2008		DATE -	REVISED -						FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		

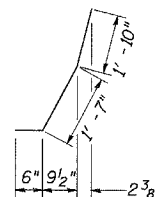
* Various
** (106BR)M, (4B-2)M & 177-4B-3JM



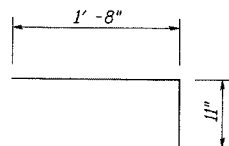
EXISTING PARTIAL PLAN
(At West Abutment)



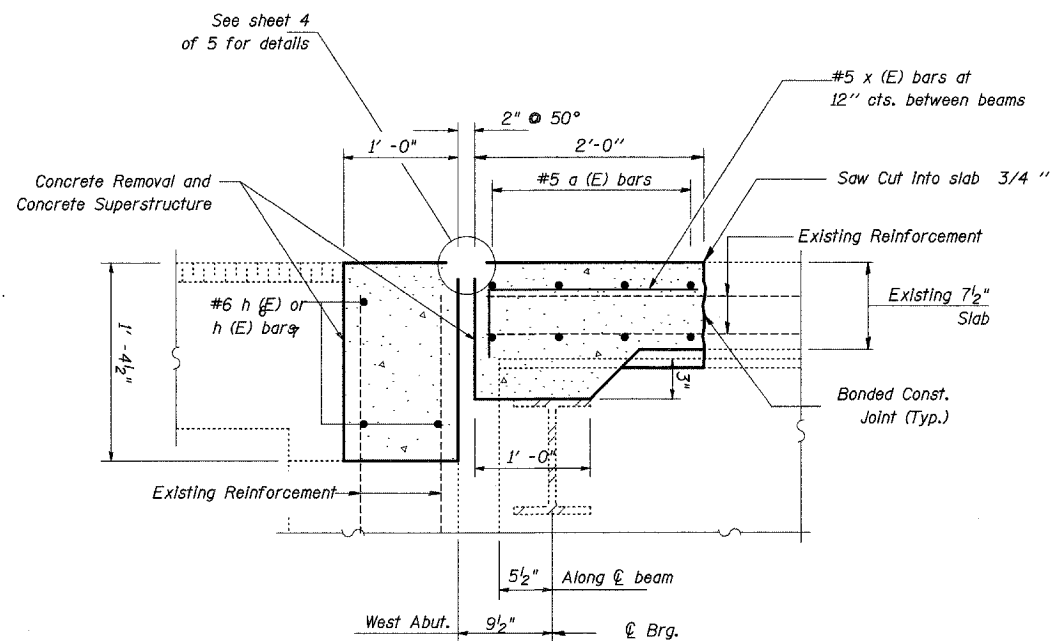
#4 d (E) BAR



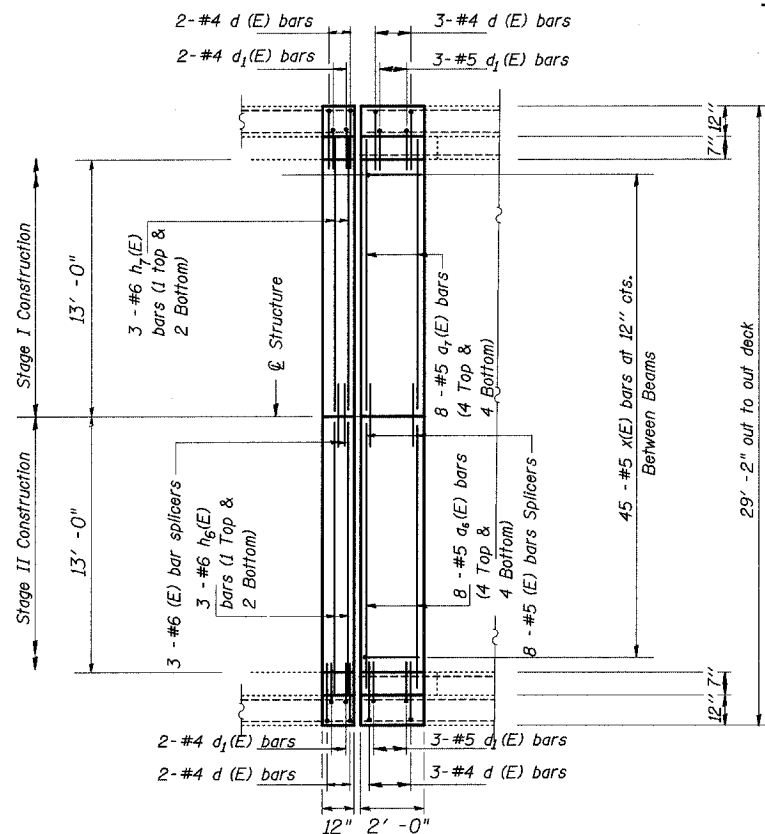
#5 d1 (E) BAR



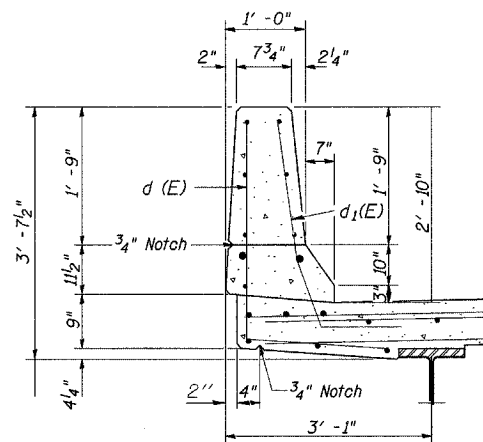
#5 x (E) BAR



SECTION THRU JOINT
(At West Abutment)



PROPOSED PARTIAL PLAN
(At West Abutment)



TYPICAL SECTION THRU PARAPET

Bill of Material

BAR	NO.	SIZE	LENGTH	SHAPE
a6(E)	8	5	15' - 2"	—
a7(E)	8	5	14' - 0"	—
d (E)	10	4	5' - 3"	J
d1 (E)	10	5	3' - 11"	J
h6(E)	3	6	13' - 5"	—
h7(E)	3	6	15' - 4"	—
x (E)	45	5	2' - 7"	—
CONCRETE SUPERSTRUCTURE			CU YD	4.0
CONCRETE REMOVAL			CU YD	4.0
REINFORCEMENT BARS, EPOXY COATED			POUND	570
PREFORMED JOINT STRIP SEAL			FOOT	30
BAR SPLICERS			EACH	11
REM REIN T B TERM T1			EACH	2

JOINT DETAILS
US 20 WB RAMP OVER SILVER CREEK
FA 401 (US 20)
SECTION 177-4B-3
STEPHENSON COUNTY
STRUCTURE NUMBER 089-0060

* Various
 ** (106BR)M, (4B-2)M & 177-4B-3)M

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -
D:\BR\CADD plans\Various Counties\Contract #64099 2008 expansion joints\02080208.dgn		DRAWN -	REVISED -
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -
PLOT DATE = Sat Mar 15 11:13:19 2008		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

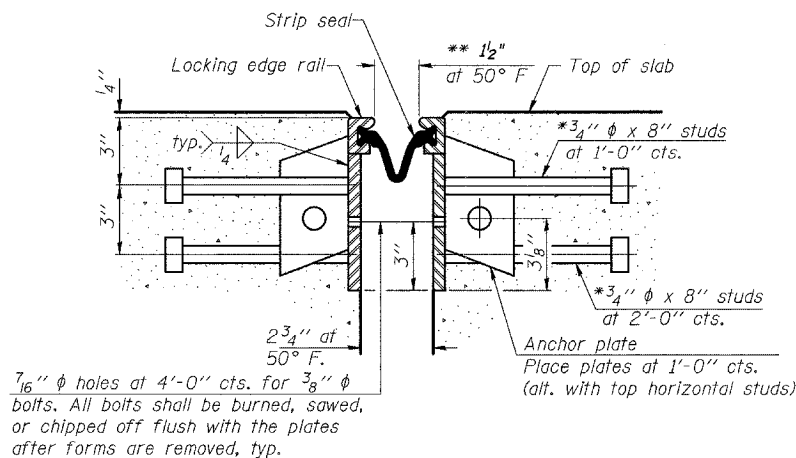
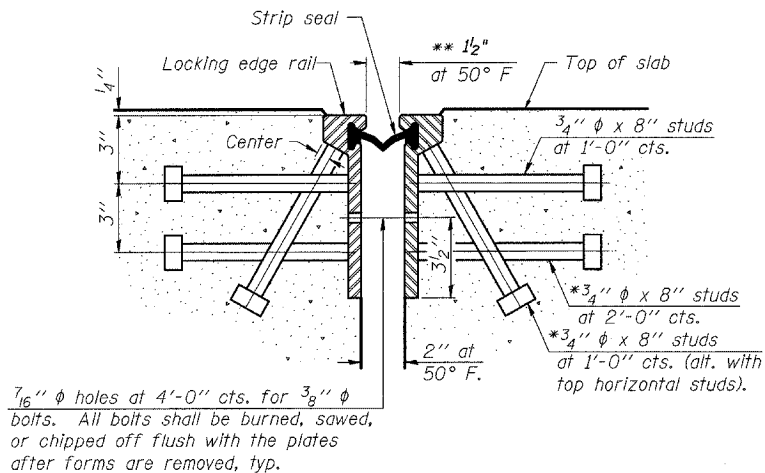
Joint Details

SCALE: None SHEET NO. 3 OF 5 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	26	24
ILLINOIS CONTRACT NO. 64099			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

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

**When joint is fixed, dimension is set at 1 1/2".



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.

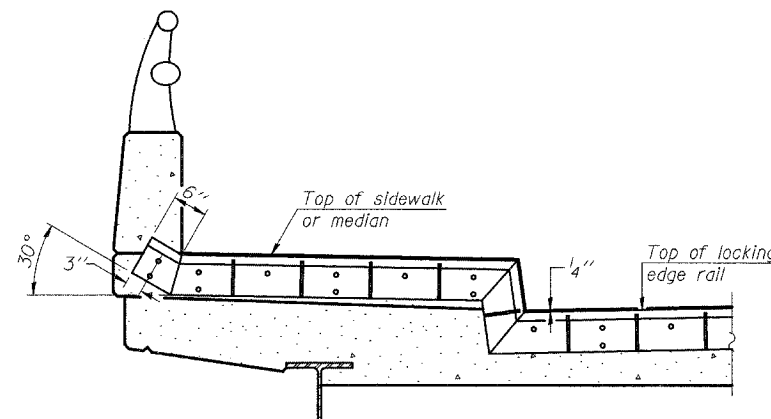
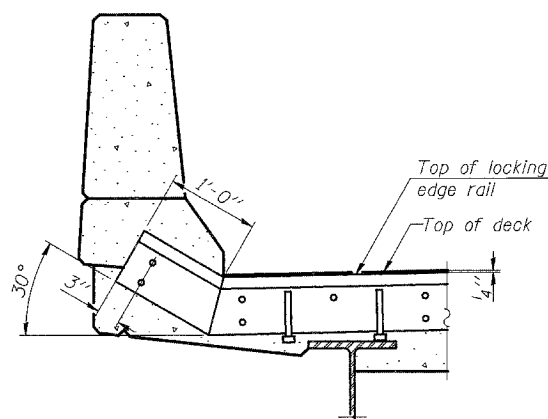
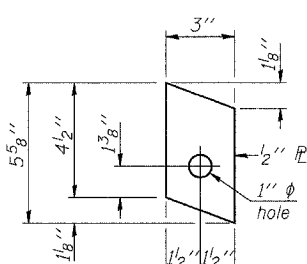
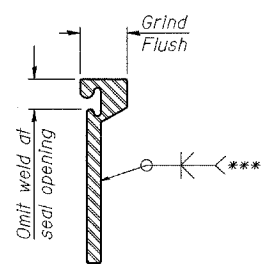
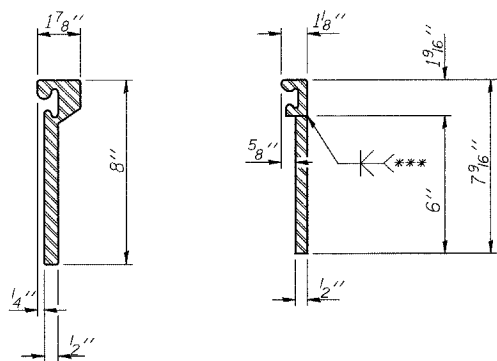
The manufacturer's recommended installation methods shall be followed.

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.

SECTION THRU ROLLED RAIL JOINT

SECTION THRU WELDED RAIL JOINT



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.

ROLLED (EXTRUDED) RAIL WELDED RAIL

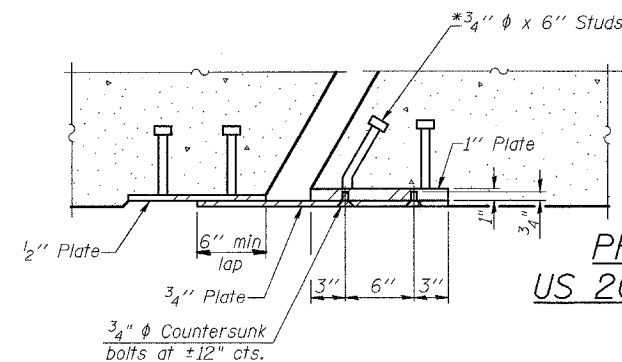
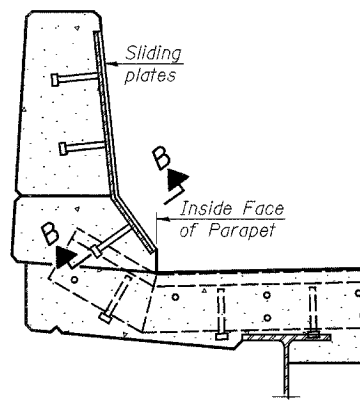
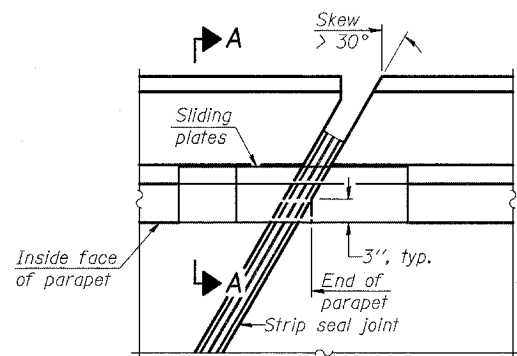
LOCKING EDGE RAIL SPLICE

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

ANCHOR PLATE (for welded rail)

TYPICAL END TREATMENTS

LOCKING EDGE RAILS



BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	30

PREFORMED JOINT STRIP SEAL
US 20 WB RAMP OVER SILVER CREEK
FA 401 (US 20)
SECTION 177-4B-3
STEPHENSON COUNTY
STRUCTURE NUMBER 089-0060

POINT BLOCK DETAILS (for skews > 30°)

EJ-SSJ

9-3-07

FILE NAME =	USER NAME = lnrkdj	DESIGNED -	REVISED -
0:\BRY\CADD plans\Various Counties\Contract #64099 2008 expansion joints\026026.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Preformed Joint Strip Seal

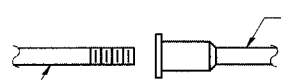
SCALE: None SHEET NO. 4 OF 5 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	26	25
ILLINOIS		CONTRACT NO. 64099		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

* Various
** (106BR)M, (4B-2)M & 177-4B-3)M

The diameter of this part is the same as the diameter of the bar spliced.

The diameter of this part is equal or larger than the diameter of bar spliced.



ROLLED THREAD DOWEL BAR



**** ONE PIECE**

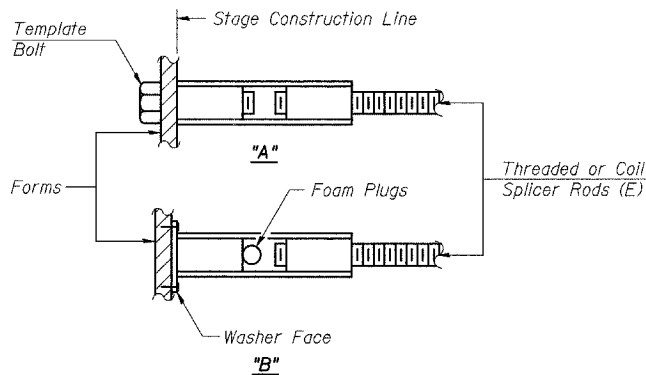
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

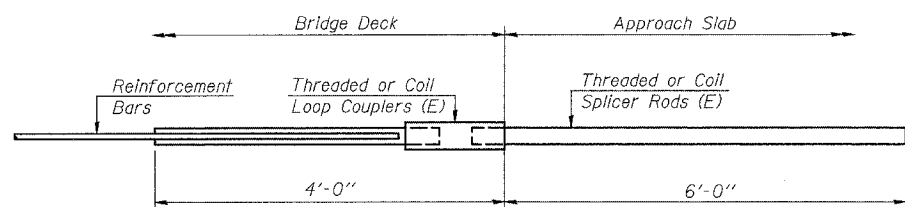
"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

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)

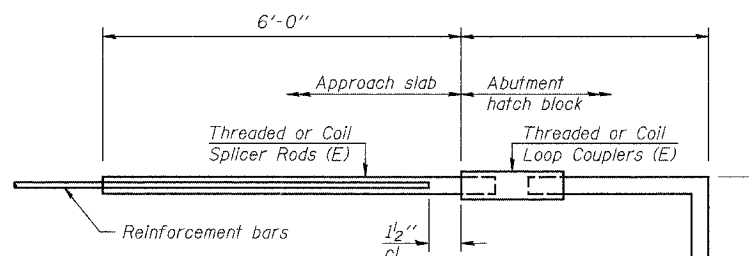
Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

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



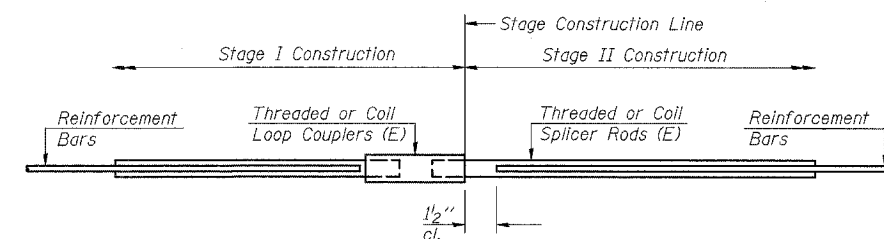
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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	8	Deck
#6	3	Abutments

BAR SPLICER ASSEMBLY DETAILS
US 20 WB RAMP OVER SILVER CREEK
FA 401 (US 20)
SECTION 177-4B-3
STEPHENSON COUNTY
STRUCTURE NUMBER 089-0060

* Various
 ** (106BR)M, (4B-2)M & 177-4B-3)M

BSD-1 11-1-06

FILE NAME =	USER NAME = lrikdj	DESIGNED -	REVISED -
G:\BR\CADD plans\Various Counties\Contract #64099 2008 expansion joints\080028.dgn		DRAWN -	REVISED -
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -
PLOT DATE = Sat Mar 15 11:31:19 2008		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bar Splicers

SCALE: None SHEET NO. 5 OF 5 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	26	26
ILLINOIS			CONTRACT NO. 64099	
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	